chapter 6

Appendix

ESG Data Sheet	205
Sustainability Disclosure for the Listed Cement Companies	242
Global Reporting Initiative Index	246
Sustainability Accounting Standards Board Index	256
European Sustainability Reporting Standards Index	259
Third-Party Assurance Statement	267

6.1

ESG Data Sheet

6.1.1 TCC Key Indicators — Governance

2024 TCC Tax Information Unit: NT$1,000

Jurisdiction	Taiwan	Mainland China (Hong Kong included)	South Europe	Türkiye	United States	Netherlands	Africa	Others	Total
Operating Revenue	66,762,889	40,639,659	27,200,539	41,967,348	1,055,650	6,114	3,876,915	6,774,607	188,283,721
Income Tax Accrued	2,072,918	439,016	1,568,094	465,107	6,874	-	62,219	148,546	4,762,774
Income Tax Paid	3,944,262	211,809	1,668,929	1,445,205	174,898	60,622	64,894	24,537	7,595,156
Cost-to-income Ratio	51.93%	2.79%	21.98%	19.03%	2.30%	0.80%	0.85%	0.32%	100%
Primary Activities	Cement manufacturing and distribution, logistics transportation, manufacturing and distribution of slag powder, sand and gravel screening and ready-mixed concrete sales, waste removal and disposal, resource recycling technology development, etc.		Investment holding, renewable energy and energy storage system construction, renewable energy and charging business, electric vehicle charging equipment.	Manufacturing of Cement, Clinker and Concrete.	Renewable energy and energy storage system construc-tion, electric vehicle charging equipment.	Investment holding and electric vehicle charging equipment.	Cement Grinding and Manufacturing.	Investment holding, manufacturing and sales of cement and ready-mixed concrete, renew-able energy and charging business, battery research, development and sales, shipping transportation, and other activities.	
Effective Tax Rate				31.55%					
Cash Tax Rate				33.26%					

Note 1: The data in the table above has not been adjusted to offset transactions with related parties that should be included in the consolidated entities.
Note 2: For the number of employee, please refer to Section CH6.1 ESG Data Sheet - 2024 Employee Diversity Composition.

Financial Performance for the Past Three Years Unit: NT$ for EPS & DPS; NT$1,000 for the remainders

Type	Items	2022	2023	2024
Economic Value Generated	Operating Revenue	113,929,706	109,314,335	154,606,511
	Operating Income (Loss)	1,162,138	10,030,160	17,126,617
	Non-operating Income and Expenses	5,483,959	4,326,671	5,706,142
Economic Value Distributed	Operating Costs	103,794,557	88,780,566	121,878,486
	EPS	0.74	1.06	1.45
	DPS	0.5	1	1
	Cash Dividend per Share	0.5	1	1
	Stock Dividend per Share	0	0	0
	Income Tax	2,489,012	4,352,218	7,203,262
	Employee Wages and Benefits	9,769,560	10,606,016	18,140,124
	Community Investments	276,550	356,825	466,015
Economic Value Retained	Retained Earnings	66,527,594	70,576,781	72,771,952

Table of Significant Environmental Law/Regulation Violations in 4 Years

Items	2021	2022	2023	2024
Violations of Legal Obligations/Regulations	1	1	0	6
Amount of Fines as the Result of Significant Penalty Cases(Unit: NT$1,000.) Above	434	425	0	20,610
Accrued Year-end Penalty Amount (Unit: NT$1,000.)	0	0	0	0

Note 1: A major penalty event is defined as any single penalty with an amount exceeding USD 10,000.

Contributions & Other Spending in 4 Years Unit: NT$

Total Invested Amount	2021	2022	2023	2024
Lobbying, Interest Representation or Similar	0	0	0	0
Local, Regional or National Political Campaigns / Organizations / Candidates	0	800,000	700,000	10,000
Trade Associations or Tax-exempt Groups (e.g. Think Tanks)	57,338,014	54,230,375	45,175,671	55,945,099
Other (e.g. Spending Related to Ballot Measures or Referendums)	0	0	0	0
Total	57,338,014	55,030,375	45,875,671	55,955,099
Data Coverage	100%	100%	100%	100%

Note 1: The scope expanded in 2024 due to the merger with the European subsidiary, resulting in an increase in public participation expenses compared to the previous three years.

Table of Supply Chain Procurement Amount in 2024 Unit: NT$

Six Major Categories	Taiwan and Mainland China	
	Procurement Amount (NT$)	Procurement Amount Percentage (%)
Raw Materials	25,152,909,759	69.53%
Outsourcing & Subcontracting	442,441,229	1.22%
Equipment & Parts	5,710,769,642	15.79%
Transport	2,159,220,717	5.97%
Construction	2,424,030,509	6.70%
Explosives	283,842,438	0.78%
Total	36,173,214,294	100.00%

Note 1: The scope covers cement business in Taiwan and Mainland China

Number of Significant Suppliers and Procurement Share in 2024

Items	Taiwan and Mainland China	
Total number of Tier-1 suppliers	2,644	
Total number and Share of significant suppliers in Tier-1	251	9.49%
Share of total spend on significant suppliers in Tier-1	81.87%	
Total number of significant suppliers in non Tier-1	45	
Total number of significant suppliers	296	

