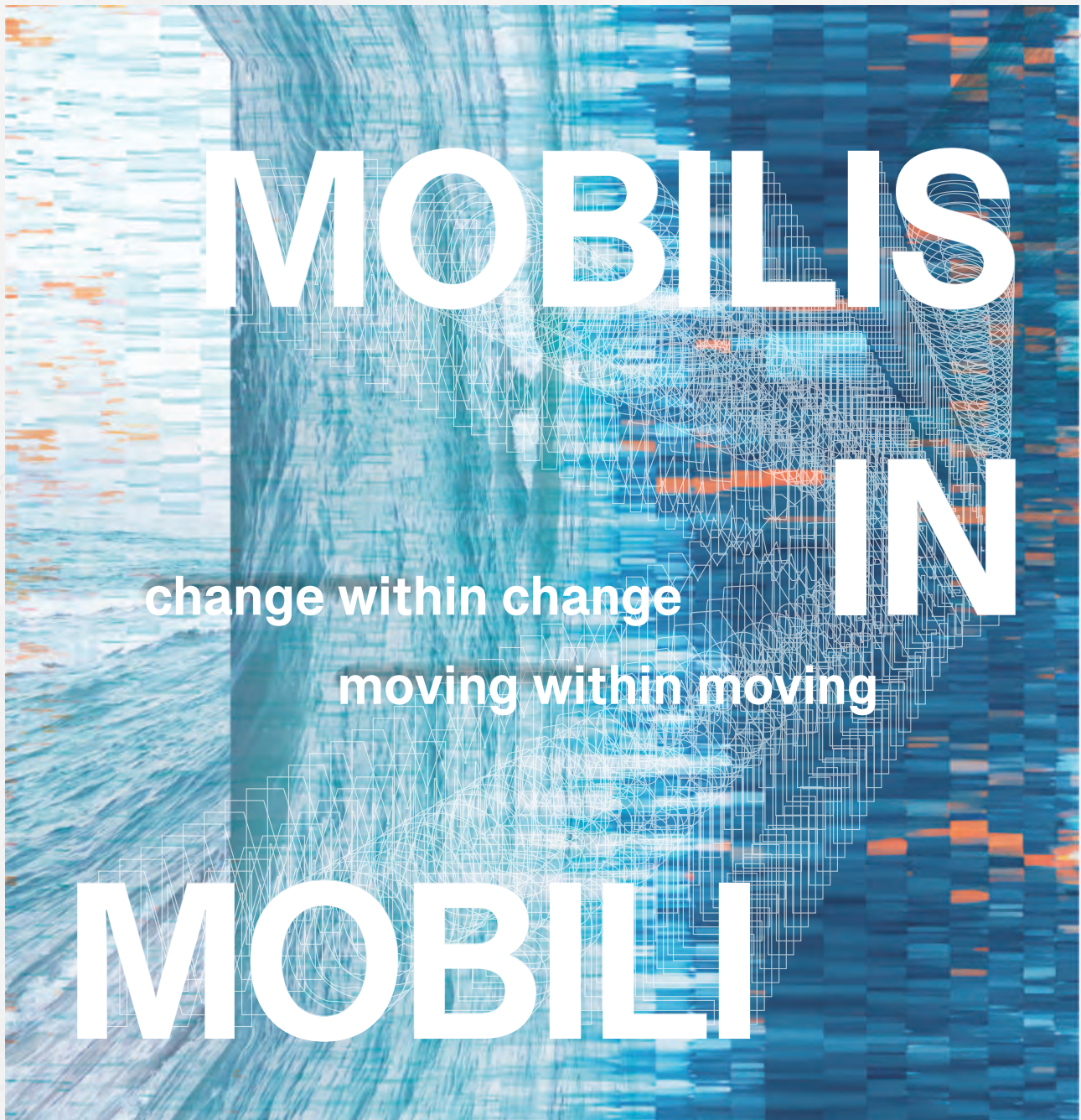




GROUP HOLDINGS

STOCK CODE 1101

TCC Group Holdings CO., LTD. 2024 ANNUAL REPORT



WEBSITE : <https://www.tccgroupholdings.com/en/>

(MOPS)MARKET OBSERVATION POST SYSTEM WEBSITE: mops.twse.com.tw

PUBLISHED ON MARCH 20th 2025

CONTENT

1. Letter to Shareholders	1
2. Corporate Governance Report	7
2.1 Information About Directors, President, Vice Presidents, Assistant Vice Presidents, and Department and Branch Managers	7
2.2 Corporate Governance Operations	59
2.3 Auditing CPA Fee Information	110
2.4 Information on the Change of CPA	110
2.5 The Chairman, President, and the Managers responsible for financial or accounting affairs have not, in the most recent year, been employed by the attesting CPA firm or its affiliated enterprises	110
2.6 Changes in equity transfer and equity pledge of directors, managers, and shareholders with more than 10% shareholding in the most recent year and up to the annual report's publication date.	111
2.7 Relationship information among the top ten shareholders by shareholding ratio	114
2.8 Combined Shareholding Percentage	115
3. Fundraising Status	117
3.1 Capital and Shares	117
3.2 List of Major Shareholders	120
3.3 Dividend Policy and Implementation	121
3.4 Impact of the Proposed Stock Dividend Distribution on TCC's Business Performance and Earnings Per Share	121
3.5 Employee and Director Compensation	122
3.6 Status of TCC's repurchase of its own shares	123
3.7 Corporate Bond Issuance	123
3.8 Preferred Stock Issuance	132
3.9 Global Depositary Receipt	134
3.10 Employee Stock Options	135
3.11 Restricted Employee Shares	135
3.12 New Shares Issuance due to Mergers, Acquisitions, or Acquisition of Shares of Other Companies	135
3.13 Implementation of Capital Allocation Plans	135

4 Business Overview	137
4.1 Business Operations	137
4.2 Market and Sales Overview	157
4.3 Employees for the Past Two Fiscal Years	169
4.4 Environmental Expenditures	170
4.5 Labor Relations	176
4.6 Information Security Management	179
4.7 Important Contracts	185
5. Review, Analysis, and Risk Matters of Financial Status and Performance	191
5.1 Financial Status	191
5.2 Financial Performance	192
5.3 Cash Flow	193
5.4 Impact of Major Capital Expenditures in the Most Recent Year on Financial Operations	194
5.5 Investment Policy for the Most Recent Year, Primary Reasons for Profit or Loss, Improvement Plans, and Investment Plans for the Coming Year	195
5.6 Analysis and Assessment of Risk Factors	195
5.7 Other important matters	214
6 Disclosure of Sustainability-related and Climate-related Financial Information	215
6.1 Implementation Plan for IFRS Sustainability Disclosure Standards	216
6.2 IFRS S1 and S2	219
7. Special notes	239
7.1 Information on affiliated entities	239
7.2 Private Placement Securities	239
7.3 Other required supplementary notes	239
7.4 Any Event in 2024 and as of the Date of This Annual Report That Had a Material Impact on Shareholders' Interests or Share Prices as Stated in Item 3 Paragraph 2 of Article 36 of the Securities and Exchange Law of Taiwan	239

01

Letter to Shareholders

Leading Change in a Turbulent World—
From Economic Shocks to the Intelligent RevolutionTCC GROUP HOLDINGS
CHAIRMAN

A handwritten signature in black ink, appearing to read "Alfonso" followed by a stylized flourish.

The year 2024 marked the beginning of Taiwan Cement's internationalization. We undertook numerous adjustments and transformations. However, over the past few months, global economic and geopolitical landscapes have experienced even more severe upheavals. Just as a butterfly's light wingbeat can stir a distant storm, geopolitical conflicts, monetary tightening, inflationary pressures, and disruptions in energy and food supply chains have intertwined, making the future increasingly unpredictable. Major economies are striving to balance economic growth and inflation control, yet global economic uncertainty remains high. In this era of drastic shifts in the global economy and technological landscape, how we lead change is not only crucial for our corporate survival but also determines how we can help to shape the future.

The International Monetary Fund (IMF) predicts that global economic growth in 2025 will fall below 3%. Confronted with the combined impacts of high inflation, high interest rates, trade protectionism, and geopolitical conflicts, many businesses find themselves in a "Frog Boiling Effect"—if they fail to recognize the gradually intensifying crisis, they will ultimately find themselves unable to escape. Financial markets have also experienced significant volatility due to shifts in global monetary policies, while emerging markets face mounting debt pressures amid a strong U.S. dollar and high-interest-rate environment. The divergence in national policy responses has further fragmented global economic rhythms.

Recent global events have caused trade and supply chain reconfiguration. The global trade recovery remains sluggish. Although supply chains initially showed signs of improvement, weak demand from major economies, rising nationalism, and increasing trade protectionism—along with the introduction of new tariff adjustments outside the WTO framework—have once again destabilized global supply chains. Against this backdrop, businesses that fall into the "Alligator Principle" trap—delaying decisions out of fear of losses—may miss crucial transformation opportunities. On the contrary, only by proactively positioning themselves can they secure a competitive edge amid shifting trade dynamics.

The Technological Revolution and the Intelligence Industry need the wisdom of the "Segal's law". In these turbulent times, technology is accelerating the transformation of the world. Artificial intelligence (AI), automation, and digital transformation are no longer distant trends but the most critical competitive advantages today. According to "Segal's law" if an organization simultaneously relies on two different management principles, it will ultimately fall into confusion. Therefore, businesses must clearly define their technological path and adhere to their core direction to avoid internal decision-making conflicts. In the face of uncertainty, certainty can only be found through technological innovation and sustainable development, to create new corporate values.

Over the past twelve months, AI has advanced in leaps and bounds, presenting multifaceted challenges for businesses. AI is penetrating industries at an unprecedented pace, from intelligent manufacturing to high-performance algorithms. The focus of corporate competition has shifted from simple cost control to data-driven decision-making, robotics, and near-full automation. In this digital revolution, merely adapting is not enough—we must shape the future before the future shapes us.

Taiwan Cement is doing just that by launching the Digital Intelligence Navigators (DIN) initiative, integrating AI with green technology to redefine eleven industries, spanning low-carbon building materials, resource recycling, and green energy. This is not just a strategic move—it is a mission to drive the intelligence industrial revolution.

Sustainability still is Taiwan Cement's Commitment to the World. A low-carbon future for the cement industry remains our unwavering goal, even as deeper technological innovations are required. As a representative of traditional manufacturing, the cement sector is at a critical transformation juncture. Climate change continues to worsen—by January 2025, global temperatures had already risen 1.75°C above pre-industrial levels. The United States' withdrawal from the Paris Agreement has further heightened global environmental policy uncertainty. In response to the "Herd Effect," businesses that merely follow market trends risk losing their competitive edge. Conversely, only those who take the lead will gain the advantage in the future.

Taiwan Cement chooses to be at the forefront by leveraging intelligent/smart technology to enhance production efficiency while actively developing low-clinker formulations and alternative materials to achieve low-carbon transformation. Through AI-driven sensors and intelligent analysis systems, we will not only improve energy efficiency management but also reduce resource waste, paving the way for a more sustainable future.

"Mobilis in Mobili" is TCC's this year's action slogan "To Embracing Change in a Changing World." In times of great transformation, we must continuously make choices and determine our future direction.

We stand at a historical crossroads, facing technological revolutions, geopolitical shifts, global economic transformations, and climate crises. The future of the world depends on our choices. In this transformation, those who passively adapt will ultimately be left behind, while those who bravely lead change will become the architects of the future.

We once thought of AI as merely a tool—now it is our partner. We once regarded green technology as an ideal—now it is a necessity for corporate survival. The progress of technology has transformed our fear of the unknown into the courage to embrace change. The future does not arrive suddenly—it is built by every choice we make today.

Like the stars in the night sky, each faint light does not exist in isolation but weaves together into a brilliant galaxy. As we move forward together, promoting intelligence and sustainability, this technological revolution will not only reshape the world but also stand as a testament to human wisdom and courage.

Amidst turbulent winds and shifting clouds, transformation fosters new frontiers. Through dynamic optimization, we seek direction in adversity.

2024 Annual Business Report

In 2024, TCC Group Holdings CO., LTD.'s (TCC) consolidated revenue reached NT\$154.6 billion, an increase of 41.4% from the previous year. Its consolidated operating gross profit margin was 21.2%, an increase of 2.4% from the previous year. Net income attributable to shareholders of the corporation reached NT\$11.259 billion, an increase of 40.8% from the previous year and earnings per share was NT\$1.45.

Consolidated Revenue	Consolidated operating gross profit margin	Increase compared to previous year	Net income attributable to shareholders of the corporation	Increase compared to previous year	Earnings Per Share
NT\$ 154.6 billion	21.2	2.4%	NT\$11.259 billion	40.8%	NT\$1.45

In the year 2024, due to differences in economic and financial structures among various countries, there were divergences in economic performance and inflation. According to data from the International Monetary Fund (IMF), the global economic growth rate was 3.2%, which is comparable to the previous year.

The United States and the Eurozone have benefited from a slowdown in inflation, relief in the labor market, and strong demand for artificial intelligence (AI) related products, leading to an overall economic recovery that has exceeded expectations. However, geopolitical risks, such as the ongoing Russia-Ukraine war, escalating tensions in the Middle East, and the intensification of U.S.-China trade conflicts, have dampened the optimistic economic outlook.

In Mainland China, domestic consumption and investment remain weak, despite the government's successive implementation of strong expansionary fiscal and monetary policies, including increased infrastructure spending and the adoption of monetary easing policies. These measures have alleviated economic pressures to some extent, however, whether these measures can sustain long-term effects remains to be seen.

TCC benefited from the profit contributions of the cement markets in Europe and Turkey, leading to a significant increase in overall profitability in the year 2024 compared to the previous year. The company's business portfolio has expanded to 11 industries and 14 international markets, achieving a diversified revenue structure and successfully reducing its reliance on the cement markets in China and Taiwan.

In recent years, TCC has been actively promoting a green transformation focused on carbon reduction and environmental sustainability. This initiative has not only shown significant results in the global cement industry but has also seen TCC actively invest in new energy sectors such as green energy, energy storage, charging stations, and batteries. These efforts have garnered affirmation from international rating agencies, including:

- The company was first included in both the Dow Jones Global Index and the Emerging Markets Index, becoming a dual constituent stock and setting a precedent in Taiwan's building materials industry.
- TCC has been recognized as a C+ PRIME top-rated company by ISS ESG, which is reputed as the most influential by foreign investors.
- Since 2022, the company has received an A rating for three consecutive years in the evaluations of various global indices by Morgan Stanley Capital International (MSCI).
- TCC has been selected by the TIME magazine as one of the "World's 500 Most Sustainable Companies for 2024."
- NHOA has been rated as a Tier 1 supplier in the global energy storage industry by Bloomberg New Energy Finance (BNEF), recognized as the most reliable supplier in the energy storage market, with its influence and technological innovation capabilities highly acknowledged.
- Atlante has achieved an ESG excellence milestone in the GRESB assessment: a score of 98/100 and a 5-star rating. This accomplishment signifies Atlante's alignment with the United Nations Sustainable Development Goals (SDGs) and the Paris Agreement on its sustainability roadmap.

- Molicel, the lithium battery brand under TCC, has its subsidiary, Molie Quantum Energy Corporation's factory located in Xiaogang, Kaohsiung, certified by both the U.S. LEED and Taiwan EEWB green building standards.
- TCC has been awarded a Long-Term Issuer Credit Rating of "BBB-" by two of the world's top three credit rating agencies, S&P and Fitch.

These achievements demonstrate TCC's outstanding performance in green transformation and sustainable development.

TCC has transformed from a traditional cement manufacturer into a new energy industry, committed to the corporate mission of shouldering the responsibilities of cultural development and the natural environment, and always actively responding to the needs of society at various times.

In 2025, based on cement market demand and capacity planning, the combined sales targets for Taiwan and China are 38.83 million metric tons of cement and clinker, and 6.96 million cubic meters of ready-mixed concrete. The combined sales targets for Europe and Turkey are 16.08 million metric tons of cement and clinker, and 8.22 million cubic meters of ready-mixed concrete.

Cross-border Synergy, Waste and Carbon Reduction

TCC actively assists industries such as semiconductors, steel, power plants, water treatment plants, construction materials, and government agencies in the non-hazardous treatment and resource recycling of industrial waste and household garbage. This strategy not only transforms wastes into alternative raw materials in the cement production process, reducing reliance on natural resources such as limestone, clay, silica sand, and iron slag, but also utilizes the calorific value generated during some sectors of the treatment of wastes or household garbage as alternative fuel. This further reduces the demand for coal and significantly decreases carbon emissions in the cement production process.

According to statistical data from 2019 to 2024, TCC has made significant progress in the use of alternative raw materials, with the proportion of alternative raw materials increasing from 19% to 20%. In terms of alternative fuels, since 2020, the thermal substitution rate has grown from 0.2% to 14%. Meanwhile, cement plants in Mainland China have also made notable advancements in the use of alternative raw materials, with the proportion increasing from 17% to 22%, and in terms of alternative fuels, the thermal substitution rate has grown from 1.25% to 19% since 2021. Additionally, cement plants in Europe and Turkey have achieved alternative raw material proportions of 3.3% and 1.9%, respectively, with thermal substitution rates reaching 34% and 25%, respectively.

Through these efforts, TCC can not only effectively utilize waste, achieve resource recycling, but also contribute significantly to environmental protection.

Low carbon building materials without compromising strength

To embrace the arrival of the carbon fee era, TCC has proactively launched a series of low-carbon building materials, dedicated to providing carbon reduction solutions for the construction and building industries. These innovative low-carbon building materials include low-carbon cement, low-carbon concrete, and Ultra-High Performance Concrete (UHPC).

The low-carbon Portland limestone cement produced by TCC not only fully replaces traditional high-carbon Portland cement but also offers higher early strength and lower carbon emissions. It has been produced and sold overseas for many years and has been well received by the market. Portland limestone cement manufactured in Taiwan has been fully promoted since it obtained the CNS (compliant with CNS15286 standards) certification in 2024. From 2026 onwards, TCC will exclusively produce and sell low-carbon cement products, including Portland limestone cement, globally. TCC obtained the Carbon Footprint Certification for Portland limestone low-carbon cement in Taiwan in 2024 and plans to obtain the Carbon Label Certification in 2025.

In the field of low-carbon concrete, Portland Limestone Cement (PLC) low-carbon concrete offers better workability, higher early strength, and improved constructability compared to traditional concrete, and it is more beneficial for carbon reduction. In 2024, 986,547 cubic meters of Portland Limestone Cement concrete were sold in Taiwan. Its application achievements include the Fubon Construction Insurance Headquarters Building, Dayi Technology Shanbi Plant, Lufu Construction T6 Project, Chang'an Grand Series, and the Yangde Art Museum, among others.

In addition, TCC has developed an innovative and high-value low-carbon building material—UHPC (Ultra-High Performance Concrete), which breaks the design limitations of traditional building materials and brings a new appearance and artistic charm to buildings. Compared to traditional concrete, UHPC has three significant features: it is thinner (thickness can be reduced by up to 75%), has a longer lifespan (up to 120 years), and reduces carbon emissions by 40% to 60%. TCC has established the largest UHPC R&D and manufacturing center in Taiwan at its Hoping Plant in Hualien. The curtain wall of the TCC DAKA Renewable Resources Recycling Center (RRRC) is made of UHPC material. This design not only won the A&D International Design Award in 2021 but also received the LCBA Low Carbon Building BCFd Diamond Level Certification. Furthermore, combining new energy technologies, TCC has developed the UHPC energy storage cabinet, EnergyArk, which features three major characteristics: fireproofing, heat insulation, and fire extinguishing. It has obtained 26 global patents and third-party liability insurance coverage, thoroughly addressing energy storage safety issues.

Sustainable green energy in service of life

TCC Green Energy Corporation, upholding the ultimate goal of achieving net zero, continuously seeks and develops new sites for renewable energy power plants, actively promoting various types of renewable energy.

The Taiwanese government is currently focusing on dual-use development projects for promoting photovoltaic energy, with a particular emphasis on aquavoltaics. This approach not only maintains the original purpose of land for aquaculture but also ensures the effective use of land required for energy development during the energy transition, essentially adding value to agriculture through photovoltaics. However, throughout the implementation of the aquavoltaics policy, many outdated and unsuitable agricultural laws and regulations have not been amended to align with the policy. This has caused numerous difficulties for industries during the setup process, thereby affecting the overall good intentions of the government's energy policy promotion.

Currently, in the Chiayi Photovoltaic Project, aside from the Chiayi Fishery and Solar Phase II 22.1MW project with its construction 50% completed, the remaining 50% also received the county government's consent for agricultural land use for agricultural facilities at the end of 2024. At present, the project is applying for a construction permit from the Energy Administration and plans to complete grid connection within four months after obtaining the permit.

In addition, the 50MW outdoor and 10MW indoor fishery and electricity symbiosis projects in the Longjiang section near Budai Harbor obtained establishment permits issued by the Energy Administration on December 17 and December 30, 2024, respectively. Currently, the projects are undergoing agricultural permit review processes.

Cement plants in Mainland China have fully utilized rooftops and unused areas to complete approximately 19MW of grid-connected photovoltaic systems, embodying the essence of self-construction, self-generation, and self-consumption. In the future, suitable locations will continue to be evaluated to further expand the scale of self-generated and self-consumed photovoltaic systems.

In terms of other renewable energy generation, expansion of the 9MW Phase II wind power project in the Zhangbin Xianxi Industrial Zone was completed and connected to the grid in April 2024. A new onshore wind power project, the Shimen Wind Power Project in New Taipei City, has also initiated its environmental impact assessment process. Meanwhile, in geothermal power generation, the Taitung Yanping geothermal project is expected to be connected to the grid by June 2025.

Global Energy Storage, Virtual Power Grid

Energy storage is a critical component in TCC's energy industrial chain layout. As of 2024, through its subsidiaries NHOA Energy and TCC Energy Storage Technology Corporation, the company has invested in a global installed capacity totaling approximately 2.5 GWh across Europe, the Americas, Australia, China, and Taiwan. In 2024, Taiwan alone has seen the deployment of 170 MW of E-dReg energy storage systems, including both self-built and intra-group construction projects, on the Taipower electricity trading platform, capturing a 39.4% market share. An additional 25 MW E-dReg energy storage system currently under construction is expected to commence operations in the first quarter of this year. Furthermore, the company has accumulated some AFC and s-Reg energy storage systems, which, combined with the operational scheduling of cement plants, provide up to 40 MW of supplementary reserve services, generating significant revenue for the group.

TCC Energy Storage Technology Corporation is actively promoting the application of energy storage systems. In addition to applying the developed EnergyArk1000 energy storage system in the Taiwanese market, the company completed its first demonstration site in Italy, Europe, in 2024. Furthermore, there are two sites under construction in Portugal and one in Mainland China, all expected to be operational in the first quarter of 2025. Additionally, in 2024, TCC Energy Storage Technology Corporation developed the new EnergyArk400 energy storage system, which requires less space and has a 1C discharge capability. This system can be widely applied in various fields, providing diverse and integrated green charging and storage solutions, including leasing options. The aim is to assist commercial and industrial enterprises in achieving energy transformation, RE100, green logistics, low-carbon backup power, and other goals, as well as meeting the obligations of major electricity consumers by providing safe, economical, and long-term solutions.

Integrated Charging and Storage, Green Mobility

With the rapid growth of the electric vehicle market, TCC Energy Storage Technology Corporation has established several DC-DC integrated charging stations, including those in Taipei's Zhishan and Lequn areas, as well as at the Su'ao Crayon Factory, and sugar factories in Hualien and Taitung. Additionally, it has passed several performance tests by Taiwan Power Company (Taipower) for the aggregation of energy storage from charging stations and factories into B2G (Battery to Grid) power transactions. TCC Energy Storage Technology Corporation will continue to promote the integration of the EnergyArk storage system with fast-charging stations. Starting from the end of the second quarter of 2025, it will combine the new EnergyArk400 in Southern Europe and Taiwan to support grid resilience, urban and corporate energy transitions in both regions, and provide fast and stable charging services for electric vehicle owners. TCC Energy Storage Technology Corporation has established a total of 12 charging stations in Taiwan and Mainland China. Additionally, Atlante has established over 1,300 charging stations and 5,300 charging points across Europe.

Multi-faceted Innovation of High-end Batteries

In recent years, our battery business has successfully established a unique market position and brand image, thanks to its leading technology. As one of the few manufacturers capable of providing safe, high-energy, and high-power output lithium batteries, we have achieved significant accomplishments in the next-generation high-power application field. We have attracted high-end supercar models, premium heavy-duty and off-road electric two-wheeler customers, and have successfully secured long-term orders for electric vertical takeoff and landing (eVTOL) aircraft.

Recently, in the consumer and industrial markets, we have continued to gain global market share in the drone sector and successfully entered the battery supply chain for new-generation battery backup unit (BBU) in AI data centers.

The unwavering mission of TCC is to explore the path to harmonious coexistence between civilization and nature, to serve life, and to pursue an ideal and sustainable way of living. We have always believed that within humanity, there exists a beautiful new world. It is this heart filled with eternal longing that drives the innate human instinct to create and build a dreamland.

TCC will continue to weave a scroll where human dreams and natural wonders intertwine. Together, we will stride hand in hand towards a new horizon of a peaceful and prosperous new era.

02

Corporate Governance Report

2.1 Information About Directors, President, Vice Presidents, Assistant Vice Presidents, and Department and Branch Managers

2.1.1 Director Information

I. The 24th Board of Directors (with a term of office from July 5, 2021, to May 20, 2024, re-elected at the Annual Shareholders’ Meeting on May 21, 2024)

The information on shares currently held was disclosed up to March 20, 2025.

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholdi ng Ratio %	Number of Shares	Shareholdi ng Ratio %
Chairman	R.O.C	Representative of Chia Hsin R.M.C. Corporation: Nelson An-ping Chang	Male 71 years old and above	2021/7/5	3 years	2018/6/22	3,032,923	0.05	3,835,997	0.05

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholdin g Ratio %	Number of Shares	Shareholdi ng Ratio %			Title	Name	Relation ship	
-	-	None	None	MBA, School of Business Administration, New York University Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Taiwan Prosperity Chemical Corporation Chairman of Chia Hsin Cement Corporation Independent Director of Synnex Technology International Corporation	Chairman and President of Molie Quantum Energy Corporation Chairman and President of HO-PING Ocean Renewable Resource Corporation Chairman and President of Ho-Ping Power Company Chairman of TCC Energy Storage Technology Corporation Chairman of TCC Chemical Corporation Chairman of TCC Sustainable Energy Investment Corporation Chairman of E-One Moli Energy Corp. Chairman of TCC Recycle Energy Technology Company Chairman of Dr. Cecilia Koo Botanic Conservation Center Chairman of Hualien County Private Hoping Sustainability Charity Foundation Chairman of In Service of Life Foundation Chairman of Energy Helper TCC Corporation Chairman of Ho-Ping Renewable Energy Company Chairman of TCC (Hangzhou) Management Company Limited Chairman of TCC (Hangzhou) Environmental Protection Technology Co., Ltd. Chairman of TCC Zhihe (Hangzhou) Environmental Protection Company Limited Chairman of NHOA S.A. Chairman of NHOA Corporate S.R.L. Vice Chairman of Ta-Ho Maritime Corporation Director of TCC Asset Management & Development Corporation Director of TCC Investment Corporation Director of Union Cement Traders Inc. Director of THC International S.A. Director of Hong Kong Cement Company Limited Director of TCC Hong Kong Cement (Yargoan) Limited Director of TCC Hong Kong Cement (QHC) Limited Director of TCC Hong Kong Cement (Philippines) Limited Director of TCC Hong Kong Cement Development Limited Director of TCC International (Liuzhou) Limited Director of TCC International (Guangxi) Limited Director of Upper Value Investments Limited Director of Prosperity Minerals (China) Ltd. Director of Wayly Holdings Limited Director of Chiefolk Company Limited Director of Hong Kong Cement Manufacturing Co. Ltd.	None	None	None	Note 1

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
							2,188,553	0.04	3,333,151	0.04
Director	R.O.C.	Representative of C. F. Koo Foundation: Eric Chen Sun Te	Male 51-70 years old	2021/7/5	3 years	2016/6/22	3,168,803	0.05	3,485,455	0.05
							230,984	0.00	230,984	0.00

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
4,599,808	0.06	None	None		Director of Jingyang Industrial Limited Director of TCC International (Hong Kong) Company Limited Director of TCC Liuzhou Company Limited Director of Prosperity Cement Investment Limited Director of Prosperity Minerals (International) Limited Director of Kiton Limited Director of Hensford Limited Director of Sure Kit Limited Director of Prime York Limited Director of Mega East Ltd. Director of TCC International (China) Company Limited Director of Scitus Cement (China) Holdings Limited Director of Scitus Cement (China) Operating Company Limited Director of Hexagon Holdings Limited Director of Hexagon II Holdings Limited Director of Hexagon III Holdings Limited Director of Hexagon IV Holdings Limited Director of Hexagon V Holdings Limited Director of Hexagon VIII Holdings Limited Director of Hexagon IX Holdings Limited Director of Hexagon XIII Holdings Limited Director of Hexagon XIV Holdings Limited Director of Upper Value Investment Limited Director of Kong On Cement Holdings Ltd. Director of Hong Kong Concrete Company Limited Director of Quon Hing Concrete Co Ltd. Authorized signatory, Prosperity Minerals (China) Limited Director of TCC Information Systems Corporation Director of Taiwan Transport & Storage Co., Ltd. Director of Ta-Ho Maritime (SG) Corporation Director of Ho-Ping Industrial Port Corporation Director of TCC International Holdings Limited Director of TCC Hong Kong Cement (BVI) Holdings Limited Director of TCC Hong Kong Cement (International) Limited Director of TCC Development Limited Director of TCC International Limited Director of Ulexite Investments Limited Director of TCC Europe Holdings B.V. Director of TCC Energy Storage (Dutch) Holdings B.V. Director of TCC Oyak Amsterdam Holdings B.V. Director of E-One Holdings Ltd. Director of E-One Moli Holdings (Canada) Ltd. Director of E-One Moli Energy (Canada) Ltd. Director of Taiwan Stock Exchange Corporation Director of CTCL Corporation Director of Chia Hsin R.M.C. Corporation Director of Cheng Hsin General Hospital Convener of the Corporate Sustainable Development Committee Member of the Nomination Committee, etc.	None	None	None	
-	-	None	None	M.B.A., University of Missouri B.A., National Chengchi University Chairman of Taipei Fubon Commercial Bank Co., Ltd. Director of Zoyi Capital Ltd.	Director of Lion Travel Service Co., Ltd. Independent Director of USI Corporation Independent Non-executive Director of Uni-President China Holdings Ltd. Supervisor of Fubon Bank (China), etc.	None	None	None	
-	-	None	None	President of North Asia and Greater China, Fullerton Financial Holdings Pte. Ltd. CEO of Corporate Banking and President, CTBC Financial Holding Co., Ltd. Country Officer and Country Head of Corporate Bank in Taiwan, Citigroup					

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Director	R.O.C.	Representative of Chia Hsin Cement Corporation: Kang-Lung (Jason) Chang	Male 51-70 years old	2021/7/5	3 years	2012/6/21	217,859,506	3.56	239,629,776	3.17
							-	-	-	-
Director	R.O.C.	Representative of International CSRC Investment Holdings Co., Ltd.: Kenneth C.M. Lo	Male 71 years old and above	2021/7/5	3 years	2002/6/18	103,548,831 *2,000,000	1.69 *1.00	113,896,285 *2,000,000	1.51 *1.00
							-	-	-	-
Director	R.O.C.	Representative of Fu Pin Investment Co., Ltd.: Por-Yuan Wang	Male 71 years old and above	2021/7/5	3 years	2003/6/26	77,482,477	1.27	85,225,165	1.13
							-	-	-	-
Director	R.O.C.	Representative of Tai Ho Farming Co., Ltd.: Kung-Yi Koo	Male 31-50 years old	2021/7/5	3 years	2018/6/22	6,043,126	0.10	6,647,005	0.09
							561,815	0.01	760,947	0.01

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	MS in Management Studies, Sloan School of Management, Massachusetts Institute of Technology	Chairman of Chia Hsin Cement Corporation Chairman of Tong Yang Chia Hsin International Corporation Chairman of Yun Chia International Co., Ltd. Chairman of Chia Hsin Foundation Vice Chairman of Epoch Foundation Director of Chia Hsin Property Management and Development Corp. Director of Chia Pei International Corporation Director of Chia Hsin Pacific Ltd. Chairman of Taiwan Cement Manufacturers' Association, etc.	None	None	None	
264,484	0.00	None	None	President of Chia Hsin Cement Corporation					
-	-	None	None	MS in Finance, Manderson School of Business, The University of Alabama Honorary					
-	-	None	None	Chairman of O-Bank Chairman of O-Bank	Managing Director of O-Bank Member of the Nomination Committee, etc.	None	None	None	
-	-	None	None	Ph.D., Carnegie Mellon University Chairman of Sercomm Corporation Chairman of Taiwan Venture Capital Association	Honorary Chairman of Sercomm Corporation Chairman of Pacific Venture Partners Chairman of K.T. Li Foundation for Development of Science and Technology Vice Chairman of Fair Winds Foundation Director of Prosperity Dielectrics Co., Ltd. Independent Director of UPC Technology Corporation, etc.	None	None	None	
-	-	None	None	Chairman of Monte Jade Science and Technology Association of Taiwan					
-	-	None	None	MBA, The Wharton School of University of Pennsylvania Vice President of Morgan Stanley Investment Banking Department	Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Linyuan Advanced Materials Technology Co., Ltd. Chairman of Circular Commitment Company Chairman of Yun Cheng Investment Corporation Chairman of CS Development & Investment Co. Chairman of Consolidated Resource Company Chairman of Taiwan Transport & Storage Co., Ltd. Chairman of CCC USA Corp. Chairman of Continental Carbon Company Director of Synpac (North Carolina), Inc. Director of Synpac GP Corporation Director of CSRC (BVI) LTD. Director of CSRC (SINGAPORE) PTE LTD. Director of SYN PAC LTD. Director of Continental Carbon Nanotechnologies, Inc. Director of Continental Carbon OYAK (Netherlands) B.V. Director of E-One Moli Energy Corp. Director of TCC Recycle Energy Technology Company Director of Ho-Ping Power Company Director of Hsing Cheng Investment Co., Ltd. Director of Tai Ho Farming Co., Ltd. Director of Chiefolk Company Limited Director of Hong Kong Cement Company Limited Director of Kong On Cement Holdings Ltd. Director of China Steel Chemical Corporation Supervisor of TCC (Hangzhou) Management Company Limited, etc.	None	None	None	
-	-	None	None	Vice Chairman of Taiwan Cement Corporation Chairman of Taiwan Prosperity Chemical Corporation					

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Director	R.O.C	Representative of Fu Pin Investment Co., Ltd.: Chi-Chia Hsieh	Male 71 years old and above	2021/7/5	3 years	2003/6/26	77,482,477	1.27	85,225,165	1.13
							494,397	0.01	543,801	0.01
Director	R.O.C	Representative of Chia Hsin Cement Corporation: Chi-Te Chen	Male 51-70 years old	2021/7/5	3 years	2012/6/21	217,859,506	3.56	239,629,776	3.17
							67,663	0.00	74,691	0.00
Director	R.O.C	Representative of Heng Qiang Investment Co., Ltd.: Chien Wen	Male 71 years old and above	2021/7/5	3 years	2003/6/26	102,240,983	1.67	112,457,746	1.49
							-	-	-	-
Director	R.O.C	Representative of Heng Qiang Investment Co., Ltd.: Chun-Ying Liu	Female 31-50 years old	2021/7/5	3 years	2003/6/26	102,240,983	1.67	112,457,746	1.49
							-	-	-	-

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	Ph.D. in Electrical Engineering, University of California Santa Clara	Chairman of Microelectronics Technology Inc. Chairman of Jupiter Network Corp. Chairman of Welltop Technology Co., Ltd. Chairman of Taicom Capital Limited Chairman of IQE Taiwan Corporation Director of Jupiter Technology (Wuxi) Co., Ltd. Director of Jupiter Technology (Wuxi) Co., Ltd. Director of MTI Laboratory Inc. Director of RadioComp ApS Director of TCM Limited Director of Bright LED Electronics Corp. Director of Henan Bright Crystal Company Limited Director of KoBrite Corp. Director of Bright Crystal Company Limited Director of KOPIN Corp. Independent Director of Innolux Corporation, etc.	None	None	None	
-	-	None	None						
-	-	None	None	MBA, University of California Santa Clara	Chairman of Chien Hwei Investment Co., Ltd. Chairman of Rock Publishing International Chairman of Golden Canyon Venture Capital Investment Co., Ltd. Chairman of Golden Canyon II Venture Capital Investment Co., Ltd. Chairman of Chien Huei Cultural & Educational Foundation Chairman of Chien Kuo Foundation for Arts and Culture Vice Chairman of Chien Kuo Construction Co., Ltd. Director of Chia Hsin Cement Corporation Director of Chia Hsin Property Management and Development Corp., etc.	None	None	None	
6,212	0.00	None	None						
-	-	None	None	MBA, The Wharton School of University of Pennsylvania	Supervisor of Winbond Electronics Corporation	None	None	None	
-	-	None	None						
-	-	None	None	CFO of Winbond Electronics Corporation	President of Cathay Securities Investment Trust	None	None	None	
-	-	None	None						
-	-	None	None	EMBA, College of Management, National Taiwan University	Partner, Tsar and Tsai Law Firm Director, Chinatrust Investment Co., Ltd. Independent Director of JARLLYTEC Co., Ltd. Independent Director of MetaEdge Corporation, etc.	None	None	None	
-	-	None	None	LLM, Northwestern University LLB, National Taiwan University					

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Independent Director	R.O.C.	Yu-Cheng Chiao	Male 51-70 years old	2021/7/5	3 years	2012/6/21	-	-	-	-
Independent Director	R.O.C.	Victor Wang	Male 71 years old and above	2021/7/5	3 years	2013/6/21	-	-	-	-
Independent Director	R.O.C.	Lynette Ling-Tai Chou	Female 51-70 years old	2021/7/5	3 years	2018/6/22	1 *200,000	0.00 *0.10	1 *200,000	0.00 *0.10

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	MS in Electronic Engineering, University of Washington BS in Communications Engineering, National Chiao Tung University Chairman of Chin Xin Investment Co., Ltd. Chairman of Nuvoton Technology Corporation Chairman of Walsin Lihwa Corporation Chairman of Taiwan Electrical and Electronic Manufacturers' Association Chairman of Vishay Capella Microsystems (Taiwan) Limited	Chairman and CEO of Winbond Electronics Corporation Director of Nuvoton Technology Corporation Director of Walsin Lihwa Corporation Director of Walsin Technology Corporation Director of Jin Cheng Construction Co., Ltd. Director of Walsin Lihwa Holdings Limited Director of Walsin Specialty Steel Holdings Limited Director of Walsin Specialty Steel Ltd. Director of United Industrial Gases Co., Ltd. Director of Song Yong Investment Corporation Director of MiTAC Holdings Corporation Director of Baystar Holdings Ltd. Director of Marketplace Management Limited Director of Newfound Asian Corporation Director of Peaceful River Corporation Director of Pigeon Creek Holding Co., Ltd. Director of Winbond Electronics Corporation America Director of Winbond Int'l Corporation Director of Landmark Group Holdings Ltd. Director of Nuvoton Investment Holding Ltd. Director of Cheng Hsin General Hospital, etc.	None	None	None	
-	-	None	None	BA in Accounting, Soochow University EMBA, National Taiwan University Vice Chairman of Deloitte Taiwan	Director of Yageo Corporation Director of YFY Inc. Independent Director of Fulin Plastic Industry (Cayman) Holding Co., Ltd. Independent Director of Taiwan Navigation Co., Ltd. Independent Director of DACIN Construction Co., Ltd. Convener of TCC's Audit Committee, Convener of the Nomination Committee, Member of the Remuneration Committee, Member of the Risk Management Committee Member of the Corporate Sustainable Development Committee and Member of the Information Security Management Committee, etc.	None	None	None	
2	0.00	None	None	PhD of Accounting, University of Houston Master of Accounting, University of Houston BS in International Business, Department of Commerce, National Taiwan University Dean of Student Affairs, Associate Dean of the College of Commerce, Head of the Department of Accounting, and Full-time Professor at National Chengchi University Professor, Guanghua School of Management Managing Supervisor, Taiwan Public Television Service Foundation Independent Director of F-MStar Co., Ltd. Independent Director of Chief Telecom Inc.	Independent Director of Next Commercial Bank Co., Ltd. Emeritus and adjunct professor of the Department of Accounting, National Chengchi University Convener of TCC's Remuneration Committee, Member of the Audit Committee, Member of the Risk Management Committee Member of the Nomination Committee and Member of the Corporate Sustainable Development Committee, etc.	None	None	None	

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Sharehold ing Ratio %	Number of Shares	Sharehold ing Ratio %
Independent Director	R.O.C.	Mei-Hua Lin	Female 71 years old and above	2021/7/5	3 years	2021/7/5	-	-	-	-
Independent Director	R.O.C.	Sherry S. L. Lin	Female 71 years old and above	2021/7/5	3 years	2021/7/5	-	-	-	-

Note 1: When the President or an equivalent position (top manager) and the Chairman are the same person, spouses, or first-degree relatives, TCC should disclose the reason, rationale, necessity, and countermeasures—such as increasing the number of independent directors or ensuring that more than half of the directors are not also employees or managers: Due to the diverse business operations of each subsidiary within the TCC Group, the Group CEO is responsible for overseeing the overall management of affiliated enterprises, implementing board resolutions, and supervising the managers of TCC and each affiliated enterprise. This role differs from that of TCC's President. Therefore, the Board of Directors has resolved to appoint a separate President to oversee the operations of TCC.

Note 1: The "*" in this table represents preferred stocks.

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Sharehold ing Ratio %	Number of Shares	Sharehold ing Ratio %			Title	Name	Relation ship	
-	-	None	None	PhD of Accounting, Drexel University Independent Director of Shin Kong Financial Holding Co., Ltd. Dean and Professor, Department of Accounting, National Cheng Chi University	-	None	None	None	
-	-	None	None	LLB, National Taiwan University Director of Cathay Financial Holding Co., Ltd. Director of Tong Lung Metal Industry Co., Ltd. Independent Director of Accton Technology Corporation Senior Consultant of Lee and Li, Attorneys-at-Law	Chairman of Bar Koo Investment Corporation Chairman of Bar Koo Consultation Corporation Chairman of Sheng Fu Investment Co., Ltd. Chairman of Sheng Fu Power Investment Co., Ltd. Chairman of Sheng Fu Land Co., Ltd. Chairman of Cheng Yu Investment Corporation Chairman of Cheng Yu Financial Consultation Corporation Chairman of Cheng Yu Sheng Investment Corporation Independent Director of Taiwan FamilyMart Co., Ltd. Special Senior Consultant of Lee and Li, Attorneys-at-Law Convener of TCC's Risk Management Committee, Member of the Audit Committee, Member of the Remuneration Committee, Member of the Nomination Committee, Member of the Corporate Sustainable Development Committee and Member of the Information Security Management Committee, etc.	None	None	None	

II. The 25th Board of Directors (elected at the Annual Shareholders' Meeting on May 21, 2024)

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholdng Ratio %	Number of Shares	Shareholdng Ratio %
Chairman	R.O.C.	Representative of Chia Hsin R.M.C. Corporation: Nelson An-ping Chang	Male 71 years old and above	2024/5/21	3 years	2018/6/22	3,335,997	0.04	3,835,997	0.05

The information on shares currently held was disclosed up to March 20, 2025.

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholdng Ratio %	Number of Shares	Shareholdng Ratio %			Title	Name	Relation ship	
-	-	None	None	MBA, School of Business Administration, New York University Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Taiwan Prosperity Chemical Corporation Chairman of Chia Hsin Cement Corporation Independent Director of Synnex Technology International Corporation	Chairman and President of Molie Quantum Energy Corporation Chairman and President of HO-PING Ocean Renewable Resource Corporation Chairman and President of Ho-Ping Power Company Chairman of TCC Energy Storage Technology Corporation Chairman of TCC Chemical Corporation Chairman of TCC Sustainable Energy Investment Corporation Chairman of E-One Moli Energy Corp. Chairman of TCC Recycle Energy Technology Company Chairman of Dr. Cecilia Koo Botanic Conservation Center Chairman of Hualien County Private Hoping Sustainability Charity Foundation Chairman of In services of Life Foudation Chairman of Energy Helper TCC Corporation Chairman of Ho-Ping Renewable Energy Company Chairman of TCC (Hangzhou) Management Company Limited Chairman of TCC (Hangzhou) Environmental Protection Technology Co., Ltd. Chairman of TCC Zhihe (Hangzhou) Environmental Protection Company Limited Chairman of NHOA S.A. Chairman of NHOA Corporate S.R.L. Vice Chairman of Ta-Ho Maritime Corporation Director of TCC Asset Management & Development Corporation Director of TCC Investment Corporation Director of Union Cement Traders Inc. Director of THC International S.A. Director of Hong Kong Cement Company Limited Director of TCC Hong Kong Cement (Yargoan) Limited Director of TCC Hong Kong Cement (QHC) Limited Director of TCC Hong Kong Cement (Philippines) Limited Director of TCC Hong Kong Cement Development Limited Director of TCC International (Liuzhou) Limited Director of TCC International (Guangxi) Limited Director of Upper Value Investments Limited Director of Prosperity Minerals (China) Ltd. Director of Wayly Holdings Limited Director of Chiefolk Company Limited Director of Hong Kong Cement Manufacturing Co. Ltd. Director of Jingyang Industrial Limited Director of TCC International (Hong Kong) Company Limited Director of TCC Liuzhou Company Limited Director of Prosperity Cement Investment Limited Director of Prosperity Minerals (International) Limited Director of Kiton Limited Director of Hensford Limited Director of Sure Kit Limited Director of Prime York Limited Director of Mega East Ltd. Director of TCC International (China) Company Limited Director of Scitus Cement (China) Holdings Limited Director of Scitus Cement (China) Operating Company Limited	None	None	None	Note1

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
							2,408,351	0.03	3,333,151	0.04
Director	R.O.C.	Representative of Tai Ho Farming Co., Ltd.: Roman Cheng	Male 51-70 years old	2024/5/21	3 years	2018/6/22	6,647,005	0.09	6,647,005	0.09
							-	-	105,000	0.00

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
4,599,808	0.06	None	None		Director of Hexagon Holdings Limited Director of Hexagon II Holdings Limited Director of Hexagon III Holdings Limited Director of Hexagon IV Holdings Limited Director of Hexagon V Holdings Limited Director of Hexagon VIII Holdings Limited Director of Hexagon IX Holdings Limited Director of Hexagon XIII Holdings Limited Director of Hexagon XIV Holdings Limited Director of Upper Value Investment Limited Director of Kong On Cement Holdings Ltd. Director of Hong Kong Concrete Company Limited Director of Quon Hing Concrete Co Ltd. Authorized signatory, Prosperity Minerals (China) Limited Director of TCC Information Systems Corporation Director of Taiwan Transport & Storage Co., Ltd. Director of Ta-Ho Maritime (SG) Corporation Director of Ho-Ping Industrial Port Corporation Director of TCC International Holdings Limited Director of TCC Hong Kong Cement (BVI) Holdings Limited Director of TCC Hong Kong Cement (International) Limited Director of TCC Development Limited Director of TCC International Limited Director of Ulexite Investments Limited Director of TCC Europe Holdings B.V. Director of TCC Energy Storage (Dutch) Holdings B.V. Director of TCC Oyak Amsterdam Holdings B.V. Director of E-One Holdings Ltd. Director of E-One Moli Holdings (Canada) Ltd. Director of E-One Moli Energy (Canada) Ltd. Director of Taiwan Stock Exchange Corporation Director of CTCI Corporation Director of Chia Hsin R.M.C. Corporation Director of Cheng Hsin General Hospital Convener of the Corporate Sustainable Development Committee Member of the Nomination Committee, etc.	None	None	None	
-	-	None	None	MBA, National Cheng Chi University	Chairman of Atlante S.R.L. Chairman of TCC Investment Corporation Chairman of Union Cement Traders Inc. Director and President of TCC Energy Storage Technology Corporation Director of TCC Sustainable Energy Investment Corporation Director of TCC Asset Management & Development Corporation Director of Ho-Ping Power Company Director of Hong Kong Cement Manufacturing Co. Ltd. Director of NHOA Energy S.R.L. Director of NHOA Corporate S.R.L.	None	None	None	
-	-	None	None	President of Taipei Fubon Commercial Bank Co., Ltd.	Director of TCC Energy Storage (Dutch) Holdings B.V. Director of Hualien County Private Hoping Sustainability Charity Foundation Director of In services of Life Foundation Executive Director and President of TCC Energy Storage (Hangzhou)Technology Company Limited Executive Director of TCC Energy Storage (Juron)Technology Company Limited Supervisor of Ta-Ho Maritime Corporation Member of TCC's Corporate Sustainable Development Committee, etc.				

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Director	R.O.C.	Representative of International CSRC Investment Holdings Co., Ltd.: Kenneth C.M. Lo	Male 71 years old and above	2024/5/21	3 years	2002/6/18	113,896,285 *2,000,000	1.51 *1.00	113,896,285 *2,000,000	1.51 *1.00
							-	-	-	-
Director	R.O.C.	Representative of Hsing Cheng Investment Co., Ltd.: Yu-Cheng Chiao	Male 51-70 years old	2024/5/21	3 years	2024/5/21	4,000,929	0.05	4,000,929	0.05
							-	-	-	-
Director	R.O.C.	Representative of C. F. Koo Foundation: Eric Chen Sun Te	Male 51-70 years old	2024/5/21	3 years	2016/6/22	3,485,455	0.05	3,485,455	0.05
							230,984	0.00	230,984	0.00
Director	R.O.C.	Representative of Chia Hsin Cement Corporation: Kang-Lung (Jason) Chang	Male 51-70 years old	2024/5/21	3 years	2012/6/21	239,629,776	3.17	239,629,776	3.17
							-	-	-	-

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	MS in Finance, Manderson School of Business, The University of Alabama	Managing Director of O-Bank Member of the Nomination Committee, etc.	None	None	None	
-	-	None	None	Honorary Chairman of O-Bank Chairman of O-Bank					
-	-	None	None	MS in Electronic Engineering, University of Washington BS in Communications Engineering, National Chiao Tung University Chairman of Chin Xin Investment Co., Ltd. Chairman of Nuvoton Technology Corporation	Chairman and CEO of Winbond Electronics Corporation Director of Nuvoton Technology Corporation Director of Walsin Lihwa Corporation Director of Walsin Technology Corporation Director of Jin Cheng Construction Co., Ltd. Director of Walsin Lihwa Holdings Limited Director of Walsin Specialty Steel Holdings Limited Director of Walsin Specialty Steel Ltd. Director of United Industrial Gases Co., Ltd. Director of Song Yong Investment Corporation Director of MITAC Holdings Corporation Director of Baystar Holdings Ltd. Director of Marketplace Management Limited Director of Newfound Asian Corporation Director of Peaceful River Corporation Director of Pigeon Creek Holding Co., Ltd. Director of Winbond Electronics Corporation America Director of Winbond Int'l Corporation Director of Landmark Group Holdings Ltd. Director of Nuvoton Investment Holding Ltd. Director of Cheng Hsin General Hospital, etc.	None	None	None	
-	-	None	None	Chairman of Walsin Lihwa Corporation Chairman of Taiwan Electrical and Electronic Manufacturers' Association Chairman of Vishay Capella Microsystems (Taiwan) Limited					
-	-	None	None	M.B.A., University of Missouri B.A., National Chengchi University Chairman of Taipei Fubon Commercial Bank Co., Ltd. Director of Zoyi Capital Ltd. President of North Asia and Greater China, Fullerton Financial Holdings Pte. Ltd. CEO of Corporate Banking and President, CTBC Financial Holding Co., Ltd. Country Officer and Country Head of Corporate Bank in Taiwan, Citigroup	Director of Lion Travel Service Co., Ltd. Independent Director of USI Corporation Independent Non-executive Director of Uni-President China Holdings Ltd. Supervisor of Fubon Bank (China), etc.	None	None	None	
-	-	None	None						
-	-	None	None	MS in Management Studies, Sloan School of Management, Massachusetts Institute of Technology President of Chia Hsin Cement Corporation	Chairman of Chia Hsin Cement Corporation Chairman of Tong Yang Chia Hsin International Corporation Chairman of Yun Chia International Co., Ltd. Chairman of Chia Hsin Foundation Vice Chairman of Epoch Foundation Director of Chia Hsin Property Management and Development Corp. Director of Chia Pei International Corporation Director of Chia Hsin Pacific Ltd. Chairman of Taiwan Cement Manufacturers' Association, etc.	None	None	None	
264,484	0.00	None	None						

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Director	R.O.C.	Representative of Heng Qiang Investment Co., Ltd.: Por-Yuan Wang	Male 71 years old and above	2024/5/21	3 years	2003/6/26	112,457,746	1.49	112,457,746	1.49
							-	-	-	-
Director	R.O.C.	Representative of CS Development & Investment Co.: Kung-Yi Koo	Male 31-50 years old	2024/5/21	3 years	2018/6/22	30,860,136 *782,130	0.41 *0.39	30,860,136 *782,130	0.41 *0.39
							700,451	0.01	760,947	0.01
Director	R.O.C	Representative of Fu Pin Investment Co., Ltd.: Chien Wen	Male 71 years old and above	2024/5/21	3 years	2003/6/26	85,225,165	1.13	85,225,165	1.13
							-	-	-	-
Director	R.O.C.	Representative of Chia Hsin Cement Corporation: Liz Wang	Female 51-70 years old	2024/5/21	3 years	2012/6/21	239,629,776	3.17	239,629,776	3.17
							-	-	-	-

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	Ph.D., Carnegie Mellon University Chairman of Sercomm Corporation	Honorary Chairman of Sercomm Corporation Chairman of Pacific Venture Partners Chairman of K.T. Li Foundation for Development of Science and Technology Vice Chairman of Fair Winds Foundation Director of Prosperity Dielectrics Co., Ltd. Independent Director of UPC Technology Corporation, etc.	None	None	None	
-	-	None	None	Chairman of Taiwan Venture Capital Association Chairman of Monte Jade Science and Technology Association of Taiwan					
-	-	None	None	MBA, The Wharton School of University of Pennsylvania Vice President of Morgan Stanley Investment Banking Department	Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Linyuan Advanced Materials Technology Co., Ltd. Chairman of Circular Commitment Company Chairman of Yun Cheng Investment Corporation Chairman of CS Development & Investment Co. Chairman of Consolidated Resource Company Chairman of Taiwan Transport & Storage Co., Ltd. Chairman of CCC USA Corp. Chairman of Continental Carbon Company Director of Synpac (North Carolina), Inc. Director of Synpac GP Corporation Director of CSRC (BVI) LTD. Director of CSRC (SINGAPORE) PTE LTD. Director of SYNPAK LTD. Director of Continental Carbon Nanotechnologies, Inc. Director of Continental Carbon OYAK (Netherlands) B.V. Director of E-One Moli Energy Corp. Director of TCC Recycle Energy Technology Company Director of Ho-Ping Power Company Director of Hsing Cheng Investment Co., Ltd. Director of Tai Ho Farming Co., Ltd. Director of Chiefolk Company Limited Director of Hong Kong Cement Company Limited Director of Kong On Cement Holdings Ltd. Director of China Steel Chemical Corporation Supervisor of TCC (Hangzhou) Management Company Limited, etc.	None	None	None	
-	-	None	None	Vice Chairman of Taiwan Cement Corporation Chairman of Taiwan Prosperity Chemical Corporation					
-	-	None	None	MBA, The Wharton School of University of Pennsylvania Supervisor of Winbond Electronics Corporation	-	None	None	None	
-	-	None	None	CFO of Winbond Electronics Corporation President of Cathay Securities Investment Trust					
-	-	None	None	MBA, Waseda University, Japan CEO of Chia Hsin Cement Corporation	Chairman of Jaho Life Plus+ Management Corp. Director of Tong Yang Chia Hsin International Corporation Director of Chia Hsin Green Electricity Corporation President of Chia Hsin Cement Corporation Vice Chairman of Taiwan Women on Boards Association Member of TCC's Risk Management Committee and Corporate Sustainable Development Committee, etc.	None	None	None	
-	-	None	None	Vice Chairman of TAS Board					

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Independent Director	R.O.C.	Victor Wang	Male 71 years old and above	2024/5/21	3 years	2013/6/21	-	-	-	-
Independent Director	R.O.C.	Lynette Ling-Tai Chou	Female 51-70 years old	2024/5/21	3 years	2018/6/22	1 *200,000	0.00 *0.10	1 *200,000	0.00 *0.10
Independent Director	R.O.C.	Sherry S. L. Lin	Female 71 years old and above	2024/5/21	3 years	2021/7/5	-	-	-	-

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	BA in Accounting, Soochow University EMBA, National Taiwan University Vice Chairman of Deloitte Taiwan	Director of Yageo Corporation Director of YFY Inc. Independent Director of Fulin Plastic Industry (Cayman) Holding Co., Ltd. Independent Director of Taiwan Navigation Co., Ltd. Independent Director of DACIN Construction Co., Ltd. Convener of TCC's Audit Committee, Convener of the Nomination Committee, Member of the Remuneration Committee, Member of the Risk Management Committee Member of the Corporate Sustainable Development Committee and Member of the Information Security Management Committee, etc.	None	None	None	
2	0.00	None	None	PhD of Accounting, University of Houston Master of Accounting, University of Houston BS in International Business, Department of Commerce, National Taiwan University Dean of Student Affairs, Associate Dean of the College of Commerce, Head of the Department of Accounting, and Full-time Professor at National Chengchi University Professor, Guanghua School of Management Managing Supervisor, Taiwan Public Television Service Foundation Independent Director of F-MStar Co., Ltd. Independent Director of Chief Telecom Inc.	Independent Director of Next Commercial Bank Co., Ltd. Emeritus and adjunct professor of the Department of Accounting, National Chengchi University Convener of TCC's Remuneration Committee, Member of the Audit Committee, Member of the Risk Management Committee Member of the Nomination Committee and Member of the Corporate Sustainable Development Committee, etc.	None	None	None	
-	-	None	None	LLB, National Taiwan University Director of Cathay Financial Holding Co., Ltd. Director of Tong Lung Metal Industry Co., Ltd. Independent Director of Accton Technology Corporation Senior Consultant of Lee and Li, Attorneys-at-Law	Chairman of Bar Koo Investment Corporation Chairman of Bar Koo Consultation Corporation Chairman of Sheng Fu Investment Co., Ltd. Chairman of Sheng Fu Power Investment Co., Ltd. Chairman of Sheng Fu Land Co., Ltd. Chairman of Cheng Yu Investment Corporation Chairman of Cheng Yu Financial Consultation Corporation Chairman of Cheng Yu Sheng Investment Corporation Independent Director of Taiwan FamilyMart Co., Ltd. Special Senior Consultant of Lee and Li, Attorneys-at-Law Convener of TCC's Risk Management Committee, Member of the Audit Committee, Member of the Remuneration Committee, Member of the Nomination Committee, Member of the Corporate Sustainable Development Committee and Member of the Information Security Management Committee, etc	None	None	None	

Title	Nationality or Place of Registration	Name	Gender Age Distribution	Selection (Appointment) Date	Term of Office	Initial Date of Election	Shares Held When Elected		Current Number of Shares Held	
							Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Independent Director	R.O.C	Ruu Tian Chang	Female 71 years old and above	2024/5/21	3 years	2024/5/21	-	-	-	-
Independent Director	R.O.C.	Nigel N. T. Li	Male 51-70 years old	2024/5/21	3 years	2024/5/21	-	-	-	-

Note 1: When the President or an equivalent position (top manager) and the Chairman are the same person, spouses, or first-degree relatives, TCC should disclose the reason, rationale, necessity, and countermeasures—such as increasing the number of independent directors or ensuring that more than half of the directors are not also employees or managers: Due to the diverse business operations of each subsidiary within the TCC Group, the Group CEO is responsible for overseeing the overall management of affiliated enterprises, implementing board resolutions, and supervising the managers of TCC and each affiliated enterprise. This role differs from that of TCC's President. Therefore, the Board of Directors has resolved to appoint a separate President to oversee the operations of TCC.

Note 2: Former Independent Director Mr. Nigel N. T. Li resigned on October 9, 2024. The Company will elect a new independent director to fill the vacancy at the 2025 Annual Shareholders' Meeting.

Note 2: The "*" in this table represents preferred stocks.

Shares Currently Held by Spouse and Minor Children		Shares Held in the Names of Others		Education and Experience	Current Positions Held in TCC and Other Companies	Executives, Directors, or Supervisors who are Spouses or within Second-degree of Kinship			Notes
Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %			Title	Name	Relationship	
-	-	None	None	MBA, University of Minnesota System Member of the Remuneration Committee, International CSRC Investment Holdings Co., Ltd. Vice Chairman of Taiwan CIO Association Consultant of International Integrated Systems, Inc. CIO of CTBC Financial Holding Co., Ltd. President of Taiwan Lottery Co., Ltd.	Executive Vice President of Gartner Group Taiwan Limited Convener of TCC's Information Security Management Committee Member of the Audit Committee, Member of the Remuneration Committee and Member of the Risk Management Committee, etc.	None	None	None	
-	-	None	None	LL.M., Harvard LL.M., National Taiwan University Adjunct Professor at National Taiwan University and Soochow University Honorary Chairman of the Chinese Arbitration Association President of the Chinese (Taiwan) Society of International Law Member of the Presidential Advisory Committee on Human Rights Managing Partner of Lee and Li, Attorneys-at-Law	Special Senior Counsel, Lee and Li, Attorneys-at-Law President of Taiwan Jurist Association, etc.	None	None	None	Note 2

Table 1: Major Shareholders of Corporate Shareholders

Name of Corporate Shareholder	Major Shareholders of Corporate Shareholders
Chia Hsin R.M.C. Corporation	Nelson An-ping Chang (65.30%) Chia Hsin Cement Corporation (13.71%) Long Chuang Investments Co., Ltd. (13.45%) Huai-Ru Koo (5.51%)
Tai Ho Farming Co., Ltd.	Hsing Cheng Investment Co., Ltd. (100%)
International CSRC Investment Holdings Co., Ltd.	Taiwan Cement Corporation (15.59%) TCC Investment Corporation (2.23%) Chinatrust Investment Co., Ltd. (1.56%) CS Development & Investment Co. (1.50%) JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.21%) JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.17%) Union Cement Traders Inc. (1.16%) TransGlobe Life Insurance Inc. (1.02%) Tian-Yi Huo (0.76%) Kao-Huang Lin (0.73%)
Hsing Cheng Investment Co., Ltd.	Huai-Chun Koo (4.17%) Lydia Chao (20.83%) Huai-Ru Koo (20.83%) Hsuan-Hui Koo (16.67%) Ching-Hua Hu (13.33%) Cheng-Huei Koo (10.42%) Kung-Yi Koo (10.42%) Jin-Heng Hu (3.33%)
C. F. Koo Foundation	CTBC Bank Co., Ltd. (62%)
Chia Hsin Cement Corporation	Tong Yang Chia Hsin International Corporation (16.44%) Song Zuo Investment Co., Ltd. (8.88%) Yong-Ping Chang (5.39%) Taiwan Cement Corporation (3.54%) Ta-Ho Maritime Corporation (3.33%) NUTRI VITA INC. (2.23%) Chia Hsin Foundation (1.92%) International Chia Hsin Corporation (1.89%) Chia Hsin R.M.C. Corporation (1.70%) Chien Kuo Construction Co., Ltd. (1.57%)
Heng Qiang Investment Co., Ltd.	Tian-Yi Huo (49.50%) Gung-Kai Koo (24.90%) Hsuan-Hui Koo (25.5995%) Fu Pin Investment Co., Ltd. (0.0005%)
CS Development & Investment Co.	International CSRC Investment Holdings Co., Ltd. (100%)
Fu Pin Investment Co., Ltd.	Hsuan-Hui Koo (49.9995%) Tian-Yi Huo (25.10%) Gung-Kai Koo (24.90%) Heng Qiang Investment Co., Ltd. (0.0005%)

Note: The above information is for the 25th term of corporate shareholders. Each corporation is requested to provide its most up-to-date information. TCC will disclose information solely based on the details provided.

Table 2: Major Shareholders of the Corporate Shareholders Listed in Table 1

Legal Entity Name	Major Shareholders of Corporate Shareholders
Chia Hsin Cement Corporation	Tong Yang Chia Hsin International Corporation (16.44%) Song Zuo Investment Co., Ltd. (8.88%) Yong-Ping Chang (5.39%) Taiwan Cement Corporation (3.54%) Ta-Ho Maritime Corporation (3.33%) NUTRI VITA INC. (2.23%) Chia Hsin Foundation (1.92%) International Chia Hsin Corporation (1.89%) Chia Hsin R.M.C. Corporation (1.70%) Chien Kuo Construction Co., Ltd. (1.57%)
Long Chuang Investments Co., Ltd.	Nelson An-ping Chang (96.32%) Huai-Ru Koo (1.05%)
Hsing Cheng Investment Co., Ltd.	Huai-Chun Koo (4.17%) Lydia Chao (20.83%) Huai-Ru Koo (20.83%) Hsuan-Hui Koo (16.67%) Ching-Hua Hu (13.33%) Cheng-Huei Koo (10.42%) Kung-Yi Koo (10.42%) Jin-Heng Hu (3.33%)
Taiwan Cement Corporation	Chia Hsin Cement Corporation (3.17%) Taishin International Bank, Custodian for Cathay MSCI Taiwan ESG Sustainability High Dividend Yield ETF (2.85%) Chinatrust Investment Co., Ltd. (2.47%) Labor Retirement Reserve Fund (1.69%) Tong Yang Chia Hsin International Corporation (1.55%) International CSRC Investment Holdings Co., Ltd. (1.51%) Heng Qiang Investment Co., Ltd. (1.49%) Chunghwa Post Co., Ltd. (1.38%) Taiwan Life Insurance Co., Ltd. (1.33%) BankTaiwan Life Insurance - Government Employees & School Staffs Insurance (1.32%)
TCC Investment Corporation	Taiwan Cement Corporation (100%)
Chinatrust Investment Co., Ltd.	Heng Qiang Investment Co., Ltd. (23.38%) Fu Pin Investment Co., Ltd. (23.33%) Taiwan Cement Corporation (9.36%) International CSRC Investment Holdings Co., Ltd. (4.48%) TCC Investment Corporation (3.45%) Ho-Ping Industrial Port Corporation (3.31%) Qiao Tai Investment Co., Ltd. (3.03%) Kung Ching International Development Co., Ltd. (2.97%) Chung Ho Spinning Co., Ltd. (2.31%) Ta-Ho Maritime Corporation (2.09%)
CS Development & Investment Co.	International CSRC Investment Holdings Co., Ltd. (100%)
JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds	Not applicable
JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Emerging Markets Stock Index Fund, a series of Vanguard International Equity Index Funds	Not applicable
Union Cement Traders Inc.	TCC Investment Corporation (100%)

Legal Entity Name	Major Shareholders of Corporate Shareholders
TransGlobe Life Insurance Inc.	Chung Wei Yi Co., Ltd. (100%)
CTBC Bank Co., Ltd.	CTBC Financial Holding Co., Ltd.(100%)
Tong Yang Chia Hsin International Corporation	Chia Hsin Cement Corporation (87.18%) Chia Hsin Construction and Development Corporation (10.41%) Jia Min Co., Ltd. (0.52%) Song Zuo Investment Co., Ltd. (0.42%) Ru-Ping Chang (0.25%) Yong-Ping Chang (0.22%) Zhong-Lian Zhong (0.19%) International Chia Hsin Corporation (0.16%) Nelson An-ping Chang (0.12%) Jian-Guo Wang (0.11%)
Song Zuo Investment Co., Ltd.	Yong-Ping Chang (59.47%) Chia Hsin Construction and Development Corporation (14.52%)
Ta-Ho Maritime Corporation	Taiwan Cement Corporation (64.79%) Taiwan Transport & Storage Co., Ltd. (29.38%) TCC Investment Corporation (0.02%)
NUTRI VITA INC.	Maxon Corporation (54.50%) Sian Ping Chang (10.50%)
Chia Hsin Foundation	Chia Hsin Cement Corporation (100%)
International Chia Hsin Corporation	Jian-Guo Wang (22.5%) Tong Yang Chia Hsin International Corporation (20.17%) Chia Hsin Cement Corporation (19.33%)
Chia Hsin R.M.C. Corporation	Nelson An-ping Chang (65.30%) Chia Hsin Cement Corporation (13.71%) Long Chuang Investments Co., Ltd. (13.45%) Huai-Ru Koo (5.51%)
Chien Kuo Construction Co., Ltd.	Chien Hwei Investment Co., Ltd. (18.26%) Chi-Te Chen (7.48%) Chen-Ching Chen (5.67%) Rock Publishing International (3.76%) Taiwan Cement Corporation (2.99%) Deqing Investment Co., Ltd. (2.29%) Po-Sheng Yeh (1.31%) Chase escrow JP Morgan investment account (1.17%) Mei-Chen He (1.08%) Barclays Capital investment account under the custody of Citi Bank (0.86%)
Fu Pin Investment Co., Ltd.	suan-Hui Koo (49.9995%) Tian-Yi Huo (25.10%) Gung-Kai Koo (24.90%) Heng Qiang Investment Co., Ltd. (0.0005%)

Legal Entity Name	Major Shareholders of Corporate Shareholders
International CSRC Investment Holdings Co., Ltd.	Taiwan Cement Corporation (15.59%) TCC Investment Corporation (2.23%) Chinatrust Investment Co., Ltd. (1.56%) CS Development & Investment Co. (1.50%) JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.21%) JP Morgan Chase Bank N.A., Taipei Branch, custodian for the Vanguard Total International Stock Index Fund, a series of Vanguard Star Funds (1.17%) Union Cement Traders Inc. (1.16%) TransGlobe Life Insurance Inc. (1.02%) Tian-Yi Huo (0.76%) Kao-Huang Lin (0.73%)
Heng Qiang Investment Co., Ltd.	Tian-Yi Huo (49.50%) Gung-Kai Koo (24.90%) Hsuan-Hui Koo (25.5995%) Fu Pin Investment Co., Ltd. (0.0005%)

Note: The above information is for the 25th term of corporate shareholders. Each corporation is requested to provide its most up-to-date information. TCC will disclose information solely based on the details provided.

1. Information Disclosure of Directors' Expertise and Independence of Independent Directors:

Condition	Professional Qualifications and Experience (Note 1)	Independence	Concurrent Positions in Other Public Companies Number of Concurrent Independent Director Positions in Other Public Companies
Name			
Nelson An-ping Chang	(1) Chairman and Group CEO of TCC Group, convener of the Corporate Sustainable Development Committee, and member of the Nomination Committee of TCC. (2) In addition to serving as Chairman of TCC, Mr. Nelson An-ping Chang also serves as Chairman of NHOA S.A. of the TCC Group, as well as Director of CTCI Corporation and Taiwan Stock Exchange. In addition, he is the Honorary Chairman of the Chinese National Association of Industry and Commerce. (3) Mr. Nelson An-ping Chang has over 40 years of valuable experience across a wide range of industries. He has spearheaded major initiatives such as privatization of enterprises, the sale of Taiwan Prosperity Chemical Corporation, and multinational mergers and acquisitions. His expertise encompasses operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, merger and acquisition investments, renewable energy, and international markets. Since becoming Chairman, Mr. Nelson An-ping Chang has expertly steered TCC Group toward greater diversification and internationalization. Under his leadership, the Group has transformed into a green enterprise, embracing power generation, energy conservation, and energy storage to promote a more sustainable lifestyle.		-
Roman Cheng	(1) Director and President of TCC and a member of the Corporate Sustainable Development Committee. (2) Mr. Roman Cheng is a director of TCC. He also serves as Chairman of Atlante S.R.L. of the TCC Group, as well as Director and President of TCC Energy Storage Technology Corporation. (3) Mr. Roman Cheng previously served as President of Taipei Fubon Bank, with over 10 years of rich experience in the banking and financial industry, and further possesses a multitude of professional capabilities including operational management, leadership decision-making, crisis management, international markets, and ESG. The Company will continue leveraging Mr. Roman Cheng's expertise to support the Company's Board of Directors and other directors, making various significant decisions, leading the Company toward better development and achieving sustainable development goals.	No Spousal or Second-Degree Relative Relationships Between Directors	-
Kenneth C.M. Lo	(1) Director of TCC and a member of the Nomination Committee. (2) Mr. Kenneth C.M. Lo is a director of TCC. He also serves as the founder and Honorary Chairman of O-Bank. (3) Mr. Kenneth C.M. Lo has over 40 years of valuable experience in the financial and banking industry. His areas of expertise include operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, and international markets. TCC will continue to rely on Mr. Kenneth C.M. Lo's expertise in making critical decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		-
Yu-Cheng Chiao	(1) Director of TCC. (2) Mr. Yu-Cheng Chiao is a director of TCC. He currently serves as the Chairman of Winbond Electronics Corporation and holds director and independent director roles in listed companies across different industries. Previously, he has served as the Chairman of Nuvoton Technology Corporation, among other positions. (3) Mr. Yu-Cheng Chiao has over 40 years of valuable experience across a wide range of industries and previously served as an independent director of TCC for three terms. His areas of expertise include multinational mergers and acquisitions, operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, and international markets. He provides valuable recommendations and guidance on TCC's operations, finances, and business analysis. TCC will continue to leverage his wealth of knowledge in monitoring company operations.		-
Eric Chen Sun Te	(1) Director of TCC. (2) Mr. Eric Chen Sun Te is a director of TCC. He also serves as a director of Lion Travel Service Co., Ltd. and an independent director of USI Corporation, among other positions. (3) Mr. Eric Chen Sun Te previously served as the Chairman of Taipei Fubon Bank and has over 40 years of valuable experience in the financial and banking industry. His areas of expertise include operational management, leadership and decision-making, crisis management, international markets, and ESG. TCC will continue to leverage Mr. Eric Chen Sun Te's expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		1

Condition	Professional Qualifications and Experience (Note 1)	Independence	Concurrent Positions in Other Public Companies Number of Concurrent Independent Director Positions in Other Public Companies
Name			
Kang-Lung (Jason) Chang	(1) Director of TCC. (2) Mr. Kang-Lung (Jason) Chang is a director of TCC. He also serves as the Chairman of Chia Hsin Cement Corporation, among other positions. (3) Mr. Kang-Lung (Jason) Chang has over 30 years of experience in the cement industry. His areas of expertise include operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, and international markets. TCC will continue to leverage Mr. Kang-Lung (Jason) Chang's expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		-
Por-Yuan Wang	(1) Director of TCC. (2) Mr. Por-Yuan Wang is a director of TCC. He also serves as the Chairman of Pacific Venture Partners and Honorary Chairman of Sercomm Corporation and hold director and independent director roles in several listed companies. (3) Mr. Por-Yuan Wang has served as a director of TCC for many years and has a deep understanding of this company. He possesses over 40 years of valuable experience across a wide range of industries and holds director and independent director roles in listed companies in different industries. His areas of expertise include cross-border mergers and acquisitions, operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, and international markets. TCC will continue leverage Mr. Por-Yuan Wang's expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		1
Kung-Yi Koo	(1) Director and Assistant Vice President of TCC. (2) Mr. Kung-Yi Koo is a director and Assistant Vice President of TCC. He also serves as the Chairman of CSRC and Chief Executive Officer of the CSRC Group. (3) Mr. Kung-Yi Koo has over ten years of valuable experience in the financial banking and cement industry. He played a key role in the successful privatization of TCC. His areas of expertise include finance, operational management, leadership and decision-making, crisis management, industry insights, corporate sustainability, and international markets. TCC will continue to leverage his expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.	No Spousal or Second-Degree Relative Relationships Between Directors	-
Chien Wen	(1) Director of TCC. (2) Mr. Chien Wen is a director of TCC. He previously served as the CFO of Winbond Electronics Corporation. (3) Mr. Chien Wen has over 30 years of valuable experience in finance, technology, and cement industry. His areas of expertise include financial management, operational management, leadership and decision-making, crisis management, and industry insights. TCC will continue to leverage his expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		-
Liz Wang	(1) Director and a member of both the Risk Management Committee member, and Corporate Sustainable Development Committee member at TCC. (2) Ms. Liz Wang is a director of TCC. She also serves as the Chairman of Jaho Life Plus+ Management Corp. and President of Chia Hsin Cement Corporation. (3) Ms. Liz Wang has over ten years of experience in the cement industry. Her areas of expertise include financial management, operational management, leadership and decision-making, crisis management, and industry insights. TCC will continue to leverage her expertise in making key decisions alongside the Board of Directors and other directors, driving TCC toward achieving more sustainable goals.		-

Condition	Professional Qualifications and Experience (Note 1)	Independence	Concurrent Positions in Other Public Companies Number of Concurrent Independent Director Positions in Other Public Companies
Name			
Victor Wang	(1) Independent director and the convener of the Audit Committee and the Nomination Committee. He is also a member of the Remuneration Committee, Risk Management Committee, Corporate Sustainable Development Committee, and Information Security Management Committee at TCC. (2) Mr. Victor Wang has served as an independent director of TCC for three terms. He previously served as Vice Chairman of Deloitte Taiwan and currently hold a director role at Yageo Corporation, as well as independent director roles at Taiwan Navigation Co., Ltd. and DACIN Construction Co., Ltd., and other listed companies. He has over 30 years of valuable experience in finance and accounting. His areas of expertise include operational management, crisis management, industry insights, corporate sustainability, and international markets. During his tenure as an independent director at TCC, he has provided valuable recommendations and guidance on audit, finance, and business analysis. TCC will continue to rely on his expertise to oversee company operations.	The four directors listed on the left: All meet the independence requirements for independent directors. They fully meet the independence criteria as follows: (1) Neither they, their spouse, nor relatives within the second degree of kinship serve as directors, supervisors, or employees of TCC or its affiliated enterprises. (2) Neither they, their spouse, nor relatives within the second degree of kinship hold any shares of TCC. (3) Do not serve as directors, supervisors, or employees of companies with specific relationships with TCC (refer to Article 6, Paragraph 1, Items 5-8 of the Regulations Governing the Appointment and Exercise of Powers by the Remuneration Committee of a Company Whose Stock is Listed on the Taiwan Stock Exchange or the Taipei Exchange). (4) Have not received any compensation for providing business, legal, financial, accounting, or other services to TCC or its affiliated enterprises in the past two years.	3
Lynette Ling-Tai Chou	(1) Independent director and the convener of the Remuneration Committee, a member of the Audit Committee, Risk Management Committee, Nomination Committee, and Corporate Sustainable Development Committee at TCC. (2) Ms. Lynette Ling-Tai Chou has over 30 years of professional experience in accounting and auditing. She currently serves as an Independent Director of Next Commercial Bank Co., Ltd. Her areas of expertise include accounting and auditing, industry insights, corporate sustainability, and international markets. During her tenure as an independent director at TCC, she has provided valuable recommendations and guidance on audit, finance, and business analysis. TCC will continue to rely on her expertise to oversee company operations.		1
Sherry S. L. Lin	(1) Independent director and the convener of the Risk Management Committee, a member of the Audit Committee, Remuneration Committee, Nomination Committee, Corporate Sustainable Development Committee, and Information Security Management Committee at TCC. (2) Ms. Sherry S. L. Lin currently serves as a Special Senior Counsel at Lee and Li, Attorneys-at-Law. She previously served as an independent director of Cathay Real Estate and holds director roles for other listed companies. She has over 40 years of valuable experience handling legal and financial projects across different industries. Her areas of expertise include operational management, crisis management, industry insights, corporate sustainability, and international markets. During her tenure as an independent director at TCC, she has provided valuable recommendations and guidance audit, finance, and mergers and acquisitions. TCC will continue to rely on her expertise to oversee company operations.		1
Ruu Tian Chang	(1) Independent director and the convener of the Information Security Management Committee, a member of the Audit Committee, Remuneration Committee, and Risk Management Committee at TCC. (2) Ms. Ruu Tian Chang has over 20 years of valuable experience in information technology. She currently serves as the Executive Vice President of Gartner Group Taiwan Limited. She previously served as the Information Technology President of CTBC Financial Holding and hold director roles for other listed companies. Her areas of expertise include operational management, crisis management, industry insights, corporate sustainability, and international markets. TCC will continue to rely on her expertise to oversee company operations.		-

Note 1: None of TCC's directors are subject to any of the conditions listed in Article 30 of the Company Act.
Note 2: The directors disclosed in this table are current directors.

2. Board Diversity and Independence

(1) Board Responsibilities and Composition:
TCC's Board of Directors is responsible for providing guidance on corporate strategy, supervising management, and being accountable to both TCC and its shareholders. The corporate governance system ensures that the Board exercises its powers in accordance with the law, the Articles of Incorporation, and shareholder resolutions. TCC has established a Nomination Committee and adopted a Candidate Nomination System. All director candidates are nominated and their qualifications are reviewed by the Nomination Committee. After receiving approval from the Board of Directors, the candidates are submitted to the shareholders' meeting for election. According to TCC's Corporate Governance Best Practice Principles, the composition of the Board of Directors must be diverse. In addition to having the necessary knowledge and skills required for their duties, directors should possess a broad range of professional backgrounds, experiences, skills, and qualities that are relevant to the industry. As of March 2025, the average term of office of Board members is 11 years. TCC's 25th Board of Directors consists of 15 directors, including five independent directors (one of whom resigned on October 9, 2024, due to personal reasons, and TCC will hold a by-election at the 2025 Annual Shareholders' Meeting). Independent directors make up one-third of the total board seats. Many of the directors also hold positions such as chairpersons or directors of other listed companies. Their extensive knowledge, insights, and business judgment contribute to strong leadership and decision-making capabilities, which are highly valued by TCC. Additionally, TCC emphasizes gender equality in the composition of its Board members. Currently, there are four female directors. On March 12, 2025, the Board of Directors nominated a female independent director candidate, who will be elected at the 2025 Annual Shareholders' Meeting, if elected, the percentage of female directors will increase to 33%. Among the current directors, one is between 31 and 50 years of age, and 13 are over 51 years of age.

- (2) The collective capabilities that the Board of Directors should possess are as follows:
- Operational judgment.
 - Accounting and financial analysis.
 - Management expertise (including management of subsidiaries).
 - Crisis management.
 - Industry insight.
 - International market perspective.
 - Leadership.
 - Decision-making.
 - Risk management knowledge and capability.
 - ESG and environmental management capability.

The composition of TCC's 25th Board of Directors emphasizes diversity and consists of elite members from industry and academia. The members' industry experience covers energy, environmental protection, cement, mergers & acquisitions/investment, information technology. In addition, they possess professional expertise in operational management, international markets, risk management, accounting and financial analysis, legal affairs, ESG:

Professional expertise	Board member(s)
Industry insight and operational management	Nelson An-ping Chang, Yu-Cheng Chiao, Por-Yuan Wang, Kung-Yi Koo, Kang-Lung (Jason) Chang, Chien Wen, Liz Wang
Financial expertise	Roman Cheng, Kenneth C.M. Lo, Eric Chen Sun Te
Financial accounting experience	Victor Wang, Lynette Ling-Tai Chou
Legal expertise	Sherry S. L. Lin
Information technology expertise	Ruu Tian Chang

TCC continues to arrange training courses for board members to improve their decision-making quality, fulfill their supervisory capabilities, and thereby strengthen the board's functions.

(3) Specific management objectives: Directors listen to reports from the management team during board meetings, offer guidance and suggestions, and maintain effective communication with the management team to collaboratively create maximum value for shareholders. TCC emphasizes gender equality in the composition of its Board members. Currently, the Board members consists of 71% male directors (ten members) and 29% female directors (four members). On March 12, 2025, the Board of Directors nominated a female independent director candidate, who will be elected at the 2025 Annual Shareholders' Meeting to fill one of the independent director seats. If elected, female directors on TCC's Board will increase to one-third (33%) of the total number of directors.

(4) Meetings: The current Board of Directors held a total of ten board meetings from May 21, 2024, to March 20, 2025, with an overall director attendance rate of 90%.

(5) Independence: TCC's current Board of Directors consists of 14 members, four of whom are independent directors, representing 29% of the total. As of the end of 2024, all independent directors comply with the regulations set by the Securities and Futures Bureau of the Financial Supervisory Commission regarding independent directors. Additionally, there are no circumstances among the directors and independent directors that would violate paragraphs 3 and 4 of Article 26-3 of the Securities and Exchange Act. For details on the independence of TCC's Board of Directors, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors." For information on each director's education, gender, and work experience, please refer to page 7 of this annual report, "2.1.1 Director Information."

3. The analysis of industry insights and professional expertise of TCC's current directors is as follows:

(1) Chairman

Legal Entity Name	Representative Name	Date of Election (Appointment)	Average term of corporate directors (including the current term)	Average term of office of corporate directors	Nationality	Gender	Age Distribution			Industry Experience				Professional expertise						
							31-50 years old	51-70 years old	71 years old and above	Energy	Environmental Protection	Cement	Mergers, Acquisitions, and Investments	Information Technology	Business Management	International Markets	Risk Management	Accounting and Financial Capability Analysis	Legal	ESG
Chia Hsin R.M.C. Corporation	Nelson An-ping Chang	2024/5/21	2+1	6.8	R.O.C.	Male			○	○	○	○	○	○	○	○	○			○

(2) Directors

Legal Entity Name	Representative Name	Date of Election (Appointment)	Average term of corporate directors (including the current term)	Average term of office of corporate directors	Nationality	Gender	Age Distribution			Industry Experience					Professional expertise						
							31-50 years old	51-70 years old	71 years old and above	Energy	Environmental Protection	Cement	Mergers, Acquisitions, and Investments	Information Technology	Business Management	International Markets	Risk Management	Accounting and Financial Capability Analysis	Legal	ESG	
Tai Ho Farming Co., Ltd.	Roman Cheng	2024/5/21	2+1	6.8	R.O.C.	Male		○		○	○	○	○		○	○	○	○		○	
International CSRC Investment Holdings Co., Ltd.	Kenneth C.M. Lo		7+1	22.9	R.O.C.	Male			○			○	○		○	○	○	○		○	
Hsing Cheng Investment Co., Ltd.	Yu-Cheng Chiao		1	0	R.O.C.	Male		○		○	○	○	○	○	○	○	○	○		○	
C. F. Koo Foundation	Eric Chen Sun Te		2+1	8.8	R.O.C.	Male		○					○		○	○	○	○		○	
Chia Hsin Cement Corporation	Kang-Lung (Jason) CHANG		3+1	12.8	R.O.C.	Male		○				○	○	○	○	○	○	○		○	
Heng Qiang Investment Co., Ltd.	Por-Yuan Wang		7+1	21.8	R.O.C.	Male			○			○	○	○	○	○	○	○		○	
CS Development & Investment Co.	Kung-Yi Koo		1+1	6.8	R.O.C.	Male	○			○	○	○	○		○	○	○	○		○	
Fu Pin Investment Co., Ltd.	Chien Wen		7+1	21.8	R.O.C.	Male			○			○	○		○			○		○	
Chia Hsin Cement Corporation	Liz Wang		3+1	12.8	R.O.C.	Female		○		○	○	○		○	○	○	○		○		

(3) Independent Director

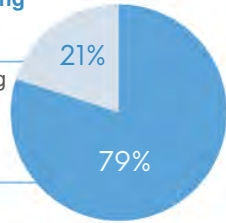
Board members	Date of Election (Appointment)	Nationality	Gender	Average term of office of independent directors	Independent Directors' Years of Service			Age Distribution			Industry Experience				Professional expertise						
					Less than 3 years	3 to 9 years	More than 9 years	31-50 years old	51-70 years old	71 years old and above	Energy	Environmental Protection	Cement	Mergers, Acquisitions, and Investments	Information Technology	Business Management	International Markets	Risk Management	Accounting and Financial Capability Analysis	Legal	ESG
Victor Wang	2024/5/21	R.O.C.	Male	11.8			○			○		○	○	○		○	○	○	○		○
Lynette Ling-Tai Chou		R.O.C.	Female	6.8		○			○			○	○	○		○	○	○	○		○
Sherry S. L. Lin		R.O.C.	Female	3.8		○				○				○		○	○	○	○	○	○
Ruu Tian Chang		R.O.C.	Female	0	○					○					○	○	○				○

The total number of directors (including independent directors) is 14, with the following percentages:

Percentage of directors serving as employees

Directors serving as employees

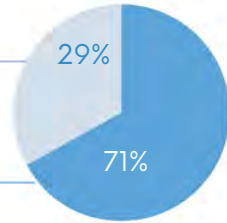
Other Directors



Percentage of Independent Directors

Independent Director

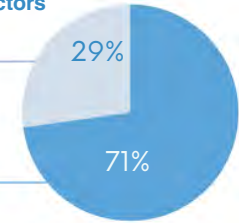
Other Directors



Percentage of Female Directors

Female directors

Other Directors



2.1.2 Information About Group CEO, President, Vice President, Assistant Vice President, Department and Branch Managers

Title	Nationality	Name	Gender	Date of Election (Appointment)	Shares Held		Shares Held by Spouses and Minor Children		Shares Held in the Names of Others	
					Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Group CEO	R.O.C.	Nelson An-ping Chang	Male	2019/7/17	3,333,151	0.04	4,599,808	0.06	None	None
President	R.O.C.	Roman Cheng	Male	2022/11/21	105,000	0.00	-	-	None	None

The information about shares currently held is disclosed up to March 20, 2025.

Education and Experience	Current Positions Held in TCC and Other Companies	Managerial Officers Who are Spouses or within Second-degree of Kinship			Notes	
		Title	Name	Relationship		
MBA, School of Business Administration, New York University Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Taiwan Prosperity Chemical Corporation Chairman of Chia Hsin Cement Corporation Independent Director of Synnex Technology International Corporation	Chairman and President of Molie Quantum Energy Corporation Chairman and President of HO-PING Ocean Renewable Resource Corporation Chairman and President of Ho-Ping Power Company Chairman of TCC Energy Storage Technology Corporation Chairman of TCC Chemical Corporation Chairman of TCC Sustainable Energy Investment Corporation Chairman of E-One Moli Energy Corp. Chairman of TCC Recycle Energy Technology Company Chairman of Dr. Cecilia Koo Botanic Conservation Center Chairman of Hualien County Private Hoping Sustainability Charity Foundation Chairman of In services of Life Foundation Chairman of Energy Helper TCC Corporation Chairman of Ho-Ping Renewable Energy Company Chairman of TCC (Hangzhou) Management Company Limited Chairman of TCC (Hangzhou) Environmental Protection Technology Co., Ltd. Chairman of TCC Zhihe (Hangzhou) Environmental Protection Company Limited Chairman of NHOA S.A. Chairman of NHOA Corporate S.R.L. Vice Chairman of Ta-Ho Maritime Corporation Director of TCC Asset Management & Development Corporation Director of TCC Investment Corporation Director of Union Cement Traders Inc. Director of THC International S.A. Director of Hong Kong Cement Company Limited Director of TCC Hong Kong Cement (Yargoan) Limited Director of TCC Hong Kong Cement (QHC) Limited Director of TCC Hong Kong Cement (Philippines) Limited Director of TCC Hong Kong Cement Development Limited Director of TCC International (Liuzhou) Limited Director of TCC International (Guangxi) Limited Director of Upper Value Investments Limited Director of Prosperity Minerals (China) Ltd. Director of Wayly Holdings Limited Director of Chiefolk Company Limited Director of Hong Kong Cement Manufacturing Co. Ltd. Director of Jingyang Industrial Limited Director of TCC International (Hong Kong) Company Limited Director of TCC Liuzhou Company Limited Director of Prosperity Cement Investment Limited Director of Prosperity Minerals (International) Limited Director of Kiton Limited Director of Hensford Limited Director of Sure Kit Limited	Director of Prime York Limited Director of Mega East Ltd. Director of TCC International (China) Company Limited Director of Scitus Cement (China) Holdings Limited Director of Scitus Cement (China) Operating Company Limited Director of Hexagon Holdings Limited Director of Hexagon II Holdings Limited Director of Hexagon III Holdings Limited Director of Hexagon IV Holdings Limited Director of Hexagon V Holdings Limited Director of Hexagon VIII Holdings Limited Director of Hexagon IX Holdings Limited Director of Hexagon XIII Holdings Limited Director of Hexagon XIV Holdings Limited Director of Upper Value Investment Limited Director of Kong On Cement Holdings Ltd. Director of Hong Kong Concrete Company Limited Director of Quon Hing Concrete Co Ltd. Authorized signatory, Prosperity Minerals (China) Limited Director of TCC Information Systems Corporation Director of Taiwan Transport & Storage Co., Ltd. Director of Ta-Ho Maritime (SG) Corporation Director of Ho-Ping Industrial Port Corporation Director of TCC International Holdings Limited Director of TCC Hong Kong Cement (BVI) Holdings Limited Director of TCC Hong Kong Cement (International) Limited Director of TCC Development Limited Director of TCC International Limited Director of Ulexite Investments Limited Director of TCC Europe Holdings B.V. Director of TCC Energy Storage (Dutch) Holdings B.V. Director of TCC Oyak Amsterdam Holdings B.V. Director of E-One Holdings Ltd. Director of E-One Moli Holdings (Canada) Ltd. Director of E-One Moli Energy (Canada) Ltd. Director of Taiwan Stock Exchange Corporation Director of CTCI Corporation Director of Chia Hsin R.M.C. Corporation Director of Cheng Hsin General Hospital Convener of the Corporate Sustainable Development Committee Member of the Nomination Committee, etc.	None	None	None	Note 1
MBA, National Cheng Chi University President of Taipei Fubon Commercial Bank Co., Ltd.	Chairman of Atlante S.R.L. Chairman of TCC Investment Corporation Chairman of Union Cement Traders Inc. Director and President of TCC Energy Storage Technology Corporation Director of TCC Sustainable Energy Investment Corporation Director of TCC Asset Management & Development Corporation Director of Ho-Ping Power Company Director of Hong Kong Cement Manufacturing Co. Ltd. Director of NHOA Energy S.R.L.	Director of NHOA Corporate S.R.L. Director of TCC Energy Storage (Dutch) Holdings B.V. Director of Hualien County Private Hoping Sustainability Charity Foundation Director of In services of Life Foundation Executive Director and President of TCC Energy Storage (Hangzhou)Technology Company Limited Executive Director of TCC Energy Storage (Juron)Technology Company Limited Supervisor of Ta-Ho Maritime Corporation Member of TCC's Corporate Sustainable Development Committee, etc.	None	None	None	

Title	Nationality	Name	Gender	Date of Election (Appointment)	Shares Held		Shares Held by Spouses and Minor Children		Shares Held in the Names of Others	
					Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Senior Vice President	R.O.C.	Chien-Chiang Huang	Male	2006/1/1	1,019,424*20,616	0.01*0.01	-	-	None	None
Senior Vice President	R.O.C.	Ker-Fu Lu	Male	2008/6/30	324,882	0.00	200,000	0.00	None	None
Vice President	R.O.C.	Bao-Luo Ge	Male	2017/8/11	523,458	0.01	-	-	None	None

Education and Experience	Current Positions Held in TCC and Other Companies	Managerial Officers Who are Spouses or within Second-degree of Kinship			Notes
		Title	Name	Relationship	
BS in Transportation and Logistics Management, National Cheng Kung University	Chairman of TJ Transport Corporation Chairman of Feng Sheng Enterprise Company Chairman of E.G.C. CEMENT CORP. Chairman of Ho-Ping Industrial Port Corporation Chairman of TCC Asset Management & Development Corporation Chairman of TCC Fuzhou Cement Co., Ltd. Chairman of TCC Fuzhou Yangyu Port Co., Ltd. Vice Chairman of TCC Liuzhou Construction Materials Co., Ltd. Director and President of TCC International Holdings Limited Director and President of TCC International Limited Director and President of Chiefolk Company Limited Director and President of Hong Kong Cement Company Limited Director of Taiwan Cement Engineering Corporation Director of TCC Information Systems Corporation Director of Taiwan Transport & Storage Co., Ltd. Director of Ta-Ho Maritime Corporation Director of Ho-Ping Power Company Director of TCC Dutch Holdings B.V. Director of TCC Shaoguan Cement Co., Ltd. Director of TCC Chongqing Cement Co., Ltd. Director of Guangan Changxing Cement Co., Ltd. Director of Scitus Luzhou Cement Co., Ltd. Director of TCC Anshun Cement Co., Ltd. Director of Guizhou Kong On Cement Co., Limited Director of Jiangsu TCC Investment Co., Ltd. Director of TCC (Hangzhou) Management Company Limited Director of Yunnan Kungang & K. Wah Cement Construction Materials Co., Ltd. Director of Baoshan Kungang & K. Wah Cement Construction Materials Co., Ltd. Director of Hong Kong Concrete Company Limited Director of Quon Hing Concrete Co Ltd. Director of Yargoan Co., Ltd. Director of Pan Asia(Engineers Constructors) Corporation Director of CHC Resources Corporation, etc.	None	None	None	
BS in Mechanical Engineering, Tamkang University	Chairman of Taiwan Cement Engineering Corporation Chairman of Jin Chang Minerals Corporation Chairman of Tuo Shan Recycle Technology Company Chairman of TCC Green Energy Corporation Chairman of TCC Chia-Chien Green Energy Corporation Chairman of TCC Yun-Kai Green Energy Corporation Chairman of TCC Lien-Hsin Green Energy Corporation Chairman of TCC Chang-Ho Green Energy Corporation Chairman of TCC Kao-Cheng Green Energy Corporation Chairman of TCC Nan-Chung Green Energy Corporation Chairman of Chang-Wang Wind Power Co., Ltd. Chairman of TCC Ping-Chih Green Energy Corporation Chairman of Chia-Ho Green Energy Corporation Chairman of TCC Tung-Li Green Energy Corporation Chairman of TCC KAO-HAN Green Energy Corporation Chairman of SHI-MEN Green Energy Corporation Chairman of HPC Power Service Corporation Chairman of TCC Chongqing Cement Co., Ltd. Chairman of TCC Anshun Cement Co., Ltd. Chairman of TCC Jingzhou Cement Company Limited Chairman of TCC Shaoguan Cement Co., Ltd. Chairman of TCC (Gui Gang) Cement Ltd. Chairman of TCC Guigang Mining Industrial Company Limited Chairman of Yingde Dragon Mountain Cement Co., Ltd. Chairman of Beijing TCC Environmental Technology Co., Ltd. Chairman of TCC Yingde Cement Co., Ltd. Chairman of TCC Yingde Mining Industrial Company Limited Chairman of TCC Huaihua Cement Company Limited Chairman of TCC Huaihua Concrete Company Limited Chairman of Jurong TCC Cement Co., Ltd. Chairman of Jiangsu TCC Investment Co., Ltd. Director and President of TCC (Hangzhou) Environmental Protection Technology Co., Ltd. Director of In services of Life Foundation Director of HO-PING Ocean Renewable Resource Corporation Director of TCC Information Systems Corporation Director of Ta-Ho Maritime Corporation Director of Ho-Ping Power Company Director of Onyx Ta-Ho Environmental Services Co., Ltd. Director of TCC (Hangzhou) Management Company Limited Director of Guangan Changxing Cement Co., Ltd. Director of Scitus Luzhou Cement Co., Ltd. Director of Scitus Naxi Cement Co., Ltd. Director of Scitus Luzhou Concrete Co., Ltd. Director of Scitus Hejiang Cement Co., Ltd. Director of Guizhou Kaili Rui An Jian Cai Co., Ltd. Director of TCC Zhihe (Hangzhou) Environmental Protection Company Limited Director of Scitus Cement (China) Holdings Limited Director of Quon Hing Concrete Co Ltd. Director of Sichuan Taichang Building Material Group Company Limited Director of Yingjing Xinan New Material Co., Ltd. Executive Director and President of TCC (Hangzhou) New Energy Company Limited Executive Director of Anshun Xin Tai Construction Materials Company Limited Supervisor of Ho-Ping Renewable Energy Company Chairman of the Board of Supervisors of Yunnan Kungang & K. Wah Cement Construction Materials Co., Ltd. Chairman of the Board of Supervisors of Baoshan Kungang & K. Wah Cement Construction Materials Co., Ltd., etc.	None	None	None	
Master's Degree from the School of Foreign Service, Georgetown University, USA	Chairman of TCC (Hangzhou) Renewable Resources Technology Co., Ltd. Chairman of TCC Yongren (Hangzhou) Environmental Protection Technology Co., Ltd. Chairman of TCC Yongren (Hangzhou) Environmental Technology Co., Ltd. Director of Onyx Ta-Ho Environmental Services Co., Ltd. Director of TCC Zhihe (Hangzhou) Environmental Protection Company Limited Supervisor of Jurong TCC Environmental Co., Ltd., etc.	None	None	None	

Title	Nationality	Name	Gender	Date of Election (Appointment)	Shares Held		Shares Held by Spouses and Minor Children		Shares Held in the Names of Others	
					Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Vice President	R.O.C.	Chien-Chuan Wang	Male	2015/2/9	257,374	0.00	1,889	0.00	None	None
Vice President	R.O.C.	Feng-Ping Liu	Female	2015/2/9	207,654	0.00	251	0.00	None	None
Vice President	R.O.C.	Yu-Jun Yeh	Female	2018/1/29	254,480	0.00	-	-	None	None
CFO and Accounting Chief Officer	R.O.C.	Randy Yu	Male	2022/9/13	49,000	0.00	-	-	None	None
Senior Assistant Vice President	R.O.C.	Kuo-Yu Tsai	Male	2020/8/3	744,381	0.01	-	-	None	None
Senior Assistant Vice President and Internal Audit Manager	R.O.C.	Guo Hong Yeh	Male	2015/12/16	212,383	0.00	-	-	None	None

Education and Experience	Current Positions Held in TCC and Other Companies		Managerial Officers Who are Spouses or within Second-degree of Kinship			Notes
			Title	Name	Relationship	
BS in Mechanical Engineering, Feng Chia University	Chairman of TCC Ta-Ho RSEA Environment Co., Ltd. Chairman of Kuan-Ho Refractories Industry Corporation Chairman of TCC Liaoning Cement Co., Ltd. Chairman of TCC Yongren (Hangzhou) Renewable Resources Technology Company Limited Chairman of TCC (Shaoguan) Environmental Technology Co., Ltd. Chairman of TCC Zhongrun (Anshun) Environmental Technology Co., Ltd. Vice Chairman of Prosperity Conch Cement Company Limited Director and President of Ho-Ping Renewable Energy Company Director of Taiwan Cement Engineering Corporation Director of Taiwan Transport & Storage Co., Ltd. Director of TCC Chemical Corporation Director of TCC Recycle Energy Technology Company Director of Energy Helper TCC Corporation Director of Tuo Shan Recycle Technology Company Director of Dr. Cecilia Koo Botanic Conservation Center Director of Hualien County Private Hoping Sustainability Charity Foundation	Director of Jurong TCC Cement Co., Ltd. Director of TCC Liuzhou Construction Materials Co., Ltd. Director of TCC Shaoguan Cement Co., Ltd. Director of TCC (Gui Gang) Cement Ltd. Director of Guigang TCC Dongyuan Environmental Protection Technology Co., Ltd. Director of TCC Fuzhou Cement Co., Ltd. Director of TCC Fuzhou Yangyu Port Co., Ltd. Director of Yingde Dragon Mountain Cement Co., Ltd. Director of Kaili TCC Environmental Technology Co., Ltd. Director of Beijing TCC Environmental Technology Co., Ltd. Director of Jurong TCC Environmental Co., Ltd. Director of Guigang Conch-TCC New Material Technology Co., Ltd. Director of Jin Yu TCC (Dai Xian) Environmental Protection Technology Co., Ltd. Director of TCC International (Guangxi) Limited Supervisor of Guizhou Kaili Rui An Jian Cai Co., Ltd., etc.	None	None	None	
MS in Technology Application and Human Resource Development, National Taiwan Normal University.	Director of International CSRC Investment Holdings Co., Ltd. Director of Dr. Cecilia Koo Botanic Conservation Center Director of NHOA S.A., etc.		None	None	None	
MS in Senior Executive Management, National Cheng Chi University	Spokesperson of Taiwan Cement Corporation Director of Dr. Cecilia Koo Botanic Conservation Center Director of Hualien County Private Hoping Sustainability Charity Foundation, etc.		None	None	None	
MBA, Stern School of Business, New York University	Director of Feng Sheng Enterprise Company Director of Kuan-Ho Refractories Industry Corporation Director of Phihong Technology Co. Ltd. Director of Ho-Ping Renewable Energy Company Independent Director of GlobalWafers Co., Ltd. Supervisor of TCC Investment Corporation Supervisor of Union Cement Traders Inc. Supervisor of Taiwan Transport & Storage Co., Ltd. Supervisor of TJ Transport Corporation Supervisor of TCC Energy Storage Technology Corporation Supervisor of Energy Helper TCC Corporation Supervisor of TCC Sustainable Energy Investment Corporation Supervisor of E-One Moli Energy Corp. Supervisor of Molie Quantum Energy Corporation Supervisor of Tuo Shan Recycle Technology Company Supervisor of TCC Chemical Corporation Supervisor of HO-PING Ocean Renewable Resource Corporation Supervisor of TCC Green Energy Corporation	Supervisor of TCC Chia-Chien Green Energy Corporation Supervisor of TCC Yun-Kai Green Energy Corporation Supervisor of TCC Chang-Ho Green Energy Corporation Supervisor of TCC Kao-Cheng Green Energy Corporation Supervisor of TCC Nan-Chung Green Energy Corporation Supervisor of Chang-Wang Wind Power Co., Ltd. Supervisor of TCC Ping-Chih Green Energy Corporation Supervisor of Chia-Ho Green Energy Corporation Supervisor of TCC Tung-Li Green Energy Corporation Supervisor of TCC KAO-HAN Green Energy Corporation Supervisor of SHI-MEN Green Energy Corporation Supervisor of Ta-Ho Maritime Corporation Supervisor of Ho-Ping Power Company	None	None	None	
BS in Laws, Soochow University.	Director, Chinatrust Investment Co., Ltd.		None	None	None	
MS in Accounting, National Taipei University.	Director of International CSRC Investment Holdings Co., Ltd. Director of Jiangsu TCC Investment Co., Ltd. Director of TCC Liaoning Cement Co., Ltd. Director of TCC (Hangzhou) Renewable Resources Technology Co., Ltd. Director of TCC International Holdings Limited Director of TCC International Limited Director of TCC Energy Storage (Dutch) Holdings B.V. Supervisor of Taiwan Cement Engineering Corporation Supervisor of TCC Information Systems Corporation Supervisor of Kuan-Ho Refractories Industry Corporation Supervisor of TCC Recycle Energy Technology Company Supervisor of Ho-Ping Industrial Port Corporation Supervisor of Onyx Ta-Ho Environmental Services Co., Ltd. Supervisor of In services of Life Foundation Supervisor of TCC Jingzhou Cement Company Limited Supervisor of TCC Jiuyuan (Guangan) Environmental Technology Co., Ltd. Supervisor of TCC Huaihua Cement Company Limited Supervisor of TCC Huaihua Concrete Company Limited Supervisor of Jurong TCC Cement Co., Ltd. Supervisor of TCC Jiangsu Mining Industrial Company Limited	Supervisor of TCC Fuzhou Cement Co., Ltd. Supervisor of TCC Fuzhou Yangyu Port Co., Ltd. Supervisor of TCC Jiuyuan (Xuyong) Environmental Technology Co., Ltd. Supervisor of Beijing TCC Environmental Technology Co., Ltd. Supervisor of TCC Yongren (Hangzhou) Environmental Technology Co., Ltd. Supervisor of TCC Yongren (Hangzhou) Environmental Protection Technology Co., Ltd. Supervisor of TCC Yongren (Hangzhou) Renewable Resources Technology Company Limited Supervisor of TCC Yongren (Hangzhou) Renewable Resources Development Company Limited Supervisor of TCC (Hangzhou) New Energy Company Limited Supervisor of TCC Energy Storage (Hangzhou) Technology Company Limited Supervisor of TCC Energy Storage (Juron) Technology Company Limited Supervisor of TCC (Hangzhou) Property Services Limited Supervisor of TCC (Guangdong) Renewable Resources Technology Company Limited, etc.	None	None	None	

Title	Nationality	Name	Gender	Date of Election (Appointment)	Shares Held		Shares Held by Spouses and Minor Children		Shares Held in the Names of Others	
					Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Senior Assistant Vice President	R.O.C.	Huei Sheng Chiou	Male	2021/12/7	-	-	-	-	None	None
Senior Assistant Vice President	R.O.C.	Yu-Wen Chiu	Male	2021/4/15	47,116*3,132	0.00*0.00	-	-	None	None
Senior Assistant Vice President	R.O.C.	Chia-Pei Wei	Male	2016/3/1	303,473*4,925	0.00*0.00	-	-	None	None
Senior Assistant Vice President	R.O.C.	Yi-Ching Chung	Female	2025/1/20	-	-	-	-	None	None
Director and Assistant Vice President	R.O.C.	Kung-Yi Koo	Male	2017/6/8	760,947	0.01	-	-	None	None
Assistant Vice President	R.O.C.	Cen-Wei Lan	Male	2017/3/6	208,469	0.00	-	-	None	None
Assistant Vice President and Corporate Governance Manager	R.O.C.	Jia-Ro Lai	Female	2019/4/23	114,449	0.00	246	0.00	None	None
Assistant Vice President	R.O.C.	Kuo-Yuan Li	Male	2021/4/15	112,741	0.00	-	-	None	None
Assistant Vice President	R.O.C.	Cheng-Tao Chiang	Male	2017/8/11	149,418	0.00	-	-	None	None

Education and Experience	Current Positions Held in TCC and Other Companies	Managerial Officers Who are Spouses or within Second-degree of Kinship			Notes	
		Title	Name	Relationship		
Doctor of Philosophy in Civil Engineering, National Taiwan University	None	None	None	None		
BS in Chemical Engineering, Minth University of Science and Technology	Chairman of Guigang TCC Dongyuan Environmental Protection Technology Co., Ltd. Chairman of TCC Jiuyuan (Guangan) Environmental Technology Co., Ltd. Chairman of TCC Yingde New Material Co., Ltd. Chairman of TCC Yongren (Hangzhou) Renewable Resources Development Company Limited Chairman of TCC Zhongxin (Anshun) Renewable Resources Technology Company Limited Director of TJ Transport Corporation Director of Kuan-Ho Refractories Industry Corporation Director of Jurong TCC Cement Co., Ltd. Director of TCC Liaoning Cement Co., Ltd. Director of TCC (Gui Gang) Cement Ltd. Director of Beijing TCC Environmental Technology Co., Ltd.	Director of TCC Yingde Mining Industrial Company Limited Director of TCC (Shaoguan) Environmental Technology Co., Ltd. Director of TCC Chongqing Cement Co., Ltd. Director of TCC Huaihua Cement Company Limited Director of TCC Jingzhou Cement Company Limited Director of TCC Huaihua Concrete Company Limited Director of Jin Yu TCC (Dai Xian) Environmental Protection Technology Co., Ltd. Director of Chongqing Xuanjie TCC Environmental Protection Technology Co., Ltd. Director of TCC Zhongrun (Anshun) Environmental Technology Co., Ltd. Director of Jingyang Industrial Limited Director of Scitus Cement (China) Holdings Limited Director of Quon Hing Concrete Co., Ltd., etc.	None	None	None	
BS in Geology, Chinese Culture University	Chairman and President of Ho Sheng Mining Co., Ltd. Chairman of Jurong TCC Cement Co., Ltd. Director and President of Jin Chang Minerals Corporation Director and CEO of Hualien County Private Hoping Sustainability Charity Foundation Director of In services of Life Foundation Director of TCC Green Energy Corporation Director of TCC Chia-Chien Green Energy Corporation Director of TCC Yun-Kai Green Energy Corporation Director of TCC Lien-Hsin Green Energy Corporation Director of TCC Chang-Ho Green Energy Corporation	Director of TCC Kao-Cheng Green Energy Corporation Director of TCC Nan-Chung Green Energy Corporation Director of Chang-Wang Wind Power Co., Ltd. Director of TCC Ping-Chih Green Energy Corporation Director of Chia-Ho Green Energy Corporation Director of TCC Tung-Li Green Energy Corporation Director of TCC KAO-HAN Green Energy Corporation Director of SHI-MEN Green Energy Corporation Director of Kuan-Ho Refractories Industry Corporation Director of HPC Power Service Corporation Director of Ho-Ping Industrial Port Corporation Director of TCC Guigang Mining Industrial Company Limited, etc.				
Executive MBA Program in Accounting and Management Decision-making of College of Management, National Taiwan University	None	None	None	None	Note 2	
MBA, The Wharton School of University of Pennsylvania Vice President of Morgan Stanley Investment Banking Department Vice Chairman of Taiwan Cement Corporation Chairman of Taiwan Prosperity Chemical Corporation	Chairman of International CSRC Investment Holdings Co., Ltd. Chairman of Linyuan Advanced Materials Technology Co., Ltd. Chairman of Circular Commitment Company Chairman of Yun Cheng Investment Corporation Chairman of CS Development & Investment Co. Chairman of Consolidated Resource Company Chairman of Taiwan Transport & Storage Co., Ltd. Chairman of CCC USA Corp. Chairman of Continental Carbon Company Director of Synpac (North Carolina), Inc. Director of Synpac GP Corporation Director of CSRC (BVI) LTD. Director of CSRC (SINGAPORE) PTE LTD.	Director of SYNPAK LTD. Director of Continental Carbon Nanotechnologies, Inc. Director of Continental Carbon OYAK (Netherlands) B.V. Director of E-One Moli Energy Corp. Director of TCC Recycle Energy Technology Company Director of Ho-Ping Power Company Director of Hsing Cheng Investment Co., Ltd. Director of Tai Ho Farming Co., Ltd. Director of Chiefolk Company Limited Director of Hong Kong Cement Company Limited Director of Kong On Cement Holdings Ltd. Director of China Steel Chemical Corporation Supervisor of TCC (Hangzhou) Management Company Limited, etc.	None	None	None	
BS in Business Administration, Soochow University	Director of TCC (Hangzhou) Environmental Protection Technology Co., Ltd. Director of Hong Kong Concrete Company Limited Director of TCC Zhongxin (Anshun) Renewable Resources Technology Company Limited Supervisor of TCC Shaoguan Cement Co., Ltd. Supervisor of Anshun Xin Tai Construction Materials Company Limited Supervisor of TCC Guigang Mining Industrial Company Limited	Supervisor of Yingde Dragon Mountain Cement Co., Ltd. Supervisor of TCC Yingde Cement Co., Ltd. Supervisor of TCC Yingde New Material Co., Ltd. Supervisor of Prosperity Conch Cement Company Limited Supervisor of Yingjing Xinan New Material Co., Ltd. Supervisor of Sichuan Taichang Building Material Group Company Limited Supervisor of TCC Yingde Mining Industrial Company Limited, etc.	None	None	None	
MS in Laws, Fu Jen Catholic University	Director of NHOA S.A. Supervisor of Ho Sheng Mining Co., Ltd. Supervisor of Ho-Ping Power Company	Supervisor of Hualien County Private Hoping Sustainability Charity Foundation	None	None	None	
Master in Land Economics, National Chengchi University.	Director of TCC Chemical Corporation	Supervisor of TCC Asset Management & Development Corporation, etc.	None	None	None	
BS in Chemical Engineering, National Taipei University of Technology	Director and President of TCC Yingde Mining Industrial Company Limited Director of TCC Yingde Mining Industrial Company Limited	Director of TCC (Guangdong) Renewable Resources Technology Company Limited Director of TCC International (Liuzhou) Limited	None	None	None	

Title	Nationality	Name	Gender	Date of Election (Appointment)	Shares Held		Shares Held by Spouses and Minor Children		Shares Held in the Names of Others	
					Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %	Number of Shares	Shareholding Ratio %
Assistant Vice President	R.O.C.	Yin-Hua Chen	Male	2022/4/1	126,430	0.00	-	-	None	None
Assistant Vice President	R.O.C.	Katrina Chen	Female	2023/2/1	97,142	0.00	-	-	None	None
Chief Information Security Officer	R.O.C.	Nien-Wang Chang	Male	2022/4/11	83,793	0.00	-	-	None	None
Assistant Vice President	R.O.C.	Xiu-Fen Lu	Female	2024/2/1	-	-	-	-	None	None
Assistant Vice President	R.O.C.	Bin-Chih Wang	Male	2024/4/8	-	-	-	-	None	None
Assistant Vice President	R.O.C.	Jin-Yi Chen	Male	2015/4/13	138,470	0.00	-	-	None	None
Senior Manager	R.O.C.	Chi-Ching Chen	Male	2023/2/1	47,201	0.00	57	0.00	None	None
Senior Manager	R.O.C.	Hsueh Ching Hsu	Female	2024/2/19	20,220 *1,133	0.00 *0.00	-	-	None	None
Senior Manager	R.O.C.	Chen-Yuan Chen	Male	2024/11/11	5,000	0.00	-	-	None	None
Manager	R.O.C.	Li-Chi Hsiao	Male	2024/3/1	62,860	0.00	-	-	None	None
Senior Assistant Manager	R.O.C.	Chu-Tsun Chen	Male	2024/4/26	81,166 *1,639	0.00 *0.00	11,204	0.00	None	None
Senior Assistant Manager	R.O.C.	Tzu-Yang Wu	Male	2025/3/13	3,000	0.00	-	-	None	None
Assistant Vice President	R.O.C.	Hsiu-Hao Chang	Male	2024/4/15	-	-	-	-	None	None
Senior Manager	R.O.C.	Shi-Sheng Liang	Male	2023/2/1	41,313 *1,584	0.00 *0.00	-	-	None	None
Senior Manager	R.O.C.	Yin-Te Wu	Male	2018/7/9	60,742	0.00	-	-	None	None
Manager and Internal Audit Manager	R.O.C.	Chia-Hua Tsao	Male	2020/12/1	6,000	0.00	-	-	None	None
Senior Assistant Manager	R.O.C.	Yu-Yang Chang	Male	2021/6/16	-	-	-	-	None	None
Senior Assistant Manager	R.O.C.	Chun-Da Yi	Male	2024/6/18	-	-	-	-	None	None

Note 1: When the President or an equivalent position (top manager) and the Chairman are the same person, spouses, or first-degree relatives, TCC should disclose the reason, rationale, necessity, and countermeasures—such as increasing the number of independent directors or ensuring that more than half of the directors are not also employees or managers: Due to the diverse business operations of each subsidiary within the TCC Group, the Group CEO is responsible for overseeing the overall management of affiliated enterprises, implementing board resolutions, and supervising the managers of TCC and each affiliated enterprise. This role differs from that of TCC’s President. Therefore, the Board of Directors has resolved to appoint a separate President to oversee the operations of TCC.

Education and Experience	Current Positions Held in TCC and Other Companies	Managerial Officers Who are Spouses or within Second-degree of Kinship			Notes
		Title	Name	Relationship	
BS in Mechanical Engineering, National Taipei University of Technology	Director of Tuo Shan Recycle Technology Company Director of TCC Huaying Cement Company Limited Director of TCC Anshun Cement Co., Ltd. Director of Jurong TCC Cement Co., Ltd. Director of TCC Jiangsu Mining Industrial Company Limited Director of TCC (Shaoguan) Environmental Technology Co., Ltd. Director of TCC Yingde New Material Co., Ltd. Director of TCC Weili (Changzhou) Environmental Engineering Co., Ltd. Director of TCC Zhongrun (Anshun) Environmental Technology Co., Ltd., etc.	None	None	None	
MS in Senior Executive Management, National Chengchi University.	Director of Dr. Cecilia Koo Botanic Conservation Center	None	None	None	
MBA, National Taipei University					
MS in Computer and Communication Engineering, National Kaohsiung First University of Science and Technology	None	None	None	None	
MS in Law, Fordham University, USA	None	None	None	None	
Ph.D. in Natural Resources and Environmental Management from National Taipei University	None	None	None	None	Note 2
BS in Chemical Engineering, National Taiwan University of Science and Technology	Director of Ho Sheng Mining Co., Ltd. Supervisor of Jin Chang Minerals Corporation	None	None	None	
MS in Chemistry, National Taiwan University	None	None	None	None	
Hsinchu Commercial High School Comprehensive High School	None	None	None	None	
BS in Mechanical Engineering, Feng Chia University	None	None	None	None	Note 2
BS in Mechanical Engineering, Da-Yeh University	None	None	None	None	
BS in Chemical Engineering, Lunghwa University of Science and Technology	None	None	None	None	Note 2
BS in Finance and Banking, Feng Chia University	None	None	None	None	Note 2
MS in Finance, National Taiwan University	None	None	None	None	Note 3
BS in Civil Engineering, Da-Han Institute of Technology	Director and President of TCC Yingde New Material Co., Ltd. Director of TCC Yingde Mining Industrial Company Limited Director of Prosperity Conch Cement Company Limited, etc.	None	None	None	Note 3
BS in Geology, Chinese Culture University	Director of Feng Sheng Enterprise Company Director of E.G.C. CEMENT CORP. Director of CHC Resources Corporation, etc.	None	None	None	Note 3
BS in Accounting, Fu Jen Catholic University	None	None	None	None	Note 3
BS in Public Health, Taipei Medical University	None	None	None	None	Note 3
BS in Healthcare Administration, Yuanpei University of Medical Technology	None	None	None	None	Note 3

Note 2: Ms. Yi-Ching Chung was newly appointed on January 20, 2025, Mr. Bin-Chih Wang on April 8, 2024, Mr. Chen-Yuan Chen on November 11, 2024, Mr. Chu-Tsun Chen on April 26, 2024, and Mr. Tzu-Yang Wu on March 13, 2025.

Note 3: Mr. Hsiu-Hao Chang was newly appointed on April 15, 2024 and relieved of duties on July 23, 2024; Mr. Shi-Sheng Liang was relieved of duties on November 11, 2024; Mr. Yin-Te Wu was relieved of duties on March 13, 2025; Mr. Chia-Hua Tsao was relieved of duties on October 21, 2024; Mr. Yu-Yang Chang was relieved of duties on June 18, 2024; Mr. Chun-Da Yi was newly appointed on June 18, 2024, and relieved of duties on January 22, 2025.

Note 4: The "" in this table represents preferred stocks.

2.1.3 Compensation paid to Directors, Supervisors, President and Vice Presidents in the most recent year

Directors' Compensation

Title	Name	Directors' Compensation							
		Compensation (A)		Retirement Pension (B)		Directors' Compensation (C) (Note 1)		Business Execution Expenses (D)	
		TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report
Chairman	Chia Hsin R.M.C. Corporation Representative: Nelson An-ping Chang	29,101	31,943	0	0	123,168	123,168	1,338	1,338
Director	Tai Ho Farming Co., Ltd. Representative: Kung-Yi Koo Representative: Roman Cheng								
Director	C. F. Koo Foundation Representative: Eric Chen Sun Te								
Director	Fu Pin Investment Co., Ltd. Representative: Por-Yuan Wang Representative: Chi-Chia Hsieh Representative: Chien Wen								
Director	International CSRC Investment Holdings Co., Ltd. Representative: Kenneth C.M. Lo								
Director	Chia Hsin Cement Corporation Representative: Kang-Lung (Jason) CHANG Representative: Eric Chen Sun Te Representative: Liz Wang								
Director	Heng Qiang Investment Co., Ltd. Representative: Chien Wen Representative: Chun-Ying Liu Representative: Por-Yuan Wang								
Director	Hsing Cheng Investment Co., Ltd. Representative: Yu-Cheng Chiao								
Director	CS Development & Investment Co. Representative: Kung-Yi Koo								
Independent Director	Yu-Cheng Chiao								
Independent Director	Victor Wang								
Independent Director	Lynette Ling-Tai Chou								
Independent Director	Mei-Hua Lin								
Independent Director	Sherry S. L. Lin								
Independent Director	Nigel N. T. Li (Note 4)								
Independent Director	Ruu Tian Chang								

1.Please describe the policies, systems, standards, and structures governing independent director compensation. Additionally, explain how the compensation amount is determined in relation to factors such as role responsibilities, risks, and time commitment: In addition to considering the results of director performance evaluations, the compensation for TCC's independent directors is determined in accordance with Article 20 of the Articles of Incorporation. The Remuneration Committee reviews each director's level of participation and contribution to the company operations, ensuring a fair and reasonable linkage between performance risks and compensation. It also takes into account TCC's operational performance and industry salary benchmarks to propose reasonable compensation recommendations to the Board of Directors.

2. In addition to the disclosures in the above table, the compensation received by TCC's directors for providing services to all companies included in the financial report in the most recent year (such as serving as non-employee consultants) was: NT\$0.

Note 1: This refers to the amount of directors' compensation approved by the Board of Directors for 2025 as of the annual report publication date. The amount listed is an estimate.

Note 2: The amount of expense-recognized pension contributions for TCC in 2024 was NT\$174 thousand, with no actual pension payments made.

Note 3: This refers to the amount of employee compensation approved by the Board of Directors for 2025 as of the annual report publication date. The amount listed is an estimate.

Note 4: Mr. Nigel N. T. Li, the original independent director, resigned on October 9, 2024.

Unit: NT\$ thousands

The sum of A, B, C and D, and the proportion to net profit after tax		Concurrent compensation received as an employee								The sum of A, B, C, D, E, F and G, and the proportion to net profit after tax		Compensation received from investee companies or the parent company, excluding subsidiaries
TCC	All Companies in the Financial Report	Salary, Bonuses, and Special Allowances (E)		Retirement Pension (F) (Note 2)		Employee Compensation (G) (Note 3)				TCC	All Companies in the Financial Report	
		TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report	TCC		All Companies in the Financial Report				
						Cash Amount	Stock Amount	Cash Amount	Stock Amount			
153,606 1.36%	156,449 1.39%	46,435	46,435	174	174	6,390	0	6,390	0	206,605 1.84%	209,448 1.86%	5,452

Compensation Ranges for Each Director of TCC	Directors' Name			
	Total Compensation for Items A, B, C, and D		Total Compensation for Items A, B, C, D, E, F, and G	
	TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report
Less than NT\$1,000,000	Roman Cheng, Chi-Chia Hsieh, Chi-Te Chen, Liz Wang, Chun-Ying Liu	Chi-Chia Hsieh, Chi-Te Chen, Liz Wang, Chun-Ying Liu	Chi-Chia Hsieh, Chi-Te Chen, Liz Wang, Chun-Ying Liu	Chi-Chia Hsieh, Chi-Te Chen, Liz Wang, Chun-Ying Liu
NT\$1,000,000 (inclusive) to NT\$2,000,000 (exclusive)	Kung-Yi Koo, Eric Chen Sun Te, Chien Wen, Kenneth C.M. Lo, Kang-Lung (Jason) Chang, Por-Yuan Wang, Mei-Hua Lin, Nigel N. T. Li, Ruu Tian Chang	Roman Cheng, Eric Chen Sun Te, Chien Wen, Kenneth C.M. Lo, Kang-Lung (Jason) Chang, Por-Yuan Wang, Mei-Hua Lin, Nigel N. T. Li, Ruu Tian Chang	Eric Chen Sun Te, Chien Wen, Kenneth C.M. Lo, Kang-Lung (Jason) Chang, Por-Yuan Wang, Mei-Hua Lin, Nigel N. T. Li, Ruu Tian Chang	Eric Chen Sun Te, Chien Wen, Kenneth C.M. Lo, Kang-Lung (Jason) Chang, Por-Yuan Wang, Mei-Hua Lin, Nigel N. T. Li, Ruu Tian Chang
NT\$2,000,000 (inclusive) to NT\$3,500,000 (exclusive)	Yu-Cheng Chiao, Victor Wang, Lynette Ling-Tai Chou, Sherry S. L. Lin	Kung-Yi Koo, Yu-Cheng Chiao, Victor Wang, Lynette Ling-Tai Chou, Sherry S. L. Lin	Yu-Cheng Chiao, Victor Wang, Lynette Ling-Tai Chou, Sherry S. L. Lin	Yu-Cheng Chiao, Victor Wang, Lynette Ling-Tai Chou, Sherry S. L. Lin
NT\$3,500,000 (inclusive) to NT\$5,000,000 (exclusive)	-	-	Kung-Yi Koo	Kung-Yi Koo
NT\$5,000,000 (inclusive) to NT\$10,000,000 (exclusive)	Chai Hsin R.M.C. Corporation, Tai Ho Farming Co., Ltd., C. F. Koo Foundation, International CSRC Investment Holdings Co., Ltd., Hsing Cheng Investment Co., Ltd., CS Development & Investment Co.	Chai Hsin R.M.C. Corporation, Tai Ho Farming Co., Ltd., C. F. Koo Foundation, International CSRC Investment Holdings Co., Ltd., Hsing Cheng Investment Co., Ltd., CS Development & Investment Co.	Chai Hsin R.M.C. Corporation, Tai Ho Farming Co., Ltd., C. F. Koo Foundation, International CSRC Investment Holdings Co., Ltd., Hsing Cheng Investment Co., Ltd., CS Development & Investment Co.	Chai Hsin R.M.C. Corporation, Tai Ho Farming Co., Ltd., C. F. Koo Foundation, International CSRC Investment Holdings Co., Ltd., Hsing Cheng Investment Co., Ltd., CS Development & Investment Co.
NT\$10,000,000 (inclusive) to NT\$15,000,000 (exclusive)	Fu Pin Investment Co., Ltd., Heng Qiang Investment Co., Ltd.	Fu Pin Investment Co., Ltd., Heng Qiang Investment Co., Ltd.	Fu Pin Investment Co., Ltd., Heng Qiang Investment Co., Ltd.	Fu Pin Investment Co., Ltd., Heng Qiang Investment Co., Ltd.
NT\$15,000,000 (inclusive) to NT\$30,000,000 (exclusive)	Chia Hsin Cement Corporation	Chia Hsin Cement Corporation	Chia Hsin Cement Corporation	Chia Hsin Cement Corporation
NT\$30,000,000 (inclusive) to NT\$50,000,000 (exclusive)	Nelson An-ping Chang	Nelson An-ping Chang	Nelson An-ping Chang	Nelson An-ping Chang
NT\$50,000,000 (inclusive) to NT\$100,000,000 (exclusive)	-	-	Roman Cheng	Roman Cheng
NT\$100,000,000 and above	-	-	-	-
Total	32	32	32	32

Compensation of Group CEO, President, and Vice President

Title	Name	Salary (A)		Retirement Pension (B)		Bonus and Special Allowances (C)		Employee Compensation Amount (D) (Note 1)				The total amount of A, B, C and D and the proportion to net income after tax		Compensation received from investee companies or the parent company, excluding subsidiaries
		TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report	TCC		All Companies in the Financial Report Parent company		TCC	All Companies in the Financial Report	
								Cash Amount	Stock Amount	Cash Amount	Stock Amount			
Group CEO	Nelson An-ping Chang	103,486	107,290	2,893	2,893	40,876	41,098	16,831	-	16,831	-	164,086 1.46%	168,111 1.49%	-
President	Roman Cheng													
Senior Vice President	Chien-Chiang Huang													
Senior Vice President	Ker-Fu Lu													
Vice President	Bao-Luo Ge													
Vice President	Chien-Chuan Wang													
Vice President	Feng-Ping Liu													
Vice President	Yu-Jun Yeh													
CFO	Randy Yu													
Chief Information Security Officer	Nien-Wang Chang													

Note 1: This refers to the amount of employee Compensation approved by the Board of Directors for 2025 as of the annual report publication date. The amount listed is an estimate.

Compensation Range for Each President and Vice President of TCC	Names of President and Vice Presidents	
	TCC	The parent company and all investee companies
Less than NT\$1,000,000	-	-
NT\$1,000,000 (inclusive) to NT\$2,000,000 (exclusive)	Nien-Wang Chang	Nien-Wang Chang
NT\$2,000,000 (inclusive) to NT\$3,500,000 (exclusive)	-	-
NT\$3,500,000 (inclusive) to NT\$5,000,000 (exclusive)	-	-
NT\$5,000,000 (inclusive) to NT\$10,000,000 (exclusive)	Chien-Chiang Huang, Bao-Luo Ge, Chien-Chuan Wang	Bao-Luo Ge, Chien-Chuan Wang
NT\$10,000,000 (inclusive) to NT\$15,000,000 (exclusive)	Yu-Jun Yeh, Feng-Ping Liu, Ker-Fu Lu	Chien-Chiang Huang, Ker-Fu Lu, Yu-Jun Yeh, Feng-Ping Liu
NT\$15,000,000 (inclusive) to NT\$30,000,000 (exclusive)	Randy Yu	Randy Yu
NT\$30,000,000 (inclusive) to NT\$50,000,000 (exclusive)	Nelson An-ping Chang	Nelson An-ping Chang
NT\$50,000,000 (inclusive) to NT\$100,000,000 (exclusive)	Roman Cheng	Roman Cheng
NT\$100,000,000 and above	-	-
Total	10	10

Names of Managers Allocated for Employee Compensation and the Allocation Status

December 31, 2024 / Unit: NT\$ thousands

	Title	Name	Stock Amount	Cash Amount	Total	Ratio of Total Amount to Net Income After Tax (%)
Manager	Group CEO	Nelson An-ping Chang	-	21,284	21,284	0.19%
	President	Roman Cheng				
	Senior Vice President	Chien-Chiang Huang				
	Senior Vice President	Ker-Fu Lu				
	Vice President	Bao-Luo Ge				
	Vice President	Chien-Chuan Wang				
	Vice President	Feng-Ping Liu				
	Vice President	Yu-Jun Yeh				
	CFO and Accounting Chief Officer	Randy Yu				
	Senior Assistant Vice President	Kuo-Yu Tsai				
	Senior Assistant Vice President and Internal Audit Manager	Guo Hong Yeh				
	Senior Assistant Vice President	Huei Sheng Chiou				
	Senior Assistant Vice President	Yu-Wen Chiu				
	Senior Assistant Vice President	Chia-Pei Wei				
	Senior Assistant Vice President (Note 1)	Yi-Ching Chung				
	Assistant Vice President	Kung-Yi Koo				
	Assistant Vice President	Cen-Wei Lan				
	Assistant Vice President and Corporate Governance Manager	Jia-Ro Lai				
	Assistant Vice President	Kuo-Yuan Li				
	Assistant Vice President	Cheng-Tao Chiang				
	Assistant Vice President	Yin-Hua Chen				
	Assistant Vice President	Katrina Chen				
	Chief Information Security Officer	Nien-Wang Chang				
	Assistant Vice President	Xiu-Fen Lu				
	Assistant Vice President (Note 1)	Bin-Chih Wang				
	Assistant Vice President	Jin-Yi Chen				
	Senior Manager	Chi-Ching Chen				
	Senior Manager	Hsueh Ching Hsu				
	Senior Manager (Note 1)	Chen-Yuan Chen				

	Title	Name	Stock Amount	Cash Amount	Total	Ratio of Total Amount to Net Income After Tax (%)
Manager	Manager	Li-Chi Hsiao				
	Senior Assistant Manager (Note 1)	Chu-Tsun Chen				
	Senior Assistant Manager (Note 1)	Tzu-Yang Wu				
	Assistant Vice President (Note 2)	Hsiu-Hao Chang				
	Senior Manager (Note 2)	Shi-Sheng Liang				
	Senior Manager (Note 2)	Yin-Te Wu				
	Manager and Internal Audit Manager(Note 2)	Chia-Hua Tsao				
	Senior Assistant Manager (Note 2)	Yu-Yang Chang				
	Senior Assistant Manager (Note 2)	Chun-Da Yi				

Note 1: Ms. Yi-Ching Chung was newly appointed on January 20, 2025, Mr. Bin-Chih Wang on April 8, 2024, Mr. Chen-Yuan Chen on November 11, 2024, Mr. Chu-Tsun Chen on April 26, 2024, and Mr. Tzu-Yang Wu on March 13, 2025.

Note 2: Mr. Hsiu-Hao Chang was newly appointed on April 15, 2024 and relieved of duties on July 23, 2024;
Mr. Shi-Sheng Liang was relieved of duties on November 11, 2024;
Mr. Yin-Te Wu was relieved of duties on March 13, 2025;
Mr. Chia-Hua Tsao was relieved of duties on October 21, 2024;
Mr. Yu-Yang Chang was relieved of duties on June 18, 2024;
Mr. Chun-Da Yi was newly appointed on June 18, 2024, and relieved of duties on January 22, 2025.

2.1.4 TWSE/TPEx listed companies that meet the conditions specified in Article 10, Paragraph 3, Item 2, Sub-item 1 or 5 of these Standards should disclose the compensation of the top five highest-paid executives individually:

No such circumstance.

2.1.5 A comparative analysis of the proportion of total compensation paid to TCC's directors, supervisors, President, and Vice Presidents by both TCC and all companies included in the consolidated financial statements to net income after tax in the individual or separate financial reports for the past two years. Additionally explain the policies, standards and combinations of compensation, the procedures for determining compensation, and its relationship with operating performance and future risks

Title	The Proportion of Total Compensation to Net Income After Tax			
	2024		2023	
	TCC	All Companies in the Financial Report	TCC	All Companies in the Financial Report
Director	1.36%	1.39%	1.61%	1.67%
Group CEO, President, and Vice Presidents	1.46%	1.49%	1.93%	1.99%

TCC offers a competitive salary structure and generous bonuses to attract, retain, and motivate talent. In line with the principle of sharing operational performance, TCC sets its compensation policy and makes timely adjustments based on actual business conditions and relevant regulations. This approach ensures that directors and managers are not incentivized to engage in risky, compensation-driven behaviors beyond TCC's risk appetite, thereby supporting the long-term development and achievement of TCC's operational goals.

(1) Employees

- 1.TCC's overall employee compensation includes monthly salary, year-end bonus, quarterly bonus, and performance bonus. We also refer to market salary levels, company operating conditions, and internal organizational structure to establish reasonable salary standards.
- 2.Annual salary adjustment plans are implemented in a timely manner based on market and industry dynamics and government regulatory requirements.
- 3.Year-end bonuses, quarterly bonuses, and performance bonuses are distributed based on the Company's operating conditions and individual employee performance. Employee compensation is allocated in accordance with Article 25 of the Articles of Incorporation to reward hard work and achievements.

(2). Managers

- 1.TCC's overall employee compensation includes monthly salary, year-end bonus, quarterly bonus, and performance bonus. We also refer to market salary levels, company operating conditions, and internal organizational structure to establish reasonable salary standards.
- 2.Annual salary adjustment plans are implemented in a timely manner based on market and industry dynamics and government regulatory requirements.

Short-term performance indicators include the following four major aspects

- 1. Individual contribution (job performance and achievement rate)
- 2. Financial indicators (net profit after tax and growth rate).
- 3. Sustainability indicators (carbon reduction effectiveness, alternative fuel applications, green energy indicators, DEI indicators, and green supply chain procurement).
- 4. Management indicators (talent development, social responsibility, legal compliance, and risk prevention).

Long-term performance indicators are divided into seven major aspects:

- 1. Individual contribution (job performance and achievement rate)
- 2. Financial and operation performance (net profit after tax and growth rate)
- 3. Corporate governance (including regulatory compliance, revenue, and profit).
- 4. Environmental sustainability and circular economy (developing circular economy to achieve circular sustainability goals).
- 5. Talent development and social responsibility (cultivating talent, enhancing employee capabilities and qualities, fostering international perspectives).
- 6. Risk assessment (evaluating long-term risks).
- 7. Other special contributions or major negative events.

(3) Directors

According to Article 4 of the Remuneration Committee Regulations, the performance evaluation and compensation of directors are based on industry salary standards. Individual performance is evaluated based on the performance assessment results, responsibilities, and the company's financial condition to ensure reasonable correlation between personal performance, company operating results, and future risks.

The performance evaluation measurement items for directors should include at least the following six major aspects:

- 1. Understanding of company goals and missions.
- 2. Awareness of director responsibilities.
- 3. Level of participation in company operations.
- 4. Management and communication of internal relationships.
- 5. Director's professional expertise and continuous education.
- 6. Internal control.

Directors receive a fixed monthly compensation and additionally receive attendance fees based on the number of meetings attended. According to Article 25 of the Articles of Incorporation, no more than one percent of profits shall be allocated as director compensation. This amount will be distributed as director compensation for the current year and based on the performance evaluation results of each director.

2.2 Corporate Governance Operations

2.2.1 Board of Directors Operations

I. The 24th Board of Directors held a total of three meetings (A) from January 1, 2024, to May 20, 2024, with directors' attendance as follows:

(The term of the 24th Board of Directors is from July 5, 2021, to May 20, 2024, with re-election at the Annual Shareholders' Meeting on May 21, 2024)

Title	Name	Actual Attendance (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)	Notes
Chairman	Chia Hsin R.M.C. Corporation Representative: Nelson An-ping Chang	3	0	100%	
Director	C. F. Koo Foundation Representative: Eric Chen Sun Te	3	0	100%	
Director	Chia Hsin Cement Corporation Representative: Kang-Lung (Jason) Chang	3	0	100%	
Director	International CSRC Investment Holdings Co., Ltd. Representative: Kenneth C.M. Lo	3	0	100%	
Director	Fu Pin Investment Co., Ltd. Representative: Por-Yuan Wang	3	0	100%	
Director	Tai Ho Farming Co., Ltd. Representative: Kung-Yi Koo	3	0	100%	
Director	Fu Pin Investment Co., Ltd. Representative: Chi-Chia Hsieh	2	1	67%	
Director	Chia Hsin Cement Corporation Representative: Eric Chen Sun Te	2	1	67%	
Director	Heng Qiang Investment Co., Ltd. Representative: Chien Wen	3	0	100%	
Director	Heng Qiang Investment Co., Ltd. Representative: Chun-Ying Liu	1	1	33%	Take one leave
Independent Director	Yu-Cheng Chiao	3	0	100%	
Independent Director	Victor Wang	3	0	100%	
Independent Director	Lynette Ling-Tai Chou	3	0	100%	
Independent Director	Mei-Hua Lin	3	0	100%	
Independent Director	Sherry S. L. Lin	3	0	100%	

Other Matters to be Recorded:

1. If any of the following circumstances occur in the operation of the Board of Directors, the board meeting date, term, proposal details, opinions of all independent directors, and the handling of the independent directors' opinions shall be specified:

(1) Matters listed in Article 14-3 of the Securities and Exchange Act: TCC has established an Audit Committee, therefore Article 14-3 of the Securities and Exchange Act does not apply. Please refer to "2.2.2 Audit Committee Operations" on page 71 of this annual report for details.

(2) Other than the aforementioned matters, any other resolutions passed by the Board of Directors with objections or reservations from independent directors that are recorded or stated in writing: No such circumstance.
2. Implementation of recusal by Directors for proposals with conflicts of interest should include the name of the Director, proposal details, reasons for recusal due to conflicts of interest, and participation in voting:

Meeting Date	Proposal Details	Reasons and Circumstances of Recusal Due to Conflicts of Interest
2024/3/20 The 30th Meeting of the 24th Board of Directors	Discussion Item 2: The proposal for the 2023 distribution of compensation for employees and directors at TCC.	Meeting Proceedings: For the second and third items, all directors present and managers in attendance, except for independent directors, left the meeting and recused themselves. Resolution: Except for the independent directors, all directors present left the meeting and recused themselves from this case, which was then chaired by Independent Director Victor Wang. This case was approved by the 18th meeting of the 5th Remuneration Committee and submitted to the Board of Directors for review. The proposal was unanimously approved by all independent directors, as confirmed by the Chairman
	Discussion Item 3: Proposal to determine the 2023 distribution ratio of compensation for the Chairman and Directors.	Meeting Proceedings: For the second and third items, all directors present and managers in attendance, except for independent directors, left the meeting and recused themselves. Resolution: Except for the independent directors, all directors present left the meeting and recused themselves from this case, which was then chaired by Independent Director Victor Wang. This case was approved by the 18th meeting of the 5th Remuneration Committee and submitted to the Board of Directors for review. The proposal was unanimously approved by all independent directors, as confirmed by the Chairman
2024/5/14 The 31st Meeting of the 24th Board of Directors	Discussion Item 8: TCC proposes to lease the land at Minde Section in Hualien City and the buildings thereon to Hualien-Taitung Branch of FDC International Hotels Corporation.	Meeting Proceedings: Chairman Nelson An-ping Chang recused himself from this case due to conflict of interest, and Director Kenneth C.M. Lo served as the acting chairperson. Resolution: Chairman Nelson An-ping Chang recused himself from this case due to conflict of interest and did not participate in the discussion or voting on this case. This case was approved by the 32nd meeting of the 3rd Audit Committee and was unanimously approved without objection by all attending directors upon inquiry by Acting Chairman Kenneth C.M. Lo.

II. The 25th Board of Directors held a total of ten meetings (A) from May 21, 2024, to March 20, 2025, and the directors' attendance is as follows:

(The 25th Board of Directors was re-elected and took office at the Annual Shareholders' Meeting on May 21, 2024)

Title	Name	Actual Attendance (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)	Notes
Chairman	Chia Hsin R.M.C. Corporation Representative: Nelson An-ping Chang	9	1	90%	
Director	Tai Ho Farming Co., Ltd. Representative: Roman Cheng	10	0	100%	
Director	International CSRC Investment Holdings Co., Ltd. Representative: Kenneth C.M. Lo	7	3	70%	
Director	Hsing Cheng Investment Co., Ltd. Representative: Yu-Cheng Chiao	10	0	100%	
Director	C. F. Koo Foundation Representative: Eric Chen Sun Te	8	2	80%	
Director	Chia Hsin Cement Corporation Representative: Kang-Lung (Jason) Chang	9	1	90%	
Director	Heng Qiang Investment Co., Ltd. Representative: Por-Yuan Wang	7	3	70%	

Title	Name	Actual Attendance (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)	Notes
Director	CS Development & Investment Co. Representative: Kung-Yi Koo	9	1	90%	
Director	Fu Pin Investment Co., Ltd. Representative: Chien Wen	8	2	80%	
Director	Chia Hsin Cement Corporation Representative: Liz Wang	10	0	100%	
Independent Director	Victor Wang	10	0	90%	
Independent Director	Lynette Ling-Tai Chou	9	1	100%	
Independent Director	Sherry S. L. Lin	10	0	100%	
Independent Director	Nigel N. T. Li	7	0	90%	Resigned on October 9, 2024
Independent Director	Ruu Tian Chang	9	1	90%	

Other Matters to be Recorded:

- 1.If any of the following circumstances occur in the operation of the Board of Directors, the Board meeting date, term, proposal details, opinions of all independent directors, and the handling of the independent directors' opinions shall be specified:

(1).Matters listed in Article 14-3 of the Securities and Exchange Act: TCC has established an Audit Committee, therefore Article 14-3 of the Securities and Exchange Act does not apply. Please refer to "2.2.2 Audit Committee Operations" on page 71 of this annual report for details.
(2).Other than the aforementioned matters, any other resolutions passed by the Board of Directors with objections or reservations from independent directors that are recorded or stated in writing: No such circumstance.
- 2.If any of the following circumstances occur in the operation of the Board of Directors, the Board meeting date, term, proposal details, opinions of all independent directors, and the handling of the independent directors' opinions shall be specified:

Meeting Date	Proposal Details	Reasons and Circumstances of Recusal Due to Conflicts of Interest
2024/6/12 The 3rd Extraordinary Meeting of the 25th Board of Directors	Discussion Item 1: TCC proposes to make a public tender offer for shares of NHOA S.A. in accordance with relevant French securities and exchange laws and to delist it as required by law.	Meeting Proceedings: Director Roman Cheng recused himself from this case due to conflict of interest. Resolution: Director Roman Cheng, who serves as the CSEO appointed by TCC to NHOA S.A., did not participate in the discussion and voting and left the meeting due to conflict of interest. This case was approved by the 2nd Extraordinary Meeting of the 4th Audit Committee, and after thorough discussion among the directors and management team at the Board meeting, it was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/8/13 The 5th Meeting of the 25th Board of Directors	Discussion Item 15: TCC intends to lease office spaces of Room 1105 and Room 1106 on the 11th floor of No. 96, Section 2, Zhongshan North Road, Taipei City, owned by Chia Hsin Property Management and Development Corp. case.	Meeting Proceedings: Director Kang-Lung (Jason) Chang and Director Liz Wang recused themselves from this case due to conflicts of interest. Resolution: Director Kang-Lung (Jason) Chang and Director Liz Wang recused themselves from this case due to conflicts of interest and did not participate in the discussion or voting. This case was approved by the 4th Meeting of the 4th Audit Committee and was unanimously approved by all attending directors without objection upon the Chairman's inquiry.
	Discussion Item 16: Proposal to establish the compensation and attendance fees for the Chairman and Directors of TCC's 25th Board of Directors.	Meeting Proceedings: All attending directors (including those participating via video conference) recused themselves due to conflicts of interest, and all managers also left the meeting. Independent Director Victor Wang served as the acting chairman. Resolution: All attending directors (including those participating via video conference) recused themselves due to conflicts of interest, and all managers also left the meeting and did not participate in the discussion or voting; Independent Director Victor Wang served as the acting chairman. This case was approved by the resolution of the 2nd Meeting of the 6th Remuneration Committee and was unanimously approved by all attending independent directors without objection upon Acting Chairman Independent Director Victor Wang's inquiry, in accordance with the original resolution of the Remuneration Committee.

Meeting Date	Proposal Details	Reasons and Circumstances of Recusal Due to Conflicts of Interest
2024/8/13 The 5th Meeting of the 25th Board of Directors	Discussion Item 17: The proposal to establish the remuneration and attendance fees for the Independent Directors of TCC's 25th Board of Directors.	Meeting Proceedings: All attending independent directors (including those participating via video conference) recused themselves due to conflicts of interest, and all managers also left the meeting. Resolution: All attending independent directors (including those participating via video conference) recused themselves due to conflicts of interest, and all managers also left the meeting and did not participate in the discussion or voting. This case was approved by the resolution of the 2nd Meeting of the 6th Remuneration Committee and was unanimously approved by all attending directors without objection upon the Chairman's inquiry, in accordance with the resolution of the Remuneration Committee.
2024/8/20 The 6th Extraordinary Meeting of the 25th Board of Directors	Discussion Item 1: TCC proposes to make a public tender offer for shares of NHOA S.A. in accordance with relevant French securities and exchange laws and its delisting, and subsequent related matters.	Meeting Proceedings: Chairman Nelson An-ping Chang and Director Roman Cheng recused themselves due to conflicts of interest, and Independent Director Victor Wang served as the acting chairman. Resolution: Chairman Nelson An-ping Chang and Director Roman Cheng, who serve as the Chairman and CSEO of NHOA S.A. appointed by TCC, respectively, recused themselves and left the meeting due to conflicts of interest and did not participate in the discussion or voting. This case was approved by the 5th Extraordinary Meeting of the 4th Audit Committee and was unanimously approved by all attending directors without objection upon the inquiry of Acting Chairman Independent Director Victor Wang.
2024/12/24 The 9th Meeting of the 25th Board of Directors	Discussion Item 8: The proposal to establish TCC's 2025 employee performance (including managers) salary adjustment plan.	Meeting Proceedings: Chairman Nelson An-ping Chang declined the bonuses (for Items 8 to 10) before the start of Item 8. Director Roman Cheng and Director Kung-Yi Koo recused themselves and left the meeting due to conflicts of interest for Items 8 to 10, and all managers also recused themselves and left the meeting. Resolution: Director Roman Cheng, Director Kung-Yi Koo, and managers in attendance recused themselves and left the meeting due to conflicts of interest, and did not participate in the discussion or voting on this case. This case was approved by the 4th Meeting of the 6th Remuneration Committee and was unanimously approved by all attending directors present without objection upon the inquiry of the Chairman.
	Discussion Item 9: The proposal for the total amount of performance bonuses (including managers) for TCC in 2024.	Meeting Proceedings: Chairman Nelson An-ping Chang declined the bonuses (for Items 8 to 10) before the start of Item 8. Director Roman Cheng and Director Kung-Yi Koo recused themselves and left the meeting due to conflicts of interest for Items 8 to 10, and all managers also recused themselves and left the meeting. Resolution: Director Roman Cheng, Director Kung-Yi Koo, and managers in attendance recused themselves and left the meeting due to conflicts of interest, and did not participate in the discussion or voting on this case. This case was approved by the 4th Meeting of the 6th Remuneration Committee and was unanimously approved by all attending directors present without objection upon the inquiry of the Chairman.
	Discussion Item 10: The proposal for the 2024 estimated performance bonus for the CEO of TCC.	Meeting Proceedings: Chairman Nelson An-ping Chang declined the bonuses (for Items 8 to 10) before the start of Item 8. Director Roman Cheng and Director Kung-Yi Koo recused themselves and left the meeting due to conflicts of interest for Items 8 to 10, and all managers also recused themselves and left the meeting. Resolution: Director Roman Cheng, Director Kung-Yi Koo, and managers in attendance recused themselves and left the meeting due to conflicts of interest, and did not participate in the discussion or voting on this case. This case was approved by the 4th Meeting of the 6th Remuneration Committee and was unanimously approved by all attending directors present without objection upon the inquiry of the Chairman.
2025/3/12 The 10th Meeting of the 25th Board of Directors	Discussion Item 10: The proposal for the 2024 distribution of compensation for employees and directors at TCC.	Meeting Proceedings: For the 10th and 11th proposals, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. Resolution: For this case, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. The meeting was chaired by Independent Director Victor Wang. This case was approved by the 5th meeting of the 6th Remuneration Committee and submitted to the Board of Directors for review. After the Chairman consulted all independent directors, the proposal was approved without objection.
	Discussion Item 11: The proposal for the 2024 distribution of compensation for the Chairman and Directors of TCC.	Meeting Proceedings: For the 10th and 11th proposals, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. Resolution: For this case, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. The meeting was chaired by Independent Director Victor Wang. This case was approved by the 5th meeting of the 6th Remuneration Committee and submitted to the Board of Directors for review. After the Chairman consulted all independent directors, the proposal was approved without objection.

3.TWSE/TPEx listed companies should disclose information about the evaluation period, scope, method, and details of the Board's self (or peer) evaluation:

To implement corporate governance and enhance the function of the Board of Directors, TCC established the Board of Directors Performance Evaluation Method on March 28, 2018. In addition to conducting an annual self-evaluation, an external evaluation is also required at least once every three years, performed by a team of external experts and scholars. The results of the internal and external performance evaluations of the Board of Directors should be completed by the end of the first quarter of the following year.

The evaluation details are as follows:

Evaluation cycle	Evaluation period	Evaluation scope	Evaluation method	Evaluation items		Evaluation results
Conducted once a year (internal evaluation)	2024/01/01-2024/12/31	Board of Directors, individual board members, and functional committees	Self-performance evaluation of the Board of Directors, board members, and functional committees. The assessment method is conducted internally and managed by the Corporate Governance Manager and the Board Secretariat. It is carried out using internal questionnaires, which evaluate the Board's operations, directors' participation, directors' assessment of the Board's operations, directors' self-assessment of their participation, and the evaluation of each functional committee.	Board of Directors performance evaluation	1. Level of participation in company operations. 2. Improving the quality of board decisions. 3. Composition and structure of the Board of Directors. 4. Selection and continuing education of directors. 5. Internal control.	The self-assessment results of TCC's Board of Directors, board members, Audit Committee, Remuneration Committee, Nomination Committee, Risk Management Committee, Corporate Sustainable Development Committee, and Information Security Management Committee for 2024 yielded an overall average score of 4.9 points (out of a maximum of five points). All scores are above the standard, with no major areas identified for improvement. The assessment results were reported to the directors at the Board meeting on March 12, 2025, and will serve as a reference for the performance, compensation, and nomination for reappointment of the Board and functional committee members.
				Director Member (Self) Performance Evaluation	1. Understanding of company goals and missions 2. Awareness of director's responsibilities 3. Level of participation in company operations 4. Management and communication of internal relationships 5. Director's professional expertise and continuous education 6. Internal control	
				Audit Committee Performance Evaluation	1. Level of participation in company operations 2. Understanding of Audit Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Audit Committee composition and member selection 5. Internal control	
				Remuneration Committee Performance Evaluation	1. Level of participation in company operations 2. Understanding of Remuneration Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Remuneration Committee composition and member selection	
				Nomination Committee Performance Evaluation	1. Level of participation in company operations 2. Understanding of Nomination Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Nomination Committee composition and member selection	
				Risk Management Committee Evaluation	1. Level of participation in company operations 2. Understanding of Risk Management Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Risk Management Committee composition and member selection 5. Internal control	
				Corporate Sustainable Development Committee Evaluation	1. Level of participation in company operations 2. Understanding of Corporate Sustainable Development Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Corporate Sustainable Development Committee composition and member selection	
				Information Security Management Committee Evaluation	1. Level of participation in company operations 2. Understanding of Information Security Committee responsibilities 3. Enhancing the decision-making quality of functional committees 4. Information Security Committee composition and member selection 5. Internal control	

Evaluation cycle	Evaluation period	Evaluation scope	Evaluation method	Evaluation items		Evaluation results
Should be conducted once every three years (external evaluation)	2024/1/1-2024/12/31	The Board of Directors and individual board members	The performance evaluation of the Board of Directors and the self-evaluation of directors for 2024 were conducted by the end of the year, with TCC engaging KPMG Advisory Services Co., Ltd., an external professional independent institution, to conduct the performance evaluation of the Board of Directors. KPMG Advisory Services Co., Ltd. is an independent, professional institution specializing in corporate governance system measurement and board effectiveness (performance) assessments. The institution and its assessment committee members have no business dealings with TCC, ensuring their independence. The evaluation method was conducted through questionnaires, data analysis, and interviews, and a performance evaluation report was issued based on the evaluation results.	The Board of Directors evaluation	There are nine key aspects, with a total of 87 evaluation questions: 1. Building an effective Board of Directors 2. Effective operation of the Board 3. Professional development and continuing education 4. Corporate foresight 5. Fulfillment of responsibilities 6. Management of the executive level 7. Creation of corporate culture 8. Communication with stakeholders 9. Performance evaluation	KPMG Advisory Services Co., Ltd. issued a performance evaluation report on TCC's Board of Directors on February 12, 2025, with an overall evaluation result of "excellent". The report was presented to the Board of Directors on March 12, 2025. 1. Comprehensive results of external expert evaluation: TCC's Board of Directors has established relevant policies and procedures pursuant to laws and domestic corporate governance indicators. TCC's Board of Directors consists of directors with relevant professional expertise and capabilities, with responsibilities appropriately allocated based on their experience. This has allowed the Board and its committees to operate effectively, earning an overall evaluation result of "excellent."
				Director Member Evaluation	Six major aspects and a total of 26 evaluation questions: 1. Understanding of company goals and missions 2. Awareness of director's responsibilities 3. Professional development and continuing education 4. Fulfillment of responsibilities 5. Level of participation in company operations 6. Management and communication of internal relationships	2. External expert recommendations: The performance evaluation of each aspect of the Board of Directors is excellent, and there is no need for immediate improvements 3. Implementation of improvements: TCC's Board of Directors adheres to corporate governance standards, ensures decisions align with sustainable operation principles, and has established two-way communication mechanisms. The Company team conducts regular briefings and communication, so no improvements are needed.

Note 1: The external performance evaluation report and internal self-evaluation report of TCC's Board of Directors have been disclosed on the company website.
Note 2: Between May 21, 2024, and December 31, 2024, the overall attendance rate of TCC's 25th Board of Directors was 90% (the director attendance rate must reach 80% as stipulated in the Regulations for Director Self-Evaluation).

4.Goals for strengthening the functions of the Board of Directors in the current and recent years (such as establishing an Audit Committee and enhancing information transparency) and implementation assessment:

(1)To strengthen the functions of the Board of Directors, TCC has established the following functional committees and disclosed their operations:

- i. Audit Committee (please refer to "2.2.2 Audit Committee Operations" on page 71 of this annual report)
- ii. Remuneration Committee (please refer to "2.2.4 Remuneration Committee Operations" on page 85 of this annual report)
- iii. Nomination Committee (please refer to "2.2.5 Nomination Committee Operations" on page 88 of this annual report)
- iv. Member of the Risk Management Committee

Establishment Information	To strengthen risk assessment and enhance management functions, TCC resolved in the 5th meeting of the 25th Board of Directors on August 13, 2024, to establish the Risk Management Committee and to formulate the new Risk Management Policy. The committee consists of six members (including four independent directors). The previous Risk Management Excutive Committee and Risk Management Policy and Principles were simultaneously abolished.
Main Responsibilities	<ul style="list-style-type: none">Review risk management policies and framework and regularly evaluate their applicability and implementation effectiveness.Approve risk appetite (risk tolerance) to guide resource allocation.Ensure that risk management mechanisms are fully equipped to address the risks faced by the company and integrate them into daily operational processes.Approve the prioritization of risk control and risk levels.Review the implementation of risk management and provide necessary recommendations to report to the Board of Directors.Review risk-related systems, regulations, mechanisms, issues, or cases that are required to be reported to the Board of Directors by regulatory authorities and various risk policies.Execute risk management decisions made by the Board of Directors

The 2nd Risk Management Executive Committee					
Term of Office	Committee member term of office is from July 15, 2021, to May 20, 2024				
Meeting Information	A total of one meeting was held (A) from January 1 to May 20, 2024.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Independent Director/Convener	Sherry S. L. Lin	Professional Qualifications: She has assisted listed companies with professional expertise in risk management, international markets, and ESG. Main Education and Professional Experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	1	0	100%
Independent Director/Committee Member	Victor Wang	Professional Qualifications: He possesses professional expertise in financial risk management. Main Education and Professional Experience: EMBA, National Taiwan University Director of Yageo Corporation Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	1	0	100%
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: She possesses professional expertise in auditing and accounting control. Main Education and Professional Experience: PhD of Accounting, University of Houston Independent Director of Next Commercial Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	1	0	100%

The implementation of the meeting is as follows:

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/5/14 The 6th Meeting of the 2nd Term Risk Management Executive Committee	<ul style="list-style-type: none">Report on the damage and recovery progress of TCC's production and business locations in Taiwan following the Hualien earthquake on April 3, 2024.Report on the annual update of TCC's main risk identification matrix in seven major aspects: operations, finance, national, legal compliance, ESG, personnel, and information security.Report on the achievement status of TCC's "2023 Climate-related Performance Indicators" and the "2024 Climate-related Performance Target Setting."	All attending committee members are fully informed.	Submitted to the Board of Directors for reporting on May 14, 2024. All attending directors were fully informed.

Note: For more information, please refer to the Investor section on TCC's official website -> Corporate Governance -> Committees

The 3rd Risk Management Committee					
Term of Office	Committee member term of office is from August 13, 2024, to May 20, 2027				
Meeting Information	A total of two meetings were held (A) from August 13, 2024 to March 20, 2025.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Independent Director/Convener	Sherry S. L. Lin	Professional Qualifications: She has assisted listed companies with professional expertise in risk management, international markets, and ESG. Main Education and Professional Experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	2	0	100%

Director/Committee Member	Liz Wang	Professional Qualifications: She possesses professional expertise in ESG Main Education and Professional Experience: MBA, Waseda University CEO of Chia Hsin Cement Corporation Vice Chairman of TAS Board	2	0	100%
Independent Director/Committee Member	Victor Wang	Professional Qualifications: He possesses professional expertise in financial risk management. Main Education and Professional Experience: EMBA, National Taiwan University Director of Yageo Corporation Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	2	0	100%
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: She possesses professional expertise in auditing and accounting control. Main Education and Professional Experience: PhD of Accounting, University of Houston Independent Director of Next Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	2	0	100%
Independent Director/Committee Member	Nigel N. T. Li (Note 1)	Professional Qualifications: He possesses expertise in ESG evaluation, finance, and others. Main Education and Professional Experience: LL.M., Harvard LL.M., National Taiwan University Senior Counsel of Lee and Li, Attorneys-at-Law Chairman of Taiwan Jurist Association	1	0	100%
Independent Director/Committee Member	Ruu Tian Chang	Professional Qualifications: She possesses information technology expertise. Main Education and Professional Experience: MBA, University of Minnesota System Executive Vice President of Gartner Group Taiwan Limited	2	0	100%

Note1: Mr. Nigel N. T. Li, the original independent director, resigned on October 9, 2024.

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/8/13 The 1st meeting of the 3rd term Risk Management Committee	Elect a convener.	All attending committee members unanimously elected Committee Member Sherry S. L. Lin to serve as the meeting chairperson and convener.	-
2025/3/12 The 2nd meeting of the 3rd term Risk Management Committee	<ul style="list-style-type: none">Report on the 2024 risk management implementation of TCC and updates to the strategic, operational, financial, and climate risk identification matrix for 2025.Report on the achievement of TCC's "2024 Climate-related Performance Indicators" and the "Setting of Climate-related Performance Targets for 2025."Proposal to amend TCCs "Risk Management Policy."	All attending committee members approved as proposed.	Submitted to the Board of Directors for reporting on March 12, 2025. All attending directors approved as proposed.

Note: For more information, please refer to the Investor section on TCC's official website -> Corporate Governance -> Committees

V. Corporate Sustainable Development Committee

Corporate Sustainable Development Committee's professional qualifications, experience, and operations:

Establishment Information	To actively promote and implement corporate sustainability, ethical management, and social responsibility, and to align with TCC's future international operations, the Board of Directors resolved to establish the Corporate Sustainable Development Committee on July 15, 2021. The Committee consists of six directors (including three independent directors).
Main Responsibilities	The Committee is responsible for decision-making and overseeing TCC's sustainability development work, including three major areas: Corporate Governance (G), Environment (E), and Social (S). Its goal is to strengthen TCC's management system, promote environmental conservation, and fulfill social responsibilities, thereby enabling the Board of Directors to effectively protect the rights and interests of TCC, employees, shareholders, and stakeholders.

The 1st Corporate Sustainable Development Committee					
Term of Office	Committee member term of office is from July 15, 2021, to May 20, 2024				
Meeting Information	No meetings have been convened from January 1 to May 20, 2024.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Chairman/Convener	Nelson An-ping Chang	Professional Qualifications: He possesses management and leadership decision-making expertise to guide TCC in achieving sustainable development goals. Main Education and Professional Experience: MBA, School of Business Administration, New York University Chairman of Taiwan Cement Corporation Group CEO of Taiwan Cement Corporation Chairman of NHOA S.A.	-	-	-
Director/Committee Member	Roman Cheng	Professional Qualifications: He possesses professional expertise in ESG. Main Education and Professional Experience: Master's degree in Business Administration, National Chengchi University President of Taiwan Cement Corporation	-	-	-
Independent Director/Committee Member	Victor Wang	Professional Qualifications: He has served as an independent director for several listed companies and understands the importance of corporate sustainable development. Main Education and Professional Experience: EMBA, National Taiwan University Director of Yageo Corporation Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	-	-	-
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: She possesses professional expertise in ESG evaluation, accounting control, and other related fields. Main Education and Professional Experience: PhD of Accounting, University of Houston Independent Director of Next Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	-	-	-

The 1st Corporate Sustainable Development Committee					
Term of Office	Committee member term of office is from July 15, 2021, to May 20, 2024				
Meeting Information	No meetings have been convened from January 1 to May 20, 2024.				
Independent Director/Committee Member	Sherry S. L. Lin	Professional Qualifications: She possesses professional expertise in ESG evaluation, finance, and other related fields. Main Education and Professional Experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	-	-	-

The 2nd Corporate Sustainable Development Committee					
Term of Office	Committee member term of office is from May 28, 2024, to May 20, 2027.				
Meeting Information	A total of four meetings were held (A) from May 28, 2024, to March 20, 2025.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Director/Committee Member	Liz Wang	Professional Qualifications: He possesses professional expertise in ESG. Main Education and Professional Experience: MBA, Waseda University Chief Executive Officer of Chia Hsin Cement Corporation Vice Chairman of TAS Board	4	0	100%
Independent Director/Committee Member	Victor Wang	Professional Qualifications: He has served as an independent director for several listed companies and understands the importance of corporate sustainable development. Main Education and Professional Experience: EMBA, National Taiwan University Director of Yageo Corporation Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	4	0	100%
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: She possesses professional expertise in ESG evaluation, accounting control, and other related fields. Main Education and Professional Experience: PhD of Accounting, University of Houston Independent Director of Next Commercial Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	4	0	100%
Independent Director/Committee Member	Sherry S. L. Lin	Professional Qualifications: She possesses professional expertise in ESG evaluation, finance, and other related fields. Main Education and Professional Experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	3	1	75%

The implementation of the meeting is as follows:

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/5/28 The 1st Meeting of the 2nd Term Corporate Sustainable Development Committee	Elect a convener.	All attending committee members unanimously elected committee member Nelson An-ping Chang to serve as the meeting chairperson and convener, and elected committee member Roman Cheng to serve as vice convener.	-
2024/6/5 The 2nd Meeting of the 2nd Term Corporate Sustainable Development Committee	<ul style="list-style-type: none">TCC's sustainability business promotion from the 4th quarter of 2023 to the 2nd quarter of 2024.TCC's subsequent important discussion items for sustainability business promotion.	All attending committee members approved as proposed.	Submitted to the Board of Directors for reporting on August 13, 2024. All attending directors approved as proposed.
2024/8/13 The 3rd Meeting of the 2nd Term Corporate Sustainable Development Committee	TCC's important discussion items for the 2023 Sustainability Report.	All attending committee members approved as proposed.	Submitted to the Board of Directors for reporting on August 13, 2024. All attending directors approved as proposed.
2025/3/12 The 4th Meeting of the 2nd Term Corporate Sustainable Development Committee	<ul style="list-style-type: none">TCC's challenges and outlook for sustainability development in 2025.In accordance with the Roadmap for Taiwan listed companies to align with IFRS Sustainability Disclosure Standards and related regulations issued by the Financial Supervisory Commission, TCC presented the implementation of the introduction plan to the Board of Directors in the first quarter of this year and has since been monitoring the project's progress on a quarterly basis.Likewise, for phase Two of the Financial Supervisory Commission's listed companies' sustainable development roadmap, the integration status of subsidiaries' greenhouse gas inventory, progress reports must be submitted to the Board of Directors on a quarterly basis.	All attending committee members approved as proposed.	Submitted to the Board of Directors for reporting on March 12, 2025. All attending directors approved as proposed.

Note: For more information, please refer to the Investor section on TCC's official website -> Corporate Governance -> Committees

vi. Information Security Management Committee

Information Security Management Committee's professional qualifications, experience, and operations:

Establishment Information	To strengthen the control and supervision of information security risks, protect corporate assets, improve the company structure, and enhance the functions of the Board of Directors, TCC has established an Information Security Management Committee in accordance with Article 27 of the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies. TCC resolved to establish this Committee at the 5th meeting of the 25th Board of Directors on August 13, 2024, and appointed three independent directors to serve on it.
Main Responsibilities	<ul style="list-style-type: none">Review information security management policies, formulate information security management framework and organizational functions, and regularly examine the development, implementation, and execution results of TCC's overall information security management mechanism.Review the information security management mechanism for new businesses.Approve the review and response measures for losses from major information security incidents.Review matters that need to be reported to the Board of Directors as stipulated or required by regulatory authorities, the Board of Directors, and various information security policies.In the event of a major temporary information security incident, the Information Security Management Team will take immediate action and submit a report to the Information Security Committee within two weeks for post-event ratification.

The 1st Information Security Management Committee					
Term of Office	Committee member term of office is from August 13, 2024, to May 20, 2027				
Meeting Information	A total of two meetings were held (A) from August 13, 2024 to March 20, 2025.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Independent Director/Convener	Ruu Tian Chang	Professional Qualifications: She possesses information technology expertise. Main Education and Professional Experience: MBA, University of Minnesota System Executive Vice President of Gartner Group Taiwan Limited	2	0	100%

The 1st Information Security Management Committee					
Term of Office	Committee member term of office is from August 13, 2024, to May 20, 2027				
Meeting Information	A total of two meetings were held (A) from August 13, 2024 to March 20, 2025.				
Independent Director/Committee Member	Victor Wang	Professional Qualifications: He possesses professional expertise in financial risk management. Main Education and Professional Experience: EMBA, National Taiwan University Director of Yageo Corporation Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	2	0	100%
Independent Director/Committee Member	Sherry S. L. Lin	Professional Qualifications: She has assisted listed companies with professional expertise in risk management, international markets, and ESG. Main Education and Professional Experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	2	0	100%

The implementation of the meeting is as follows:

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/8/13 The 1st Meeting of the 1st Term Information Security Management Committee	Elect the chairperson and convener.	All attending committee members unanimously elected Committee Member Ruu Tian Chang to serve as the meeting chairperson and convener.	-
2024/12/24 The 2nd Meeting of the 1st Term Information Security Management Committee	Report on enterprise group information security.	All attending committee members approved as proposed.	Submitted to the Board of Directors for reporting on December 24, 2024. All attending directors approved as proposed.

Note: For more information, please refer to the Investor section on TCC's official website -> Corporate Governance -> Committees

2.Regarding the diversity policy and implementation status of TCC's Board of Directors, please refer to "2.1.1 Directors' Information 2. Board Diversity and Independence" on page 37 of this annual report.

3.The 24th Board of Directors of TCC held three board meetings from January 1, 2024, to May 20, 2024, while the 25th Board of Directors held ten board meetings from May 21, 2024, to March 20, 2025. Both boards complied with TCC's Regulations Governing Procedure for Board of Directors Meetings in terms of procedures and implementation of recusal due to conflicts of interest in each meeting, as well as the requirement to hold at least one meeting per quarter as specified in the regulations. Furthermore, important proposals were disclosed on the Market Observation Post System (MOPS) in accordance with the law, and on TCC's website to ensure timely, transparent information disclosure, strengthening board governance, enhancing supervisory functions, and improving management capabilities.

4.Other Board Governance

About Corporate Governance

- (1) In January 2025, TCC completed the self-performance evaluation of the Board of Directors, individual directors, and functional committees. Additionally, TCC commissioned KPMG Advisory Services to complete the 2024 external board performance evaluation by the end of 2024. The evaluation results were reported to the directors at the Board meeting on March 12, 2025.
- (2) Corporate governance evaluation report.
- (3) Report on ESG implementation results.
- (4) Information security report.
- (5) Ethical management report.

About Legal Matters

TCC's Corporate Governance Manager and Board Secretariat regularly update directors on legal development, either through email, paper notifications, or arrange for external professionals (such as accountants or lawyers) to provide explanations to directors before or during meetings.

Director Training

Each year, TCC invites experts to conduct courses based on the latest regulations and in consideration of operational directions, projects, or economic conditions. In 2024, TCC collaborated with the Taiwan Sustainable Energy Research Foundation (TSERF) to conduct courses on "Taiwan's Path to Just Transition for Hard-to-Abate Sectors" and "Sustainable Financial Disclosure" Additionally, the Taiwan Corporate Governance Association held courses on "Corporate Governance and Legal Compliance - Discussion on Insider Trading and Concerted Actions" and "Corporate Risk Management Trends and Organizational Resilience." For information on individual directors' training, please refer to page 77, "2.2.3 The operation of corporate governance and the differences and reasons between it and the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies," Note 2 on directors' training.

2.2.2 Audit Committee Operations

Establishment Information:

To strengthen the internal supervisory mechanism of corporate governance and enhance operational effectiveness, TCC established the Audit Committee in place of supervisors on June 27, 2012, in accordance with the Securities and Exchange Act. The committee is composed entirely of independent directors.

Main Responsibilities Include Reviewing or Handling the Following Matters:

- Establishment or amendment of internal control systems in accordance with Article 14-1 of the Securities and Exchange Act.
- Assessment of the effectiveness of the internal control system.
- Establishment or amendment of procedures for significant financial and business activities such as acquisition or disposal of assets, derivatives trading, loans to others, endorsements or guarantees for others in accordance with Article 36-1 of the Securities and Exchange Act.
- Matters involving directors' interests.
- Significant transactions of assets or derivatives.
- Significant loans, endorsements, or provision of guarantees.
- Fundraising, issuance or private placement of equity securities.
- Appointment, dismissal, or compensation of certified public accountants.
- Appointment or dismissal of financial, accounting, or internal audit managers.
- Annual financial reports.
- Merger and acquisition matters regulated by the Business Mergers and Acquisitions Act.
- First quarter to third quarter financial reports.
- Approval of annual audit and non-audit services provided by TCC's CPAs.
- Communication with TCC's CPAs.
- Negotiation of disagreements between management and the Company's CPAs regarding financial reporting.
- Discussion with management and the Company's CPAs regarding other financial information and reports required by the U.S. Securities Exchange Act.
- Other material matters stipulated by the Company or the regulatory authorities.
- Annual financial reports:

The Board of Directors has prepared TCC's business report, financial statements, and earnings distribution proposal for 2024. The financial statements have been audited by Deloitte Taiwan, which has issued an audit report. The aforementioned business report, financial statements, and earnings distribution proposal have been reviewed by the Audit Committee and found to be satisfactory.

Members, professional qualifications, and independence:

Regarding the Audit Committee members and their professional qualifications and independence, please refer to "2.1.1 Director Information" on page 7 and "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors" on page 35 of this annual report.

1. The 3rd Audit Committee (term from July 5, 2021, to May 20, 2024) held a total of three meetings (A) from January 1 to May 20, 2024. The attendance of independent directors is as follows:

Title	Name	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)	Notes
Independent Director	Yu-Cheng Chiao	2	1	67%	
Independent Director/Convener	Victor Wang	3	0	100%	
Independent Director	Lynette Ling-Tai Chou	3	0	100%	
Independent Director	Mei-Hua Lin	3	0	100%	
Independent Director	Sherry S. L. Lin	3	0	100%	

Other Matters to be Recorded:

1. If any of the following circumstances occur in the operation of the Audit Committee, the date of the Audit Committee meeting, session, proposal details, independent directors' objections, reservations or significant recommendations, the resolution of the Audit Committee, and TCC's response to those opinions shall be specified.

(1) Matters listed in Article 14-5 of the Securities and Exchange Act:

Audit Committee Meeting Date	Proposal Details	Audit Committee Resolution	TCC's Response to Audit Committee's Opinions
2024/2/27 The 30th Meeting of the 3rd Term Audit Committee	TCC's 2023 individual and consolidated financial statements.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	TCC's regular assessment of the professionalism, competence, and independence of the CPAs.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Issuing TCC's 2023 Statement on Internal Control System.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposal to amend TCC's internal control system and approving the new version of the Internal Control Depilation	All attending committee members approved as proposed.	All attending directors approved as proposed.
2024/3/20 The 31st Meeting of the 3rd Term Audit Committee	Formulating TCC's 2023 profit distribution plan.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	TCC's consolidated financial report for the first quarter of 2024.	All attending committee members approved as proposed.	All attending directors approved as proposed.
2024/5/14 The 32nd Meeting of the 3rd Term Audit Committee	Proposal for TCC's subsidiary, TCC Green Energy Corporation, to lease land in Changbin from TCC Chemical Corporation.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	In response to group policy, and in order to expand renewable energy capacity, the subsidiary TCC Green Energy Corporation proposes to invest in the Kaohsiung Yong'an fishery-solar power plant project.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	In order to continuously promote sustainable management and optimize the internal control system, it is proposed to amend TCC's Internal Control Policy.	All attending committee members approved as proposed.	All attending directors approved as proposed.

- (2) Other than the aforementioned matters, any other resolution items that were not approved by the Audit Committee but were approved by more than two-thirds of all directors: No such circumstances.

2. For the implementation of recusal by independent directors from agenda items involving conflicts of interest, please specify the name of the independent director, the agenda item, the reason for recusal, and the participation in voting: No such circumstances.
3. Communication between independent directors, internal audit manager, and the accountant (should include material matters, methods, and results of communication regarding TCC's financial and business conditions):

- (1) The audit report and follow-up report are submitted to the convener for review at least once a month. During this time, the monthly audit results, improvement of audit deficiencies, and TCC's financial and business conditions are also reported. The convener then reviews the audit report and provides feedback.
- (2) The Internal Audit Manager and the accountant attend the Audit Committee meetings to report on audit activities, including methods, scope, significant audit adjustments and explanations to the Audit Committee. Additionally, the accountant regularly submits communication reports to the Corporate Governance Unit, ensuring continuous dialogue with the independent directors.
- (3) Beyond meeting discussions, the Internal Audit Manager and accountant also directly communicate with independent directors as needed, maintaining a strong and interactive relationship.

The communication matters between independent directors, Internal Audit Manager, and CPAs are detailed in the table below, and are also disclosed in the Corporate Governance section of TCC's official website.

Meeting Date	Attendees	With Internal Audit Manager		With CPAs	
		Discussion Topics	Results	Discussion Topics	Results
2024/2/27 Audit Committee	Independent Director, Victor Wang Independent Director, Yu-Cheng Chiao Independent Director, Lynette Ling-Tai Chou Independent Director, Mei-Hua Lin Independent Director, Sherry S. L. Lin Internal Audit Manager, Chia-Hua Tsao Deloitte CPA, Hui-Min Huang Deloitte CPA, Ya-Ling Wong Deloitte Assistant Vice President, Pei-Shan Hsieh	Discussion on Statement on Internal Control System	<ul style="list-style-type: none">Passed without objection.Independent Director Mei-Hua Lin raised questions for discussion and communication.	<ul style="list-style-type: none">Supplementary explanation by the CPA regarding the Company's financial report for the 4th quarter of 2023.Regulatory Change ReportThe CPA engaged in discussions with attendees to address their questions.	Acknowledged
2024/5/14 Audit Committee	Independent Director, Victor Wang Independent Director, Yu-Cheng Chiao Independent Director, Lynette Ling-Tai Chou Independent Director, Mei-Hua Lin Independent Director, Sherry S. L. Lin Internal Audit Manager, Chia-Hua Tsao Deloitte CPA, Hui-Min Huang Deloitte CPA, Ya-Ling Wong Deloitte Assistant Vice President, Pei-Shan Hsieh	Report on the execution results of audit operations	No opinions were expressed in this meeting.	<ul style="list-style-type: none">Supplementary explanation by the CPA regarding the Company's financial report for the 1st quarter of 2024.Regulatory Change ReportThe CPA engaged in discussions with attendees to address their questions.	Acknowledged

II. The 4th Audit Committee (term from May 21, 2024, to May 20, 2027) held a total of nine meetings (A) from May 21, 2024, to March 20, 2025. The attendance of independent directors is as follows:

Title	Name	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)	Notes
Independent Director/Convener	Victor Wang	9	0	100%	
Independent Director	Lynette Ling-Tai Chou	8	1	89%	
Independent Director	Sherry S. L. Lin	9	0	100%	
Independent Director	Nigel N. T. Li	6	0	100%	Resigned on October 9, 2024
Independent Director	Ruu Tian Chang	8	1	89%	

Other Matters to be Recorded

1. If any of the following circumstances occur in the operation of the Audit Committee, the date of the Audit Committee meeting, session, proposal details, independent directors' objections, reservations or significant recommendations, the resolution of the Audit Committee, and TCC's response to those opinions shall be specified.