Note 1: The scope covers cement business in Taiwan and Mainland China

Supplier Assessment Performance and Goals for 2024

Supplier Assessment	FY 2024	Target for FY 2024
Total number of suppliers assessed (via desk assessments/on-site assessments)	275	100%
Results		
Number of suppliers assessed with substantial actual/potential negative impacts	14	
Share of suppliers with agreed corrective action/improvement plan	100%	
Number of suppliers that were terminated	2	
Supplier corrective plan performance and targets		
Total number of suppliers with substantial actual/potential negative impacts expected to be supported in corrective action plan implementation	14	100%
Total number of suppliers supported in corrective action plan implementation	12	
Performance and goals of suppliers capacity building programs		
Total number of suppliers in capacity building programs	262	183

Note 1: The scope covers cement business in Taiwan and Mainland China

Mean Salary and Median Salary of Full-Time, Non-Managerial Employees and Their Historical Differences Unit: NT$1,000

Items	2023	2024	Difference
“Mean Salary” of Full-Time, Non-Managerial Employees	992	1,003	11
“Median Salary” of Full-Time, Non-Managerial Employees	870	877	7

Note 1: This table discloses salary information for Taiwan based on the "Instructions for Reporting Salary Information of Full-Time Employees Not Holding Supervisory Positions" issued by the Taiwan Stock Exchange.

6.1.2 TCC Key Indicators — Construction Materials

TCC Key Indicators — Environmental

GHG Emissions in 4 Years Unit: tCO_2e

Items		2021	2022	2023	2024
Scope 1	Taiwan	4,798,945	4,314,312	3,463,663	3,311,817
	Mainland China	25,867,678	20,715,305	17,418,591	20,300,454
	Subtotal	30,666,623	25,029,617	20,882,254	23,612,270
	CIMPOR & OYAK CEMENT	-	-	-	9,183,229
	Total	30,666,623	25,029,617	20,882,254	32,795,500
Scope 2 (Location-based method)	Taiwan	220,392	218,480	195,702	208,671
	Mainland China	1,094,397	846,574	656,627	698,270
	Subtotal	1,314,789	1,065,054	852,329	906,941
	CIMPOR & OYAK CEMENT	-	-	-	482,671
	Total	1,314,789	1,065,054	852,329	1,389,612
Scope 2 (market-based method)	Taiwan	220,392	218,480	195,702	208,631
	Mainland China	1,094,397	846,574	656,627	682,879
	Subtotal	1,314,789	1,065,054	852,329	891,510
	CIMPOR & OYAK CEMENT	-	-	-	537,745
	Total	1,314,789	1,065,054	852,329	1,429,255
Scope 1+Scope 2 (market-based method) Total	Taiwan	5,019,337	4,532,792	3,659,365	3,520,448
	Mainland China	26,962,075	21,561,879	18,075,218	20,983,333
	Subtotal	31,981,412	26,094,671	21,734,583	24,503,781
	CIMPOR & OYAK CEMENT	-	-	-	9,720,974
	Total	31,981,412	26,094,671	21,734,583	34,224,755
Scope 3	Taiwan	28,761	17,428	6,277,977	6,473,285
	Mainland China	-	-	-	963,241
	Subtotal	28,761	17,428	6,277,977	7,436,526
	CIMPOR & OYAK CEMENT	-	-	-	1,867,000
	Total	28,761	17,428	6,277,977	9,303,526

Note 1: The newly disclosed scope in 2023 includes Ho Sheng Mining Co., Ltd. The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enterprise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR, OYAK CEMENT, and the European Operations Headquarters.
Note 2: CIMPOR and OYAK CEMENT were officially included in the Company's consolidated financial statements starting from March 2024. Therefore, the GHG emissions presented above only account for the period from March to December 2024.
Note 3: The GHG emissions were inventoried in terms of operational control. The formula used is emissions = activity data × emissions factor (EF) × global warming potential (GWP).
Note 4: The scope 3 emissions cover all 15 categories defined by the GHG Protocol.
Note 5: To comply with the requirements of the Financial Supervisory Commission, this table adopts the greenhouse gas GWP values from IPCC AR6 for calculation.

Total Emissions of Various Greenhouse Gases for Scope 1 in Two Years Unit: tCO_2e

Items		2023	2024
CO_2	Taiwan	3,451,687.86	3,311,669.45
	Mainland China	22,786,777.11	20,316,085.00
	Total	26,238,464.97	23,627,754.45
CH_4	Taiwan	1,436.22	1,946.25
	Mainland China	849.88	693.96
	Total	2,286.10	2,640.21
N_2O	Taiwan	6,086.47	6,555.26
	Mainland China	597.49	377.72
	Total	6,683.96	6,932.97
HFCs	Taiwan	406.82	630.87
	Mainland China	7,380.32	1,421.41
	Total	7,787.14	2,052.28
PFCs	Taiwan	-	-
	Mainland China	-	-
	Total	-	-
SF_6	Taiwan	-	-
	Mainland China	395.14	314.99
	Total	395.14	314.99
NF_3	Taiwan	-	-
	Mainland China	-	-
	Total	-	-

Note 1: The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enterprise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited.
Note 2: To comply with the requirements of the competent authority, the Ministry of Environment, this table adopts the greenhouse gas GWP values from IPCC AR5 for calculation.