(1) Matters listed in Article 14-5 of the Securities and Exchange Act:

Audit Committee Meeting Date	Proposal Details	Audit Committee Resolution	TCC's Response to Audit Committee's Opinions
2024/6/12 The 2nd Meeting of the 4th Term Audit Committee	TCC proposes to make a public tender offer for shares of NHOA S.A. in accordance with relevant French securities and exchange laws and its delisting as required by law.	All attending committee members approved as proposed.	Director Roman Cheng, who serves as the CSEO appointed by TCC to NHOA S.A., did not participate in the discussion and voting and left the meeting due to conflict of interest. This case was approved by the 2nd Extraordinary Meeting of the 4th Audit Committee, and after thorough discussion among the directors and management team at the Board meeting, it was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/8/13 The 4th Meeting of the 4th Term Audit Committee	TCC's consolidated financial report for the second quarter of 2024.	All attending committee members approved as proposed.	All attending committee members approved as proposed.
	TCC's investment real estate business - The business division of Yisen Section on Keelung Road in Xinyi District, Taipei City is to be transferred to TCC Asset Management and Development Co., Ltd.	All attending committee members approved as proposed.	All attending committee members approved as proposed.
	TCC intends to increase capital investment in its subsidiary TCC Energy Storage Technology Corporation.	All attending committee members approved as proposed.	All attending committee members approved as proposed.
	The Company's subsidiary TCC Energy Storage (Hangzhou) Technology Company Limited intends to invest approximately RMB 80 million to build a manufacturing and production base for Ultra-High Performance Concrete (UHPC) components.	All attending committee members approved as proposed.	All attending committee members approved as proposed.
	Budget report for the first phase of construction (storage facilities) of alternative raw material fuel storage and transportation equipment at the Company's Hoping Plant.	All attending committee members approved as proposed.	All attending committee members approved as proposed.
2024/8/20 The 5th Meeting of the 4th Term Audit Committee	TCC intends to lease office spaces of Room 1105 and Room 1106 on the 11th floor of No. 96, Section 2, Zhongshan North Road, Taipei City, owned by Chia Hsin Property Management and Development Corp.	All attending committee members approved as proposed.	Director Kang-Lung (Jason) Chang and Director Liz Wang recused themselves from this case due to conflicts of interest and did not participate in the discussion or voting. This case was approved by the 4th Meeting of the 4th Audit Committee and was unanimously approved by all attending directors without objection upon the Chairman's inquiry.
	TCC proposes to make a public tender offer for shares of NHOA S.A. pursuant to relevant French securities and exchange laws and its delisting, and subsequent related matters.	All attending committee members approved as proposed.	Chairman Nelson An-ping Chang and Director Roman Cheng, who serve as the Chairman and CSEO of NHOA S.A. appointed by TCC, respectively, recused themselves and left the meeting due to conflicts of interest and did not participate in the discussion or voting. This case was approved by the 5th Extraordinary Meeting of the 4th Audit Committee and was unanimously approved by all attending directors without objection upon the inquiry of Acting Chairman Independent Director Victor Wang.
	TCC's proposed issuance of the first domestic unsecured convertible corporate bonds (as sustainability-linked bonds) and the first overseas unsecured convertible corporate bonds for 2024.	All attending committee members approved as proposed.	All attending directors approved as proposed.
2024/9/13 The 6th Meeting of the 4th Term Audit Committee	The Company's proposed investment to increase capital in its 100% owned Dutch subsidiary, Taiwan Cement(Dutch) Holdings B.V.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	The Company's proposed new endorsement guarantee of €300 million for the issuance of green corporate bonds by its 100% owned Dutch subsidiary, Taiwan Cement (Dutch) Holdings B.V.	All attending committee members approved as proposed.	All attending directors approved as proposed.
2024/11/11 The 7th Meeting of the 4th Term Audit Committee	The Company's accounting audit personnel change case.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	TCC's Accounting Chief Officer change case.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	The Company's consolidated financial statements for the third quarter of fiscal year 2024.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Follow-up plan for the "Oliver 2 case" investment in Portugal.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposed sale of 3 land parcels numbered 4, 5, and 10 in the TCC section of Zhudong Township, Hsinchu County.	All attending committee members approved as proposed.	All attending directors approved as proposed.

Audit Committee Meeting Date	Proposal Details	Audit Committee Resolution	TCC's Response to Audit Committee's Opinions
2024/12/24 The 8th Meeting of the 4th Term Audit Committee	The Company proposes to increase its endorsement guarantee to EUR 500 million for its 100% owned Dutch subsidiary, TCC Dutch Holdings B.V., for the issuance of green corporate bonds.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	The budget proposed for capital requirements during the preparation period of the Taipei Xinyi project by the Company's subsidiary, TCC Asset Management & Development Corporation.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposed addition and amendment to parts of the Company's "Internal Control Policy.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposed drafting of the Company's audit plan for the fiscal year 2025.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposed amendment to the Company's Internal Audit Implementation Rules.	All attending committee members approved as proposed.	All attending directors approved as proposed.
2025/3/12 The 9th Meeting of the 4th Term Audit Committee	TCC's 2024 individual financial statements and consolidated financial statements.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	TCC's regular assessment of the professionalism, competence, and independence of the CPAs.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	The Company's CPA audit fee for the fiscal years 2025 to 2027.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	TCC proposes to increase the endorsement guarantee amount to 600 million euros for its 100% owned Dutch subsidiary TCC Dutch Holdings B.V. for issuing green corporate bonds and/or arranging green syndicated loans.	All attending committee members approved as proposed.	All attending directors approved as proposed.
	Proposed issuance of the Company's "Statement on Internal Control System" for the fiscal year 2024.	All attending committee members approved as proposed.	All attending directors approved as proposed.

- (2) Other than the aforementioned matters, any other resolution items that were not approved by the Audit Committee but were approved by more than two-thirds of all directors: No such circumstances.
- 2.For the implementation of recusal by independent directors from agenda items involving conflicts of interest, please specify the name of the independent director, the agenda item, the reason for recusal, and the participation in voting: No such circumstances.
- 3.Communication between independent directors, internal audit manager, and the accountant (should include material matters, methods, and results of communication regarding TCC's financial and business conditions):
- (1) The audit report and follow-up report are submitted to the convener for review at least once a month. During this time, the monthly audit results, improvement of audit deficiencies, and TCC's financial and business conditions are also reported. The convener then reviews the audit report and provides feedback.

- (2) The Internal Audit Manager and the accountant attend the Audit Committee meetings to report on audit activities, including methods, scope, significant audit adjustments and explanations to the Audit Committee. Additionally, the accountant regularly submits communication reports to the Corporate Governance Unit, ensuring continuous dialogue with the independent directors. Beyond meeting discussions, the Internal Audit Manager and accountant also directly communicate with independent directors as needed,
- (3) maintaining a strong and interactive relationship.
- The communication matters between independent directors, Internal Audit Manager, and CPAs are detailed in the table below, and are also disclosed in the Corporate Governance section of TCC's official website.

Meeting Date	Attendees	With Internal Audit Manager		With CPAs	
		Discussion Topics	Results	Discussion Topics	Results
2024/8/12 Independent discussion	Independent Director Internal Audit Manager, Chia-Hua Tsao	Special report	Discussion and communication on questions raised by independent directors	-	-
2024/8/13 Audit Committee	Independent Director, Victor Wang Independent Director, Lynette Ling-Tai Chou Independent Director, Sherry S. L. Lin Independent Director Nigel N. T. Li Independent Director, Ruu Tian Chang Internal Audit Manager, Chia-Hua Tsao Deloitte CPA, Hui-Min Huang Deloitte CPA, Ya-Ling Wong Deloitte Assistant Vice President, Pei-Shan Hsieh	Report on the execution results of audit operations	No opinions were expressed in this meeting.	<ul style="list-style-type: none">Supplementary explanation by the CPA regarding the Company's financial report for the second quarter of fiscal year 2024Regulatory Change ReportThe CPA engaged in discussions with attendees to address their questions.	Acknowledged
2024/10/14 Independent discussion	Independent Director, Victor Wang Independent Director, Lynette Ling-Tai Chou Independent Director, Sherry S. L. Lin Independent Director, Ruu Tian Chang Internal Audit Manager, Chia-Hua Tsao	Report on the execution results of audit operations	Acknowledgment by independent directors	-	-
2024/11/11 Audit Committee	Independent Director, Victor Wang Independent Director, Lynette Ling-Tai Chou Independent Director, Sherry S. L. Lin Independent Director, Ruu Tian Chang Internal Audit Manager, Guo Hong Yeh Deloitte CPA, Hui-Min Huang Deloitte CPA, Ya-Ling Wong Deloitte Assistant Vice President, Pei-Shan Hsieh	Report on the execution results of audit operations	No opinions were expressed in this meeting.	<ul style="list-style-type: none">Supplementary explanation by the CPA regarding TCC's financial report for the third quarter of 2024.Regulatory Change ReportThe CPA engaged in discussions with attendees to address their questions.	Acknowledged
2025/3/12 Audit Committee	Independent Director, Victor Wang Independent Director, Lynette Ling-Tai Chou Independent Director, Sherry S. L. Lin Independent Director, Ruu Tian Chang Internal Audit Manager, Guo Hong Yeh Deloitte CPA, Ya-Ling Wong Deloitte Assistant Vice President, Pei-Shan Hsieh	Report on the execution results of audit operations	No opinions were expressed in this meeting.	<ul style="list-style-type: none">Supplementary explanation by the CPA regarding TCC's financial report for the fourth quarter of 2024.Regulatory Change ReportThe CPA engaged in discussions with attendees to address their questions.	Acknowledged

2.2.3 The operation of corporate governance and the differences and reasons between it and the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
I. Has the Company established and disclosed its corporate governance principles based on the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies?	✓		TCC has established Corporate Governance Best Practice Principles with reference to the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies formulated by the Taiwan Stock Exchange and the Taipei Exchange. These principles have been posted on TCC's website for shareholders' reference. TCC's corporate governance system not only complies with laws and regulations but also establishes an effective structure that protects shareholders' rights, strengthens board functions, respects stakeholders' rights, and enhances information transparency.	None
II. Company's Ownership Structure and Shareholders' Rights 1. Has the Company established internal operating procedures to handle shareholder suggestions, doubts, disputes and litigation matters, and implemented them accordingly?	✓		1. TCC has designated investor relations personnel, with the spokesperson and deputy spokesperson responsible for collecting shareholders' suggestions and questions, handling disputes, or forwarding issues to relevant departments based on the inquiry. There have been no litigation issues with shareholders.	None
2. Is the Company aware of the identity of its major shareholders and the ultimate controllers behind those major shareholders?	✓		2. TCC has established a Board Secretariat and appointed a professional stock affairs agency to continuously monitor the shareholding status of directors, managers, and major shareholders holding more than 10% ownership at all times. These shareholdings are reported monthly on the Market Observation Post System designated by the Financial Supervisory Commission.	None
3. Has the Company established and implemented risk control mechanisms and firewalls between itself and its affiliated enterprises?	✓		3. (1) TCC's Board of Directors approved the Related Party Transaction and Supervision Policy on February 24, 2023, to ensure sound financial and business transactions between TCC and related parties (including affiliated enterprises), and to prevent irregular transactions or improper transfer of benefits between related parties. (2) To ensure the effective implementation of the Related Party Transaction and Supervision Policy, TCC has established the Related Party Transaction Procedure Control Measures based on the Regulations Governing the Acquisition and Disposal of Assets by Public Companies, Regulations Governing Loaning of Funds and Making of Endorsements/Guarantees by Public Companies, Procedures for Acquisition or Disposal of Assets in Taiwan Cement Corporation, Procedures for Endorsement and Guarantee Procedures in Taiwan Cement Corporation, and Procedures for Fund Loans to Others in Taiwan Cement Corporation. These measures outline the control procedures and approval processes required for transactions between TCC and related parties, including purchases and sales, labor or technical services, acquisition and disposal of assets, loans of funds, and endorsements/guarantees. To implement effective risk control between TCC and related parties, any related party transactions that require Board approval according to regulations must first be approved by the Board of Directors before proceeding and will be reported at the nearest shareholders' meeting after the end of the fiscal year. The Related Party Transaction Procedure Control Measures have been approved by the President and have been in effect since the announcement date of September 28, 2023. (3) To ensure that employees comply with the control procedures and approval processes outlined in the Related Party Transaction and Supervision Policy and Related Party Transaction Procedure Control Measures, TCC has established a Related Party Transaction Database. Employees should check the database to confirm whether a transaction qualifies as a related party transaction before proceeding. If the query result indicates that it is a related party transaction, employees are required to download the results and complete a "Related Party Transaction Declaration Checklist," which must be uploaded to the electronic document approval system along with the contract for approval. (4) Before signing or affixing seals to contracts for any type of related party transaction, approval must be obtained through the electronic document approval system. When submitting documents through the electronic approval system, employees must indicate whether the transaction qualifies as a related party transaction. Except for related party transactions that require additional Board approval, all transactions must be approved by the appropriate management personnel at various levels according to their authorization limits. Through the electronic document approval system, approving supervisors can confirm whether the required control procedures have been followed, and verify that the transaction does not involve any irregular transactions or improper transfer of benefits.	None
4. Has the company established internal regulations prohibiting the company from using non-public market information to trade securities?	✓		4. TCC has established Procedures for Handling Material Inside Information, which prohibits directors, managers, or employees from using non-public market information to trade securities for profit. TCC reminds directors during the annual training on the prohibition of insider trading that they are not allowed to trade company shares during blackout periods. These periods include 30 days before the annual financial report announcement and 15 days before the quarterly financial report announcement (in 2024 and as of the annual report publication date, whenever board meetings discussed financial reports, reminders about blackout periods were included in board meeting notifications, for a total of 5 times). In addition, education and advocacy regarding relevant regulations are provided at least once a year to current directors, managers, and employees, while new directors, managers, and employees are given effective education and advocacy after they take office (for information on "Procedures for Handling Material Inside Information," please visit the "Company Regulations" section of TCC's official website). TCC re-elected all directors in 2024. On August 7, 2024, TCC provided reports to all directors covering operations, finances, investments, and legal matters. On November 27, 2024, an educational program was held for all directors, managers, and employees. The program focused on confidentiality procedures for material information, as well as explanations on the causes of insider trading, identification processes, and trading case examples. The presentation files were sent to all directors, managers, and employees for reference.	None

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
III. Board Composition and Responsibilities 1. Has the Board of Directors formulated a diversity policy, specific management objectives, and implemented them?			1. (1) TCC approved amendments to the Corporate Governance Best Practice Principles at the 16th meeting of the 23rd Board of Directors on March 20, 2020. A diversity policy was formulated in Chapter 3 "Enhancing Board Functions." TCC has established a Nomination Committee and adopted a Candidate Nomination System. All director candidates are nominated and their qualifications reviewed by the Nomination Committee, and after approval by the Board of Directors, they are submitted to the shareholders' meeting for election. TCC complies with the Corporate Governance Best Practice Principles and the Director Election Regulations to ensure diversity and independence of the Board members. (2) The members of TCC's 25th Board of Directors emphasize diversity and consist of industry and academic elites, bringing (industry experience) capabilities in energy, environmental protection, cement, mergers and acquisitions/investment, information technology, and (professional capabilities) operational management, international markets, risk management, accounting and financial analysis, legal, ESG and other professional capabilities. Directors with strong industry knowledge and operational management include Nelson An-ping Chang, Yu-Cheng Chiao, Por-Yuan Wang, Kung-Yi Koo, Kang-Lung (Jason) Chang, Chien Wen, Liz Wang and others. Those with financial expertise include Roman Cheng, Kenneth C.M. Lo, Eric Chen Sun Te and other directors. Directors with financial accounting experience include Victor Wang, Lynette Ling-Tai Chou and others; with legal expertise: Sherry S. L. Lin; with information technology expertise: Ruu Tian Chang. TCC continues to organize diverse training courses for board members to improve their decision-making quality, fulfill their supervisory capabilities, and thereby strengthen board functions. (3) In TCC's board, 21% of directors have employee status, 29% are independent directors, and 29% are female directors. In addition, there is one director aged between 31 and 50, and 13 directors who are over 51 years old. (4) Independence: TCC's directors do not have spousal or second-degree relative relationships among them. For detailed information, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors." (5) Specific Diversity Management Objectives: i. TCC's Board of Directors provides guidance on corporate strategy, supervises management, and is accountable to the company and shareholders. All operations and arrangements of its corporate governance system should ensure that the Board of Directors exercises its powers in accordance with laws, the Articles of Incorporation, or resolutions of shareholders' meetings. Directors listen to reports from the management team during board meetings, offer guidance and suggestions, and maintain effective communication with the management team to collaboratively create maximize benefits for shareholders. ii. TCC emphasizes gender equality in the composition of its Board of Directors. The Board members consists of 71% male directors (ten members) and 29% of female directors (four members). On March 12, 2025, the Board of Directors nominated one female independent director candidate, who will be elected at the 2025 Annual Shareholders' Meeting to fill one of the independent director seats. If elected, female directors on TCC's Board will increase to one-third (33%) of the total number of director seats. iii. The Board of Directors supports and monitors actions taken by management to increase the proportion of female senior managers. (6) Meetings: The 24th Board of Directors held a total of three meetings from January 1 to May 20, 2024, with an attendance rate of 91%. The 25th Board of Directors held a total of ten meetings from May 21, 2024, to March 20, 2025, with an attendance rate of 90%. (7) The Board of Directors has established a diversity policy for its composition, which is disclosed on TCC's website and the Market Observation Post System.	None
	✓		2. In addition to establishing the Remuneration Committee and Audit Committee as required by law, TCC has also established: (1) Corporate Sustainable Development Committee: It established by the Board resolution made on July 15, 2021, composed of six members, including three independent directors, in accordance with the Organization Regulations of the Corporate Sustainable Development Committee, with the Chairman serving as the convener. (2) Risk Management Committee: On August 13, 2024, at the 5th meeting of the 25th Board of Directors, it was resolved to establish the Risk Management Committee and formulate the Risk Management Policy, with five members, including four independent directors. The previous Risk Management Executive Committee and Risk Management Policy and Principles were simultaneously abolished, with Independent Director Sherry S. L. Lin serving as the convener. (3) Nomination Committee: Established by the Board resolution made on June 21, 2022, with the Nomination Committee Organization Regulations formulated. It is composed of five directors, including three independent directors, with Independent Director Victor Wang serving as the convener. (4) Information Security Management Committee: Established by the resolution of the 5th meeting of the 25th Board of Directors on August 13, 2024, with the Information Security Management Committee Organization Regulations formulated. The committee has appointed three independent directors, with Independent Director Ruu Tian Chang serving as the convener. For relevant establishment and implementation information, please refer to TCC's official website and page 64 of this annual report, "4. Goals for strengthening the functions of the Board of Directors in the current and recent years."	
2. In addition to establishing the Remuneration Committee and Audit Committee as required by law, has the Company voluntarily established other types of functional committees?		✓		None
3. Has the company established a Board of Directors performance evaluation method and assessment approach, conducted regular performance evaluations annually, reported the evaluation results to the Board of Directors, and used them as references for individual director remuneration and nomination for reappointment?		✓	3. (1) TCC established the Board of Directors Performance Evaluation Method at the 21st meeting of the 22nd Board of Directors on March 28, 2018, and conducts an internal Board performance evaluation once a year in accordance with this method. The internal evaluation period of the Board of Directors shall be at the end of each year, and the internal Board performance evaluation shall be executed according to the evaluation procedures and indicators specified in Articles 6 and 8. The implementation of the Board of Directors performance evaluation shall be conducted by an external professional independent institution or a team of external experts and scholars at least once every three years. The internal and external performance evaluation results of the Board of Directors shall be completed by the end of the first quarter of the following year. TCC's 2024 performance evaluation of the Board of Directors, board members, and functional committees was completed before the end of January 2025 and has been submitted to the 10th meeting of the 25th Board of Directors on March 12, 2025, for reporting. (2) TCC's 2024 Board of Directors evaluation and directors' self-evaluation have been commissioned to an external professional independent institution, KPMG Advisory Services Co., Ltd., which issued a performance evaluation report on TCC's Board of Directors on February 12, 2025. The overall evaluation results were "Excellent." KPMG Advisory Services Co., Ltd. is an independent, professional institution specializing in corporate governance system measurement and board effectiveness (performance) assessments. The institution and its assessment committee members have no business dealings with TCC and maintain independence. (3) The internal performance assessment method is conducted through internal evaluation, which is executed by the Corporate Governance Manager and the Board Secretariat. It is carried out using internal questionnaires, which evaluate the Board's operations, directors' participation, directors' assessment of the Board's operations, directors' self-assessment of their participation, and the and the evaluation of each functional committee.	None

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
3. Has the company established a Board of Directors performance evaluation method and assessment approach, conducted regular performance evaluations annually, reported the evaluation results to the Board of Directors, and used them as references for individual director remuneration and nomination for reappointment?	✓		<p>(4) The internal evaluation results of the Board of Directors, board members, and functional committees are as follows:</p> <p>i. The assessment items for the Board of Directors' performance evaluation include the following five major aspects:</p> <ul style="list-style-type: none">Level of participation in company operations.Improving the quality of board decisions.Composition and structure of the Board of Directors.Election of directors and continuing education.Internal control. <p>Evaluation results: The overall average score for the Board of Directors' self-evaluation is 4.9 points (out of a maximum of five points).</p> <p>ii. The assessment items for the directors' (self) performance evaluation include the following six major aspects:</p> <ul style="list-style-type: none">Understanding of company goals and missions.Awareness of director's responsibilities.Level of participation in company operations.Management and communication of internal relationships.Director's professional expertise and continuous learning.Internal control. <p>Evaluation results: The overall average score for the directors' (self) performance self-evaluation is 4.9 points (out of a maximum of five points).</p> <p>iii. The assessment items for the Audit Committee's performance evaluation include the following five major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Audit Committee responsibilitiesEnhancing the decision-making quality of functional committeesAudit Committee composition and member selectionInternal control <p>Evaluation results: The Audit Committee's self-assessment overall average score is 4.9 (out of a maximum of five points).</p> <p>iv. The assessment items for the Remuneration Committee's performance evaluation include the following four major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Remuneration Committee's responsibilitiesEnhancing the decision-making quality of functional committeesRemuneration Committee composition and member selection <p>Evaluation results: The Remuneration Committee's self-assessment overall average score is 4.9 (out of a maximum of five points).</p> <p>v. The assessment items for the Nomination Committee's performance evaluation include the following four major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Nomination Committee's responsibilitiesEnhancing the decision-making quality of functional committeesNomination Committee composition and member selection <p>Evaluation results: The Nomination Committee's self-assessment overall average score is 4.9 (out of a maximum of five points).</p> <p>vi. The assessment items for the Risk Management Committee's performance evaluation include the following five major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Risk Management Committee responsibilitiesEnhancing the decision-making quality of functional committeesRisk Management Committee composition and member selectionInternal control <p>Evaluation results: The Risk Management Committee's self-assessment overall average score is 4.9 (out of a maximum of five points).</p> <p>vii. The assessment items for the Corporate Sustainable Development Committee's performance evaluation include the following four major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Corporate Sustainable Development Committee's responsibilitiesEnhancing the decision-making quality of functional committeesCorporate Sustainable Development Committee composition and member selection <p>Evaluation results: The Corporate Sustainable Development Committee's self-assessment overall average score is 4.9 (out of a maximum of five points).</p> <p>viii. The assessment items for the Information Security Management Committee's performance evaluation include the following five major aspects:</p> <ul style="list-style-type: none">Level of participation in company operationsUnderstanding of Information Security Committees responsibilitiesEnhancing the decision-making quality of functional committeesInformation Security Committee composition and member selectionInternal control	

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
			Evaluation results: The Information Security Management Committee's self-assessment overall average score is 4.9 (out of a maximum of five points). (5.)The self-assessment results of TCC's Board of Directors, board members, Audit Committee, Remuneration Committee, Nomination Committee, Risk Management Committee, Corporate Sustainable Development Committee, and Information Security Management Committee for 2024 were all above standard, with no major areas identified for improvement. The assessment results were reported to directors at the Board meeting on March 12, 2025, and will serve as reference for the performance, compensation, and nomination for reappointment of the Board and functional committee members. Detailed information can be found on TCC's official website under Corporate Governance.	
4. Does the Company regularly evaluate the independence of its certified public accountants?	✓		4. TCC's Audit Committee evaluates the independence of CPAs every year and submits the evaluation results to the Board of Directors. TCC's Audit Committee conducts an annual evaluation of the independence and suitability of its CPAs. In addition to requiring the CPAs to provide a statement of independence and Audit Quality Indicators (AQIs), the Committee also refers to the AQI disclosure framework and template released by the Financial Supervisory Commission of the Executive Yuan on August 19, 2021, using them as objective reference indicators for the selection of CPAs by enterprises and Audit Committees. After confirmation, it has been verified that the CPAs have no financial interests or business relationships with TCC, other than fees for certification and tax cases, and the accountants' family members also comply with the independence requirements. Furthermore, by referencing the AQI indicator information, it was confirmed that the CPAs and their firm have audit experience and training hours that exceed the industry average. Additionally, over the past three years, they have been continuously implementing digital audit tools to improve audit quality. The evaluation results for the most recent fiscal year were discussed and approved by the Audit Committee on February 27, 2024, and March 12, 2025, and then submitted to the Board of Directors on February 27, 2024, and March 12, 2025. The assessment of the independence and suitability of the CPAs is detailed in Note 1.	None
IV. Has the listed company appointed qualified and appropriate personnel for corporate governance, and designated a Corporate Governance Manager responsible for corporate governance-related matters (including but not limited to providing directors and supervisors with necessary information for performing their duties, assisting directors and supervisors in legal compliance, handling matters related to board meetings and shareholders' meetings in accordance with the law, and preparing minutes of board meetings and shareholders' meetings, etc.)?	✓		TCC resolved to establish a Corporate Governance Unit at the Board of Directors meeting on March 22, 2019. In addition, at the Board of Directors meeting on August 11, 2020, it was resolved to appoint the Legal Director as the Corporate Governance Manager. This individual has more than three years of experience in supervisory roles related to legal affairs, finance, shareholder services, or corporate governance in public companies. Responsibilities are as follows: 1.Report to the Board of Directors at least once per year: On March 12, 2025, reported the annual corporate governance achievements to the Board of Directors. 2.To ensure that Board members receive important company information promptly, they are immediately notified after the company releases material information. 3.Regularly update board members on the latest regulatory amendments and developments related to the company's business areas and corporate governance. 4.Arrange "in-house training" courses for board members as follows: (1) 2024/10/30 Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors (3 hours) (2) 2024/10/30 Sustainable Finance Disclosure (3 hours) (3) 2024/11/27 Corporate Governance and Corporate Legal Compliance-Discussing Insider Trading and Concerted Actions (3 hours) (4) 2024/12/24 Discussion on Enterprise Risk Management Trends and Organizational Resilience (3 hours) 5.Evaluate and purchase appropriate Directors, Supervisors, and Key Officers Liability Insurance and report to the Board of Directors on March 12, 2025. 6.Periodically coordinate communication between accountants, auditors or financial executives and independent directors to implement internal audit and control systems. The meeting minutes of such communications will be submitted to the Board of Directors for reference. 7.Prepare the Board meeting agenda and send out meeting notices seven days in advance, while coordinating with relevant departments to promptly supplement reference materials for the meeting. Reminders are sent in advance when agenda items involve directors' conflict of interest recusals. The Board meeting minutes are completed within twenty days after the meeting and distributed to all directors. 8.To implement corporate governance, regular performance evaluations for the Board of Directors and individual directors should be arranged in accordance with TCC's Performance Evaluation Policy for the Board of Directors and Functional Committees. Each year, the evaluation is conducted by an external organization. 9.Register shareholders' meeting dates in advance according to laws, prepare meeting notices, meeting handbooks, and meeting minutes within the statutory deadline, and promptly handle registration of changes when amending articles of incorporation or re-electing directors. 10.Promote corporate governance-related matters, assist in providing directors with information necessary for executing their duties, and handle other matters related to regulatory compliance.	None

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
V. Has the company established communication channels with stakeholders (including but not limited to shareholders, employees, customers, and suppliers), set up a stakeholder section on the company website, and appropriately responded to important corporate social responsibility issues of concern to stakeholders?	✓		1.TCC values the opinions of stakeholders (including shareholders, employees, customers, upstream and downstream manufacturers, banks, creditors, etc.), actively communicates and engages with them to identify material sustainability issues and incorporates these into the corporate sustainability development blueprint. Based on industry characteristics, we reference indicators such as GRI Standards, Sustainability Accounting Standards Board (SASB), Dow Jones Sustainability Index (DJSI), and follow the AA 1000 Stakeholder Engagement Principles international standard to identify and prioritize stakeholder relationships. 2.On March 12, 2025, TCC's Corporate Sustainable Development Committee presented a report to the Board of Directors regarding the communication with stakeholders in the most recent year, after cross-departmental discussions and formulation of future plans. This communication and reporting mechanism is conducted regularly at least twice a year. 3.In addition to maintaining effective communication with various stakeholders on a regular basis, TCC has established a "Stakeholders" section on its website and set up an email address (tcc_csr@taiwancement.com) for stakeholders to make contact. 4.The website has a "Corporate Governance" section, allowing investors to search and download corporate governance-related regulations	None
VI. Has the Company appointed a professional stock affairs agency to handle shareholders' meeting matters?	✓		TCC has appointed a professional stock affairs agency, with the Stock Transfer Agency Department of CTBC Bank Co., Ltd. handling shareholders' meeting related matters.	None
VII. Information Disclosure 1. Has the Company set up a website to disclose financial, operational, and corporate governance information?	✓		1. TCC discloses its latest status, financial information, and shareholders' meeting materials through the investor section in both Chinese and English versions on its website (http://www.tccgroupholdings.com/tw/), which is regularly updated for investors' reference. Relevant information is also disclosed on the Market Observation Post System at all times.	None
2. Has the Company adopted other means of information disclosure (such as establishing an English website, designating personnel responsible for the collection and disclosure of company information, implementing a spokesperson system, and posting investor conference proceedings on the company website, etc.)?	✓		2. TCC has established Chinese and English websites, appointed a spokesperson and deputy spokesperson as required, and designated personnel responsible for filing various financial and operational information on the Market Observation Post System and for information disclosure on its website. TCC also updates investor conference proceedings on it.	None
3. Does the Company announce and file its annual financial reports within two months after the end of the fiscal year, and announce and file its first, second, and third quarter financial reports and monthly operating results ahead of the required deadlines?	✓		3. TCC strictly complies with laws and regulations by announcing and filing its annual financial reports within three months after the end of the fiscal year (the Company approved and announced the 2024 financial reports at the Board meeting on March 12, 2025), and announces and files its first, second, and third quarter financial reports and monthly operating results within the required deadlines.	None
VIII. Is there any other important information that helps to understand the operational status of corporate governance (including but not limited to employee rights, employee care, investor relations, supplier relations, stakeholder rights, directors' and supervisors' continuing education, implementation of risk management policies and risk measurement standards, implementation of customer policies, purchase of liability insurance for directors and supervisors, etc.)?	✓		1. Employee Rights and Care: TCC Group has established an online wellness platform and employee opinion email inbox, where employees can provide feedback to the company on various workplace challenges, such as pandemic prevention, workplace environment safety and hygiene, gender equality, work hours system, and employee care issues. All matters are handled confidentially by designated personnel, providing colleagues with the most reassuring protection and implementing human rights safeguards. The Group promotes diversity and gender equality policies and uses employee engagement surveys to ensure policy effectiveness and continuous improvement, allowing employees to develop with peace of mind and grow together. Additionally, the Company has planned various employee welfare programs, including paid leave that exceeds legal requirements (such as: paid care leave), flexible working hours, work-from-home options, and cross-country time zone shift arrangements, enabling all colleagues to balance their health and safety needs, family care responsibilities, and work flexibility requirements. TCC also organizes health check-ups for colleagues and offers a range of benefits, including medical insurance, educational scholarships for children, marriage and childbirth benefits, holiday bonuses, employee stock ownership trusts, and emergency assistance. TCC provides comprehensive welfare benefits, ensuring thoughtful care for both the physical and mental well-being of employees. TCC is committed to continuously supporting employees' physical and mental well-being. To protect employee rights, clear measures and regulations regarding excellent performance or misconduct are also outlined in the work rules. 2. Investor Relations: In accordance with the law, TCC announces material information on the Market Observation Post System to protect investors' rights. 3. Supplier Relations: TCC holds an annual supplier conference to promote green environmental ESG initiatives and conducts ESG-related educational training during the event, encouraging investment in ESG practices while also assisting supply chain vendors with transformation. The most recent conference was successfully held on October 18, 2024, forming a green supply chain alliance consisting of 19 major transportation and raw material partners. Additionally, for supplier communication management, the Company conducts annual audits, holds irregular tender meetings, sets up a supplier opinion mailbox on the official website, and communicates irregularly through external mailboxes, telephone, and email. The Company has established a sound management mechanism to implement supplier management and build stable long-term cooperative relationships with suppliers, enabling suppliers to continuously grow together with the Company.	None

Evaluation items	Operations			Differences from the Corporate Governance Best Practice Principles for TWSE/TPEX Listed Companies and reasons
	Yes	No	Summary	
			4. Stakeholders' Rights: To further strengthen communication channels with the aforementioned stakeholders, the Company has established a "Stakeholders Section" on its website, providing stakeholders with a transparent and effective communication channel with the Company to pursue sustainable business operations. 5. Status of Directors and Supervisors' Continuing Education: The Company's directors' continuing education in the most recent year, in accordance with the Directions for the Implementation of Continuing Education for Directors and Supervisors of TWSE Listed and TPEX Listed Companies, is detailed in Note 2. 6. Implementation Status of Risk Management Policies and Risk Measurement Standards: TCC established a "Risk Management Committee" and formulated a "Risk Management Policy" at the Board meeting on August 13, 2024, to strengthen TCC Group's corporate governance and establish sound risk management operations, controlling the risks that may arise from various business activities within acceptable ranges to achieve reasonable risk-return objectives. Additionally, various internal regulations have been established in accordance with laws to carry out risk management and assessments, which are implemented accordingly. 7. Implementation Status of Customer Policy: The Company has established customer service and complaint handling procedures, providing customers with comprehensive product quality service, and has set up a dedicated research lab that collaborates with various production and business units to provide customized cocktail-style services and customer complaint solutions. Customer satisfaction surveys are conducted regularly every year to serve as a basis for improvement and supervision. For business partners, corruption and bribery risk assessments and corresponding due diligence procedures are conducted during initial collaboration or on a regular basis, serving as a reference for evaluating subsequent cooperation relationships with those business partners. 8. Status of Liability Insurance Purchases for Directors and Managers: The Company has passed a resolution at the Board meeting on March 12, 2025, to purchase "Liability Insurance for Directors (including Managers)" to reduce and diversify the risks of significant damages to the Company and shareholders due to illegal actions by directors. 9. Introduction of Taiwan Intellectual Property Management System (TIPS): Applied and passed the TIPS A-level (2016 version) patent and trademark certification as "Taiwan Cement Corporation" (Certificate No.: TIPS-2024-cert.-077; Certificate validity: December 31, 2025). TCC's intellectual property management plan, implementation, and Board reporting status have been disclosed on TCC's official website under Investor Relations -> Corporate Governance -> Corporate Governance Disclosure.	

Items Improved in the 10th Corporation Governance Evaluation Indicators:

Item Number	Indicator Item	Improvement
1.1	Does the company report the remuneration received by directors at the annual shareholders' meeting, including remuneration policies, individual remuneration content and amounts?	The Company has reported at the 2024 annual shareholders' meeting.
3.13	Does the company voluntarily disclose the individual remuneration of directors and supervisors in its annual report?	The Company has disclosed this information in the annual report.
3.14	Does the company disclose the link between performance evaluation and remuneration for directors and managers in its annual report?	The Company has disclosed this information in the annual report.

Priority areas for improvement that have not yet been addressed in the 10th Corporation Governance Evaluation:

Item Number	Indicator Item	Improvement
3.8	Has the company voluntarily published quarterly financial forecast reports, and have there been no cases of correction by the competent authority or deficiencies recorded by the Taiwan Stock Exchange or Taipei Exchange regarding related operations?	The Company will conduct internal evaluations.
3.21	Does the company voluntarily disclose the individual remuneration of the President and Vice Presidents in its annual report?	The Company will conduct internal evaluations.

Note1: Independence evaluation criteria accountants:

Evaluation items	Evaluation results	Whether independence requirements are met
1. Whether the accountant has a direct or significant indirect financial interest relationship with the Company.	No	Yes
2. Whether the accountant has financing or guarantee arrangements with the Company or the Company's directors.	No	Yes
3. Whether the accountant has a close business relationship or potential employment relationship with the Company.	No	Yes
4. Whether the accountant and members of the audit team served as directors, managers, or held positions that significantly influenced the audit work at the Company during the audit period.	No	Yes
5. Whether the accountant has provided non-audit services to the Company that may directly affect the audit work.	No	Yes
6. Whether the accountant holds stocks or other securities issued by the Company.	No	Yes
7. Whether the accountant has served as an advocate for the Company or represented the Company in coordinating conflicts with other third parties.	No	Yes
8. Whether the accountant has family relationships with the Company's directors, managers, or personnel who have significant influence on the audit work.	No	Yes
9. Whether the accountant and members of the audit team have received gifts or presents of significant value from the Company's directors or managers.	No	Yes
10. Whether the Company has failed to obtain an independence declaration from the accountant.	No	Yes

Note2: TCC’s directors and supervisors (TCC already has independent directors) select suitable training courses based on their personal schedules and professional backgrounds. The arranged continuing education is as follows:

Title	Name	Training Date	Organizer	Training Course	Training Hours	Whether Completed the Training Meets Requirements
Chairman	Nelson An-ping Chang	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Director	Roman Cheng	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
		2024/12/24	Taiwan Corporate Governance Association	Discussion on Enterprise Risk Management Trends and Organizational Resilience	3.0	Yes
Director	Kenneth C.M. Lo	2024/03/13	Taiwan Corporate Governance Association	Corporate Governance and Sustainable Development	1.0	Yes
		2024/04/09		Benefits of Circular Economy and Opportunities in Sustainable Finance	2.0	Yes
		2024/05/02		Enterprise Cybersecurity Posture Under Digital Resilience	1.0	Yes
		2024/10/02		Money Laundering Prevention and Counter-Terrorism Financing Risk Trends	2.0	Yes
		2024/11/12		Fair Customer Treatment, Inclusive Finance, and Ethical Business Operations	2.0	Yes
Director	Yu-Cheng Chiao	2024/01/26	Taiwan Corporate Governance Association	Analysis of Taiwan’s Economic Trends in 2024	3.0	Yes
		2024/03/14		Chaotic Blooms: Contradictory Dialogue Under Current Economic Situation and Geopolitics; A Musical Messenger from Heaven	3.0	Yes
		2024/03/14		Opportunities and Challenges of Generative AI; Leveraging Climate Regulatory and Economic Tools to Address Scope 3 Emission Reduction Challenges	3.0	Yes
		2024/08/08		Exploring Business Management Challenges and Responses Through the Growth Journey of Well-Known Multinational Corporations/Trends and Challenges in Climate Change and Corporate Sustainability	3.0	Yes
		2024/08/08		Global Economic Outlook	1.5	Yes
Director	Eric Chen Sun Te	2024/07/11	Securities and Futures Institute	Digital Transformation Creating a New AI Future - Sharing Generative AI Application Cases	3.0	Yes
		2024/10/16		Carbon Trading Mechanism and Carbon Management Applications	3.0	Yes

Title	Name	Training Date	Organizer	Training Course	Training Hours	Whether Completed the Training Meets Requirement s
Director	Kang-Lung (Jason) Chang	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Director	Por-Yuan Wang	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Director	Kung-Yi Koo	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Director	Chien Wen	2024/08/09	Taiwan Corporate Governance Association	Green Electricity, Certificates and Sustainable Development - The Corporate Path to Net Zero	3.0	Yes
		2024/10/30		Latest Trends in Corporate Governance Evaluation Indicators That Directors and Supervisors Must Know - Intellectual Property Management	3.0	Yes
Director	Liz Wang	2024/04/02	Taiwan Institute of Directors	How the Board of Directors Implements the Relation Between Senior Executive Compensation and ESG Performance Systems	3.0	Yes
		2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
		2024/11/27	Taiwan Corporate Governance Association	Corporate Governance and Corporate Legal Compliance - Discussing Insider Trading and Concerted Actions	3.0	Yes
Independ ent Director	Victor Wang	2024/08/08	Securities and Futures Institute	How Directors and Supervisors Can Oversee Corporate Risk Management and Crisis Handling (Including Gender Equality)	3.0	Yes
		2024/10/29	Accounting Research and Development Foundation of the Republic of China	Legal Responsibilities and Case Analysis of Corporate Control Contests	3.0	Yes
		2024/11/08	Securities and Futures Institute	Carbon Trading Mechanism and Carbon Management Applications	3.0	Yes
		2024/12/24	Taiwan Corporate Governance Association	Discussion on Enterprise Risk Management Trends and Organizational Resilience	3.0	Yes
		2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Independ ent Director	Lynette Ling-Tai Chou	2024/10/30		Sustainable Finance Disclosure	3.0	Yes
		2024/12/24	Taiwan Corporate Governance Association	Discussion on Enterprise Risk Management Trends and Organizational Resilience	3.0	Yes
Independ ent Director	Sherry S. L. Lin	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Sustainable Finance Disclosure	3.0	Yes
		2024/10/30		Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
		2024/11/13	Taiwan Corporate Governance Association	Latest ESG Sustainability Information Regulations and Practices	3.0	Yes
		2024/11/27		Corporate Governance and Corporate Legal Compliance - Discussing Insider Trading and Concerted Actions	3.0	Yes
Independ ent Director	Ruu Tian Chang	2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Discussion on Enterprise Risk Management Trends and Organizational Resilience	3.0	Yes
		2024/10/30		Sustainable Finance Disclosure	3.0	Yes
		2024/11/27	Taiwan Corporate Governance Association	Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	3.0	Yes
Independ ent Director		2024/10/30	Taiwan Institute for Sustainable Energy (TAISE)	Corporate Governance and Corporate Legal Compliance - Discussing Insider Trading and Concerted Actions	3.0	Yes
		2024/10/30		Corporate Governance and Corporate Legal Compliance - Discussing Insider Trading and Concerted Actions	3.0	Yes

2.2.4 Composition, Responsibilities, and Operation of the Remuneration Committee

At the 18th meeting of the 20th Board of Directors on August 30, 2011, TCC resolved to establish the Remuneration Committee and formulated the Remuneration Committee Charter. The Committee evaluates the compensation policies and systems for directors and managers from a professional and objective standpoint. It also reviews the policies, systems, standards, and structure related to performance evaluation and compensation of directors and managers.

I. The 5th Remuneration Committee

1. Committee Member Information

Identity	Name	Professional Qualifications and Experience	Independence	Number of Other Public Companies Where the Person Also Serves as a Member of the Remuneration Committee
Independent Director/Convener	Yu-Cheng Chiao	The Remuneration Committee members are independent directors of TCC. For details on their professional qualifications and experience, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors."	The Remuneration Committee members are independent directors of TCC. For details on their professional qualifications and experience, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors."	0
Independent Director	Victor Wang			3
Independent Director	Lynette Ling-Tai Chou			1
Independent Director	Mei-Hua Lin			0
Independent Director	Sherry S. L. Lin			1

2. Operational Information

(1) TCC's Remuneration Committee consists of five members.
(2) The current committee members' term of office: From July 15, 2021, to May 20, 2022
The Remuneration Committee held a total of three meetings from January 1 to May 20, 2024, and the attendance is as follows:

Title	Name	Actual Attendance Count	Attendance by Proxy Count	Actual Attendance Rate (%)	Notes
Convener	Yu-Cheng Chiao	3	0	100%	
Committee Member	Victor Wang	3	0	100%	
Committee Member	Lynette Ling-Tai Chou	3	0	100%	
Committee Member	Mei-Hua Lin	3	0	100%	
Committee Member	Sherry S. L. Lin	3	0	100%	

Other Matters to be Recorded:
The Board of Directors did not adopt or amended the recommendations of the Remuneration Committee: No such circumstance.
Instances where members expressed objections or reservations to the Remuneration Committee's resolutions that were recorded or stated in writing: No such circumstance.

3.Operations

Meeting Date	Key Agenda Details	Resolution Result	TCC's Response to Committee Members' Opinions
2024/03/20	TCC's 2023 distribution of employee and director compensation is hereby submitted for review.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to establish the 2023 distribution ratio of compensation for the Chairman and directors is hereby submitted for review.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.

II. The 6th Remuneration Committee

1. Committee Member Information

Identity	Name	Professional Qualifications and Experience	Independence	Number of Other Public Companies Where the Person Also Serves as a Member of the Remuneration Committee
Independent Director/Convener	Lynette Ling-Tai Chou	The Remuneration Committee members are independent directors of TCC. For details on their professional qualifications and experience, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors."	The Remuneration Committee members are independent directors of TCC. For details on their professional qualifications and experience, please refer to page 35 of this annual report, "1. Information Disclosure of Directors' Expertise and Independence of Independent Directors."	1
Independent Director	Victor Wang			3
Independent Director	Sherry S. L. Lin			1
Independent Director	Ruu Tian Chang			0
Independent Director	Nigel N. T. Li (Note)			0

Note: Mr. Nigel N. T. Li, the original Independent Director, resigned on October 9, 2024.

2. Operational Information

(1) TCC's Remuneration Committee consists of five members.
(2) The term of office for the current committee members: May 28, 2024, to May 20, 2027.
The Remuneration Committee held a total of five meetings from May 28, 2024, to March 20, 2025 (the publication date), and the attendance is as follows:

Title	Name	Actual Attendance Count	Attendance by Proxy Count	Actual Attendance Rate (%)	Notes
Convener	Lynette Ling-Tai Chou	5	0	100%	
Committee Member	Victor Wang	5	0	100%	
Committee Member	Sherry S. L. Lin	5	0	100%	
Committee Member	Ruu Tian Chang	5	0	100%	
Committee Member	Nigel N. T. Li	5	0	100%	Resigned on October 9, 2024

Other Matters to be Recorded:
The Board of Directors did not adopt or amended the recommendations of the Remuneration Committee: No such circumstance.
Instances where members expressed objections or reservations to the Remuneration Committee's resolutions that were recorded or stated in writing: No such circumstance.

3.Operations

Meeting Date	Key Agenda Details	Resolution Result	TCC's Response to Committee Members' Opinions
2024/5/28	Elect the chairperson and convener.	Unanimously approved by all committee members.	-
2024/8/13	Proposal to determine the compensation and attendance fees for the 25th Chairman and Directors of TCC, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to determine the compensation and attendance fees for the 25th Independent Directors of TCC, submitted for review and approval.	All committee members resolved to submit to the Board of Directors for review	Submitted to the Board of Directors and unanimously approved by all attending directors.
2024/11/11	Proposal regarding the change of TCC's Internal Audit Manager, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal regarding the change of TCC's Accounting Chief Officer, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to dismiss Mr. Chia-Pei Wei, Manager of the Hoping Branch, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to appoint Mr. Chen-Yuan Chen as the Manager of the Hoping Branch, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
2024/12/24	Proposal to appoint a new manager, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to establish the 2025 performance-based employee (including managers) salary adjustment plan, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposed total amount of performance bonuses (including managers) for 2024, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal regarding the estimated performance bonus for the CEO for 2024, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
2025/03/12	Proposal to amend certain provisions of TCC's Articles of Incorporation, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal to establish the scope of Base-level Employees, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal regarding TCC's distribution of employee and director compensation for 2024, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.
	Proposal regarding TCC's distribution of compensation for the Chairman and directors for 2024, submitted for review and approval.	Unanimously approved by all committee members.	Submitted to the Board of Directors and unanimously approved by all attending directors.

2.2.5 The composition, responsibilities, and operations of the Nomination Committee

Establishment Information	To strengthen the functions of TCC's Board of Directors and enhance its management mechanisms, the Board resolved to establish the Nomination Committee and formulate the Nomination Committee Organization Regulations on June 21, 2022. The committee consists of five directors (including three independent directors).				
Main Responsibilities	The Committee, acting under the authorization of the Board of Directors, shall diligently perform the following duties with the care of a prudent administrator. It shall remain accountable to the Board of Directors, and submit its recommendations to the Board for discussion: · Formulate the selection process for directors (including independent directors) and senior executives. · Develop and regularly review directors' professional development plans, directors' management performance, evaluation of board members, and succession plans for senior executives. · Handle other matters as assigned by the Board of Directors				
The 1st Nomination Committee					
Term of Office	Committee member term of office is from June 21, 2022, to May 20, 2024.				
Meeting Information	A total of one meeting was held (A) from January 1 to May 20, 2024				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B / A)
Chairman/Convener	Nelson An-ping Chang	Professional Qualifications: Professional expertise includes business management, leadership and decision-making and ESG. Main education and professional experience: MBA, School of Business Administration, New York University Chairman of Taiwan Cement Corporation Group CEO of Taiwan Cement Corporation Chairman of NHOA S.A.	1	0	100%
Director/Committee Member	Kenneth C.M. Lo	Professional Qualifications: Professional expertise includes business management, leadership and decision-making and ESG. Main education and professional experience: MS in Finance, Manderson School of Business, The University of Alabama Honorary Chairman of O-Bank President of CTBC Bank Co., Ltd. Chairman of the Chinese National Association of Industry and Commerce	0	1	0%
Independent Director/Committee Member	Yu-Cheng Chiao	Professional Qualifications: Professional expertise includes business management, leadership and decision-making and ESG. Main education and professional experience: MS in Electronic Engineering, University of Washington BS in Communications Engineering, National Chiao Tung University Chairman of Winbond Electronics Corporation	0	1	0%
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: Professional expertise includes ESG assessment and accounting control. Main education and professional experience: PhD of Accounting, University of Houston Independent Director of Next Commercial Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	1	0	100%
Independent Director/Committee Member	Sherry S. L. Lin	Professional Qualifications: Professional expertise includes ESG assessment and financial management. Main education and professional experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	1	0	100%

The implementation of the meeting is as follows:

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/3/20 The 4th Meeting of the 1st Nomination Committee	Proposal to nominate 15 director candidates (including five independent directors) for TCC.	Unanimously approved by all attending committee members.	Submitted to the Board of Directors for reporting on March 20, 2024. All attending directors approved as proposed.

Note: For more information, please refer to the Investor section on TCC's official website -> Corporate Governance -> Committees

The 2nd Nomination Committee					
Term of Office	Committee member term of office is from May 28, 2024, to May 20, 2027.				
Meeting Information	A total of four meetings were held (A) from May 28, 2024, to March 20, 2025.				
Title	Name	Professional Qualifications and Experience	Actual Attendance Count (B)	Attendance by Proxy Count	Actual Attendance Rate (%) (B/A)
Independent Director/Convener	Victor Wang (Note)	Professional Qualifications: ESG assessment capabilities and financial expertise Main education and professional experience: PhD of Accounting, University of Houston EMBA, National Taiwan University Former Chief Operating Officer and Vice Chairman of Audit Services Department at Deloitte Taiwan	3	0	100%
Chairman/Committee Member	Nelson An-ping Chang	Professional Qualifications: Professional expertise includes business management, leadership and decision-making and ESG. Main education and professional experience: MBA, School of Business Administration, New York University Chairman of Taiwan Cement Corporation Group CEO of Taiwan Cement Corporation Chairman of NHOA S.A.	4	0	100%
Independent Director/Committee Member	Kenneth C.M. Lo	Professional Qualifications: Professional expertise includes business management, leadership and decision-making and ESG. Main education and professional experience: MS in Finance, Manderson School of Business, The University of Alabama Honorary Chairman of O-Bank President of CTBC Bank Co., Ltd. Chairman of the Chinese National Association of Industry and Commerce	1	3	25%
Independent Director/Committee Member	Lynette Ling-Tai Chou	Professional Qualifications: Professional expertise includes ESG assessment and accounting control. Main education and professional experience: PhD of Accounting, University of Houston Independent Director of Next Commercial Bank Co., Ltd. Dean of Student Affairs, Deputy Dean of the College of Commerce, and Department Chair of Accounting at National Chengchi University	4	0	100%
Independent Director/Committee Member	Sherry S. L. Lin	Professional Qualifications: Professional expertise includes ESG assessment and financial management. Main education and professional experience: LLB, National Taiwan University Chairman of Bar Koo Investment Corporation Special Consultant at Lee and Li, Attorneys-at-Law	4	0	100%
Independent Director/Committee Member	Nigel N. T. Li (Note)	Professional Qualifications: Professional expertise includes ESG assessment and legal expertise. Main education and professional experience: LL.M., Harvard LL.M., National Taiwan University Special Senior Consultant of Lee and Li, Attorneys-at-Law	1	0	100%

Note: Independent Director, Mr. Nigel N. T. Li, resigned on October 9, 2024. TCC's Board of Directors resolved on November 11, 2024, to appoint Independent Director Victor Wang as a member of the Nomination Committee to fill the vacancy.

The implementation of the meeting is as follows:

Meeting Date	Meeting Highlights	Meeting Results	Handling of Committee Opinions
2024/5/28 The 1st Nomination Committee Meeting of the 2nd Term	Elect the chairperson and convener.	All attending committee members unanimously elected Committee Member Nigel N. T. Li to serve as the meeting chairperson and convener.	-
2024/11/11 The 2nd Nomination Committee Meeting of the 2nd Term	Elect the chairperson and convener.	All attending committee members unanimously elected Committee Member Victor Wang to serve as the meeting chairperson and convener.	-
2024/12/24 The 3rd Nomination Committee Meeting of the 2nd Term	Report on the 2024 directors' continuing education for TCC.	Acknowledgment of the report.	Submitted to the Board of Directors for reporting on December 24, 2024. All attending directors approved as proposed.
2025/3/12 The 4th Nomination Committee Meeting of the 2nd Term	Proposal to nominate candidates for independent directors of TCC.	Unanimously approved by all attending committee members.	Submitted to the Board of Directors for reporting on March 12, 2025. All attending directors approved as proposed.

Note: For more information, please refer to the Investor section on TCC's official website → Corporate Governance → Committees

2.2.6 Implementation status of promoting sustainable development and the differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies


Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
I. Has the company established a governance structure to promote sustainable development, with a dedicated (or part-time) unit responsible for the promotion of sustainable development, which is authorized by the Board of Directors to be handled by senior management? Additionally, is the Board of Directors supervising the implementation?	✓		<p>To implement the sustainable development strategies of Low-Carbon Transformation and Accelerating International Deployment, TCC's Board of Directors approved the establishment of the Corporate Sustainable Development Committee in 2018. In July 2021, it was elevated to a functional committee that holds at least two meetings annually, responsible for approving and supervising sustainable development promotion matters.</p> <p>TCC's Board of Directors is the highest decision-making and supervisory body for sustainability matters, responsible for overseeing sustainable development implementation and governance structures. The current Corporate Sustainable Development Committee consists of six committee members (including three independent directors): Chairman Nelson An-ping Chang, Director Roman Cheng, Director Liz Wang, Independent Director Victor Wang, Independent Director Lynette Ling-Tai Chou, and Independent Director Sherry S. L. Lin, making independent directors accounting for 50%. Chairman Nelson An-ping Chang serves as the convener. The committee members bring expertise in areas such as risk management, business operations, energy technology, environmental protection, and ESG. The Board of Directors reviews TCC's sustainable development and ESG management approach annually, based on reports from the Corporate Sustainable Development Committee. It also oversees and monitors the management team's progress in implementing sustainable development and achievement of annual performance goal, thereby strengthening the corporate foundation.</p> <p>In 2022, TCC established a Sustainability Development Office to coordinate and integrate group resources for promoting sustainability projects, facilitating cross-departmental communication, and proposing improvement recommendations. The Chief Sustainability Officer regularly reports the Group's sustainability progress to the Corporate Sustainable Development Committee, ensuring the implementation of sustainable operations.</p> <p>The Corporate Sustainable Development Committee oversees seven functional groups, including Corporate Governance, Comprehensive Care, Sustainable Products and Manufacturing, Sustainable Environment, Green Energy, Sustainable Information Disclosure, and Biodiversity. The functional groups consist of senior executives and personnel from various relevant departments with ESG-related responsibilities, assigned based on their departmental functions. These responsibilities extended to the subsidiaries of the Group.</p> <p>In 2024, the Chief Sustainability Officer reported the results of the Corporate Sustainable Development Committee meetings and future plans to the Board of Directors on May 28 and August 13, respectively. The reported matters are briefly described as follows:</p> <ul style="list-style-type: none">The first meeting on May 28, 2024: Appointment of new committee members.The second meeting on June 5, 2024: The implementation of sustainability projects from the fourth quarter of 2023 to the second quarter of 2024, as well as important discussion items for TCC's subsequent sustainability initiatives.The third meeting on August 13, 2024: Important discussion items regarding TCC's 2023 Sustainability Report. <p>The Board of Directors reviews reports from the management team on a quarterly basis (including ESG reports). The management level is responsible for proposing company strategies to the Board of Directors, and the Board must evaluate the feasibility of these strategies, regularly review their progress, and urge the management team to make timely adjustments as needed.</p>	None
II. Has the Company conducted risk assessments on environmental, social, and corporate governance issues related to its operations in accordance with the materiality principle, and established relevant risk management policies or strategies?	✓		<p>TCC conducts a materiality analysis every two years, gathering stakeholder expectations and feedback to identify key issues that guide the preparation of the sustainability report. At the same time, based on the materiality results, TCC refines its sustainability goals and strategies, evaluates the risks of material issues, and plans and allocates resources to address these issues.</p> <p>In 2023, TCC adopted the Global Reporting Initiative (GRI) 'double materiality' analysis, assessing various sustainability issues based on their impact on the economy, environment, people, and human rights and impact on Company value. Details of the assessments and boundaries can be found in '6. Disclosure of Sustainability-related and Climate-related Financial Information' on page 215 of this annual report and in TCC's annually published Sustainability Report.</p> <p>In addition, with the approval of the Board of Directors, TCC has clearly defined in its Code of Corporate Social Responsibility Practices that it conducts risk assessments on environmental, social, and corporate governance issues related to its operations in accordance with the materiality principle and establishes relevant risk management policies and strategies.</p> <p>1. Corporate Governance:</p> <p>(1) To strengthen risk assessment and management functions, at the 5th meeting of the 25th Board of Directors on August 13, 2024, TCC resolved to rename the previous Risk Management Executive Committee and Risk Management Policy and Principles to Risk Management Committee and Risk Management Policy. The committee was established with five members, including four independent directors.</p> <p>(2) The Risk Management Committee held a meeting on May 14, 2024, to report on the damage and recovery progress at TCC's production and business sites in Taiwan following the major Hualien earthquake on April 3, 2024. The annual update of TCC's major risk identification matrix across seven key areas: operations, finance, national, legal compliance, ESG, personnel, and information security. The achievement status of TCC's 2023 Climate-related Performance Indicators and the establishment of 2024 Climate-related Performance Targets.</p> <p>(3) TCC strictly adheres to relevant legal regulations and has established the Code of Ethical Conduct and Code of Integrity in Management to ensure all operational activities are carried out with integrity, fairness, and reasonableness, aiming for zero violations. Additionally, TCC has established complaint and whistleblowing management systems to encourage employees to report any illegal or unethical behavior. In 2021, TCC became the first enterprise in Taiwan to obtain ISO 37001 Anti-bribery Management System certification, aiming to eliminate the risk of corruption.</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
II. Has the Company conducted risk assessments on environmental, social, and corporate governance issues related to its operations in accordance with the materiality principle, and established relevant risk management policies or strategies?	✓		<p>(4) Each department of TCC regularly tracks and updates the latest developments in laws and regulations and strictly complies with government regulations in daily operations.</p> <p>(5) Training sessions are planned for directors on relevant topics, and provide the latest regulations, institutional developments, and policies on an annual basis.</p> <p>(6) Directors are provided with liability insurance to protect them in case of litigation or claims.</p> <p>2. Environmental Issues:</p> <p>TCC closely monitors the materials used in products and production processes, with a strong focus on natural resource depletion. It actively promotes circular economy, explores alternatives such as sustainable raw materials and fuels, integrates AI management systems into production processes, and establishes green management concepts in its business operations.</p> <p>Climate change risks have been incorporated into TCC's overall risk management process. Risk identification follows the TCFD framework, and based on the identification results, each department develops response strategies, integrates and manages risks that may affect operations and profitability. The Risk Management Committee submits annual risk assessment and management reports to the Board of Directors.</p> <p>3. Social Issues:</p> <p>TCC adheres to the fundamental principles of human rights protection as outlined in various international human rights conventions, including the UN Global Covenant, the UN Universal Declaration of Human Rights, and the International Labor Organization's Fundamental Principles and Rights at Work. TCC is fully committed to respecting and protecting human rights in all aspects. TCC also evaluates the potential impacts of the net-zero transition on employees and various stakeholders through the Just Transition key strategies outlined in the National Development Council's 'Taiwan's Pathway to Net-Zero Emissions in 2050 and Strategies.' TCC incorporates inclusiveness and fairness into the planning of its transformation planning, ensuring the rights of surrounding communities.</p> <p>TCC emphasizes safety management and employee development by identifying potential risks in daily operations across departments to ensure employee safety. As a result, relevant management systems have been implemented to enhance safety awareness among both employees and contractors, effectively preventing occupational hazards. TCC has established Occupational Safety and Health Management Internal Control Policies that apply to employees, outsourced workers, and contractors. In addition, TCC's cement plants, product factories across Taiwan and mainland China, and its operational headquarters have all obtained ISO 45001 Occupational Health and Safety Management System certification.</p> <p>Regarding talent recruitment and succession risk, TCC not only expands its international presence to attract global talent but also focuses on campus recruitment to secure early-career stage talent. TCC continuously strengthens its salary structure to improve market competitiveness and enhance retention through measures such as talent development, employee benefits, and incentive compensation. Moreover, it also extends appointments of senior personnel to facilitate the transfer of experience. Additionally, it communicates with government agencies, local communities, and other stakeholders every year, maintaining effective communication channels and actively responding to stakeholders' opinions.</p>	
III. Environmental Issues 1. Has the company established an appropriate environmental management system according to its industry characteristics?	✓		<p>1.</p> <p>(1) TCC Group has formulated environmental protection policies, which are publicly disclosed in the environmental chapter of the ESG section on the official website. This demonstrates its commitment to implementing various pollution prevention and environmental improvement measures, striving for a harmonious and mutually beneficial relation between enterprise and the natural environment, while fostering sustainable development.</p> <p>(2) TCC follows environmental protection policies to implement international standards such as ISO 14001, ISO 50001, ISO 46001, and BS 8001, establishing environmental management systems for plant areas and effectively improving management performance.</p> <p>(3) All of the ISO certificates are within their validity periods and are publicly disclosed in the ESG section (Sustainability Certification) of the official website.</p>	None
2. Is the company committed to improving energy efficiency and using renewable materials with low environmental impact?	✓		<p>2.</p> <p>(1) TCC is dedicated to addressing environmental problems. In 2018, it became the world's first cement company to obtain BS-8001 Circular Economy certification. Over the years, through the experience of co-processing renewable resources in cement kilns, TCC has handled industrial waste from various industries such as optoelectronics and semiconductor, paper, water treatment plants, chemical plants, and steel mills. By reusing these materials as alternatives to natural resources and raw materials, TCC reduces energy consumption per unit of cement product and lowers greenhouse gas emission intensity, thereby minimizing environmental impact. Furthermore, in 2024, TCC achieved the highest level of BS 8001 level 4 certification for its circular model of converting MSW into alternative raw materials and fuels.</p> <p>(2) TCC's two cement plants in Taiwan and the Low-carbon R&D Center have all received ISO 50001 Energy Management certification. The cement plants feature waste heat power generation systems, which reduce 20-30% of purchased electricity by utilizing waste heat for power generation, thus improving energy efficiency.</p> <p>(3) TCC's energy efficiency performance and alternative raw material usage are publicly disclosed annually in the Environmental chapter of the ESG section on its official website.</p>	None
3. Does the company assess the potential current and future risks and opportunities of climate change to the enterprise, and take measures to address climate-related issues?	✓		<p>3.</p> <p>(1) TCC established the Risk Management Executive Committee under the Board of Directors in May 2020. At the 5th meeting of the 25th Board of Directors on August 13, 2024, it was resolved to rename the previous Risk Management Executive Committee and Risk Management Policies and Principles to Risk Management Committee and Risk Management Policy, respectively. Risk identification and analysis are conducted across seven major areas according to business scope. Based on the identification results, each department develops response strategies, and the Risk Management Committee submits a risk control report to the Board of Directors annually.</p> <p>(2) In response to changes in the company development strategy, TCC's Board of Directors approved revisions to the risk management policy in May 2024, incorporating "biodiversity" as a key area of risk identification. This aims to prevent and reduce the impact of operational activities on nature and biodiversity.</p> <p>(3) Details regarding the operation of TCC's Risk Management Committee and the analysis of climate change transition and emerging risks are publicly disclosed in the Corporate Governance chapter of the ESG section on the official website.</p> <p>(4) For the assessment of climate change-related risks and opportunities and the response measures, please refer to page 97 of this annual report, "2.2.7 Implementation of Climate-related Information."</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
4. Has the company compiled statistics on greenhouse gas emissions, water consumption, and total waste generation for the past two years, and established policies for energy conservation, carbon reduction, greenhouse gas reduction, water conservation, or other waste management?	✓		<p>4.</p> <p>(1) Greenhouse Gas Management:</p> <p>For details on TCC's goals and strategies, as well as the results of ISO 14064 carbon inventory and emission intensity, please refer to page 97 of this annual report under "2.2.7 Implementation of Climate-related Information" and the Greenhouse Gas Management section in the ESG area on TCC's official website.</p> <p>(2) Water Resource Management:</p> <p>Cement plants and products factories in Taiwan and Mainland China have all completed ISO 14046 water footprint inventory. Taiwan's cement plants and products factories have obtained ISO 46001 water efficiency certification. Since 2022, cement plants have implemented a water footprint management platform to monitor the entire process from water supply, usage, recycled water to discharged water, strengthening water management efforts. For water-stressed areas, future water supply is evaluated based on the WRI Aqueduct Water Risk Atlas. The water consumption intensity targets for cement plants in Taiwan and Mainland China (weighted average) are set at: 0.000233 by 2025, 0.000225 by 2030, and 0.000220 by 2050 (unit: million liters/ton of cementitious material).</p> <p>In 2023, the water consumption intensity for Taiwan and Mainland China (weighted average) was 0.000236 (unit: million liters/ton of cementitious material). Taiwan's water consumption totaled 2,898.88 million liters, and this data was verified and certified by Deloitte under ISAE 3000. As the 2024 figures could not be fully assured before the annual report publication date, the complete assurance opinion will be disclosed in the 2024 Sustainability Report and the Environmental Chapter of the ESG area on TCC's official website.</p> <p>(3) Waste Management:</p> <p>Following ISO 14001 certification, each site has established its waste management regulations. All factory waste generated by TCC is classified as non-hazardous waste and is treated in accordance with regulations to ensure safe disposal. TCC is investing in innovative waste reduction development aimed at achieving zero waste by minimizing waste generation and maximizing resource recycling and reuse. In 2024, TCC's cement plants in Taiwan and Mainland China have set a target of converting 100% waste into renewable energy resources, striving for non-hazardous and resource-oriented waste management.</p> <p>In 2023, the water consumption intensity for Taiwan and Mainland China was 17,209.17 (unit: million liters/ton of cementitious material). Taiwan's water consumption totaled 9,194.78 million liters, and this data was verified and certified by Deloitte under ISAE 3000. As the 2024 figures could not be fully assured before the annual report publication date, the complete assurance opinion will be disclosed in the 2024 Sustainability Report and the Environmental Chapter of the ESG area on TCC's official website.</p>	None
IV. Social Issues 1. Has the company developed relevant management policies and procedures in accordance with relevant regulations and international human rights conventions?	✓		<p>1.</p> <p>TCC Group upholds the Total Care Commitment, dedicated to creating a safe, inclusive workplace with opportunities for growth. TCC Group adheres to international human rights conventions, including the UN Global Compact, United Nations Universal Declaration of Human Rights, ILO Declaration on Fundamental Principles and Rights at Work, United Nations Guiding Principles on Business and Human Rights, United Nations Declaration on the Rights of Indigenous Peoples, and Convention concerning Indigenous and Tribal Peoples in Independent Countries (ILO No.169). The Group is committed to protecting human rights, promoting diversity and gender equality policies, and ensuring the effectiveness and continuous optimization of these policies through employee engagement surveys, enabling employees to thrive with peace of mind and grow together with TCC.</p> <p>(1) Implementing human rights protection measures to ensure that its business operations comply with international standards.</p> <p>TCC Group is committed to respecting and protecting the fundamental rights of all employees and has established relevant policies and management mechanisms based on international standards to ensure that its operations comply with human rights regulations. In 2024, TCC Group officially implemented the Corporate Sustainability Due Diligence Directive (CSDDD), further strengthening its human rights protection mechanisms and ensuring all business activities comply with international standards. TCC Group's human rights policy and implementation are disclosed on its official website, demonstrating TCC's commitment to social responsibility and ensuring transparent information is accessible to all stakeholders.</p> <p>(2) Promoting diversity and gender equality policies</p> <p>TCC Group firmly believes that fostering a diverse and inclusive workplace is key to unlocking employee potential, driving corporate innovation and promoting growth. Therefore, TCC Group actively promotes workplace equality and anti-discrimination policies to ensure all employees receive fair treatment. In 2024, TCC Group established an Anti-discrimination and Anti-harassment Policy, further clarifying workplace behavioral standards to ensure that each employee can work in an environment of respect and trust. To further enhance the friendly workplace environment, the policy was revised in 2025 to include anti-bullying provisions and renamed the Anti-discrimination, Anti-harassment, and Anti-bullying Policy, broadening the scope of protection for employee rights. Through regular internal training and promotional activities, TCC fosters employees' awareness of diverse cultures, strengthens respect and inclusiveness in corporate culture, and ensures that everyone can develop their careers in a fair and respectful environment.</p> <p>(3) Strengthening employee engagement surveys</p> <p>TCC Group values employee opinions and gathers insights into their needs through engagement surveys. Based on employee feedback to adjust workplace policies accordingly to ensure continuous development toward a more supportive work environment. In December 2024, TCC Group collaborated with Willis Towers Watson (WTW) to conduct an employee sustainability engagement survey targeting cement businesses and affiliated companies in Taiwan and mainland China, ensuring employees could express their opinions safely and anonymously. The results of this survey showed an employee response rate as high as 98%, with over 80% expressing positive engagement with sustainability. This demonstrates that TCC Group has earned strong recognition for creating a safe and respectful workplace environment. Based on the survey results, we will further optimize internal communication mechanisms and, through continuous improvement measures, ensure that all employees feel a sense of belonging and have opportunities for development within TCC Group. This allows both TCC and its employees to progress together toward a more sustainable future.</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
2. Has the company established and implemented reasonable employee benefit measures (including compensation, leave, and other benefits), and appropriately reflected business performance or results in employee compensation?	✓		<p>2.</p> <p>TCC not only offers competitive salaries and rewards but also fosters a diverse, inclusive, and gender-equal workplace. We do not discriminate based on gender, race, religion, political stance, or marital status, fully implementing the concept of workplace equality.</p> <p>In 2024, female colleagues accounted for 22% of TCC's workforce, while female managers represented 28.4%. We are committed to creating a gender-friendly workplace to attract and retain talent.</p> <p>Based on objectives such as operational goals, employee performance, and corporate social responsibility, TCC conducts an annual review of employee salary levels and reward systems through salary survey reports. We align the company's overall operational profits with individual performance, ensuring that employees at all levels are motivated to advocate for environmental protection and improve social benefits. To support this, we have designed incentive compensation systems to reward outstanding performance. In 2024, we implemented performance-based salary adjustments to retain talent and ensure competitive salary levels.</p> <p>TCC embraces a people-oriented core value by offering diverse employee benefit programs. This includes paid leave that exceeds legal requirements (such as paid care leave), flexible working hours, work-from-home options, and cross-time zone shift arrangements, enabling all employees to balance their health, safety, family care, and work flexibility needs. TCC also organizes health check-ups for colleagues and offers a range of benefits, including medical insurance, educational scholarships for children, marriage and childbirth benefits, holiday bonuses, employee stock ownership trusts, and emergency assistance. TCC provides comprehensive welfare benefits, ensuring thoughtful care for both the physical and mental well-being of employees. TCC is committed to continuously supporting employees' physical and mental well-being. To protect employee rights, clear measures and regulations regarding excellent performance or misconduct are also outlined in the work rules.</p>	None
3. Does the company provide a safe and healthy work environment, and regularly implement safety and health education for employees?	✓		<p>3.</p> <p>(1) TCC places a strong emphasis on workplace safety. In 2024, we formally incorporated the goal of "zero occupational injuries and fatalities, zero safety incidents" into our internal control policy, which was approved by the Board of Directors. This applies to employees, contractors, and suppliers. We have established an occupational safety and health management system to oversee all safety-related matters within TCC. The Occupational Safety and Health Office convenes quarterly occupational safety and health committee meetings to track progress, review work execution, and discuss improvements. In 2022, we launched the 'Work Safety Monthly Report' mechanism, which has been officially restructured into a weekly reporting system. It covers seven major aspects: safety and health inspections, contractor operation management, safety and health education and training, work injury data, occupational accident explanations, near-miss incidents, hazard identification, and corrective and preventive measures. We provide timely and detailed safety and health training, including simulation drills for employees, while strengthening management education and training on work environments, equipment, and hazardous substances. This approach ensures the safety and well-being of our employees in the workplace.</p> <p>Since 2024, the labor safety office of TCC Group's headquarters, along with senior executives, has conducted regular/irregular on-site inspections and audits to comprehensively review the effectiveness of safety and health measures at each plant. Additionally, the Work Safety Improvement Promotion Teams have been established at the plants to carry out risk assessments, preventive measures, and corrective actions, with performance thoroughly reviewed through monthly Occupational Safety Meetings. Moreover, to strengthen risk management, starting in 2025, we are introducing AI recognition technology by installing smart cameras in high-risk operation areas at each plant. We are also implementing a reporting system for occupational disaster and major accident. This provides convenient channels for reporting abnormal events and a comprehensive mechanism for investigating and analyzing occupational accidents, enabling continuous improvement of our safety and health management system.</p> <p>In terms of health and safety education and training, to effectively raise the awareness of employees, suppliers, contractors, and all potential visitors to the plant about operational environment safety and health risks, we have established and promoted a 7 Major Rules for Life Safety Handbook. Beginning in 2025, to further enhance safety awareness among on-site personnel, each individual is required to complete at least ten hours of safety education and training annually.</p> <p>In accordance with current government regulations, TCC arranges annual training and refresher courses for employees to obtain relevant certifications, including first aid personnel, oxygen-deficient operations, hazardous equipment, and occupational safety and health supervisors. Additionally, we uncover potential safety risk factors in the workplace through hazard identification, followed by safety awareness campaigns, drills, and disaster prevention seminars. TCC also participated in certification training organized by the government, including air pollution prevention seminars, fire safety management training, pneumoconiosis diagnosis and case discussion workshops. In 2024, a total of 35,443 people took part in TCC's environmental safety and health training programs, and no cases of occupational disease were reported during the year. Additionally, TCC provides regular health check-ups and free annual influenza vaccinations to strengthen employee health protection. We also monitor employees' health conditions and adjust job duties as needed based on their health status to ensure their well-being and workplace safety.</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
3. Does the company provide a safe and healthy work environment, and regularly implement safety and health education for employees?			<p>Since 2020, TCC has implemented on-site health services by hiring medical staff to provide on-site health examinations. Both the Hoping Plant and Suao Plant each employ a full-time nurse dedicated to improving workers' health and reducing occupational hazard risks. At the same time, we promote health initiatives, including health lectures and related education and training. In 2024, these services reached a total of 551 participants. Meanwhile, we are implementing four major plans, including ergonomics, overload prevention, workplace violence prevention, and maternal health protection. Through health examinations, questionnaires, and other methods, we assess and classify colleagues' health status and provide relevant health recommendations to colleagues with medium to high health risks.</p> <p>In line with the concept of advancing health and sustainability together, TCC launched the Sustainable Healthy Living Festival in 2024. Through a digital platform app, we motivated employees to participate in carbon reduction and health challenges. During the event period, the total accumulated steps reached 169,869,496, which converts to a carbon sequestration amount of 28,266.28 kilograms, equivalent to the carbon absorption capacity of 743 square meters of acacia trees, fully demonstrating our commitment to sustainable forests and carbon reduction. The activity had a total of 842 participants, a 35% increase from the previous year, spanning five generations, with a male-to-female ratio of 6:4, indicating employees' emphasis on health and sustainable living.</p> <p>In terms of annual sporting events, 140 employees participated in the TCC Cup Dragon Boat Race held in May 2024. They achieved excellent results in the public competition during the Dragon Boat Festival, showcasing strong team unity and competitive spirit. In September of the same year, 39 employees took part in the Sun Moon Lake Mass Swimming Carnival, challenging their personal endurance and proving strong team cooperation.</p> <p>Additionally, 68 employees participated in volunteer activities, and 104 employees joined blood donation efforts, contributing a total of 431 units of blood, embodying their care and support for society.</p> <p>(2) All of TCC's cement plants, product plants, and corporate headquarters have obtained ISO 45001 Occupational Health and Safety Management System certification, with certificates valid until May 2027. To strengthen internal occupational safety awareness, we also provide internal auditor qualification training for key personnel in each unit in accordance with ISO requirements.</p> <p>(3) In 2024, there were a total of 3 occupational accidents among employees in Taiwan, resulting in injuries to three employees, accounting for 0.2% of the total workforce. All injuries were attributed to lapses in the proper implementation of safety regulations. After these incidents, safety protection operation training was arranged, and the responsible units were required to propose effective preventive measures to ensure the completion of closed-loop management.</p> <p>(4) In 2024, there were no fire incidents, and fire drills were conducted once every six months.</p>	
4. Has the company established an effective career capability development training plan for employees?		✓	<p>4.</p> <p>The TCC Group passionately believes that talent is a vital asset for sustainable corporate growth and prioritizes training and development to enhance employees' competencies at every career stage. To equip employees with a forward-looking vision and pioneering capabilities in addressing complex and evolving environmental challenges, the Group fosters cross-disciplinary expertise and diverse professional skills. It provides a wide range of learning opportunities centered on sustainable development, a global perspective, and technological innovation.</p> <p>(1) Corporate Sustainable Culture Values and Heritage</p> <p>TCC Group actively strengthens its sustainable culture by fostering carbon competitiveness among all employees and integrating the spirit of sustainability into corporate culture. To reinforce TCC Group's market leadership in the low-carbon economy, we have developed a comprehensive system to enhance our carbon competitiveness. TCC Carbon Academy is TCC Group's platform for building carbon knowledge, offering a structured learning path that covers everything from fundamental greenhouse gas inventory and carbon footprint certification to advanced courses on corporate carbon management and international carbon trends. Participants will learn to accurately assess and calculate carbon emissions while also exploring carbon reduction potential across R&D, manufacturing processes, and transportation. This equips them with the skills to develop proactive carbon reduction strategies, strengthening the carbon competitiveness of TCC's products and services. In response to rising carbon costs and increasingly stringent regulations, TCC Carbon Academy trains managers at all levels to become carbon management specialists, implementing carbon reduction as a core operational strategy across all business units of the TCC Group.</p> <p>2024 marked the 70th anniversary of TCC's privatization. We held a series of activities under the theme 'Reducing Carbon with Heart, Cherishing Resources with Love,' encouraging the TCC community to take on the mission and responsibility of climate change mitigation, carbon reduction, and serving the well-being of life as TCC's core values. In addition to the participation of past board members and supervisors, around one hundred retired colleagues returned to their "home" to join these activities. Together, we celebrated this momentous occasion, steeped in history and fueled by sustainable green momentum. Through this event, we reflected on TCC's proud history and redefined the core values of the TCC community, creating new momentum for future growth.</p> <p>(2) Global Vision Cultivation Program</p> <p>With the international development and layout of TCC Group, cultivating global vision and cross-cultural understanding has become key to achieving excellence. TCC believes that broadening one's horizons not only enriches personal life experiences but also fosters inclusive and innovative thinking in the workplace, paving the way for a brighter future for the enterprise.</p> <p>To achieve this, we organized the 'TCC Community's European Journey' diversity and inclusion seminar, with the Chairman serving as a commentator. The seminar explored Europe's rich history, culture, cuisine, lifestyle, and future development, drawing innovative insights and deepening the Group's global strategic thinking.</p> <p>(3) Cultivation of Forward-Looking Technological Capabilities</p> <p>In these rapidly changing times, AI has become a key driver of industrial innovation. Generative AI, in particular, is unlocking limitless possibilities, ranging from content creation to data analysis, and from enhancing innovation to improving efficiency. Its influence spans across various fields. To ensure that the TCC Group's teams remain at the forefront of this technological wave, we invited two leading professors from the Massachusetts Institute of Technology (MIT) to provide an in-depth analysis on 'Insight & Strategy: The Impact of Generative AI on Industries.' This seminar led us to explore the latest developments in generative AI, gain a deeper understanding of how it is reshaping industrial ecosystems, and discover how we can respond to these changes and seize opportunities for digital transformation.</p> <p>The cumulative total training hours of TCC Group for the whole year reached 60,348.5 hours, with an investment of 15,561 thousand dollars in education and training expenses.</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies
	Yes	No	Summary	
5. Does the company comply with relevant regulations and international standards regarding issues such as customer health and safety, customer privacy, marketing and labeling of products and services, and establish related consumer or customer protection policies and complaint procedures?	✓		<p>5.</p> <p>TCC adheres to the principles of safeguarding consumer rights and upholding standards of product quality and customer service. In areas such as customer health and safety, product labeling, marketing information disclosure, and complaint handling, TCC complies with relevant regulations and international standards. To further enhance customer service quality and complaint handling efficiency, TCC has established comprehensive customer service regulations and complaint handling procedures, ensuring a systematic and reliable service mechanism. The specific implementation details are as follows:</p> <p>(1) To protect customer rights and ensure the transparency and accuracy of product information, TCC strictly complies with relevant government regulations and implements various measures in product labeling and marketing advertisements to ensure customer health and safety.</p> <p>In accordance with the Commodity Labeling Act, packaged cement bags are labeled with the place of origin, composition, production date, and shelf life. For bulk cement, the shipping note includes information on the shipping plant, composition, and production date. Ready-mixed concrete details product specifications (including 28-day strength, design slump, maximum particle size, and design slump flow) and the weight of various components (including cement, admixtures, slag, and fly ash) on the delivery note, ensuring consistent and reliable quality.</p> <p>(2) TCC attaches great importance to customer health and safety. For domestic products, specialized transport vessels equipped with dust collection equipment are used to reduce dust dispersion effects on the environment and operating personnel. Additionally, complete shipping documents are provided to ensure traceable transportation information. For exports, sales and shipping are conducted in accordance with international regulations and commercial practices to ensure service quality and protect the rights of international customers.</p> <p>In addition, all production plants have obtained ISO quality management system certification and CNS Mark certification. Before products leave the factory, they undergo strict inspections according to the regulations of the Bureau of Standards, Metrology and Inspection, TCC's stricter internal quality control, and specific customer requirements. These measures ensure product quality, safety, and regulatory compliance, providing comprehensive protection for consumer and customer rights.</p> <p>(3) TCC's sales personnel serve as the front point of contact for handling customer complaints. In addition, public contact channels have been established on the official website, including a dedicated email address (# 20505), with designated personnel responsible for receiving complaints, filing cases, and tracking the resolution process to ensure timely responses and protection of customer rights.</p> <p>TCC has a dedicated research laboratory that supports various production and business units, providing "cocktail-style" customized products and complaint resolutions to flexibly respond to diverse customer needs.</p> <p>Since 2002, TCC has regularly conducted annual customer satisfaction surveys as a basis for service improvement and internal management. The 2024 survey, for the first time, included sustainability topics such as carbon footprint, water footprint, product traceability, and health and safety, demonstrating TCC's strong commitment to product transparency and customer relationship management, and continuously improving the overall customer experience.</p> <p>(4) For more information on customer privacy issues, please refer to the data protection initiatives described in the relevant section.</p> <p>(5) Other details and related updates regarding these initiatives implemented in 2025 will be disclosed in the annual sustainability report or on the official website.</p>	None
6. Has the company established supplier management policies requiring suppliers to comply with relevant regulations on environmental protection, occupational safety and health, or labor rights, and what is the implementation status?	✓		<p>6.</p> <p>TCC has established a Supplier Management Policy and Supplier Code of Conduct, and has set up a supplier section on its official website:</p> <p>(1) Since 2020, TCC has held annual supplier conferences to provide ESG-related education and training, while recognizing suppliers with outstanding sustainability performance. The most recent conference took place on October 18, 2024, and we established a Green Supply Chain Alliance. This alliance aims to complete a carbon footprint inventory by 2025 and achieve a 10% reduction in carbon emissions by 2030.</p>  <p>(2) TCC distributes annual sustainability questionnaires for suppliers to self-evaluate their ESG performance, which are then reviewed by TCC and external consultants. Suppliers scoring below the standard are classified as high-risk and are subject to regular monitoring for improvement.</p> <p>(3) In 2024, we completed sustainability audits of 262 suppliers and conducted human rights due diligence by category, assisting suppliers with improvements and remediation.</p>	None

Promoted items	Implementation			Differences from and reasons for deviation from the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies																				
	Yes	No	Summary																					
V. Does the company prepare sustainability reports or other reports disclosing non-financial information with reference to internationally accepted reporting standards or guidelines? Has the aforementioned report obtained assurance or verification opinion from a third-party verification organization?	✓		<p>TCC's sustainability report is presented in accordance with international standards including the 2021 GRI Sustainability Reporting Standards issued by the Global Reporting Initiative (GRI), the Building Materials Sector Standards by the Sustainability Accounting Standards Board (SASB), the Global Cement and Concrete Association (GCCA) Sustainability Guidelines, the IFRS S1 and S2 Sustainability Reporting Standards published by the International Sustainability Standards Board, and the Task Force on Climate-related Financial Disclosures (TCFD) recommendations issued by the Financial Stability Board (FSB).</p> <p>Third-party verification is conducted by Deloitte Taiwan, which provides independent limited assurance in accordance with Assurance Standards No. 3000 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information issued by the Accounting Research and Development Foundation of the Republic of China (based on the International Standard on Assurance Engagements ISAE 3000 Revised). The external verification is conducted by an independent third party, British Standards Institution Taiwan Branch (BSI), in accordance with GRI Standards and AA1000AS v3 Type 1 moderate level of assurance, confirming compliance with GRI Standards requirements.</p> <p>The assured items may vary each year depending on material topics. For instance, in our 2023 Sustainability Report, the assured indicators include confirmed corruption incidents and actions taken, energy consumption, water withdrawal, air pollution emissions, waste management, occupational health and safety conditions, local community engagement. Related information and reports are provided in the appendices of the Company's annual sustainability reports.</p>	None																				
VI. If the company has established its own sustainable development principles based on the Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies, please describe any differences between its operation and the established principles:																								
<p>1. TCC established the Taiwan Cement Corporation Corporate Social Responsibility (CSR) Practices Guidelines, which were approved by the Board of Directors on March 18, 2011. Since then, amendments to these guidelines have been approved by the Board of Directors in December 2011, March 2016, March 2017, March 2020, and August 2020 to strengthen the implementation of corporate social responsibility.</p> <p>2. TCC's Internal Control Policy/Guidelines includes Personal Data Protection Management policies and procedural regulations to ensure that 'the collection, use, processing, and management of personal data, whether related to TCC employees, customers or customer employees, or supply chain vendors or their employees, are properly governed. Additionally, it ensures that data files and system security are maintained in accordance with relevant personal data protection laws and regulations.' This includes, but not limited to:</p> <p>(1) Establishing management regulations and documentation for personal data procedural operations, implementing compliant use of personal data and protection measures, and requiring that security maintenance operations for personal data files and systems comply with applicable regulations and the provisions of this policy.</p> <p>(2) Assigning a dedicated unit and personnel with appropriate resources to manage personal data, ensuring the security of data files and systems while providing the necessary support for personal data protection efforts.</p> <p>(3) Emergency response measures and notification mechanisms for personal data incidents should be handled in accordance with regulations.</p> <p>3. TCC Group's Information Security Management Guidelines clearly require all employees to comply with government-related regulations on information security, personal data protection, and trade secrets.</p> <p>4. In addition to its existing Personal Data Protection Management policies and related procedures, TCC is taking steps to strengthen the security of personal data, ensure proper handling of personal data after business termination, and establish notification mechanisms for data breaches. To this end, TCC will review relevant legal requirements and formulate a separate Personal Data Protection and Management Policy, which is expected to be submitted to the Board of Directors for review in early May 2025, and will be announced and implemented upon approval.</p> <p>5. This initiative is a new requirement under the 2025 corporate governance evaluation by the competent authority. Its implementation and related updates are scheduled to be disclosed in the Sustainability Report and on TCC's official website following resolution by the Board of Directors.</p> <p>6. TCC regularly reviews implementation according to these guidelines and makes improvements accordingly. There have been no differences in implementation to date.</p> <p>TCC's Corporate Social Responsibility Practices Guidelines:</p> 																								
Other important information that helps understand the implementation of sustainable development:																								
<p>1. In addition to the relevant operational information disclosed in 6 Disclosure of Sustainability-related and Climate-related Financial Information on page 215 of this annual report and in our published Sustainability Report, our official website also features a dedicated ESG section that provides insights into past performance and future plans. The information is presented in formats such as images and charts to enhance readability, allowing external stakeholders to gain a timely understanding of TCC's tangible achievements in sustainability.</p> <p>2. To deepen communication with the general public, TCC utilizes diverse media platforms to interact with various groups and promptly publishes information about sustainability-related activities.</p> <p>The following are links to TCC's major social media accounts:</p> <table><tr><td>(1) Official Instagram:</td><td>(2) Official WeChat:</td><td>(3) TCC Group's YouTube Channel</td><td>(4) Facebook Fan Page</td><td>(5) Earth Helper Carbon Reduction Sustainability Initiative Facebook Fan Page</td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr><tr><td>(6) TCC DAKA Hoping Micro Travel</td><td>(7) Suao Plant Fan Page</td><td>(8) Aohua Hanben Sea Relay Station Facebook Fan Page</td><td>(9) NHQA.TCC LINE</td><td></td></tr><tr><td></td><td></td><td></td><td></td><td></td></tr></table>					(1) Official Instagram:	(2) Official WeChat:	(3) TCC Group's YouTube Channel	(4) Facebook Fan Page	(5) Earth Helper Carbon Reduction Sustainability Initiative Facebook Fan Page						(6) TCC DAKA Hoping Micro Travel	(7) Suao Plant Fan Page	(8) Aohua Hanben Sea Relay Station Facebook Fan Page	(9) NHQA.TCC LINE						
(1) Official Instagram:	(2) Official WeChat:	(3) TCC Group's YouTube Channel	(4) Facebook Fan Page	(5) Earth Helper Carbon Reduction Sustainability Initiative Facebook Fan Page																				
																								
(6) TCC DAKA Hoping Micro Travel	(7) Suao Plant Fan Page	(8) Aohua Hanben Sea Relay Station Facebook Fan Page	(9) NHQA.TCC LINE																					
																								

2.2.7 Implementation of Climate-related Information

1. Climate-related information implementation status:

(1) Description of the Board of Directors and Management's Supervision and Governance of Climate-related Risks and Opportunities:

In 2018, TCC's Board of Directors established the Corporate Sustainable Development Committee and formulated the TCC Corporate Sustainable Development Committee Charter. In 2021, it was elevated to a functional committee. It is responsible for approving and supervising TCC's sustainable development initiatives, including climate governance and low-carbon issues. The Committee meets at least twice a year and reports to the Board of Directors. Through these reports, the Board can confirm TCC's sustainable development and ESG management policies, supervise and track the implementation of TCC's sustainable development, and review the achievement of performance targets.