Energy Use in 4 Years

Energy Usage | Raw Consumption		2021	2022	2023	2024
Coal (thousand metric ton)	Taiwan	757	703	499	464
	Mainland China	4,446	3,369	2,822	2,321
	Total	5,203	4,072	3,321	2,785
Diesel (KL)	Taiwan	1,435	1,776	1,473	4,786
	Mainland China	16,991	13,239	12,143	11,680
	Subtotal	18,426	15,015	13,616	16,467
	CIMPOR & OYAK CEMENT	-	-	-	27,132
	Total	18,426	15,015	13,616	43,598
Gasoline (KL)	Taiwan	154	195	187	694
	Mainland China	340	252	262	301
	Subtotal	494	447	449	995
	CIMPOR & OYAK CEMENT	-	-	-	1,181
	Total	494	447	449	2,176
Purchased Electricity (GWh)	Taiwan	456	445	800	425
	Mainland China	2,272	1,601	1,361	1,972
	Subtotal	2,728	2,046	2,161	2,396
	CIMPOR & OYAK CEMENT	-	-	-	1,901
	Total	2,728	2,046	2,161	4,297
Power Generation by Waste Heat Recovery (GWh)	Taiwan	138	108	64	79
	Mainland China	1,034	811	738	858
	Subtotal	1,172	919	802	937
	CIMPOR & OYAK CEMENT	-	-	-	84
	Total	1,172	919	802	1,021
Natural Gas (m^3)	Taiwan	3,750	1,723	1,742	9,541
	Mainland China	-	-	-	0
	Total	3,750	1,723	1,742	9,541

Energy Use in 4 Years

Energy Usage | Raw Consumption		2021	2022	2023	2024
Alternative Fuel (GJ)	Taiwan	-	668,807	1,322,967	1,724,940
	Mainland China	1,141,467	5,667,469	8,539,446	13,131,664
	Subtotal	1,141,467	6,336,276	9,862,413	14,856,604
	CIMPOR & OYAK CEMENT	-	-	-	10,423,490
	Total	1,141,467	6,336,276	9,862,413	25,280,094
Renewable Energy (kWh)	Taiwan	272,778	307,778	2,803,611	5,836,025
	Mainland China	-	889,444	14,029,722	63,755,710
	Subtotal	272,778	1,197,222	16,833,333	69,591,736
	CIMPOR & OYAK CEMENT	-	-	-	185,808,077
	Total	272,778	1,197,222	16,833,333	255,399,812

Energy Usage | In terms of Gigajoule (GJ)					
Coal	Taiwan	17,632,953	16,355,419	11,577,410	10,806,676
	Mainland China	102,356,312	77,566,859	64,978,651	53,561,704
	Total	119,989,265	93,922,278	76,556,061	64,368,380
Diesel	Taiwan	50,489	62,451	51,753	168,288
	Mainland China	597,444	465,515	426,977	410,714
	Subtotal	647,933	527,966	478,730	579,002
	CIMPOR & OYAK CEMENT	-	-	-	954,021
	Total	647,933	527,966	478,730	1,533,023
Gasoline	Taiwan	5,097	6,366	6,128	22,637
	Mainland China	11,115	8,228	8,575	9,837
	Subtotal	16,212	14,594	14,703	32,474
	CIMPOR & OYAK CEMENT	-	-	-	38,576
	Total	16,212	14,594	14,703	71,050
Purchased Electricity	Taiwan	1,640,996	1,602,000	1,490,608	1,528,627
	Mainland China	8,179,002	5,763,600	4,899,412	7,097,867
	Subtotal	9,819,998	7,365,600	6,390,020	8,626,494
	CIMPOR & OYAK CEMENT	-	-	-	6,843,536
	Total	9,819,998	7,365,600	6,390,020	15,470,030

Energy Use in 4 Years

Energy Usage | Raw Consumption		2021	2022	2023	2024
Power Generation by Waste Heat Recovery	Taiwan	497,725	388,800	228,780	286,155
	Mainland China	3,723,552	2,919,600	2,565,800	3,088,559
	Subtotal	4,221,277	3,308,400	2,794,580	3,374,715
	CIMPOR & OYAK CEMENT	-	-	-	301,356
	Total	4,221,277	3,308,400	2,794,580	3,676,071
Natural Gas	Taiwan	139	58	58	320
	Mainland China	-	-	-	0
	Total	139	58	58	320
Alternative Fuel	Taiwan	-	668,807	1,322,967	1,724,940
	Mainland China	1,141,467	5,667,469	8,539,446	13,131,664
	Subtotal	1,141,467	6,336,276	9,862,413	14,856,604
	CIMPOR & OYAK CEMENT	-	-	-	10,423,490
	Total	1,141,467	6,336,276	9,862,413	25,280,094
Renewable Energy	Taiwan	982	1,108	10,093	21,010
	Mainland China	-	3,202	50,507	229,521
	Subtotal	982	4,310	60,600	250,530
	CIMPOR & OYAK CEMENT	-	-	-	668,909
	Total	982	4,310	60,600	919,439