In May 2020, TCC's Board of Directors resolved to establish the Risk Management Execution Committee and formulated the Organization Regulations of TCC Risk Management Execution Committee and Risk Management Policy and Principles. The President serves as the highest management officer responsible for climate-related issues. In August 2024, the Board of Directors renamed the Risk Management Execution Committee to Risk Management Committee and established the Organization Regulations of TCC Risk Management Committee, repealing the previous Organization Regulations of TCC Risk Management Execution Committee. The TCC Risk Management Committee regularly identifies and manages business risks, including physical and transitional risks related to climate change, and leads the development of relevant response measures. The Committee and its working groups implement risk management decisions approved by the Board of Directors, supervise the establishment of TCC's risk management framework, review risk control reports submitted through internal hierarchical channels, handle risk management-related issues, and oversee the overall implementation and coordination of risk management. The Committee reports to the Board of Directors at least once a year on the implementation of management and risk control, providing insights into strategy, decision-making on major transactions, and risk management processes. It also supervises and tracks the management team's execution of risk management (including ESG and climate-related risks) and the achievement of performance targets.

In 2023, TCC established climate-related performance indicators and targets, which were approved by the Board of Directors. The Risk Management Committee regularly reports to the Board on the progress of these indicators. The President's performance is not only linked to compensation indicators but also includes assessment factors such as developing circular economy to achieve circular sustainability goals.

(2) Description of how the identified climate risks and opportunities impact the company's business, strategy, and finances (short-term, mid-term, long-term):

TCC evaluates climate risks and opportunities every two years the TCFD framework. The assessment covers TCC's cement business (including concrete) in Taiwan and Mainland China as their carbon emissions account for the majority of TCC Group's carbon emission, with their combined revenue representing 41% of the Group's total revenue in 2024. Through senior executives from various departments of TCC and external consultants, we identify transition risks, physical risks, and related opportunities based on external factors such as policy and regulation changes, market trends, and climate-related disasters, as well as internal operational strategies

In response to the potential operational impacts of global warming and extreme climate, TCC has integrated climate risks into its overall risk management policy. Following TCFD guidelines and industry recommendations, we identified 11 key climate risks and seven derived opportunities in 2024. Along with reviewing existing concrete response strategies and adaptation measures, we have formulated six major climate actions based on the scope and duration of risks and opportunities—low-carbon circular production, industry-leading low-carbon building materials, low-carbon and negative carbon technology innovation, smart new energy business, low-carbon supply chain, and climate disaster adaptation. These actions enhance TCC's resilience and adaptability in the transition to net-zero, enabling us to develop transformation plans and strengthen operational resilience.

Response measures and strategies are formulated according to the duration and the magnitude of impact. A summary of climate change risks and opportunities is as follows:

Risks	Opportunities	Financial Impact		Climate Actions	Period
		Risk Impact	Opportunity Impact		
Carbon emissions cap and trade, carbon fees, carbon taxes	Participation in carbon trading markets	Cost Increase	Revenue Increase	Low-Carbon Circular Production Smart New Energy Business	Short-term
Renewable Energy Regulations and Procurement	Participation in Power Trading Market	Capital Expenditure Cost Increase	Revenue Increase Cost Reduction		
Transformation of Coal-fired Hoping Power Plant	New Energy Project Construction	Revenue Decrease Cost Increase	Revenue Increase Cost Reduction	Smart New Energy Business	Medium-term
Carbon Capture and Storage (CCS) Advanced Technology Breakthrough	Oxygen-enriched and Pure Oxygen Combustion Technology Applied to Carbon Capture and Utilization	Capital Expenditure Cost Increase	Cost Reduction	Low-carbon and Negative Carbon Technology Innovation	Long-term
Low-carbon Technology, Equipment, and Management Cost Investment	Smart Low-carbon Production and Collaborative Waste Disposal	Capital Expenditure Cost Increase	Revenue Increase Cost Reduction	Low-Carbon Circular Production Leading Low-carbon Building Materials in the Industry Low-carbon Supply Chain	Short-term
Increase in Raw Material and Energy Prices	Low-carbon Product Market Expansion				Medium-term
Impact on Company Reputation	Attracting Long-term Investment Interest from Investors	Decrease in Available Funds	Increase in Available Funds	Low-Carbon Circular Production Leading Low-carbon Building Materials in the Industry Low-carbon and Negative Carbon Technology Innovation Smart New Energy Business	Short-term
Impact on the Level of Support from Financial Institutions for Investment, Financing, and Insurance					
Flooding (Production)	—	Revenue Decrease Cost Increase	—	Climate Disaster Adaptation	Short-term
Changes in Precipitation Patterns and Extreme Changes in Climate Patterns (Transportation)					
Drought (Production)					

- (3) In response to the operational impacts that may arise from global warming and extreme climate events, TCC has incorporated climate risks into its overall risk management policy. For detailed information, please refer to item (2).
- (4) Explanation on How Climate Risk Identification, Assessment, and Management Processes are Integrated into the Overall Risk Management System:

TCC has approved the Taiwan Cement Corporation Risk Management Policies and Principles and the Taiwan Cement Corporation Risk Management Committee Organization Regulations. Through regularly convened meetings, we monitor the progress of various climate actions to ensure that risks arising from business operations remain within acceptable limits. This approach helps establish sound risk management operational principles.

The climate risk and opportunity management process is as follows:

1. Risk and Opportunity Identification	2. Risk and Opportunity Assessment	3. Response and Adaptation	4. Monitoring and Tracking
<ul style="list-style-type: none">Update relevant climate issues based on previous risk and opportunity identification, international scientific and technical reports, local regulations, industry trends, and other requirements specific to our operational locations.	<ul style="list-style-type: none">Convene cross-departmental workshops to discuss the substantive impacts of various risks/opportunities on TCC, their timing, sources, and potential financial implications (note).Analyze and evaluate questionnaires, incorporating perspectives from external experts and senior executives to identify key risks and opportunities.Analyze questionnaire results and incorporate perspectives from external experts and senior executives to identify key risks and opportunities.	<ul style="list-style-type: none">Link climate policies, operational production, product services, and external communications to existing climate mitigation and adaptation-related strategies, developing six major climate actions for implementation.	<ul style="list-style-type: none">Hold regular meetings to review the progress of the six major climate actions addressing risks and opportunities and monitor carbon reduction at various plants through the carbon reduction management platform. The Risk Management Committee submits risk control reports to the Board of Directors.
Implementation Results: Screened 13 key risks and eight derived opportunities for TCC in 2023 according to TCFD classification.	Implementation Results: Distributed 16 internal assessment questionnaires, ultimately identifying 11 key risks and seven derived opportunities.	Implementation Results: Six major climate actions.	Implementation Results: Management indicators for the six major climate actions and performance of various non-financial indicators.

Note: For the financial impact materiality threshold, the impact level is divided into five grades reflecting TCC's risk tolerance: Very High, High, Medium, Low, Very Low. The corresponding financial materiality standards measure the impact on assets/revenue/costs using the average consolidated pre-tax net profit for the past three years as the grading standard: >15%, 10%~15%, 5%~10%, 0.1%~5%, ≤0.1%.

(5) When scenario analysis is used to assess resilience to climate change risks, the scenarios, parameters, assumptions, analysis factors, and key financial impacts used should be described:

TCC analyzes the level and duration of financial impact from climate risks based on evaluation of both transition and physical risks associated with climate change. To further address the impact of climate risks, TCC conducts forward-looking scenario analyses for specific transition and physical risks. This analysis evaluates the potential financial impacts under various global warming scenarios and policy environments, and the results are incorporated into future resilience strategies to achieve our net-zero goal.

Considering the impacts brought by different future climate scenarios, TCC selects multiple scenarios for both transition risks and physical risks, thereby formulating different climate response strategies based on the results. For transition risk scenarios, TCC considers "Carbon cap-and-trade/carbon fee/carbon tax" as the primary assessment item, given their significant impact on TCC's risk profile. In line with greenhouse gas regulation trends, we adopt the International Energy Agency (IEA)'s Stated Policies Scenario (STEPS), Announced Pledges Scenario (APS), and Net Zero Emissions Scenario (NZE) to evaluate the future carbon price trends and their financial impacts on our operations in Taiwan and Mainland China.

Regarding physical risks, we assess locations in Taiwan and Mainland China, considering the potential impacts of climate disasters such as drought, floods. Therefore, we have selected the low greenhouse gas emission scenario (SSP1-2.6) and high greenhouse gas emission scenario (SSP5-8.5) published by the Intergovernmental Panel on Climate Change (IPCC). Through multi-scenario evaluations of transition and physical risks, we can improve future strategies to reduce financial and operational risks and understand future climate trends.

Summarizing the assumptions of the above-mentioned risk types and different scenarios:

Risk Types	Scenarios	Scenario Description	Key Parameters	Impact Content	Estimated Temperature Rise	Scenario Source
Transition Risk	STEPS	Existing measures and specific policies formulated by governments around the world in response to climate change.	Changes in carbon prices across different regions. (Note 1)	Additional expenditure over five to ten years caused by carbon fees or carbon trading.	2.5°C	IEA(Note 2)
	APS	Incorporating the latest climate commitments from various countries, including Nationally Determined Contributions and long-term net-zero targets.			1.7°C	
	NZE 2050	The global energy sector achieving net-zero carbon dioxide emissions by 2050.			1.5°C	
Physical risks Alternative Fuel Thermal Substitution Rate	SSP1-2.6	A low emissions scenario refers to a situation where the world strives to achieve sustainability goals but does so at a slow pace.	Drought and changes in precipitation caused by extreme weather. (Note 3)	Operational disruptions and asset impairment due to drought and flooding.	1.8°C	IPCC (Note 4)
	SSP5-8.5	A very high emissions scenario refers to a world characterized by extremely high emissions resulting from the widespread use of fossil fuels and the absence of climate policies.			4.4°C	

Note 1: Referenced from IEA WEO 2023, Taiwan Carbon Pricing Options (2020).
Note 2: Referenced from the International Energy Agency (IEA)'s World Energy Outlook 2023 (WEO).
Note 3: Referenced from the Central Weather Administration, Ministry of Transportation and Communications.
Note 4: Referenced from the Intergovernmental Panel on Climate Change (IPCC)'s 2021 Sixth Assessment Report.

(6) When scenario analysis is used to assess resilience to climate change risks, the scenarios, parameters, assumptions, analysis factors, and key financial impacts used should be described:

TCC makes climate commitments based on the highest scientific standards, developing a comprehensive carbon reduction strategy with a net-zero target by 2050, concrete carbon neutrality goal, and Science-Based Targets (SBT) by 2025. We implement carbon reduction in cement operations and products. Additionally, we are expanding our green energy business to offer renewable energy solutions for national energy systems, cities, businesses, and electric vehicle consumers, driving the societal energy transition. Therefore, TCC has established relevant indicators for various strategic aspects and set ambitious targets, consistently tracking the progress of these targets each year. TCC rigorously reviews effectiveness to manage climate-related risks and opportunities.

Climate-related indicators and targets are as follows:

Item Indicators		2025 Targets	2030 Targets	2050 Targets
Greenhouse Gas Management Base year: 2016 Formula: t CO ₂ e / tonnes of binding materials	Taiwan	0.758 (SBT -11%)	0.585	Concrete Carbon Neutrality
	Mainland China	0.651 (-11%)		
	Taiwan and Mainland China (weighted average)	0.675		
Water Resource Management - Water Consumption Intensity Reduction Base year: 2016 Formula: million liters / tonnes of binding materials	Taiwan and Mainland China (weighted average)	0.000233	0.000225	0.000220
Alternative Fuel Thermal Substitution Rate	Taiwan and Mainland China (weighted average)	25%	35%	50%
Alternative Raw Material Ratio	Taiwan and Mainland China (weighted average)	21%	22%	25%
Clinker-to-Cement Ratio	Taiwan and Mainland China (weighted average)	0.796	0.78	0.57
Renewable Energy	Taiwan and Mainland China	235 MW	400 MW	750 MW
Carbon Capture		-	100,000 tonnes/year	1.6 million tonnes/year
Effective Carbon Emissions Data Collection from Tier 1 Key Suppliers		-	90%	-
Launch a third-party carbon audit program for raw material suppliers in Taiwan and Mainland China in 2024				

(7) If using internal carbon pricing as a planning tool, please explain the basis for price setting.

TCC has established an internal carbon pricing system to promote low-carbon investments, improve energy efficiency, and incentivize internal carbon reduction actions. Based on the carbon pricing policies, regulations, and guidelines in the regions where our cement business operates, we have established the following internal carbon pricing framework. For Taiwan, we refer to the Options for Carbon Pricing in Taiwan published by the London School of Economics and set NT\$300/tonne CO₂e as the basis for internal carbon pricing for 2023 and 2024. For Mainland China, assuming the cement industry is included in the trading scheme, we reference the actual carbon prices in China for 2023 and the International Energy Agency's World Energy Outlook report. According to the Stated Policies Scenario (STEPS), China's carbon price is expected to rise to USD 28/tonne CO₂e by 2030. Based on this, we estimate that the internal carbon pricing for 2024 should be set at RMB 101/tonne CO₂e to reflect the impact on capital investment and operations. Therefore, when budgeting for capital expenditures, maintenance items, equipment improvements, and energy-saving projects, in addition to considering existing costs, we must also incorporate carbon impacts into internal rate of return calculations to strengthen the carbon reduction motivation in business decisions across all departments

(8) If climate-related targets have been set, please explain the activities covered, greenhouse gas emission scopes, planned timeline, annual progress toward achievement, etc. If carbon offsets or Renewable Energy Certificates (RECs) are used to achieve related targets, please explain the source and quantity of the carbon reduction credits or the quantity of Renewable Energy Certificates (RECs)

The climate-related targets of TCC, including the activities covered, planned timeline, and annual progress information, are detailed in item (6). TCC does not use carbon offsets or Renewable Energy Certificates (RECs) to achieve related targets.

2. Greenhouse Gas Inventory and Assurance Status for the Company in the Most Recent Two Years :

(1) Greenhouse gas inventory information

The Most Recent Two-Year Greenhouse Gas Emissions (tons CO₂e), Intensity (metric tons CO₂e per million NT dollars), and Data Coverage Scope.

- Basic Information of Taiwan Cement Corporation
Companies with a capital of over NT\$10 billion, Steel Industry, or Cement Industry
- The scope of information that the company is required to disclose, as stipulated by the Sustainable Development Roadmap for Listed Companies, includes at least the following areas:
The parent company entity shall commence the inventory starting from the year 2023.
Consolidated entities shall commence the inventory starting from the year 2025.

The consolidated company has established a greenhouse gas inventory mechanism in accordance with the ISO 14064-1 greenhouse gas inventory standard published by the International Organization for Standardization (ISO). Conduct annual greenhouse gas inventories for individual entity since 2016. Progressively initiated greenhouse gas emission inventories for consolidated entities starting from 2005. This ensures comprehensive tracking of greenhouse gas usage and emissions, as well as verification of the effectiveness of reduction initiatives.

In addition, the greenhouse gas inventory data for the most recent two years has been compiled using the operational control approach, covering both the company and all consolidated entities.

The details are as follows: Item		FY 2023		FY 2024	
		Total emissions (tons CO ₂ e)	Intensity (tons CO ₂ e/NT\$ millions)	Total emissions (tons CO ₂ e)	Intensity (tons CO ₂ e/NT\$ millions)
Parent company	Scope 1 Direct emissions	3,459,537	132.9	3,303,179	126.7
	Scope 2 Indirect emissions	195,664	7.5	206,001	7.9
Consolidated entities	Scope 1 Direct emissions	-	-	36,327,780	477.9
	Scope 2 Indirect emissions	-	-	1,299,110	17.1
Cimpor	Scope 1 Direct emissions	-	-	2,217,632	122.7
	Scope 2 Indirect emissions	-	-	79,521	4.4
Total		3,655,201	-	43,433,223	-

Note 1: The coverage for Scope 1 (direct emissions) and Scope 2 (energy indirect emissions) data includes the Company's cement and concrete operations in Taiwan. This encompasses the Cement Manufacturing Division's Hoping and Suao plants; ready-mix concrete manufacturing plants in Taipei, Taichung, and Kaohsiung, along with their 22 locations; and the Kaohsiung and Taichung port shipping stations. The scope also covers the group's operational headquarters and the Low Carbon Research and Development Center.

Note 2: The intensity for the years 2024 and 2023 of parent company was calculated using the standalone net revenues of TCC, which were NT\$26,077,189 thousand and NT\$26,021,513 thousand, respectively. The intensity for the year 2024 of consolidated entities was calculated using NT\$76,011,117 thousand. The intensity for the year 2024 of Cimpor was calculated using the standalone net revenues, which was NT\$18,078,610 thousand.

Note 3: For the years 2024 and 2023, the data for Scope 1 (direct emissions) and Scope 2 (energy indirect emissions) of the Company were verified by third-party organizations, including the British Standards Institution Pacific Limited Taiwan Branch (BSI) and the Taiwan Inspection Technology Corporation (SGS). Certificates related to these verifications are accessible on the Company's official website under the sustainability certification page.

Note 4: Revenue from Turkey and Portugal is officially included in the company's consolidated financial reports starting from March 2024. The company discloses the full-year greenhouse gas emissions of its subsidiary Cimpor (all-year option) in the table above in accordance with the GHG Protocol. Cimpor's emissions from March 2024 to December 2024 amount to 2,386,906 (metric tons of CO₂e).

Note 5: The scope of consolidated entities does not yet include the Turkish subsidiary, OYAK. Its greenhouse gas (GHG) emissions will be disclosed in the 2024 Sustainability Report.

(2) Assurance Information

As of the date of this annual report's publication, the assurance details for the greenhouse gas emissions over the two most recent years include the scope of assurance, the assuring body, the assurance standards, and the assurance opinions provided.

The scope of assurance that the company is required to perform, as stipulated by the Sustainable Development Roadmap for listed companies, includes at least the following areas:

- The parent company shall commence assurance starting from the year 2024.
- Consolidated entities shall commence assurance starting from the year 2027.

The assurance status for the greenhouse gas inventories of the company and consolidated entities for the most recent two years is described as follows:

Item		FY 2023 Total emissions (tons CO ₂ e)	FY 2024 Total emissions (tons CO ₂ e)
Parent company	Scope 1 Direct emissions	3,459,664	3,303,179
	Scope 2 Indirect emissions	195,661	206,001
	Total	3,655,324	3,509,180
	Percentage of 1-1-1	100%	100%
Assurance Body		BSI GROUP SINGAPORE PTE.LTD. TAIWAN BRANCH (BSI) and the Taiwan Inspection Technology Corporation (SGS)	BSI GROUP SINGAPORE PTE.LTD. TAIWAN BRANCH (BSI)
Assurance Standards		ISO 14064-3:2019	ISO 14064-3:2019
Assurance Opinions		Unqualified Opinion	Unqualified Opinion

(3) Greenhouse Gas Emission Reduction Targets, Strategies and Specific Action Plans

Describe the greenhouse gas reduction base year and its data, reduction targets, strategies, and specific action plans, as well as the status of achieving reduction targets.

- In line with the SBT, TCC has set its greenhouse gas baseline year as 2016. The emission intensity for that year was 0.849 (tons CO₂e / ton of cementing material), with total emissions amounting to 4,621,312 tons CO₂e. These greenhouse gas emission figures are audited annually by a third party as mandated by the Environmental Protection Administration and are disclosed in the TCC's Sustainability report.
- The company's greenhouse gas reduction targets are aligned with SBT 1.5°C pathway. The target year is 2030, with the following goals: a 23.9% reduction in Scope 1 carbon emission intensity, a 64.4% reduction in Scope 2 carbon emission intensity, and a 26.8% reduction in combined Scope 1 and Scope 2 carbon emission intensity.
- The company's greenhouse gas reduction strategy aligns with that of the international cement industry, incorporating specific action plans such as increasing the use of alternative materials, boosting alternative fuel usage, enhancing waste heat generation technology, improving process equipment, establishing renewable energy installations, and developing carbon capture technologies. According to SBT Well Below 2°C pathway approved in 2020, the parent company's reduction target for 2024 has achieved approximately 97% compared to the baseline year (2016).

2.2.8 Implementation Status of Ethical Corporate Management and Differences from the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies and the Reasons

Evaluation items	Operations			Differences from the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies and the Reasons
	Yes	No	Summary	
I. Establishing ethical corporate management policies and programs				
1. Has the company formulated an ethical corporate management policy approved by the Board of Directors, and clearly stated its ethical management policies, practices, and the commitment of the Board of Directors and senior management to actively implement these management policies in regulations and external documents?	✓		1. To foster a culture of integrity and sound development, TCC approved and established the Code of Integrity in Management at the Board of Directors meeting on March 18, 2011. To fulfill corporate social responsibility, TCC has always prioritized promoting culture and respecting talent, creating a corporate entity that embodies 'quality, character, and taste.'" By upholding integrity and service enthusiasm, we strive to exceed customer expectations through refined services to achieve customer satisfaction. Building strong relationships with suppliers and customers while pursuing sustainable business operations and growth are our primary objectives. TCC's management philosophy is clearly stated on its official website, and both the Board of Directors and management are committed to implementing the business philosophy of integrity.	None
2. Has the company established a risk assessment mechanism for dishonest behavior, regularly analyzing and evaluating business activities with higher risks of dishonesty within its business scope, and accordingly formulated programs to prevent dishonest behavior, which cover at least the preventive measures for each type of conduct mentioned in Paragraph 2, Article 7 of the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies?	✓		2. External donations by TCC that exceed a certain amount must be approved by the Board of Directors before they can be implemented. The audit unit also monitors for any bribery, acceptance of bribes, or other improper benefits. TCC has established relevant regulations in the Code of Integrity in Management as part of its internal procedures. For details, please refer to the "Investor Relations" - "Corporate Governance" - "Ethical Corporate Management" section on its official website.	None
3. Has the company specified operating procedures, behavioral guidelines, disciplinary measures for violations, and grievance systems in its programs to prevent dishonest behavior, implemented them effectively, and regularly reviewed and revised the aforementioned programs?	✓		3. To prevent dishonest behavior, TCC has established and implemented various relevant operational regulations including the Code of Integrity in Management, Code of Ethical Conduct, Reporting Mechanism for Violation of Code of Conduct, Anti-Corruption and Anti-Bribery Policy, Procedure of Anti-Corruption and Anti-Bribery Training Program, and Procedures for Handling Material Inside Information. TCC regularly reviews and revises these operational regulations and submits them to the Board of Directors for discussion and revision.	None
II. Implementation of Ethical Corporate Management				
1. Has the company assessed the integrity records of its counterparties, and specified ethical conduct clauses in the contracts it signs with its business partners?	✓		1. For business partners, TCC conducts corruption and bribery risk assessments and corresponding due diligence procedures upon initial cooperation or periodically, which serve as a basis for evaluating future collaborative relationships with these business partners. TCC has established an Integrity Commitment Statement, which is attached to signed contracts, requiring the signatories to comply with all integrity regulations formulated by TCC Group. The signatories must confirm they have thoroughly read the Code of Integrity in Management, Anti-Corruption and Anti-Bribery Policy, Supplier Code of Conduct for Corporate Social Responsibility, and guarantee that they will require their responsible persons, managers, employees, agents, related personnel, or users to strictly adhere to the obligations in this commitment statement.	None
2. Has the company established a dedicated unit under the Board of Directors to promote ethical corporate management, and does it regularly (at least once a year) report to the Board of Directors regarding its ethical management policies, programs to prevent dishonest behavior, and supervision of implementation?	✓		2. (1) To actively promote and implement corporate sustainability, ethical management, and social responsibility, the Board of Directors passed a resolution on May 10, 2018, to establish the Corporate Sustainable Development Committee, with the Chairman serving as the Chief Commissioner (the highest authority). A hierarchical structure of subordinate units has been established, which must report to the Board of Directors regularly. TCC began implementing the ISO 37001 Anti-Corruption and Anti-Bribery Management System on April 1, 2021, and established an Anti-Corruption and Anti-Bribery Task Force to oversee system planning, consultation, and implementation. The Audit Committee is responsible for supervising the achievement of this management system's objectives and reports to the Board of Directors at least once a year. A report was presented to the Board of Directors on November 11, 2024. (2) The Company implements ethical management policies. The implementation status for 2024 is as follows: i. On February 29, 2024, the Anti-Corruption and Anti-Bribery Task Force discussed and resolved to establish objectives and plans for 2024 and completed various risk assessments. Additionally, arrangements were made to complete internal audit operations from the end of May to early June of the same year, which was approved by the President in May of the same year. ii. On May 13, 2024, employees of the General Administration Division participated in online policy promotion and educational training courses for the ISO 37001 Anti-Corruption and Anti-Bribery Management System (including corruption detection indicators, public sector relationship management, guidelines for receiving hospitality/gifts). The rate of viewing training materials and completing post-course tests reached 100%. iii. On June 3 and 4, 2024, internal audit operations were carried out. In response to issues mentioned in the audit findings, such as missing due diligence documents for business partners and incomplete query records, the Anti-Corruption and Anti-Bribery Task Force discussed the implementation of an online form system to prevent execution deficiencies. iv. On June 11, 2024, the Anti-Corruption and Anti-Bribery Task Force compiled corrective measures proposed by each department in response to internal audit findings, submitted them to the President for approval, and continued to track improvements throughout the year.	None

Evaluation items	Operations			Differences from the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies and the Reasons
	Yes	No	Summary	
			v. Considering that the validity period of the ISO 37001 certification would expire in August 2024, the Company arranged for a recertification review by an external certification body on June 13 and 14, 2024 and was granted a valid certification for the subsequent three years. Furthermore, the achievement rate for new employees signing the Code of Conduct and Ethics Declaration was 100%. All directors, General Administration Division and plant employees also signed the Code of Conduct and Ethics Declaration (directors) (employees), maintaining over 1,300 signatories. Medium and high-risk managers whose duties involve interactions with suppliers and customers, in addition to the Code of Conduct and Ethics Declaration, they were also required to sign the Job Class Code of Integrity (medium and high-risk managers), with a 100% signing rate. vi. On August 28, 2024, the Anti-Corruption and Anti-Bribery Task Force Meeting was convened again to track the implementation status of corrective measures.	
3. Has the Company established policies to prevent conflicts of interest, provided appropriate channels for disclosure, and effectively implemented them?	✓		3. In the Code of Corporate Social Responsibility Practices, it is clearly stipulated that when fulfilling corporate social responsibility, TCC shall respect social ethics and pay attention to the rights and interests of other stakeholders. While pursuing sustainable operations and profitability, TCC shall emphasize environmental, social, and corporate governance factors, and incorporate them into company management and operations.	None
4. Has the Company established effective accounting systems and internal control systems to implement ethical management, and has the internal audit unit developed relevant audit plans based on the results of risk assessment for unethical behavior, and accordingly verified compliance with the prevention programs for unethical behavior, or engaged CPAs to perform audits?	✓		4. To implement ethical management, the Company has established effective accounting systems and internal control systems, and the internal audit unit has developed relevant audit plans based on the results of risk assessment for unethical behavior and accordingly verified compliance with the prevention programs for unethical behavior.	None
5. Does the Company regularly hold internal and external educational training on ethical management?	✓		5. To strengthen the high standards of integrity, TCC regularly promotes the Code of Integrity in Management to directors, managers, employees and business partners every year. The implementation in 2024 was as follows: (1) Through physical and online learning methods, training on ethical management topics (including ISO 37001 Anti-corruption and Bribery Management System Operation Mechanism Training, ISO 37001 Promotion Team Member Education Training, and Corporate Governance and Corporate Legal Compliance - Insider Trading and Concerted Actions" courses) was provided to TCC's directors, managers, and employees, with a total of 2,882 participants across online and physical sessions, and a total course duration of 4.63 hours. (2) The completion rate for new employees signing the Code of Conduct and Ethics Declaration was 100%. In addition, all directors, General Administration Division and plant employees have also completed signing the Code of Conduct and Ethics Declaration, maintaining over 1,300 signatories. For managers with medium to high risk, whose duties involve dealings with suppliers and customers, they are required to sign both the Code of Conduct and Ethics Declaration and Job Class Code of Integrity (for medium and high risk managers). The signing rate for these managers also reaching 100%. For the above course information, please refer to TCC's official website - "Investor Area" - "Corporate Governance" - "Corporate Governance Practices" - "Directors, Managers and Employees 2024 Course Information" section.	None
III. TCC's Whistleblowing System Operations				
1. Has the Company established specific whistleblowing and reward systems, set up convenient whistleblowing channels, and assigned appropriate dedicated personnel to handle reported cases?	✓		1. TCC has established a Reporting Mechanism for Violation of Code of Conduct. While specific reward systems have not yet been established, TCC encourages the reporting of any illegal or unethical conduct, strengthens the promotion of ethical concepts, and urges employees to report any suspected or discovered violation of laws, regulations, or the code of ethical conduct to the Internal Audit and Compliance Office. If internal or external whistleblowers report matters involving our senior managers, the whistleblower may, in addition to the aforementioned reporting channels, choose to report to the Company's Audit Committee, so that appropriate personnel can be assigned to handle different reported subjects.	None
2. Has the Company established standard operating procedures for investigating reported matters, follow-up measures to be taken after investigations are completed, and related confidentiality mechanisms?	✓		2. TCC has established a Reporting Mechanism for Violation of Code of Conduct, which clearly defines handling and investigation procedures for reported matters and related confidentiality mechanisms. These are handled by the Internal Audit and Compliance Office in accordance with its relevant operating regulations.	None
3. Has the Company implemented measures to protect whistleblowers from improper treatment as a result of their reporting?	✓		3. TCC's Reporting Mechanism for Violation of Code of Conduct includes a whistleblower confidentiality system, ensuring reported cases are handled confidentially. TCC is committed to protecting whistleblowers from improper treatment, reassuring employees that TCC will make every effort to safeguard those who report in good faith.	None
IV. Enhance Information Disclosure				
Has the Company disclosed the content and implementation results of its Code of Integrity in Management on its website and the Market Observation Post System?	✓		TCC has established an "Investor Relations" - "Corporate Governance" - "Integrity Management" area on its official website (http://www.tccgroupholdings.com/tw/). Clearly discloses its integrity management philosophy. The website is also available in English and Simplified Chinese.	None
V. If the Company has established its own Code of Integrity in Management based on the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies, please describe any differences between its operation and the established principles: The Code of Integrity in Management was established at the 14th meeting of the 20th Board of Directors and underwent its 3rd revision at the 11th meeting of the 22nd Board of Directors. The audit department is responsible for supervising the implementation of integrity management policies. Both the operation and TCC's established Code of Integrity in Management have been implemented in accordance with the provisions of the Ethical Corporate Management Best Practice Principles for TWSE/TPEX Listed Companies. Subsequently, the 26th meeting of the 23rd Board of Directors resolved to align the reporting mechanism provisions in the Code of Integrity in Management with TCC's Reporting Mechanism for Violation of Code of Conduct to strengthen access control to reported information. Furthermore, at the 6th meeting of the 24th Board of Directors, the Reporting Mechanism for Violation of Code of Conduct was amended to ensure that reports would be handled by corresponding units based on the management levels of the reported individuals. In addition to TCC's Internal Audit and Compliance Office, the Audit Committee was included as a reporting channel for cases involving senior managers, thereby bolstering the communication channels for reporting.				
VI. Other important information that helps understand TCC's integrity management operations: (such as the review and revision of the Company's established Code of Integrity in Management) The primary banks for transactions with affiliated enterprises are financial institutions with certain credit ratings and asset scales. Additionally, TCC has established sales customer credit management regulations and conducts regular supplier evaluations, assessing relevant risk items and utilizing the SAP system for control. The Company has disclosed its integrity management policy in the regulations section of its official website, and provides detailed explanations of specific practices, programs to prevent dishonest behavior, implementation status, and measures.				

2.2.9 Other important information to enhance understanding of TCC's corporate governance operations

1. Timely disclosure of material information and regular investor conferences.
2. The 14th meeting of the 20th Board of Directors approved the Code of Ethical Conduct, Code of Integrity in Management, and Code of Corporate Social Responsibility Practices.
3. TCC upholds the principles of openness, transparency, and integrity by regularly publishing an annual sustainability report. This report faithfully reflects TCC's communication with stakeholders and its commitment to sustainability issues.

- (1) Internal Review: The data or information disclosed in this report is provided by each relevant department and verified by the ESG report compilation team. The report is then returned to each department head for verification, and finally Submitted to the heads of various departments for review, and finally reviewed by the Chairman and submitted to the Board of Directors for approval.
- (2) External Review: Deloitte Taiwan conducted an independent limited assurance on GRI and SASB indicators according to Assurance Standards Bulletin No. 1 Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (based on International Standard on Assurance Engagements ISAE 3000 Revised) issued by the Accounting Research and Development Foundation of the Republic of China. Additionally, the British Standards Institution Taiwan Branch (BSI) performed verification in accordance with GRI Standards and AA1000AS v3 Type 1 moderate level of assurance.

The aforementioned sustainability report has been disclosed on the Company's website and the Market Observation Post System for investors' reference.

4. TCC's managers participate in the following corporate governance-related education and training:

Title	Name	Training Institution	Course Title	Training Date	Training Hours
CFO and Accounting Chief Officer	Randy Yu (Note 1)	Not applicable (Note 2)			
Assistant Vice President and Corporate Governance Manager	Jia-Ro Lai	Taiwan Institute for Sustainable Energy (TAISE)	Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	2024/10/30	3.0
			Sustainable Finance Disclosure	2024/10/30	3.0
		Taiwan Corporate Governance Association	Corporate Governance and Corporate Legal Compliance - Discussing Insider Trading and Concerted Actions	2024/11/27	3.0
			Introduction to Corporate Governance Personnel System and the Role of Legal Personnel in Corporate Governance	2024/12/13	3.0
			Discussion on Enterprise Risk Management Trends and Organizational Resilience	2024/12/24	3.0
Senior Assistant Vice President and Internal Audit Manager	Guo Hong Yeh (Note 3)	Taiwan Institute for Sustainable Energy (TAISE)	Taiwan's Path to Net-Zero Just Transition in Hard-to-Abate Sectors	2024/10/30	3.0
			Sustainable Finance Disclosure	2024/10/30	3.0
		Taiwan Corporate Governance Association	Discussion on Enterprise Risk Management Trends and Organizational Resilience	2024/12/24	3.0
		Internal Audit Association of the Republic of China	Pre-service Training Workshop for Newly Appointed Corporate Internal Auditors	2025/1/14–2025/1/16	18.0

Note 1: Due to group organizational adjustment, TCCs Board of Directors resolved on November 11, 2024, that CFO Randy Yu would concurrently serve as the Accounting Chief Officer.

Note 2: As the appointment has been less than one year, the regulations regarding professional development for the Accounting Chief Officer are not applicable.

Note 3: Due to group organizational adjustment, TCC's Board of Directors resolved on November 11, 2024, that Senior Assistant Vice President Guo Hong Yeh would concurrently serve as the Internal Audit Manager.

2.2.10 Internal Control System Implementation

2.2.10.1 Internal Control Statement

Please refer to the Market Observation Post System:
<https://mopsov.twse.com.tw/nas/cont06/c1101113011140313.pdf>

2.2.10.2 If a CPA has been engaged to review the internal control system, the CPA's audit report should be disclosed: None.

2.2.11 Major Resolutions of Shareholders' Meetings and Board of Directors' Meetings in the Most Recent Year and up to the Date of the Annual Report's Publication.

Review of the implementation status of resolutions from the regular shareholders' meetings in 2024 and 2025 up to the date of the annual report's publication:

Major Resolutions of Shareholders' Meetings			
Meeting Date	Proposal	Resolution Result	Implementation
2024/5/21 Annual Shareholders' Meeting	TCC's 2023 Business Report and Financial Statements are hereby submitted for approval.	The original proposal of the Board of Directors was approved through a vote.	Approved TCC's 2023 Business Report and Financial Statements.
	TCC's 2023 earnings distribution proposal is hereby submitted for approval.	The original proposal of the Board of Directors was approved through a vote.	The 2023 earnings distribution will allocate NT\$7,531,181,742 in cash dividends to shareholders (NT\$1.00000000 per share). The ex-dividend record date is July 7, 2024, and the cash dividend payment date is July 26, 2024. (TCC's 2023 earnings distribution cash dividend was originally scheduled to be paid on July 26, 2024. However, due to the impact of a typhoon, operations were suspended in some areas, causing the banking institutions' remittance schedule to be delayed. Therefore, the payment date has been changed to July 30, 2024.)
	Elected fifteen directors for the 25th term (including five independent directors).	Election Results The list of elected directors is as follows: (1) Chia Hsin R.M.C. Corporation Representative: Nelson An-ping Chang Number of Votes Received: 5,773,676,590 votes (2) Tai Ho Farming Co., Ltd. Representative: Roman Cheng Number of Votes Received: 4,865,053,085 votes (3) International CSRC Investment Holdings Co., Ltd. Representative: Kenneth C.M. Lo Number of Votes Received: 4,230,253,843 votes (4) Hsing Cheng Investment Co., Ltd. Representative: Yu-Cheng Chiao Number of Votes Received: 4,223,446,318 votes (5) C. F. Koo Foundation Representative: Eric Chen Sun Te Number of Votes Received: 4,215,306,327 votes (6) Chia Hsin Cement Corporation Representative: Kang-Lung (Jason) Chang Number of Votes Received: 4,210,537,011 votes (7) Heng Qiang Investment Co., Ltd. Representative: Por-Yuan Wang Number of Votes Received: 4,205,873,778 votes (8) CS Development & Investment Co. Representative: Kung-Yi Koo Number of Votes Received: 4,203,594,201 votes (9) Fu Pin Investment Co., Ltd. Representative: Chien Wen Number of Votes Received: 4,200,450,104 votes (10) Chia Hsin Cement Corporation Representative: Liz Wang Number of Votes Received: 4,197,698,245 votes List of Elected Independent Directors: (1) Victor Wang Number of Votes Received: 4,601,876,981 votes (2) Lynette Ling-Tai Chou Number of Votes Received: 4,600,808,390 votes (3) Sherry S. L. Lin Number of Votes Received: 4,598,239,033 votes (4) Nigel N. T. Li Number of Votes Received: 4,596,321,253 votes (5) Ruu Tian Chang Number of Votes Received: 4,595,762,203 votes	Registration approved by the Ministry of Economic Affairs on June 3, 2024, with approval document No. 11330091150, and disclosed on the Market Observation Post System and TCC's official website.
	TCC plans to arrange a long-term capital fundraising project, hereby submitted for resolution.	The original proposal by the Board of Directors was approved by vote.	1. Disclosed on the Market Observation Post System and the TCC official website on May 21, 2024. 2. TCC's Board of Directors resolved on September 13, 2024, to issue the first domestic unsecured convertible corporate bonds (which are sustainability-linked bonds) and completed pricing on December 2 of the same year. The relevant details are as follows:

Major Resolutions of Shareholders' Meetings			
Meeting Date	Proposal	Resolution Result	Implementation
2024/5/21 Annual Shareholders' Meeting	TCC plans to arrange a long-term capital fundraising project, hereby submitted for resolution.	The original proposal by the Board of Directors was approved by vote.	(1)Date and Reference Number of FSC Approval: October 21, 2024, Financial Supervisory Commission Securities Issuance No. 11303592041 (2)Total fundraising amount of NT\$8,000,000,000. (3)Issue Date: December 10, 2024 (4)Conversion Price: NT\$36.5 (5)Term: 5 years, Maturity Date: December 10, 2029 3. TCC's Board of Directors resolved on September 13, 2024, to issue the first overseas unsecured convertible corporate bonds of 2024. The relevant details are as follows: (1) Date and Reference Number of FSC Approval: October 21, 2024, Financial Supervisory Commission Securities Issuance No. 1130359204 (2)On January 2, 2025, an application was submitted to extend the fundraising period, and on January 8, 2025, approval for the first overseas unsecured convertible corporate bonds was obtained from the Financial Supervisory Commission Securities Issuance No. 1140330117, with period extended to April 20, 2025. As of the publication date of the annual report, the bonds have not yet been issued. 4. For more detailed information, please refer to the Market Observation Post System/ Investment Section
	Proposed amendments to certain provisions of TCC's Articles of Incorporation are hereby submitted for approval.	The original proposal by the Board of Directors was approved by vote.	The proposal been announced on the Market Observation Post System and the Company's website on May 21, 2024, and the registration of changes has been filed with the Administration of Commerce, MOEA. Procedures will be conducted in accordance with the amended process.
	Proposal to release newly appointed directors from non-competition restrictions is hereby submitted for approval.	The original proposal by the Board of Directors was approved by vote.	It has been resolved by the shareholders' meeting to release newly appointed directors from non-competition restrictions regarding their positions in the listed companies.

Important resolutions of the Board of Directors in 2024 and 2025 up to the publication date of the annual report:

Important resolutions of the Board of Directors		
Meeting Date	Meeting Highlights	Meeting Results
2024/2/27	TCC's 2023 individual and consolidated financial statements.	This proposal was approved by the 30th Extraordinary Meeting of the 3rd Audit Committee and has been passed unanimously by all attending directors as consulted by the chairperson.
	Proposal regarding the convening of TCC's 2024 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/3/20	The proposal for the 2023 distribution of compensation for employees and directors at TCC.	Except for the independent directors, all directors present left the meeting and recused themselves from this case, which was then chaired by Independent Director Victor Wang. This case was approved by the 18th meeting of the 5th Remuneration Committee and is submitted to the Board of Directors for review, After consultation by the chairperson, the proposal was unanimously approved by all independent directors.
	TCC's 2023 earnings distribution proposal.	This proposal was approved by the 31st Meeting of the 3rd Audit Committee, and has been passed unanimously by all attending directors as consulted by the chairperson.
	TCC proposes to plan and carry out a long-term capital raising project.	This proposal was approved by the 31st Meeting of the 3rd Audit Committee, and has been passed unanimously by all attending directors as consulted by the chairperson.
	It is proposed to include 'Election of 15 directors for the 25th Board (including five independent directors) in the agenda for the 2024 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	It is proposed to include the removal of non-competition restrictions for newly elected directors in the agenda for the 2024 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	Cases related to the nomination of director candidates (including independent directors), review standards, and operational procedures for the 2024 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/3/20	It is proposed to supplement the meeting method and add reasons to convening the 2024 Annual shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.

Important resolutions of the Board of Directors		
Meeting Date	Meeting Highlights	Meeting Results
2024/5/14	TCC's consolidated financial report for the first quarter of 2024.	This proposal was approved by the 32nd Meeting of the 3rd Audit Committee, and has been passed unanimously by all attending directors as consulted by the chairperson.
	Proposal for TCC's subsidiary, TCC Green Energy Corporation, to lease land in Changbin from TCC Chemical Corporation.	This proposal was approved by the 32nd Meeting of the 3rd Audit Committee, and has been passed unanimously by all attending directors as consulted by the chairperson.
	In response to group policy, and in order to expand renewable energy capacity, the subsidiary TCC Green Energy Corporation proposes to invest in the Kaohsiung Yong'an fishery-solar power plant project.	This proposal was approved by the 32nd Meeting of the 3rd Audit Committee, and has been passed unanimously by all attending directors as consulted by the chairperson.
2024/5/21	Election of the Chairman.	All attending directors unanimously elected Director Nelson An-ping Chang, the representative of Chia Hsin R.M.C. Corporation, as the Chairman.
2024/5/28	Proposal to appoint members of TCC's 6th Remuneration Committee.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	Proposal to appoint members of TCC's 2nd Corporate Sustainable Development Committee.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	Proposal to nominate members of TCC's 2nd Nomination Committee.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/6/12	TCC proposes to make a public tender offer for shares of NHOA S.A. pursuant to relevant French securities and exchange laws and to delist it as required by law.	Discussion process: Director Roman Cheng recused himself from this case due to conflict of interest. Director Roman Cheng, who serves as the CSEO appointed by TCC to NHOA S.A., did not participate in the discussion and voting and left the meeting due to conflict of interest. This case was approved by the 2nd Extraordinary Meeting of the 4th Audit Committee, and after thorough discussion among the directors and management team at the Board meeting, it was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/8/13	TCC's consolidated financial report for the second quarter of 2024.	This case was approved by the 4th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	TCC's investment real estate business - The business division of Yisen Section on Keelung Road in Xinyi District, Taipei City is to be transferred to TCC Asset Management and Development Co., Ltd.	This case was approved by the 4th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	TCC intends to increase capital investment in its subsidiary TCC Energy Storage Technology Corporation.	This case was approved by the 4th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	Subsidiary TCC Energy Storage (Hangzhou) Technology Company Limited proposes to invest approximately RMB 80 million to build a manufacturing and production base for Ultra-High Performance Concrete (UHPC) components.	This case was approved by the 4th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/8/20	Budget report for the first phase of construction of alternative raw materials/fuel storage and transportation equipment (storage construction) at TCC's Hoping Plant.	This case was approved by the 4th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	TCC proposes to make a public tender offer for shares of NHOA S.A. pursuant to relevant French securities and exchange laws and its delisting, and subsequent related matters. TCC's proposed issuance of the first domestic unsecured convertible corporate bonds (as sustainability-linked bonds) and the first overseas unsecured convertible corporate bonds for 2024.	Discussion process: Chairman Nelson An-ping Chang and Director Roman Cheng recused themselves from this case due to conflict of interest, with Independent Director Victor Wang serving as the acting chairman. Chairman Nelson An-ping Chang and Director Roman Cheng, who serve as the Chairman and CSEO of NHOA S.A. appointed by TCC, respectively, recused themselves and left the meeting due to conflicts of interest and did not participate in the discussion or voting. This case was approved by the 5th Extraordinary Meeting of the 4th Audit Committee, and was unanimously approved by all attending directors without objection upon the inquiry of Acting Chairman Independent Director Victor Wang.
2024/9/13	TCC's proposed issuance of the first domestic unsecured convertible corporate bonds (as sustainability-linked bonds) and the first overseas unsecured convertible corporate bonds for 2024.	This case was approved by the 6th interim meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	TCC proposes to increase its investment in its 100% owned Dutch subsidiary Taiwan Cement (Dutch) Holdings B.V.	This case was approved by the 6th interim meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.

Important resolutions of the Board of Directors		
Meeting Date	Meeting Highlights	Meeting Results
2024/11/11	TCC's consolidated financial statements for the third quarter of 2024.	This case was approved by the 7th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	Change of TCC's Internal Audit Manager.	This case was approved by the 3rd meeting of the 6th Remuneration Committee and the 7th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	TCC's Accounting Chief Officer change case.	This case was approved by the 3rd meeting of the 6th Remuneration Committee and the 7th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	Proposal to appoint members of TCC's Nomination Committee.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	Proposed sale of 3 land parcels numbered 4, 5, and 10 in the TCC section of Zhudong Township, Hsinchu County.	This case was approved by the 7th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	Follow-up plan for the "Oliver 2 case" investment in Portugal.	This case was approved by the 7th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
2024/12/14	TCC proposes to increase the endorsement guarantee for its 100% owned Dutch subsidiary TCC Dutch Holdings B.V. to 500 million euros for the issuance of green corporate bonds.	This case was approved by the 8th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	The budget proposed for capital requirements during the preparation period of the Taipei Xinyi project by the Company's subsidiary, TCC Asset Management & Development Corporation.	This case was approved by the 8th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
2025/3/12	TCC's 2024 Business Report	This case was approved by the 9th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon the chairperson's inquiry.
	TCC's 2024 individual financial statements and consolidated financial statements.	This case was approved by the 9th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	TCC's 2024 profit distribution plan.	This case was approved by the 9th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	TCC proposes to increase the endorsement guarantee amount to 600 million euros for its 100% owned Dutch subsidiary TCC Dutch Holdings B.V. for issuing green corporate bonds and/or arranging green syndicated loans.	This case was approved by the 9th meeting of the 4th Audit Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	TCC's proposal for the 2024 distribution of compensation for employees and directors.	Meeting Proceedings: For the 10th and 11th proposals, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. For this case, all attending directors and managers in attendance left the meeting to avoid conflicts of interest, except for the independent directors. The meeting was chaired by Independent Director Victor Wang. This case was approved by the 5th meeting of the 6th Remuneration Committee and submitted to the Board of Directors for review. After the Chairman consulted all independent directors, the proposal was approved without objection.
	Proposal to amend certain provisions of TCC's Articles of Incorporation.	This case was approved by the 5th meeting of the 6th Remuneration Committee, and was unanimously approved by all attending directors upon chairperson's inquiry.
	Proposal to include 'Election for one Independent Director position' in the agenda of the 2025 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.
	Proposal to convene TCC's 2025 Annual Shareholders' Meeting.	The proposal was unanimously approved by all attending directors upon the chairperson's inquiry.

2.2.12 For the most recent year and up to the publication date of the annual report, there were no instances where directors had dissenting opinions on important resolutions passed by the Board of Directors that were recorded or stated in writing: No such circumstance.

2.2.13 The status of personnel related to financial information transparency obtaining relevant certificates designated by the competent authority is as follows

Certificate Name	Number	
	Finance	Audit
Certified Public Accountant (CPA) of the Republic of China	2	2

2.3 Auditing CPA Fee Information

Amount Unit: NT\$ Thousand

Accountant Firm Name	CPA Name	CPA Audit Period	Audit Fee	Non-audit Fee	Total	Note:
Deloitte Taiwan	Ya-Ling Wong	2024/1/1-2024/12/31	42,980	23,172	66,152	Non-audit fees primarily include fees for tax services, corporate bond issuance, sustainability services, and consulting services.
	Hui-Min Huang					

2.3.1 Cases where the audit firm was changed and the audit fees paid in the year of change were reduced compared to the year before the change: No such circumstance.

2.3.2 Cases where audit fees were reduced by 10% or more compared to the previous year: No such circumstances.

2.4 Information on the Change of CPA: No such circumstance.

2.4.1 About the Previous CPA:

Not applicable.

2.4.2 Regarding the Successor CPA:

Not applicable.

2.4.3 Response from the previous CPA regarding Item 1 and Item 2 of Paragraph 6, Article 10 of these Standards:

Not applicable.

2.5 The Chairman, President, and the Managers responsible for financial or accounting affairs have not, in the most recent year, been employed by the attesting CPA firm or its affiliated enterprises: No such circumstance.

2.6 Changes in equity transfer and equity pledge of directors, managers, and shareholders with more than 10% shareholding in the most recent year and up to the annual report's publication date.

2.6.1 Equity transfer and equity pledge changes

Title	Name	2024		For the current year up to March 20	
		Number of shares held increased (decreased)	Number of pledged shares increased (decreased)	Number of shares held increased (decreased)	Number of pledged shares increased (decreased)
Chairman	Representative of Chia Hsin R.M.C. Corporation: Nelson An-ping Chang	500,000	0	0	0
Director	Tai Ho Farming Co., Ltd. Representative: Roman Cheng	0	0	0	0
Director	Representative of International CSRC Investment Holdings Co., Ltd.: Kenneth C.M. Lo	0	0	0	0
Director	Hsing Cheng Investment Co., Ltd. Representative: Yu-Cheng Chiao (Date of Appointment: May 21, 2024)	0	0	0	0
Director	Representative of C. F. Koo Foundation: Eric Chen Sun Te	0	0	0	0
Director	Representative of Chia Hsin Cement Corporation: Kang-Lung (Jason) Chang Representative: Liz Wang	0	0	0	0
Director	Heng Qiang Investment Co., Ltd. Representative: Por-Yuan Wang	0	0	0	0
Director	CS Development & Investment Co. Representative: Kung-Yi Koo (Date of Appointment: May 21, 2024)	0	0	0	0
Director	Fu Pin Investment Co., Ltd. Representative: Chien Wen	0	0	0	0
Independent Director	Victor Wang	0	0	0	0
Independent Director	Lynette Ling-Tai Chou	0	0	0	0
Independent Director	Sherry S. L. Lin	0	0	0	0
Independent Director	Ruu Tian Chang (Date of Appointment: May 21, 2024)	0	0	0	0
Group CEO	Nelson An-ping Chang	924,800	0	0	0
President	Roman Cheng	105,000	0	0	0
Senior Vice President	Chien-Chiang Huang	106,995	0	0	0
Senior Vice President	Ker-Fu Lu	106,995	0	0	0

Title	Name	2024		For the current year up to March 20	
		Number of shares held increased (decreased)	Number of pledged shares increased (decreased)	Number of shares held increased (decreased)	Number of pledged shares increased (decreased)
Vice President	Bao-Luo Ge	92,894	0	0	0
Vice President	Chien-Chuan Wang	21,999	0	0	0
Vice President	Feng-Ping Liu	23,098	0	0	0
Vice President	Yu-Jun Yeh	39,597	0	0	0
CFO and Accounting Chief Officer	Randy Yu	39,000	0	0	0
Senior Assistant Vice President	Kuo-Yu Tsai	73,395	0	0	0
Senior Assistant Vice President and Internal Audit Manager	Guo Hong Yeh	42,597	0	0	0
Senior Assistant Vice President	Huei Sheng Chiou	0	0	0	0
Senior Assistant Vice President	Yu-Wen Chiu	21,698	0	0	0
Senior Assistant Vice President	Chia-Pei Wei	50,197	0	0	0
Senior Assistant Vice President	Yi-Ching Chung (Date of Appointment: January 20, 2025)	0	0	0	0
Director and Assistant Vice President	Kung-Yi Koo	60,496	0	0	0
Assistant Vice President	Cen-Wei Lan	20,899	0	0	0
Assistant Vice President and Corporate Governance Manager	Jia-Ro Lai	18,698	0	0	0
Assistant Vice President	Kuo-Yuan Li	26,898	0	0	0
Assistant Vice President	Cheng-Tao Chiang	27,498	0	0	0
Assistant Vice President	Yin-Hua Chen	38,498	0	0	0
Assistant Vice President	Katrina Chen	47,297	0	0	0
Chief Information Security Officer	Nien-Wang Chang	27,698	0	0	0
Assistant Vice President	Xiu-Fen Lu	0	0	0	0
Assistant Vice President	Bin-Chih Wang (Date of Appointment: April 8, 2024)	0	0	0	0

Title	Name	2024		For the current year up to March 20	
		Number of shares held increased (decreased)	Number of pledged shares increased (decreased)	Number of shares held increased (decreased)	Number of pledged shares increased (decreased)
Assistant Vice President	Jin-Yi Chen	19,799	0	0	0
Senior Manager	Chi-Ching Chen	24,899	0	0	0
Senior Manager	Hsueh Ching Hsu	4,950	0	0	0
Senior Manager	Chen-Yuan Chen (Date of Appointment: November 11, 2024)	0	0	0	0
Manager	Li-Chi Hsiao	26,398	0	0	0
Senior Assistant Manager	Chu-Tsun Chen (Date of Appointment: April 26, 2024)	8,249	0	0	0
Senior Assistant Manager	Tzu-Yang Wu (Date of Appointment: March 13, 2025)	0	0	0	0
Director	Fu Pin Investment Co., Ltd. Representative: Chi-Chia Hsieh (Date of Dismissal: May 21, 2024)	0	0	0	0
Director	Heng Qiang Investment Co., Ltd. Representative: Chun-Ying Liu (Date of Dismissal: May 21, 2024)	0	0	0	0
Independent Director	Mei-Hua Lin (Date of Dismissal: May 21, 2024)	0	0	0	0
Independent Director	Nigel N. T. Li (Date of Appointment: May 21, 2024) (Date of Dismissal: October 9, 2024)	0	0	0	0
Assistant Vice President	Hsiu-Hao Chang (Date of Appointment: April 15, 2024) (Date of Dismissal: July 23, 2024)	0	0	0	0
Senior Manager	Shi-Sheng Liang (Date of Dismissal: November 11, 2024)	19,249	0	0	0
Senior Manager	Yin-Te Wu (Date of Dismissal: March 13, 2025)	9,899	0	0	0
Manager and Internal Audit Manager	Chia-Hua Tsao (Date of Dismissal: October 21, 2024)	7,198	0	0	0
Senior Assistant Manager	Yu-Yang Chang (Date of Dismissal: June 18, 2024)	12,649	0	0	0
Senior Assistant Manager	Chun-Da Yi (Date of Appointment: June 18, 2024) (Date of Dismissal: January 22, 2025)	0	0	0	0

2.6.2 In the case where the counterparty in a transfer or pledge of shares is a related party:

No such circumstance.

2.7 Relationship information among the top ten shareholders by shareholding ratio

Data as of the ex-dividend record date: July 3, 2024

Name	Shares held by the person		Shares held by spouses and minor children		Shares held in the name of others		Among the top ten shareholders, those who have relationships as related parties, spouses, or relatives within the second degree of kinship, their names and relationships.		Notes
	Number of Shares	Shareholding ratio (%)	Number of Shares	Shareholding ratio (%)	Number of Shares	Shareholding ratio (%)	Name	Relationship	
Chia Hsin Cement Corporation Representative: Kang-Lung (Jason) Chang	239,629,776	3.17	-	-	None	None	Tong Yang Chia Hsin International Corporation	Chairman is the same person	
							Tong Yang Chia Hsin International Corporation	Director of the company	
	-	-	264,484	0.00	None	None	Tong Yang Chia Hsin International Corporation	Chairman is the same person	
Taishin International Bank, Custodian for Cathay MSCI Taiwan ESG Sustainability High Dividend Yield ETF	215,033,748	2.85	-	-	None	None	None	None	
Representative of Chinatrust Investment Co., Ltd.: Tian-Yi Huo	186,189,210	2.47	-	-	None	None	Heng Qiang Investment Co., Ltd.	Director of the company	
	9,460,616	0.13	-	-	None	None	Heng Qiang Investment Co., Ltd.	Chairman is the same person	
Labor Retirement Reserve Fund	127,695,767	1.69	-	-	None	None	None	None	
Tong Yang Chia Hsin International Corporation Representative: Kang-Lung (Jason) Chang	116,912,847	1.55	-	-	None	None	Chia Hsin Cement Corporation	Chairman is the same person	
							Chia Hsin Cement Corporation	Director of the company	
	-	-	264,484	0.00	None	None	Chia Hsin Cement Corporation	Chairman is the same person	
International CSRC Investment Holdings Co., Ltd. Representative: Kung-Yi Koo	113,896,285	1.51	-	-	None	None	None	None	
	760,947	0.01	-	-	None	None	None	None	
Heng Qiang Investment Co., Ltd. Representative: Tian-Yi Huo	112,457,746	1.49	-	-	None	None	CTBC Investments Co., Ltd.	Director of the company	
	9,460,616	0.13	-	-	None	None	CTBC Investments Co., Ltd.	Chairman is the same person	
Chunghwa Post Co., Ltd. Representative: Hong-Mo Wu	104,456,746	1.38	-	-	None	None	None	None	
	-	-	-	-	None	None	None	None	
Taiwan Life Insurance Co., Ltd. Representative: Tai-Teck Cheng	100,531,192	1.33	-	-	None	None	None	None	
	-	-	-	-	None	None	None	None	
BankTaiwan Life Insurance - Government Employees & School Staffs Insurance	99,341,262	1.32	-	-	None	None	None	None	

2.8 Combined Shareholding Percentage

The Company, its directors, supervisors, managers, and enterprises directly or indirectly controlled by the Company, shall calculate the number of shares held in the same invested enterprise, and combine to calculate the combined shareholding percentage.

December 31, 2024 Unit: Shares %

Investee Companies	TCC's Investment (Note 1)		Investment by Directors, Supervisors, Managers, and Directly or Indirectly Controlled Enterprises		Combined Investment	
	Number of Shares	Shareholding Percentage	Number of Shares	Shareholding Percentage	Number of Shares	Shareholding Percentage
Taiwan Transport & Storage Co., Ltd.	52,410,366	83.88%	419,013	0.67%	52,829,379	84.55%
Taiwan Cement Engineering Corporation	59,781,378	99.36%	-	-	59,781,378	99.36%
Kuan-Ho Refractories Industry Corporation	60,163,639	95.29%	-	-	60,163,639	95.29%
Hong Kong Cement Manufacturing Co. Ltd.	38,094	84.65%			38,094	84.65%
Ta-Ho Maritime Corporation	227,803,766	64.79%	103,648,759	29.48%	331,452,525	94.27%
TCC Investment Corporation	239,800,000	100.00%			239,800,000	100.00%
TCC Chemical Corporation	140,000,000	100.00%			140,000,000	100.00%
TCC Information Systems Corporation	14,904,000	99.36%			14,904,000	99.36%
Jin Chang Minerals Corporation	9,100,000	100.00%			9,100,000	100.00%
Ho-Ping Industrial Port Corporation	319,990,000	100.00%			319,990,000	100.00%
TCC International Ltd.	1,100,875,900	100.00%			1,100,875,900	100.00%
Ho-Ping Power Company	805,940,306	59.50%	6,772,608	0.50%	812,712,914	60.00%
HPC Power Services Corporation	6,000	60.00%	-	-	6,000	60.00%
Synpac Ltd.	2,700,000	25.00%	8,100,000	75.00%	10,800,000	100.00%
CCC USA CORP.	79,166	33.33%	158,334	66.67%	237,500	100.00%
Feng Sheng Enterprise Company	27,260,611	45.43%	-	-	27,260,611	45.43%
E.G.C. CEMENT CORP.	8,062,600	50.64%	7,587,400	49.36%	15,650,000	100.00%
Onyx Ta-Ho Environmental Services Co., Ltd.	84,212,462	50.00%	-	-	84,212,462	50.00%
TCC Ta-Ho RSEA Environment Co., Ltd	666,000	66.60%	-	-	666,000	66.60%
TCC Green Energy Corporation	1,350,898,696	100.00%	-	-	1,350,898,696	100.00%
Ho Sheng Mining Co., Ltd.	30,100,000	100.00%	-	-	30,100,000	100.00%
TCC International Holdings Ltd.	3,734,927,496	47.29%	4,163,097,279	52.71%	7,898,024,775	100.00%

Investee Companies	TCC's Investment (Note 1)		Investment by Directors, Supervisors, Managers, and Directly or Indirectly Controlled Enterprises		Combined Investment	
	Number of Shares	Shareholding Percentage	Number of Shares	Shareholding Percentage	Number of Shares	Shareholding Percentage
Taicorn Minerals Corp. (Note 2)	119,997	72.70%	-	-	119,997	72.70%
Trans Philippines Mineral Corp.	19,996	40.00%	-	-	19,996	40.00%
TCC Sustainable Energy Investment Corporation	100,000	100.00%	-	-	100,000	100.00%
TCC Energy Storage Technology Corporation	250,600,000	100.00%	-	-	250,600,000	100.00%
TCC Recycle Energy Technology Company	1,046,153,632	36.77%	1,575,910,482	55.39%	2,622,064,114	92.16%
Tuo Shan Recycle Technology Company	100,000	100.00%	-	-	100,000	100.00%
International CSRC Investment Holdings Co., Ltd.	153,476,855	15.59%	35,527,529	3.61%	189,004,384	19.19%
TCC Dutch Hodings B.V	1,179,219	82.51%	250,000	17.49%	1,429,219	100.00%

Note 1: This is an investment accounted for using the equity method by the company.
Note 2: The shareholding ratio of Taicorn Minerals Corp. is calculated based on the capital contribution amount.

03

Fundraising Status

3.1 Capital and Shares

3.1.1 Source of Capital

As of the date of the publication of the annual report, March 20, 2025Unit: Share

Types of Shares	Authorized Capital				
	Outstanding Shares			Unissued Shares	Total
	Listed	Not Listed	Total		
Registered Common Stocks	7,551,181,742	-	7,551,181,742	2,248,818,258	9,800,000,000
Preferred Stocks	200,000,000	-	200,000,000	-	200,000,000

3.1.2 Capital Formation

As of the date of the publication of the annual report, March 20, 2025

Unit: Dollar/ Share

Month and Year	Issuing Price (NTD)	Authorized Capital		Paid-in Capital		Under Construction				Payment for Shares with Non-cash Property	Others
		Number of Shares	Amount	Number of Shares	Amount	Source of Capital					
						Capitalization of Earnings	Capitalization of Capital Reserve	Cash Capital Increase			
August 1995	10	1,650,000,000	16,500,000,000	1,280,787,200	12,807,872,000	1,372,272,000	-	-	None	None	
August 1996	10	1,650,000,000	16,500,000,000	1,408,865,920	14,088,659,200	896,551,040	384,236,160	-	None	None	
October 1997	10	1,650,000,000	16,500,000,000	1,650,000,000	16,500,000,000	563,546,368	845,319,552	1,002,474,880 (Note 1)	None	None	
July 1998	10	2,300,000,000	23,000,000,000	1,815,000,000	18,150,000,000	660,000,000	990,000,000	-	None	None	
September 1999	10	2,300,000,000	23,000,000,000	2,196,500,000	21,965,000,000	363,000,000	1,452,000,000	2,000,000,000 (Note 2)	None	None	
August 2000	10	2,550,000,000	25,500,000,000	2,372,220,000	23,722,200,000	1,098,250,000	658,950,000	-	None	None	
August 2001	10	2,757,386,600	27,573,866,000	2,443,386,600	24,433,866,000	-	711,666,000	-	None	None	
September 2001	25	2,757,386,600	27,573,866,000	2,607,386,600	26,073,866,000	-	-	1,640,000,000 (Note 3)	None	None	
August 2002	10	2,757,386,600	27,573,866,000	2,656,254,332	26,562,543,320	-	488,677,320	-	None	None	
September 2003	10	3,157,386,600	31,573,866,000	2,710,396,409	27,103,964,090	541,420,770	-	-	None	None	
September 2004	10	3,507,386,600	35,073,866,000	2,809,764,407	28,097,644,070	993,679,980	-	-	None	None	
October 2005	10	4,007,386,600	40,073,866,000	2,949,351,287	29,493,512,870	1,395,868,800	-	-	None	None	
April 2006	10	4,007,386,600	40,073,866,000	2,991,886,496	29,918,864,960	-	-	-	None	NT\$425,352,090 (Note 4)	

Month and Year	Issuing Price (NTD)	Authorized Capital		Paid-in Capital		Under Construction			Payment for Shares with Non-cash Property	Others
		Number of Shares	Amount	Number of Shares	Amount	Source of Capital				
						Capitalization of Earnings	Capitalization of Capital Reserve	Cash Capital Increase		
June 2006	10	4,007,386,600	40,073,866,000	3,131,344,565	31,313,445,650	-	-	-	None	NT\$1,394,580,690 (Note 4)
September 2006	10	4,007,386,600	40,073,866,000	3,181,438,776	31,814,387,760	-	-	-	None	NT\$500,942,110 (Note 4)
September 2006	10	4,007,386,600	40,073,866,000	3,236,097,960	32,360,979,600	546,591,840	-	-	None	None
October 2006	10	4,007,386,600	40,073,866,000	3,072,097,960	30,720,979,600	-	-	-	None	NT\$(1,640,000,000) (Note 5)
January 2007	10	4,007,386,600	40,073,866,000	3,141,612,870	31,416,128,700	-	-	-	None	NT\$695,149,100 (Note 4)
April 2007	10	4,007,386,600	40,073,866,000	3,207,351,086	32,073,510,860	-	-	-	None	NT\$657,382,160 (Note 4)
August 2007	10	4,007,386,600	40,073,866,000	3,248,637,197	32,486,371,970	412,861,110	-	-	None	None
August 2008	10	4,007,386,600	40,073,866,000	3,292,175,869	32,921,758,690	435,386,720	-	-	None	None
December 2010	27	4,007,386,600	40,073,866,000	3,692,175,869	36,921,758,690	-	-	4,000,000,000 (Note 6)	None	None
June 2011	10	6,000,000,000	60,000,000,000	3,692,175,869	36,921,758,690	-	-	-	None	None
November 2017	10	6,000,000,000	60,000,000,000	4,246,509,010	42,465,090,100	-	-	-	None	NT\$5,543,331,410 (Note 7)
August 2018	10	6,000,000,000	60,000,000,000	4,670,559,911	46,705,599,110	4,240,509,010	-	-	None	None
September 2018	10	6,000,000,000	60,000,000,000	5,108,059,911	51,080,599,110	-	-	4,375,000,000 (Note 8)	None	None
January 2019	10	6,000,000,000	60,000,000,000	5,308,059,911	53,080,599,110	-	-	2,000,000,000 (Note 9) (preferred stocks)	None	None
June 2019	10	7,000,000,000	70,000,000,000	5,308,059,911	53,080,599,110	-	-	-	None	None
September 2019	10	7,000,000,000	70,000,000,000	5,665,619,204	56,656,192,040	3,575,592,930	-	-	None	None
September 2020	10	7,000,000,000	70,000,000,000	5,938,500,164	59,385,001,640	2,728,809,600	-	-	None	None
October 2020	10	7,000,000,000	70,000,000,000	5,941,400,721	59,414,007,210	-	-	-	None	NT\$29,005,570 (Note 10)
February 2021	10	7,000,000,000	70,000,000,000	6,010,254,882	60,102,548,820	-	-	-	None	NT\$688,541,610 (Note 10)
March 2021	10	7,000,000,000	70,000,000,000	6,095,645,647	60,956,456,470	-	-	-	None	NT\$853,907,650 (Note 10)
June 2021	10	7,000,000,000	70,000,000,000	6,157,440,327	61,574,403,270	-	-	-	None	NT\$617,946,800 (Note 10)
August 2021	10	7,000,000,000	70,000,000,000	6,323,580,010	63,235,800,100	-	-	-	None	NT\$1,661,396,830 (Note 10)
November 2021	10	7,000,000,000	70,000,000,000	6,324,200,257	63,242,002,570	-	-	-	None	NT\$6,202,470 (Note 10)
December 2021	10	7,000,000,000	70,000,000,000	6,325,234,002	63,252,340,020	-	-	-	None	NT\$10,337,450 (Note 10)
August 2022	10	8,500,000,000	85,000,000,000	6,936,851,342	69,368,513,420	6,116,173,400	-	-	None	None
September 2022	10	8,500,000,000	85,000,000,000	6,936,181,742	69,361,817,420	-	-	-	None	NT\$ (6,696,000) (Note 11)
October 2022	10	8,500,000,000	85,000,000,000	7,356,181,742	73,561,817,420	-	-	4,200,000,000 (Note 12)	None	None
November 2023	10	10,000,000,000	100,000,000,000	7,751,181,742	77,511,817,420	-	-	3,950,000,000 (Note 13)	None	None

- 1.Approved by the Securities and Futures Bureau of the Ministry of Finance on July 7, 1997, under Letter No. 50087, the cash capital increase was issued at a price of NT\$ 36.
- 2.Approved by the Securities and Futures Bureau of the Ministry of Finance on April 20, 1999, under Letter No. 29130, the cash capital increase was issued at a price of NT\$ 20.
- 3.This refers to the cash capital increase through the issuance of 164,000,000 preferred shares, as approved by the Securities and Futures Bureau of the Ministry of Finance on July 31, 2001, under Letter No. 143691.
- 4.This refers to the conversion of overseas unsecured convertible corporate bonds into common shares. The maximum total amount of overseas unsecured convertible corporate bonds was approved by the Securities and Futures Bureau of the Ministry of Finance on February 6, 2004, under Letter No. 0920162472.
- 5.Preferred stocks were redeemed upon maturity to proceed with a capital reduction.
- 6.This refers to a cash capital increase through the issuance of 400,000,000 common stocks, as approved by the Financial Supervisory Commission of the Executive Yuan on November 5, 2010, under Letter No. 0990059240.
- 7.This refers to the newly issued 554,333,141 shares for capital increase to acquire shares of TCC International Holdings Ltd., as approved by the Financial Supervisory Commission on November 6, 2017, under Letter No. 1060041014.
- 8.This refers to a cash capital increase through the issuance of 375,000,000 to 468,750,000 common stocks, participating in the issuance of 75,000,000 to 93,750,000 units of Global Depositary Receipts, for a total amount of approximately US\$440,000,000 to 550,000,000, as approved by the Financial Supervisory Commission on July 25, 2018, under Letter No. 10703258531.
- 9.This refers to a cash capital increase through the issuance of 200,000,000 second preferred stocks, as approved by the Financial Supervisory Commission on July 25, 2018, under Letter No. 1070325853.
- 10.This refers to the conversion of the 2018 first overseas unsecured convertible corporate bonds into common stocks. The maximum total amount of these corporate bonds was approved by the Financial Supervisory Commission on July 25, 2018, under Letter No. 10703258532.
- 11.This refers to the cancellation of 669,600 treasury shares, as approved by the Ministry of Economic Affairs on September 2, 2022, under Letter No. 11101163360.
- 12.This refers to a cash capital increase through the issuance of 420,000,000 common stocks, participating in the issuance of 84,000,000 units of Global Depositary Receipts, for a total amount of approximately US\$425,040,000, as approved by the Financial Supervisory Commission on September 27, 2022, under Letter No. 1110356873.
- 13.This refers to a cash capital increase through the issuance of 395,000,000 common stocks, participating in the issuance of 79,000,000 units of Global Depositary Receipts, for a total amount of approximately US\$384,730,000, as approved by the Financial Supervisory Commission on October 2, 2023, under Letter No. 1120356293.

3.1.3 Information related to the shelf registration system:

None.

3.2 List of Major Shareholders

3.2.1 Common Stocks

Information as of the ex-dividend record date: July 3, 2024

Major Shareholder Name	Total Shares Held	Shareholding Ratio %
Chia Hsin Cement Corporation	239,629,776	3.17
Taishin International Bank, Custodian for Cathay MSCI Taiwan ESG Sustainability High Dividend Yield ETF Securities Investment Trust	215,033,748	2.85
CTCB Investments Co., Ltd.	186,189,210	2.47
Labor Retirement Reserve Fund (The Old Fund)	127,695,767	1.69
Tong Yang Chia Hsin International Co., Ltd.	116,912,847	1.55
International CSRC Investment Holdings Co., Ltd.	113,896,285	1.51
Heng Qiang Investment Co., Ltd.	112,457,746	1.49
Chunghwa Post Co., Ltd.	104,456,746	1.38
Taiwan Life Insurance Co., Ltd.	100,531,192	1.33
BankTaiwan Life Insurance - Government Employees & School Staffs Insurance	99,341,262	1.32

3.2.2 Preferred Stocks

Information as of the ex-dividend record date: July 3, 2024

Major Shareholder Name	Total Shares Held	Shareholding Ratio %
China Life Insurance Co., Ltd.	40,000,000	20.00
Nan Shan Life Insurance Company, Ltd.	30,000,000	15.00
Yuanta Commercial Bank	28,350,000	14.18
Chunghwa Post Co., Ltd. labor pension fund management committee	27,650,000	13.83
Labor Pension Fund (The New Fund)	20,000,000	10.00
Labor Insurance Fund	12,000,000	6.00
BankTaiwan Life Insurance- Army Insurance Reserve	6,337,000	3.17
Yuanta Life Insurance Co., Ltd.	3,825,000	1.91
Far Eastern International Bank	3,173,000	1.59
Union Insurance Company	2,785,000	1.39

3.3 Dividend Policy and Implementation

3.3.1 Dividend Policy:

When TCC calculates annual net profits, after the payment of income taxes and offsetting any accumulated losses, 10% of the remaining profits shall be allocated as legal reserve. However, once the legal reserve reaches the total amount of TCC's paid-in capital, no further allocation is required. The remaining amount, along with accumulated undistributed earnings, may be allocated or reversed as special reserve in accordance with relevant laws and regulations, or partially retained if necessary. After distributing dividends for preferred stocks according to Article 5-1 of the Articles of Incorporation from the remaining balance, common stock dividends shall be distributed. The Board of Directors shall propose the distribution ratio in an earnings distribution plan and submit it to the shareholders' meeting for approval.

According to the Articles of Incorporation, TCC not only engages in capital-intensive and stable manufacturing and sales of cement products but is also actively expanding into diversified operations. To accommodate the investment needs of diversified development or major capital budget planning, the cash dividend payment ratio is set at 20% or more of the common share dividends, with the remaining balance distributed as share dividends.

For dividend distribution, after legal reserve and special reserve allocation as required by law, at least 50% of the remaining earnings shall be distributed for the current year. This is subject to approval at the shareholders' meeting while considering reinvestment funding requirements, major capital expenditures, and financial structure improvements.

3.3.2 Earnings Distribution:

At the 10th Board Meeting of the 25th term held on March 12, 2025, TCC proposed the 2024 earnings distribution plan, as shown in the table below. This proposal includes distributing preferred stock dividends of NT\$405,250,000, and cash dividends of NT\$1 per common share. This proposal will be processed pursuant to relevant regulations after being approved by the shareholders' meeting on May 27, 2025.

	Unit: NT\$
Preferred Stock Cash Dividend (NT\$2.02625 per share)	405,250,000
Common Stock Cash Dividend (NT\$1 per share)	7,531,181,742

3.4 Impact of the Proposed Stock Dividend Distribution on TCC's Business Performance and Earnings Per Share:

Not applicable.

3.5 Employee and Director Compensation

3.5.1 Percentage or Range of Employee and Director Compensation as Stipulated in the Articles of Incorporation

If TCC generates profits for the current fiscal year, it shall allocate them accordingly:

- 1. Employee compensation: 0.01% to 3%. (Note)
- 2. Director compensation: not exceeding 1%.

However, if TCC still has accumulated losses, it shall first reserve an amount to offset the losses first and then allocate employee and director compensation according to the ratios specified in items 1 and 2 of the preceding paragraphs.

Employee compensation may be distributed in the form of stock or cash and may also include employees of controlling or subsidiary companies who meet certain conditions.

Note: The proposal to amend the allocation of employee compensation to not less than 10% will be submitted for approval at the 2025 shareholders' meeting.

3.5.2 Estimation Basis for the Employee and Director Compensation in the Current Period, Calculation Basis for Stock-based Employee Compensation Shares, and Accounting Treatment for Discrepancies Between Actual Distribution and Estimated Amount

The estimation basis for TCC's employee and director compensation for 2024, the calculation basis for stock-based employee compensation shares, and any discrepancies between the actual distribution amount and the estimated amount will be handled according to accounting estimate adjustments and recorded in the following year.

3.5.3 The Board of Directors' Approval of Compensation Distribution

- 1. The amount of employee and director compensation distributed in cash or shares. If there is a discrepancy between the distributed amount and the estimated amount recognized as an expense for the year, the difference, its reason, and the handling method should be disclosed:

On March 12, 2025, the Board of Directors approved the distribution of NT\$66,616,173 in 2024 employee compensation and NT\$123,167,600 in 2024 director compensation, both in cash. These amounts are the same as the estimated amounts recorded in the books for 2024.

- 2. The amount of employee compensation distributed in stock, along with its proportion to the sum of net income after tax and total employee compensation in the current period's parent company only or individual financial statements:
There is no distribution of employee compensation in stock, therefore, it is not applicable.

3.5.4 The Actual Distribution of Employee, Director, and Supervisor Compensation in the Previous Year (Including the Number of Shares Distributed, the Amount, and the Share Price); if There Is a Discrepancy Between the Distributed Amount and the Recognized Employee, Director, and Supervisor Compensation, the Difference, Reason, and Handling Method Should Be Explained.

Item	Board of Directors Resolution (March 20, 2024)
Distribution amount of employee cash compensation	73,954,817
Distribution amount of director cash compensation	88,018,454

Note: The employee compensation matches the estimated amount for 2023, while the director compensation is NT\$16,432 less than the estimated amount. This difference results from changes in accounting estimates and has been adjusted to be listed as profit or loss for 2024.

3.6 Status of TCC's repurchase of its own shares:

None.

3.7 Corporate Bond Issuance

3.7.1 Corporate Bond Information

As of the date of the publication of the annual report, March 20, 2025 Unit: NT\$		
Type of Corporate Bond	2018 First Series Unsecured Corporate Bonds	2020 First Series Unsecured Corporate Bonds
Issuance date	June 21, 2018	April 15, 2020
Face value	NT\$1 million	NT\$1 million
Issuance and trading location	Not applicable	Not applicable
Offering price	NT\$100 per unit at par	NT\$100 per unit at par
Total amount	NT\$12 billion	NT\$20 billion Bond A: NT\$5.2 billion Bond B: NT\$14.8 billion
Coupon rate	Fixed annual interest rate of 1.70%	Bond A: Fixed annual interest rate of 0.69% Bond B: Fixed annual interest rate of 0.93%
Term and Maturity Date	15-year term with a maturity date of June 21, 2033	Bond A: 7-year term with a maturity date of April 15, 2027 Bond B: 15-year term with a maturity date of April 15, 2035
Guarantor Institution	None	None
Trustee	CTBC Bank Co., Ltd.	CTBC Bank Co., Ltd.
Underwriter	HSBC Bank (Taiwan) Co., Ltd.	HSBC Bank (Taiwan) Co., Ltd.