Note 1: The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enterprise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR (not yet included the cement plant in Cameroon) and OYAK CEMENT.
Note 2: The coal calorific values for cement plants in Taiwan are converted based on each plant's specific settings. The conversion factors are as follows: Su'ao Plant – 5,532.69 kcal/kg; Hoping Plant – 5,570.14 kcal/kg; other cement plants in Taiwan – 5,512.66 kcal/kg. Conversion factors for other fuels are: diesel – 8,400 kcal/l, gasoline – 7,800 kcal/l, electricity – 3,600 GJ per million kWh, and natural gas – 8,000 kcal/m^3. For Mainland China, CIMPOR, and OYAK CEMENT, calorific values are calculated in accordance with local practices and regulations.
Note 3: Energy consumption data is based on reports submitted to the Energy Administration.
Note 4: In light of the schedule, information on coal and natural gas usage by CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

2024 Energy Conservation Projects

Operation Sites	Energy Conservation Project	Cumulative Period	Energy Saved	Base Year
Hoping Plant	Compressed air system intelligent management optimization performance management system (ESCO project)	2023/06-2024/05	Electricity savings of 1,410,775 kWh	compared before and after the implementation of the plan
	2K clinker cooler renovation and upgrade project	2023/08-2024/07	Electricity savings of 1,227,332 kWh	
	1K clinker cooler renovation and upgrade project	2024/04-2025/03	Electricity savings of 2,540,601 kWh	
	Plant-wide electrical room water-cooled packaged air conditioner replacement and renewal	2024/12-2025/11	Electricity savings of 29,215 kWh	
Suao Plant	#6K preheater dust cleaning backup air compressor replacement and renewal - 1 unit	2024/06-2024/12	Electricity savings of 103,395 kWh	
	Cooler air blast tank compressor replacement and renewal - 1 unit	2024/12-2024/12	Electricity savings of 14,770 kWh	
Taipei Plant	Installation of automatic start-stop control for material receiving conveyor belt	2024/08-2024/12	Electricity savings of 4,978 kWh	2024
	Office lighting power improvement	2024/09-2024/12	Electricity savings of 216 kWh	2024
Tucheng Plant	Replacement of energy-saving lighting fixtures (sensor lights and LED)	2024/01-2024/12	Electricity savings of 802 kWh	2023
Bade Plant	Water dispenser energy saving	2024/01-2024/12	Electricity savings of 10.62 kWh	2023
Taoyuan Second Branch	Water dispenser energy saving	2024/01-2024/12	Electricity savings of 840 kWh	2023
Kaohsiung Plant	Water dispenser energy saving	2024/02-2024/12	Electricity savings of 4,020 kWh	2024
Taichung Plant	Air compressor replacement	2024/01-2024/12	Electricity savings of 8,229 kWh	2023
Yingde Plant	Yingde TCC 1K Clinker Cooler Energy-Saving Technical Upgrade Project	2024/03-2025/03	Savings of 6,282 metric tons of standard coal	2023
	Yingde TCC #5, 9C Cement Production Line Green Manufacturing Technology Upgrade Project	2022/10-2024/12	Savings of 979 metric tons of standard coal	2022
Guigang	#7C Mill Dispersion Machine Return Material Added L-Separator	2024/1-2024/12	Electricity savings of 428,301 kWh	2023
	#3C Mill Dispersion Machine Return Material Added L-Separator	2024/1-2024/12	Electricity savings of 107,237 kWh	2023
	Longzushan Corridor Photovoltaic Project	2024/6-2024/12	Electricity savings of 1,202,610 kWh	2023
	High Energy Consumption Motor Replacement	2024/1-2024/12	Electricity savings of 565,044 kWh	2023
	#8C Replace Diamond Hardfacing Roll, Increase Roll Width from 800mm to 900mm (Including Roll Sleeve Repair)	2024/6-2024/12	Electricity savings of 563,500 kWh	2023
	Waste Heat Power Generation TG1 Main Circulating Water Pump B Frequency Conversion	2024/7-2024/12	Electricity savings of 163,392 kWh	2024
Jurong	Cement Mill Energy-Saving Technical Modification	Already put into operation in June 2024	Electricity savings of 16,380,000 kWh/year	2020
Guangan	Modification of Coal Feeding Magnetic Levitation Fan in Coal Mill System	2024/05-2024/12	Electricity savings of 22,065 kWh	2024/4/1
	Cement Mill A System Fan Modification	2024/06-2024/12	Electricity savings of 197,428 kWh	2023/11/1

2024 Energy Conservation Projects

Operation Sites	Energy Conservation Project	Cumulative Period	Energy Saved	Base Year
Anshun	Replacement of Louver Valves in Kiln Tail Bag Filter at Clinker Plant	2024/06-2024/12	Electricity savings of 557,465 kWh/ton	2024
	Replacement of Mill Grate Plates at Cement Plant	2024/01-2024/12	Electricity savings of 53,196 kWh/ton	2024
Kaili	Replacement of AQC Heat Exchange Tubes on Line 2	-	Increased power generation by 1,332,100 kWh	2024 H1
	Deactivation of Line 1 and 2 Transformers (During Kiln Shutdown Period)	-	Electricity savings of 257,083 kWh	2023
Lungshan	Raw Mill System Fan Frequency Conversion Renovation Project	-	Electricity savings of 3,652,500 kWh/year	2024
	Three Kilns Using RDF Biomass Alternative Fuel	2026/01-2026/12	Coal savings of 44,900 metric tons/year	2024-2025
	Yingde Lungshan Company 11.8MWp Distributed Photovoltaic Power Generation Project	2026/01-2026/12	Electricity savings of 12,000,000 kWh/year	2024
Tsing Yi Plant	Compressed Air Delivery and Replacement Project for Air Compressors		Electricity savings of 22,500 kWh/year	2024
	Electric Official Vehicle Procurement Project		Diesel savings of 200 liters	2024
Total Energy Savings Converted to GJ	1,357,933 GJ			
Capital Investment	NT$ 1,994,543,000			
Operating Expenses	NT$ 262,996,000			
Costs Saved	NT$ 225,299,000			

Air Pollutant Emissions in 4 Years Unit: metric ton

Items	Unit	Site	2021	2022	2023	2024
NOx	metric ton	Taiwan	6,473	5,427	4,923	4,481
		Mainland China	9,908	8,207	5,053	4,740
		Subtotal	16,381	13,634	9,976	9,221
		CIMPOR & OYAK CEMENT	-	-	-	17,949
		Total	16,381	13,634	9,976	27,170
SOx	metric ton	Taiwan	113	65	97	58
		Mainland China	997	1,096	962	1,057
		Subtotal	1,110	1,161	1,059	1,115
		CIMPOR & OYAK CEMENT	-	-	-	3,354
		Total	1,110	1,161	1,059	4,469

Air Pollutant Emissions in 4 Years Unit: metric ton

Items	Unit	Site	2021	2022	2023	2024
Particulate Matter	metric ton	Taiwan	214	158	168	182
		Mainland China	569	317	402	466
		Subtotal	783	475	570	648
		CIMPOR & OYAK CEMENT	-	-	-	1,170
		Total	783	475	570	1,818
VOC/THC	metric ton	Taiwan	0.0042	0.0043	0.0042	0.0043
		Mainland China	-	-	-	0.0113
		Total	0.0042	0.0043	0.0042	0.0157
PCDD/F	g I-TEQ	Taiwan	-	0.7576	0.0299	0.0505
		Mainland China	-	-	-	0.00000024
		Total	-	0.7576	0.0299	0.0505
Mercury Emissions (Hg)	metric ton	Taiwan	0.2788	0.2264	0.1669	0.1729
		Mainland China	-	-	-	0.2058
		Subtotal	0.2788	0.2264	0.1669	0.3787
		CIMPOR & OYAK CEMENT	-	-	-	0.0110
		Total	0.2788	0.2264	0.1669	0.3897

Note 1: Emissions are calculated either through direct measurement or based on specific on-site data. The emission factors are sourced from the "Emission Factors, Control Efficiencies, and Other Measurement Regulations for Particulate Pollutants, Lead, Cadmium, Mercury, Arsenic, Hexavalent Chromium, and Dioxins from Stationary Pollution Sources in Public and Private Premises." These include Appendix 1: Emission Factors for Particulate Pollutants from Industrial Processes, and Appendix 3: Emission Factors for Lead, Cadmium, Mercury, Arsenic, Hexavalent Chromium, and Dioxins from Industrial Processes, as well as emission factors, control efficiencies, and other measurement regulations for volatile organic compounds (VOCs), process units (including equipment components), as specified for the declaration of air pollution control fees for stationary pollution sources.
Note 2: The nature of operations at product plants involves cement product mixing and transportation; therefore, no air pollutant emissions are generated.
Note 3: Emissions of mercury, dioxins, and furans (PCDD/Fs) from Mainland China are disclosed starting from 2024.
Note 4: In 2024, additional heavy metal emissions were recorded. For Heavy Metals 1 (HM1, including thallium, cadmium, lead, arsenic, and their compounds), emissions totaled 0.7424 metric tons in Taiwan and Mainland China, and 0.0630 metric tons in CIMPOR and OYAK CEMENT. For Heavy Metals 2 (HM2, including beryllium, chromium, tin, antimony, copper, cobalt, manganese, nickel, vanadium, and their compounds), emissions totaled 1.3715 metric tons in Taiwan and Mainland China, and 1.4050 metric tons in CIMPOR and OYAK CEMENT.
Note 5: In 2024, the newly added disclosure scope included 22.17 metric tons of fluorides, 33.51 metric tons of hydrogen chloride, 3.63 metric tons of hydrogen fluoride, 115.93 metric tons of ammonia, and 16.75 metric tons of total organic carbon.
Note 6: The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enterprise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR (not yet included the cement plant in Cameroon) and OYAK CEMENT.
Note 7: In light of the project timeline, the data on PCDD/F and VOC/THC for CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