Type of Corporate Bond	2018 First Series Unsecured Corporate Bonds	2020 First Series Unsecured Corporate Bonds
Legal counsel	Hui-Chi Kuo	Hui-Chi Kuo
Auditor	Deloitte Taiwan Ya-Ling Wong, Chih-Ming Shao	Deloitte Taiwan Ya-Ling Wong, Chih-Ming Shao
Repayment Method	Bullet	Bullet
Outstanding Principal	NT\$12 billion	NT\$20 billion
Redemption or Early Repayment Terms	None	None
Restrictive Clauses	None	None
Name of Credit Rating Agency, Date, Corporate Bond Rating Results	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: May 8, 2018	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: April 25, 2019
Additional Rights of Bondholders	Amount Converted or Exchanged into Ordinary Shares, GDRs, or Other Securities as of the Annual Report Printing Date	None
	Issuance, Conversion, Exchange, and Subscription Procedures	None
	Dilution Effects on Share Equity, and Impact on Existing Shareholders' Rights	None
	Name of Custodian	None

As of the publication date of the annual report, March 20, 2025 Unit: NT\$		
Type of Corporate Bond	2021 First Series Unsecured Corporate Bonds	2022 First Series Unsecured Corporate Bonds
Issuance date	August 31, 2021	June 8, 2022
Face value	NT\$1 million	NT\$1 million
Issuance and trading location	Not applicable	Not applicable
Offering price	NT\$100 per unit at par	NT\$100 per unit at par
Total amount	NT\$16.6 billion Bond A: NT\$5.8 billion Bond B: NT\$3.1 billion Bond C: NT\$1.2 billion Bond D: NT\$6.5 billion	NT\$7.75 billion Bond A: NT\$4.95 billion Bond B: NT\$2.8 billion

Type of Corporate Bond	2021 First Series Unsecured Corporate Bonds	2022 First Series Unsecured Corporate Bonds
Coupon rate	Bond A: Fixed annual interest rate of 0.59% Bond B: Fixed annual interest rate of 0.68% Bond C: Fixed annual interest rate of 0.78% Bond D: Fixed annual interest rate of 0.95%	Bond A: Fixed annual interest rate of 1.90% Bond B: Fixed annual interest rate of 2.15%
Term and Maturity Date	Bond A: 5-year term with a maturity date of August 31, 2026 Bond B: 7-year term, with a maturity date of August 31, 2028 Bond C: 10-year term with a maturity date of August 31, 2031 Bond D: 15-year term with a maturity date of August 31, 2036	Bond A: 6-year term with a maturity date of June 8, 2028 Bond B: 10-year term with a maturity date of June 8, 2032
Guarantor Institution	None	None
Trustee	CTBC Bank Co., Ltd.	CTBC Bank Co., Ltd.
Underwriter	Yuanta Securities Co.	Yuanta Securities Co.
Legal counsel	Hui-Chi Kuo	Hui-Chi Kuo
Auditor	Deloitte Taiwan Chih-Ming Shao, Hui-Min Huang	Deloitte Taiwan Hui-Min Huang, Cheng-Hung, Kuo
Repayment Method	Bullet	Bullet
Outstanding Principal	NT\$16.6 billion	NT\$7.75 billion
Redemption or Early Repayment Terms	None	None
Restrictive Clauses	None	None
Name of Credit Rating Agency, Date, Corporate Bond Rating Results	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: April 27, 2021	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: April 21, 2022
Additional Rights of Bondholders	Amount Converted or Exchanged into Ordinary Shares, GDRs, or Other Securities as of the Annual Report Printing Date None	None
	Issuance, Conversion, Exchange, and Subscription Procedures	None
Dilution Effects on Share Equity, and Impact on Existing Shareholders' Rights	None	None
Name of Custodian	None	None

As of the publication date of the annual report, March 20, 2025 Unit: NT\$

Type of Corporate Bond	2022 Second Series Unsecured Corporate Bonds	2022 Third Series Unsecured Corporate Bonds
Issuance date	November 25, 2022	January 13, 2023
Face value	NT\$1 million	NT\$1 million
Issuance and trading location	Not applicable	Not applicable
Offering price	NT\$100 per unit at par	NT\$100 per unit at par
Total amount	NT\$3.3 billion Bond A: NT\$2.1 billion Bond B: NT\$1.2 billion	NT\$9.3 billion Bond A: NT\$6.1 billion Bond B: NT\$3.2 billion
Coupon rate	Bond A: Fixed annual interest rate of 2.10% Bond B: Fixed annual interest rate of 2.65%	Bond A: Fixed annual interest rate of 2.40% Bond B: Fixed annual interest rate of 2.65%
Term and Maturity Date	Bond A: 5-year term with maturity date of November 25, 2027 Bond B: 10-year term with a maturity date of November 25, 2032	Bond A: 7-year term with a maturity date of January 13, 2030 Bond B: 10-year term with a maturity date of January 13, 2033
Guarantor Institution	None	None
Trustee	CTBC Bank Co., Ltd.	CTBC Bank Co., Ltd.
Underwriter	Yuanta Securities Co.	Yuanta Securities Co.
Legal counsel	Hui-Chi Kuo	Hui-Chi Kuo
Auditor	Deloitte Taiwan Hui-Min Huang, Cheng-Hung Kuo	Deloitte Taiwan Hui-Min Huang, Cheng-Hung Kuo
Repayment Method	Bullet	Bullet
Outstanding Principal	NT\$3.3 billion	NT\$9.3 billion
Redemption or Early Repayment Terms	None	None
Restrictive Clauses	None	None
Name of Credit Rating Agency, Date, Corporate Bond Rating Results	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: April 21, 2022	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating Date: April 21, 2022
Additional Rights of Bondholders	Amount Converted or Exchanged into Ordinary Shares, GDRs, or Other Securities as of the Annual Report Printing Date None	None
	Issuance, Conversion, Exchange, and Subscription Procedures	None

Type of Corporate Bond	2022 Second Series Unsecured Corporate Bonds	2022 Third Series Unsecured Corporate Bonds
Dilution Effects on Share Equity, and Impact on Existing Shareholders’ Rights	None	None
Name of Custodian	None	None
As of March 20, 2025 (the Annual Report publication date) Unit: USD		
Type of Corporate Bond	2023 First Series Unsecured Euro-Convertible Corporate Bonds	2024 First Series Unsecured Euro-Convertible Corporate Bonds
Issuance date	October 24, 2023	March 28, 2025
Face value	US\$200, 000	US\$200, 000
Issuance and trading location	Singapore Exchange (SGX)	Singapore Exchange (SGX)
Offering price	NT\$100 per unit at par	NT\$100 per unit at par
Total amount	US\$420 million	US\$350 million
Coupon rate	0%	0%
Term and Maturity Date	5-year term with a maturity date of October 24, 2028	5-year term with a maturity date of March 28, 2030
Guarantor Institution	None	None
Trustee	Citicorp International Limited	Citicorp International Limited
Underwriter	Citigroup Global Markets Inc.	Morgan Stanley
Legal counsel	Abe T.S. Sung	Abe T.S. Sung
Auditor	Deloitte Taiwan Ya-Ling Wong, Hui-Min Huang	Deloitte Taiwan Ya-Ling Wong, Hui-Min Huang
Repayment Method	Unless previously redeemed early, repurchased and canceled, or the conversion right has been exercised, the bonds will be redeemed in US dollars at their face value upon the maturity date, plus a yield calculated at an annual interest rate of 2.65% (calculated semi-annually).	Unless previously redeemed early, repurchased and canceled, or the conversion right has been exercised, the bonds will be redeemed in US dollars at their face value upon the maturity date, plus a yield calculated at an annual interest rate of 1.875% (calculated semi-annually).
Outstanding Principal	US\$420 million	-

As of the publication date of the annual report, March 20, 2025 Unit: NT\$

Type of Corporate Bond	2023 First Series Unsecured Euro-Convertible Corporate Bonds	2024 First Series Unsecured Euro-Convertible Corporate Bonds
Redemption or Early Repayment Terms	1. From the third year after the issuance date of these bonds until the maturity date, if the closing price of TCC's common stocks on the Taiwan Stock Exchange (TWSE) exceeds 130% of the Early Redemption Amount multiplied by the then applicable conversion price (converted into US dollars at the fixed exchange rate) divided by the face value, for 20 out of 30 consecutive trading days, the issuing company may redeem all or part of these bonds at the early redemption amount. 2. (When 90% or more of these bonds have been redeemed, converted by bondholders, repurchased and canceled, the issuing company may redeem all remaining outstanding bonds at the early redemption amount. 3. If changes in the tax laws of the Republic of China (Taiwan) cause the issuing company to incur an increased tax burden, additional interest expenses, or higher costs related to these bonds after the issuance date, the issuing company may redeem all of these bonds early at the early redemption amount. If bondholders do not participate in the redemption, they may not request the issuing company to bear additional taxes or expenses.	1. From the third year after the issuance date of these bonds until the maturity date, if the closing price of TCC's common stocks on the Taiwan Stock Exchange (TWSE) exceeds 130% of the Early Redemption Amount multiplied by the then applicable conversion price (converted into US dollars at the fixed exchange rate) divided by the face value, for 20 out of 30 consecutive trading days, the issuing company may redeem all or part of these bonds at the early redemption amount. 2. When 90% or more of these bonds have been redeemed, converted by bondholders, repurchased and canceled, the issuing company may redeem all remaining outstanding bonds at the early redemption amount. 3. If changes in the tax laws of the Republic of China (Taiwan) cause the issuing company to incur an increased tax burden, additional interest expenses, or higher costs related to these bonds after the issuance date, the issuing company may redeem all of these bonds early at the early redemption amount. If bondholders do not participate in the redemption, they may not request the issuing company to bear additional taxes or expenses.
Restrictive Clauses	None	None
Name of Credit Rating Agency, Date, Corporate Bond Rating Results	None	None
Additional Rights of Bondholders	Amount Converted or Exchanged into Ordinary Shares, GDRs, or Other Securities as of the Annual Report Printing Date 0	0

Type of Corporate Bond	2023 First Overseas Unsecured Convertible Corporate Bonds	2024 First Overseas Unsecured Convertible Corporate Bonds
Issuance and Conversion (Exchange or Subscription) Procedures	Except for early redemption or repurchase by TCC, or during the conversion suspension period (as defined below), bondholders may, from the day following three months after the issuance of these bonds (excluding the issuance date) (i.e., January 25, 2024), until (1) 10 days before the maturity date (i.e., October 14, 2028) or (2) the 5th business day before the date on which bondholders exercise their put option or TCC exercises its redemption right (excluding the maturity date), request to convert these bonds into the issuing company's common stocks at any time pursuant to relevant laws, regulations, and the provisions of the trust deed.	Except for early redemption or repurchase by TCC, or during the conversion suspension period (as defined below), bondholders may, from the day following three months after the issuance of these bonds (excluding the issuance date) (i.e. June 29, 2025), until (1) 10 days before the maturity date (i.e. March 18, 2030) or (2) the 5th business day before the date on which bondholders exercise their put option or TCC exercises its redemption right (excluding the maturity date), request to convert these bonds into the issuing company's common stocks at any time in accordance with relevant laws, regulations, and the provisions of the trust deed.
	The aforementioned conversion suspension period refers to: 1.The period when transfer of shares is suspended under laws of the Republic of China, including within sixty days prior to TCC's annual general shareholders' meeting and within thirty days prior to an extraordinary shareholders' meeting. 2.When TCC issues stock dividends, cash dividends, or cash capital increases, the period will run from fifteen business days before the record date for stock dividends, the record date for cash dividends, or the record date for subscription rights in cash capital increases, up to the rights distribution record date. 3.When TCC conducts a capital reduction, the period will run from the record date of the reduction until the day before the commencement of trading for the shares issued in exchange for the capital reduction. 4.When TCC changes the par value of its shares, the conversion suspension will start from the date the Company halts conversion due to change in par value until the day before the newly issued shares begin trading. 5.Other suspension periods for share transfers as required by laws of the Republic of China or regulations of the TWSE. 6.Any changes to the aforementioned laws regarding suspension periods for share transfers should be followed according to the amended regulations.	The aforementioned conversion suspension period refers to: 1.The period when transfer of shares is suspended according to laws, including within sixty days prior to TCC's annual general shareholders' meeting and within thirty days prior to an extraordinary shareholders' meeting. 2.When TCC issues stock dividends, cash dividends, or cash capital increases, the period will run from fifteen business days before the record date for stock dividends, the record date for cash dividends, or the record date for subscription rights in cash capital increases, up to the rights distribution base date. 3.When TCC conducts a capital reduction, the period will run from the record date of the reduction until the day before the commencement of trading for the shares issued in exchange for the capital reduction. 4.When TCC changes the par value of its shares, the conversion suspension will start from the date the Company halts conversion due to change in par value until the day before the newly issued shares begin trading. 5.Other suspension periods for share transfers as required by laws of the Republic of China or regulations of the TWSE. 6.Any changes to the aforementioned laws regarding suspension periods for share transfers should be followed according to the amended regulations.
	If all of these bonds are converted, the maximum dilution ratio to the equity of existing shareholders would be approximately 4.84%. While this would lead to an increase in share capital and a dilution of earnings per share, it would also improve the financial structure by increasing equity capital, reducing the debt ratio, and strengthening the financial position, which would be beneficial for the Group's future operations and development.	If all of these bonds are converted, the maximum dilution ratio to the equity of existing shareholders would be approximately 3.79%. While this would lead to an increase in share capital and a dilution of earnings per share, it would also improve the financial structure by increasing equity capital, reducing the debt ratio, and strengthening the financial position, which would be beneficial for the Group's future operations and development.
Name of Custodian	None	None

As of the publication date of the annual report, March 20, 2025 Unit: NT\$

Type of Corporate Bond	First Domestic Unsecured Convertible Corporate Bonds (which are Sustainability-Linked Bonds)	
Issuance date	December 10, 2024	
Face value	NT\$100,000	
Issuance and trading location	Not applicable	
Offering price	NT\$100 per unit at par	
Total amount	NT\$8 billion	
Coupon rate	0%	
Term and Maturity Date	5-year term with a maturity date of December 10, 2029	
Guarantor Institution	None	
Trustee	CTBC Bank Co., Ltd.	
Underwriter	Yuanta Securities Co.	
Legal counsel	Louis & Chales Attorneys at Law, Ya-Wen Chiu	
Auditor	Deloitte Taiwan, Ya-Ling Wong, Hui-Min Huang	
Repayment Method	If no trigger events occur, except for the bondholders converting their bonds into TCC's common stocks in accordance with Article 12 of these Regulations, or TCC redeeming the bonds early under Article 21, or repurchasing and canceling the bonds through securities dealers, the Company shall repay the full face value of the convertible corporate bonds held by the bondholders in cash with a single payment within ten business days after the maturity of date these bonds.	
Outstanding Principal	NT\$8 billion	
Redemption or Early Repayment Terms	Please refer to the Issuance and Conversion Regulations	
Restrictive Clauses	Please refer to the Issuance and Conversion Regulations	
Name of Credit Rating Agency, Date, Corporate Bond Rating Results	Credit Rating Agency: Taiwan Ratings Corporation Rating Subject: Taiwan Cement Corporation Rating Level: twA+ Rating date: April 29, 2024 Credit rating agency: S&P Global Ratings Rating Subject: Taiwan Cement Corporation Rating grade: BBB- Rating date: July 5, 2024	
Additional Rights of Bondholders	Amount Converted or Exchanged into Ordinary Shares, GDRs, or Other Securities as of the Annual Report Printing Date	0
	Issuance, Conversion, Exchange, and Subscription Procedures	Please refer to Appendix I of the prospectus for the First Domestic Unsecured Convertible Corporate Bonds
Dilution Effects on Share Equity, and Impact on Existing Shareholders' Rights	Please refer to pages 171-172 of the prospectus for the First Domestic Unsecured Convertible Corporate Bonds	
Name of Custodian	None	

3.7.2 Convertible Corporate Bond Information

Type of Corporate Bond		2023 First Series Unsecured Euro-Convertible Corporate Bonds			
Item	Year	At the time of issuance	2023	2024	2025 (Note)
Convertible Corporate Bond Market Price	Highest	US\$99.690	US\$112.852	US\$112.091	US\$107.557
	Lowest	US\$99.690	US\$99.489	US\$103.805	US\$102.868
	Average	US\$99.690	US\$105.991	US\$107.374	US\$105.181
Conversion Price (NT\$/share)		NT\$37.27/share	NT\$37.27/share	NT\$36.16/share	NT\$36.16/share
Issue (Processing) Date and Conversion Price at Issuance			Issued on October 24, 2023 NT\$37.27/share		
Method of Fulfilling Conversion Obligations			Delivery of Issued Shares		

Note: Information for 2025 is up to the publication date of March 20.

Type of Corporate Bond		First Domestic Unsecured Convertible Corporate Bonds (which are Sustainability-Linked Bonds)		
Item	Year	At the time of issuance	2024	2025 (Note)
Convertible Corporate Bond Market Price	Highest	NT\$98.55	NT\$100.30	NT\$108.10
	Lowest	NT\$98.55	NT\$98.50	NT\$98.75
	Average	NT\$98.55	NT\$99.04	NT\$102.29
Conversion Price (NT\$/share)		NT\$36.50/share	NT\$36.50/share	NT\$36.50/share
Issue (Processing) Date and Conversion Price at Issuance			Issued on December 10, 2024 NT\$36.50/share	
Method of Fulfilling Conversion Obligations			Delivery of Issued Shares	

Note: Information for 2025 is up to the publication date of March 20.

Type of Corporate Bond		2024 First Series Unsecured Euro-Convertible Corporate Bonds	
Item	Year	At the time of issuance	
Convertible Corporate Bond Market Price	Highest	Not yet issued as of the publication date of the annual report	
	Lowest	Not yet issued as of the publication date of the annual report	
	Average	Not yet issued as of the publication date of the annual report	
Conversion Price (NT\$/share)		NT\$38.80/share	
Issue (Processing) Date and Conversion Price at Issuance			March 28, 2025 NT\$38.80/share
Method of Fulfilling Conversion Obligations			Delivery of Issued Shares

3.7.3 Exchangeable Corporate Bond Information:

None.

3.7.4 Shelf Registration Corporate Bond Issuance Status:

None.

3.7.5 Corporate Bonds with Warrants Information:

None.

3.8 Preferred Stock Issuance

3.8.1 Preferred Stock Information

		As of the date of the publication of the annual report, March 20, 2025	
Item	Issue (processing) date		December 13, 2018
			Stock Listing Name: Taiwan Cement Corp. 2nd Preferred Stock(TWSE:1101B)
		Face value	NT\$10
		Issue price	NT\$50 per share
		Number of Shares	Total number of shares: 200,000 thousand shares
		Total amount	NT\$10,000,000 thousand
Rights and Obligations	Distribution of Dividends and Bonuses	1. Dividends: The initial annual interest rate is 3.5%. On the day after five years from the issuance date (i.e., December 14, 2023), the dividend rate will be reset. The reset reference date is two business days in the Taipei financial market before the interest rate reset date (i.e., December 12, 2023). According to Reuters, the arithmetic average of the five-year IRS "TAIFXIRS" and "COSMOS3" at 11:00 a.m. on December 12, 2023, was 1.490%. Adding the interest rate spread of 2.5625% at issuance results in a new reset dividend rate is 4.0525% effective from December 14, 2023.	
		2. Dividend Payment: 1. Dividends are paid once a year in cash. Once the annual shareholders' meeting approves the financial reports and profit distribution proposals, the Board of Directors will set a record date for the dividend payments that can be distributed for the previous year. The dividend payments for the issuance year and redemption year are calculated based on the actual number of days issued in the current year. 2. If TCC generates profits after the annual closing of accounts, the Company shall first pay taxes, offset any losses, allocate a legal reserve, and add accumulated undistributed earnings. After setting aside a special reserve as required by the law, regulations, or actual needs, any remaining surplus may be used to distribute the second preferred stock dividends. 3. TCC has full discretion over the dividend distribution of second preferred stock. If there are no profits or insufficient profits after the annual closing of accounts, the cancellation of the second preferred stock dividend distribution will not be considered a default. 4. The second preferred stock is non-cumulative. Any undistributed or partially distributed dividends will not be carried forward or paid in future profitable years. 5. Apart from receiving dividends according to the conditions set forth in paragraphs (3) to (4) of this section, participation in the distribution of common stock Regarding the allocation of earnings and capital reserves as cash and capital contributions is not allowed.	

Issue (processing) date		December 13, 2018	
Item		Stock Listing Name: Taiwan Cement Corp. 2nd Preferred Stock(TWSE:1101B)	
Rights and Obligations	Distribution of Residual Assets	The shareholders of second preferred stock have priority over common shareholders in the distribution of TCC's residual assets. They share the same priority ranking as other preferred shareholders of TCC. However, this priority is limited to an amount not exceeding the outstanding preferred stocks, calculated at their issue price at the time of distribution.	
	Exercise of Voting Rights	The second preferred stock shareholders have no voting or election rights at TCC's shareholders' meetings, but they may be elected as directors. Shareholders of preferred stock have voting rights at preferred shareholders' meetings and shareholders' meetings concerning rights and obligations of preferred shareholders.	
	Other	When the Company issues new shares for cash, the second preferred stock shareholders and common shareholders have the same priority rights to subscribe for new shares.	
	Recovery or Conversion Amount	NT\$0	
	Outstanding Balance Not Recovered or Converted	NT\$10,000,000 thousand	
	Outstanding Preferred Shares	1. The second preferred stocks cannot be converted into common stocks, and second preferred shareholders do not have the right to request the Company to redeem their second preferred stocks.	
Market Price per Share	2024	Highest	NT\$49.40
		Lowest	NT\$46.00
		Average	NT\$47.71
	Current year as of March 20, 2025 (Note)	Highest	NT\$47.80
		Lowest	NT\$46.60
		Average	NT\$47.23
Market Price per Share	Amount converted or subscribed as of the publication date of the annual report	The second preferred stocks cannot be converted into common shares	
	Issuance, conversion, or subscription methods	None	
Impact of issuance conditions on preferred shareholders' rights, potential dilution of shares, and impact on existing shareholders' rights		None	

Note: Enter the information for the current year as of the publication date of the annual report.

3.8.2 Information on preferred stocks with warrants:

None.

3.9 Global Depository Receipt

As of the date of the publication of the annual report, March 20, 2025

Issue (processing) date		August 3, 2018	October 3, 2022	October 17, 2023
Item				
Issuance and trading location		EuroMTF	EuroMTF	EuroMTF
Total Issuance Amount		USD\$548,625,000	USD\$425,040,000	USD\$384,730,000
Unit Issue Price		US\$6.27 per unit	US\$5.06 per unit	US\$4.87 per unit
Total Number of Units Issued		87,500,000 units	84,000,000 units	79,000,000 units
Source of Securities Represented		Common stocks issued by TCC through cash capital increase	Common stocks issued by TCC through cash capital increase	Common stocks issued by TCC through cash capital increase
Amount of Securities Represented		437,500,000 shares	420,000,000 shares	395,000,000 shares
Rights and obligations of depository receipt holders		Rights and obligations are the same as those of common stocks	Rights and obligations are the same as those of common stocks	Rights and obligations are the same as those of common stocks
Trustee		Not applicable	Not applicable	Not applicable
Depository Institution		CitiBank	CitiBank	CitiBank
Custodian Institution		First Bank	First Bank	First Bank
Outstanding Balance			100 units	
Method of Allocation for Issuance and Ongoing Related Expenses		To be covered by TCC	To be covered by TCC	To be covered by TCC
Important Agreed Terms of the Depository and Custody Agreement		As outlined in the Depository and Custody Agreement	As outlined in the Depository and Custody Agreement	As outlined in the Depository and Custody Agreement
Market Price per Unit	2024	Highest	US\$5.600	
		Lowest	US\$4.840	
		Average	US\$5.126	
	For the current year up to March 20 (Note)	Highest	US\$5.350	
		Lowest	US\$4.580	
		Average	US\$4.991	

Note: Enter the information for the current year as of the publication date of the annual report.

3.10 Employee Stock Options:

None.

3.11 Restricted Employee Shares:

None.

3.12 New Shares Issuance due to Mergers, Acquisitions, or Acquisition of Shares of Other Companies:

None.

3.12.1 Professional opinions from the lead securities underwriter on the issuance of new shares due to mergers, acquisitions, or acquisition of shares of other companies in the most recent quarter, and their implementation:

Not applicable.

3.12.2 Basic information table of other company:

Not applicable.

3.13 Implementation of Capital Allocation Plans

1. Plan Details and Implementation

- (1) 2024 Issuance of the First Domestic Unsecured Convertible Corporate Bonds:
1. Capital Allocation Plan: Investment in overseas subsidiaries and repayment of bank loans.

2. Approval Date and Reference Number: December 10, 2024, Financial Supervisory Commission Document No.11303592041.

3. Total Capital Required for This Plan: NT\$8,000,000 thousand.

4. Source of Funds: The First Domestic Unsecured Convertible Corporate Bonds.

5. Plan Items and Implementation:

Plan Items	Implementation	Main Products	As of March 20, 2025	Reasons for Being Ahead of Schedule or Delays, and Improvement Plans
Investment in Overseas Subsidiary - TCC Dutch	Disbursement Amount	Planned	1,926,000	Funds raised domestically for transfer to overseas subsidiaries are waiting approval from the Investment Review Commission.
		Actual	0	
	Implementation Progress (%)	Planned	100.00%	
		Actual	0.00%	

Plan Items	Implementation	Main Products	As of March 20, 2025	Reasons for Being Ahead of Schedule or Delays, and Improvement Plans
Repayment of Bank Loans	Disbursement Amount	Planned	6,074,000	Completed as planned.
		Actual	6,074,000	
	Implementation Progress (%)	Planned	100.00%	
		Actual	100.00%	
Total	Disbursement Amount	Planned	8,000,000	
		Actual	6,074,000	
	Implementation Progress (%)	Planned	100.00%	
		Actual	75.93%	

2. Implementation Assessment

- (1) Regarding the funds raised through the issuance of the first domestic unsecured convertible corporate bonds in 2024, Item 1 was intended for investment in the overseas subsidiary, TCC Dutch, to repay bank loans. However, as this is still waiting for approval from the Investment Review Commission, it has not yet been implemented as of publication date of the annual report. For more details, please refer to the Market Observation Post System.
(https://mopsov.twse.com.tw/mops/web/bfhtm_q2)
- (2) Regarding the funds raised through the issuance of the first domestic unsecured convertible corporate bonds in 2024, Item 2 was intended for repayment of bank loans. The expected benefit was to reduce financial burden. There is no significant difference between the expected benefits and the actual outcomes. For more details, please refer to the Market Observation Post System.
(https://mopsov.twse.com.tw/mops/web/bfhtm_q2)

04

Business Overview

4.1 Business Operations

4.1.1 Business Scope

Taiwan Cement Corporation (TCC)'s primary business is the production and sales of cement products. Other departments are engaged in the following businesses:

- Cement Department: Specializes in production, processing, and sales of various cement products.
- Electricity & Energy Department: Focuses on thermal power generation, solar power generation, wind power generation, and geothermal power generation for the development and operation of power plants. It also engages in research, development, production, and sales of rechargeable lithium-ion batteries and battery modules.
- Other Departments: Engaged in marine and land transportation, production and sales of heat-resistant materials, construction related to environmental pollution control.

Current primary products and their sales ratio:

Department	Main Products	Sales Ratio
Cement Department	Cement and ready-mixed concrete	76.31%
Electricity and Energy Department	Power supply, Energy Storage, and Rechargeable lithium-ion battery	20.52%
Other Departments	Marine and Land Transportation	3.17%
Total		100.00%

4.1.2 Industry Overview

4.1.2.1 Cement Department

• Current Status and Product Development

We are a mature cement company with stable demand. In terms of cement kiln capacity, the expiration of mining rights in western Taiwan in 1997 led to the shutdown of many production facilities. As a result, the total registered capacity of the Taiwan Cement Manufacturers' Association currently stands at 16.84 million tonnes, though some facilities have ceased or reduced production. In 2024, member companies produced a total of 9.876 million tonnes of cement domestically, while the annual domestic cement consumption reached 13.34 million tonnes, averaging 569.93 kilograms per person per year.

The domestic real estate market, affected by policy impacts from the Equalization of Land Rights Act, has not seen a significant decline, and previously expedited construction projects are still progressing. However, labor shortages in the construction industry remain unsolved. It is expected that construction volume will gradually decrease due to longer construction periods, and overall market development is predicted to slow and fluctuate. In terms of building permit applications and new construction floor areas, growth is expected to maintain at 5% in 2024. In Mainland China, factors such as population decline, aging demographics, and rising local government debt are suppressing investment, leading the economy to experience weaker potential growth. The challenges in China's real estate market are expected to persist. From a medium to long-term perspective, the overall economy is affected by factors such as a slowdown in consumer demand, major adjustments in the real estate industry, shifts in the supply chain which, when combined, will lead to slower economic growth in China.

Looking ahead to 2025, S&P Global's latest forecast predicts global economic growth of 2.5%, down from 2.7% for 2024. According to the latest estimates in the Executive Yuan's administrative report, domestic demand will support moderate economic growth, with the country's economic growth rate expected to exceed 3% in 2025, outperforming the global average. This is driven by favorable monetary and fiscal policies that will contribute to overall positive economic growth.

TCC's product range primarily includes Portland Type I cement, with a specialized focus on providing special cements for public construction projects. To offer more environmentally friendly, low-carbon alternatives, TCC launched Portland Limestone Type IL Cement on January 1, 2024, providing consumers with a more sustainable option. In addition, pre-mixed concrete plants have begun producing low-carbon limestone cement concrete. With the growing emphasis put on the importance of carbon reduction and environmental protection, this innovative product is expected to be a competitive choice in the market.

• The connections between up-, mid-, and downstream sectors of the industry

The cement industry's related sectors include upstream industries such as the extraction of limestone, clay, and silica sand by the mining industry, the provision of iron slag and furnace slag materials by the steelmaking industry, the supply of gypsum and limestone by the non-metallic mining industry, and the provision of fly ash and desulfurization gypsum by the power generation industry. Additionally, supporting industries such as electricity supply, gas fuel supply, railway transportation, automobile transportation, and maritime shipping complement the manufacturing process.

Downstream sectors that require cement products include the construction industry, ready-mix concrete industry, cement products industry (such as concrete pipes, concrete bricks, and precast culverts), and others (such as oil and gas drilling geological engineering).

4.1.2.2 Electricity and Energy Department

Current Status and Product Development

1. Electricity

A stable supply of electricity and sustainable development of the electricity industry are both crucial to people's livelihoods, industrial competitiveness, environmental protection, and national security. Taiwan's electricity industry is entering its 30th year since private enterprises were allowed to establish power plants in 1995. However, the overall power industry has not seen any major changes since 2009. For a long time, the state-owned Taiwan Power Company ("Taipower") has operated the entire power industry. While Taipower coordinates its operation with the country's economic development goals, it also follows its own "Long-term Power Development Program" to introduce new developments in the power industry.

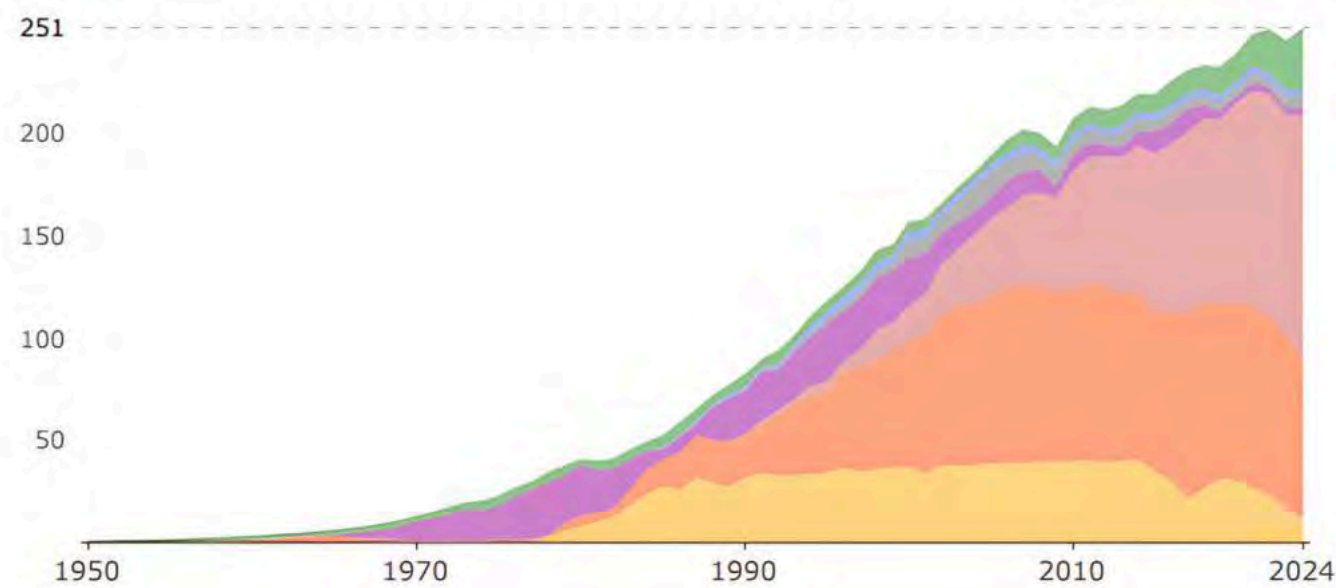
However, after 1989, rapid economic growth led to a surge in electricity demand (see the figure below – Power Generation and Purchases by the Taipower System over the Years). The reserve capacity rate dropped sharply in recent years (2014 to 2018). The actual reserve capacity rate even fell below the 15% target value mandated by the government (see the figure below - Reserve Capacity Rate). In 2019, the peak load reached 37.07 million kW, followed by the deactivation of the No. 2 generator of the First Nuclear Power Plant, the commercial transfer of the new Tunghsiao Gas-fired Power Plant, and increased installation of photovoltaic systems. Units 1 and 2 of the Xiehe Oil-fired Power Plant were deactivated in 2020, but new units such as the Linkou (ultra-supercritical coal-fired), Talin (gas-fired) and Tunghsiao (gas-fired) power plants were initiated. With the commercial operation of these plants and the injection of renewable energy, the reserve capacity rate increased to 16.4%.

The Directorate-General of Budget, Accounting and Statistics of the Executive Yuan has announced that the economic growth rate in 2024 was 3.94%. Considering factors such as the semiconductor industry expansion and electric vehicle promotion policies driven by AI technology, the average annual growth rate of electricity demand from 2024 to 2028 is projected to be around 2.5%. Among them, electricity demand for AI technology is expected to increase by approximately 2 million kW by 2028, roughly 8 times the level of 2023. With stable application trends, the average annual growth rate of electricity demand from 2024 to 2033 is estimated to rise to about 2.8%.

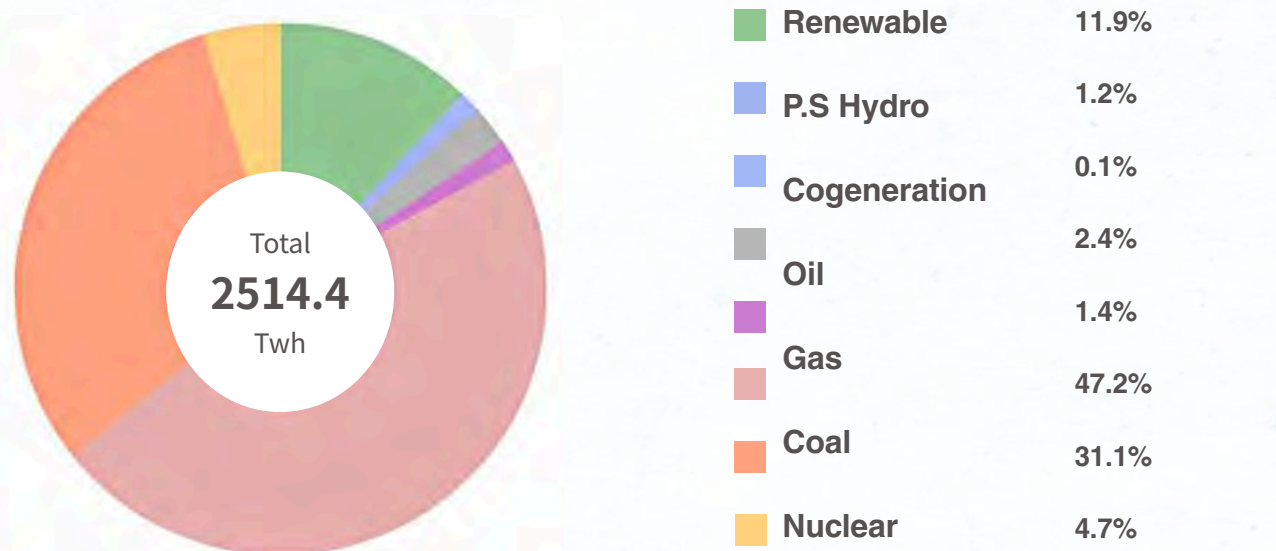
History of Net Power Generated and Purchased by Energy Type

Unit : TWh

Each type

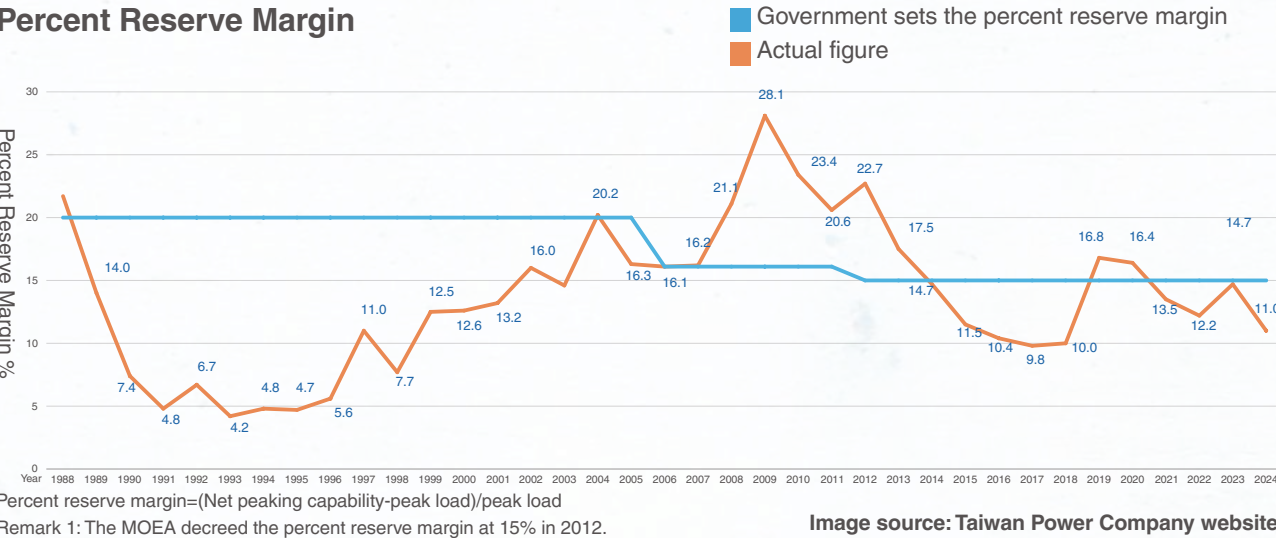


Net Power Generated and Purchased in 2024



Note : Hover over the area chart to switch the year of the pie chart
Image source: Taiwan Power Company website

Percent Reserve Margin



Since 2006, rising international fossil fuel prices and the challenges of global warming have severely impacted the operating environment of the electric industry. Low-carbon economy, low-carbon energy and low-carbon electricity will be central goals for global development. In order to ensure the sustainable development of the electric power industry in the face of the lack of domestic energy production and the necessary trend of greenhouse gas reduction, efforts are being made to develop low-carbon electricity on the supply side while promoting energy conservation and improving efficiency on the demand side. As a result, the electric power industry is entering an era of "energy saving and carbon reduction."

The Electricity Act was enacted in 1947 and has not been amended in over 50 years since its last revision in 1965. As a result, the electric power industry has experienced a long-term monopoly, leading to slow liberalization, a lack of competition and the basis of comparative performance of operation. Recognizing that electricity market reform is a global development trend and in response to changing times and the needs of national economic development, the Legislative Yuan finally revised and promulgated the Electricity Act on January 26, 2017. The key points of the revised law are summarized as follows: (1) Promote green electricity first; (2) Establish open and transparent electricity trading platforms.

The Bureau of Energy has gradually revised the relevant sub-laws of the Electricity Act and established measures accordingly. With the release of the Rules for Setting Up An Electricity Trading Platform by the Ministry of Economic Affairs on June 29, 2021, and the official launch of the trading platform on July 1, 2021, TCC has been actively participating in providing training courses for employees regarding the electricity trading platform to obtain trader qualification licenses and engaging in the domestic electricity market. Furthermore, we continuously monitor changes in laws and regulations to adjust our plans and long-term development goals as needed.

Notable events in Taiwan's power industry in recent years include:

- In 1995, the first and second phases of permitting the establishment of private power plants began.
- In 1997, the Kyoto Protocol was enacted.
- In 1999, the third phase of permitting the establishment of private power plants began.
- In 2005, GHG emission inventories in the energy industry were first taken.
- In 2006, the fourth phase of permitting the establishment of private power plants began.
- In 2015, the Greenhouse Gas Reduction and Management Act was announced.
- In 2017, the amendments to the Electricity Act were announced.
- In 2018, a referendum on energy issues was conducted.
- In 2019, the Renewable Energy Development Act was released.
- In 2020, the government announced Key Points for Setting up Trial Platforms for Auxiliary Services and Spare Capacity Transactions.
- In 2021, the Trial Platforms for Auxiliary Services and Spare Capacity Transactions was officially launched.
- In 2023, the Greenhouse Gas Reduction and Management Act was amended and replaced with the Climate Change Response Act.
- In 2024, the Fee-charging Rates of Carbon Fees was announced.

TCC Group's TCC Green Energy is dedicated to the construction and management of renewable energy power plants, with the goal of integrating the benefits of various renewable energy sources. The table below presents the current renewable energy power plant system construction.

Installed and in Operation			Under Construction		
Site Location	Energy Type	Capacity	Site Location	Energy Type	Capacity
Zhangbin Industrial Zone	Solar Power	2 MW	Chiayi Yiju	Solar Power	22.1 MW
	Solar Power	10.1 MW	Taitung Hongye	Geothermal Power Generation	1 MW
	Wind Power Generation	16.2 MW	Chiayi Budai	Solar Power	60 MW
Chiayi Yiju	Solar Power	43.4 MW	New Taipei Shimen	Wind Power Generation	5.4 MW
Changhua Fangyuan	Wind Power Generation	14.4 MW	Hoping Industrial Zone	Ocean Energy	2 MW
CSRC Group LAMT plant	Solar Power	725 KW			
TTSC Dadu plant	Solar Power	424 KW			
TTSC Linyuan plant	Solar Power	456 KW			
E-One Moli Tainan Plant	Solar Power	497 KW			
FDC International Hotels Employee Dormitory	Solar Power	99 KW			
Molie Quantum Energy Kaohsiung Xiaogang Plant	Solar Power	2.1 MW			
Zhangbin Industrial Zone	AFC ESS	5 MW			
	E-dReg ESS	4.9 MW/6.8 MWh			
Hoping Industrial Zone	E-dReg ESS	100MW/311.4MWh			

Taiwan's renewable energy policy involves regular reviews of electricity demand and planning of the power development by the government. The current goal for 2030 is to source 30% of electricity from green energy, 20% from coal, and 50% from natural gas. Among these, photovoltaics, which is a relatively mature technology, aims to reach 31 GW by 2030, with a total installed capacity of approximately 14 GW as of the end of 2024. The target for onshore wind power is 1.2 GW, with around 900 MW already achieved.

The current plan of renewable energy power plants promoted aligns with the national energy transition and meets future green energy demands, taking into account both domestic and international carbon tax fees. In line with our corporate social responsibility, we also prioritize biodiversity in our renewable energy development. For instance, along with experimenting with different species in fishery-photovoltaic power plants, the country's largest solar-wind hybrid power plant is conducting trials with sheep grazing.

2. Energy

(1) In recent years, driven by advancements in science and technology and the trend of energy transition, the traditional vehicle market has gradually shifted towards electrification, leading to the vigorous growth of the global green energy vehicle market. According to a Bloomberg New Energy Finance report, global demand for lithium-ion batteries will continue to grow, surpassing 2,300 GWh by 2031, with approximately 88% of that demand coming from electric vehicles. However, widespread adoption has as yet been hindered due to charging times, insufficient battery capacity, and safety issues. Recently, major international manufacturers have invested in the development of high-power, high-capacity, and high-safety battery technologies to solve the above problems.

Countries have set phased goals for electric vehicle policy. For instance, Norway plans to ban the sale of fuel vehicles by 2025. Other countries, such as the United Kingdom, the Netherlands, Germany, and Denmark will fully ban the sale of fuel vehicle by 2030. France announced in 2017 that it would stop selling fuel vehicles from 2040 to align with the goals of Paris Agreement. Moreover, Japan's revised version of the Green Growth Strategy, published in June 2021, stated a target for electric vehicles must account for 100% of new car sales by 2035.

Driven by the policy goals of various countries, major international car manufacturers have also announced relevant electric vehicle development policies.

- Germany's Mercedes-Benz Group will invest over 40 billion euros between 2022 and 2030 to accelerate the research and development of electric vehicles, aiming to establish eight battery factories across three continents. By 2030, plug-in hybrid vehicles and fully electric vehicles are expected to account for more than half of its global sales.
- Volvo Cars announced that it would stop producing gasoline and diesel vehicles starting in 2019, shifting entirely to fully electric and hybrid vehicles. By 2024, it will phase out its gasoline and diesel vehicle business completely. It also aims to sell 1 million electric and hybrid vehicles by 2025.
- Honda announced that by 2030, two-thirds of its vehicle sales will come from electric vehicles.
- Germany's Volkswagen Group (VAG) announced plans to invest 89 billion euros in electric vehicles and digitalization over the next 5 years. Of this amount, 52 billion euros will be allocated to electric vehicle research and development, while 30 billion euros will be used for software and autonomous vehicle development.
- General Motors aims to sell 1 million electric vehicles worldwide by 2025 and is committed to producing only electric vehicles starting 2035.

In addition to advancing low-carbon technologies for ground transportation, energy transformation is also driving the aviation industry toward decarbonization. At COP26, the aviation industry proposed a net-zero commitment by 2050, which is the only industry to do so on a global scale. According to the Waypoint 2050 report released by the Air Transport Action Group (ATAG), short-haul transportation with less than 100 seats are expected to switch to electric and hybrid power systems, with transition beginning in 2035.

Morgan Stanley has estimated that the global market size for electric aircraft, including eVTOL and UAM, under an optimistic scenario where technological advancements and regulatory policies can be opened up in a timely manner, the market could reach 2.9 trillion US dollars by 2040. Airlines such as United Airlines, Delta Airlines, jetBlue, American Airlines, Virgin Airlines, Asian Airlines, and cargo DHL and aircraft leasing companies such as Avolon are actively working toward decarbonization. These companies are cooperating with electric aircraft operators and setting procurement targets. For example, United Airlines has signed procurement agreements with many electric aircraft manufacturers, with plans to purchase at least 350 aircraft from an electric aircraft manufacturer, contributing to a significant procurement volume in the next decade.

TCC Group's E-One Moli Energy is an industry leader, holding a high market share in the electric aircraft eVTOL and UAM market. The company has carried out preliminary introduction, testing and development, and conducted technical research and improvement based on customer requirements. As various electric aircraft enter into service, E-One Moli Energy's technology is well-equipped to connect with the industry and brings excellent business opportunities.

Lithium-ion batteries are mainly classified according to various anode materials. Graphite is mostly used for negative electrode materials. Different anodes will directly affect the capacity, lifespan, operating temperature, stability, and even price of the battery. The current mainstream lithium-ion battery shapes are divided into three categories: cylindrical, prismatic, and laminated batteries.

Compared with the other two types of batteries, cylindrical batteries have the longest development time, the most mature production technology, and the highest degree of automation. The battery sizes are divided into 14500 (capacity usually less than 1.0Ah), 16340 (0.7~0.8Ah), 18650 (2.3Ah~3.6Ah), 26700 (2.0Ah~3.0Ah), 20700 (3.0Ah~4.0Ah), 21700 (4.0Ah~5.0Ah), and 4680 (higher than 20Ah), etc. Among them, 18650 is the most widely used in the market. However, under the gathering effect of electric vehicle manufacturers such as Tesla, 21700 batteries replacing 18650 has become an inevitable trend.

Since its establishment, E-One Moli Energy has focused on the development and production of cylindrical lithium batteries, primarily offering with 18650 and 21700 models. The company uses the most advanced NCA (nickel-cobalt-aluminum) material for the anode material. In 2021, when major global battery manufacturers dominated the market, E-One Moli Energy took the lead in launching products with the highest capacity of 4.5Ah, high power of 100W discharge, and 12-minute (5C) fast charging capabilities, which received a strong market response. The Company plans to further launch high-end battery cells of 5.0Ah and 6.0Ah or more.

(2) Regarding energy policies, many countries are working toward achieving net-zero emissions. The use of green electricity and the adoption of EV100 are becoming key trends for businesses. As green electricity becomes more prevalent and the number of fast charging stations for electric vehicles continues to increase, the power grid is facing significant challenges. However, these challenges also present considerable market opportunities for energy storage solutions.

In 2023, TCC Group's NHOA.TCC launched the EnergyArk1000, focusing on industrial energy storage solutions. This product has been deployed across Taiwan for both front-of-the-meter and behind-the-meter applications, allowing NHOA.TCC to participate in all services on the Taipower electricity trading platform, demonstrating the product's stability. In 2024 and 2025, NHOA.TCC introduced a new product, EnergyArk400, targeting EV charging stations, as well as commercial and industrial sites facing grid instability and feeder capacity issues. Key features of EnergyArk400 include plug-and-play installation, a compact footprint, and high power output. EnergyArk400 is designed to capture the EV charging and storage market. The first charging and storage site for Volkswagen is expected to be completed in the third quarter of 2025, providing a stable and fast charging experience for Volkswagen electric vehicles.

Europe has a higher penetration rate of green electricity compared to Taiwan, and the number of electric vehicles is several times greater. However, as Europe undergoes its energy transition, the grids are not fully prepared, resulting in negative electricity prices and increasing lack of power to support the construction of EV charging stations. NHOA.TCC is also actively expanding its presence in the European energy storage market. In 2024, the first EnergyArk1000 product was deployed in collaboration with the renowned A.ROMA hotel in Rome, Italy. The energy storage system helps the hotel reduce electricity costs, provides sufficient power for its fast charging stations, creates a virtual power plant to stabilize the regional power grid. Additionally, in the first quarter of 2025, two more EnergyArk1000 products will be installed for industrial applications in Portugal. Furthermore, over 65 EnergyArk400 products will be deployed across Europe within a year, establishing a distributed power system. These energy storage systems will participate in power trading, enhancing power grid stability and create virtual power operational platforms, as NHOA.TCC enters the European market with its safest EnergyArk services.

(3) In 2024, TCC Group's NHOA Energy's operation reached nearly 1,010 MWh, up from 850 MWh at the end of 2023 and 126 MWh at the end of 2022, marking a significant milestone in its global market standing.

NHOA Energy positions itself in the market as a complete system provider, offering cutting-edge technology, seamless execution from system design to operation, and world-class service. While battery cells are sourced from top-tier third-party suppliers, NHOA Energy uses its own power electronics products (including power conversion and energy management systems) to deliver the best-performing solutions to customers. The systems are typically delivered on a full turn-key basis, tailored to customer requirements, including civil works, on-site installation, and interconnection activities. Such activities are usually outsourced to selected local partners, while NHOA Energy retains supervision and overall responsibility for project delivery.

In 2024, BloombergNEF (BNEF) recognized NHOA Energy as a Tier 1 energy storage supplier, a recognition shared with only a few global leaders in the industry. BNEF's Energy Storage Tier 1 list is designed to provide clear differentiation among the hundreds of stationary energy storage suppliers in the market.

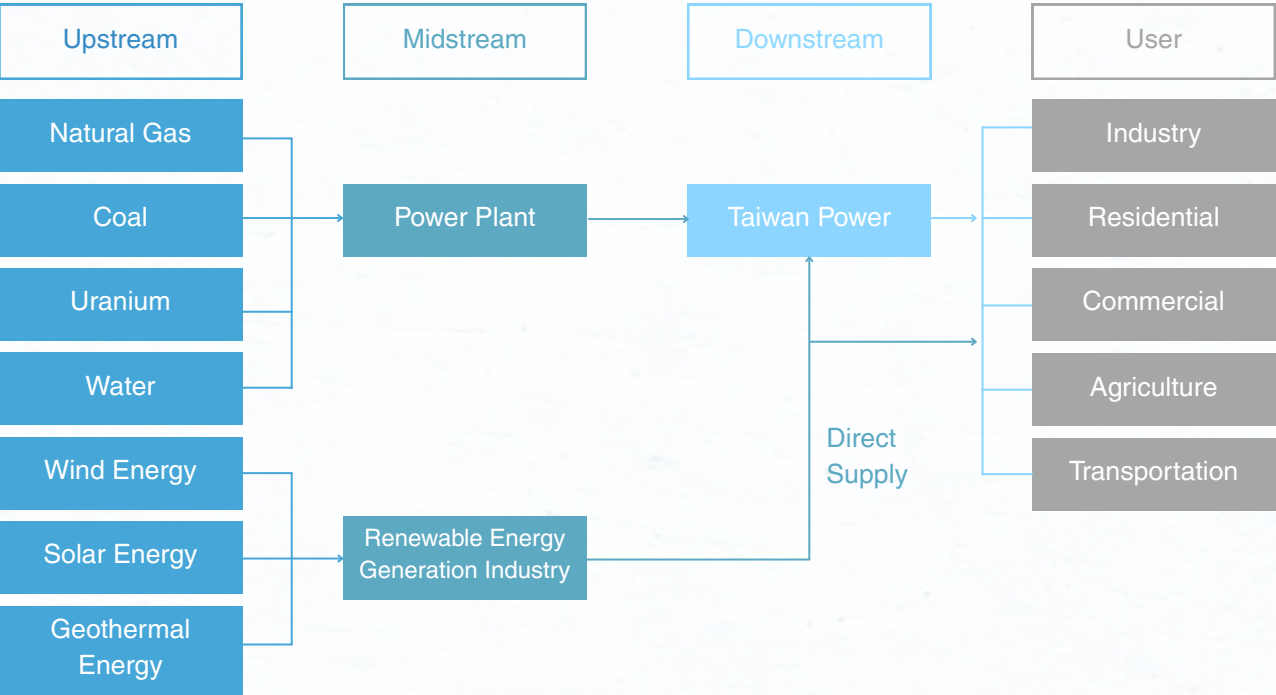
(4) TCC Group's Atlante has entered into several commercial agreements with eMSPs. (e-Mobility Service Providers). In addition, Atlante introduced direct payment options via credit card terminals at the end of 2023 and launched MyAtlante App in 2024. This enables Atlante to directly sell its charging services to end customers, including private individuals, businesses, and other commercial institutions. Moreover, integration with major navigation service providers ensures seamless network accessibility.

Atlante is entering the Southern European mobile charging market with fast charging technology and the use of energy storage solutions to address the challenges of limited grid connectivity. Atlante also leverages Vehicle Grid Integration (VGI) services to offer additional operational advantages. The mobile fast-charging infrastructure in Southern Europe still has significant growth potential and is expected to triple by 2030. This represents a highly promising business opportunity. Compared to Northern Europe, the electric vehicle penetration rate in Southern Europe remains lower, meaning that the electric vehicle market in the region is expected to experience substantial growth in the next decade.

• The connections between up-, mid-, and downstream sectors of the industry

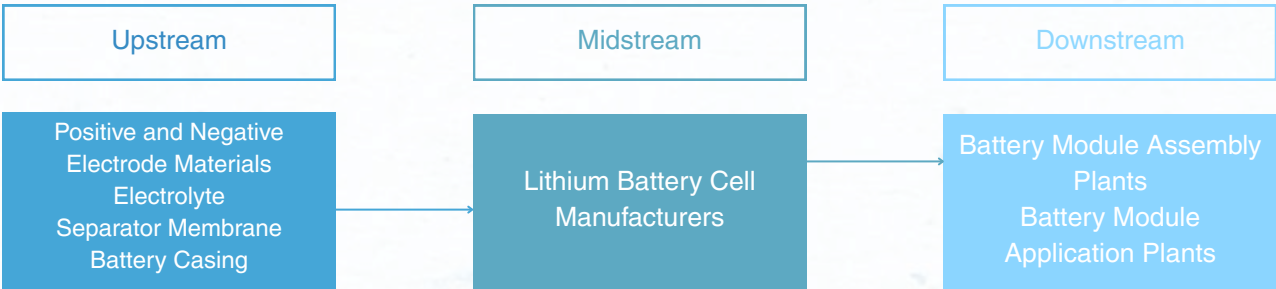
1. Electricity

Taiwan's main power generation methods are presented below. With the opening up of Taiwan's electricity market, new power generation industries are entering the market, particularly the renewable energy sector. In response to the government's green energy policy for energy conservation and carbon reduction, TCC Group is actively investing in renewable energy infrastructure.

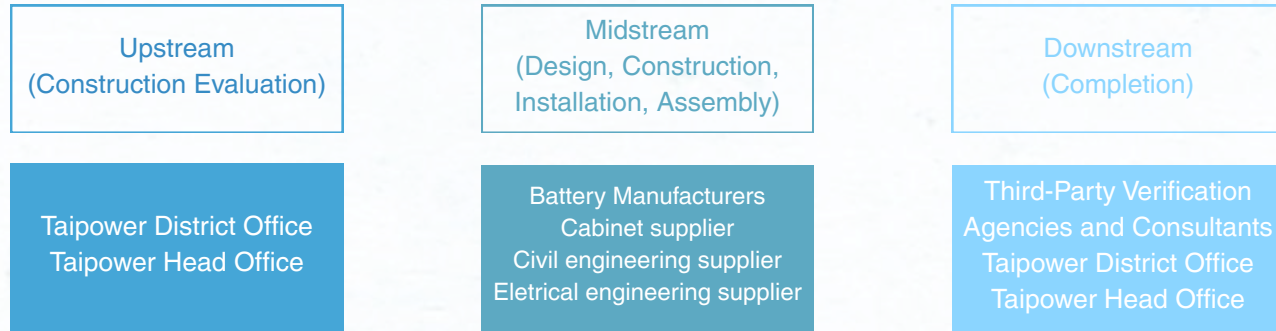


2. Energy

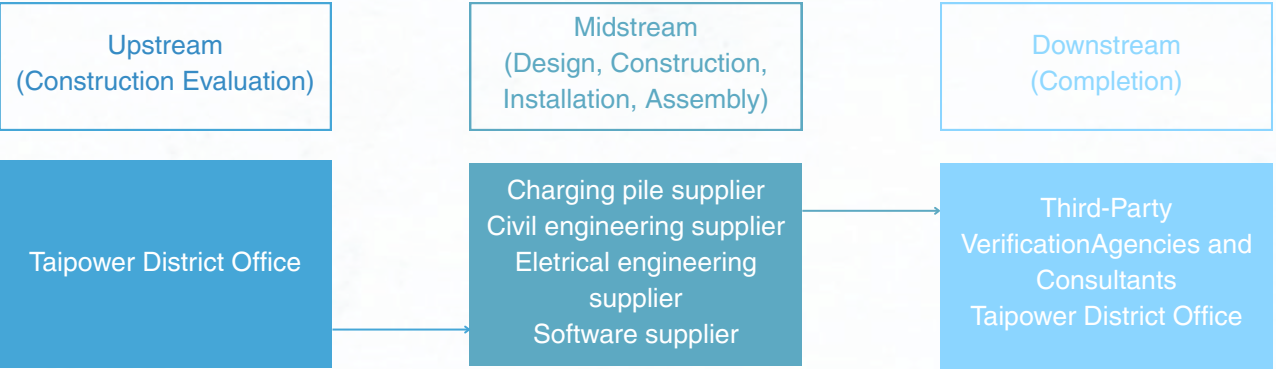
Battery Business:



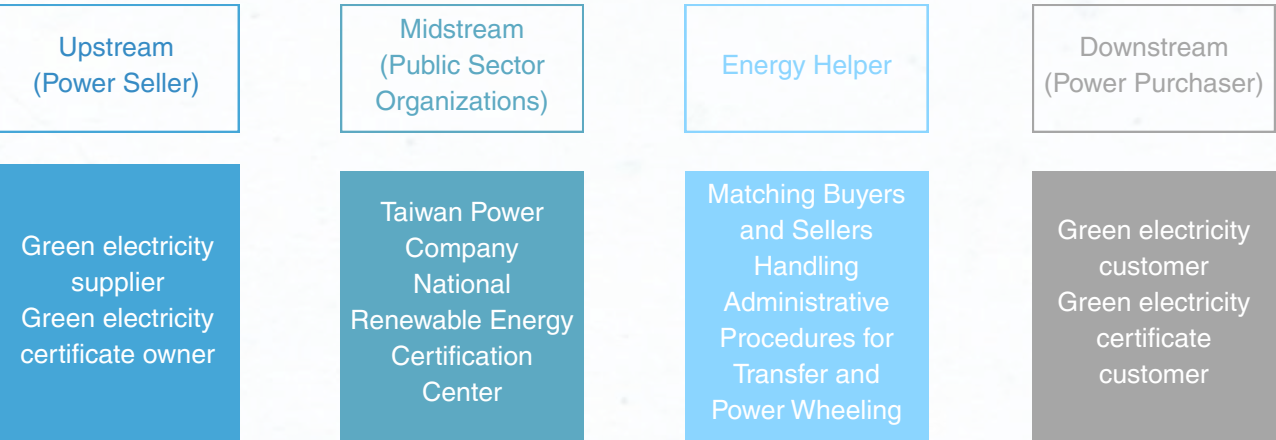
Energy Storage Business:



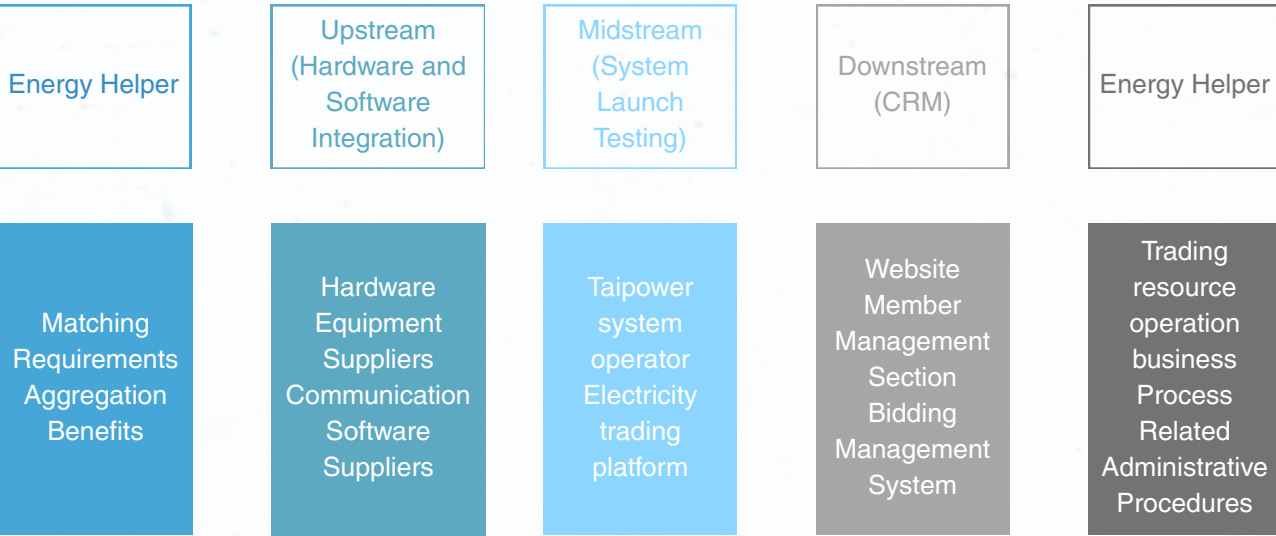
EV Charging Business:



Green Electricity Purchasing & Retailing:



Electricity Trading Resource Aggregation and Operation Business:



4.1.3 Overview of Technology and R&D

As of the publication date of this annual report for 2024 and 2025, the TCC Group has invested NT\$1,453,063 thousand and NT\$139,235 thousand in R&D expenses, respectively. The following provides an overview of the technology and R&D efforts across major operating departments:

4.1.3.1 Cement Department

1. TCC has the only specialized R&D center for cement and concrete in Taiwan, the lab’s research covers three major fields: cement, concrete and resource recycling. Our efforts are focused on our three core values: low-carbon construction materials, circular economy, and green energy.

2. To strengthen TCC's technical capabilities and competitive edge in low-carbon construction materials, the TCC Low-Carbon R&D Center was established. This center focuses on enhancing staff expertise, ensuring the quality of raw materials and products for cement and concrete, reinforcing TCC's professional image, and market competitiveness. In addition, it drives the development of new materials and low-carbon products, with a continuous commitment on advancing low carbon construction materials.

3. Aligned with TCC’s core focus on a circular economy, efforts will be made beyond the ongoing research on various product upgrades and quality optimization, TCC will take more approach in R&D of technology in the following areas:

- Widening the scope of resource recycling, such as blending and utilizing recycled pellets as well as industrial waste, waste incineration, and use of coal ash from power plants and slag from steel plants, plus treatment and applications for solid recovered fuel (SRF).
- Co-processing solid waste and hazardous waste in cement kilns.
- Lowering unit energy consumption, saving energy and reducing our carbon footprint.
- Adding oxygen-enriched combustion equipment and increasing the use of alternative fuels.

4. Successfully developed technologies or products include:

- Development and mass-production of Type II high-performance cement and Type II/V high-strength cement.
- Development and mass-production of Type IV cement with quality conforming to CNS specifications and special engineering requirements, earning qualification to use the CNS mark and the MIT smile mark.
- Development and mass-production of 10000 psi high-performance concrete.
- Development and mass-production of self-infilling concrete.
- Development and mass-production of high impermeability concrete.
- Development of testing and reutilization technology for calcium fluoride sludge.
- Development of detection technology for cement trace elements.
- Development of detection technology for trace elements in reducing slag.
- Development of applications and technology for oil mud and ash residues.
- Technology used in cement kiln treatment of household waste.
- Treatment technology to reduce crusting in the cyclone preheater for the cement kiln.
- Research and development of energy-saving and carbon-reduction technologies involving the application of thermoelectric materials, installed in rotary kilns for waste heat power generation.
- Microalgae farming technology to expand the scope of cultivation, and the trial development of astaxanthin cosmetics has been completed.
- Completed trial production of medical and beauty cosmetics and skin care products, including four products — cleansing bubble masks, crystal serum, anti-ageing double-effect pearls, hydrating energy-boosting cream and other cosmetics-related products. Meanwhile, we are developing health-related testing systems to ensure product quality.
- Development of haematococcus pluvialis red algae gift boxes, including red algae buckwheat noodles, seaweed, litsea cubeba and shichimi seven-flavored powder.
- Registration of the trade name and INCI name for Astarose cosmetics and ingredients has been completed.

- The 1.9 MWt pilot calcium circuit test plant carried out a 100-hour continuous operation test, with CO₂ capture efficiency reaching 85-93%.
- The new generation 500kWt steam hydration and multi-stage cyclone calcium loop carbon capture system was installed, with 1,200 hours of cumulative operating time.
- Proposal of 15 items and 31 patents for calcium-based carbon dioxide capture technology and microalgae cultivation-related technologies.
- Development of concrete mix ratios to mortar in grout and implemented DIY workshops for cement.
- Completion of the formulation of science-based targets initiative.

TCC's science-based target is, taking 2016 as the base year, to reduce greenhouse gas (GHG) emission in Scope 1 by 11% by the target year 2025. TCC is also committed to reducing Scope 2 GHG intensity by 32% over the same period.

- Completed formulation of the national Portland Cement products Carbon Footprint Product Category Regulations (PCR) and obtained Taiwan's first carbon footprint label for cement products.
- Completed the carbon footprint inventory and obtained certification for Type I cement (bulk) products from the Hoping Plant.
- Completed the carbon footprint inventory and obtained certification for 3000psi ready-mixed concrete products from the Daya Plant.
- TCC's Hoping, Suao, and RMC Plants have successively obtained the EPA's carbon footprint reduction label for cement products, acquiring the first carbon reduction label in Taiwan.
- TCC joined GCCA, an international organization of cement and concrete producers, to stay in line with international practices. The Company also discussed and studied possible paths for carbon neutrality with international benchmarking enterprises and scholars and formulated the carbon reduction path for TCC's cement and concrete in 2050.
- Obtained certification for low-carbon green building materials for concrete.
- TCC's Suao Plant has received the CNS mark for Portland Limestone Type IL Cement, while the Hoping Plant has been certified for both Portland Limestone Type IL Cement and Pozzolan cement.
- Acquired the carbon footprint reduction label certificate for concrete.
- Obtained TAF laboratory accreditation for concrete.
- Launched a series of low-carbon building materials: low-carbon cement, low-carbon concrete, and innovative, high-value building materials, including Ultra-High Performance Concrete (UHPC).
- Developed new materials for TCC UHPC (Ultra-High Performance Concrete) and established Cladding Panel production technology, becoming the first enterprise in the country with the capability to produce UHPC products.
- Completed the technical development of TCC 180 MPa UHPC (Ultra-High Performance Concrete).
- Developed high-value added technology for making high-performance Portland materials from waste glass (container glass, panel glass, photovoltaic glass). (Expected to obtain patent rights)
- TCC Hoping Plant and Suao plant obtained the ISO 14067 carbon footprint certificate for Portland Limestone Type IL Cement.
- TCC obtained official certification for low-carbon circular building materials from the Architecture Building Research Institute of the Ministry of the Interior's low-carbon (low embodied carbon) building evaluation and certification system. The certified cement types are Portland Type I Cement bulk cement from Suao plant and Hoping Plant, Portland Type II (MH) Cement from Suao plant, and concrete with 280 kg/cm², 350 kg/cm², and 420 kg/cm².
- TCC strictly adhered to the 1.5°C path set by the COP26 climate summit, established the Science Based Targets (SBT) for 2030, and committed to achieving net zero by 2050.

TCC's SBT 1.5°C 2030 near term target was approved on December 2, 2024. The covered areas include 14 cement plants in Taiwan and Mainland China. The baseline year is 2016, and the target year is 2030. Compared to the baseline year of 2016, the carbon emission intensity of Scope 1 is expected to decrease by 23.9%, Scope 2 by 64.4%, and, combined, Scope 1 and 2 by 26.8%. TCC's SBT 1.5°C 2050 net zero commitment was officially approved by SBTi on July 24, 2024.

- Completed the development of the on-site casting formula for UHPC by the end of 2024. At present, TCC has mastered the capabilities and formulas for both precast and on-site casting of low carbon UHPC, expanding the application of UHPC products.

5. Future R&D plans and the new products to be developed under the plans:

- (1) Continuing the enhancement of low-carbon products, the current research directions include:
- Optimizing the production conditions for producing Portland Limestone Type IL Cement.
 - Investing in research on the reuse of construction waste by integrating optimally processed construction waste into concrete and cement to reduce the proportion of cement and clinker, thereby achieving carbon reduction.
 - Developing low-carbon UHPC formulations.
 - Expanding the use of waste to extend the lifecycle of circular economy. For example, evaluating the application of recycled waste glass in concrete as a replacement for existing fine aggregates.
- (2) The development of carbon capture technology:
- Collaborating with thyssenkrupp Polysius (tkPOL), a subsidiary of the renowned German ThyssenKrupp Industrial Group, to advance the third-generation oxy-fuel combustion process and technology.
 - By adding pure oxygen during the cement calcination process, the concentration of captured carbon dioxide in the process will be increased to over 90%, while also reducing the energy required for carbon capture.
 - Mastering the core technology for commercial operation by 2030, aiming for an annual carbon dioxide capture capacity of 100,000 tonnes.
- (3) Other research projects include :
- Application of finely ground limestone in IL (15) cement concrete—Experimental planning: The focus of this project is to evaluate the performance of finely ground limestone powder in IL cement concrete.
 - Improvement of UHPC fire door panels: Currently, the EnergyArk Energy Storage Cabinet developed by TCC features an outer shell made of Ultra-High Performance Concrete (UHPC), while the fire doors are still made of steel. Therefore, the goal is to develop fire door panels using UHPC as the main material, ensuring that the entire EnergyArk Energy Storage Cabinet is constructed using the self-developed UHPC materials.
 - 3D printed concrete compositions, their products, and methods of manufacturing these products.

4.1.3.2 Electricity and Energy Department

1. Electricity

The core business of TCC Group’s Hoping Power Plant is coal-fired power generation. To reduce pollution emissions, the “Boiler Combustion Efficiency Improvement” Project for Unit No. 1 and “AQCS-Air Quality Control System Optimization” EPC Project for Unit No. 2 were completed in 2019 and 2022. To improve equipment efficiency and stable operation, the DCS control systems upgrade plan and the steam turbine low-pressure cylinder efficiency improvement for the two Units were completed in 2024.

Hoping Power Plant has gradually entered into its energy transformation plan. The renewable energy plan includes photovoltaic installations on the roofs of factory buildings, biomass alternative fuels, micro hydropower, as well as ocean thermal energy conversion and the development of the deep seawater industry.

1. Photovoltaic installations

The Hoping Power Company has completed the installation of rooftop photovoltaic systems in six phases across 15 buildings, with a total installed capacity of 1,470.78 kWp. This setup is expected to obtain 1,664 certificates annually. The plant is continuing with the rooftop solar PV installation for the seventh phases, with an estimated capacity of 330 kWp for the electrostatic precipitator and transformer rooms. The grid connection work is expected to be completed by the end of 2025. Once the rooftop solar PV installations are fully completed, they are expected to contribute to an annual carbon reduction of 1,670 tonnes.

2. Biomass alternative fuel project

In 2023, in collaboration with the gasification furnace specialist Valmet, the "Pre Study for the Gasification Furnace at the Ho-Ping Power Plant" was completed in November. This assessment included:

- ·Scope of supply for the gasification furnace
- ·Configuration of the gasification furnace
- ·Process design for the gasification furnace
- ·Basic engineering design for the gasification furnace

In 2024, evaluations related to biomass alternative fuels were carried out, entrusting engineering consultancy and professional boiler manufacturer to assist with the related assessment plan, and is expected to complete the evaluation process in the third quarter of 2025, which includes:

- ·Assessment and analysis of the transportation, storage, and handling of SRF (Solid Recovered Fuel) and wood pellets.
- ·Feasibility assessment of co-firing syngas produced by gasifier with boiler.

3. Micro hydropower project

The Hoping Power Company utilizes cooling water, with volumes up to 22 cms, primarily to condense the low-pressure steam generated during operations into water, which is then discharged into the ocean through the seawater cofferdam. Since the seawater cofferdam can provide potential energy, the plan is to install micro-hydropower units in the existing thermal discharge channels. A feasibility study has led to plans for a micro-hydropower generation system in the cooling water discharge channel of Unit 1, with an estimated capacity of 576 kWp. This project is expected to be completed by the second quarter of 2026 and will generate approximately 3.9 million kWh of electricity annually, contributing to a reduction of about 3, 245 tonnes of carbon emissions.

4. Ocean thermal energy conversion and its related industry

Regarding government laws and regulations, on January 18, 2024, the Ministry of Culture held a review meeting for the underwater cultural heritage survey report of the Hualien Ho-Ping Ocean Thermal Energy Development Project. The Ministry of Culture issued a notification letter dated February 6, 2024, that the report was "approved for review" and a further letter dated May 27, 2024, which confirmed that the underwater cultural heritage survey was "approved for filing". For environmental impact assessment, the environmental ecological survey was completed on August 29, 2024. A public meeting on the environmental impact statement of the "Hualien Ho-Ping Ocean Thermal Energy Development Project" was held on November 26, 2024. A public opinion survey report on the "Hualien Ho-Ping Ocean Thermal Energy Development Project" was submitted on December 17, 2024. The Environmental Impact Assessment was sent to Energy Administration of the Ministry of Economic Affairs on January 14, 2025.

In the terms of related industries, as well as continuing to collect information on deep-sea water industries, it is planned to conduct a deep seawater-related industry utilization and benefit analysis in 2025, which will serve as the basis for future development.

(5) Improvement and renovation plan for power plant unit efficiency

As the units have been in operation for over 20 years, a large-scale transformation of both units is planned to extend their lifespan, improve power generation efficiency and reduce coal consumption.

- Study the efficiency improvement and transformation plan of subcritical coal-fired power plants and conduct technical experience exchanges with power plants that have undergone similar transformation.
- Carry out feasibility assessment related to unit efficiency improvement, and study the scope of transformation, projects, expected performance, and project costs. This feasibility assessment is expected to be completed in the third quarter of 2025.

TCC Green Energy follows the government's energy transition policies by actively investing in renewable energy sources such as solar power, wind power, geothermal power, and large-scale energy storage facilities. These efforts include participating in Taipower's ancillary services and continuing the development of hydroelectric and ocean energy power plants to actively support the government's energy transition initiatives.

2. Energy

E-One Moli Energy focuses on the research, development, and production of high energy density and ultra-high power cylindrical lithium-ion batteries. The main details are as follows:

- (1) The battery research and development scope cover advanced material, advanced battery safety technology (covering aviation, automotive, and AI data center applications), interface engineering, cell design, advanced equipment and manufacturing process, battery electrical and thermal distribution simulation, and other fields.
- (2) Based on the concept of battery recycling, TCC not only continues to research advanced materials development and quality optimization, but also actively carries out technical research and development in the following areas:
- While enhancing high-power output, TCC is prioritizing improvements to battery cycle life. At the same time, TCC is strengthening its market positioning and product competitiveness while implementing the concept of second-use battery applications.
 - Evaluation of alternative solutions for organic solvents in the manufacturing process to achieve the ideal goal of green manufacturing.
- (3) Successfully developed technologies or products include:
- The research and development for mass producing the 21700-P50B models has successfully completed the mass production verification stage.
 - The research and development for mass producing the 21700-P60B models has successfully completed the engineering stage.
 - The research and development for mass producing 21700-P50S models has successfully completed the engineering stage.
 - The research and development for mass producing the 18650-P22S models has successfully completed the mass production engineering stage.
 - The research and development for mass producing the 21700-XA3 models has successfully completed the R&D engineering verification.
 - The development and verification of the X Series high ion conductivity and high magnification positive and negative electrode systems are complete.
 - The development of the second supplier of high-capacity silicon negative electrode material is complete.
 - The establishment of the next-generation Ni93 positive electrode system is complete, and a radial structure high-nickel positive electrode material has been introduced to improve stability.

(4) Future research and development plans and new products to be developed:

- BBU application products P30S and P50S.
 - Metal-doped high-nickel positive electrode materials.
 - Single crystal high-nickel system and thermally stable positive electrode materials.
 - High-capacity and superlattice composite layered positive electrode material (LLO).
- High capacity and stable advanced positive electrode materials.
 - High-temperature oligomer coated separator membrane.
 - Flame-retardant electrolyte and additives.
 - Construction of high-temperature stable interface chemistry.
- High-capacity negative electrode material platform.
 - High-capacity carbon-silicon composite negative electrode materials.
 - Optimization of high-proportion carbon-silicon composite material negative electrode formula.
 - In-situ expansion measurement technology.
- Ultra-high power 21700-XA3 cell and multi-tab system design and manufacturing.
 - Multi-tab copper welding.
 - Regulation of high-magnification cycle electrochemical system.
 - Multi-tab process.

TCC Energy Storage marks a new milestone in energy research and storage planning for the Group. The business scope encompasses energy storage systems, microgrids, and electric vehicle charging stations. As a provider of energy regulation and conservation solutions and services, its technological development covers software, hardware, and renewable energy.

- Software
Cloud-EMS successfully managed all trading items in Taiwan, including E-dReg, S-Reg, d-Reg, and supplemental reserve. It was applied in Taiwan's first case of reverse power flow participation in the electricity trading platform. Beyond Taiwan, Cloud-EMS plans to collaborate with local platform providers in Europe to optimize power dispatch algorithms for the European market. This will address Europe's fluctuating electricity prices and diverse ancillary services, expand AI module applications, and optimize the benefits of participating in electricity trading. By integrating various brands of charging stations for different customers, the charging and storage system will be modularized to manage power dispatch at EV charging and storage sites. Multiple sites will be aggregated to execute ancillary service commands when the grid requires it.
- Hardware
Besides the EnergyArk1000, TCC Energy Storage has developed the EnergyArk400 for the CPO and C&I markets. The battery utilizes 1C high-power cells with a capacity of 379 kWh, offering the advantages of occupying less than one parking space and Plug & Play modular construction. In October 2024, NHOA.TCC officially signed an energy storage cooperation agreement with Volkswagen Taiwan, and entered into an official contract with its distributor, Swire Group, in February 2025. The EnergyArk400 will be installed at Volkswagen Taiwan's fast-charging stations to provide energy services. Safety, high power efficiency, long lifespan, and Plug & Play will be the key competitive advantages of this product in the market.
- Renewable Energy
In addition to existing solar photovoltaic, onshore wind power, biomass energy, and geothermal energy projects, the TCC Group will research ocean thermal energy conversion technology through the stable ocean temperature differences brought by the Hoping Power Plant and Eastern deep seawater, with the potential to become a model enterprise for Taiwan's development of ocean thermal energy conversion.

4.1.4 Long-term and Short-term Business Development Plans

4.1.4.1 Cement Department

Short-term Development Plan

- 1. The cement industry in Taiwan is mature, so TCC’s primary goals are to maintain market share, reduce costs and increase profits. In 2024, TCC focused on promoting Portland Limestone Type IL Cement and PLC concrete, aiming to boost their sales share, reduce carbon emissions, and fulfill its Science Based Targets initiative (SBTi) commitments. Additionally, production of Portland Limestone Type IL Cement will fully begin in 2026, marking a significant step forward in the promotion of low-carbon cement.
- 2. Regarding its business in Mainland China, TCC has established cement plants in Guangdong, Guangxi, Jiangsu, Liaoning, Guizhou, Sichuan, Chongqing, Hunan, and Yunnan through self-construction, mergers, and acquisitions over the years. There are also grinding stations in Liuzhou (Guangxi), Fuzhou (Fujian), and Naxi (Sichuan). In 2024, our total annual production capacity in Mainland China reached 66.54 million metric tons, ranking 6th in clinker production capacity within China’s cement industry. In 2017, after the privatization of TCC International Holdings Ltd., we aligned with the industry’s policies on "green development", "supply-side reform", and "environmental protection", maintaining our leadership in regional market share in environmental protection processes while continuing to increase profits.
- 3. TCC Group’s Cimpor will focus on expanding its presence and capturing value across its value chain. Current initiatives include constructing a calcined clay plant in Ghana and a gypsum plant in Cameroon. In Europe, Cimpor is establishing a direct commercial presence in the UK and France, along with the formation of a trading company. Meanwhile, in Portugal, Cimpor is developing a maintenance company to internalize outsourced services in the initial stage and later offer services to third parties.

Long-term Development Plan

- 1. TCC is dedicated to boosting the sales share of Portland Limestone Type IL Cement, with the goal of fully replacing the higher carbon Portland Type I cement. Products with even lower carbon footprints are being explored to achieve TCC's NET ZERO carbon reduction target.
- 2. In Mainland China, the TCC Group has proactively established environmental companies that work alongside cement plants to co-process urban waste, industrial waste, and hazardous waste, among other circular economy initiatives, continually reducing carbon emissions.
- 3. TCC is committed to maintain its brand status in Taiwan while enhancing product quality and customer service in South China, Southwest China, and East China. The goal is to remain firmly established in Taiwan while expanding into Mainland China, with a particular focus on the South and Southwest markets, to sustain its leadership position in China's cement industry as long-term development. Furthermore, TCC is dedicated to developing alternative fuels and raw materials, reducing carbon emissions, and investing in renewable energy and energy storage solutions, with the ambition of achieving carbon neutrality by 2050.

(1) Projects for co-processing of cement kiln renewable resources (household waste)

- In December 2015, the Guizhou Anshun Plant launched its first cement kiln co-processing facility for renewable resources utilization in Mainland China, with a capacity of 200 tonnes/day.
- A supporting co-processing facility for renewable resources is planned to be established at the Shaoguan Plant in Guangdong. A 25-year domestic waste treatment agreement was signed with the district government in July 2016. The cement production line was established in the fourth quarter of 2021, and the renewable resource co-processing project, with a capacity of 200 tonnes/day, commenced operation in August 2022.

- TCC's Hoping Cement Plant co-processes general waste in Hualien County. At the end of 2019, the Hoping Plant signed a BOO (Build-Own-Operate) contract with the Environmental Protection Bureau of Hualien County. In February 2020, this BOO project underwent its first Environmental Impact Assessment (EIA) review, and in September 2020, it passed the EIA review. In March 2021, the plant obtained a building permit and began construction in July 2021. In July 2023, trial operation commenced, and in December 2023, an official operation approval letter was obtained from the Hualien County government. In 2024, the Hoping Resource Recycling Center co-processed 41,520 tonnes of general waste from Hualien.
- The Hunan Jingzhou Plant's cement kiln renewable resource co-processing project, with a capacity of 200 tonnes/day, received Environmental Impact Assessment approval in November 2021 and commenced operations in September 2022.

(2) Projects for Cement Kiln Co-processing Treatment of Solid and Hazardous Waste

- The Suao Plant's Projects for Processing Other Industrial Waste: In 2024, the Suao Plant assisted in processing a variety of industrial waste materials, such as calcium fluoride sludge, inorganic sludge, recycled granules, stone powder, electric arc furnace steelmaking slag, waste ceramics, waste plastics, non-hazardous oil sludge, waste synthetic fibers, metal smelting slag, waste foundry sand, waste wood, solid recovered fuel (SRF) and mineral fines.
- The Hoping Plant's Projects for Processing Other Industrial Wastes: In 2024, the Hoping Plant assisted in processing a variety of industrial waste, such as calcium fluoride sludge, coal ash inorganic sludge, electric arc furnace steelmaking slag, waste compression molding rubber, mineral fines, converter slag, construction waste, non-oily sludge, waste wood, solid recovered fuel (SRF), and waste synthetic fibers.
- Guigang TCC Dongyuan Environmental Protection Technology Co., Ltd. has been utilizing a cement kiln to co-process 330,000 tonnes of solid waste annually. In April 2020, the first phase of the project, which includes the disposal of 200,000 tonnes of hazardous waste and 30,000 tonnes of general solid waste per year, was put into operation. On November 30, 2021, the company was notified by the Guigang City Ecological Environment Bureau that it had been selected as the first batch of Ecological Environment Protection Publicity and Education Practice Demonstration Bases in Guigang. On December 12, 2022, it earned the designation of the third batch of Ecological Environment Publicity and Education Practice Bases in Guangxi by the Guangxi Zhuang Autonomous Region Ecological Environment Department.
- Jiangsu Juirong Plant's Second-Line Treatment Project for processing 50,000 tonnes/year of power plant fly ash began operations in October 2021.
- Guizhou Kaili Plant's 50,000-ton Annual Hazardous Waste Project received a five-year hazardous waste business license on November 9, 2021, and operation started in February 2022.
- Sichuan Guang'an Plant's Solid and Hazardous Waste Project (hazardous waste of 100,000 tonnes/year and general solid waste of 150,000 tonnes/year) received Environmental Impact Assessment (EIA) approval on May 14, 2021, a hazardous waste management license on December 30, 2022, and began operations in January 2023.
- Guizhou Anshun Plant's Fly Ash Treatment Project (Phase 1: 50,000 tonnes/year) began construction on January 29, 2023, for the 150 tons/day fly ash water washing production line. This marks Guizhou Province's first fly ash resource utilization project, expected to start operations in October 2024.

(3) Project for the Establishment of Construction Waste Treatment Facilities

- In February 2024, TCC’s Hualien Plant applied to the Hualien County Government for the establishment of a "Construction Mixture Resource Classification Processing Plant or Decoration and Renovation Waste Processing Plant." In April 2024, the Environmental Protection Bureau of Hualien County approved the application, and in August 2024, the trial operation plan was also approved. In December 2024, the project completed all trial operation tests. The results report is currently under review by the county government. Formal operations will begin upon completion of the review and issuance of the permit.

4.1.4.2 Electricity and Energy Department

Short-term Development Plan

1. Hoping Power Plant has already obtained various ISO certifications

- (1) ISO 14001 Environmental Policy:
 - Comply with environmental regulations and EIA commitments to prevent public disputes.
 - Continue to upgrade equipment and improve the performance of anti-pollution equipment.
 - Carry out waste classification and reduction and implement recycling.
 - Regularly supervise and engage in pollution prevention.
 - Establish and implement an environmental management and control system.
 - Conduct regular education sessions and reporting and promote public awareness through written communication.
 - Welcome external visits and with transparency and demonstrate environmental protection performance.
- (2) Implementation of the ISO 9001 quality management system:

Through the promotion of the quality management system the performance of equipment is continually improved, providing stable, reliable, and high-quality power services to our customers.
- (3) Implementation of the ISO 45001 occupational health, safety, and environmental management system:

Guided by the ISO 45001 occupational health, safety, and environmental management system, we provide a sound facility environment, reduce accidents and injuries, maintain zero safety violations, improve communication and foster harmonious development, and ultimately enhance the Group’s image.
- (4) Implementation of the ISO 27001 information security management certification:

By organizing and managing information effectively to prevent leakage of the company’s business secrets, ensuring smooth operations.
- (5) Implementation of the ISO 5001 energy management system certification:

The total electricity saving target for 2024 is 12 million kWh. By systematically managing energy processes, we aim to reduce greenhouse gas emissions and mitigate environmental impacts, and, consequently, reduce energy costs.
- (6) Advocate for the use of electric vehicles to transport auxiliary materials and limestone powder, reducing carbon emissions from diesel vehicles, and building charging stations at factories.
- (7) Establish an online monitoring and analysis system for boiler and steam turbine thermal performance, providing unit efficiency monitoring and operation maintenance.

2. After the old production line of the E-One Moli Energy Tainan plant was retired, the overall production capacity continued to grow. This year, we will continue to actively promote plant renewal projects to further enhance production efficiency and product quality. In terms of the high-end application market, Molie Quantum Energy gigafactory in Kaohsiung was officially completed and began trial production in 2023. The entire production line incorporates technologies to enhance material management, production line automation, AI analysis of production data, process management, and back-end order management and shipping. With an annual capacity of 1.8 GWh, it can supply power to 24,000 electric vehicles per year. The focus is mainly on producing high-end, high-capacity, and high-charge and discharge power size 21700 high-nickel ternary lithium batteries to ensure that the new plant's capacity meets the demand for advanced batteries in the electric aircraft and high-end electric vehicle markets. This will enable the optimal production capacity to implement research and development results.

3. NHOA.TCC

- (1) Stably operating seven large-scale energy storage sites in Taiwan (including Suao 35MW E-dReg, Hualien 100MW, and 50MW E-dReg energy storage), with a total volume of service capacity exceeding 200MW, thereby steadily increasing company revenue and profit.
- (2) Achieve an annual target of 90 million kWh for green electricity sales and power wheeling.
- (3) Complete the collaboration with Volkswagen Taiwan and used this project as a starting point to capture the Taiwan’s charging and storage station market. NHOA.TCC provides energy services with the EnergyArk400, lowering the threshold for customers to use energy storage and increasing the market share of EnergyArk products.
- (4) Deploy over 65 energy storage systems across Europe, expanding into various European markets and launching power trading operations.
- (5) Establish production line for UHPC cabinet at the Juirong Plant.
- (6) Continuously develop new products and optimize costs to enhance the competitiveness of EnergyArk products.
- (7) Develop industrial customers with EnergyArk400 and EnergyArk1000.
- (8) NHOA.TCC Green Power Technology (Hangzhou) conducts power trading in Mainland China, managing the demand of various cement plants with energy storage and photovoltaics, creating a virtual power plant.

Mid-term Development Plan:

- 1. TCC Group's Hoping Power Plant will undergo equipment upgrade:
 - Implementing two units of EP high unburned carbon fly ash recovery and reburning to achieve carbon reduction and coal conservation.
 - Converting gas-consuming drying equipment to electric heating dryers.
- 2. TCC Group's Molie Quantum Energy has steadily mass-produced on the first production line and completed the installation, trial production, and capacity release of the second production line in 2024. It has also successfully mass-produced the third-generation 5.0Ah high-capacity ultra-fast charging battery.

Long-term development plans

- 1. Hoping Power Plant will continue to establish small hydropower units for clean energy, ocean thermal conversion power generation, and conducting feasibility studies on carbon reduction technologies, including:
 - Biomass fuel transportation and storage systems, gasification furnace installation, synthesis gas introduction into boiler co-firing, and unit flow efficiency improvement and carbon reduction retrofit.
 - Set emission reduction targets and evaluate technical improvement plans for the current flue gas emission standards and successively completed unit air quality control system (AQCS) improvement projects in 2024.
- 2. TCC Green Energy will continue its commitment to the renewable energy sector, focusing on the development, construction, and operation of power plants in areas such as solar power, wind power, geothermal energy, ocean energy, and small hydroelectric power. In addition to this, the Company will conduct research into ocean energy, which holds significant potential for power generation.
- 3. NHOA.TCC will continue to expand energy markets in various countries, including the electricity and ancillary services market, with a focus on EnergyArk products. It will also develop C&I Solutions, enter the Japanese, European, and American markets, and initiate local power trading to become a virtual power plant operator specializing in energy storage solutions.
 - Establish distributed power systems in various countries to stabilize regional power grids.
 - Participate in power trading markets in various countries to become a virtual power plant operator.
 - Develop UPS+BESS solutions to provide competitive UPS solutions for AI centers and data centers.
 - Develop applications for second-life batteries.

4.2 Market and Sales Overview

4.2.1 Market Analysis

4.2.1.1 Cement Department

Sales Regions, Market Share, Future Supply and Demand, and Growth Potential of the Major Products

TCC's main products are cement and ready-mixed concrete, with sales covering both Taiwan and overseas markets.

The amount of Taiwan cement consumption in 2024 was 13.35 million tons, a increase of 2.5% from 13.02 million tons in 2023. In 2024, domestic sales of cement and clinker in Taiwan (including materials used in the ready-mix concrete plants) reached 4.61 million tonnes, an increase of 2.1% from 4.51 million tonnes in 2023, with a market share of approximately 34.6%.

In 2024, despite the impact of the government's stringent real estate policies on Taiwan's cement market, which led to a slight downturn in the overall economy, cement prices still remained stable, ensuring profitability.

In 2025, despite the ongoing challenges of a sluggish economic environment and tightening real estate policies, the electronic technology and manufacturing industries continue to drive new construction projects. As a result, cement demand is expected to remain stable. In 2025, TCC anticipates domestic sales of cement and clinker to reach 4.91 million tonnes. Domestic cement prices will remain reasonable, taking into account rising production costs and potential adjustments in commodity taxes.

TCC's primary export products are bulk cement and clinker. In 2024, TCC exported 83,700 tonnes of these products, a significant decrease of 52.4% from 176,000 tonnes in 2023. For 2025, TCC expects its export volume to be around 80,000 tonnes, anticipating further price declines in the international cement market due to a global economic slowdown. Although TCC had raised its export prices in 2025, high production costs have negatively impacted sales. Furthermore, in accordance with government export control policies aimed at reducing export volume, TCC will continue to decrease its export quantities.

In 2024, TCC's total domestic and export sales of cement and clinker (including materials used in the ready-mix plants) in Taiwan amounted to 4.693 million tonnes, marking a 0.09% increase from 4.689 million tonnes in 2023. The main reasons are the impact of earthquakes and natural disasters in 2024, along with the influx of low-priced cement imports from Vietnam, which have squeezed the market.

In 2025, TCC will continue its strategy to stabilize profitability. The sales target for its cement and clinker (including materials used in ready-mix plants) in Taiwan and overseas is set at 4.99 million tonnes, marking a 6.62% increase from 4.68 million tonnes in 2024.

In 2024, TCC sold 4.84 million cubic meters of ready-mix concrete in Taiwan and overseas, marking a 6.2% decrease from the 5.16 million cubic meters sold in 2023. In 2025, the sales volume of ready-mix concrete is expected to increase to around 5.25 million cubic meters, despite a gradual slowdown in real estate projects, factory construction, and public works. However, with a strong backlog of orders, shipment volume is expected to rise. Given the high costs of raw materials, TCC will adjust the selling price of its products to maintain stable profits.

In Portugal, Cimpor maintains a cement production capacity of 9 million tonnes and clinker capacity of 4.9 million tonnes across five plants located in Souselas, Alhandra, Loulé, Sines, and São Miguel (Azores Island). On top of this, Cimpor operates several ready-mix concrete plants, 10 active quarries, and two mortar plants. The Company holds an estimated market share of over 52% in Portugal. In 2024, Cimpor strengthened its Executive Committee to tackle emerging industry challenges and maintain its leadership in the Portuguese cement sector.

In Africa, Cimpor operates a bagging facility in Cabo Verde in Santiago Island, with a market share above 75%, up 2.7 percentage points from the previous year. Since beginning full operations in 2020, the cement grinding plant in Côte d'Ivoire has maintained stable sales and profits in 2024, despite a nationwide energy shortage, and its market share remains unchanged from the previous year. In Cameroon, the cement grinding plant in Kribi commenced commercial operations in January 2025, with an estimated first-year market share of 5%. With a cement capacity of 0.8 million tonnes and a calcined clay kiln capable of producing 240,000 tonnes of low-carbon cement, the plant experienced steady volume growth throughout the year.

The headquarter of TCC Group's OYAK Çimento located in Ankara, Türkiye. As a leading cement and clinker manufacturer operating across all seven regions of Türkiye, the company focuses on delivering high-quality, low-carbon products, including Portland Cement, Portland Composite Cement, Pozzolanitic Cement, and more. OYAK Çimento maintains the largest cement production capacity in Türkiye and is the market leader in net profitability.

Competitive Niches and Favorable Factors for Industry Development

TCC is Taiwan's largest and most historic cement and ready-mix concrete producer and seller, and also a leading example of successful vertical integration in the domestic market. With strong R&D capability and strict process control, our products are recognized for their superior quality and strong brand reputation. Moreover, with cement shipping locations and ready-mix concrete plants across Taiwan, TCC has a well-established sales network covering major metropolitan areas. This enables us to provide customers with top-quality products and services, reinforcing our competitive edge.

Since 2021, TCC has implemented a raw material and product traceability system for ready-mix concrete, certified by an impartial third party (TCRI - Taiwan Construction Research Institute). Customers can access inspection reports for materials and finished products via QR codes or email, allowing them to check for quality variability within TCC's system, demonstrating TCC's commitment to quality. In 2022, TCC's cement and concrete products received ISO 14064 greenhouse gas inventories and ISO 14067 carbon footprint from BSI, as well as the EPA's carbon footprint label.