Water Resource Use in 4 Years Unit: million liters

Items		2021	2022	2023	2024
Water Withdrawal					
Third-Party Water_Municipal Water	Taiwan	322	309	289	282
	Mainland China	405	373	523	539
	Subtotal	727	682	812	821
	CIMPOR & OYAK CEMENT	-	-	-	236
	Total	727	682	812	1,057
Third-Party Water_Industrial Water	Taiwan	1,039	819	722	1,086
	Mainland China	516	456	782	586
	Subtotal	1,555	1,275	1,504	1,672
	CIMPOR & OYAK CEMENT	-	-	-	719
	Total	1,555	1,275	1,504	2,391
Surface Water_Rivers	Taiwan	-	-	-	13
	Mainland China	12,319	8,325	8,177	10,925
	Subtotal	12,319	8,325	8,177	10,938
	CIMPOR & OYAK CEMENT	-	-	-	211
	Total	12,318	8,325	8,177	11,149
Surface Water_Mines	Taiwan	-	-	-	-
	Mainland China	-	-	33	94
	Subtotal	-	-	33	94
	CIMPOR & OYAK CEMENT	-	-	-	-
	Total	-	-	33	94
Surface Water_Lakes	Taiwan	-	-	-	-
	Mainland China	348	135	99	137
	Subtotal	348	135	99	137
	CIMPOR & OYAK CEMENT	-	-	-	5
	Total	348	135	99	142
Surface Water_Rainwater/Spring Water	Taiwan	-	-	694	37
	Mainland China	-	6	448	967
	Subtotal	-	6	1,142	1,004
	CIMPOR & OYAK CEMENT	-	-	-	24
	Total	-	6	1,142	1,028

Water Resource Use in 4 Years Unit: million liters

Items		2021	2022	2023	2024
Groundwater	Taiwan	1,102	1,173	1,123	1,460
	Mainland China	520	350	-	263
	Subtotal	1,622	1,523	1,123	1,723
	CIMPOR & OYAK CEMENT	-	-	-	7,507
	Total	1,622	1,523	1,123	9,230
Seawater	Taiwan	0	0	0	0
	Mainland China	0	0	0	0
	Subtotal	0	0	0	0
	CIMPOR & OYAK CEMENT	-	-	-	19,929
	Total	-	-	-	19,929
Discharged Reclaimed Water	Taiwan	102	113	73	89
	Mainland China	-	-	-	-
	Subtotal	102	113	73	89
	CIMPOR & OYAK CEMENT	-	-	-	9
	Total	102	113	73	98
Total	Taiwan	2,566	2,414	2,900	2,968
	Mainland China	14,109	9,645	10,062	13,510
	Subtotal	16,675	12,059	12,962	16,478
	CIMPOR & OYAK CEMENT	-	-	-	28,641
	Total	16,675	12,059	12,962	45,118
Water discharge					
Surface Water	Taiwan	-	-	-	464
	Mainland China	-	-	-	0
	Subtotal	-	-	-	464
	CIMPOR & OYAK CEMENT	-	-	-	5,308
	Total	-	-	-	5,772
Groundwater	Taiwan	-	-	-	0
	Mainland China	-	-	-	0
	Subtotal	-	-	-	0
	CIMPOR & OYAK CEMENT	-	-	-	77
	Total	-	-	-	77

Water Resource Use in 4 Years Unit: million liters

Items		2021	2022	2023	2024
Seawater	Taiwan	-	-	-	0
	Mainland China	-	-	-	0
	Subtotal	-	-	-	0
	CIMPOR & OYAK CEMENT	-	-	-	19,929
	Total	-	-	-	19,929
Third-Party Water	Taiwan	-	-	-	30
	Mainland China	-	-	-	118
	Subtotal	-	-	-	148
	CIMPOR & OYAK CEMENT	-	-	-	96
	Total	-	-	-	244
Total	Taiwan	-	-	-	494
	Mainland China	-	-	-	118
	Subtotal	-	-	-	612
	CIMPOR & OYAK CEMENT	-	-	-	25,410
	Total	-	-	-	26,022
Water Consumption					
Water Consumption	Taiwan	2,566	2,414	2,900	2,474
	Mainland China	14,109	9,645	10,062	13,391
	Subtotal	16,675	12,059	12,962	15,865
	CIMPOR & OYAK CEMENT	-	-	-	3,231
	Total	16,675	12,059	12,962	19,096