Since 2023, TCC disclosed the carbon emissions of cement and concrete shipments, highlighting its efforts in carbon reduction. In October 2023, TCC launched its Portland Limestone Type II Cement, focusing on carbon competitiveness towards achieving the 2050 carbon neutrality goal.

- 1.In Taiwan, private and public construction, urban renewal projects, and social housing are still underway despite the strict government real estate policies and the near completion of the Forward-looking Infrastructure Development Program, keeping cement demand relatively stable. With inflation easing and signs of recovery in exports and the electronics industry, Taiwan's economy is expected to improve, suggesting stable operations in the cement industry.
- 2.In Mainland China, strong demand persists, driven by industrialization, urbanization, and economic development. At the same time, stringent environmental standards are being implemented and there are restrictions on new capacity construction. Off-peak production schedules. The implementation of carbon reduction policies is expected to gradually ease the issue of oversupply. As China's market matures, industry consolidation and increased concentration will continue. TCC will closely assess the economic conditions in China and utilizing its advancements in carbon reduction and efficiency to maintain its leadership in the cement industry.

Unfavorable Factors and Countermeasures for Industrial Development

- 1.The domestic cement industry faces negative impacts due to various taxes imposed by the government, including commodity tax, air pollution fees, waste disposal fees, and local government mining taxes. Furthermore, the cement market in Taiwan is mature and small in scale, and government policies have prohibited expansion.
- 2.In recent years, growing environmental awareness has led to increased external challenges, including the application and renewal of mining permits for raw material quarries. With global commitments to reducing carbon emissions, governments around the world may adopt stringent measures, such as carbon taxes or production limits, to meet their carbon reduction goals.
- 3.The economic slowdown in Mainland China, coupled with unresolved real estate issues, has led to a decline in demand and severe overcapacity. Achieving industrial structural adjustments in the short term remains challenging.

Countermeasures:

- For the Taiwanese market, TCC is focusing on strengthening cost control and integrate the market through information systems to enhance overall operational efficiency. TCC continues to deepen its engagement in the domestic market to maintain its leading position in the industry. Contemporaneously, the Company will actively coordinate with the government to align with national development goals, implement cement industry policies, promote a circular economy, facilitate co-processing of waste and industrial by-products, and push for the development of low-carbon products to ensure the sustainable operation of the industry.
- As the Taiwanese cement market is a mature industry with limited growth potential, TCC has invested in the cement market in Mainland China, targeting the South China region as its primary market, and extending into East and Southwest China. As of 2024, TCC's annual production capacity in Mainland China reached 66.54 million tonnes. In line with China's peak carbon emissions by 2030 and carbon neutrality target by 2060, as well as energy consumption control policies, TCC will accelerate the development of alternative energy sources and implement scientific carbon reduction actions such as resource recycling to ensure sustainable operations.
- In Côte d'Ivoire, TCC owns the world's largest calcined clay base, with its products reducing carbon emissions by about 40% compared to traditional cement. Cimpor's Kribi plant in Cameroon, unlike traditional cement plants, boasts high overall energy efficiency, especially with a biomass fuel utilization rate of up to 90%, aiding TCC's global low-carbon cement initiative to achieve its 2030 carbon reduction target.
- TCC has established a Corporate Sustainable Development Committee under its Board of Directors, which regularly reviews climate change risks, sets execution goals, and formulates supportive measures. TCC goes beyond current environmental standards by using information technology to monitor environmental data in real time. The Cement Department also reviews environmental performance indicators in regular operational meetings, sets clear carbon reduction targets, and tracks progress. Through a "one-stop environmental solution" operating model that links cement production with waste management, TCC plays an active role in managing the complex relationship between humanity and nature, aiming to fulfill its corporate social responsibility and create win-win situations for all stakeholders.

4.2.1.2 Electricity and Energy Department

1. Electricity

Sales Regions, Market Share, Future Supply and Demand, and Growth Potential of the Major Products

The electricity generated by Hoping Power Plant is currently sold in bulk to Taiwan Power Company (Taipower) under a power purchase agreement, with Taipower handling the power distribution. With the global carbon reduction policies driving the implementation of carbon credits and carbon taxes, TCC Green Energy is transitioning from the traditional 100% Feed-in Tariff (FIT) model to supplying green electricity directly to private enterprises. Currently, 100% of wind power is supplied to private enterprises through Taipower's grid using the Corporate Power Purchase Agreement (CPPA) model. Solar power is also gradually shifting from the FIT model to the CPPA model, resulting in increased revenue. In the future, there will be increased investment in the development of renewable energy power plants.

According to statistics from the official website of Taipower, the total installed capacity of Taiwan was 57.923 million kilowatts in 2024, and the net power generation was 251.44 billion kilowatt-hours. Among them, the total installed capacity of coal-fired power plants was 13.109 million kilowatts, and the net coal-fired power generation was 78.23 billion kilowatt-hours; the total installation capacity of renewable energy was 20.426 million kilowatts, and the net power generation of renewable energy was 30.02 billion kilowatt-hours.

The installed capacity of the two units of Hoping Power Plant is 1.31 million kilowatts. In 2024, the electricity sales volume was approximately 7.74 billion kilowatt-hours, accounting for approximately 1% of the total power generation in Taiwan. Additionally, the Group's TCC Green Energy had an operational grid-connected capacity of approximately 59.8 MW for photovoltaic systems and 30.6 MW for onshore wind power in 2024. The total electricity sales volume was about 0.14 billion kWh, accounting for approximately 0.06% of Taiwan's total power generation.

Competitive Niches and Favorable Factors for Industry Development

- (1)Geographic advantage of power generation units located near the northern electricity load center:
With the gradual decommissioning of major power generation units like Nuclear Power Plant II and Hsien-ho Plant in the North, along with the failure to execute planned power development projects in the northeastern region (such as Shen'ao, Nuclear Power Plant IV, and the third LNG terminal affecting the Datan Power Plant) the North is facing a power supply shortage. The Hoping Power Plant's generation units, connected to the northern grid, play a critical role in alleviating the power shortage in Northern Taiwan.
- (2) Rising Environmental Awareness Among the Public:
Despite coal-fired power plants and the government's efforts to implement environmental protection measures to reduce pollution, public concerns about the environmental issues of these plants persist. This ongoing apprehension complicates the acquisition of new plant sites and land for power transmission towers.
- (3) Collaboration and Utilization of Resources Across the Group:
The Hoping Power Plant was designed to utilize coal ash produced by coal-fired power generation as an alternative raw material for cement plants, replacing clay. This approach solves the need for ash ponds to bury coal ash at coal-fired plants. Moreover, the limestone required for the power plant's desulfurization equipment can be supplied directly by the cement plant, and the gypsum produced from desulfurization can be used by the cement plant, and the gypsum generated after desulfurization can be used by the plant as a setting retarder. This complies with industrial resource recycling and environmental protection requirements. To address air and water pollution, the plant is equipped with a 250-meter high chimney for exhaust emissions, indoor coal storage, and a fully enclosed conveyor system to transport coal, eliminating coal dust and preventing coal-related water pollution.

In addition to implementing the aforementioned plans and installing related equipment to reduce pollution, TCC Group also works with professional consulting firms, academic institutions, and environmental testing companies certified by the Ministry of Environment to conduct environmental quality monitoring, nearby marine ecological surveys, and whole-plant flue gas and effluent testing on a quarterly or monthly basis. These efforts aim to enhance environmental protection and build stronger mutual trust between the Group and the community. All of these actions form the foundation for TCC Group's sustainable operations.

Unfavorable Factors and Countermeasures for Industrial Development

International Fuel Price Fluctuations:

The power generation costs for coal-fired power plants are mainly driven by the price of coal, which is an international bulk raw material transaction item. As a result, market prices are highly influenced by economic cycles and fluctuating demand, directly affecting the operating costs and profitability of coal-fired power plants.

Countermeasures:

To reduce the supply risk caused by extreme weather in coal supply areas, the solution is to diversify coal supply sources (such as Australia, Indonesia, etc.) purchasing methods (spot purchases and long-term contracts) to mitigate coal price fluctuations and the risks of fuel supply disruptions from a single region.

2. Energy

Unfavorable Factors and Countermeasures for Industrial Development

The Group's E-One Moli Energy's battery products are exported with 76% to Asia, 8% to North America, and approximately 16% to other regions, while domestic sales account for about 1% of total sales. According to SNE Research's release of global power battery installation volume in 2024, the top ten global power battery installation volumes are Contemporary Amperex Technology, BYD, LG New Energy, China Innovation Aviation (China Aviation Lithium Batteries), SK On, Panasonic, Samsung SDI, Gotion High-Tech, EVE Energy, and Sunwoda. In 2024, the total production capacity market share of E-One Moli Energy is approximately 0.5 to 1%. Globally, the installed capacity of power batteries grew by 27.2%, reaching 894.4 GWh.

Therefore, E-One Moli Energy's ultra-high-power cell series, which leads the market with higher density, higher capacity, and higher charge and discharge rates, continues to be favored by European and American customers in high-end electric supercars, electric off-road motorcycles, micro-mobilities, cargo drones, and satellites. As hybrid electric vehicles have gained a global consumer preference, major car manufacturers have introduced multiple models and increased battery capacities to 20-25kWh, further driving the use of ternary lithium battery cells in vehicles. This solidifies E-One Moli Energy's position in ultra-high-power batteries for high-end applications.

The year 2024 marks the first year of generative AI, responding to the rapid development of AI applications driven by ChatGPT and numerous large language models, and the flourishing trend in the large data center market. The battery-centered uninterrupted backup system (Backup Battery Unit, BBU) can provide backup power with high-power discharge of over 10C when utility power is interrupted, effectively preventing data loss and service interruption, and avoiding damage to hardware equipment from voltage fluctuations, ensuring the continuous operation of AI data centers. This will be the market niche for E-One Moli Energy.

TCC Group has steadily strengthened its presence in the energy sector, concurrently acquiring the NHOA business and establishing NHOA.TCC. NHOA.TCC's operations are spread across Europe, the Americas, Oceania, and Africa, with various patents and products in advanced BESS (Battery Energy Storage Systems), EV fast-charging devices, smart grids, and hydrogen energy. NHOA.TCC focuses on developing EnergyArk products, the C&I market, and power trading markets in various countries, while integrating resources from across TCC Group to advance the energy business.

NHOA.TCC primarily operates in energy storage, charging stations, green electricity purchasing and retailing, and aggregated electricity trading. Since 2022, it has established seven large-scale energy storage sites at the Group's Suao Cement Factory, Hoping Cement Plant, Hualien Cement Factory, Changbin Phase II, and Molie Quantum Energy, with a total capacity exceeding 200 MW. By 2024, it completed the installation of 170 MW of E-dReg energy storage systems, capturing nearly 40% of this power trading market. TCC Group's renewable energy power plants offer a range of integrated solutions, including power wheeling, to support other companies in their energy transition to achieve goals such as RE100, EV100, green logistics, and low-carbon backup power supply. Beyond this, the Group has launched energy service solutions to alleviate the initial investment burden on enterprises procuring energy storage system equipment, offering customers more flexible and comprehensive options. TCC Group has developed the world's first fireproof and safest energy storage cabinets. The EnergyArk Energy Storage Cabinet is fireproof, explosion-proof, heat-resistant, and fire-extinguishing. These systems are designed for industrial users and urban energy storage applications, providing sufficient high power for charging stations.

Competitive Niches and Favorable Factors for Industry Development

(1) Global Environmental Protection Policies and Target Setting:

Countries have formulated electric vehicle policies and targets to expand the global market, promoting electric vehicle development through measures such as tax incentives, subsidies, infrastructure development, and exhaust emission regulations. However, to accelerate industrial growth, many countries have also focused on battery technology. For example, the US government provides policy incentives to encourage operators to develop high-end batteries, driving technological advancements in the battery industry. TCC Group's Molie Quantum Energy has the expertise to develop anode and cathode material formulas and electrolyte formulas and holds over 70 patents both domestically and internationally. Their products are known for their stable quality, with the entire product line complies with EU RoHS and green product standards. The products have also passed UL, UN, CE, and BSMI certification (which was launched in 2014). The products are widely used by the US military.

(2) Review Mechanism for the Large Electricity User Terms:

According to the large electricity user terms, the deadline for compliance is set for 2025. According to data from the Energy Administration of the Ministry of Economic Affairs in 2023, the majority of large electricity users (52%) currently meet their energy needs through purchasing renewable energy power and certificates. However, the global pursuit of carbon reduction, RE100, and SBTi targets remains ongoing and mutually supportive. TCC Group offers comprehensive new energy integration solutions for customers. Even if large electricity users choose to fulfill their obligations by purchasing green electricity, TCC Group can provide optimized services to minimize waste and reduce costs.

(3) Increased Demand for EV Charging Facilities:

Government regulations are increasingly focused on establishing dedicated parking spaces and charging facilities for electric vehicles, including public parking lots and commercial office buildings. As the demand for charging grows, the need for energy storage equipment installation becomes more important. To address public concerns about fire and explosion safety, TCC Group uses the low carbon UHPC (Ultra-High Performance Concrete) for its energy storage cabinets. Both data and field tests have confirmed its effectiveness. The product was officially launched in July 2022 and has been optimized into standardized products in various sizes and for different applications, ensuring efficient and reliable services.

(4) Increasing Green Electricity Penetration and Grid Instability:

Governments are committed to developing clean energy, but the lack of supporting measures to stabilize the grid creates opportunities for the energy storage market. The rapid response and high-power output capabilities of energy storage systems are becoming essential solutions for future urban grids. Safety issues are also gaining attention due to frequent thermal runaway incidents in energy storage and fires in electric vehicles. EnergyArk has emerged as a standout product in the market. By integrating with virtual power plant operations, NHOA.TCC can further maximize the benefits of energy storage, turning the hardware into a commercially viable energy service.

Unfavorable Factors and Countermeasures for Industrial Development

Reversal in Global Supply of Battery Raw Materials and Weak Market Demand Momentum:

According to forecasts from market research firm BMI, global lithium consumption is expected to rise from 320,000 tonnes in 2020 to 1 million tonnes in 2025, and further to 3 million tonnes in 2030. In 2024, the supply of battery raw materials such as lithium, nickel, and copper increased due to the continuous release of new production capacity. However, the growth of electric vehicles, the main application for lithium batteries, slowed slightly, leading to a significant drop in prices throughout the year.

Copper foil is one of the key raw materials for battery cells. Due to the large-scale construction of power plants and infrastructure such as data centers globally, there were two price surges by the end of the year. This trend is expected to continue into 2025, making raw materials, particularly copper foil, a key factor to monitor.

In 2024, China's electric vehicle exports to Europe and the United States reached a historic high, surpassing traditional Japanese automakers. This prompted the administrative authorities of the European Union and the United States to take notice and introduce punitive tariffs to protect their domestic automotive market. The uncertainty of global trade continues towards the end of the year, the use of tariffs as a bargaining tool will lead to a highly unstable business environment. In the short term, this may provide a competitive advantage for non-Chinese-made batteries. However, the overproduction of batteries in China will inevitably flood into Europe and other regions, causing another wave of low-priced product dumping.

Countermeasures:

In response to the increased demand for lithium batteries following COP 26, the raw material shortages and sharp price rises have intensified fluctuations in supply and pricing. To address the growing risks, a dual-pronged strategy has been adopted to mitigate potential challenges.

- Establish a safe inventory level for raw materials: Ensure key materials are stocked for 3 to 4 months to address the risk of potential supply chain shortages.
- Actively develop alternative suppliers to achieve market price competitiveness: Evaluate alternative suppliers for key materials or those facing supply shortages to diversify risks from sensitive production areas and achieve more competitive cost prices.

4.2.2 Production Processes and Utilization of Main Products

4.2.2.1 Cement Department

Main Products	Purpose
Brand of low-carbon cement: Portland Limestone Type IL Cement	Lower carbon emissions and stronger strength, making it suitable for general construction and engineering projects.
Brand of cement: Portland Type I Cement	Suitable for use in general construction and engineering.
Brand of cement: Portland Type II (MH) Cement	Lower hydration heat, resistant to sulfates, suitable for bridge piers and large dams.

The main raw materials for clinker in Portland cement include limestone, clay, silica sand, and iron slag. The production process begins by grinding the raw materials after computerized batching into raw meal powder, which is then heated and decarbonized in a preheater before entering the rotary kiln. High-temperature firing and subsequent cooling form the clinker, which is finally ground with gypsum, limestone and inorganic process additives according to CNS quality specifications to produce the final cement product.

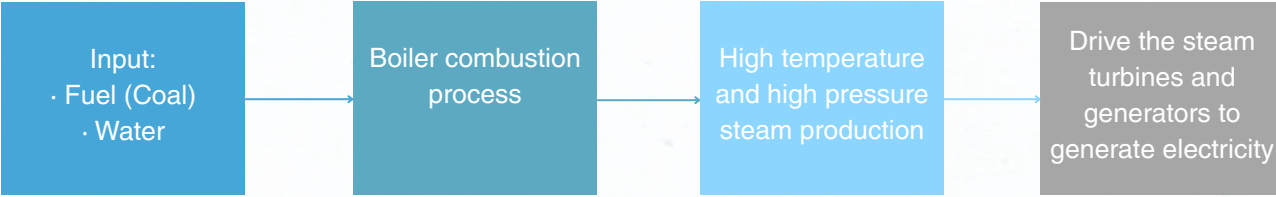
Portland Limestone Type IL Cement has the same clinker composition as Portland Type I Cement, but with 15% limestone used as a substitute for clinker. It offers stronger early strength and a lower carbon footprint, achieving carbon reduction without compromising on strength.

4.2.2.2 Electricity and Engergy Department

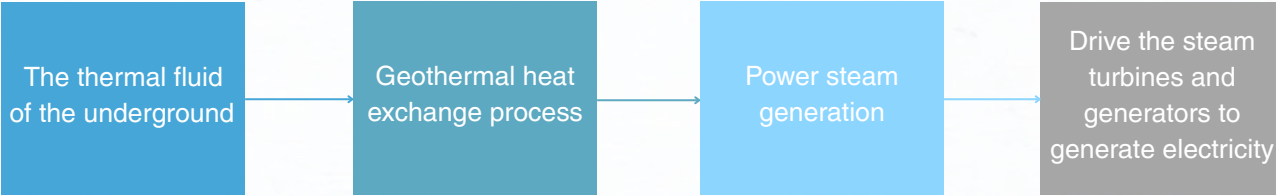
1. Electricity

The primary product of TCC Group's Power Department is electricity, which is the backbone of industry and the foundation of a thriving economy. Electricity is widely applied across various sectors, including residential, industrial, agricultural, and transportation, all of which rely on electricity to function properly.

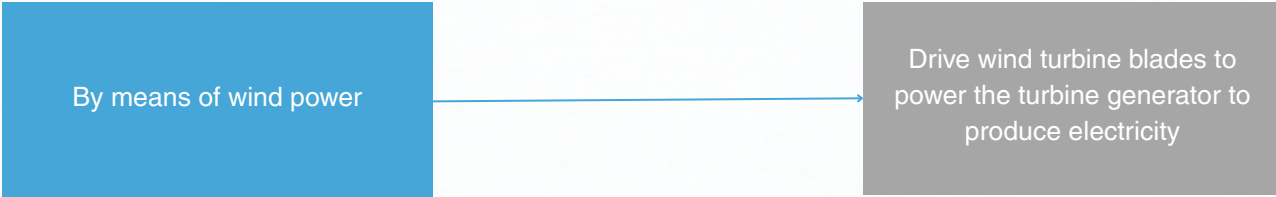
The thermal power production process is as follows:



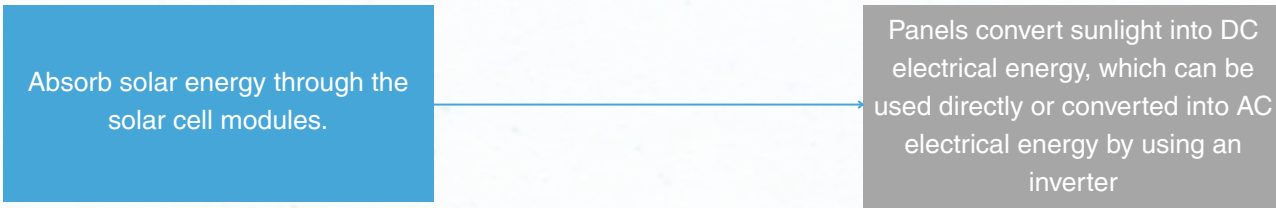
The geothermal power production process is as follows:



The wind power production process is as follows:



Solar energy power generation process is as follows:



2. Energy

The main products of TCC Group's Energy Department include lithium batteries, energy storage system installation, EV charging and storage solutions, green electricity purchasing and retailing, and electricity trading resource aggregation.

Secondary lithium batteries have high energy density, long lifespan and repeated charge/discharge capabilities. This mature technology has become a widely used energy source in today's world. It is extensively applied in smart electronic devices, handheld electric tools, and electric vacuum cleaners, medical equipment, BEVs (battery electric vehicles), HEVs (hybrid electric vehicles), various mobile electric vehicles, data center backup power, agricultural machinery, automated guided vehicles (AGV), electric skateboards, heavy electric motorcycles, off-road racing motorcycles, electric bicycles, drones, energy storage systems, and, in recent years, development of vertical take-off and landing flying vehicles (eVTOL) and low-orbit satellites.

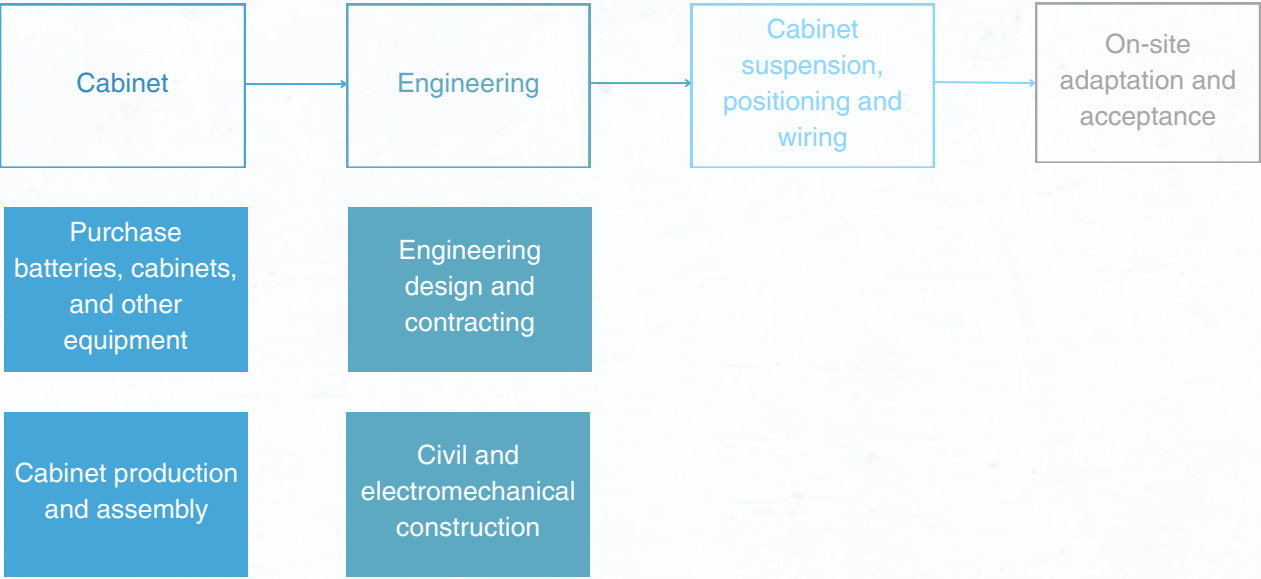
The installation of energy storage systems helps users manage power distribution in their electricity usage areas, reduce contracted capacity, and can also serve as an option for fulfilling obligations as a large electricity consumer. Additionally, it can be used to create an uninterruptible power supply system. In the case of concentrated charging demands at the same time, the energy storage system can provide power, stabilizing the grid's overall reliability. Renewable energy can also be coupled with energy storage system, further supporting the achievement of RE100 targets. While the installation cost of energy storage is higher, it can enhance electricity stability and reduce hidden costs. Additionally, by participating in the auxiliary services market of electricity trading platforms, the overall benefits of the installation can be further increased.

Due to RE100 and EV100 targets, the number of electric vehicles is expected to increase, and relevant laws and regulations are gradually being formulated. For example, parking lots should be set up with dedicated spaces and charging stations for electric vehicles, driving the demand for energy storage. Renewable energy purchasing and retailing can aid energy-heavy consumers in fulfilling their obligations to achieve RE100 targets, implement SBTi carbon reduction plans, and respond to the 2050 net-zero carbon emission goal, while also complying with international supply chain requirements. Through demand response within factories or energy storage systems, aggregated power trading management can participate in electricity trading platforms or related Taipower management measures. This provides users with a clearer direction for energy conservation and carbon reduction, delivering practical benefits.

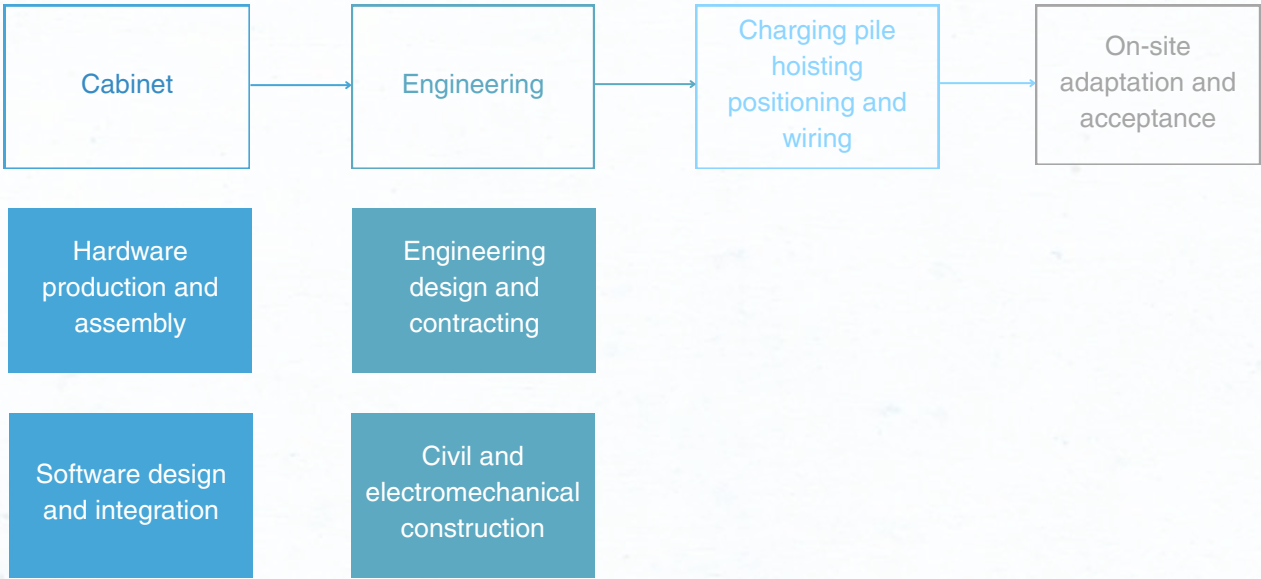
The Secondary Lithium Batteries Production Process is as Follows:



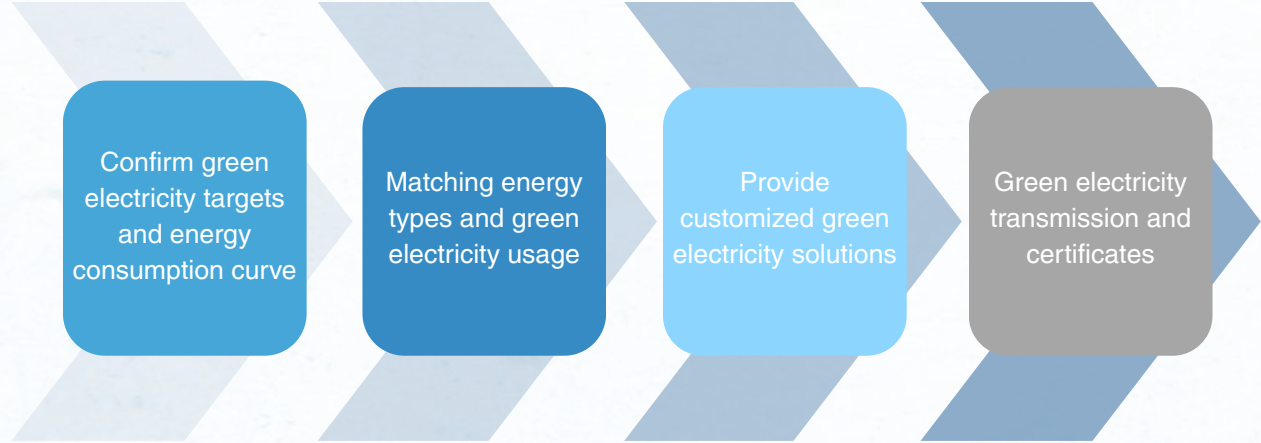
The Energy Storage Installation Process is as Follows:



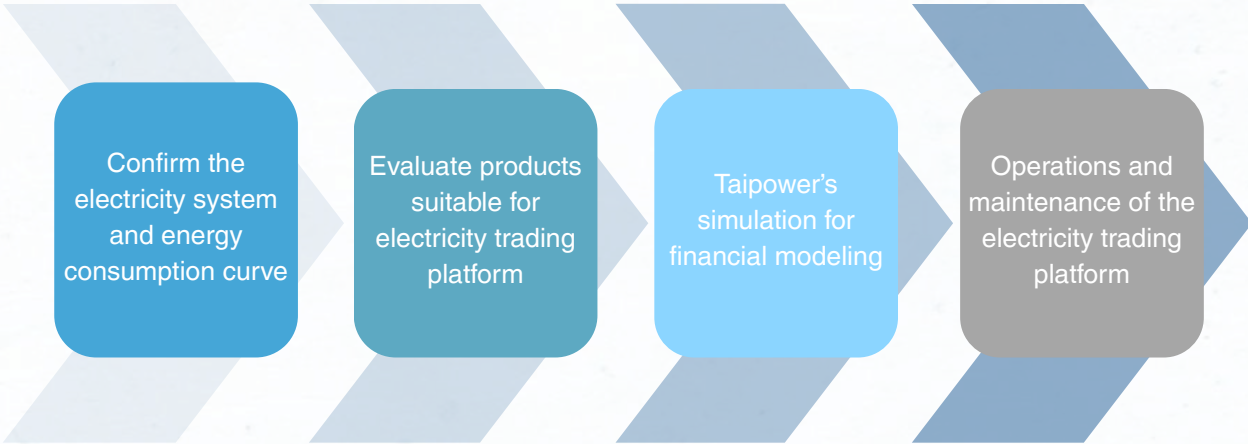
The EV charger installation process is as follows:



The Green Electricity Purchase and Sale Process is as follows:



The Process of Electricity Trading Integration and Operation is as follows:



4.2.3 Supply of Primary Raw Materials

4.2.3.1 Cement Department

Cement production relies on the following main raw materials: limestone, clay, silica sand, iron slag, and gypsum. The primary fuel is coal, but alternative fuels are actively used to reduce costs and lower carbon emissions.

Limestone is both self-produced and sourced through long-term supply contracts signed with domestic manufacturers. Similarly, clay and silica sand are procured from domestic suppliers. On the other hand, gypsum, low-alkali sand, and iron slag are purchased from high-quality domestic and foreign suppliers.

In Taiwan, coal is mainly imported from Australia through spot bidding. In Mainland China, coal mainly comes from domestic sources, while other auxiliary materials are obtained through long-term local contracts. For alternative fuels, Taiwan primarily uses sawdust, waste wood, and solid recovered fuel (SRF), while Mainland China mainly relies on wood chips, waste wood, and waste spinning materials.

TCC relies on stable raw material suppliers that sell at competitive market prices.

4.2.3.2 Electricity and Energy Department

TCC Group's thermal power generation from Power Department abides by the government's power supply requirements and environmental assessment standards. The average annual ash content of coal should be less than 12%. Therefore, procurement must be diversified in order to match the low ash content of Indonesian coal. As a result, procurement is carried out through both long-term and short-term supply contracts. Weather factors could limit the amount of sunlight and wind in renewable energy power generation, but this still has great benefits for environmental protection. By extensively adopting renewable energy and implementing energy-saving and waste-reduction measures, the impact of human activities on the Earth's environment can be effectively controlled.

In addition to ensuring the stable supply of raw materials and price competitiveness, Energy Department has continuously strengthened its supply chain management. The department has also deepened its partnerships with strategic suppliers, working together to drive technological advancements and innovation. This collaboration helps maintain a leading position in the competitive battery cell market, meet customer demands for high-quality and high-performance products, and actively develop new suppliers to increase the selectivity and flexibility of supply sources. In addition, TCC Group has gradually launched various sustainability projects to align with international environmental protection trends and requirements, and provided support and guidance to its supply chain partners, working together to achieve carbon reduction and promote sustainability.

4.2.4 Major Suppliers and Customers for the Most Recent Two Years

Suppliers accounting for more than 10% of annual net procurement for the most recent two years:

Unit: NT\$ thousands								
2023					2024			
Item	Name	Amount	Percentage of annual net purchase amount (%)	Relationship with the issuer	Name	Amount	Percentage of annual net purchase amount (%)	Relationship with the issuer
1	Others	60,316,517	100%	-	Others	108,204,926	100%	-
	Net purchase amount	60,316,517	100%		Net purchase amount	108,204,926	100%	

Customers accounting for more than 10% of annual net revenue for the most recent two years:

Unit: NT\$ thousands								
2023					2024			
Item	Name	Amount	Percentage of annual net sales amount (%)	Relationship with the issuer	Name	Amount	Percentage of annual net sales amount (%)	Relationship with the issuer
1	Taiwan Power Company	27,901,872	26%	None	Taiwan Power Company	20,352,547	13%	None
2	Others	81,412,463	74%	-	Others	134,253,964	87%	-
	Net sales amount	109,314,335	100%		Net sales amount	154,606,511	100%	

4.3 Employees for the Past Two Fiscal Years

Unit: NT\$ thousands				
Item \ Year		2023	2024	Current year as of March 20, 2025
Total number of employees		9,984	13,772	13,872
Average age		41.26	41.28	41.44
Average years of service		8.55	8.91	8.99
Distribution of education levels	Doctorate	0.49%	0.32%	0.30%
	Master's degree	4.80%	5.32%	5.45%
	College	35.46%	32.89%	32.56%
	High school	33.21%	25.88%	25.48%
	Below high school	26.04%	35.59%	36.21%

4.4 Environmental Expenditures

4.4.1 Cement Department

TCC has established an environmental management policy with the goals of achieving "zero waste, zero pollution, zero emissions." The Company has implemented international standards such as ISO 14001, ISO 50001, ISO 14046, ISO 46001, and BS 8001 to enhance performance in products, energy resources, water resources, and waste management. The Company adopts standards that exceed environmental regulations as the basis for evaluating energy-saving, environmental protection, and production process improvement solutions, fully implementing the concept of sustainable environmental management to reduce environmental impact.

1. Certifications and Participation in Environmental Initiatives

TCC adheres to ISO 14001 standards for ongoing environmental protection and improvement. The Company strictly controls emissions well beyond government standards, using equipment modifications, enclosed conveyors, and nitrogen oxide control technologies, resulting in nitrogen oxides (NOx), sulfur oxides (SOx), particulate pollutants (TSP), and dioxin emission concentrations significantly below government standards.

To improve water resource management, TCC became the first in its industry to receive the ISO 46001 Water Efficiency Management System certification in 2021. By optimizing water resource to achieve a recycling rate of over 85%, exceeding the 30-80% range set by the Water Resources Agency. In 2024, TCC adopted the Alliance for Water Stewardship (AWS) standard to rigorously assess water management performance against international benchmarks.

2. Investment in Environmental Protection and Remediation

TCC utilizes Low NOx preheaters and combustion technology in its production lines to effectively minimize pollutants. Every year, the Company allocates a specific budget for the maintenance of environmental protection equipment. In 2019, TCC successfully upgraded the electrostatic precipitators at its Hoping Plant and Suao Plant to hybrid electrostatic precipitator/bag filter systems, achieving particulate emission levels well below government standards. In response to increasingly stringent environmental regulations, TCC initiated ultra-low NOx emission retrofit projects at plants in China starting in 2021. Since 2022, it has completed the installation of SCR (Selective Catalytic Reduction) de-NOx systems in several plants, including the Guigang Plant in Guangxi, the Yingde Plant and the Shaoguan Plant in Guangdong, the Chongqing Plant in Sichuan, the Xuyong Plant, the Juirong Plant in Jiangsu, the Guizhou Anshun Plant, and the Kaili Plant in Guizhou, further reducing NOx emissions to levels surpassing government standards.

In 2024, the Cement Department allocated NT\$108.79 million in Taiwan and RMB 131.94 million in China for environmental protection.

(1) The total amount of losses (including compensation) and disposals incurred by TCC due to environmental pollution in the most recent fiscal year and up to the date of the annual report's publication: NT\$ 4,865,975.

Disposal date	Disposal reference number	Violated legal provisions	Content of violated regulations
2024.02.15	Hang Bei Zi No.1130001061	Article 37, Paragraph 4 of the Commercial Port Law	During cement loading operations in the Suao Port area, dust dispersion occurred due to a pipeline rupture.
2024.05.08	Administrative decision reference No. 40-113-050006	Article 31, Paragraph 1, Subparagraph 1 of the Waste Disposal Act	The investigation (D-1099) revealed that the site primarily returns materials to the storage silo for reuse, which is not in accordance with the operational procedures outlined in the industrial waste disposal plan.
2024.05.16	Environmental inspection waste disposal decision letter No. 1130516720	Article 36, Paragraph 1 of the Waste Disposal Act and Article 6, Paragraph 1, Subparagraph 2 of the Methods and Facilities Standards for the Storage, Clearance and Disposal of Industrial Waste.	The plant's internal drainage channels were clogged, and the inorganic sludge storage area has not been properly kept clean and intact. As a result, sludge is seeping out, contaminating the ground and drainage channels.
2024.05.28	Administrative decision reference No. 20-113-050031	Article 24, Paragraph 2 of the Air Pollution Control Act	The air reverse-jet bag filter A004 shows a pressure drop reading of 25 mmH ₂ O (standard: 80-240 mmH ₂ O), which does not comply with the permitted operating parameters.
2024.09.13	Environmental inspection waste disposal decision letter No. 113090241	Article 7, Paragraph 1 of the Water Pollution Control Act and Article 5, Paragraph 2 of the Water Pollution Control Measures and Test Reporting Management Regulations	The plant's wastewater collection ditches were blocked, and the wastewater from cleaning the plant floor was not properly collected, causing it to overflow onto ground outside the plant and contaminate water bodies. The water quality exceeded legal standards, and no emergency response measures were taken, nor was the competent authority notified.
2024.09.13	Environmental inspection waste disposal decision letter No. 113090242	Article 18 of the Water Pollution Control Act and Article 39, Paragraph 1 of the Water Pollution Control Measures and Test Reporting Management Regulations	There are no flow meters on the pipeline from T01-13 to T01-14 (S01) within the plant. One inlet pipeline to T01-14 (S01) lacks a flow meter, and one of the five outlet pipelines lacks a flow meter. This does not comply with the water pollution control measures outlined in the permit.
2024.09.13	Environmental inspection waste disposal decision letter No. 113090243	Article 20, Paragraph 1 of the Water Pollution Control Act	The operation of the wastewater treatment equipment within the plant does not comply with the approved contents of the water pollution control measures outlined in the permit.
2024.09.26	Government Environmental Air Quality Letter No. 1130187269	Article 34 of the Air Pollution Control Act	Air pollution control personnel shall not concurrently serve as personnel responsible for other regulations outside of environmental regulations

Disposal date	Disposal reference number	Violated legal provisions	Content of violated regulations
2024.09.30	Government Environmental Air Quality Letter No. 1130118832	Article 23, Paragraph 1 of the Air Pollution Control Act	The AI-based smoke detection system deployed by the Environmental Protection Bureau of Taichung City sent an alert on July 31, 2024, at 6:51 PM, indicating that the Dadu Plant was emitting noticeable particulate matter, thereby polluting the air.
2024.11.05	Environmental inspection waste disposal decision letter No. 11310301	Article 20, Paragraph 1, and Article 48, Paragraph 2 of the Water Pollution Control Act and Article 22, Paragraph 1 of the Regulations Governing the Review and Approval of Water Pollution Control Measures and Permit Applications	Due to the failure to improve within the timeframe set by the competent authority for violations of the Water Pollution Control Act, a re-inspection was conducted in accordance with regulations. The inspection revealed that the wastewater treatment equipment inside the plant still did not comply with the water pollution control measures outlined in the permit.
2024.11.05	Environmental inspection waste disposal decision letter No. 11310302	Article 18, Paragraph 46 of the Water Pollution Control Act and Article 39, Paragraph 1 of the Water Pollution Control Measures and Test Reporting Management Regulations	Due to the failure to improve within the timeframe set by the competent authority for violations of the Water Pollution Control Act, a re-inspection was conducted in accordance with regulations. The inspection revealed that the wastewater treatment equipment inside the plant still did not comply with the water pollution control measures outlined in the permit.
2024.11.13	Administrative decision reference No. 30-113-110020	Article 20, Paragraph 1 of the Water Pollution Control Act	The investigation revealed that the wastewater from the process of washing vehicles should be collected in the storage and recovery tanks (S02, R02). However, this wastewater flows into the roadside ditch outside the plant and continues to flow into Taliaokeng Creek, which is not in accordance with the registered items of the storage permit.
2024.11.15	Administrative decision reference No. 30-113-110004	Article 18 of the Water Pollution Control Act and Article 5 of the Water Pollution Control Measures and Test Reporting Management Regulations	Runoff wastewater flowed out from the approved discharge outlet, and the Environmental Protection Bureau's sampling and testing showed that the water quality exceeded the legal discharge standards. No emergency response measures were taken, nor was a report made.
2025.01.17	Environmental inspection waste disposal decision letter No. 114010015	Article 7, Paragraph 1 of the Water Pollution Control Act and Article 2, Article 18-1, Paragraph 1 of the Effluent Standards Article 8, Paragraph 1 of the Water Pollution Control Act Enforcement Rules	The suspended solids test value of the process wastewater (car wash platform and dust suppression sprinkler) at the Tainan Branch of TCC's Kaohsiung cement products plant did not meet the Effluent Standards.

The following improvement measures were taken:

- The loading pipeline in the port area was replaced, with the pipeline extended and the bends improved to prevent future pipeline rupture.
- Installation of automatic water level control and pumping equipment at the entrance drainage ditch and the rainwater sedimentation tank at the gate, with regular weekly desilting to prevent overflow.
- The car wash wastewater from the wash platform is collected and directed to a collection pool, where it is directed to flow back according to the approved water management plan to prevent overflow.
- Reassessment of the contents of the environmental permit. In the event of natural disasters or force majeure, the Environmental Protection Bureau should be notified first, and inspections of relevant environmental protection equipment should be conducted.
- The air pollution control personnel and fire management personnel at the cement plant are both assigned to specialized roles.
- To address the issue of the damaged iron conveyor pipe, iron plates were used to reinforce and weld the pipe, followed by filling it with concrete to ensure there are no potential gaps or leaks.
- A comprehensive review has been conducted to verify the approved contents of the water pollution control measures plan, the current on-site implementation, and compliance with the relevant regulations of the water pollution control regulations.
- Proposal of a process and equipment improvement plan for water pollution control operations to optimize operating parameters and comply with water pollution control regulations.
- TCC's Tainan Branch has installed wastewater treatment facilities and set up automatic monitoring and transmission measures to the Environmental Protection Bureau to ensure compliance with environmental emission standards.

(2) Future environmental focus includes

- Maintain and upgrade air and water pollution control equipment, update air pollution monitoring equipment, maintain and clean the plant environment, strict control of waste disposal procedures, and regular commissioning of third-party agencies to conduct environmental monitoring. These actions aim to ensure compliance with government emission standards and reduce environmental impact.
- The head of operational headquarters will take the lead in launching a comprehensive environmental inspection program for all 23 manufacturing plants in Taiwan, while also strengthening the training for specialized sewage operators to prevent recurrence.

Estimated environmental protection expenditure for the Cement Department in the next three years are as follows:

Area	Currency	2025	2026	2027	Total
Taiwan	NTD	240.1 million	144.11 million	105.60 million	489.81 million
Mainland China	RMB	193.52 million	129.17 million	58.38 million	381.07 million

4.4.2 Electricity and Energy Department

1.The total amount of losses (including compensation) and disposals incurred due to environmental pollution in the most recent fiscal year and up to the date of the annual report's publication: None.

2.Future countermeasures and possible expenditures:

(1)To continuously improve environmental protection, the Power Department not only ensures proper operation of pollution control equipment but also plans and executes projects to improve the Air Quality Control Systems (AQCS) and enhance wastewater treatment efficiency. Moreover, professional consulting firms, academic bodies, and testing companies certified by the Ministry of Environment are commissioned to conduct environmental quality monitoring programs, ecological surveys of nearby maritime areas, and inspections of the plant's flue gas and wastewater discharge on a quarterly or monthly basis. The estimated environmental expenditure over the next three years amounts to approximately NT\$ 1.24 billion.

- Indoor coal storage bunkers are established, and coal is transported through entirely sealed corridors, eliminating coal dust and preventing water contamination.
- All raw materials and by-products are conveyed in sealed conditions to prevent pollution.
- Coal ash generated by the power plant serves as a raw material or additive in cement production at the nearby Hoping Cement Plant, eliminating the need for ash ponds or sea disposal, thereby preventing marine pollution.
- Electrostatic precipitators, wet limestone/gypsum flue gas desulfurization equipment, and selective catalytic reduction units are utilized to lower the emissions of particulate pollutants to 20 mg/m³ (matching regulatory standards), sulfur oxides to 50 ppm (below the 60 ppm standard), and nitrogen oxides to 50 ppm (below the 70 ppm standard). A 250-meter chimney aids in the dispersion.
- The discharge of warm water, noise control, and wastewater treatment are strictly regulated to comply with the latest national environmental standards.
- The expansion of physicochemical treatment units at wastewater treatment facilities to improve efficiency and reduce the concentration of pollutants in the discharge water.

(2)The Energy Department continues to develop new types of energy batteries. However, the high complexity of developing new processes and the significant increase in raw material demands have also led to a rise in waste generation. To reduce environmental impact, we adhere to the principles of reuse and recycling, striving to minimize waste generation and increase the recycling rate. In 2024, in response to the announcement of the new EU's Batteries Regulation, we launched a plan for reusing scraps and waste materials. By using chemical extraction methods on the scraps from battery cathodes, black powder can be extracted, which can then be reduced and remade into the original materials for cathodes, thus reducing the use of primary raw materials for battery cathodes. In 2024, we invested about 126.5 tonnes, extracting and recovering around 95 tonnes of black powder, achieving a recovery rate of approximately 75.2%. In total, we implemented five resource recycling and scrap waste reuse measures to promote the principles of reduction and circular use.

- The recovery and reprocessing of cathode scraps amounted to a total of 95 tonnes.
- The waste slurry was physically treated to recover 64.99 tonnes of carbon.
- The waste fiber bags from raw material packaging were processed into secondary packing straps, amounting to a total of 9.8 tonnes.
- The waste fiber bags were physically processed into solid recovered fuel (SRF), amounting to a total of 6.04 tonnes.
- The waste wood was reused for gas thermal power generation, generating 71,812.5 kWh of electricity.

In terms of environmental management, both battery plants have established and obtained third-party verification of the ISO 14001 environmental management system. Through this system, the plants are able to continuously improve environmental performance by implementing environmental management plans, improvement initiatives, and the establishment of management systems to enhance the strength of environmental management. In response to the net-zero emissions issue, E-One Moli Energy and Molie Quantum Energy reported total direct and indirect emissions from energy (Scope 1 and Scope 2) of 60,510.75 tonnes CO₂e in 2024. The main source of emissions is electricity, which accounts for over 80% of the total. In 2024, E-One Moli Energy introduced and obtained the ISO 50001 energy management system certification, strengthening energy management. In the same year, a total of seven energy-saving improvement measures were implemented, with an expenditure of approximately NT\$9 million. These measures resulted in electricity savings of around 3.12 million kWh and a reduction of approximately 894 tonnes of CO₂ emissions. After the mass production of Molie Quantum Energy, efforts were made to optimize the operation of utility systems. Five adjustments were made to systems such as CDA, HVAC, and exhaust systems, resulting in total electricity savings of approximately 4.7 million kWh and a reduction of about 2,328 tonnes of CO₂ emissions. Both plants saved a total of 7.82 million kWh of electricity and reduced CO₂ emissions by 3,222 tonnes. Moving forward, various measures for emission reduction and energy savings will be implemented to mitigate the impact of greenhouse gases on the environment, fulfilling our responsibility as global citizens.

In addition to complying with local regulations and covering necessary expenses, TCC Group continues to invest in energy conservation, emission reduction, and pollution improvement programs. A total of twelve energy-saving improvement measures were implemented in 2024.

- EMT ceramic coating applied inside the cooling water pump
- EMT distillation tower reduced NMP reflux, reducing energy consumption
- EMT warehouse lights replaced with LED lights (Phase I)
- EMT chiller#1 circuit modified to reduce standby energy consumption
- EMT air compressor updated to VFD
- EMT installed VFD on CH/PCW pump (Phase I)
- EMT added steam coil to HVAC
- MQE CDA pressure reduced
- MQE chilled water pump frequency reduced
- MQE adjusted the operating parameters of the HVAC
- MQE exhaust fan frequency reduced
- MQE scrubber fan frequency reduced

In the future, climate change will be incorporated into risk impact assessments, with improvement plans implemented based on the results. Continuing the principles of the ISO 50001 Energy Management System, a cross-departmental energy-saving team will be established to reduce energy consumption and carbon emissions, enhance carbon reduction management performance, and continually optimize system operations. Further to this, we will assess waste recycling rates and related energy-saving and waste-reduction measures, strengthen the development of "renewable energy" and "green circular manufacturing," and work towards the goal of sustainable corporate development. The major environmental expenditures are expected to include the following items:

- EMT Replacing warehouse lights with LED lights (Phase II): NT\$ 200,000
- EMT install VFD on chilled water/cooling water pump (Phase II): NT\$ 500,000
- EMT reduce CDA supply pressure and improve leakage: NT\$ 20,000
- EMT changing from T8 lamps to LED lamps: NT\$ 100,000
- EMT process vacuum changed to central vacuum system: NT\$ 1,000,000
- MQE PCW pump frequency reduction: NT\$ 40,000
- MQE optimizing HVAC operation: NT\$ 100,000

4.5 Labor Relations

Since its establishment, TCC has prioritized the rights and benefits of its employees. Regarding the systems and measures surrounding labor relations, the Company fully complies with labor laws and regulations to ensure transparency in the protection of employees' rights and interests. TCC has implemented mechanisms for two-way communication between the Company and employees through channels including labor-management meetings, departmental meetings, employee assemblies, suggestion boxes, grievance systems, and electronic platforms. Adhering to a people-oriented approach and a commitment to fostering a friendly workplace environment, TCC continuously cultivates positive interactions and collective agreements with labor unions. This has formed a solid foundation of harmony and mutual trust, allowing employees and TCC to collaborate towards long-term development.

Besides providing a high-quality workplace and a market-competitive salary and benefit system, the Company also places emphasis on cultivating talents. For employees, various benefits, advanced training, training, and retirement systems are all carried out on the premise that they exceed or comply with laws and regulations. Planning and implementation are committed to creating a harmonious working environment between labor and capital.

As of the printing date of the 2024 financial report and annual report, TCC has not incurred any losses due to labor disputes.

4.5.1 Educational Development

The TCC Group passionately believes that talent is a vital asset for sustainable corporate growth and prioritizes training and development to enhance employees' competencies at every career stage. To equip employees with a forward-looking vision and pioneering capabilities in addressing complex and evolving environmental challenges, the Group fosters cross-disciplinary expertise and diverse professional skills. It provides a wide range of learning opportunities centered on sustainable development, a global perspective, and technological innovation.

1. Corporate Sustainability Culture Values and Heritage

TCC Group is actively deepening its sustainability culture by encouraging carbon competitiveness among all employees and embedding the spirit of sustainability into its corporate heritage. To reinforce TCC Group's market leadership in the low-carbon economy era, we have established a comprehensive system for cultivating carbon competitiveness. TCC Carbon Academy serves as the Group's platform for developing carbon expertise, offering a structured learning path from fundamental greenhouse gas inventory and product carbon footprint certification to advanced courses on corporate carbon management and international carbon trends. Participants not only learn to accurately assess and calculate carbon emissions but also explore carbon reduction potential across R&D, manufacturing processes, and transportation. This enables them to develop forward-looking carbon reduction strategies, strengthening the carbon competitiveness of TCC's products and services. Facing rising carbon costs and stricter regulations, TCC Carbon Academy trains managers at all levels to become carbon management specialists, implementing carbon reduction as a core operational strategy across all business units of TCC Group.

2024 marked the 70th anniversary of TCC's privatization. We held a series of activities under the theme "Reducing Carbon with Heart, Cherishing Resources with Love," encouraging the TCC community to take on the mission and responsibility of climate change mitigation, carbon reduction, and serving the well-being of life as TCC's core values. In addition to the participation of past board members and supervisors, around one hundred retired colleagues returned to their "home" to join these activities. Together, we celebrated this momentous occasion, steeped in history and fueled by sustainable green momentum. Through this event, we reflected on TCC's proud history and redefined the core values of the TCC community, creating new momentum for future growth.

2. Global Vision Cultivation Program

As TCC Group strengthens its internationalization efforts, cultivating a global vision and cross-cultural understanding has become essential to achieving excellence. We believe that broadening horizons not only enriches personal life experiences but also fosters inclusive and innovative thinking in the workplace, paving the way for a brighter future for the enterprise.

To achieve this, we organized the "TCC Community's European Journey" diversity and inclusion seminar, with the Chairman serving as a commentator. The seminar explored Europe's rich history, culture, cuisine, lifestyle, and future development, drawing innovative insights and deepening the Group's global strategic thinking.

3. Cultivation of Forward-Looking Technological Capabilities

In these rapidly changing times, AI has become a key driver of industrial innovation. Generative AI, in particular, is unlocking limitless possibilities—ranging from content creation to data analysis, and from enhancing innovation to improving efficiency. Its influence spans across various fields. To ensure that the TCC Group's teams remain at the forefront of this technological wave, we invited two leading professors from the Massachusetts Institute of Technology (MIT) to provide an in-depth analysis on "Insight & Strategy: The Impact of Generative AI on Industries." This seminar led us to explore the latest developments in generative AI, gain a deeper understanding of how it is reshaping industrial ecosystems, and discover how we can respond to these changes and seize opportunities for digital transformation.

The cumulative total training hours of TCC Group for the entire year reached 60,348.5 hours, with an investment of 15,561 thousand dollars in education and training expenses.

4.5.2 Employee Benefits

TCC is dedicated to prioritizing the well-being of its employees. Its Employee Welfare Committee strives to create fair and positive working conditions to maintain harmonious relations between staff and management. Through a wide variety of benefits, we support our employees and their families, offering essential benefits in line with labor laws. TCC’s welfare system includes:

1. Sound Compensation System

Performance bonuses, quarterly bonuses, factory operational efficiency bonuses, employee stock ownership trust, employee welfare savings trust, and retirement allowances (for senior employees in their 25th year of service, recognition is given, and silver bricks are presented as a token of appreciation).

2. Healthcare Benefits

Group insurance for employees and their family members, medical expenses subsidies, health check-up subsidies, maternity subsidies and gifts, hospitalization consolation grants, on-site health consultation services, health promotion lectures, and stress-relieving massage services.

3. Life Care:

Holiday gifts (on Women's Day, Mother's Day, Dragon Boat Festival, Father's Day), festival bonuses (on Labor Day, Dragon Boat Festival, Mid-Autumn Festival), travel subsidies, birthday celebrations, birthday gift money, childbirth subsidies, marriage gifts, funeral subsidies for employees and their family members, emergency assistance funds, club subsidies, after-school recreational spaces for employees' children.

4. Learning support

Education scholarships for employees' children, advanced study grants, digital learning platforms, and English courses.

5. Retirement care

Additional appropriations of employee share trust, employee health check-ups, retirement parties, and retirement insurance plans (triple protection of medical, accident and life insurance subsidized by TCC).

Furthermore, TCC Group actively organizes or subsidizes various activities that support employees' physical and mental well-being while fostering labor-management communication. These include sports clubs (basketball, softball, badminton, yoga, aerobics, etc.) and sporting events (dragon boat racing, swimming across Sun Moon Lake, internal sports walking activities), union activities, union/welfare committee gatherings, Christmas dinners, Christmas markets, promotion dinners, year-end banquets, team-building activities, family days, labor-management meetings, employee assemblies. Through these events, TCC strives to provide ongoing care and support to every team member, cultivating a pleasant, friendly, and harmonious work environment.

In response to the impact of COVID-19 in recent years, TCC has implemented comprehensive preventive measures, encouraging employees to get vaccinated and providing paid vaccine leave. TCC has also invested nearly NT\$3.52 million to offer free flu vaccines to all employees. Through corporate outreach, we actively promote timely vaccination to protect both employees and those around them. Along with this, we provide on-site health check-ups and wellness sessions, free personal consultations on epidemic-related health concerns and psychological stress, and holistic support for employees' physical and mental well-being.

To support employees working late due to urgent projects or unexpected tasks, TCC Group has introduced a late-night transportation assistance program, covering taxi fares to help them get home sooner. In 2024, this service was used 821 times, with total expenses reaching NT\$260,000. For employees with family care responsibilities, we have launched the Diverse and Agile Working Hours Plan, which includes three days of paid family leave each year. Employees can also request to work from home and coordinate with their supervisors to take a day off to recover from jet lag. These measures promote health, safety, and work flexibility, enabling employees to better balance their professional and family lives.

4.5.3 Retirement System

To ensure employees' financial security after retirement, TCC has established a retirement plan.

- 1.Pensions for employees who worked before the implementation of the Labor Standards Act are provided with retirement benefits that exceed the current regulations.
- 2.TCC set up the Labor Retirement Reserve Fund Supervision Committee, pursuant to the law, to regularly allocate and deposit pension funds to the Bank of Taiwan Co., Ltd. (formerly known as the Central Trust of China). The committee regularly meets to review the allocation and use of pension funds. At the end of each year, the committee reviews the balance of the special account. If the funds are insufficient to cover the estimated retirement payments for employees eligible to retire the following year, the amount will be replenished by the end of March of the next year to safeguard employees' rights and interests.
- 3. The government introduced a new retirement scheme on July 1, 2005. Under this new scheme, all employers were required to deposit at least 6% of a worker's monthly wages into an individual labor pension account to protect employees' interests. Individuals could also make additional voluntary deposits into a personal pension account managed by the Labor Insurance Bureau. These deposits would be deducted from their monthly salary based on their chosen contribution rate.
- 4. To help colleagues build wealth and plan for retirement, TCC has increased the employee stock ownership trust for those approaching retirement at age 60.

4.5.4 Employee Rights

TCC Group is committed to the Total Care Commitment, creating a safe, inclusive workplace with opportunities for growth. Guided by international standards, the Group implements human rights protections, promotes diversity and gender equality policies, and conducts employee engagement surveys to ensure the effectiveness and continuous improvement of policies. This enables employees to develop with confidence and grow alongside TCC.

1. Implementing human rights protection to ensure business operations comply with international standards

TCC Group is dedicated to respecting and protecting the fundamental rights of every employee. The Group formulates policies and management mechanisms in accordance with international standards to ensure compliance with human rights regulations in all business operations. In 2024, TCC Group officially implemented the Corporate Sustainability Due Diligence Directive (CSDDD), further strengthening human rights protection mechanisms and ensuring all business activities align with international standards. The Group's human rights policy and its implementation are disclosed on its official website, demonstrating its commitment to social responsibility and providing stakeholders access to transparent information.

2. Promoting diversity and gender equality policies

TCC Group firmly believes that only by establishing a diverse and inclusive workplace can employees' full potential be unlocked, promoting innovation and growth within the Company. Therefore, TCC Group actively promotes workplace equality and anti-discrimination policies, ensuring fair treatment for all employees. In 2024, TCC Group introduced the Anti-Discrimination and Anti-Harassment Policy, providing clear workplace behavior guidelines to cultivate an environment of respect and trust. This policy was further strengthened in 2025, with the addition of anti-bullying provisions and was renamed the Anti-Discrimination, Anti-Harassment, and Anti-Bullying Policy, expanding the scope of protections for employee rights. TCC regularly conducts training sessions and promotional activities, enhancing employees' understanding of cultural diversity and creating an inclusive and respectful environment where everyone is able to thrive and develop their careers.

3. Strengthening employee engagement surveys

TCC Group values employee feedback and conducts engagement surveys to better understand their needs, refining workplace policies accordingly to create a more attractive work environment. In December 2024, TCC Group partnered with Willis Towers Watson (WTW) to conduct a sustainable employee engagement survey targeting cement industry businesses and affiliated companies in Taiwan and Mainland China. The survey provided employees with a safe and anonymous platform to express their opinions. With a high response rate of 98%, over 80% of employees indicated a positive level of sustainable engagement, demonstrating the Group's commitment to fostering a safe and respectful workplace. Based on the results, we will further optimize internal communication mechanisms and promote improvement measures, ensuring that all employees feel a sense of belonging and have ample opportunities for development, enabling both TCC and its employees to move towards a more sustainable future together.

4.6 Information Security Management

TCC Group has established comprehensive incident reporting procedures to ensure prompt and effective responses to information security incidents. External professional teams have been enlisted to monitor potential security incidents 24/7 and promptly report any anomalies, thereby minimizing potential losses to the Group from security incidents.

From 2024 to the publication date of this annual report, TCC Group has not experienced any major information security incidents.

4.6.1 Security Policy

TCC Group bears the mission of reducing carbon emissions in the cement industry and has focused on developing green energy businesses in recent years. As the Group continues to grow, information security has become a vital commitment to society, its shareholders, and business partners.

To ensure the proper protection of the Group's information systems, international standards such as ISO/IEC 27001:2022 and the NIST CSF cybersecurity framework are followed to continuously enhance the information security management system. This effort focuses on continually improving the confidentiality, integrity, and availability of information security, thereby providing more secure and stable services.

4.6.2 Management Plan

- 1.No major security incidents throughout the year, ensuring the optimal protection of information services and sensitive data for TCC Group and its business partners.
- 2.Annual disaster recovery operations are conducted for core business systems to verify the effectiveness of backup procedures and data backups. Through practical drills, these operations ensure the seamless continuation of information system services, prevent disaster risks, and lay the foundation for TCC's sustainable operation.
- 3.TCC Group classifies and categorizes all data, implements stringent data leakage prevention measures and monitoring for sensitive data that is stored or transmitted, to ensure the security of business secrets.
- 4.A risk assessment framework is adopted to identify potential information security threats. Risk mitigation measures are considered to reduce the impact of security incidents such as damage, theft, leakage, tampering, misuse, and infringement on information security.
- 5.In accordance with the NIST CSF cybersecurity framework, the confidentiality, integrity, and availability of all operations in information service systems are continuously enhanced.
- 6.Executed in conformity with the requirements of the ISO/IEC 27001: 2022 standard, passed the external information security re-assessment audit with zero deficiencies in December 2021, and obtained the ISO/IEC 27001: 2022 version certification in December 2023. The certificate is valid from January 5, 2024, to January 4, 2027.



4.6.3 Organizational structure

In 2020, the Information Security Management Committee was established, and an annual information security management review meeting is held to ensure that the management of TCC Group is aware of the annual planning and operational conditions of information security.

In 2022, in response to the requirements of the Financial Supervisory Commission, a Chief Information Security Officer (CISO) and a dedicated information security unit were established. The dedicated unit reports the implementation of information security to the CISO, who in turn reports to the Board of Directors and the management.

In 2024, to demonstrate TCC Group's commitment and confidence in information security and in response to the increasing threats of cybersecurity, it was resolved at the Board of Directors meeting in August 2024 to reconfigure the Information Security Management Committee as a functional committee and appoint three directors as members.

4.6.4 Resource Management

1. Information Security Enhancement

In response to TCC Group's green transformation and sustainable development, and in alignment with recent trends in information security, such as cyber defense, zero trust architecture, and AI security applications, the dedicated information security unit will continue to optimize the following security measures starting in 2024 to ensure the effective implementation of information security:

- The information units, energy businesses, and key infrastructure units under TCC Group have established information security management systems and obtained ISO27001:2022 certification, with annual validation by external audit units to ensure the validity of the certificate.
- Conduct an annual review of core business system user accounts, granting permissions based on the "Need-to-Know" principle, and manage high-privilege accounts through the Privileged Access Management (PAM) system.
- A Mobile One-Time Password System (MOTP) is used for two-factor authentication in core systems and remote connections (VPN), generating a dynamic password every 60 seconds to reduce the risk of password compromise.
- Real-time monitoring and alert mechanisms (PRTG) are adopted, with IT personnel assigned to oversee system operations. Any anomalies are addressed promptly to ensure the availability of core business operations
- Annual vulnerability scanning tools are used to identify medium-to-high risk vulnerabilities in the Group's core systems and websites. Continuous tracking and improvement efforts ensure that all medium-to-high risk vulnerabilities are addressed and resolved.
- Annually, external cybersecurity companies are commissioned to conduct penetration testing and simulated cyber-attacks to identify potential vulnerabilities in the websites and systems. System owners are required to promptly patch all vulnerabilities and perform re-scanning to ensure zero risk.
- Annual core system disaster recovery (DR) drills are conducted to ensure that the IT department can quickly restore core system operations in the event of cybersecurity incidents, demonstrating the Group's resilience in information security.
- Introduce protection against malicious connection and internal propagation protection (DDI), as well as endpoint detection and response (EDR), with 24/7 monitoring of network and endpoint security by external experts through managed detection and response (MxDR).
- Antivirus software is installed on all devices across the Group, with regular updates to virus codes to prevent known threats and reduce risks.
- Sensitive file encryption systems are used to protect core business data, preventing hackers from stealing business secrets and impacting the Group's operations.
- Strictly regulate external file transfer channels, including portable devices (USB), cloud storage, communication software (IM), file transfer protocols (FTP), and email mechanisms.
- The network architecture adopts multi-layer protection mechanisms, including firewall controls, intrusion detection and prevention systems (IDS/IPS), web application firewalls (WAF), and Internet behavior monitoring (L7) to safeguard the internal network security of the Group.
- Optimize protection measures for production sites (OT) by segmenting the general internal network (IT) from the production network (OT). Use anti-virus USB drives to promptly detect any malware viruses in production equipment, ensuring smooth and safe operations.

- Establish a honeypot system to lure hackers into attacking non-critical systems. Arrange internal red team personnel to execute periodic simulated attacks to identify potential risks.
- Implement an event containment analysis system (ELK) to analyze the correlation of events and determine their severity and periodically review audit trails of core systems and equipment to ensure no internal or external abnormal access.
- Establish a supplier management risk identification mechanism and require suppliers to sign Non-Disclosure Agreements (NDA). Include information security clauses in contracts to enforce supplier management systems.
- Enhance security for the energy business by installing metal detectors and prohibiting cameras in sensitive areas (such as production lines and laboratories). Provide dedicated secure phones to prevent employees from capturing sensitive processes.
- Join TW-CERT, Trend Micro, and other threat intelligence centers to stay updated on the latest vulnerabilities and risks. Continuously analyze security incidents and emerging tools to effectively manage threat intelligence.
- Establish a dedicated ChatGPT account for the Group with two-factor authentication for login, tracking user login activity and prompt logs to prevent the leakage of confidential information.

2. Improving Information Security Awareness

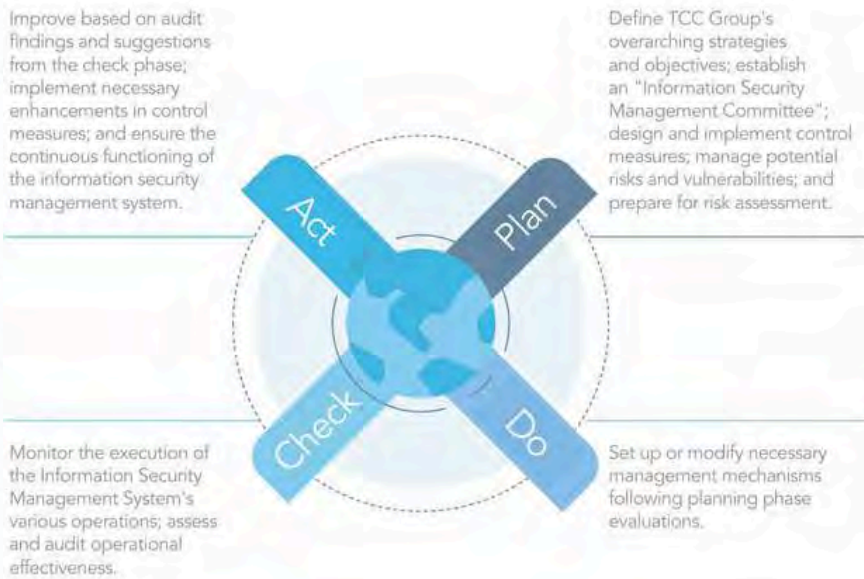
To continuously enhance employees' awareness of information security, the information security unit conducts annual education and training programs covering fundamental security concepts, security trends, and the latest hacking techniques. Security updates and incident analyses are regularly shared through promotional emails and the security platform to reinforce daily vigilance and reduce the risk of human-related cybersecurity incidents.

In 2024, a total of three information security awareness training sessions were held, covering topics such as hacking techniques, countermeasures, as well as basic security concepts. The sessions were uploaded to an online platform for employees, with approximately 2,600 participants and a total of around 1,800 learning hours completed. At the same time, to prevent security incidents caused by employees falling for phishing emails, a total of four social engineering drills were conducted in 2024, including two highly realistic phishing email simulations for the entire group. The overall violation rate for these drills was 3.15%.

3. Establishment of Protective Mechanisms

TCC Group adopts a zero trust framework as its foundation, implementing a defense-in-depth strategy to establish a comprehensive protection mechanism that addresses both external to internal threats. The Group is committed to preventing various attacks to minimize the impact on the stable operation of the TCC's systems. Meanwhile, employee awareness of information security is enhanced through education and regular announcements, with periodic assessments of the appropriateness and effectiveness of security procedure documents.

Furthermore, the Group follows ISO/IEC 27001 standards, utilizing the "Plan-Do-Check-Act" (PDCA) cycle operational model. This continuous improvement mechanism aims to enhance the stability and security of information system services.

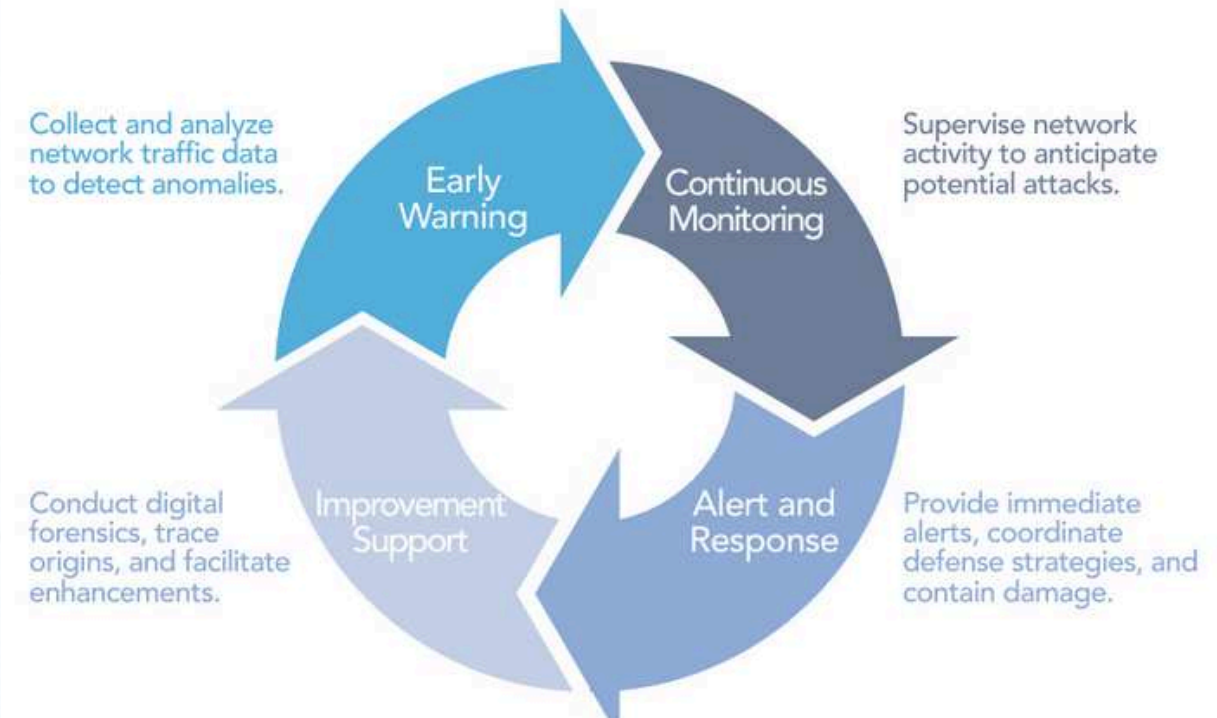


4.6.5 Impact of Information Security Risks on TCC's Financial Operations and Countermeasures

4.6.5.1 Information Security Risk Management

To understand the security risks within the organization, the Information Security Committee conducts an annual review and reassessment of the classification and acceptable risk levels of information assets. Based on these levels, risk evaluations are carried out across various security dimensions to address high-risk areas. Additionally, the committee evaluates and tracks both internal anomalies and external information security incidents on an ongoing basis.

- Planning and Evaluation: Following ISO/IEC 27001:2022 management standards, a risk evaluation is conducted on threats, vulnerabilities, and existing control mechanisms affecting information asset security.
- Development and Implementation: Control mechanisms are designed, developed, and implemented based on the results of the risk assessment.
- Review and Audit: Regular risk evaluations and internal audits of information security are conducted to ensure the effectiveness of the information security management system. Management reviews are carried out to ensure the implementation of information security measures.
- Tracking and Continuous Improvement: Corrective and preventive measures are executed based on audit results, improving and implementing necessary control mechanisms. Information security awareness and training are also provided to employees.
- Practical Measures: An annual inventory of information assets is conducted, with a security risk analysis performed based on the evaluation mechanism that considers assets, vulnerabilities, and threats. Management tools are used to support risk mitigation efforts and uphold the principles of information security management. In 2022, asset management tools for software and hardware were introduced to effectively monitor usage and prevent unauthorized software installations or violations of intellectual property rights.



4.6.5.2 Information Security Audit

To ensure the effective operation and implementation of the information security management system in line with ISO27001:2022 standards, related information security organizations and responsibilities are clearly defined. This supports the management, execution, and auditing of various tasks. At least one information security audit and Management Review Meeting is held annually to ensure the applicability, adequacy, and effectiveness of the information security management system.

- Formulate and execute both internal and external audit procedures in compliance with ISO/IEC 27001:2022 standards.
- Conduct audits on information records, implement alert devices, and manage maintenance operations.
- Correct and improve information security management systems and related improvement items.
- Promote education on information security incidents and provide analysis of regulatory compliance.

4.6.5.3 Information Security Procedures and Legal Compliance:

All subsidiaries of TCC Group must establish relevant management standards in accordance with information security requirements. Each subsidiary must develop operational management standards specific to its business activities. Any anomalies or information security incidents occurred during daily operations must be reported to related departments such as information security, audit, and management. In addition to internal management procedures, subsidiaries must regularly review and ensure compliance with personal data privacy protection and other information security standards and requirements. This ensures adherence to relevant laws and regulations, preventing violations of information security-related laws, regulations, and contractual obligations.

4.6.5.4 Information Security Development:

Information security is a crucial priority for enterprises. The TCC Information System Corporation follows the Group's strategy to enhance security technology development. Key focus areas include strengthening protection against security attacks, real-time detection and effective blocking of external threats, and reducing the risk of sensitive data leaks.

TCC Group's information security technology development and operational planning are reinforced based on the three core principles of information security, addressing common security risks, and future business landscape-related security issues. Key focus areas include remote work security risks, enhancing employee security awareness, improving system availability, protecting sensitive data, managing privileged accounts, recording and analyzing incidents, and evaluating cloud environment security. The related enhancements are as follows:

- Strengthening remote access security in response to pandemic prevention measures by implementing two-factor authentication and enhancing network connection security controls.
- Enhancing employee security awareness through education and drills, reducing the risk of security incidents caused by human error.
- Implementing network traffic and behavior analysis to improve the security of external services.
- Establishing a sensitive data protection zone to enhance the monitoring of access and usage of core business data.
- Strictly controlling external file transmissions by allowing only authorized methods setting rules to prevent data leakage.
- Strengthening physical security in core business areas, utilizing two-factor authentication for entry to protect important assets and data of the Group.
- Ensuring the stability of core systems through system monitoring tools.
- Regularly conducting off-site backup drills and recovery drills for core systems to ensure timely restoration in the event of information security incidents.

4.7 Important Contracts

4.7.1 Supply and Distribution

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Sales	Taiwan Power Company	1998.08.04–2027.06.29	Power purchase agreement	No Major Restrictive Clauses
Sales	FreetoX S.r.l.	2022.05.27–2033.05.27	Provide services for EVC design, operation and leasing, hardware installation, construction management, and removal.	No Major Restrictive Clauses
Procurement	Pt. Indominco	2004.08.01–2025.12.31	Purchase of coal	No Major Restrictive Clauses
	Yancoal	2024.02.22–2024.07.31		
	Bayan	2024.03.01–2024.12.31 2025.04.01–2025.11.30		
	Eaglecrest	2024.01.11–2024.03.31		
	Noble	2023.12.20–2024.10.31		
	Ashon (Note)	2024.04.24–2024.10.31		
	Glencore	2023.12.20–2024.10.31 2025.02.01–2025.12.31		
	Vitol	2023.11.22–2024.11.30		
	MSJ	2024.09.18–2024.12.31 2024.12.11–2025.03.30		
	Ensham	2024.05.09–2024.12.31 2024.12.11–2025.04.30		
	CCS	2023.11.02–2024.02.29		
	Macquaire	2023.11.02–2024.10.31 2024.12.11–2025.03.30		
	Bengalla	2024.01.17–2024.03.31		
	Rwood	2024.06.13–2024.10.31		
Procurement	Hsin Tai Chemical Co., Ltd.	2024.09.01–2025.08.31	Purchase of liquid ammonia	No Major Restrictive Clauses
Procurement	Jiangsu Haitong Offshore Engineering Equipment Co., Ltd.	2024.06–2025.10	New Bulk Carrier Contract	No Major Restrictive Clauses
	Jiangsu Haitong Offshore Engineering Equipment Co., Ltd.	2024.06–2026.08	New Bulk Carrier Contract	No Major Restrictive Clauses
	MARUBENI CORPORATION	2022.03–2025.01	New Bulk Carrier Contract	No Major Restrictive Clauses
Procurement	Toray Engineering Co., Ltd.	2021.12.14–2025.10.24 2022.08.24–2025.12.25	Electrode Coating Production Equipment	No Major Restrictive Clauses
Procurement	Sintokogio, Ltd.	2021.12.10–2024.09.23	Electrode Rolling Production Equipment	No Major Restrictive Clauses
Procurement	Wuxi Rich Intelligent Equipment Co., Ltd.	2021.12.01–2025.07.02	Electrode Feeding Production Equipment	No Major Restrictive Clauses
Procurement	Nishimura MFG. Co., Ltd.	2021.12.15–2025.05.15	Electrode Slitting Production Equipment	No Major Restrictive Clauses

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Procurement	Hana Technology Co., Ltd.	2021.11.30–2026.08.31 2022.11.02 to the End of Warranty Period	Assembly Line Production Equipment	No Major Restrictive Clauses
Procurement	Maschinenfabrik Gustav Eirich GmbH & Co. KG	2022.02.24 to the End of Warranty Period	Electrode Mixing Production Equipment	No Major Restrictive Clauses
Procurement	Kaido Manufacturing Co., Ltd.	2021.11.30 to the End of Warranty Period	Winding Machine Production Equipment	No Major Restrictive Clauses
Procurement	MACCOR INC	2022.06.08–2024.10.06	Test System Equipment	No Major Restrictive Clauses
Procurement	Sintokogio, Ltd.	2022.10.17–2025.08.05	Electrode Rolling Production Equipment	No Major Restrictive Clauses
Procurement	KATAOKA CORPORATION	2022.12.01 to the End of Warranty Period	Formation Production Equipment	No Major Restrictive Clauses
Procurement	Tex Technology Inc.	2023.10.18 to the End of Warranty Period	Electrode Slitting Production Equipment	No Major Restrictive Clauses
Procurement	Contemporary Amperex Technology Co. Limited.	2023.04.28–2026.12.31	Specific Product Procurement	No Major Restrictive Clauses
Service	Bocimar	2011.04.01–2026.03.31	Coal Transportation	No Major Restrictive Clauses
	Norden	2011.04.01–2026.03.31		
Service	Taiwan Power Company	2021.01.04–2026.12.31	Major Overhaul and Inspection of Generator Units	No Major Restrictive Clauses
Service	GE Power	2020.07.01–2027.06.30	Major Overhaul and Inspection of Generator Units	No Major Restrictive Clauses
Service	Cathay Life Insurance, Fubon Life, Shin Kong Life, First Insurance, South China Insurance, Tokio Marine Nawa Insurance, Mega Bank, Union Insurance, Nan Shan General, MSIG, Taiwan Fire and Marine Insurance, HoTai Insurance, and other insurance companies	2023.12.31–2024.12.31	Power Plant Property and Operation Insurance	No Major Restrictive Clauses
Service	FIAT CHRYSLER AUTOMOBILES ITALY SPA	2021.12.22 to the End of 20-year Asset Amortization	Electric Vehicle Logistics Services and V2G (Vehicle-to-Grid)	No Major Restrictive Clauses
Service	FDC International Hotels	2020.05.27–2045.05.27 (Renewable for an additional 10 years upon expiration)	Operation Management Service Contract Joint Marketing and Planning Trademark Licensing Agreement and Hotel Pre-planning Technical Services	Opening before December 31, 2025
Cooperation Agreement	Accenture S.p.A.	2021.11.12–2025.12.31	Scope of Cooperation: (1) Technical Platform Approach (2) Joint Market (Go To Market) (3) Operation and Maintenance Services (4) Ecosystem Dynamics	No Major Restrictive Clauses
Cooperation Agreement	FreetoX S.r.l.	2022.05.27–2034.05.27	Cooperation Agreement Reached for Profit and Loss Sharing of EVC Installed at Linate Airport	No Major Restrictive Clauses

Note: Please refer to page 212 of this annual report, "5.6.13 Other Significant Risks (3)" for explanation.

4.7.2 Engineering and Labor Services

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Engineering	GE Power	2020.06.20–2025.12.31	DCS/TGC/AVR Upgrade and Renovation Project for Two Units	No Major Restrictive Clauses
Engineering	CTCI Corporation	2020.02.04–2024.07.31	Unit 2 Air Pollution Control Equipment Improvement Project Contract (AQCS Project)	No Major Restrictive Clauses
Engineering	CTCI Corporation	2021.05.01–2025.07.31	EPsCm Services	No Major Restrictive Clauses
Engineering	CTCI Smart Engineering Corporation	2021.10.20–2026.04.30	Electromechanical System Engineering	No Major Restrictive Clauses
Engineering	Taiwan Jiuyueng Engineering Corporation	2024.09.03–2024.12.31	Clinker Cooler Renovation and Upgrade Project	No Major Restrictive Clauses
Engineering	Taiwan Jiuyueng Engineering Corporation	2022.09.01–2024.12.31	Waste Heat Power Generation System Renovation Project	No Major Restrictive Clauses
Engineering	Taiwan Jiuyueng Engineering Corporation	2025.01.07–2025.07.28	Chlorine Bypass System Construction Project	No Major Restrictive Clauses
Engineering	Taiwan Jiuyueng Engineering Corporation	2024.10.11–2025.04.15	UHPC Steam Curing System Construction Project	No Major Restrictive Clauses
Engineering	Taiwan Jiuyueng Engineering Corporation	2024.12.02–2025.11.30	UHPC Phase II Plant Expansion General Contracting Project	No Major Restrictive Clauses
Engineering	Shang Yu Industrial Ltd.	2023.09.08–2024.03.27	Clinker Cooler Renovation and Upgrade Project	No Major Restrictive Clauses
Engineering	Futai Engineering Co., Ltd.	2023.11.20–2024.11.30	AQC Boiler Exhaust Duct and Pre-settling Chamber Renovation Project	No Major Restrictive Clauses
Engineering	Ruentex Engineering & Construction Co., Ltd.	2021.08.20–2025.10.12	Factory Site Preliminary Preparation Project	No Major Restrictive Clauses
Engineering	Ruentex Engineering & Construction Co., Ltd.	2021.10.20–2033.10.12	Factory Site Civil Engineering Project	No Major Restrictive Clauses
Engineering	Chunghwa Telecom Co., Ltd.	2017.12–2025.07	Phase II Solar Power Plant in Chang-Bin Construction	No Major Restrictive Clauses
Engineering	Star Energy Corporation	2017.11–2025.04	Phase I Wind Power Plant in Chang-Bin Construction	No Major Restrictive Clauses
Engineering	Taiyen Green Energy Co., Ltd.	From November 2020 until project completion	Chia-Chien Green Energy Corporation's Fishery-Photovoltaic Phase I Plant Construction	No Major Restrictive Clauses
Engineering	CTCI Resources Engineering Inc.	2021.07.01–2024.04.30	TCC DAKA Renewable Resources Recycling Center's Civil, Mechanical and Electrical Engineering Project	No Major Restrictive Clauses
Engineering	CTCI Resources Engineering Inc.	2021.07.01–2024.04.30	TCC DAKA Renewable Resources Recycling Center (Civil/Mechanical and Electrical) Contract–Phase II Order	No Major Restrictive Clauses
Engineering	CTCI Resources Engineering Inc.	From 2023.04. 30 until project completion in 11 months	TCC DAKA Renewable Resources Recycling Center (Curtain Wall Engineering) Phase I and Phase II	No Major Restrictive Clauses
Engineering	ALLIS ELECTRIC CO., LTD.	From 2022.08. 05 until obtaining power industry license	Chia-Chien Green Energy Corporation's Fishery-Photovoltaic Phase II EPC Turnkey Project	No Major Restrictive Clauses

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Engineering	San Yuan Hsing Construction Co., Ltd.	2023.01.01–2023.06.30	Lianxin Hoping 100 MW Site Civil, Mechanical and Electrical, Substation Construction Turnkey Project	No Major Restrictive Clauses
Engineering	CNBM Environmental Protection Research Institute (Jiangsu) Co., Ltd.	2022.11.30–2025.05.11	Yingde Plant Kiln Tail Flue Gas Denitrification Ultra-Low Emission Technology Renovation Project	No Major Restrictive Clauses
Engineering	Qingyuan City Dianchuang Electric Power Engineering Installation Co., Ltd.	2022.09.08 to the end of warranty period	Yingde Plant 7 MWP Solar Photovoltaic Power Station Turnkey Engineering Project	No Major Restrictive Clauses
Engineering	Jiangsu Yumeng Environmental Protection Technology Co., Ltd.	2022.04.08 to the end of warranty period	Yingde Plant 3K Fourth Generation Grate Cooler Technology Renovation Turnkey Engineering Project	No Major Restrictive Clauses
Engineering	Tianjin Cement Industry Design and Research Institute Co., Ltd.	2022.12.05 to the end of warranty period	Yingde Plant Roller Press System and Roller Press Pre-grinding System Technology Renovation Turnkey Project	No Major Restrictive Clauses
Engineering	CNBM (Hefei) Powder Technology Equipment Corporation Limitedo., Ltd.	2023.09.15 to the end of warranty period	Cement Mill Energy-saving Technology Renovation	No Major Restrictive Clauses
Engineering	Anhui Conch Design & Research Institute of Building Materials CO., LTD.	2023.07.20 to the end of warranty period	Line 2 Kiln Ultra-low Emission Renovation Turnkey Project	No Major Restrictive Clauses
Engineering	Engie Servizi S.p.A.	2021.03.21–2023.06.23	The Engineering, Procurement, Installation and 15-year Operation and Maintenance for the Nera Montoro Energy Storage System in Italy.	No Major Restrictive Clauses
Engineering	Engie Rinnovabili S.p.A.	2021.03.31–2023.06.23	The Engineering, Procurement, Installation and 15-year Operation and Maintenance for the Salemi (Trapani) Energy Storage System in Italy.	No Major Restrictive Clauses
Engineering	Blyth Battery Pty Ltd.	2022.12.31–2030.04.03	The Engineering, Procurement and Construction Contract for the Blyth 200 MW Battery Energy Storage System in South Australia.	If the financial institution issuing the bank guarantee no longer holds the required rating (S&P's A- or Moody's A3), the contractor must immediately notify the client and provide an alternative bank guarantee to the client within 10 days of the date of issuance.
Engineering	Kallpa Generacion S.A.	2022.09.16–2024.12.18	Design, construction and installation of electronic energy storage system.	The required rating for this project is: long-term senior unsecured rating of at least A3 by Moody's or A- by S&P
Engineering	ENGIE ENERGIA PERU S.A.	2022.03.21–2025.06.12	26.5MW Battery Energy Storage System Engineering, Procurement and Construction Contract	No Major Restrictive Clauses

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Engineering	Kearsarge Kingston LLC	2022.03.21–2025.05.31	The Engineering, Procurement, Testing and Commissioning for 1MW AC/4.58MWh DC Battery Energy Storage System	If the bank issuing the guarantee has a credit rating below the minimum rating of BBB by S&P or Baa2 by Moody's, the contractor shall, within thirty days, provide the owner with a guarantee issued by the London branch of a bank that meets the rating criteria.
Engineering	Kearsarge Beverly LLC	2022.03.21–2025.05.09	The Engineering, Procurement, Testing and Commissioning for 1.7MW AC/7.44MWh DC Battery Energy Storage System	If the bank issuing the guarantee has a credit rating below the minimum rating of BBB by S&P or Baa2 by Moody's, the contractor shall, within thirty days, provide the owner with a guarantee issued by the London branch of a bank that meets the rating criteria.
Engineering	Italiana Petroli S.p.A.	2022.07.14–2023.06.30	(1) Design, procurement and construction of five electric vehicle charging stations (2) Provision of software services related contract (creation of two digital platforms to manage electric vehicle charging stations and energy storage systems)	No Major Restrictive Clauses
Engineering	Kearsarge Fordham ESS LLC	2023.03.27–2025.05.31	Battery Energy Storage System Supply and Commissioning	No Major Restrictive Clauses
Engineering	BASILDON BESS LIMITED	2023.06.30–2025.06.30	Battery Energy Storage System Supply and Commissioning	No Major Restrictive Clauses
Engineering	LOUDWATER BESS LIMITED	2023.06.30–2025.05.31	Battery Energy Storage System Supply and Commissioning	No Major Restrictive Clauses
Engineering	A2A GENCOGAS S.p.A.	2023.07.31–2025.05.31	The Engineering, Procurement, Installation of the Battery Energy Storage System	No Major Restrictive Clauses
Engineering	Green Vicari S.r.l.	2023.12.22–2025.08.30	The Engineering, Procurement, Installation of the Battery Energy Storage System	No Major Restrictive Clauses
Engineering	COYLTON ENERGY LIMITED	2024.05.31–2026.01.31	Design and Commissioning of Battery Energy Storage System	No Major Restrictive Clauses
Engineering	RED ELÉCTRICA DE ESPAÑA, S.A.U.	2024.02.16–2026.01.31	The Engineering, Procurement and Construction of the Battery Energy Storage System	No Major Restrictive Clauses
Engineering	RED ELÉCTRICA DE ESPAÑA, S.A.U.	2024.02.16–2026.03.31	The Engineering, Procurement and Construction of the Battery Energy Storage System	No Major Restrictive Clauses
Engineering	Engie Electrabel	2024.12.12–2027.04.30	The Design, Supply and Commissioning of the Battery Energy Storage System	No Major Restrictive Clauses
Engineering	Vinci Autoroutes	2023.03.05–2038.05.03	Construction of 89 Supercharging Stations and 15-year Franchise	No Major Restrictive Clauses
Engineering	Autostrade per l'Italia S.p.A	2024.08.01–2036.08.01	Construction of 39 HPC Chargers and 8 Fast Chargers and 12-year Franchise	No Major Restrictive Clauses

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Engineering	European Climate, Infrastructure and Environment Executive Agency (CINEA)	2022.06.07–2025.06.07	Construction of Light and Heavy-duty Electric Vehicle Charging Station Network	No Major Restrictive Clauses
Engineering	European Climate, Infrastructure and Environment Executive Agency (CINEA)	2022.06.07–2025.06.07	Construction of Light and Heavy-duty Electric Vehicle Charging Station Network	No Major Restrictive Clauses
Engineering	European Climate, Infrastructure and Environment Executive Agency (CINEA)	2023.04.13–2026.04.12	Construction of Light and Heavy-duty Electric Vehicle Charging Station Network	No Major Restrictive Clauses
Engineering	European Climate, Infrastructure and Environment Executive Agency (CINEA)	2023.11.07–2026.11.06	Construction of Light and Heavy-duty Electric Vehicle Charging Station Network	No Major Restrictive Clauses
Labor Service	Taiyen Green Energy Co., Ltd.	Completed from February 2018 to the end of 20-year commercial operation period	Chia-Chien Green Energy Corporation Fishery-Photovoltaic Phase I obtained operational rights for the symbiotic project and fishery management during the commercial operation period.	No Major Restrictive Clauses
Labor Service	Wei Chen Development Co., Ltd.	From 2021.07.07 until Grid Connection Completion	Labor management for land development of the Chia-Ho Longjiang Fishery-Photovoltaic symbiosis project	No Major Restrictive Clauses

4.7.3 Financial

Contract Nature	Parties Involved	Contract Start and End Dates	Main Content	Restrictive Clauses
Syndicated Loan Agreement	Consortium bank led by the Mega International Bank	2022.05.17–2027.05.17	Five-year Credit Agreement	Maintain certain financial ratios
	Consortium of banks including CTBC Bank Co., Ltd.	2018.12.07–2025.12.07	Seven-year Credit Agreement	Maintain certain financial ratios
	Consortium of banks including Credit Agricole	2024.03.04–2026.03.04	Two-year Credit Agreement	No Major Restrictive Clauses
Purchase agreement	Citigroup Global Markets Limited, UBS AG Hong Kong Branch, DBS Bank Ltd.	2023.10.17–2028.10.17	Purchase agreement for Euro convertible bonds	No Major Restrictive Clauses
	Morgan Stanley Services Pty Ltd, DBS Bank Ltd	2025.03.19~2030.03.19	Purchase agreement for Euro convertible bonds	No Major Restrictive Clauses
Indenture	CITICORP INTERNATIONAL LIMITED	2023.10.24–2028.10.24	Indenture for Euro convertible bonds	No Major Restrictive Clauses
		2025.03.28~2030.03.28	Indenture for Euro convertible bonds	No Major Restrictive Clauses

05

Review, Analysis, and Risk Matters of Financial Status and Performance

5.1 Financial Status

Unit: NT\$ thousands				
Item \ Year	2024	2023	Difference	
			Amount	%
Current Assets	173,380,580	153,113,300	20,267,280	13%
Property, Plant and Equipment	214,711,092	124,115,635	90,595,457	73%
Intangible Assets	64,539,690	29,757,225	34,782,465	117%
Other Assets	140,782,285	162,452,362	-21,670,077	-13%
Total Assets	593,413,647	469,438,522	123,975,125	26%
Current Liabilities	86,373,382	72,581,236	13,792,146	19%
Non-current Liabilities	199,132,001	142,956,245	56,175,756	39%
Total Liabilities	285,505,383	215,537,481	69,967,902	32%
Capital	77,511,817	77,511,817	0	0%
Capital Surplus	74,790,459	74,119,162	671,297	1%
Retained Earnings	72,771,952	70,576,781	2,195,171	3%
Other Equity	23,755,725	9,457,953	14,297,772	151%
Equity Attributable to Owners of the Parent	248,097,494	230,933,254	17,164,240	7%
Non-controlling Interests	59,810,770	22,967,787	36,842,983	160%

- Notes:
1. The increase in property, plant and equipment, intangible assets, and total assets is primarily due to the impact of mergers and acquisitions.

2. The increase in non-current liabilities and total liabilities is mainly due to the impact of the factors mentioned in item 1.

3. The increase in other equity is mainly due to changes in exchange differences in translation of foreign operations' financial statements and unrealized gains and losses on financial assets measured at fair value through other comprehensive income.

5.2 Financial Performance

Comparative Analysis of Operating Results

Unit: NT\$ thousands

Item	Year	2024	2023	Increase (Decrease) Amount	Change Percentage (%)
Net Operating Revenue		154,606,511	109,314,335	45,292,176	41%
Operating Costs		121,878,486	88,780,566	33,097,920	37%
Gross Profit from Operations		32,728,025	20,533,769	12,194,256	59%
Operating Expenses		15,601,408	10,503,609	5,097,799	49%
Operating Income		17,126,617	10,030,160	7,096,457	71%
Non-operating Income and Expenses		5,706,142	4,326,671	1,379,471	32%
Profit before Tax		22,832,759	14,356,831	8,475,928	59%
Income Tax Expense		7,203,262	4,352,218	2,851,044	66%
Net Profit for the Year		15,629,497	10,004,613	5,624,884	56%

- Notes:
1. The increase in net operating revenue, gross profit, operating income, non-operating income and expenses, profit before tax and net profit for the year, was primarily driven by the impact of acquisitions.

2. The increase in operating costs, operating expenses, and income tax expense was mainly due to the impact of the factors mentioned in item 1.

3. Expected sales volume for the next year and its basis: Based on market demand and production capacity, the combined sales target for cement and clinker is 38.83 million tonnes and 6.9million cubic meters of ready-mixed concrete in Taiwan and Mainland China. For Europe and Turkey, the combined sales target is 16.08 million tonnes of cement and clinker and 8.22 million cubic meters of ready-mixed concrete.

4. Potential impact of financial performance changes in the past two years: In 2024, the United States and the Eurozone experienced better-than-expected economic recovery, supporting slowing inflation, reduced labor market pressures, and strong demand for artificial intelligence (AI)-related products. However, geopolitical risks such as the ongoing Russia-Ukraine war, escalating tensions in the Middle East, and intensifying US-China trade conflicts, have weakened optimistic economic expectations. TCC has benefited from the profit from the European cement markets in Portugal and Turkey, resulting in a significant increase in overall profitability in 2024 compared to the previous year. In Mainland China, domestic consumption and investment remained weak despite the government's implementation of strong expansionary fiscal and monetary policies, including increased infrastructure spending and monetary easing policies. While these policies have alleviated some economic pressure, it remains uncertain whether they will be effective in the long term. Taiwan's cement and concrete business remains stable.

5. Future response: TCC Group is actively advancing its green transformation through carbon reduction and green enhancement. We have developed and launched Portland Limestone Type IL cement and continued to expand our investments in low-carbon cement in Portugal, Africa, and Turkey. These initiatives have not only diversified TCC's revenue structure but also marked our formal entry into new low-carbon cement markets across Europe, Asia, and Africa, thereby reducing reliance on a single cement market. In addition to our cement business, we are expanding into new energy sectors such as green electricity, energy storage, batteries, charging stations, and power trading. Through these practical initiatives, we are laying a strong foundation for carbon and electricity competitiveness in the new era, enabling us to meet global economic challenges while bringing new opportunities and driving momentum to the company's growth.

5.3 Cash Flow

Analysis of Cash Flow Changes in the Most Recent Year

Unit: NT\$ thousands

Beginning Cash Balance	Net Cash Flow from Operating Activities for the Year	Total Cash Inflow (Outflow) for the Year	Cash Surplus (Deficit) Amount	Remedial Measures for Cash Shortage	
				Investment Plan	Financial Planning
66,366,622	31,793,945	11,397,882	77,764,504	—	—

1. Analysis of Cash Flow Changes for the Current Year:
- (1) Operating Activities: Primarily derived from operational profits.

(2) Investment Activities: Primarily consists of acquisition of property, plant and equipment, and the cash impact from acquired net assets due to mergers and acquisitions.

(3) Financing Activities: Primarily consists of the increase in long-term and short-term bank loans.
2. Remedial Measures for Cash Deficiency and Liquidity Analysis: None.

Liquidity Analysis for the Past Two Years

Item	Year	2024	2023	Increase (Decrease) Percentage (%)
Cash Flow Ratio		36.81	46.5	(21)
Cash Flow Adequacy Ratio		59.6	70.76	(16)
Cash Reinvestment Ratio		3.17	5.98	(47)

Description of the analysis of the changes in the increase/decrease ratio:
This is mainly due to the decrease in net cash inflow from operating activities and the increase in acquisition of property, plant and equipment in 2024.

Cash Flow Liquidity Analysis for the Coming Year

Unit: NT\$ thousands

Beginning Cash Balance	Net Cash Flow from Operating Activities for the Year	Total Cash Inflow (Outflow) for the Year	Cash Surplus (Deficit) Amount	Remedial Measures for Cash Shortage	
				Investment Plan	Financial Planning
77,764,504	30,787,518	(6,529,660)	71,234,844	—	—

- Analysis of Cash Flow Changes for the Coming Year:
- (1) Operating Activities: Mainly derived from business profits.

(2) Investing Activities: Mainly for capital expenditures.

(3) Financing Activities: Mainly for distributing cash dividends and other financing activities.

5.4 Impact of Major Capital Expenditures in the Most Recent Year on Financial Operations

In 2024, capital expenditure is approximately NT\$33.6 billion. The major capital expenditures expected to impact the group's revenue and circular economy layout include:

- 1.The Hoping Plant, part of the cement business, is set to officially launch TCC DAKA Renewable Resources Recycling Center in December 2024. Additionally, treatment equipment for civil engineering or construction waste mixtures installed at the same site will begin trial operations in October 2024. The former utilizes the high temperature of cement kilns to fully decompose harmful substances such as dioxins, enabling the Hualien area to process up to 200 tons of household waste per day. This support the environmental goals of maximizing the utilization of household waste resources and achieving zero bottom ash residue. The latter facilitates the processing of construction waste mixtures, such as discarded cement and concrete blocks, linking the entire cement life cycle value chain and reinforcing the circular economy in its entirety. The Hoping Plant, combined with the cement plant, becomes a landmark environmental protection settlement that integrates cement production, waste treatment, and zero-pollution cultural recreation.
- 2.Under our European cement business, CIMPOR and OYAK are enhancing kiln efficiency by adopting new burners and advanced fuel handling equipment, supported by transportation and feeding systems. These improvements are expected to be officially launched following commissioning and optimization in 2025. At that time, the upgrades are expected to significantly reduce carbon dioxide emission equivalent per unit of clinker, with the thermal substitution rate projected to exceed 70%.
- 3.TCC plans to build an energy storage system with a capacity exceeding 300MW, which will be gradually completed and connected to the grid starting from 2023. This system will be developed through subsidiaries located in Suao, Hualien, Europe, and Mainland China plant areas, contributing to the Group's overall revenue.
- 4.Utilizing renewable energy models such as wind, solar, geothermal, and ocean thermal energy, combined with TCC Green Energy's continuous development of potential energy sources including solar, wind, and geothermal, we have planned for an installation capacity exceeding 180MW. As of 2024, over 90MW has been connected to the grid. Additionally, through Energy Helper, we are developing a green electricity matching business, contributing to the revenue of our new energy business.
- 5.In line with the European Union's planned ban on the sale of fuel-powered vehicles by 2035, Atlante, under NHOA, has established over 5,400 electric vehicle charging stations across Southern Europe. In 2024, the number of charging stations grew by 48% compared to the previous year. With the global progress in carbon reduction and green energy, along with the rising adoption of new energy vehicles, NHOA's deployment will further provide reliable and stable charging locations.
- 6.TCC's new environmentally friendly cement vessel Da-Xun under Ta-Ho Maritime Corporation adopts a fully enclosed pneumatic cement loading and unloading system to prevent dust leakage, and its shore power system reduces fuel consumption and greenhouse gas emissions during port stays. Its fuel efficiency meets the requirements of Phase II of the Energy Efficiency Design Index (EEDI) of the International Maritime Organization (IMO), improving energy efficiency and effectively achieving energy conservation and carbon reduction goals. Ta-Ho Maritime has also ordered two 63,500-ton Ultramax new environmentally friendly bulk carriers from Jiangsu Haitong, which are expected to be completed and delivered in 2026. With the advancement of the fleet with new environmentally friendly vessels, Ta-Ho Maritime will provide low-carbon transportation services for the Group's low-carbon cement business across Europe, Asia, and Africa regions. This expansion of shipping routes to leverage the advantages of environmental protection and carbon reduction.
- 7.Under TCC Recycle Energy Technology Company, Molie Quantum Energy Corporation has built Taiwan's first super battery factory in Xiaogang, Kaohsiung. The facility is completed and has begun mass production. Once fully operated, it will have an annual production capacity of up to 1.8 GWh, making it one of the few research and manufacturing companies that can provide safe lithium batteries with both high energy density and high power output. TCC has already introduced high-end supercar models and high-end heavy-duty and off-road electric motorcycles have already been introduced to customers, and long-term orders for electric vertical takeoff and landing aircraft (eVTOL) have been officially secured. Looking ahead, they will continue to develop potential opportunities in markets such as drones, machine tools, and AI server backup power systems (BBU).

5.5 Investment Policy for the Most Recent Year, Primary Reasons for Profit or Loss, Improvement Plans, and Investment Plans for the Coming Year

TCC's investment gains under the equity method on a consolidated basis for 2024 amounted to NT\$620 million.

The investment profit mainly comes from Onyx Ta-Ho Environmental Services Co., Ltd., which focuses on waste treatment as its main business.

Additionally, International CSRC Investment Holdings Co., Ltd., one of the invested companies, experienced losses in 2024, mainly due to an oversupply of carbon black in the Chinese market, which led to intensified competition. Furthermore, carbon black imports from Russia further worsened the supply-demand imbalance, adding pressure to the carbon black business. International CSRC Investment Holdings Co., Ltd. plans to adapt to market changes with a flexible global strategy by disposing of its production capacity in China while continuing to expand capacity in the United States and Turkey.

5.6 Analysis and Assessment of Risk Factors

5.6.1 Impact of Interest Rate Fluctuations, Exchange Rate Variations, and Inflation on Company Profits and Losses, and Future Response Measures

- 1.Regarding interest rates, major central banks may delay interest rate cuts due to the impact of U.S. tariff policies, geopolitical factors, and extreme climate conditions. Interest rate fluctuations in Taiwan, the United States, Europe, and China will impact TCC's interest income from cash equivalents and financial assets, as well as interest expenses to be paid on liabilities. TCC closely monitors interest rate changes and promptly evaluates potential risks. We will continue to track market conditions and adjust our liability positions or adopt fixed interest rates as needed to mitigate risks.
- 2.As for exchange rates, TCC is primarily affected by fluctuations in the USD, CNY, and EUR. In overall operations, we adopt natural hedging of net positions and continuously monitor exchange rate trends to manage spot foreign exchange transactions, forward contracts, or adjust foreign currency loans in a timely manner, all to mitigate the risks of exchange rate volatility. The hedging methods can help reduce exchange rate risks and will be reviewed based on market conditions and hedging costs when necessary. Overall, exchange rate fluctuations have a relatively limited impact on TCC's operations.
- 3.The Directorate-General of Budget, Accounting and Statistics of the Executive Yuan forecasts that Taiwan's annual Consumer Price Index (CPI) will increase by 1.94% in 2025 compared to the previous year. Therefore, the impact of inflation on profit and loss is expected to be limited, although certain regions may experience inflationary pressure, which will be reflected in product selling prices.
- Overall, the impact of inflation on TCC's annual profit and loss will be limited.

5.6.2 Policies, main reasons for profit or loss, and future countermeasures regarding high-risk, high-leverage investments, loans to others, endorsements/guarantees, and derivative product transactions

- 1.TCC and its subsidiaries have not engaged in high-risk, high-leverage investments in the most recent fiscal year.
- 2.TCC and its subsidiaries provide loans and endorsements/guarantees only to subsidiaries or affiliated companies with stable financial and business conditions. These activities comply with relevant regulations from the Securities and Futures Bureau and TCC's Procedures for Loans to Others and Endorsement and Guarantee Procedures, therefore there is no possibility of incurring losses.
- 3.TCC and its subsidiaries engage in derivative product transactions solely to hedge against exchange rate or raw material cost risks arising from operations. These transactions are conducted in accordance with the Procedures for Acquiring or Disposing of Assets, and no non-hedging transactions are undertaken.

5.6.3 Future research and development plans and estimated R&D expenses to be invested

5.6.3.1 Cement Department

TCC has consistently maintained its commitment to research and development. In addition to the ongoing development low-carbon of various products, it also engages in relevant technical research and development aligned with its core focus on advancing the circular economy.

- The initial plan for CCUS was to invest in the development of third-generation pure oxygen combustion processes and technologies. However, the project has been temporarily suspended due to shifting global trends, the absence of clearly identified carbon storage sites in Taiwan, and a lack of supporting measures. Priority will be given to advancing oxygen-enriched combustion technologies that can effectively reduce carbon emissions in the short term, while closely monitoring the latest developments in carbon storage solutions. In addition, the Low-carbon R&D Center has developed low-carbon UHPC materials that can be pump-cast on-site and applied to 3D printing.
- Development project for high calorific value SRF co-firing and clean integration system in cement kilns.
- Fine ground limestone application in IL(15) cement concrete: The research focus of this project is to evaluate the performance of fine ground limestone powder in IL cement concrete. The estimated budget for this project is approximately NTD 1.5 million.
- UHPC fire door panel development: TCC's current EnergyArk Energy Storage Cabinet features an exterior made of Ultra-High Performance Concrete (UHPC) building materials, while the fire-resistant door is still constructed from steel. TCC aims to develop fire door panels primarily made of UHPC, aiming for the entire EnergyArk Energy Storage Cabinet to be built using self-developed UHPC materials. The estimated budget for this project is approximately NTD 1.8 million.
- 3D printing patent application: Using 3D printing technology to produce concrete material compositions, the resulting products, and their manufacturing methods. The estimated budget for this project is approximately NTD 0.5 million.

Recent annual plans	Current progress	Research and development funding to be invested (NTD 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
Application of Fine Ground Limestone in IL(15) Cement Concrete - Test Planning	The research focus of this case is to assess the performance of fine ground limestone powder in IL cement concrete. Meanwhile, the project will evaluate the effects of four cement produced by TCC (Type I, Type II, IL(15), IL(15)(MS)) on the sulfate resistance of concrete containing fine ground limestone powder.	150	2025/09	Complete the testing according to the test plan within the scheduled timeframe.
Development of UHPC Fire-Resistant Door Panel	Currently, TCC's EnergyArk energy storage cabinet features an exterior made of Ultra-High Performance Concrete (UHPC) building materials, while the fire-resistant door is still constructed from steel. To achieve full use of UHPC, we will develop fire door panels primarily made of UHPC, aiming for the entire EnergyArk Energy Storage Cabinet to be built using self-developed UHPC materials.	180	2025/12	Establishment and stability of the production process for UHPC door panel manufacturing.
3D Printing Patent Application	The Use of 3D Printing Technology to Produce Concrete Material Compositions, the Resulting Products and Their Manufacturing Methods.	50	2025/12	Completeness and technical uniqueness of the patent application.
Oxygen-Enriched Combustion	The initial plan was to invest in the development of third-generation pure oxygen combustion processes and technology. However, the project has been temporarily suspended due to shifting global trends, the absence of clearly identified carbon storage sites in Taiwan, and a lack of supporting measures. Priority will be given to advancing oxygen-enriched combustion technologies that can effectively reduce carbon emissions in the short term, while closely monitoring the latest developments in carbon storage solutions.	97,100	2027/01	1. Increase the use of alternative fuels. 2. Construction of chlorine bypass system.

Recent annual plans	Current progress	Research and development funding to be invested (EUR 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
Waste Concrete Recycling and Reuse Plant Construction Project	1.The contract with Fives has been signed. 2.The project design and project management companies have been selected and begun operations. 3.The first phase of this project involves the tendering of mechanical equipment. The project design company has completed the preparation of tender documents.	€ 270	2026/2	Project Planning in Progress
LEILAC-2	The project continues in operation.	€ 150	2026/6	Scalability and Feasibility: Ensuring that innovative technologies from the pilot phase (such as electrification, carbon dioxide separation) can be effectively scaled up and applied to commercial production.

5.6.3.2 Power Department

Recent annual plans	Current progress	Research and development funding to be invested (NTD 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
Evaluation and Analysis of SRF and Wood Pellet Transportation, Storage, and Co-firing	Feasibility Study in Progress	2,450	2025/06	1.Feasibility of introducing syngas generated by gasifier into existing boilers. 2.Acquisition of storage land. 3.Adjustment of feed-in tariffs after partially replacing coal with biomass fuels.
Feasibility Study on Flow Optimization and Carbon Reduction Transformation of Hoping Power Plant	Feasibility Study in Progress	4,500	2025/09	1.Extension of unit equipment lifespan. 2.Improvement of power generation efficiency and reduction of coal consumption for power generation. 3.Reduction of carbon emissions.
Cooperation and Production Plan for Testing Pipes Using UHPC RCP in Ocean Thermal Energy Conversion	Vendor and implementation model under evaluation	600	2025/12	1.Construction of MW-scale Ocean Thermal Energy Conversion (OTEC) 2.Reinforced Concrete Pipe (RCP) meeting external pressure test standards
Analysis of Application Benefits in Deep Seawater Related Industries	Planning in progress	400	2026/06	1.Construction of MW-scale OTEC. 2.Land acquisition for deep seawater related industries.

5.6.3.3 Energy Department

Recent annual plans	Current progress	Research and development funding to be invested (NTD 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
Development of BBU Application Products P30S and P50S	1.Development of heat-resistant oligomer coating separator membrane. 2.Development of flame-retardant electrolyte and additives. 3.Establishment of high-temperature stable interface chemistry.	10,000	2025/12	1. Gas Chromatography-Mass Spectrometry (GCMS) Qualitative and Quantitative Measurement Technology 2. ARC and Thermal Runaway Analysis Calorimeter 3. Thermomechanical Analysis (TMA) Thermal Simulation Analysis Technology
Development of High-Capacity and Stable Advanced Cathode Materials	1. Metal-doped high-nickel cathode materials. 2. Single-crystal high-nickel system and thermally stable cathode materials. 3. 3High-capacity and superlattice composite layered cathode materials (LLO)	6,000	2025/12	1. Investment in Relevant Professional Talent 2. Key Strategic Supplier Collaboration Projects 3. Synchrotron High-Energy X-ray Measurement Technology 4. Examination of Superlattice and High-Resolution Field Emission Electron Microscopy Measurement Technology
High-Capacity Anode Material Platform	1. High-Capacity Carbon-Silicon Composite Anode Materials 2. Optimization of High-Ratio Carbon-Silicon Composite Anode Formulations 3. On-site Expansion Measurement Technology Developmen	5,000	2025/12	1. Investment in Relevant Professional Talent 2. Synchrotron High-Energy X-ray Measurement Technology 3. Investment in Powder Pore Size Analysis Equipment
Development of Ultra-High Power 21700-XA3 Cells and Multi-Pole Handle System Design and Manufacturing	1. Multi-Copper Pole Handle Welding. 2. High-Rate Cycling Electrochemical System Regulation. 3. Multi-Pole Handle Process Development.	15,000	2026/12	1. Investment of Highly Professional Research Colleagues 2. Technical Collaboration Project with Key Welding Equipment Suppliers 3. Development of Handleless Winding Machine 4. Investment in High-Current Charging and Discharging Equipment

Recent annual plans	Current progress	Research and development funding to be invested (EUR 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
SLB CUBICLE MAKE	In this project, NHOA Energy is working on creating an energy storage system utilizing second-life batteries (SLBs) obtained from Stellantis electric vehicle platforms.	€ 42.6	2025/9	Its objective is to preserve the value gap between new and second-hand batteries. To achieve this, NHOA aims to design a solution that utilizes SLBs directly, eliminating the need for any battery refurbishment.
C-BESS2000 platform upgrades	The project aims to upgrading the C-BESS2000 hardware platform to enhance modularity and facilitate integration with new DC modules from various battery manufacturers in the short term.	€ 127.3	2026/12	This project will deliver two distinct products on separate timelines: C-BESS2200: This version will include hardware and software upgrades to the existing power conversion system C-BESS2000, with the goal of optimizing the NHEXUS platform and increasing the available AC power to 4.4 MVA, all while using the same platform. The improvement will enable the development of optimized power islands for CATL EnerC+ and Hitium/Rept 5MWh containers. C-BESS3300: This product will feature innovative designs aimed at improving the cooling process and reducing noise by enhancing the heat sinks of the power stacks, which is an important factor for global market competitiveness. Additionally, the C-BESS3300 will consist of three independent 1 MVA power columns, securing its position for IRA incentives and ensuring competitiveness in the US market. The project aims to develop a modular power conversion system (PCS) optimized for integration with higher-density battery containers expected to enter the market in the coming years.
C-BESS8000-M developments	The project aims to develop a Modular Power Conversion System (PCS) designed to optimize the coupling with denser battery containers expected to enter the market in the coming years.	€ 101.9	2026/12	The main objective is to enhance the cost-effectiveness, modularity, efficiency, and power density of the existing CONVERT platform. The project plans to develop an approximately 8MVA converter using modular inverters to optimize integration with emerging battery technologies.

Recent annual plans	Current progress	Research and development funding to be invested (EUR 10,000s)	Completion Time	Main Factors Affecting Future R&D Success
NHEXUS evolution	This project seeks to upgrade the NHEXUS platform by integrating the latest innovative designs from the C-BESS platform, with a focus on delivering immediate benefits and driving strategic long-term improvements. Aimed at optimizing performance, reducing costs, and increasing operational flexibility, NHEXUS is expected to become a cutting-edge solution in the industry.	€ 67.5	2026/12	NHEXUS4400: This evolution aims to optimize the NHEXUS platform, potentially boosting power output to 4.4 MVA using the existing 4 MVA infrastructure. This improvement is key to enhancing compatibility with CATL EnerC+ and Hithium/REPT 5 MWh containers, potentially leading to a 7% cost saving for the NHEXUS platform. NHEXUS6600: The improvement targets the C-BESS3300 product to reduce the CONNECT platform in terms of \$/kW (approximately -10%). Additionally, further advancements will be made to enhance the product's AC output connections and overall thermal efficiency. NHEXUS8000: The refinement aims to seamlessly integrate the C-BESS8000-M solution at the MV level, further reducing system costs and enhancing flexibility through the integration of resin-cast transformers.
PEMS cybersecurity design developments	This project intends to enhance the functionality, security, and efficiency of NHOA Energy PROPHET control platform, emphasizing improving its cybersecurity capabilities to comply with industry standards and meet stringent regulatory requirements.	€ 81.1	2026/12	Key objectives include upgrading the security compliance to IEC 62443 Level 3 certification and integrating updated hardware and software features to ensure seamless operation with the NHEXUS platform. Additionally, this project will involve designing new PEMS cabinets to house next-generation Power Island (PI) components and battery platforms, optimizing both cost and performance. In addition, the NHOA Energy PROPHET control platform will be improved with the following advanced features: - Management of multiple MRP loops. - Implementation of new data collection schemes. - Comprehensive review and optimization of the alarm management system. - Improved communication delay compensation. - Integration of new instruments and components. - Automation of software standardization, including version control and library management. The goal is to deliver a robust, future-ready system that enhances reliability, reduces costs, and ensures compliance with evolving cybersecurity regulations.
PROPHET PPC-control and MBD enhancement	This project will enhance NHOA's PROPHET Power Plant Controller (PPC) by expanding its functionality, ensuring grid code compliance, and broadening market coverage. It will also support both centralized and distributed Battery Energy Storage Systems (BESS), Photovoltaic plus storage systems (PV+BESS), as well as behind-the-meter applications, and integrates advanced grid-forming capabilities such as black start, off-grid operation, and grid synchronization.	€ 130.1	2026/12	The focus of this project is to optimize energy management, improving model validation, and enhancing platform portability to SIEMENS TIA Portal, PSCAD, PSSE, and PFY. Through advanced automation and testing, high-performance control solutions will be ensured, enabling seamless integration of renewable energy and batteries across diverse grid environments.

5.6.4 Impact of Significant Domestic and International Policy and Legal Changes on TCCs Financial Operations and Response Measures

The Group's operational policies comply with regulatory requirements, and it remains informed about both domestic and international policy and legal developments. When necessary, expert opinions are sought to assess the impact of regulation changes on the Group's financial operations, enabling timely adjustments to internal systems.

Mainland China has released the Action Plan for Carbon Dioxide Peaking Before 2030, setting a target for non-fossil energy consumption to account for about 20% of total energy consumption by 2025 and about 25% by 2030. In Taiwan, a net-zero emissions target for 2050 has been established. On January 10, 2023, the Legislative Yuan passed the Climate Change Response Act with its third reading, officially incorporating the net-zero emissions target into law and initiating the carbon fee collection mechanism.

On August 29, 2024, the Ministry of Environment announced the Regulations Governing the Collection of Carbon Fees, Regulations Governing Self-determined Reduction Plans and the Designated GHG Emissions Reduction Goals for Entities Subject to Carbon Fees. These three regulations complete supporting legal framework for the carbon fee system, marking a significant step forward in Taiwan's transition to a carbon pricing era. The carbon fee will take effect in 2025, with emissions from that year to be included in the fee calculations. Starting in 2026, fee-paying entities will begin making payments based on their 2025 emissions and the applicable rates.

In May 2022, the European Commission released the REPowerEU plan, centered around three key pillars: energy conservation, clean energy production, and diversification of EU energy supply. As part of efforts to scale up renewable energy across power generation, industry, building, and transportation sectors, the EU increased its 2030 target for the share of renewable energy in power generation, raising it from 40% to 45%.

On June 22, 2022, the European Parliament approved the legislative principles for the world's first Carbon Border Adjustment Mechanism (CBAM), with 450 votes in favor, 115 against, and 55 abstentions. In the future, companies will bear the cost of environmental impact associated with their exports to the European market. The approval of CBAM encourages non-EU countries to reduce emissions and prevent carbon leakage to lower global carbon emissions, making a significant contribution to implementing EU and global climate objectives.

- Expanding the scope of CBAM: The regulated scope, in addition to the five major product categories including cement, steel, aluminum, fertilizers, and electricity, also covers organic chemicals, plastics, hydrogen, and ammonia. The CBAM has been extended to include indirect emissions, such as those from electricity used by manufacturers, providing a more accurate reflection of the carbon dioxide costs for European industries.
- The CBAM went into effect on January 1, 2023, with a transition period extended by one year to the end of 2026. Official taxation will begin in 2027. Starting in 2027, free allocations for exporters will be gradually reduced each year, reaching 93%, 84%, 69%, 50%, 25%, and ultimately zero by 2032, marking the end of free allocations under the EU ETS.

Response Measures for the Cement Department:

In response to Mainland China's Action Plan for Carbon Dioxide Peaking Before 2030 and Taiwan's carbon fee strategy under the Climate Change Response Act, TCC's cement plants will continue to explore alternative raw material and fuel sources to accelerate carbon emission reductions, with a particular focus on biomass fuels such as waste wood chips and SRF. Additionally, we plan to upgrade the preheater, cooler, and cement mill to reduce coal and electricity consumption. We are also planning renovations of the waste heat power generation system and the implementation of solar power and energy storage systems to further reduce electricity consumption and costs.

In response to EU regulations, our investment companies CIMPOR Portugal Holdings, SGPS, S.A. and OYAK Çimento Fabrikaları A.S. have planned investments for their production plants in Portugal and Turkey to reduce carbon emissions, decrease energy consumption, and increase renewable energy usage. These investments include increasing the proportion of alternative fuels to reduce fuel carbon emissions, optimizing production systems to reduce coal consumption and energy usage, and constructing solar power generation facilities to increase the proportion of renewable energy.

Under the government's relevant energy and circular economy policies, TCC upholds its role as an Eco-solution provider by supporting various efforts beneficial to mitigating and adapting to climate change, with the aim of assisting industries and local governments in reducing environmental impact risks.

Response Measures for the Electricity and Energy Department:

According to the Taiwan 2050 Net-Zero Transition: Key Strategic Actions for the Power System and Energy Storage issued by the Ministry of Economic Affairs in April 2023:

Energy conservation, carbon reduction, and increasing the proportion of renewable energy are key priorities in Taiwan's energy policy. To advance energy conservation and carbon reduction policies, developing power systems with energy storage and smart grids is one of the essential steps. Energy storage systems play a crucial role in stabilizing domestic renewable energy generation, introducing renewable energy, strengthening power grid, ensuring stable power supply. Additionally, they support the introduction of user-side energy management measures. According to the Ministry of Economic Affairs' planning, the energy storage system targets are as follows: by 2025, 1000MW for grid-side and 500MW for generation-side; by 2030, 3000MW for grid-side and 2500MW for generation-side. Additionally, user-side capacity is being assessed based on disaster prevention shelters, major electricity consumers (such as factories, approximately 506 companies with contract capacity over 5000KW that are required to install green energy or energy storage systems), and public facilities like traffic signals and telecommunication base stations.

- Taiwan - November 30, 2022 - Amendment to Article 27-1 of the Parking Facility Act: Public parking facilities shall install dedicated parking spaces for electric vehicles and their charging facilities.
- This addition provides a significant boost to the domestic electric vehicle charging device market, coupled with the fact that Taiwan's electric vehicle market in 2022 grew by over 70% compared to 2021, highlighting a sharp increase in market demand. Additionally, since November 2021, the Condominium Administration Act Building Administration Division has been working on legislative amendments to relax restrictions on charging stations. Several counties and cities have also begun implemented requirements for new buildings to allocate charging parking spaces in proportion, with charging stations installation now considered an evaluation factor for condominiums.

- California Legislature and European Parliament - 2022, 2023 - Passed new legislation: Ban on sales of new diesel vehicles by 2035.
- The passing of this law mandates that all new vehicles must have zero-carbon emissions, which will accelerate the growth of the European electric vehicle market and positively impact the Group's plans to install over 5,000 fast charging devices in Southern Europe before 2025, as well as its strategic positioning in the European market.
- EU Battery and Waste Battery Regulation: On July 12, 2023, the European Commission introduced Regulation (EU) 2023/1542, aimed at ensuring the sustainable development of batteries throughout their entire life cycle, covering aspects such as material procurement, collection, recycling, and reuse. This regulation came into effect on August 17, 2023, and replaced the previous Battery Directive 2006/66/EC on August 18, 2025.
 - The European Union's Connecting Europe Facility (CEF) program actively supports infrastructure development in the transportation sector, with a special focus on the construction of electric vehicle charging facilities. The CEF program providing funding for the installation of fast charging stations along the Trans-European Transport Network (TEN-T), aiming to placing charging stations of at least 150kW every 60 kilometers. This initiative promotes the widespread adoption of electric vehicles, reduces carbon emissions, and supports sustainable development in the transportation sector.
 - Taiwan - November 28, 2022 - The Bureau of Standards, Metrology and Inspection of the Ministry of Economic Affairs implemented the Battery Energy Storage System Project Certification System.
- Taiwan - August 17, 2022 - Established the Guidelines for Improving Fire Safety Management of Energy Storage Systems.
- The release of these policies reflects the government's commitment to promoting energy storage systems. Through the design of a three-stage verification procedure and management measures, the aim is to address safety issues while encouraging wider adoption and easing public concerns. This is undoubtedly favorable for the energy storage installation business. However, internal development should also closely follow and comply with regulations to avoid any conflicts.
- Taiwan - January 10, 2023 - Climate Change Response Act passed.
- The passage of this law represents that the government has established clear and mandatory guidelines for carbon emissions charges. In the initial phase, the carbon fee will target major electricity users, with formal collection expected to begin in 2024. This development aligns with the Group's business model, focusing on major electricity consumers, and also represents a key direction for future growth.
- Taiwan - Technical Regulations for Outdoor Battery Energy Storage System Site Verification: In June 2023, the Bureau of Standards, Metrology and Inspection of the Ministry of Economic Affairs issued the Technical Regulations for Outdoor Battery Energy Storage System Site Verification. This regulation provides detailed requirements for the design, installation, and verification of grid-connected energy storage systems, including electrical installation, fire prevention design, and distance requirements, aiming to ensure the safety and reliability of energy storage systems.
 - Taiwan - The Executive Yuan approved the draft amendment to the Electricity Act on January 9, 2025. The amendment introduces a new category of specific power supply businesses, including grid-connected energy storage and demand response measures participating in the power trading platform. Entities in power supply business are required to obtain an electricity business license and comply with operational and emergency reporting obligations.

5.6.5 Impact and Response Measures for Technology Changes (Including Information Security Risks) and Industry Changes on TCC's Financial and Business Operations

5.6.5.1 Technology and Industry Transformation

In response to global climate change and the advent of carbon pricing, TCC Group is optimizing its internal management systems, with a focus on four key areas: cloud mobility, big data, Internet of Things, and intelligent machinery. The Group is also shifting from goal-oriented to behavior oriented management by integrating economic, environmental, social, and risk factors. This approach helps employees to make accurate and timely decisions, therefore improving performance and operational efficiency. Key outcomes include the establishment of TCC's war room system, which enables real-time monitoring of production and business data from each plant, allowing for early risk detection. The system is integrated with the plant's database, incorporates Artificial Intelligence (AI), and utilizes machine learning and product Life Cycle Assessment (LCA). Combined with self-developed carbon reduction management systems and alternative fuel performance tracking systems, this approach ensures effective implementation and monitoring of carbon reduction targets and progress tracking at every stage, from target setting to performance analysis. Furthermore, it strengthens alignment with internal performance evaluation and bonus incentives, reinforcing the commitment to low-carbon production and smart manufacturing. In 2024, the Group launched an online greenhouse gas inventory system, progressively digitizing the GHG reporting and inventory management across all subsidiaries. This is expected to reduce manpower and material costs for annual inventory and enable more accurate and efficient responses to regulations and disclosure requirements.

In recent years, both Taiwan and Mainland China have prioritized the co-processing of renewable resources in cement kilns as a key policy direction to promote an industrial circular economy. With over 30 years of experience in waste disposal, TCC leverages the expertise of professionals from the Low-carbon R&D Center and TAF-certified equipment to support other industries in processing various types of waste. In July 2023, the TCC DAKA Renewable Resources Recycling Center in Hualien began trial operations for the co-processing of local municipal waste. In December, it received approval from the Hualien County Government to officially commence operations. By 2024, the center had co-processed a total of 41,421 tonnes of local municipal waste in Hualien.

The Guangxi Guigang Plant in Mainland China launched its Phase I cement kilns co-processing project for solid waste, with an annual capacity of 200,000 tonnes of hazardous waste and 30,000 tonnes of general solid waste. The Guigang Plant was selected as one of the first batch of ecological environmental protection publicity and education demonstration bases in Guigang City in November 2020 and later selected as the third batch of Guangxi ecological environment publicity and education demonstration bases in December 2022. Jiangsu Jurong Plant's project for processing fly ash from incineration power plants (50,000 tonnes/year) began operations in October 2021. Guangdong Shaoguan Plant's cement kiln renewable resource co-processing began operations in August 2022. Guizhou Kaili Plant's hazardous waste co-processing project (50,000 tonnes/year) began operations in February 2022. Hunan Jingzhou Plant's cement kiln renewable resource co-processing started in September 2022. Sichuan Guang'an Plant's solid and hazardous waste project with an annual capacity of 100,000 tonnes for hazardous waste and 150,000 tonnes for general solid waste started operations in January 2023. Guizhou Anshun Plant's first project for the resource utilization of fly ash (Phase 150,000 tonnes/year) began construction in January 2023 and started operations in October 2024.

Moving forward, TCC will continue to balance national and societal interests with business performance, remain committed to tackling environmental challenges and reinforce its leadership in the circular economy.

Mainland China has released the Action Plan for Carbon Dioxide Peaking Before 2030, setting a target for non-fossil energy consumption to account for about 20% of total energy consumption by 2025 and about 25% by 2030. On November 17, 2022, the China Building Materials Industry Carbon Peaking Conference was organized in Beijing by the China Building Materials Federation, as commissioned by the Ministry of Industry and Information Technology, announcing the comprehensive launch of its carbon peaking action plan, aiming to reach carbon peak before 2030. As part of the building materials industry in Mainland China, TCC achieved carbon peaking within the Group in 2021 and has since actively implemented a range of carbon reduction strategies.

Taiwan has set a net-zero emissions target for 2050, and on January 10, 2023, the Legislative Yuan passed the Climate Change Response Act on its third reading, officially establishing the net-zero emissions target in law and initiating the carbon fee collection mechanism. On August 29, 2024, the Ministry of Environment announced the Three Carbon Fee Regulations, specifying that the collection targets are the electricity industry and large manufacturing industries (including the cement industry). This represents the onset of carbon pricing, with collection expected to begin in 2026.

In response to Mainland China's Action Plan for Carbon Dioxide Peaking Before 2030 and Taiwan's carbon fee collection measures, TCC will continue to explore alternative raw materials and fuels to reduce carbon emissions, with a particular focus on biomass fuels such as waste wood chips and SRF. We also plan to upgrade preheaters, coolers, and cement mills to reduce coal and electricity consumption, while planning renovations to the waste heat power generation systems, solar power, and energy storage systems to reduce electricity consumption and costs. Aligned with the Paris Agreement's goal of limiting global warming to 1.5°C, we are moving toward achieving net-zero emissions by 2050 through three key development pillars: low-carbon building materials, resource recycling, and green energy. In 2019, TCC established a carbon reduction management system based on the Life Cycle Assessment (LCA) approach, enabling systematic calculation of carbon emissions from raw material use and energy consumption. Carbon reduction performance is linked to KPIs and incorporated into bonus assessments of senior executives and employees at cement plants to ensure annual reductions in carbon intensity. In the future, we will expand this approach across our core businesses to manage carbon emissions throughout the entire Group.

5.6.5.2 Information Security

For TCC's information security risk management, please refer to the details in "4.6 Information Security Management" on page 179 of this annual report.

5.6.6 Brand Image Transformation and its Impact on Crisis Management and Countermeasures

1. Core Business Philosophy

In 2018, TCC refined its brand around three core pillars: Low Carbon Cement, Resource Recycling, and Green Energy. The Company has evolved into a green environmental engineering company dedicated to managing the complex relationship between human civilization and nature. Guided by a people-oriented philosophy, TCC consistently drives low-carbon transformation.

In 2024, TCC earned widespread recognition in environmental protection, social engagement, and corporate governance. Achievements include inclusion in both the Dow Jones Sustainability World and Emerging Markets Indices, an A rating in MSCI's ESG assessment, Leadership-level (A-) ratings in CDP's climate change and water security evaluations, a C+ PRIME designation from ISS ESG, four consecutive years as one of TCSEA's Top Ten Sustainable Exemplary Companies, selection as one of TIME magazine's Top 500 Sustainable Companies in 2024, and three-time recipient of HR Asia's 'Best Companies to Work for in Asia' award. These accolades reflect TCC's commitment to internationalization and sustainable transformation while maintaining a strong corporate image and values.

Taiwan Cement Company Group's TCC encompasses its two major commitments: Total Climate Commitment and Total Care Commitment.

Total Climate Commitment: Comprehensive solutions to mitigate and adapt to climate change.

(1) Climate Change Mitigation

The Company abides by international sustainability standards and supports climate initiatives. On September 1, 2020, TCC and the Global Cement and Concrete Association (GCCA), plus 40 cement benchmarking companies, launched Climate Vision 2050 and publicly announced that it would strive to reduce carbon footprint and achieve carbon neutrality for cement products by 2050.

TCC has set a carbon reduction target based on Science Based Targets (SBTs). On January 10, 2025, TCC passed the expert advisory group review of the Science-Based Targets initiative, committing to follow the 1.5°C carbon reduction pathway. The Company's climate mitigation strategies include:

- **Decarbonization and Green Transition Strategy:** This involves the use of alternative raw materials, alternative fuels, alternative clinker, equipment & process enhancements, power generation by waste heat recovery, renewable energy (including solar, wind, geothermal, and marine energy), energy storage, power cells, carbon capture, and carbon sink.

Based on the decarbonization and green transition strategy, TCC published a new net-zero pathway in 2024. For the details, please refer to the Company's annual Sustainability Reports.

- **Low-Carbon Products and Processes:** In October 2023, TCC launched the Total Climate series of low-carbon construction materials. Regarding the embodied carbon (basic building materials) in the building design and construction phase, the new generation of TCC Portland Limestone Type IL Cement achieved a 23.83% reduction in carbon emissions. In addition, Limestone Cement Concrete delivers a carbon reduction of at least 53% compared to Taiwan's standard values, making them the lowest-carbon cement and concrete products available in Taiwan.

Furthermore, in July 19, 2024, the Portuguese subsidiary CIMPOR inaugurated the world's first innovative cement production process without a cement kiln in Cameroon. This process utilizes low-carbon calcined clay to replace the high-carbon clinker used in traditional cement plants, achieving a carbon reduction of 40% compared to conventional cement.

- **On November 18th, 2024,** TCC invited representatives from over one hundred construction companies that use low-carbon Limestone Cement and Limestone Cement Concrete to jointly announce the formation of the Low-Carbon Construction Pioneers Alliance. The alliance is dedicated to promoting the use of low-carbon building materials and accelerating decarbonization in the construction industry.
- **Introducing an internal carbon trading system to control emission intensity:** In 2024, TCC introduced an internal carbon trading platform, inspired by the Guangdong Pilot ETS and EU ETS, to help its plants control emission intensity and adjust product sales in response to market demands. The Finance Department issues quarterly carbon budget reports to spur competition and collaboration among plants. Year-end carbon allowance settlements will influence performance appraisals.
- **Carbon Capture and Storage (CCS),** the world's leading climate technology: International scientists recognize CCS as a key tool for mitigating climate change. It is also one of the twelve key strategies of the 2050 Net Zero Path of National Development Council. CCUS initially planned to invest in the development of third-generation pure oxygen combustion processes and technologies. However, the project has been temporarily suspended due to shifting global trends, the absence of clearly identified carbon storage sites in Taiwan, and a lack of supporting measures. Priority will be given to advancing oxygen-enriched combustion technologies that can effectively reduce carbon emissions in the short term, while closely monitoring the latest developments in carbon storage solutions. In addition, the Low-carbon R&D Center has developed low-carbon UHPC materials that can be pump-cast on-site and applied to 3D printing.

(2) Climate Adaptation

- **High-Temperature Kiln Core and Integrated Process of Domestic, Commercial, and Construction Waste:** According to the World Business Council for Sustainable Development (WBCSD), the average temperature of a cement kiln exceeds 1,300 degrees Celsius. This can decompose the dioxin that cannot be processed by incinerators and convert most of the waste produced by human into harmless resources, replacing cement raw materials and fuels, and thus achieve the goal of carbon reduction, effectively becoming the most effective urban purifier. " Through Cement Co-Processing, TCC disposes of industrial, household waste, and construction waste, forming a symbiotic circular economy system. In 2024, TCC processed a total of 974,744 tonnes of waste in Taiwan through cement kiln co-processing technology.

— **Industrial Waste:** Since 2011, we have assisted the optoelectronics and semiconductor industries, paper manufacturers, water purification plants, chemical plants, iron and steel mills, and other industrial waste producers, not only to reuse resources and form an environmental value chain but also to significantly reduce their consumption of energy and resources. In this way, we help alleviate the problems of waste disposal and pollution.

— **Household Waste:** TCC DAKA RRRC started trial operation in July 2023 and officially launched in December that year, becoming the first in Taiwan to utilize Co-processing of Cement Kilns for the municipal waste. The RRRC helps address the long-accumulated household waste in Hualien, providing a sustainable solution for Hualien County and surrounding areas. With a maximum daily processing capacity of 200 tonnes, it significantly reduces the burden on landfills and cuts carbon emissions associated with transporting waste to other counties. In 2024, the total amount of waste processed by DAKA Recycling Center of Taiwan Cement was 41,421 metric tons.

— **Construction Waste:** The average lifespan of urban buildings is about 60 years. When a building reaches the end of its lifecycle and must be demolished, TCC is capable of handling the resulting waste. Since 2023, our cement plants in Taiwan and Mainland China have been assisting the construction industry in disposing traditionally difficult-to-handle waste. Some of this waste can be reused as alternative raw materials for cement production, re-fired in the kilns. Other waste is recycled into aggregate materials used as base mixtures in new constructions, or as graded aggregate materials applied in road resurfacing. This approach embodies the spirit of circular economy and carbon reduction.

- **Low-carbon New Energy Total Solution Enhances Urban Resilience:** Considering that carbon emissions from construction account for nearly 40% of global emissions, TCC integrates low-carbon building materials, resource recycling, and the Group's green energy, energy storage, and charging services, from the low-carbon building materials and green electricity storage during construction, to green electricity supply after project completion, and waste disposal during demolition.

TCC provides a comprehensive Low-carbon New Energy Total Solution for the entire lifecycle of a building, enhancing urban resilience to climate change and supporting the development of low-carbon, new energy cities.

- **Nature-based Solutions (NbS):** Climate action and nature-based solutions are the two key forces driving the progress towards the 2050 net-zero goal. TCC became a TNFD (Taskforce on Nature-related Financial Disclosures) Early Adopter on January 16, 2024. TNFD is an initiative promoted by the United Nations and the G20. According to the latest World Risk Report, the world will face increasingly severe extreme weather impacts, biodiversity loss, and ecosystem collapse in the next ten years, all of which will cause irreversible changes to the Earth's ecosystems and directly impact human survival. TCC's low-carbon transition considers nature-positive growth and balance.
- **White Popinac** has been listed as one of the world's most invasive alien species by the International Union for Conservation of Nature (IUCN). In January 2024, TCC announced that its Suao Plant and Hoping Plant have signed MOUs with central and local governments and farmers' associations, to utilize advanced Cement Co-Processing to convert White Popinac removed from rivers in eastern Taiwan into biomass fuel for the cement production process.

Total Care Commitment: Guided by a people-oriented philosophy, TCC cherishes the rights and interests of our stakeholders.

TCC continuously communicates with various stakeholders on climate issues to transform the image of the cement industry.

To achieve net-zero transition, industry transformation, energy transition, social transformation, and lifestyle transformation are necessary, among which lifestyle and social transformation rely on public participation. TCC adheres to the principles of openness, transparency, integration, sharing, and incorporation, hoping to deepen external stakeholders' understanding of our related actions, enhance awareness of industrial industries, and thereby improve our corporate image. Details and results of TCC's engagement with stakeholders can be found in our annual Sustainability Reports. The following summarizes the highlights of TCC's communication with stakeholders on climate-related issues in 2024.

(1) Government, Public Associations, Academia – Low-Carbon Product and Taiwan CBAM Communication, Supporting Cement Industry Transformation

- **Promoting Low-Carbon Products :** TCC participates in public associations such as the Taiwan BIM Alliance of NTU and the Low Carbon Building Alliance to understand the cultivation process and perspectives of civil engineering talents, thereby strengthening the potential applications of our developed products. TCC also actively communicates with relevant authorities such as the Ministry of Economic Affairs, Ministry of the Interior, Public Construction Commission, and Ministry of Environment to participate in the revision of regulations related to construction and low-carbon products, including public works specifications, chloride ion standards, and cargo tax-related regulations, and has achieved progress such as the Ministry of Finance's announcement that starting from January 1, 2024, the taxable amount of commodity tax for Type II cement that uses alternative raw materials (such as fly ash, blast furnace slag, and limestone) and reduces the use of clinker.
- **Taiwan CBAM Communication :** To accelerate carbon reduction in the cement industry, TCC also actively encourages the government to establish a Carbon Border Adjustment Mechanism (CBAM). In addition to providing relevant regulatory recommendations, our company also jointly discusses with members of the Taiwan Cement Manufacturers' Association, scholars, and relevant government agencies on how to establish a Carbon Border Adjustment Mechanism (CBAM) in Taiwan to prevent carbon leakage among Taiwan and other countries.
TCC supports carbon pricing and, in accordance with the Carbon Border Adjustment Mechanism (CBAM), advocates for extending the carbon pricing system to the border. As Taiwanese companies begin paying carbon fees in 2025, relevant industries should be required to declare information such as the carbon content of imported raw materials and products. This will help prepare Taiwan for the future implementation of the CBAM.

(2) Public – Innovative AI Applications and New Site Openings to Enhance Public Understanding of Sustainability Issues

- **Promoting the Development of Climate Action Talents:** To enhance public understanding of Climate Action Talents and our low-carbon transformation, TCC launched the 2024 TCC Climate Action Talent Recruitment Program in February 2024 and participated in events such as the NTU Campus Recruitment Fair in March, with ongoing promotion throughout the year. This program utilizes two AI generators, ChatGPT and Midjourney, inputting parameters (prompts) incorporating the personality traits, skills, and workplace characteristics required by various business units, resulting in six AI virtual spokespersons for different job openings to engage with Generation Z job seekers who have grown up in the digital environment. In October 2024, TCC also participated in the launch ceremony of the Hsing Academy held by National Chung Hsing University, adhering to the principle that talent development is key to corporate sustainability, allowing students to gain an in-depth understanding of the Group's carbon reduction and sustainability strategies, and experience the practical applications of the new energy industry.
- **TCC DAKA Renewable Resources Recycling Center (RRRC) Opens New Areas:** This site is expected to open this year, allowing the public to enhance their understanding of new technologies for resource recycling through actual visits and understand that buildings for garbage and waste treatment can now achieve odorless operation. TCC hopes to integrate waste treatment facilities with the environment, making them friendly facilities for tourists and surrounding residents.

(3) Community – Carbon Reduction Parent-Child Bankbook Program, Working Together on Low-Carbon Transformation Starting from Education

In 2023, TCC initiated the first Carbon Reduction Parent-Child Bankbook program nationwide in the indigenous community where the TCC Hoping Plant (Hualien) is located. Through an incentive mechanism, parents are guided to accompany their children to jointly develop daily carbon reduction habits and cultivate carbon reduction awareness. The program encourages the children of this indigenous community to practice carbon reduction in three key areas: finishing their lunch at school to reduce food waste, depositing used batteries, disposable cups, aluminium cans, and PET bottles at the TCC DAKA, while implementing waste sorting and recycling and adopting energy-saving at home to reduce carbon emissions.

Students and parents can earn "carbon coins" through carbon reduction behaviors and accumulate them in the "carbon reduction bankbook." By conducting "carbon coin trading" with the TCC Hoping Plant, they can ultimately obtain government-certified carbon label products, such as school bags, sneakers, beverages, and toilet paper, making indigenous children more conscious about their daily carbon reduction.

Currently, this program has expanded from the Hoping area to elementary schools in the Suao area, hoping to root the concept from an early age and work together with the community on carbon reduction.

(4) Employees – Comprehensively Enhancing Carbon Knowledge Through Diverse Channels, Extending to Business Partners in the Future

Sustainable operations have always been a key focus in internal communications. TCC is committed to fostering a culture of sustainability and embedding throughout the organization. We promote sustainability through a variety of channels and initiatives, including:

- **Internal ESG Education and Training:**
TCC launched the TCC Carbon Academy online courses in August 2023. The courses includes national certification training, greenhouse gas (GHG) and carbon inventory, and AI digital transformation in the cement industry. Course participation hours are also incorporated into performance evaluation items. This provides a channel for all employees to acquire sustainability-related knowledge. We also conduct consensus camps on carbon issues for mid and senior-level managers and general managers of various plants to enhance their climate awareness. Furthermore, our company shares the latest sustainability news with all employees weekly through the TCC Sustainability Learning Passport, allowing all employees to stay informed about the latest sustainability trends and climate-related information.
- **Regular Employee Communication Meetings:** As opportunities for interaction between the Chairman, managers at all levels, and all employees, TCC holds communication meetings such as Town Hall Meetings, labor-management meetings, union meetings, and welfare committee meetings quarterly. Through face-to-face exchanges, we gather employee opinions and feedback and directly communicate the significance and plans for corporate sustainable development.
- **Decision-Making Monthly Meeting:** This meeting is chaired by the Chairman, with participants including the Manager, Vice Presidents, mid- and senior-level managers of various departments, and nearly 40 Presidents from plants in Taiwan and overseas. The agenda covers discussion and review of TCC's current strategies, as well as topics related to corporate social responsibility and sustainability.
- **Carbon Reduction and Biodiversity:** To promote carbon reduction in the supply chain, TCC regularly holds supplier greenhouse gas (GHG) inventory counseling, GHG workshops, and sustainable governance workshops. In addition to assisting suppliers in calculating their carbon emissions, we also help them improve the data quality of their carbon data collection and formulate carbon reduction plans, working hand in hand with suppliers to mitigate climate change. Furthermore, TCC jointly promotes biodiversity conservation with suppliers, calling on ten suppliers around the Hoping Power Plant to participate in the Conservation Project: Little Tern (*Sterna albifrons*), Ho-Ping Welcomes You. We also plan to organize beach cleanup activities before the little tern breeding season, cement decoy placement activities, on-site observations, and the establishment of a patrol team with suppliers in 2025.

- Sustainable Supplier Learning Platform: To ensure that the supply chain can align with the latest sustainability and carbon management trends during TCC's international expansion, we have adopted the same system architecture as the TCC Carbon Academy used for internal employee ESG education and training to develop and build the Sustainable Supplier Learning Platform. To enhance user experience and ensure smooth video playback, TCC is actively developing video streaming functions to improve playback speed and convenience. In addition, TCC is currently developing an AI project for the Supply Chain Management Department. After the completion of relevant projects, we plan to use the latest development results to build the Sustainable Supplier Learning Platform, providing more comprehensive functions and services to facilitate the continuous advancement of TCC's supply chain.

2. Incidents Response

(1) Kaohsiung Cement Products Plant Tainan Branch Violated the Water Pollution Control Act

TCC's Kaohsiung Cement Products Plant Tainan Branch was inspected by the Environmental Protection Bureau of Tainan City Government on September 20, 2024. The suspended solid test results of the process wastewater (from car wash platforms and dust suppression sprinklers) did not meet the Effluent Standards, violating Article 7, Paragraph 1 of the Water Pollution Control Act. Consequently, the branch was penalized in accordance with Article 40, Paragraph 1 and Article 46-1.

To improve the situation and strengthen future measures, the Tainan Branch has installed additional wastewater treatment facilities and set up automatic monitoring systems linked to the local Environmental Protection Bureau to ensure compliance with environmental discharge standards. Furthermore, TCC has disciplined relevant managers and personnel and launched a comprehensive environmental inspection plan for all 23 RMC Plants across Taiwan, while enhancing training for wastewater operation personnel to prevent future violations.

Regarding the partial shutdown of the Tainan Branch's wastewater treatment process approval has been granted for the resumption of operations on March 1, 2024. This incident had no significant impact on TCC's financial operations.

(2) With regard to the Revocation of the Permit for the Fishery-Solar Symbiosis Project in Yizhu, Chiayi, the Enforcement Has Been Halted by the Ministry of Agriculture

In response to government energy policies and in support of fishery-solar symbiosis, the subsidiary TCC Chia Chien Green Energy invested in the fishery-solar symbiosis project in Yizhu, Chiayi.

However, due to a single landowner's inability to cultivate part of the fish ponds, the Chiayi County Government revoked the permit to structure farming facilities on agricultural land for the first phase of the project on December 9, 2024. Consequently, the Ministry of Economic Affairs revoked the work permit for the F zone on February 10, 2024, severely affecting the rights of many legitimate aquaculture operators.

To prevent irreversible damage to operators and legitimate aquaculture households, TCC Green Energy has legally appealed and applied for suspension of execution, while asserting its rights through arbitration. Despite efforts to communicate with the landowner, no consensus was reached. Given the legitimate aquaculture rights granted to TCC Green Energy through a notarized agreement, the company has entered the pre-cultivation phase to resolve the deadlock caused by the individual aquaculture operator undermining the results of the fishery-solar symbiosis project. This is to ensure the successful implementation of the national fishery-solar symbiosis policy. The Company hopes that the government will protect the rights of honest enterprises and law-abiding aquaculture households. Other areas of the project remain unaffected.

Regarding the appeal and application for suspension of execution, the Ministry of Agriculture has agreed to halt the revocation by the Chiayi County Government on February 20, 2025.

5.6.7 Expected Benefits and Possible Risks of Mergers and Acquisitions

Subsidiary TCC Dutch Holdings B.V. (TCC Dutch) and OYAK Capital Investments B.V. established an investment company, TCC Oyak Amsterdam Holdings B.V. (TCAH). TCC Dutch acquired 60% of TCAH shares for EUR 201,391 thousand. Originally, TCC Dutch had planned to indirectly increase its investment in Oyak Denizli Çimento Anonim Şirketi (Oyak Denizli).

However, at the end of 2023, Oyak Denizli merged with Oyak Çimento Fabrikalari Anonim Sirketi (Oyak F), with the merger completed in early 2024. Oyak F became the surviving company, and Oyak Denizli was dissolved. TCAH, the investment company of TCC Dutch, increased its shareholding in OYAK F to approximately 75.8%. Following a mandatory share tender offer in the third quarter of 2024, TCAH's shareholding in OYAK F further rose to 80.05%.

TCC Dutch has also increased its investment in its wholly owned subsidiary, TCC Europe Holdings B.V. (TCEH). In turn, TCEH raised its shareholding in Cimpor Portugal Holdings SGPS S.A. (Cimpor) to 100%, with an investment amount of EUR 419,673 thousand.

The total amount is EUR 621,064 thousand, and the related closing procedures were completed on March 6, 2024.

5.6.8 Expected benefits and potential risks of plant expansion

Cement Department: No plant expansion.

Electricity and Energy Department:

In line with the government's core vision for energy transition, Expanding Green, Increasing Gas, Reducing Coal, and Maintaining Non-nuclear policy, and the goal of achieving 20% renewable energy in Taiwan's total power generation, the Group's Power Department is keeping pace with the government's energy transition efforts by developing and investing in renewable energy projects. At the former TCC Chemical plant site in Zhangbin Industrial Zone, the first and second phases of large-scale ground-mounted solar power and large-scale onshore wind power have been completed, along with solar power equipment installed on facilities within the plant. Additionally, the first designated fishery-solar symbiosis zone in Taiwan, located in Chiayi area, was officially connected to the grid in June 2022. Currently, TCC continues to expand large-scale solar power sites in Chiayi and Kaohsiung areas, some of which have already entered the construction phase and are expected to be connected to the grid successively after the third quarter of 2025. Additionally, TCC is applying for relevant permits for new wind power projects in the northern coastal areas from the Ministry of Environment under the Executive Yuan.

TCC Green Energy is also developing renewable energy power plants with base-load characteristics, with plans to complete the grid connection of MW-level geothermal power plants in the Taitung area by 2025. In addition, plans are underway to develop MW-level marine energy generation in the eastern sea areas of Hualien. The project is currently undergoing environmental impact assessment review by the Ministry of Environment. Upon receiving approval, TCC will proceed with submitting the preparatory application to the Energy Administration.

The nation's first local large-scale AFC energy storage facility has currently renewed its contract with Taipower to engage in a second round of grid frequency regulation services. In addition, there are also plans to convert part of the dReg systems, which were originally used in the power trading platform, to participate in solar power combined with energy storage system tenders led by the Energy Administration. Technical upgrade planning for the current system is already in progress, with the implementation timing dependent on the launch of new tenders by the Energy Administration. The major large-scale E-dReg energy storage system in the Hualien-Taitung area, which completed grid connection for the entire area in 2024, is currently operating stably. In addition to providing crucial support for national grid resilience, it also generates significant revenue for TCC Green Energy.

In response to newly introduced power trading initiatives in various countries, NHOA.TCC plans to enter the European market by deploying the EnergyArk400 at fast-charging stations and C&I sites. It aims to become an energy aggregator in these countries, engaging in power trading, including the electricity market and ancillary services market, which is expected to bring stable revenue to the group. Additionally, TCC Group's European subsidiary, Atlante, will accelerate the deployment of fast-charging stations in Southern Europe by leveraging the plug-and-play design and a faster power application process.

To achieve the annual production and sales plan of over 500 EnergyArk units, a factory has been purchased in Jurong City, China. Several EnergyArk cabinet production lines have been deployed to meet the energy storage market demand in Europe and China.

5.6.9 Risks faced due to concentrated purchases or sales:

None.

5.6.10 Impact on TCC due to large transfers or changes in shareholdings of directors, supervisors, or major shareholders with over 10% ownership:

None.

5.6.11 Impact and risks to TCC due to changes in management control:

None.

5.6.12 Litigation or non-litigation cases

As of 2024 and the printing date of this annual report, major litigation, non-litigation, or administrative disputes that have been definitively adjudicated or are still pending: None.

As of 2024 and the printing date of this annual report, any major litigation, non-litigation, or administrative disputes involving the directors, President, de facto responsible persons, major shareholders with shareholding exceeding 10%, and subsidiaries, whether definitively adjudicated or still pending, which may significantly impact shareholders' equity or securities prices:

Company Name	Ho-Ping Power Company
Disputed Facts	The Fair Trade Commission (FTC) imposed a penalty on Ho-Ping Power Company for violating Article 14 of the Fair Trade Act, which governs the conduct of domestic private power companies.
Amount in dispute	NTD 1,350,000 thousand
Litigation/appeal start date	March 2013
Main Parties to the Litigation	Ho-Ping Power Company and the Fair Trade Commission
Processing status	1.In November 2013, the Fair Trade Commission made a second disposition, revising the fine imposed on Ho-Ping Power Company to NTD 1,320,000 thousand. 2.This case was overturned by the Supreme Administrative Court on June 30, 2015 and September 6, 2018, nullifying the original judgments that were favorable to Ho-Ping Power Company, and was remanded to the Taipei High Administrative Court for retrial. Afterward, on May 13, 2020, the Taipei High Administrative Court once again revoked the FTC's disposition in the second retrial (Case No.: 107-Su-Geng (2) No. 116). However, the FTC filed an appeal expressing its objection. On August 11, 2022, the Supreme Administrative Court rendered a judgment dismissing Ho-Ping Power Company's lawsuit in the original trial (Case No.: 109-Shang No. 864). Ho-Ping Power Company, dissatisfied with the final judgment, has filed an application for retrial with the Supreme Administrative Court according to law. In February 2024, the Supreme Court dismissed the part concerning the agreement on concerted action, while the part concerning competitive relationship was transferred to the Taipei High Administrative Court. 3.In 2014, Ho-Ping Power Company filed an administrative appeal against the Fair Trade Commission's Disposition No. 103090, dated July 10, 2014, regarding a Fair Trade Act case. The administrative appeal procedure was temporarily suspended. Now, as the aforementioned administrative litigation case has been finalized by the Supreme Administrative Court's Judgment No. 109-Shang No. 864, the Executive Yuan subsequently dismissed this administrative appeal case. Ho-Ping Power Company has also filed a lawsuit with the Taipei High Administrative Court according in accordance with legal procedures. The case is currently pending and under review by the court. 4.Out of prudence, Ho-Ping Power Company had recognized the estimated loss in 2012 and had fully settled the amount by June 30, 2019.

Company Name	Ho-Ping Power Company
Disputed Facts	Taiwan Power Company (Taipower) filed a civil lawsuit with the Taipei District Court.
Amount in dispute	A total of approximately NT\$1,755,216 thousand
Litigation/appeal start date	November 2015
Main Parties to the Litigation	Ho-Ping Power Company and Taipower
Processing status	In November 2015, Ho-Ping Power Company received a civil lawsuit filed by Taipower in the Taipei District Court regarding the same matter as the aforementioned administrative litigation. In May 2020, Taipower reduced its claim from the original NT\$5,268,000 thousand to NT\$1,755,216 thousand. Both the Taipei District Court and the Taiwan High Court dismissed the lawsuit. Taipower, dissatisfied with the ruling, filed an appeal. On January 24, 2024, the Supreme Court ruled to remand the case to the Taiwan High Court, where it remains under review.

5.6.13 Other Significant Risks

(1) The introduction of carbon pricing and its impact on businesses is no longer a future concern but a present reality. TCC is developing low-carbon building materials and advancing green energy, energy storage, and charging services, while expanding our global industrial footprint and strengthening our international carbon competitiveness.

With the emergence of global carbon pricing, carbon emissions are increasingly linked to business operating costs, making carbon reduction a key factor in both national and corporate competitiveness.

In 2023, TCC led the way by launching Taiwan's first low-carbon products, including the lowest-carbon cement, Portland Limestone Type IL Cement, along with TCC Portland Limestone Cement Concrete and UHPC low-carbon, high-quality building materials. These innovations reflect our commitment to reducing carbon emissions in the construction sector and advancing the development of low-carbon cities. To meet SBTi targets, TCC plans to transition fully to produce Portland-Limestone Cement starting in 2026. OYAK Cement and Cimpor Cement are global leaders in the R&D and production of low-carbon cement. OYAK stands out for its high-performance, low-carbon emission products and holds the largest production capacity in Turkey. Meanwhile, Cimpor's Kribi plant in Cameroon operates differently from traditional cement plants as it does not use a traditional cement kiln. Instead, cement is produced through calcination, enabling exceptionally high energy efficiency, with the biomass fuel usage accounting for up to 90%. This innovative approach aligns with low-carbon regulations and demands across various markets and promotes technical exchange within the Group.

In addition to developing low-carbon building materials, TCC Group has expanded into energy storage and green electricity supply, integrating its carbon reduction and green energy strategies to integrate the industrial value chain and create innovative product and service models. One key initiative is the development of EnergyArk Energy Storage Cabinet, which combines the fire- and weather-resistant advantages of low-carbon ultra-high performance concrete with TCC's power battery technology and smart energy storage systems. TCC is now the only company in Taiwan addressing the full life cycle of buildings, from low-carbon materials in the construction phase, to green electricity and energy storage installation during usage, and finally to green electricity supply after building completion and resource recycling after demolition. As a global Tier 1 energy storage supplier, NHOA Energy delivers complete energy storage systems by integrating cutting-edge technology, seamless operation from system design to implementation, and world-class services during operations along with its power electronics products. In the green electricity business, NHOA Energy continues to invest in renewable energy power plant development, targeting annual sales and supply of 90 million kWh annually. Currently, 100% of its wind power is supplied to private enterprises through the CPPA model, with solar power gradually shifting to the same model.

The Group integrates core resources and expands its international presence to strengthen competitiveness in the carbon revolution era, moving toward providing solutions for net-zero cities.

(2) The first company in Taiwan to successfully issue green ECBs totaling NT\$13.5 billion. The issuance received a BBB– rating with a stable outlook from Fitch Ratings, one of the world's top three credit rating agencies, and its green credentials were recognized by overseas ESG investors

In September 2023, TCC released its Green Financing Framework and obtained a Second Party Opinion (SPO) from Sustainalytics, an international benchmark ESG rating agency, confirming its compliance with green standards. TCC became the first company in Taiwan to present a green financing framework and corresponding SPC to the international capital market. Subsequently, in October 2023, TCC issued the equivalent of approximately NT\$26 billion, including US\$384.7 million in Global Depositary Receipts (GDRs) and US\$420 million in Green Euro Convertible Bonds (Green ECBs). This international fundraising set three records at the time. First, it marked the largest dual issuance of global depositary receipts and convertible bonds in Asia in the past two years. Second, it was first successful issuance of green overseas convertible bonds from Taiwan, certified by the international institution Sustainalytics. Third, it was one of the rare cases in Asia in recent years where long-only funds and ESG investment institutions subscribed to over double-digit percentages.

Additionally, in December 2023, Fitch Ratings, one of the world's three major credit rating agencies in the capital markets, assigned TCC a first-time international credit rating of BBB– with a Stable outlook for its long-term unsecured US dollar bonds, which qualifies as an Investment Grade credit rating. This credit rating report reflects TCC's leading position in the cement markets of Taiwan, Turkey, and Portugal, as well as its strong presence in the southern and southwestern provinces in Mainland China. In addition, subsidiary Ho-Ping Power Company maintains stable profitability and cash flow, with a moderate level of debt. This report indicates that, in light of stringent carbon emission standards and future carbon fees, TCC's investments in energy conservation, carbon reduction, and equipment and technological upgrades in its Mainland China cement business will enhance its competitiveness. It also notes that TCC's renewable energy business is already profitable. Its European subsidiary, NHOA Energy, is engaged in global EPC (Engineering, Procurement, and Construction) energy storage business, and NHOA. TCC is expected to deliver positive EBITDA cash flow performance.

TCC's green credentials have been recognized by overseas ESG investors. The issuance of green overseas unsecured convertible bonds has obtained an international investment-grade credit rating, helping TCC secure more favorable procurement conditions and bond issuance terms in global markets. This not only enhances TCC's visibility in international capital markets but also optimizes its shareholder composition and strengthens its balance sheet.

(3) Energy for Social Transition - The Planned Decommissioning of Ho-Ping Power Plant by 2040 Represents Our Commitment to Carbon Reduction and Green Energy, While Promoting Just Transition

Ho-Ping Power Company, located at the border of Yilan and Hualien counties, is the largest power plant in eastern Taiwan. It provides approximately 95% of the electricity for Yilan and about 25% for New Taipei City, two major cities in northern Taiwan, supplying nearly 4% of Taiwan's total electricity. Currently, it serves as a primary source for the northern and eastern power grid. Eastern Taiwan lacks natural gas receiving terminals and pipelines, making it unfeasible to follow western Taiwan's coal-fired power plants in converting from coal to gas. According to Taipower, without Hoping Power Plant, the region's power supply would be severely impacted, as the northern and eastern power grids serve nearly five million residents who rely on the plant for electricity. TCC President Roman Cheng refers to the plant's continued operation as social transition energy, a tangible expression of TCC's commitment to social responsibility. The Ho-Ping Power Plant plays a crucial role in supporting national energy transition policies and maintaining grid stability and thus has an undeniable obligation to initiate renewal contract with Taipower for the operations beyond 2027. The Ho-Ping Power Plant will follow the recommendations of the International Energy Agency (IEA) and coordinate with Taipower's contract renewal and grid stability requirements. The current plan is for Ho-Ping's coal-fired units to remain in operation until the end of their design life, with decommissioning no later than 2040. As part of its future transformation efforts, the Ocean Thermal Energy Conversion project will be launched by the end of 2024. Meanwhile, a just transition plan will be initiated, using diverse communication channels to understand and address the concerns of employees and other relevant stakeholders.

Hoping Power Plant, an Eco-Friendly Power Plant - Committed to Carbon Reduction Plans and Exploring the Feasibility of Ocean Energy Generation

Since its commissioning in 2002, the Hoping Power Plant has adopted circular economy design. All coal ash produced is transported via enclosed conveyor corridors to the nearby Hoping Plant, where it is used as alternative raw material. This makes it the only power plant in the world that neither uses fly ash ponds nor transports fly ash off-site. TCC continues to advance green energy transformation by reducing carbon emissions through increased investments in renewable energy and energy storage:

- **Solar Power:** The Hoping Power Plant plans to install self-generated, self-sustaining renewable energy generation equipment, with solar panels covering all rooftops. The expected power generation efficiency is superior to the Hualien County average.
- **Small Hydropower:** The Ho-Ping Power Plant intends to enhance the efficiency of cooling water usage for power units by leveraging flow rates and potential energy differences in existing channels for small-scale hydropower generation, connecting to the plant's high-voltage system. Feasibility assessment was completed in 2023, with an installed capacity of 572kW and an estimated annual power generation of 3.9 million kWh.
- **Ocean Thermal Energy Conversion Power Plant:** The Hoping Power Plant is located in Taiwan's eastern waters, enabling it to utilize the temperature difference between the plant's cooling water and deep sea water to drive turbine generators, creating the world's first MW-class ocean thermal energy conversion power plant.
- **Improving Energy Efficiency:** The Hoping Power Plant aims to transition from subcritical to supercritical technology to improve energy efficiency, reduce coal consumption per unit of electricity generated, and thereby lower both fuel costs and pollutant emissions.

Initiating Just Transition to Minimize Potential Impact on Employees, Suppliers, and Other Community Stakeholders

During the global net-zero transition, in order to minimize the impact on local communities and employees, TCC began engaging with communities surrounding the Hoping Power Plant in 2022 through the Carbon Reduction Parent-Child Bankbook program, helping them understand the significance of energy transition and carbon reduction. In addition, to address the potential impact of decommissioning Hoping Power Plant's coal-fired units in 2040, TCC initiated the Just Transition Plan in March 2025. This plan ensures the involvement of stakeholders, including employees, surrounding communities, and suppliers, shifting from unilateral decision-making to open, two-way communication.

By identifying potential impacts on stakeholders during the transition process and analyzing gaps after the net-zero transition such as changes in job opportunities, employee skill gaps, or training needs, TCC will develop transition strategies and plans based on principles of inclusivity and legitimacy. This approach aims to mitigate potential impacts on stakeholders to achieve a just transition. TCC will actively create job opportunities aligned with climate mitigation, adaptation, and transition needs, while supporting affected stakeholders through empowerment programs to transition together. For example, TCC will continue to advance the ocean thermal energy conversion power plant construction project and has long provided relevant professional training and job transfer programs. In addition, TCC has conducted stakeholder impact identification and assessment through qualitative research methods, including interviews and forums, engaging senior management, employees, surrounding communities, and other stakeholders. This will support the subsequent implementation of Hoping Power Plant's Just Transition Plan.

Responding to International Human Rights Issues: Hoping Power Plant Stops Using Russian Coal

The Hoping Power Plant uses a mix each quarter based on market supply and demand, as its main coal ratio, ensuring compliance with environmental assessment regulations. Every batch of imported coal must be accompanied by a third-party inspection report. However, unlike Taipower, which operates multiple power plants, Hoping Power Plant lacks the ability to dispatch coal supplies from multiple countries with the same level of flexibility. Russian coal is the low-ash coal source with the second shortest shipping distance to Taiwan after coal from Mainland China. After the outbreak of the Russia-Ukraine war in 2022, Hoping Power Plant sought to diversify procurement risks by purchasing Russian coal solely through spot contracts. In May of that year, the plant submitted a request to the Ministry of Environment to raise the upper limit of the annual average ash content, aiming to enhance procurement flexibility. However, the Ministry concluded that further review of environmental impacts was necessary. At the same time, Indonesia, one of Hoping Power Plant's primary coal suppliers, experienced four force majeure shipping delay incidents between 2021 and 2022. These include the Indonesian government's ban on coal exports and customs system failures causing port congestion. In addition, Australian coal deliveries are consistently disrupted during the rainy season from January to March, and in July 2022, a railway workers' strike in Australia also delayed shipments to Ho-Ping. Despite the tense and volatile international landscape, Ho-Ping Power Plant continues to seek sustainable solutions amid numerous challenges. On one hand, it is developing new coal sources from South Africa, and on the other, it is testing safe low-ash coal blending ratios following the reduction in Russian coal usage.

2024 marks the 70th anniversary of TCC's privatized operations, as well as its first year of international expansion. TCC has expanded investments in low-carbon cement markets across Europe, Asia, and Africa, while also diversifying its revenue structure through international expansion, with its subsidiary Hoping Power Plant now accounting for only about 10% of total revenue. TCC is committed to sustainable operations and actively supports Taiwan's energy transition. While the Hoping Power Plant plays a key role in ensuring stable power supply during the transition, TCC is currently participating in the energy transition, standing out as the only company in Taiwan simultaneously investing in the development of diverse renewable energy sources, including solar power, wind power, fishery-solar symbiosis, geothermal power, and ocean thermal energy conversion. Through the development of low-carbon energy, implementation of just transition plans, and attention to stakeholder interests, TCC continues to make steady progress toward its 2050 net-zero goal.

5.7 Other important matters: None.

06

Disclosure of Sustainability-related and Climate-related Financial Information

「In a world of rapid change, especially amid today's complex geopolitical landscape, we must embody the spirit of "Mobilis in Mobili"—to move dynamically within the ever-changing tides.」 —Chairman, Nelson An-ping Chang

In 2025, the international political and economic landscape underwent a significant restructuring, presenting global enterprises with a new wave of profound uncertainties. On April 2nd, U.S. President Trump declared Liberation Day, announcing comprehensive tariffs on imported goods from over a hundred countries worldwide. This disrupted global supply chain configurations, drove up raw material costs, and triggered significant volatility in international stock and currency markets. Beyond increasing direct import costs, this round of tariff policies is establishing a new wave of trade barriers globally, hindering the trend of regional economic integration, challenging the multilateral trading system, and rapidly escalating non-tariff barriers. The accelerated trends of supply chain shifts and localization are compelling multinational corporations to reassess their global footprints and risk exposures.

Having embarked on a seven-year low-carbon transformation since 2017, TCC Group completed investments and acquisitions in Turkey and Portugal in March 2024. This has evolved TCC into an international enterprise spanning 11 industries and 14 key markets, with employees of 47 nationalities. Our business encompasses low-carbon construction materials, resource recycling, green energy, energy storage, and the high-end Lithium-ion ternary battery industry chain, demonstrating cross-domain integration capabilities and competitiveness. Furthermore, TCC maintains a robust financial structure, employing a natural hedging strategy for foreign exchange operations to effectively mitigate exchange rate risks. In March 2025, TCC successfully issued US\$350 million in green convertible bonds. By pre-locking the NTD exchange rate, the maximum annualized interest rate was only 1.875%, underscoring TCC's international creditworthiness and financing capabilities. TCC stands as one of the very few companies in Taiwan with annual revenues exceeding NT\$100 billion, characterized by deep and comprehensive domestic market penetration and a low reliance on exports.

Chairman Nelson An-ping Chang, emphasizing the spirit of exploration and change with the Latin maxim Mobilis in Mobili - moving within motion and changing within change, encourages all TCC colleagues to navigate change and ride the waves. He urges us to continuously adapt, seize opportunities, control risks, demonstrate adaptability and resilience in a dynamic environment, constantly seek new opportunities, and move forward steadily.

Sustainable Finance Investments Continue to Drive the Market

According to the Global Market Insights (2024), the global sustainable finance market reached US\$5.87 trillion in 2024 and is projected to expand at a compound annual growth rate (CAGR) of 19.8% through 2034, demonstrating significant structural growth potential. Recent compound disasters, such as the Taiwan Hualien earthquake on April 3rd, 2024, and the Myanmar earthquake on March 28th, 2025, along with extreme climate events like floods, wildfires, and hurricanes (both anthropogenic and natural), have caused substantial global economic losses. This, in turn, is accelerating the flow of capital from financial markets into more disaster-resilient and climate-resilient infrastructure, clean energy, and sustainable assets. In alignment with international standards through the adoption of IFRS S1 and S2, TCC aims to enhance the transparency and reliability of its sustainability disclosures to attract more sustainability-focused investors.

For corporations, sustainable development is not merely about regulatory compliance but also competitiveness and market opportunities. Despite potential short-term fluctuations in global ESG regulatory policies, the overall market demand and trend for sustainable investment are expected to persist. TCC values its investors and continuously adjusts its strategies in real-time to meet market expectations and international standards.

Sustainable/Just Transition Strengthens Operational Resilience

TCC continues to deepen its sustainable development strategy by formulating an implementation plan for IFRS Sustainability Disclosure Standards S1 and S2, gradually strengthening its internal sustainability information management and disclosure mechanisms. Through the newly established 1.5-degree science-based decarbonization pathway, combined with the application of innovative technologies such as equipment & process enhancement, artificial intelligence, and carbon capture, supported by flexible sustainable investment and financing strategies, TCC is further advancing its sustainable transformation initiatives. Hoping Power Plant, with Energy for Social Transformation as its core, is enhancing its resilience to natural disasters to fulfill its national power supply responsibilities, building a highly resilient grid to support the northern and eastern regions. While progressing towards this transition, it carefully assesses the impact on the economy, employees, and surrounding communities, undertaking a just transition strategy with inclusivity and legitimacy. This approach creates job opportunities related to climate mitigation and adaptation, as well as the demand for transition, and supports affected stakeholders through empowerment programs to transform together, contributing greater value to global sustainable transformation.

Aligning with International ESG Financial Metrics to Enhance Transparency

Sustainability/climate-related financial disclosures significantly influence investor decision-making. As early as 2024, TCC pioneered the inclusion of sustainability-related financial disclosures in its annual report, referencing IFRS Sustainability Disclosure Standards. By proactively adopting international frameworks, TCC aims to lead industry sustainability efforts. These standards help companies identify sustainability and climate-related risks and opportunities, strengthen internal sustainability governance, and enhance capital market transparency regarding a company's ESG proficiency. TCC's sustainability transition efforts have earned international recognition. It became the first construction materials company in the Greater China region to be included in both the DJSI World and Emerging Markets indices. Furthermore, in the Carbon Disclosure Project (CDP) evaluations, TCC received an (A-) rating in both climate change and water security questionnaires, highlighting its recognized achievements in carbon reduction, environmental management, and climate risk response.

6.1 Implementation Plan for IFRS Sustainability Disclosure Standards

Establishing Internal Control Systems: Integrating Sustainability Information into Circular Controls

In April 2024, TCC Group proactively aligned with the International Sustainability Standards Board (ISSB) and Financial Supervisory Commission (FSC) Roadmap for Taiwan Listed Companies to Align with IFRS Sustainability Disclosure Standards. TCC adopted IFRS S1 (General Requirements for Disclosure of Sustainability-related Financial Information) and S2 (Climate-related Disclosures), publishing a dedicated chapter on IFRS-aligned sustainability and climate-related financial disclosures in its 2023 Annual Report.

According to the Taiwan Stock Exchange's official notice released in July 2024, large corporations with paid-in capital exceeding NT\$10 billion are required to fully adopt the IFRS Sustainability Disclosure Standards by 2027. In response, TCC's Board of Directors approved the alignment with IFRS standards on August 13th, 2024, and established a cross-functional task force led by the Chief Sustainability Officer. The task force is responsible for integrating sustainability and financial information and has completed the implementation plan, reporting entity identification, and analysis of major gaps between existing sustainability data and IFRS standards by Q4 2024. Progress is reported quarterly to the Corporate Sustainable Development Committee and the Board. The first execution progress report was presented to the Board on March 12th, 2025.

To enhance internal controls over sustainability information, on December 24th, 2024, the Board approved the TCC Internal Control Policy, has had Section 19 – Sustainability Information Management (AGC-19) added under Chapter 10. On January 13th, 2025, Chairman Nelson An-ping Chang issued the Circular Control Operations Guidelines, officially incorporating sustainability information management into TCC's circular control system (AGC). The guidelines stipulate that sustainability reporting units must follow IFRS reporting standards when processing and compiling sustainability data. This framework has been fully integrated into TCC's internal control system to ensure the accuracy and completeness of sustainability-related information, covering all entities within the scope of the consolidated financial statements.

Establishing a Scientific Risk and Opportunity Database: A Systematic Strategy for Sustainable Development

With operations spanning 11 business sectors—including cement, green energy, energy storage, and EV charging—across five continents and 14 countries, TCC is actively identifying reporting entities within the Group to comply with IFRS standards. In alignment with the Sustainability Accounting Standards Board (SASB), TCC is systematically assessing the materiality of its operations and mapping out sustainability and climate-related risks and opportunities across industries.

In 2025, TCC plans to build a data-driven and scientifically grounded Risk and Opportunity Database to enhance its risk management capabilities. This database will leverage expert models and methodologies from the Ministry of Economic Affairs, international insurance firms (e.g., Munich Re), and risk management consultants (e.g., Marsh) to ensure global-standard risk identification. The development will include a comprehensive review of current risks, historical loss analysis, insurance coverage evaluations, and the applicability of risk mitigation measures. A standardized identification, evaluation, and prioritization mechanism will be established, with residual risk calculated and ranked based on severity and likelihood. Final reviews and adjustments will be conducted by senior executives to ensure strategic alignment with business operations and to formulate risk countermeasures accordingly. Simultaneously, TCC is developing a framework for identifying sustainability and climate-related opportunities. These will be integrated into the Risk and Opportunity Database and disclosed according to IFRS standards, strengthening the Company's overall sustainability competitiveness.

TCC plans to adopt a scientific approach to establish a corporation-wide Risk and Opportunity Database in 2025. By integrating diverse reference sources and analytical tools, the Company aims to ensure that the identification of risks and opportunities is both systematic and data driven. The development process will follow the steps outlined below:

Establishing Risk and Opportunity Database

Referencing Authoritative Risk Assessment Frameworks

- Incorporate methodologies from domestic and international financial/insurance institutions (e.g., Munich Re, Fubon Insurance) and risk advisors (e.g., Marsh) to meet global risk identification standards.

Systematic Risk Inventory

- Conduct a comprehensive review of existing ESG-related risks across TCC Group, and analyze past events and actual losses to quantify potential impacts.
- Assess the applicability of existing insurance coverage and other risk mitigation measures to evaluate the adequacy of current mechanisms in addressing potential risks.

Risk Assessment and Prioritization

- Establish a standardized assessment process to continuously improve risk identification methods, evaluation, and prioritization mechanisms.
- Calculate Residual Risk and prioritize risks based on their impact and likelihood of occurrence to serve as a basis for decision-making.

Senior Management Review and Strategy Formulation

- Review risk prioritization and analysis results through senior management evaluation to ensure their alignment with the Company's actual operational needs.
- Formulate appropriate mitigation measures for immediate and significant risks and evaluate whether potential opportunities exist.

Scientific Risk Identification Process

TCC's risk identification process is scientific and structured, with the following key steps:

Data Collection

- Collect internal and external data, including operational data, historical loss records, industry trends, and climate model projections.