Water Resource Use in 4 Years Unit: million liters

Items		2021	2022	2023	2024
Recycled water					
Process Recycled Water	Taiwan	91,218	88,394	62,485	5,864
	Mainland China	11,773	9,610	9,779	758
	Subtotal	102,991	98,004	72,264	6,622
	CIMPOR & OYAK CEMENT	-	-	-	1,921
	Total	102,991	98,004	72,264	8,543
Other Recycled Water	Taiwan	-	-	54	175
	Mainland China	-	-	-	292
	Subtotal	-	-	54	467
	CIMPOR & OYAK CEMENT	-	-	-	0
	Total	-	-	54	467

Note 1: In Mainland China, water discharged to third parties refers to water provided for use by other organizations.
Note 2: At TCC's Hoping Plant in Taiwan, rainwater intake in 2023 was estimated based on projected runoff from rainfall, while in 2024, rainwater meters were installed to record the actual volume of rainwater collected. As a result, differences in water intake between the two years are due to differences in calculation methods.
Note 3: From 2021 to 2023, Taiwan and Mainland China reported 0 discharge of process wastewater. In 2024, statistics were expanded to include domestic sewage discharge and water discharged for use by third parties.
Note 4: The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enterprise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR (not yet included the aggregate plant in Cabo Verde) and OYAK CEMENT.

Water Resource Use in Water-Stressed Areas over the Past Three Years Unit: Million Liters

Items		2022	2023	2024
Water Withdrawal				
	Taiwan	-	-	-
	Mainland China	1,471	1,932	1,718
	Subtotal	1,471	1,932	1,718
	CIMPOR & OYAK CEMENT	-	-	2,383
	Total	1,471	1,932	4,101
Water discharge	Taiwan	-	-	-
	Mainland China	-	-	-
	Subtotal	-	-	-
	CIMPOR & OYAK CEMENT	-	-	109
	Total	-	-	109
Water Consumption	Taiwan	-	-	-
	Mainland China	1,471	1,932	1,718
	Subtotal	1,471	1,932	1,718
	CIMPOR & OYAK CEMENT	-	-	2,274
	Total	1,471	1,932	3,992
Recycled water	Taiwan	-	-	-
	Mainland China	-	-	69
	Subtotal	-	-	69
	CIMPOR & OYAK CEMENT	-	-	399
	Total	-	-	467

Note 1: TCC assesses future water availability using the WRI Aqueduct Water Risk Atlas. Some locations in Mainland China, as well as sites operated by CIMPOR and OYAK CEMENT, are situated in areas with high water stress, while the remaining sites are not located in water-stressed regions.

2024 Water Conservation Project

Operation Sites	Water Conservation Project	Cumulative Period	Total Water Saved	Base Year
Hoping Plant	3A shaft tunnel water resource recovery and reuse	2021/05-2024/12	25,430 cubic meters of water saved	-
	1B shaft tunnel water resource recovery and reuse	2023/03-2024/12	6,077 cubic meters of water saved	-
	2024 rainwater collection facility	2024/05-2024/12	4,538 cubic meters of water saved	-
Suao Plant	RD01 effluent water recovery pipeline expansion project	2024/03-2024/12	36,719 cubic meters of water saved	2024
Taipei Plant	Driver water control system	2024/11-2024/12	496 cubic meters of water saved	2023
Zhongli Plant	Rainwater recycling system	2024/12-2024/12	125 cubic meters of water saved	2023
Tucheng Plant	Rainwater recycling system	2024/01-2024/12	539 cubic meters of water saved	2023
Hsinchu Plant	Rainwater recycling system	2024/03-2024/12	2,661 cubic meters of water saved	2023
Guishan Branch	Rainwater recycling system	2024/11-2024/12	7 cubic meters of water saved	2024
Kaohsiung Plant	Water-saving equipment in administrative building restrooms	2024/08-2024/12	89 cubic meters of water saved	2024
	Rainwater recycling system	2024/01-2024/12	5,106 cubic meters of water saved	2023
Taichung Plant	Rainwater recycling system	2024/05-2024/12	38 cubic meters of water saved	2023
Shengang Plant	Rainwater recycling system	2024/04-2024/12	299 cubic meters of water saved	2023
Jurong Plant	Waste heat power generation wastewater recycling	2024/01-2024/12	81,847cubic meters of water saved	2020
Anshun Plant	Rainwater Recovery	2024/08-2025/01	94,318 cubic meters of water saved	
Total Water Savings			258,289 cubic meters	
Capital Investment			NT$ 26,274,000	
Operating Expenses			NT$ 1,207,000	
Cost Saved			NT$ 1,916,000	

Waste Treatment in 4 Years Unit: metric ton

Total Waste			2021	2022	2023	2024
Quantity of in-house waste reused	Non-Hazardous Waste	Taiwan and Mainland China	3,881.23	9,673.86	7,811.95	11,181.09
	Hazardous Waste	Taiwan and Mainland China	-	-	-	0