Preliminary Identification

- Identify key sustainability and climate-related risks for each industry sector based on SASB standards and international frameworks.

Quantitative Analysis

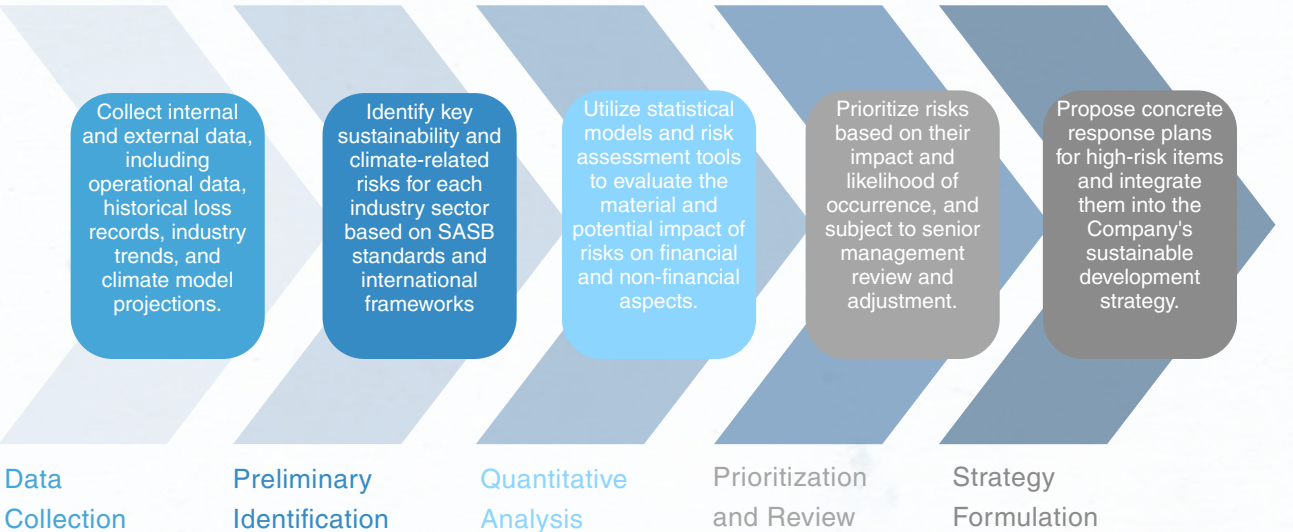
- Utilize statistical models and risk assessment tools to evaluate the material and potential impact of risks on financial and non-financial aspects.

Prioritization and Review

- Prioritize risks based on their impact and likelihood of occurrence, and subject to senior management review and adjustment.

Strategy Formulation

- Propose concrete response plans for high-risk items and integrate them into the Company's sustainable development strategy.



Opportunity Identification

In addition to risk management, TCC is also concurrently establishing an identification process for sustainability and climate-related opportunities.

- Explore Green Energy Market Expansion: Such as renewable energy investments and emerging market expansion.
- Carbon Capture Technology Application: Evaluate the commercial feasibility of CCUS (Carbon Capture, Utilization, and Storage) technology.
- Circular Economy Model Development: Strengthen resource recycling and industrial chain circular management to enhance competitive advantages.

This mechanism is being continuously improved. In the future, it will be integrated with the risk database, and relevant information will be disclosed in accordance with IFRS Sustainability Disclosure Standards to enhance corporate transparency and sustainable competitiveness.

Enhancing Corporate Resilience and Promoting Sustainable Transformation

TCC's establishment of a risk and opportunity database using scientific methods demonstrates its commitment to sustainable development and lays a foundation for operational stability amidst globalization and severe climate challenges. By referencing international standards, systematically identifying risks, utilizing quantitative analysis, and employing a multi-layered mechanism involving senior management review, we ensure that risk management and opportunity identification align with international practices and meet professional standards, while more closely aligning with the Company's actual operational needs. In the future, TCC aims to introduce AI technology to enhance the reliability of data collection and identification, making the database a core tool for formulating long-term strategies and addressing climate change, thereby driving the Company towards sustainable transformation and achieving steady growth in a low-carbon economy.

6.2 IFRS S1 and S2

From the perspective of the primary users of general-purpose financial reports (including existing and potential investors, lending banks, and other creditors), TCC has selected Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, and Low-carbon Products and Services as its three material sustainability topics. Then in accordance with the IFRS S1 and S2, TCC identifies sustainability-related and climate-related risks and opportunities that could reasonably be expected to affect TCC’s prospects. Given the Company’s expanded business footprint in recent years, spanning multiple business segments and countries, the term Sustainable Products and Services has been adjusted to Low-Carbon Products and Services to avoid potential confusion with the EU Taxonomy for sustainable economic activities and enhance clarity in our disclosures. Unless otherwise specified, the financial impact amounts disclosed in Chapter 6 are presented in New Taiwan Dollars (NTD), which is the functional currency of the business. For foreign currency transactions involving exchange rate conversions, please refer to the significant accounting policies in our consolidated financial statements, ensuring that information users can accurately assess the Company’s risk exposure and balance sheet fluctuations under different currency environments.

6.2.1 Governance

The Board of Directors is the highest decision-making body overseeing sustainability and climate issues at TCC. Members of the TCC Board of Directors, through their experience in management and risk management, environment, climate change, and sustainability, provide insights that contribute to addressing climate change and sustainability challenges. Additionally, through annual director training, the knowledge of board members regarding sustainability and climate issues is enhanced.

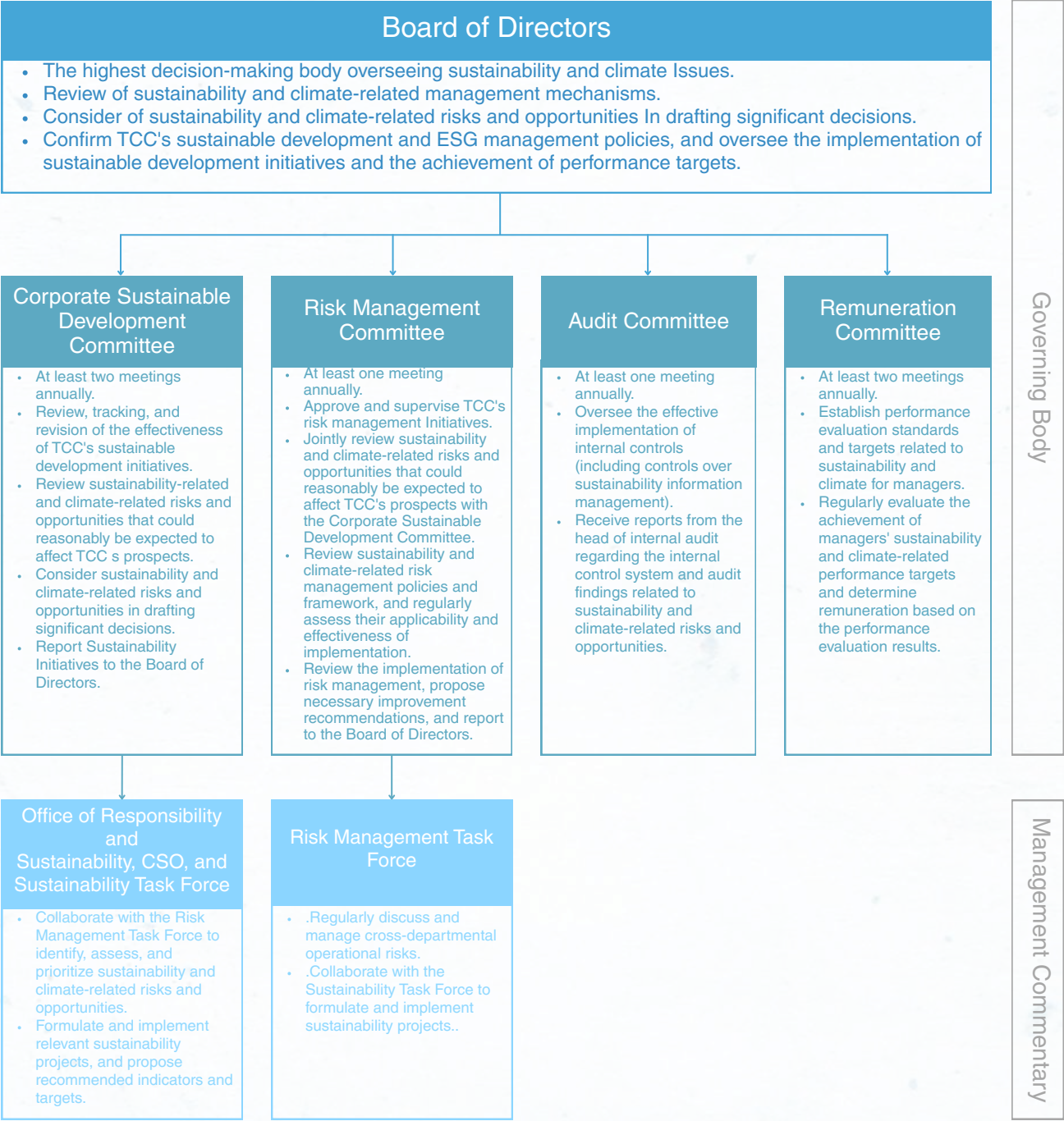
In 2018, the Board of Directors of TCC established the Corporate Sustainable Development Committee, with the TCC Corporate Sustainable Development Committee Charter being set. In 2021, it was elevated to a functional committee. The Corporate Sustainable Development Committee is responsible for approving and supervising the sustainability initiatives of TCC, including climate governance and low-carbon issues. The committee holds at least two meetings annually and reports to the Board of Directors. Through the content reported to the Board of Directors by the Corporate Sustainable Development Committee, the Board can confirm the Company’s sustainability development and ESG management policies, supervise, and track the implementation and performance goals achievement status of TCC’s sustainability development.

TCC established the Risk Management Committee and formulated the TCC Risk Management Committee Charter and the Risk Management Policy. TCC Risk Management Committee regularly identifies and manages the risks associated with corporate operations, including the physical and transitional risks that may arise from climate change, and leads the planning of relevant response measures. TCC Risk Management Committee and the Risk Management Working Group execute the risk management decisions approved by the Board of Directors. They supervise the establishment of the framework for TCC’s risk management mechanism, review the risk control reports presented according to internal hierarchical responsibilities, address issues related to risk management, and oversee the implementation and coordination of overall risk management operations. The Risk Management Committee presents a management execution status and Risk Control Report to the Board of Directors at least once a year (an average of twice a year, held twice in 2024), serving as a reference for strategy, decisions on significant transactions, and the risk management process. It also oversees and tracks the review of the management team’s risk management execution (including ESG and climate-related risks) and the status of performance goal achievement.

The Audit Committee oversees the effectiveness of the control system for sustainability information management, regularly receives reports from the head of internal audit on sustainability and climate-related findings and establishes or revises internal control systems when necessary. The Remuneration Committee is responsible for establishing the performance system, standards, and structure related to sustainability and climate for managers, regularly evaluates the achievement of targets to approve remuneration, ensuring that remuneration arrangements align with and are linked to TCC’s strategic objectives.

In 2023, TCC also established climate-related performance indicators and targets, which were approved by the Board of Directors. The Risk Management Committee regularly reports the status of each indicator’s achievement progress to the Board of Directors. In addition to being linked to senior management remuneration indicators, climate-related targets and indicators will also incorporate the achievement of circular sustainability goals through the development of a circular economy into the scope of evaluation.

Governance and Responsibilities of Management Structure for Sustainability and Climate-Related Risks and Opportunities



6.2.2 Strategy

TCC considered the Sustainability Accounting Standards Board (SASB) disclosure topics relevant to TCC's operations in 2025. Continuing on from the discussion in the "Disclosure of Sustainability-related and Climate-related Financial Information" chapter in the 2023 Annual Report, relevant topics and their connection to sustainability strategies were discussed through internal management meetings. As a result, three material topics with significant strategic importance were identified: Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, and Low-carbon Products and Services. These three topics resonate with TCC's commitment to addressing climate change challenges and embody our spirit of innovation in product lifecycle and energy applications. Through the selection of these topics, the Company aims to address sustainability-related risks while also capitalizing on the immense opportunities arising from the transition, thereby embodying TCC's core values of Total Climate Commitment, Total Care Commitment. TCC will proactively respond to the needs and expectations of stakeholders through various communication channels and platforms, and work together to achieve common sustainable development goals.

Through the identification and discussion of sustainability and climate-related risks and opportunities, TCC understands the risks and opportunities it faces within the three material topics of Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, and Low-carbon and Services¹. This process identifies the time horizon of sustainability/climate-related risks and opportunities expected to impact TCC's prospects.

Period	Definition	Linkage to Strategic Decisions
Short-term	Within 2 years (2025-2026)	Annually review strategic initiatives for the next 1 to 2 years and adjust on a rolling basis.
Medium-term	Within 2-4 years (2027-2029)	The planning cycle for significant decisions averages around 4 years, with review and adjustments conducted periodically.
Long-term	4-6+ years (after 2030)	Strategies are expected to generate results after 2030. Furthermore, in alignment with the national 2050 Net-Zero Emissions Pathway and related policies, plans are being developed for the cement and concrete business units to achieve net-zero emissions by 2050.

¹ Following identification, it was confirmed that among the identified sustainability and climate-related risks and opportunities, there are no significant risks that would require material adjustments to the carrying amounts of assets and liabilities reported in the relevant financial statements within the next reporting period.

【Foresight, Steadiness, and Diversified Growth】 Summary of TCC's Sustainable Financial Performance in 2024

- **【Foresight】** Strategically positioned across key markets in 14 countries, TCC's consolidated revenue reached NT\$154.6 billion in 2024, with a net profit after tax of NT\$15.6 billion and a net profit after tax attributable to the parent company of NT\$11.259 billion, representing a 41% increase compared to 2023. Revenue from European cement and energy-related product sales to the US market accounted for less than 1% of consolidated revenue. With a resilient 'local-to-local' supply chain, overall operations are less susceptible to global tariff and trade fluctuations.
- **【Steadiness】** TCC maintained strong financial discipline in 2024, being able to 100% fund its low-carbon transition initiatives through internally generated capital. Capital expenditures related to carbon reduction and green investments comprised 70% of total CapEx for the year, with a strategic emphasis on advancing low-carbon construction materials and new energy solutions. By expanding its integrated industrial footprint across Europe, Asia, and Africa, TCC continues to establish diversified revenue streams and reinforce a resilient, long-term growth trajectory.
- **【Diversified Growth】** Anchored in its core sustainability pillars, TCC's strategy continues to drive robust profit expansion. In 2024, revenue attributable to the three material sustainability themes totaled NT\$88.2 billion, accounting for 57% of the total operating revenue. The Company reported an EBITDA margin of 28.82%, underscoring a highly efficient operating structure and solid profitability across its diversified portfolio.

The TCC Group embarked on the strategic transformation roadmap in 2018, expanding beyond its core cement business into three major sustainability-driven businesses: low-carbon construction materials, resource recycling, and green energy. Through cross-industry diversification and integration across global value chains, TCC has established a resilient operating model and steady growth trajectory.

In 2024, the consolidated revenue for the full year increased by 41% compared to 2023, reflecting strong earnings momentum. TCC's low-carbon transition strategy received international recognition, with S&P Global Ratings and Fitch Ratings awarding the Group an investment-grade rating of BBB– with a 'Stable' outlook. These ratings reflect the Group's robust profitability and cash flow generation across its key markets in Taiwan, Turkey, and Portugal, reinforcing the value of its green transition strategy.

In terms of operational strategy, TCC follows a local-for-local approach, producing and selling close to its main markets, effectively reducing the supply chain's sensitivity to global tariffs and trade fluctuations. In 2024, 70% of the Group's CapEx was allocated to decarbonization and green transformation with targeted investment concentrated in low-carbon construction materials and new energy systems. Internal resources are capable of fully financing these capital investments, underscoring TCC's financial self-sufficiency in driving its net-zero transformation. The EBITDA margin reached a robust 28.82% in 2024, demonstrating extraordinary operational efficiency and profitability.

In anticipation of increasingly stringent global carbon regulations and Taiwan's upcoming carbon fee to be levied in 2026, TCC plans to recognize carbon-related liabilities in 2025 based on verified emission volumes and fulfill payment obligations by May 2026.

On renewable energy deployment, TCC remained profitable throughout 2024. European subsidiary, NHOA sustains strong performance in global energy storage EPC projects, while NHOA.TCC delivers positive EBITDA cash flows, further enhancing the overall competitiveness of TCC Group.

Proactively building a low-carbon industrial ecosystem, TCC formed the Low-Carbon Construction Pioneers Alliance with over a hundred construction firms, expanding its market footprint in green construction materials. Furthermore, in March 2024, TCC Asset Management and Development Corp. was established to promote land asset revitalization, creating a long-term income stream.

As the world economy accelerates toward the 2050 Net-Zero Target, a new era of large-scale green competition is unfolding. TCC views sustained investment as key to its green transition, managing risks while capitalizing on emerging opportunities. The Group remains committed to building a resilient, sustainable future.

The financial impacts of Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, and Low-carbon Products and Services for the fiscal year 2024 and 2023 mainly include:

Unit: Thousands New Taiwan Dollars									
Item	Climate Actions and Net-Zero Emissions		Green Energy and Energy Storage		Low-carbon Products and Services		Total		Notes
Fiscal Year	2024	2023	2024	2023	2024	2023	2024	2023	1
Revenues	466,509	748,807	15,453,386	10,639,209	72,271,958	39,279,069	88,191,853	50,667,085	2
Revenues (Onyx Ta-Ho Environmental Services Co., Ltd. Included)	3,508,279	3,788,519	15,453,386	10,639,209	72,271,958	39,279,069	91,233,623	53,706,797	3
Cash Inflow from EU Subsidy	-	-	293,604	371,713	-	-	293,604	371,713	4
Capital Expenditures	8,265,685	5,218,254	15,106,604	18,590,440	27,224	117,523	23,399,513	23,926,217	5
Net Cash Inflow from Operating Activities							31,793,945	36,919,281	6
Sustainable and Green Financing Cash Inflow							39,431,443	30,829,871	7

- Notes:
1. In 2024, the definition of Green Energy and Energy Storage was broadened to include the Battery Business,. Accordingly, financial figures for 2023 were restated for consistency.
 2. Revenues from low-carbon cement and concrete products, waste management services, storage and charging services, renewable energy trading, and battery products totaled NT\$88.19 billion in 2024, representing 57% of total operating revenues. Including contributions from equity-method investee, Onyx Ta-Ho Environmental Services Co., Ltd., the total would reach NT\$91.23 billion, or 58% of pro forma revenue.
 3. Revenues in 2024 and 2023 generated from Green Energy and Energy Storage are as follows: energy storage and charging pile products and services amounted to NT\$9.4 billion and NT\$5.32 billion; renewable energy trading amounted to NT\$655.35 million, and NT\$496.30 million; battery products and services amounted to NT\$5.39 billion and NT\$4.82 billion. The sustained growth enhanced operating cash flows and underscored TCC's execution capability and scaling diversified, sustainability-aligned revenue stream.
 4. In September 2022, NHOA secured a grant of €22.7 million from the Connecting Europe Facility (CEF) Fund, which is allocated for the construction of 215 pure green electricity charging points across four European countries. NHOA's subsidiary, ATLANTE S.R.L (ATLANTE), is dedicated to the development of fast and ultra-fast charging networks for electric vehicles, aligning with the European Union's transport infrastructure funding programs. In September 2023, ATLANTE was granted sponsorship by the EU CEF Fund, expecting to receive a subsidy of €49.9 million. In April 2024, the Company was reselected and is expected to receive an additional subsidy of €17.2 million. The actual subsidy amounts received in 2024 for the aforementioned were NT\$293.6 million (€8.6 million).
 5. For carbon reduction and green investments, enhancing operational efficiency through equipment and technology upgrades, and investing in the energy infrastructure, TCC's green-related capital expenditure totaled NT\$23.39 billion in 2024, representing 70% of the total CapEx and fully financed through a combination of operating cash flows and proceeds from sustainable and green financing instruments.
 6. TCC generated NT\$31.79 billion in operating cash inflows in 2024, providing sufficient internal resources to fully support its decarbonization and green transition capital expenditures.
 7. Actively participating in green and sustainable finance, TCC obtained sustainable and green financing lines of NT\$151 billion, overseas green convertible bonds of NT\$13.56 billion, and sustainability-linked convertible bonds raising a total of NT\$8 billion, which caused the cash inflow of financing activities to increase by NT\$39.43 billion.

² Onyx Ta-Ho Environmental Services Co., Ltd. is an associate company in which our company holds a 50% equity interest, performance recognition by the equity method. However, Ta-Ho Environmental is not included in the consolidated total operating revenue of TCC's Consolidated Comprehensive Income Statement for the Year 2024 and Consolidated Comprehensive Income Statement for the Year 2023.

The strategies that TCC use to manage sustainability /climate-related risks and opportunities in Climate Actions and Net-Zero Emissions, Green Energy and Energy Storage, and Low-carbon Products and Services are detailed in the table below.

Material Topic 1: Climate Actions and Net-Zero Emissions

	Sustainability/ Climate-related Risks		Sustainability/ Climate-related Opportunities
1. Types and Descriptions of Risks and Opportunities	<div>Climate-related Transition Risks/ Policies and Regulations</div> <div><ul style="list-style-type: none">• Carbon Trading, Carbon Fees, and Carbon Taxes under Emissions Caps: The cement manufacturing process emits substantial greenhouse gases from raw materials. Failure to reduce these emissions will result in adverse impacts due to increasingly stringent carbon regulations, such as carbon trading schemes, carbon taxes, or carbon fees. Furthermore, the absence of a national carbon border adjustment mechanism, which would impose carbon costs on imported goods, could create unfair competition.</div>	<div>Climate-related Physical Risks/ Long-term Physical Risks</div> <div><ul style="list-style-type: none">• Drought and Floods: Water scarcity resulting from drought conditions will severely impact the production and operation of cement and concrete. The occurrence of heavy rain and typhoons may cause damage to the Company's equipment at cement and concrete operating sites, fluctuations in raw material quality, disruptions to raw material supply, or operational interruptions.</div>	<div>Climate-related Opportunities/ Products and Services</div> <div><ul style="list-style-type: none">• Exploration of the Market for Low-carbon Products: Increased customer awareness of carbon reduction helps drive demand for low-carbon products. TCC's utilization of alternative raw materials and fuels, investments in energy-saving and coal-reducing technological upgrades, and the launch of UHPC (Ultra-High Performance Concrete) new products all contribute to the development and promotion of low-carbon products.• Development of New Energy Projects: Install solar panels at operational sites for self-consumption, independently develop diverse renewable energy sources and, in conjunction with energy storage system development, provide green electricity and energy storage solutions to Taiwanese businesses.</div> <div>Climate-related Opportunities/ Markets</div> <div><ul style="list-style-type: none">• Involvement in the Electricity Trading Market: Self-generated electricity for self-consumption can reduce external power purchases, and a portion of self-generated renewable energy can obtain renewable energy certificates for trading in the market.</div> <div>Climate-related Opportunities/ Resilience</div> <div><ul style="list-style-type: none">• Smart Low-carbon Production and Waste Co-processing: Leading the industry in low-carbon production models and achieving coal, waste, and carbon reduction through waste co-processing circular reuse.• Application of the Oxygen-enriched Combustion and Oxyfuel Combustion Technologies to Carbon Capture and Reuse: Employing oxygen-enriched combustion in cement kiln calcination to enhance combustion efficiency and reduce carbon emissions. Developing oxyfuel combustion technology to improve carbon capture efficiency.</div>
2. Reasonably Foreseeable Time Horizon	Short-term	Short to Medium-term	Short to Medium and long-term
3. Current and Anticipated Effects of Sustainability-related Risks and Opportunities on the Entity's Business Model and Value Chain	<div>Business Model</div> <div>The implementation of carbon trading, carbon taxes, or carbon fees in various countries has led to an increase in the cost of cement operations, which is expected to pose a risk of decline in profitability for TCC.</div>	<div>Business Model</div> <div>Water is an important raw material for the production of concrete. Droughts not only affect the normal water usage at production sites but also severely impact the concrete production and sales operations within the value chain. The operation of a waste heat recovery system in a cement plant also requires a significant amount of cooling water. Drought conditions will lead to the inoperability of waste heat power generation, which will increase the demand and cost for purchased electricity. The risk of flooding at TCC's production sites has also risen, particularly affecting the operation of the cement business. TCC's main cement and concrete production bases are located in Taiwan and the Southern part of Mainland China. From April to September each year, the rainy season often brings sudden heavy rainfall, which may cause damage to production or transportation equipment, resulting in additional operating costs and the risk of operational interruptions.</div>	<div>Business Model</div> <div>TCC centers its core strategy on carbon reduction and green growth, advancing 3 core businesses: low-carbon construction materials, resource recycling, and green energy³. By adopting ten strategies, including carbon reduction for basic construction materials, new energy charging/storage optimization, and carbon negative technologies, TCC aims to expand growth momentum within its operations in the value chain, enhance the 'green content' of the enterprise, and seize the green business opportunities brought about by climate change. It includes:<ul style="list-style-type: none">• Low-carbon Construction Materials: Exploration of the market for low-carbon products• Resource Recycling: Smart low-carbon production and waste co-processing• Green Energy: Installation of new energy projects; involvement in the electricity trading market• Negative Carbon Technologies: Application of the oxygen-enriched combustion and oxy-fuel combustion technologies to carbon capture and reuse</div>

³Climate scenarios involve assumptions related to social, economic, or political factors. The difficulty in predicting these factors increases the uncertainty in scenario analysis and resilience assessment, which may subsequently require reevaluation.

⁴Climate scenarios involve assumptions related to social, economic, or political factors. The difficulty in predicting these factors increases the uncertainty in scenario analysis and resilience assessment, which may subsequently require reevaluation.

5TCC only discloses financial items with significant impact for the fiscal year 2024 and 2023, and the disclosed amounts have not been individually audited by accountants.

			Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
6. Financial Position, Financial Performance and Cash Flows	Current Financial Effects ⁶	Profits Growth or Cash Inflow	<p>Continuously expanding the global green layout, investing in the low-carbon cement market in Europe, Asia, and Africa. In 2023, due to associated companies OYAK Cement and Cimpor Cement, performance recognition by the equity method, reported nonoperating income of NT\$3,560,296 thousand. In the first quarter of 2024, the completion of the increased shareholdings in European low-carbon cement companies (OYAK and Cimpor) officially make TCC one of the main suppliers of low-carbon cement in Europe. For details on low-carbon product revenue, please refer to Material Topic Three: Low-carbon Products and Services.</p> <p>As of December 31, 2024, and December 31, 2023, the undrawn sustainable and green financing facilities amounted to NT\$80,739,843 thousand and NT\$78,467,698 thousand, respectively. The drawdown amounts of sustainable and green financing facilities in 2024 and 2023 increased cash inflow from financing activities by NT\$39,431,443 thousand and NT\$30,829,871 thousand. These funds were used for Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, Low-Carbon Products and Services, and other sustainable green expenditures.</p> <p>In 2024, TCC issued its first domestic Sustainability-Linked Convertible Bonds (SLCB) with a total amount of NT\$8,000,000 thousand, increasing cash inflow from financing activities by NT\$7,994,105 thousand (NT\$8,000,000 thousand deducted the issuance transaction costs of NT\$5,895 thousand). In 2023, its overseas Green Convertible Bonds (ECB) amounted to NT\$13,473,544 thousand (US\$ 420,000 thousand deducted issuance transaction costs of NT\$89,516 thousand), increasing cash inflow from financing activities by NT\$13,473,544 thousand. These funds were used for Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, Low-carbon Products and Services, and other sustainable expenditures.</p>	
		Increase in Cost / Expenses or Cash Outflow	<p>In 2024 and 2023, capital expenditures related to Climate Action and Net-Zero Emissions amounted to NT\$8,265,685 thousand and NT\$5,218,254 thousand, resulting in cash outflows. Depreciation expenses for these initiatives amounted to NT\$1,697,477 thousand and NT\$658,685 thousand in 2024 and 2023, including the following:</p> <ul style="list-style-type: none">Continuous upgrades to equipment and technology, including enhancing the efficiency of gasifiers, preheaters, and cement mills, updating waste heat recovery systems, expanding alternative raw material and fuel storage areas, installing infrared scanning equipment, alternative fuel conveyors, adding spark detectors to silos, increasing automatic sprinkler systems to strengthen fire safety control in alternative fuel storage, and investing in the DAKA Renewable Resources Recycling Center for co-processing waste. These activities resulted in capital expenditures of NT\$8,136,756 thousand and NT\$5,115,954 thousand in 2024 and 2023, leading to cash outflows, and depreciation expenses for the years amounting to NT\$1,619,572 thousand and NT\$617,695 thousand.Investment in negative carbon technologies, including the signing of a Memorandum of Understanding (MOU) in late January 2024 with Thyssenkrupp Polysius, a subsidiary of the renowned German Thyssenkrupp Industrial Group, for a carbon capture project. The Hualien Hoping Plant's kiln No. 1 will serve as the site for carbon capture technology, jointly developing a third-generation oxy-fuel combustion process and technology. Related capital expenditures amounted to NT\$9,470 thousand, resulting in cash outflows. Additionally, research and development expenses of NT\$813 thousand were incurred, increasing cash outflows from operating activities.Promotion of transportation vehicle electrification, continuing with the conversion of official vehicles at various operating sites to electric vehicles, and procuring electric trucks and electric tractor-trailers. The purchase of these electric vehicles led to capital expenditures of NT\$18,693 thousand and NT\$44,088 thousand in 2024 and 2023, resulting in cash outflows, and generated depreciation expenses amounting to \$50,266 thousand and NT\$24,062 thousand, respectively.TCC improved water usage efficiency by establishing water storage tanks, implementing projects to enlarge discharge outlets, and installing water recycling systems at cement plants, mining areas, and product plants. This increased equipment costs by NT\$23,709 thousand and NT\$50,162 thousand in 2024 and 2023, causing cash outflows from investing activities, and resulted in depreciation expenses amounting to NT\$27,639 thousand and NT\$16,928 thousand, respectively.Investments in AI-related hardware and software amounted to NT\$77,057 thousand and NT\$8,050 thousand in 2024 and 2023 (details on AI are provided in the following paragraph). <p>TCC is actively integrating AI technology to enhance production efficiency and promote carbon reduction and green initiatives. By applying AI in the production process, TCC can monitor the operation status of equipment in real-time, predict maintenance needs, thereby reducing downtime and maintenance costs. Moreover, AI technology is also used to optimize energy use, analyze, and adjust energy consumption during the production process, further reducing carbon emissions and supporting our move towards a greener, more sustainable manufacturing future. These innovative applications not only enhance competitiveness but also demonstrate a commitment to social responsibility and environmental protection. With significant advancements in AI technology, future investments in AI-related hardware and software will substantially increase. In 2024 and 2023, investments in AI-related equipment (such as GPUs) increased by NT\$77,057 thousand and NT\$8,050 thousand. Additionally, expenditures related to AI talent development and digital intelligence leadership programs increased operating costs and expenses by NT\$28,975 thousand and NT\$9,993 thousand in 2024 and 2023, resulting in cash outflows.</p> <p>Investments in the development and application of alternative raw materials and fuels, oxygen-enriched combustion, and carbon capture technologies resulted in research and development expenses of NT\$585,648 thousand and NT\$604,036 thousand in 2024 and 2023, respectively, leading to increased cash outflows from operating activities.</p> <p>The subsidiary, Taiwan Cement Europe Holdings B.V. (TCEH), has made an additional investment in the overseas new energy business (NHOA), resulting in a cash outflow of NT\$7,627,118 thousand (€224,922 thousand) for TCEH's individual investment activities. The investment funds are used for the establishment of electric vehicle charging stations in four Southern European countries and the construction of cross-border energy storage projects.</p> <p>In the first quarter of 2024, the expanded investment in Europe, resulting in the acquisition of OYAK Cement and Cimpor, generated cash outflows from investing activities of NT\$12,965,009 thousand. In 2023, increased investments in new energy and alternative fuel projects, including the acquisition of ATLANTE INFRA PORTUGAL S.A., ATLANTE ITALIA S.R.L., 123 (Guangdong) Environmental Technology Co., Ltd., and Shimen Green Energy Co., Ltd., collectively resulted in cash outflows from investing activities of NT\$329,336 thousand.</p> <p>In response to expenditures related to climate action and net-zero emissions, TCC's investments, in addition to the aforementioned items, also include actively developing businesses in the new energy sector, continuous investment in the integration and training of new energy talent, the implementation of water resource management systems, and the purchase of natural disaster insurance to enhance resilience and adaptive capacity. TCC also invited over a hundred representatives from domestic construction and building companies that actively use low-carbon limestone cement and limestone cement concrete, forming the Low-Carbon Construction Pioneers Alliance. These initiatives resulted in increased operating costs and expenses of NT\$556,086 thousand and NT\$226,217 thousand in 2024 and 2023 (due to increased related expenditures from the acquisition of the Turkish and Portuguese cement operations), leading to cash outflows from operating activities.</p>	

		Sustainability/ Climate-related Risks		Sustainability/ Climate-related Opportunities	
6. Financial Position, Financial Performance and Cash Flows	Current Financial Effects ⁵	Overview of TCC's Risks and Opportunities Related to Climate Action and Net-Zero Emissions: <ul style="list-style-type: none">Revenue: Increased volume of industrial waste and domestic waste services generated revenues of NT\$466,509 thousand and NT\$748,807 thousand in 2024 and 2023, (the decrease in revenue for 2024 was due to the earthquake in Taiwan on April 3rd of that year, which caused disruptions to treatment services), leading to an increase in cash inflow from operating activities.Cost Savings: Waste heat recovery power generation and self-consumption of solar energy, increased utilization of alternative fuels, reducing coal consumption, and the storing electricity during off-peak hours and discharging during peak hours model energy storage systems resulted in operating cost savings of NT\$3,878,793 thousand and NT\$2,804,848 thousand in 2024 and 2023.Capital Expenditure: The Company invested NT\$8,265,685 thousand and NT\$5,218,254 thousand in 2024 and 2023 to enhance green production processes, low-carbon technologies, and energy-saving facility construction, and incurred depreciation expenses of NT\$1,697,477 thousand and NT\$658,685 thousand.Acquisition of Subsidiaries: Acquisition expenditures in 2024 and 2023 amounted to NT\$12,965,009 thousand and NT\$329,336 thousand. These strategic acquisitions actively position TCC in the sustainable and low-carbon industry value chain, expanding overall value chain benefits.Financing: Drawdowns of sustainable and green financing facilities, the issuance of Sustainability-Linked Convertible Bonds, and overseas Green Convertible Bonds in 2024 drove an increase in cash inflow from financing activities to NT\$39,431,443 thousand, a further increase from NT\$30,829,871 thousand in 2023. These funds are also used for Green Energy and Energy Storage, Low-carbon Products and Services, and other sustainable green expenditures.Operating costs and expenses (including the depreciation expenses from aforementioned capital expenditure items) amounted to NT\$2,868,186 thousand and NT\$1,498,931 thousand in 2024 and 2023.			
	Anticipated Financial Effects ⁶	Profits Growth or Cash Inflow	<p>The utilization rate of the Company's industrial and construction waste treatment capacity is expected to increase in the future, and the idle Hualien plant site has been developed as a construction waste treatment facility, commencing trial operations in the fourth quarter of 2024. Plans aim for a monthly processing capacity of 12,000 tonnes, which is expected to increase cash inflow from operating activities. Additionally, the associate company Ta-Ho Environmental, in which TCC holds a 50% stake and performance recognition by the equity method, currently has a capacity utilization rate of 90.3% and can process approximately 2.49 million tonnes of waste annually. If its capacity utilization rate increases in the future, it is expected to increase cash inflow from investing activities.</p> <p>The volume of domestic waste management services has increased. The DAKA RRRC has a daily disposal capacity of over 200 tons, while the combined daily disposal capacity of cement plants in Mainland China exceeds 600 tons. It is expected to increase future revenue and enhance cash inflows from operating activities.</p> <p>The target for the thermal substitution rate is to reach 25% by 2025 and 35% by 2030. It is anticipated that the use of alternative fuels will increase, leading to a reduction in the amount of purchased coal. Consequently, this is expected to lower future operating costs and is anticipated to contribute to generating positive cash flow.</p> <p>The Development Project for Co-firing High Calorific SRF and a Clean Integrated System in Cement Kilns is expected to receive government subsidies in 2025, leading to an increase in government grant income and consequently increasing cash inflow from operating activities.</p> <p>Improvements in waste heat recovery efficiency and an increase in self-generated solar energy will reduce the need for purchased electricity. Additionally, TCC has joined EP100, aiming to increase energy productivity by 50% by 2040 compared to 2016. This is expected to reduce future operating costs and contribute to positive cash flow.</p> <p>TCC invests in negative carbon technologies for carbon capture. TCC is planning that for the future, capture of carbon dioxide not only involves providing cross-industry services such as industrial welding and food processing but also includes assessing the feasibility of sequestration and carbon pricing in line with government policies or exploring other value-added uses. The increase in revenue or reduction in costs resulting from carbon capture services in the future will contribute to generating positive cash flow.</p> <p>Continuously optimizing and upgrading existing equipment and adopting new technologies, including improving production efficiency and reducing energy consumption of cement mills, optimizing the performance of coolers, and enhancing the efficiency of low-pressure steam turbines at Hoping Power Plant, will help reduce operating costs and generate positive cash flow.</p> <p>In March 2025, TCC issued overseas unsecured convertible bonds (ECB) with a total issuance amount of NT\$11,557,000 thousand, increasing cash inflow from financing activities by NT\$11,478,994 thousand (US\$350,000 thousand deducted issuance transaction costs of NT\$78,006 thousand).</p>		
		Increase in Costs/ Expenses or Cash Outflow	<p>The Ministry of Environment has announced the collection of carbon fees in 2026, based on 2025 reported emissions. Simultaneously, the Ministry of Ecology and Environment of Mainland China plans to include the cement industry in the national carbon emission trading scheme in 2025. Therefore, an increase in operating costs, liabilities, and cash outflows from operating activities is anticipated (TCC will recognize related liability provisions based on actual emissions in 2025). In December 2024, TCC's 1.5°C emissions reduction targets were approved by SBTi. Starting in 2025, a total of 14 cement plants across Taiwan and Mainland China will follow this 1.5°C pathway, using 2016 as the baseline year. The company is committed to reducing Scope 1 carbon emission intensity by 23.9%, Scope 2 carbon emission intensity by 64.4%, and the combined Scope 1 and 2 carbon emission intensity by 26.8%, thereby mitigating the impact of carbon emissions on operating costs.</p> <p>Investments in upgrading operational equipment or implementing technologies (such as negative carbon technologies) will lead to increased capital expenditure and depreciation expenses, resulting in cash outflows. Furthermore, ongoing investments in the development and application of alternative raw materials and fuels, oxy-enriched combustion, and carbon capture technologies will increase research and development expenses, leading to increased cash outflows from operating activities.</p> <p>The future adoption of electric vehicles for all official vehicles, along with the procurement of electric trucks, tractor-trailers, and mining trucks, is projected to increase capital expenditure, resulting in cash outflows and the incurrence of depreciation expenses.</p>		

⁶ The degree of measurement uncertainty involved in estimating the anticipated financial effects is excessively high, and the anticipated financial effects of related opportunities constitute commercially sensitive information for the Company. In light of the above, the Company is disclosing the relevant anticipated financial effects using qualitative information.

			Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
6. Financial Position, Financial Performance and Cash Flows	Anticipated Financial Effects ⁶	Increase in Costs/ Expenses or Cash Outflow	The ongoing development of new projects in the energy sector, with renewable energy management targets of 235MW by 2025 and 400MW by 2030, and a global energy storage deployment target of >2.5GWh by 2025, will lead to increased capital expenditure, resulting in cash outflows, as well as increased depreciation expenses, other operating costs and expenses beyond depreciation, and cash outflows from operating activities.	
			Ongoing investments in new energy and cross-disciplinary talent development, with cumulative employee training expenditure targets of NT\$125,000 thousand by 2025 and NT\$250,000 thousand by 2030, will lead to increased operating costs and expenses, as well as increased cash outflows from operating activities.	
			Ongoing investments in Artificial Intelligence (AI)-related equipment will lead to increased capital expenditure, resulting in cash outflows and the incurrence of depreciation expenses. Additionally, investments in AI talent development and other related expenditures will increase operating costs and expenses, leading to increased cash outflows from operating activities.	
			Plans to procure renewable energy electricity will lead to increased operating costs and expenses, as well as increased cash outflows from operating activities	
			To establish a green shipping fleet, TCC placed an order in 2022 with Shin Kurushima Dockyard in Japan for one new environmentally friendly cement carrier, with a total contract price not exceeding US\$50,000 thousand. In 2024, TCC signed a contract with Jiangsu Haitong Shipbuilding Co., Ltd. in Mainland China to build two new environmentally friendly bulk carriers, with a total transaction amount not exceeding US\$67,000 thousand. These vessels are expected to be delivered in 2025 and 2026, leading to increased capital expenditure and cash outflows, as well as the incurrence of depreciation expenses. Furthermore, the environmentally friendly fleet is anticipated to reduce operating costs due to lower fuel consumption and carbon emissions.	
			To expand storage space for alternative raw materials and fuels and to comply with industrial zone building coverage requirements, the Board of Directors approved a capital expenditure project for the construction of alternative raw material and fuel storage facilities at the Hoping Cement Plant in August 2024. The total investment amount is approximately NT\$1,636,000 thousand, which will increase capital expenditure, resulting in cash outflows and the incurrence of depreciation expenses.	
			The occurrence of extreme weather events such as floods and droughts may impede the shipment and allocation of products or raw materials, necessitating adjustments to transportation methods and leading to increased transportation costs. Floods may also cause equipment submersion requiring repairs and necessitate enhanced slope protection measures in the future. Severe droughts will lead to increased water procurement expenses. These factors will increase operating costs and expenses, resulting in increased cash outflows from operating activities.	
The primary sources of funding for the aforementioned investment plans are net cash inflow from operating activities and sustainable and green financing.				

Material Topic 2: Green Energy and Energy Storage

	Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities	
1. Types and Descriptions of Risks and Opportunities	<div>Climate-related Transition Risks/ Markets</div> <div><ul style="list-style-type: none">Renewable Energy Regulations and Procurement: Legal requirements mandate the installation of renewable energy facilities. The cost of investing in renewable energy equipment may be affected by rising international raw material prices.</div>	<div>Climate-related Opportunities/ Products and Services</div> <div><ul style="list-style-type: none">Development of New Energy Projects: Install solar panels at operational sites for self-consumption; independently develop diverse renewable energy sources and, in conjunction with energy storage system development, provide green electricity and energy storage solutions to Taiwanese businesses.</div> <div>Climate-related Opportunities/ Markets</div> <div><ul style="list-style-type: none">Involvement in the Electricity Trading Market: Self-generated electricity for self-consumption can reduce external power purchases, and a portion of self-generated renewable energy can obtain renewable energy certificates for trading in the market. Established Energy Helper TCC Corporation to provide green electricity consulting services and developed a green electricity trading platform along with auxiliary services for bidding on the power trading platform.</div>	<div>Sustainability-related Opportunities</div> <div><ul style="list-style-type: none">Construction and Operation of Green Energy Storage with EV Charging Station: Leveraging TCC's green energy, charging, and energy storage businesses to establish integrated charging services.Providing Service of Green Logistics: Integrating charging services and introducing green vehicles to provide customers with a green logistics system.</div>
2. Reasonably Foreseeable Time Horizon	Short-term	Short to Medium and Long-term	Short to Medium and Long-term
3. Current and Anticipated Effects of Sustainability-related Risks and Opportunities on the Entity's Business Model and Value Chain	<div>Business Model</div> <div>According to Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity published by the Ministry of Economic Affairs, the Hoping plant and Suao plant are obligated users of renewable energy (i.e., Energy-Heavy Industries). They are required to install renewable energy generation facilities for their use according to the obligatory capacity. Therefore, additional costs may arise from conducting related environmental impact assessments. Additionally, due to the impact of international raw material price increases in recent years, the cost of equipment installation has also significantly risen.</div> <div>Value Chain</div> <div>The costs associated with installing renewable energy facilities may be passed on through increased product selling prices, affecting the purchasing costs of downstream customers for cement and concrete.</div>	<div>Business Model</div> <div>TCC implements the self-consumption of renewable energy by installing solar panels on the rooftops of various plants and operational buildings to reduce the use of grey energy. Through the power retailing business under TCC, Energy Helper TCC Corporation, a portion of green electricity certificates is allocated to be traded in the renewable energy market for profit. At the same time, TCC Green Energy Corporation is actively engaged in the development of diverse renewable energy sources, focusing on forward-looking energy research and development, including OTEC and geothermal power generation. NHOA.TCC and NHOA are actively establishing energy storage projects. Currently, NHOA.TCC is the only company in Taiwan that participates in all operational projects on the Energy Trading Platform (ETP) of Taiwan Power Company. With comprehensive capabilities in both hardware and services, as well as with extensive experience in the electricity trading platform, NHOA.TCC can assist clients in setting up energy storage and managing electricity transactions to generate economic benefits.</div> <div>Value Chain</div> <div>Downstream customers benefit from increased access to green energy procurement channels and receive assistance with green electricity trading and energy storage development, meeting their green energy demands</div>	<div>Business Model</div> <div>NHOA.TCC integrates TCC Group's resources to create a Green Energy Storage with EV Charging Station. By integrating energy storage systems as a buffer, electricity is stored during off-peak hours and discharged during peak hours, reducing the burden on the power grid and stabilizing the quality of fast charging.</div> <div>Value Chain</div> <div>NHOA.TCC plans low-carbon charging solutions for downstream customers in the value chain, providing logistics services to reduce their Scope 3 greenhouse gas emissions from downstream transportation and distribution, with the goal of building a zero-carbon green logistics ecosystem in Taiwan.</div>

	Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
4. Resilience	<p>Scenario⁴</p> <p>【The obligatory capacity for Energy-Heavy Industries】 According to the Ministry of Economic Affairs, TCC's obligatory capacity for renewable energy installations is calculated as 10% of the average contracted capacity for the year 2020, and must be fulfilled before the year 2026. The implementation methods include installing renewable energy generation equipment, purchasing renewable energy electricity and certificates, or setting up energy storage systems. A single method or a combination of methods is fine.</p> <p>【EIA Scenario】 According to Article 38 of Environmental Impact Assessment Enforcement Rules, if the developers modify the contents of an original application, including planned production capacity or scale is expanded, or a roadway is extended, by ten percent or more, they should reconduct an environmental impact assessment for the part of the application that to be modified. Referring to Standards for Determining Specific Items and Scope of Environmental Impact Assessments for Development Activities, if the development of energy or power transmission projects by TCC falls under the circumstances described in Article 29 of the aforementioned regulations, an EIA must be conducted.</p> <p>Adaptive Capacity</p> <p>【Sustainable Growth Operating Model】 TCC continues to deepen its capabilities in site development, construction, and management. Benefiting from early investments, project sites can operate through the feed-in tariff or by transferring or selling renewable energy certificates through Energy Helper TCC Corporation, thereby enhancing operational flexibility. TCC also enhances renewable energy and energy storage facility construction by revitalizing assets.</p>	<p>Scenario⁴</p> <p>【IEA Net Zero Emissions Scenario and COP29 Commitment】 According to the IEA's Net Zero Roadmap 2023: A Global Pathway to Keep the 1.5°C Goal in Reach, under the net-zero emissions scenario, the installed capacity of renewable energy will triple by 2030 compared to 2022. COP29 committed to deploying 1,500 GW of energy storage in the power sector by 2030, representing an increase of over six times the levels in 2022.</p> <p>【National Development Council Taiwan's Pathway to Net-Zero Emissions in 2050】 According to the Taiwan's Pathway to Net-Zero Emissions in 2050 and Strategies, Taiwan prioritizes the development of mature technologies in solar photovoltaic and wind power generation by 2030, aiming to achieve a cumulative installation target of 20GW for solar photovoltaic by 2025, and an annual increase target of 2GW for the years 2026 to 2030. After 2030, there will be a significant increase in the installation of device capacity, with solar photovoltaic systems adopting more efficient silicon stacking modules. By 2050, the installed capacity is expected to reach 40 to 80GW.</p> <p>【Development Goals for Renewable Energy and Energy Storage in Mainland China】 The Guidance Opinions on Strengthening Grid Peaking Energy Storage and Smart Dispatch Capacity Building issued by the Energy Bureau of the NDRC of Mainland China set a target for the proportion of new energy generation to exceed 20% by 2027. It also promotes the development of new types of energy storage on the user side, including for end users such as data centers, 5G base stations, industrial parks, as well as EV users.</p> <p>【TCC Sustainability Indicators and Targets】 TCC's renewable energy targets are to manage 235MW by 2025, 400MW by 2030, and 750MW by 2050.</p> <p>Adaptive Capacity</p> <p>【The Only Comprehensive Energy Group in Asia】 Since 2018, TCC has invested in energy layouts both domestically and internationally, mapping out the most comprehensive new energy industry chain in Taiwan to date. TCC possesses research and development capabilities as well as the ability to manufacture in the fields of green energy, batteries, energy storage, and fast charging for EVs. TCC also has the capacity for independent design and construction of EnergyArk energy storage cabinets. Moreover, TCC can independently develop the core key energy management system inside EnergyArk, strengthening TCC's competitive position in the new energy market.</p> <p>【Early Participants in the Taiwan Renewable Energy Market】 TCC entered the new energy market early on. TCC Green Energy Corporation's projects have accumulated a considerable installed capacity to date. This allows for flexible adjustments to the price difference between the voluntary market and the feed-in tariff, effectively enhancing profitability.</p> <p>【International Layout of Energy Business】 NHOA.TCC enhances the competitiveness of EnergyArk energy storage solutions by adopting advanced and mature technologies and products from Europe and America. Furthermore, through its European subsidiary, NHOA, TCC enters the global energy market, integrating international scientific research resources, introducing innovative technologies, and perfecting the product layout of its energy business.</p>
5. Strategy and Decision-making Responses	<p>【Operational Bases Are Fully Equipped With Solar Panels or Energy Storage Systems】 All operational bases in Taiwan have comprehensively installed rooftop solar photovoltaic systems as the primary method of fulfilling obligations. TCC plans to fulfill these obligations ahead of schedule by 2024, with the capacity of the obligatory installations being deductible by 20%, which is 8% of the average contract capacity in 2020. Energy storage systems are being progressively installed in the idle spaces of cement plants in Taiwan, leveraging the difference in electricity prices during off-peak hours to effectively increase profitability. In the future, TCC will consider the voluntary market prices of renewable energy, taking into account the capacity of renewable energy and energy storage as well as potential profitability, to maintain flexibility in how Energy-Heavy Industries fulfill their obligations.</p> <p>【Cautiously Develop Project Sites】 TCC carefully evaluates the establishment of renewable energy and energy storage projects. In addition to completing necessary procedures such as EIA in accordance with the law, TCC also continuously strengthens communication with external stakeholders, including residents near the project sites, to ensure that information is ample and understood.</p>	<p>【New Energy Integration Plan】 TCC centers its development around the EnergyArk energy storage cabinet, creating a green energy storage with EV charging station, green energy wheeling services, and aggregation of electricity trading. This provides customers with urban microgrids integrated solutions. In collaboration with NHOA, TCC is expanding into the global market.</p> <p>【Value Chain Integration. Strategic Investment and Strategic Procurement】 In 2021, TCC strategically invested in Pihong Technology, positioning itself in the EV and charging station markets in Taiwan and Europe, and America. TCC also actively ensures product development costs and overall competitiveness through strategic procurement, including NHOA. TCC collaborating with a UK company, Williams Advanced Engineering (WAE), to develop a scalable battery module.</p> <p>In addition, NHOA.TCC worked with KULR, a US battery safety integration solution provider with experience in aerospace development for NASA, to create extremely safe batteries for energy storage applications.</p> <p>【Innovative abilities of electricity sales business】 TCC has established a subsidiary, Energy Helper TCC Corporation, to apply for an electricity sales license. Energy Helper TCC Corporation has developed a flexible renewable energy electricity sales portfolio and offers innovative electricity sales services, including online platform consulting. For the energy storage business, Energy Helper TCC Corporation is also capable of aggregating self-owned project sites and those of clients to participate in electricity trading with Taiwan Power Company.</p> <p>【Providing green logistics services】 TCC's subsidiary, Taiwan Transport & Storage Corporation (TTS), continues to introduce 26-tonne electric trucks and 43-tonne electric tractor-trailers. In 2024, by entering the technology industry supply chain and integrating TCC's energy storage solutions, TCC assisted clients in planning low-carbon charging plans. Coupled with an energy management system, TCC helps corporate clients optimize charging efficiency and reduce Scope 3 emissions.</p> <p>【Innovative sustainable tourism operation model integrated with renewable energy】 TCC Green Energy Corporation and Fleur de Chine jointly developed the Vakangan Green Energy Hot Spring Park, which is the first geothermal power generation base in Taiwan that combines tourism with local symbiosis. TCC prioritizes the employment of local residents for its green energy projects and recruits local brands to join. At the same time, TCC continues to collaborate with communities surrounding the project sites and external stakeholders to achieve community sharing and interaction.</p>

	Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
6. Financial Position, Financial Performance and Cash Flows	<p>Current Financial Effects⁵</p> <p>Profits Growth or Cash Inflow</p> <p>In 2024 and 2023, revenue generated from energy storage and charging pile products and services amounted to NT\$9,406,147 thousand and NT\$5,321,096 thousand, leading to an increase in cash inflow from operating activities.</p> <p>In 2024 and 2023, renewable energy trading generated revenues of NT\$655,351 thousand and NT\$496,301 thousand, contributing to an increase in cash inflow from operating activities.</p> <p>In 2024 and 2023, battery products generated revenues of NT\$5,391,888 thousand and NT\$4,821,812 thousand, contributing to an increase in cash inflow from operating activities.</p> <p>In 2024 and 2023, NHOA received subsidies of NT\$293,604 thousand (€8,600 thousand) and NT\$371,713 thousand (€11,350 thousand), respectively, generating positive cash flow. These subsidies partly originated from the €22,700 thousand grant obtained from the Connecting Europe Facility (CEF) Fund in September 2022, aimed at establishing 215 pure green electricity charging points across four Southern European countries. NHOA's subsidiary, ATLANTE S.R.L (ATLANTE), is dedicated to the development of fast and ultra-fast charging networks for electric vehicles, aligning with the European Union's transport infrastructure funding programs. In September 2023, ATLANTE was granted sponsorship by the EU CEF Fund, expecting to receive a subsidy of NT\$1,695,602 thousand (€49,900 thousand). In April 2024, the Company was reselected and is expected to receive an additional subsidy of NT\$587,208 thousand (€17,200 thousand). Additionally, the Atlante4All project has been proposed, with plans to establish 407 charging stations across Europe. It is expected to install more than 1,000 fast-charging stations, providing 1,800 charging points. The project has received support from the Caisse des Dépôts et Consignations (CDC) in France, which will provide additional funding of approximately NT\$17,023 thousand (€490 thousand).</p> <p>Increase in Costs/ Expenses or Cash Outflow</p> <p>TCC continues to expand its capital allocation towards the energy transition, focusing on the development and global deployment of renewable energy, energy storage, and charging infrastructure. This includes the construction of a 35 MW/123.6 MWh energy storage system at the Suao Plant, 6.2 MWh (Phase I) and 5.3 MWh (Phase II) energy storage systems at the Kaohsiung subsidiary, a 4.9 MWh energy storage system in Chang-bin (Phase II), a 1 MW geothermal power system in Yan-ping, Taitung, a 9 MW renewable energy system (Phase II) in Chang-bin offshore wind farm, investments in European charging and storage ventures, and the investment in Taiwan's first giga-scale battery factory, specializing in the mass production of large-format power batteries. These initiatives resulted in capital expenditures of NT\$15,106,604 thousand and NT\$11,539,175 thousand in 2024 and 2023, leading to cash outflows, and depreciation expenses for the years amounting to NT\$2,302,512 thousand and NT\$1,212,029 thousand.</p> <p>In 2024 and 2023, research and development expenses incurred for the development of energy storage and battery technologies amounted to NT\$819,220 thousand and NT\$766,210 thousand, leading to an increase in cash outflows from operating activities.</p> <p>Overview of TCC's Risks and Opportunities Related to Green Energy and Energy Storage:</p> <ul style="list-style-type: none">Revenue generated from energy storage and charging pile products and services, renewable energy trading, and battery-related products and services amounted to NT\$15,453,386 thousand and NT\$10,639,209 thousand in 2024 and 2023, leading to an increase in cash inflow from operating activities and demonstrating significant growth in diversified revenue streams.Government Subsidies: Funds received from government subsidies amounted to NT\$293,604 thousand and NT\$371,713 thousand in 2024 and 2023, helping to accelerate technology adoption and project implementation.Capital Expenditure: Capital expenditures amounted to NT\$15,106,604 thousand and NT\$18,590,440 thousand in 2024 and 2023, with corresponding depreciation expenses of NT\$2,302,512 thousand and NT\$1,212,029 thousand.Operating costs and expenses, including the depreciation expenses from aforementioned capital expenditure items, amounted to NT\$3,121,732 thousand and NT\$1,978,239 thousand in 2024 and 2023.	<p>Anticipated Financial Effects⁵</p> <p>Profits Growth or Cash Inflow</p> <p>The IEA and international consulting research reports anticipate that renewable energy will experience rapid growth in the next five years, with the global market size for battery storage systems doubling. The trade of renewable energy and storage electricity will become a driving force for the increase in TCC's revenue and increasing cash inflow from operating activities.</p> <p>ATLANTE has joined Spark Alliance, Europe's largest fast-charging network. This alliance is committed to creating a seamless charging experience, simplifying the electric vehicle charging process to make EV ownership easier than ever before. Starting in the summer of 2025, drivers will be able to charge and pay at any charging station within the Spark Alliance network. This is expected to attract more users to ATLANTE's charging services, further driving revenue growth and increasing in cash inflow from operating activities.</p> <p>Solar power systems have been installed on the rooftops and idle areas of all operational sites, including the headquarters, cement plants, RMC plants, and related enterprises. Implementing self-consumption of renewable energy is expected to reduce the cost of purchased electricity, thereby decreasing future operating costs and contributing to positive cash flow.</p> <p>Operational sites are successively installing energy storage systems. These systems support internal electricity usage or participate in power trading platforms for ancillary services. It is expected to increase operating revenue and positively impact the cash inflow from operating activities; reduce the cost of purchased electricity, decreasing future operating costs, and contribute to generating positive cash flow.</p> <p>Increase in Costs/ Expenses or Cash Outflow</p> <p>Investing in a diverse array of renewable energy projects, including the Chiayi Fishery-solar symbiosis and the Changhua wind farm, the Taitung Vakangan geothermal energy, and the Hualien OTEC projects, as well as engaging in new energy project development and the installation of energy storage systems within the facilities, will lead to an increase in future capital expenditures and cash outflows, and will generate depreciation expenses.</p> <p>Ongoing investments in the development of energy storage technologies, energy transition initiatives, and renewable energy will lead to increased research and development expenses and increased cash outflows from operating activities.</p> <p>On May 14, 2024, the Board of Directors approved TCC Green Energy's investment in a fishery-solar power plant in the southern region, with a total investment amount of approximately NT\$3,900,000 thousand. This will lead to increased future capital expenditure, resulting in cash outflows and the incurrence of depreciation expenses.</p> <p>The primary sources of funding for the aforementioned investment plans are net cash inflow from operating activities, EU subsidies, and sustainable and green financing.</p>

Material Topic 3: Sustainable Products and Services

	Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
1. Types and Descriptions of Risks and Opportunities	<p>Climate-related Transition Risks/ Technologies</p> <p>Investment in Low-carbon Technology, Equipment, and Management Costs: Low-carbon related investments lead to increased costs, and inadequate investment may affect research and development capabilities, thereby diminishing the Company's competitiveness.</p>	<p>Climate-related Opportunities / Products and Services</p> <p>Exploration of the Market for Low-carbon Products: Increased customer awareness of carbon reduction helps drive demand for low-carbon products. TCC's utilization of alternative raw materials and fuels, investments in energy-saving and coal-reducing technological upgrades, and the launch of UHPC (Ultra-High Performance Concrete) new products all contribute to the development and promotion of low-carbon products.</p>
2. Reasonably Foreseeable Time Horizon	Short-term	Short to Medium and Long-term
3. Current and Anticipated Effects of Sustainability-related Risks and Opportunities on the Entity's Business Model and Value Chain	<p>Business Model</p> <p>TCC's cement and RMC plants exceed regulatory requirements and continuously undertake technological upgrades to optimize the energy consumption of process equipment, thereby increasing the demand for capital goods purchases. If the majority of market peers only meet the minimum regulatory standards when replacing equipment, it will lead to differences in production costs, adversely affecting TCC's cost competitiveness. Furthermore, under the international trends in the cement industry and net-zero targets, industry peers are all undergoing low-carbon technology transformation. If a company lacks sufficient investment in low-carbon research and development and capital, it will lose market competitiveness.</p>	<p>Business Model</p> <p>TCC has developed the Total Climate series of low-carbon products and the UHPC series of products. After the implementation of future government regulations and the launch of carbon pricing mechanisms, customer awareness of carbon reduction will be strengthened, leading to an increased demand for low-carbon products among downstream customers in the value chain. In response to global investors' ESG requirements, entities that are internationally professionally rated and certified are more likely to be included in thematic investment portfolios or become investment targets. Companies that achieve substantial carbon reduction and promote green products can also obtain better credit terms or financing rates.</p>
4. Resilience	<p>Scenario⁴</p> <ul style="list-style-type: none">• 【The Science Based Targets (SBT) for Cement】 In December 2024, TCC's 1.5°C emissions reduction targets were approved by SBTi. Starting in 2025, a total of 14 cement plants across Taiwan and Mainland China will follow this 1.5°C pathway, using 2016 as the base year. The company is committed to reducing Scope 1 carbon emission intensity by 23.9%, Scope 2 carbon emission intensity by 64.4%, and the combined Scope 1 and 2 carbon emission intensity by 26.8%, thereby mitigating the impact of carbon emissions on operating costs.• 【The GCCA Net Zero Roadmap for Concrete】 TCC has joined the Global Cement and Concrete Association (GCCA) and, following its 'Our Concrete Future' 2050 roadmap, has set a carbon neutrality target for TCC concrete by 2050. This serves as a reference for the development of related low-carbon products.• 【National Development Council Taiwan's Pathway to Net-Zero Emissions in 2050】 According to Taiwan's Pathway to Net-Zero Emissions in 2050 and Strategies, the goal for the circular economy aspect of industrial transformation in the manufacturing sector is to achieve a 7% substitution rate of mineral raw materials in the cement industry by 2030, and to increase the proportion of alternative fuels used in the cement industry to 10%.	<ul style="list-style-type: none">• 【UN's 2030 Embodied Carbon Target】 The Climate Action Pathway for Human Settlements, released by the UNFCCC, states that the embodied carbon of new buildings should be reduced by 40% by 2030.• 【Taiwan Initiates a Carbon Emission Disclosure Program for Public Construction Projects】 The Public Construction Commission of the Executive Yuan plans to require bidding companies to disclose carbon content on the government's electronic procurement website starting from 2024, and to incorporate carbon intensity into the consideration for public construction project bids. On the other hand, the New Taipei City Public Works Department is implementing Building Information Modeling (BIM). It is anticipated that by June 2024, a template for carbon emission assessment based on the model will be incorporated into the specifications of public works contracts.• 【Mainland China's Energy Consumption Target for Cement Clinker】 The NDRC in Mainland China has released the Benchmarking Levels for Energy Efficiency in Industry Key Areas (2023 Edition), which reveals that the comprehensive energy consumption per unit of cement clinker must be below 117 kilograms of standard coal per ton.• 【European Parliament 2028 Zero Carbon Emissions Regulations for New Buildings】 The newly revised Energy Performance of Buildings Directive (EPBD) by the European Union mandates that new buildings owned or operated by public authorities must be zero carbon emissions by 2026;. By 2028, all new buildings must achieve zero carbon emissions.• 【Global Cement Market Forecast for March 2024】 The growth rate of green cement and concrete is projected to be 3.3% annually until 2030.

	Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
4. Resilience	<p>Adaptive Capacity</p> <p>【The Cement Business is Actively Reducing Carbon Emissions】 TCC is committed to reducing the carbon emissions from the production of cement products through equipment & process enhancements, power generation by waste heat recovery, and the use of alternative fuels.</p> <p>【Laboratories with International Certifications for Cement and Concrete, such as TAF Accreditation】 TCC has established a Low-carbon R&D Center and built a TAF-certified laboratory, which can assist in the research and development of low-carbon cement and concrete, as well as control strength and production quality.</p> <p>【Development and Demonstration Site for Low-carbon Construction Materials】 TCC Hualien Hoping Low-carbon Green Energy Park, combining Hoping Cement Plant, Hoping Power, and Hoping Port, is the flagship operational site for TCC. With sustainability as the core principle of all development, TCC has the DAKA Tower, an ultrahigh-performance low-carbon UHPC center, and alternative raw material and fuel warehouses, which will become the practice field for the low-carbon construction materials business.</p> <p>【The Brand of TCC】 TCC has a long history and has established an independent inspection system, offering six major quality assurances and certifications. Additionally, TCC has introduced a traceability system and obtained GRMC and ISO 9001 certifications, earning deep trust from customers.</p>	<p>Adaptive Capacity</p> <p>【Low-carbon Product Sales and Production Targets】 TCC sets sales and production targets for low-carbon products according to different markets, actively expanding the low-carbon product market. In the Taiwan region, the goal is for low-carbon cement production to account for 15% of the total by 2024, and to reach 100% by 2026. Furthermore, the objective for 2027 is to launch new products with even lower carbon emissions.</p> <p>【The Adjustment of the Cement Commodity Tax】 Starting from 2024, Taiwan will adjust the commodity tax on hydraulic cement and masonry cement, effectively shaping the market positioning of low-carbon cement.</p> <p>【Seeking Green Financing】 TCC actively seeks green financing and investment. As of December 31, 2024, the Company had over NT\$151,001,156 thousand in sustainable and green financing facilities, representing more than 37% of the Group's total financing facilities.</p> <p>【Investing in Low-carbon Cement Overseas】 TCC participates in the international cement market and diversifies market risks by investing in OYAK and Cimpor Cement companies, expanding international and diverse demands. In 2024, TCC increased its shareholding, making TCC one of the main suppliers of low-carbon cement in Europe.</p>
5. Strategy and Decision-making Responses	<p>【Developing and Producing Low-carbon Cement, Concrete, and UHPC】 TCC is actively developing low-carbon products, keeping abreast of construction policy trends and sustainable trends in the construction industry.</p> <p>【The Establishment of UHPC Center】 The Center provides innovative cement-based construction materials that are low in carbon and high in quality. With ultra-high mechanical properties, high compressive strength, and superior durability, these materials represent a significant leap in the performance of construction materials.</p> <p>【The Only One in Taiwan to Obtain Both The EPA's Carbon Label and Carbon Reduction Label Certification】 TCC's low-carbon products have obtained multiple certifications, including carbon labels, carbon reduction labels, the Ministry of the Interior's low-carbon recycled building materials, and green building material labels. Our low-carbon products are among the few in the market that can provide international certification documents, making them responsible choices.</p> <p>【Implementing ISO Systems to Strengthen Internal Management】 TCC has implemented international standards such as ISO 50001 Energy Management, ISO 14064 Greenhouse Gases, ISO 14067 Carbon Footprint of Products and BS 8001 Circular Economy to enhance internal management efficiency.</p> <p>【Policy Communication Ensures Carbon Reduction Without Compromising Strength】 TCC actively engages with the Bureau of Standards, Metrology and Inspection (BSMI) of the Ministry of Economic Affairs, the authority overseeing national cement standards, to demonstrate TCC's commitment to carbon reduction and its self-imposed quality standards. This includes discussions on relaxing the specifications within CNS 61, such as the limits for total additive content and chloride ion content in cement, thereby strengthening product development constraints to enable the gradual implementation of low-carbon products while complying with Taiwanese regulations. Following the official release of the international definition for low-carbon cement and concrete by the Global Cement and Concrete Association (GCCA) at COP29, TCC is actively engaging with the Ministry of Environment to jointly develop the low-carbon cement and concrete definition in Taiwan.</p>	<p>【Launch the Total Climate Series of Low-carbon Products to Ensure Predominance】 TCC continues to develop new low-carbon products, launching the Total Climate series, which offers comprehensive low-carbon urban solutions and services. These are targeted at corporate factories and offices, as well as construction firms and developers with a focus on emission reduction. This initiative strengthens the brand power of TCC's low-carbon cement products and guides the market towards establishing a consciousness for sustainability.</p> <p>【Formulate Sales Strategies for Low-carbon Products】 TCC focuses on marketing low-carbon products and establishing marketing communication strategies and mechanisms for the building industry value chain. This includes building collaborative models for low-carbon products with civil engineering associations, architects, corporations, construction companies, and construction and supervision units.</p> <p>【Independently Developed an Operational Carbon Reduction Calculation System】 TCC has developed a calculation system, referencing the Ministry of the Interior's low-carbon building certification method and ISO 14067, to develop a rapid auxiliary assessment system for the carbon emissions of building materials. This system provides the carbon reduction benefits of using TCC's low-carbon construction materials.</p> <p>【Develop and Sell New Products with Low Carbon and Energy Security Features】 Leveraging its core technologies in the cement and energy industries, TCC has pioneered the global low-carbon fire-resistant EnergyArk energy storage cabinet. This innovation has received dual approval from the National Fire Agency and the National Chung Shan Institute of Science and Technology of Taiwan. It is also Taiwan's first commercial energy storage system usable both indoors and outdoors to pass the international safety certification UL 9540:2023, third edition test. Additionally, it is the only energy storage system in Taiwan that has passed the UL9540, making it the safest indoor energy storage solution available.</p> <p>【Grasp Construction Policy and Adjust Trends】 TCC actively seeks and grasps key public sector discussions related to Taiwan's construction policies, including those with the Public Construction Commission, the Ministry of the Interior, and the Water Resources Agency. The outcomes of these discussions include adjustments to the commodity tax and confirmation that low-carbon products meet customer needs arising from policy developments.</p> <p>【Strengthening Communication with Investors and Media】 TCC has launched low-carbon products. As an industry leader committed to responsible production, it is even more crucial to actively strive to showcase TCC's philosophy and product capabilities to institutional investors and media. This effort aims to communicate that TCC has gradually transformed from a raw material supplier focused on sales volume to a construction materials brand known for its high-quality products</p>

			Sustainability/ Climate-related Risks	Sustainability/ Climate-related Opportunities
Financial Position, Financial Performance and Cash Flows	Current Financial Effects ⁵	Profits Growth or Cash Inflow	TCC's low-carbon products in Taiwan include Portland Cement Type I, Portland Cement Type II (MH), and Portland Limestone Cement, all of which have obtained Carbon Reduction Labels and Gold-rated Green Marks, as well as concrete and Portland Limestone Cement concrete with a cementitious material content of 50% or less. In Mainland China, low-carbon products refer to cement products that have obtained low-carbon product certification. For OYAK Cement and Cimpor, low-carbon products are defined as cement and concrete produced with other than Portland Cement Type I. Operating sites in Taiwan and Mainland China generated low-carbon product revenue, as defined above, of NT\$32,672,421 thousand and NT\$39,279,069 thousand in 2024 and 2023, respectively. TCC consolidated OYAK Cement and Cimpor in March of this year. Based on OYAK Cement and Cimpor's definitions of low-carbon cement and concrete, low-carbon product revenue included in the consolidated operating revenue from March to December 2024 amounted to NT\$39,599,537 thousand, leading to cash inflow from operating activities.	
		Increase in Costs/ Expenses or Cash Outflow	Investments in the construction of plants and equipment for sustainable cement products resulted in capital expenditures of NT\$27,224 thousand and NT\$117,523 thousand in 2024 and 2023, leading to cash outflows and depreciation expenses for the years amounting to NT\$13,955 thousand and NT\$10,184 thousand.	
			Research and development expenses incurred for the development of low-carbon building materials products and services amounted to NT\$48,195 thousand and NT\$70,064 thousand in 2024 and 2023, leading to cash outflows from operating activities.	
			In addition to the aforementioned efforts, TCC continues to implement relevant management systems and certifications in the process of producing low-carbon products. These investments include the costs for the introduction and certification of ISO management systems, as well as third-party certification fees (including carbon labels, carbon reduction labels, green building material labels, and green factory labels). To enhance the promotion of low-carbon products and services, TCC internally expands the manpower of the New Cement Business Center and invests in employee/supplier education and training costs. Externally, TCC continues to invest in marketing and communication expenses. The investment has impacted the finances for 2024 and 2023, including generating operating costs and expenses amounting to NT\$37,298 thousand and NT\$19,040 thousand, leading to cash outflows from operating activities.	
	Overall, in response to the risks and opportunities related to low-carbon products and services, TCC's consolidated financial statements for 2024 and 2023 show low-carbon construction material revenues of NT\$72,271,958 thousand (representing 46.75% of operating revenue) and NT\$39,279,069 thousand (representing 35.93% of operating revenue) ⁷ . Total related capital investments and expenditures amounted to NT\$27,224 thousand and NT\$117,523 thousand in 2024 and 2023, and total related costs and expenses amounted to NT\$99,448 thousand and NT\$99,288 thousand in 2024 and 2023.			
	Anticipated Financial Effects ⁶	Profits Growth or Cash Inflow	Due to the adjustment of the cement commodity tax in Taiwan, coupled with the rising demand for green buildings and low-carbon buildings in Taiwan's public works, factory offices, and general construction, it is expected to drive the market demand for low-carbon cement and concrete. In early March 2024, the Public Construction Commission indicated that, in anticipation of the official implementation of the EU CBAM in 2026, it plans to introduce carbon reduction guidelines for eight major categories of public works. These guidelines, which will be mandatory in the future, require carbon reduction from the design phase. It is expected that these impacts will promote growth in TCC business revenue and an increase in cash inflow from operating activities.	
			Combining our core business in construction materials with new energy, TCC has developed a patented product, the EnergyArk energy storage cabinet. TCC is promoting it from Taiwan and Mainland China to the European and American markets, cooperating with its subsidiary, ATLANTE, which will lead to an increase in future operating revenue and cash inflows from operating activities.	
			TCC continues to optimize the product formulations in Mainland China, driving an increase in the sales of low-carbon products, which will lead to an increase in future operating revenue and cash inflows from operating activities.	
		Increase in Costs/ Expenses or Cash Outflow	Enhancing the effective utilization of renewable resources, expanding and optimizing co-processing equipment for alternative fuels and domestic waste management are expected to lead to increased future capital expenditure, resulting in cash outflows and the incurrence of depreciation expenses.	
			The expenses associated with promoting low-carbon products and services, including low-carbon product research and development costs, ISO management system implementation and verification costs, and investments in employee/supplier education and training, will lead to increased future operating costs and expenses, as well as increased cash outflows from operating activities.	
The primary sources of funding for the aforementioned investment plans are net cash inflow from operating activities and sustainable and green financing.				

⁷The percentage of financial impact on operating revenue is calculated based on the total consolidated operating revenue in TCC's Consolidated Comprehensive Income Statement for the Year 2024 and Consolidated Comprehensive Income Statement for the Year 2023.

6.2.3 Risk Management

To strengthen the risk management of TCC and ensure the sustainable operation of TCC and its subsidiaries, TCC adopts a systematic approach with board-level involvement. A Risk Management Committee has been established to qualitatively and quantitatively assess the potential impact of various business activities on TCC's operations. This enables TCC to mitigate risks to an acceptable level and achieve a balanced risk-return profile. TCC has established the Risk Management Policy in accordance with the Regulations Governing Establishment of Internal Control Systems by Public Companies promulgated by the Financial Supervisory Commission and the relevant provisions of the Risk Management Best Practice Principles for TWSE/TPEX Listed Companies published by the Taiwan Stock Exchange. Through the establishment of an effective risk management mechanism, TCC evaluates and supervises its risk-bearing capacity and the current situation of risks borne, decides on risk response strategies, and follows the risk management procedures. This year, TCC has selected Climate Action and Net-Zero Emissions, Green Energy and Energy Storage, and Sustainable Products and Services as its three material sustainability topics to identify reasonably foreseeable sustainability and climate-related risks and opportunities that could impact TCC's outlook. With its diversified business portfolio, TCC will, in 2025, progressively assess and incorporate sustainability and climate-related risks and opportunities for each of its industries, based on the applicable Sustainability Accounting Standards Board (SASB) standards and their respective disclosure topics. For detailed information regarding TCC's risk management, please refer to Page 64 "iv. Operation of Risk Management Committee" and Page 195 "5.6 Analysis and Assessment of Risk Factors" of this Annual Report.

6.2.4 Indicators and Targets

Climate-related Indicators

1. GHG Emissions	GHG Emission		Emission (metric ton of CO ₂ e)	
	Scope 1	Please refer to the Implementation of Climate-related Disclosure of the Annual Report		
	Scope 2	Please refer to the Implementation of Climate-related Disclosure of the Annual Report		
	Scope 3	Please refer to the Implementation of Climate-related Disclosure of the Annual Report		
	Note 1: GHG emissions were inventoried in terms of operational control. The formula used is emissions = activity data x emissions factor (EF) x global warming potential (GWP). The EF and GWP values are selected based on the location and applicable regulations, with the data sources remaining consistent throughout the reporting period.			
Note 2: The EF used for Taiwan is subject to the Emissions Factor Management Table released by the Ministry of Environment; the GWP for the Cement Plants is derived from the IPCC Fourth Assessment Report (2007); the GWP for RMC Plant and Operation Headquarters is derived from the IPCC Sixth Assessment Report (2021). The EF for Mainland China is subject to the Guidelines for Accounting and Reporting Greenhouse Gas Emissions, China Cement Production Enterprises (Trial), the 2006 IPCC Guidelines for National Greenhouse Gas Inventories, the 2019 Refinement, and the GWP is derived from the IPCC Sixth Assessment Report (2021).				
Note 3: The aforementioned greenhouse gas emissions cover the scope of the consolidated financial statements.				
2. Amount and Percentage of Assets or Operating Activities Vulnerable to Climate-Related Transition Risks	• The number of plants in Taiwan included in the list of carbon fee collected by the Ministry of Environment, and its percentage in the total number of plants in Taiwan in 2023 and 2024			
	Assets or Operating Activities	Number of Plants in Taiwan Included in the Ministry of Environment's List of Carbon Fee (A)	Total Plants in Taiwan(B)	Percentage of Carbon Fee Collected Plants (A/B)
	Cement Plant	2	2	100%
	RMC Plant	0	24	0%
	Ho-Ping Power Company	1	1	100%
• The production volume in Mainland China included in the regional emission trading pilots accounts for 45.33% and 45.27 % in Mainland China's total production volume in 2024 and 2023.				
3. Internal Carbon Pricing	Please refer to the Implementation of Climate-related Disclosure of the Annual Report			
4. Remuneration	<ul style="list-style-type: none">• Senior Executive ESG Performance-Linked Compensation Policy and Climate-Related Considerations: To implement and realize ESG, TCC continuously tracks the medium and long-term goals of sustainable strategies and various non-financial indicator performances and incorporates them into the senior executive (including the President, vice presidents, and managers) remuneration system for evaluation. In addition, TCC includes the execution results of corporate governance, green finance, social care, and sustainable environment into the personal performance evaluation scope of the President. After the Remuneration Committee reviews the contributions to the Company's operations and the reasonableness of the compensation, it is determined by the Board of Directors.• The carbon reduction targets of each plant are linked to the compensation and reward system and are connected to climate-related considerations. TCC implements a carbon reduction performance system, linking carbon reduction achievements with annual evaluations and salary incentives to enhance the enthusiasm and effectiveness of tracking performance indicators related to medium and long-term goals and climate issues. Since 2019, TCC has set annual carbon reduction targets for its cement plants in Taiwan and Mainland China. In the Mainland China plants, during the annual budget preparation by the Finance Department, various KPI indicators are set, including the intensity of electricity and coal consumption during the production process. Improvement targets are then allocated according to the characteristics of each cement plant. TCC monitors progress through the AI Carbon Reduction Management Platform. The platform displays real-time daily data and achievement statuses, including emission intensity, progress of carbon reduction projects, and the use of alternative raw materials and fuels. At the SBT meetings held every two weeks, the performance tracking of each plant is discussed. TCC promotes low-carbon transformation through a mechanism of accountability involving all employees. The carbon reduction performance of each plant is linked to the bonuses of senior executives and employees. Quarterly and at the end of the year, the quarterly bonuses and annual performance bonuses are calculated based on the EPS of each plant and the achievement rate of carbon reduction targets. Starting from July 2022, a trial of an internal carbon trading platform within cement plants was initiated. The emission quotas are allocated based on the production capacity of each plant. The plants submit their demands for emission quota trades through the platform, which then matches the prices. The planning of related internal carbon trading scenarios is settled at the end of the year based on the prices in the Guangdong carbon market and is linked to variable compensation.			

⁸ For 2024 production calculations, the scope has been expanded to include the trustee plant and the Huaihua plant, and the 2023 data has been adjusted accordingly. Additionally, the carbon trading regional pilot program in Mainland China specifically targets rotary kiln production lines, therefore the calculation scope excludes grinding stations.

The reason the aforementioned climate-related indicators do not include comprehensive cross-industry metrics is that only information that is reasonable and verifiable as of the reporting date is currently disclosed.

Industry-based Indicators (Construction Materials): Please refer to the Appendix of the Sustainability Report

Sustainability/Climate-related Targets

Item	2025 Target	2030 Target	2050 Target
Carbon Neutrality Target for Cement and Concrete ⁹ (1) GHG Management Taiwan (2) GHG Management Mainland China (3) GHG Management Taiwan & Mainland China (Weighted Average) Base year 2016 Unit metric tons of CO ₂ e/metric ton of cementitious	(1) 0.758 (SBT-11%) (2) 0.651 (–11%) (3) 0.675	0.585	Carbon Neutrality for Concrete
WWI Reduction Target Water Management-WCI Reduction Taiwan & Mainland China (Weighted Average) Base year 2023 Unit million liters/metric ton of cementitious materials	(1) 0.000233	(1) 0.000225	(1) 0.000220
Thermal Substitution Rate of Alternative Fuels Target Thermal Substitution Rate of Alternative Fuels Taiwan & Mainland China (Weighted Average)	(1) 25%	(1) 35%	(1) 50%
Ratio of Alternative Raw Materials Target Ratio of Alternative Raw Materials Taiwan & Mainland China (Weighted Average)	(1) 21%	(1) 22%	(1) 25%
Clinker Ratio Clinker Ratio Taiwan & Mainland China (Weighted Average)	(1) 0.796	(1) 0.780	(1) 0.570
Energy Efficiency Target Energy Efficiency Taiwan & Mainland China (Weighted Average) Unit: GJ/t Formula: Total petrochemical energy consumption/ Cementitious materials output	2.460	2.306	1.998
Renewable Energy Target Taiwan & Mainland China	235 MW under Management	400 MW under Management	750 MW under Management
Negative Emissions Technologies Target (1) Carbon Capture R&D Budget (since 2011 Unit NT\$) (2) Carbon Capture (Unit metric ton)	(1) Cumulative investment of NT\$1.3 billion (2) —	(1) — (2) 100,000 metric tons/year	(1) — (2) 1.6 million metric tons/ year

⁹ Carbon Neutrality Target for Cement and Concrete is derived using the Sectoral Decarbonization Approach (SDA), encompassing the following greenhouse gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), nitrogen trifluoride (NF₃), perfluorocarbons (PFCs), and sulfur hexafluoride (SF₆).

07

Special notes

7.1 Information on affiliated entities:

Please refer to the Market Observation Post System.
(https://mopsov.twse.com.tw/mops/web/t57sb01_q10)

7.2 Private Placement Securities:

None.

7.3 Other required supplementary notes:

None.

7.4 Any Event in 2024 and as of the Date of This Annual Report That Had a Material Impact on Shareholders’ Interests or Share Prices as Stated in Item 3 Paragraph 2 of Article 36 of the Securities and Exchange Law of Taiwan:

None.

Contact Information

<p>TCC Headquarter (02)2531-7099 No.113, Section 2, Zhongshan North Rd., Zhongshan Dist., Taipei City 104, Taiwan</p> <p>Low-carbon R&D Center (03)321-7855 No.148, Section 1, Chang'an Rd., Luzhu Dist., Taoyuan City 338,Taiwan</p> <p>Hoping cement plant (03)868-2111 No.263, Hoping Village, Sioulin Township, Hualien County, 972, Taiwan</p> <p>Suao cement plant (03)996-2511~20 No.46, Yongchang Rd., Su-aoTownship, Yilan County, 270, Taiwan</p> <p>Hualien cement plant (03)822-1161~4 No.103, Huadong, Hualien City, Hualien County 970, Taiwan</p> <p>Taipei Cement Products Plant (02)8691-9518 No.310, Sec. 1, Datong Rd., Xizhi Dist., New Taipei City 221, Taiwan</p> <p>Tucheng Branch (02)8676-3356 No.4, Ln. 223, Sec. 3, Jieshou Rd., Sanxia Dist., New Taipei City 237, Taiwan</p> <p>Taoyuan Branch (03)322-2166~68 No.220, Sec. 2, Nanshan Rd., Luzhu Dist., Taoyuan City 338, Taiwan</p> <p>Taoyuan Second Branch (03)322-1321 No. 59, Liufu Rd., Luzhu Dist., Taoyuan City 338, Taiwan</p> <p>Hualien Branch (03)822-8353 No.2-1, Jingmei Rd., Hualien City, Hualien County 970, Taiwan</p> <p>Taipei Delivery Station (02)2423-1815 No. 59, Guanghua Rd., Zhongshan Dist., Keelung City 203, Taiwan</p> <p>Guishan Branch (03)359-5633 No.688, Dongwanshou Rd., Guishan Dist., Taoyuan City 333, Taiwan</p> <p>Bade Branch (03)368-5785 No.32-1, Zhongxiao Ln., Changxing Rd., Bade Dist., Taoyuan City 334, Taiwan</p> <p>Jhongli Branch (03)490-7675~8 No.203, Sec. 6, Minzu Rd., Xinwu Township, Taoyuan County 327, Taiwan</p> <p>Jhongli Second Branch (03)490-5501 No. 38, Ln. 306, Sec. 1, Guoling Rd., Zhongli Dist., Taoyuan City 320, Taiwan</p> <p>Hsinchu Branch (03)551-5166-9 No. 792, Bo'ai St., Zhubei City, Hsinchu County 302, Taiwan</p> <p>Yilan Branch (03)922-0456 No.438, Sec. 2, Yuanshan Rd., Yuanshan Township, Yilan County 264, Taiwan</p>	<p>Taichung Cement Plant (04)2568-1691 No.785, Sec. 3, Zhongqing Rd., Daya Dist., Taichung City 428, Taiwan</p> <p>Dadoo Branch (04)2699-2826 No.303, Sec. 2, Shatian Rd., Dadu Dist., Taichung City 432, Taiwan</p> <p>Taichung Port Cement Distribution Station (04)2656-4394~5 No.2, Beiheng 7th Rd., Qingshui Dist., Taichung City 436, Taiwan</p> <p>Shengang Branch (04)2563-3980 No.202, Xizhou Rd., Shengang Dist., Taichung City 429, Taiwan</p> <p>Caotun Branch (049)225-3248 No.137, Renhe Rd., Nantou City, Nantou County 540, Taiwan</p> <p>Wuri Branch (04)2337-7265 No. 986, Jianxing Rd., Wuri Dist., Taichung City 414, Taiwan</p> <p>Kaohsiung Cement Plant (07)372-0396 No.16, Gongye 1st Rd., Renwu Dist., Kaohsiung City 814, Taiwan</p> <p>Chiayi Branch (05)221-7215 No.8, Xinsheng St., Minxiong Township, Chiayi County 621, Taiwan</p> <p>Tainan Branch (06)270-3259 No.36, Taiyi 7th St., Rende Dist., Tainan City 717, Taiwan</p> <p>Luzhu Branch (07)607-1238 No.809, Daren Rd., Luzhu Dist., Kaohsiung City 821, Taiwan</p> <p>Shanhua Branch (06)581-0685 No.33, Xingnong Rd., Shanhua Dist., Tainan City 741, Taiwan</p> <p>Anping Branch (06)291-9809 No.84-2, Xinle Rd., South Dist., Tainan City 702, Taiwan</p> <p>Nanzi Plant (07)349-4062 No. 99-1, Gaonan Highway, Renwu Dist., Kaohsiung City 814, Taiwan</p> <p>Xiaogang Branch (07)872-1166~7 No.12, Zhonglin Rd., Xiaogang Dist., Kaohsiung City 812, Taiwan</p> <p>Kaohsiung Port Cement Distribution Station(Wharves No.44) (07)813-5047~9 No.12, Dahua 3rd Rd., Qianzhen Town, Kaohsiung City 806,Taiwan</p> <p>Anping Port Cement Distribution Station (06)292-3123 No.6, Lane 23, Xingang Rd., South Dist., Tainan City 702, Taiwan</p>	<p>TCC Group Holdings CO.,LTD. 📍 No.113, Section 2, Zhongshan North Rd., Zhongshan Dist., Taipei City 104, Taiwan ☎ (02)2531-7099 🌐 https://www.tccgroupholdings.com/tw/ Fax : (02)2531-6650</p> <p>Spokesman:VP, Shelly Yeh ☎ (02)2531-7099 Ext 20265 ✉ shellyyeh@taiwancement.com</p> <p>Deputy Spokesperson: Associate VP, Jia-Ro Lai ☎ (02)2531-7099 Ext 20207 ✉ nana.lai@taiwancement.com</p> <p>Stock Transfer Services Transfer Agency, CTCB Bank 📍 5F, No.83, Sec. 1, Chongqing S. Rd., Zhongzheng Dist., Taipei City 100, Taiwan ☎ (02)6636-5566 🌐 http://www.chinatrust.com.tw</p> <p>CPAs: Ya-Ling Wong and Hui-Min Huang CPA Firm : : Deloitte Taiwan 20F, Taipei Nan Shan Plaza 📍 No.100, Songren Rd. Xinyi Dist. Taipei 11073, Taiwan ☎ (02)2725-9988(Rep.) 🌐 http://www.deloitte.com</p> <p>Overseas listings and access to the listing information: Global depository receipts - Luxembourg Stock Exchange sub-board link for inquiries: 🌐 https://www.bourse.lu/issuer/ TaiwanCement/55152</p> <p>Overseas unsecured convertible corporate bonds - Singapore Exchange link for inquiries: 🌐 https://www2.sgx.com/</p>
---	--	--

TCC Group Holdings
Chairman





GROUP HOLDINGS

TCC GROUP HOLDINGS

No.113, Section 2, Zhongshan North Rd.,
Zhongshan Dist., Taipei City 104, Taiwan
<https://www.tccgroupholdings.com/en/>

TEL: (02)2531-7099

FAX: (02)2531-6650