Waste Treatment in 4 Years Unit: metric ton

Total Waste				2021	2022	2023	2024
Outsourced treatment volume of in-house waste	Off-site Waste landfilled	Non-Hazardous Waste	Taiwan and Mainland China	-	-	-	131.24
		Hazardous Waste	Taiwan and Mainland China	-	-	-	1.24
	Off-site Waste incinerated with energy recovery	Non-Hazardous Waste	Taiwan and Mainland China	-	-	-	841.60
		Hazardous Waste	Taiwan and Mainland China	-	-	-	4.54
	Off-site Waste incinerated without energy recovery	Non-Hazardous Waste	Taiwan and Mainland China	1,091.74	212.71	1,686.68	278.97
		Hazardous Waste	Taiwan and Mainland China	-	-	-	49.06
	Off-site Waste sent to recycle/reuse	Non-Hazardous Waste	Taiwan and Mainland China	12,751.75	11,352.67	7,710.54	21,939.22
		Hazardous Waste	Taiwan and Mainland China	-	-	-	502.74
Total		Non-Hazardous Waste		17,724.72	21,239.24	17,209.17	34,372.11
		Hazardous Waste		-	-	-	557.58

Note 1: The newly disclosed scope in 2024 includes Longshan, Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; Feng Sheng Enter-prise Company, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited.
Note 2: In light of the project timeline, the data on waste treatment for CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

Raw Material Use in 2024 Unit: metric ton

Category	Item	Taiwan	Item	Mainland China	Item	CIMPOR & OYAK CEMENT
		Usage Amount		Usage Amount		Usage Amount
Recycled Materials	Alternative Clay	494,130	Desulfurization Gypsum	1,116,458	Steel Slag	355,138
	Coal Ash	269,099	Coal Slag	759,878	Other Combustibles	155,319
	Gypsum	217,485	Coal Gangue	715,858	Waste Concrete and Concrete Sludge	88,178
	Construction Waste Soil	163,993	Fly Ash	571,783	Construction Waste	58,612
	Iron Slag	143,250	Steel Slag	457,816	Reduction Slag	41,287
	Bottom Ash	77,176	Construction Waste Soil	279,141	Fly Ash	29,892
	Reduction Slag	29,674	Copper Slag	265,050	Iron Ore Waste	28,327
	Calcium Fluoride Sludge	14,379	Furnace Slag	231,205	Flotation Waste	22,984
	Others	48,847	Iron Tailings	221,931	Bottom Ash and Boiler Dust	22,369
			Others	2,315,283	Others	73,278
	Subtotal	1,458,033	Subtotal	6,934,403	Subtotal	875,384
Non-Renewable Materials	Limestone	5,494,419	Limestone	36,188,402	Limestone/Chalk	9,304,957
	Low-Alkali Sand	202,506	Siltstone	824,743	Limestone	4,473,816
	Silica Sand	35,915	High-Silica Sand	759,773	Clay/Shale/Slate/Kaolin	3,600,773
			Clay	681,515	Cement Composite Materials	1,203,407
			Sandy Shale	308,606	Marlstone	1,169,925
			Waste Rock	282,672	Natural Gypsum	396,067
			Shale	266,513	Volcanic Ash	344,404
			Sulfuric Acid Residue	225,251	Clinker	177,075
			Overburden	206,349	Silica Sand	138,814
			Others	610,867	Others	535,148
	Subtotal	5,732,840	Subtotal	40,354,691	Subtotal	21,344,386
Total Amount of Recycled Materials Used (A)						9,267,820
Total Amount of Non-recycled Materials Used						67,431,917
Total Amount of Materials Used (B)						76,699,737
Proportion of Recycled Materials Used (A/B; %)						12.08%

Note 1:The calculation of raw material use in Taiwan covers only cement plants.

2024 Consumption of Alternative Raw Materials and Fuels Unit: metric ton

Taiwan

Resource Reused	Alternative Type	Usage Amount
Fly Ash	Alternative Raw Materials	227,432
Construction Waste Soil	Alternative Raw Materials	163,993
Desulfurization Gypsum	Alternative Supplementary Materials	217,485
Wood Chips	Alternative Fuel	84,737
Bottom Ash	Alternative Raw Materials	77,176
Mineral Sludge	Alternative Raw Materials	58,307
Waste Co-Processing	Alternative Fuel	41,421
Coal Ash	Alternative Raw Materials	41,667
Calcium Fluoride Sludge	Alternative Raw Materials	14,379
Reduction Slag	Alternative Raw Materials	29,674
Air-Cooled Slag	Alternative Raw Materials	12,670
SRF	Alternative Fuel	8,187
Furnace Slag Powder	Alternative Raw Materials	8,353

Mainland China

Resource Reused	Alternative Type	Usage Amount
Desulfurization Gypsum	Alternative Supplementary Materials	690,269
Waste Textiles	Alternative Fuel	566,734
Coal Gangue	Alternative Raw Materials	549,721
Steel Slag	Alternative clinker	508,096
Fly Ash	Alternative Supplementary Materials	477,710
Furnace Slag	Alternative Raw Materials	380,781
Fly Ash	Alternative Raw Materials	368,909
Coal Slag	Alternative Supplementary Materials	304,509
Coal Slag	Alternative Raw Materials	291,609
Construction Waste Soil	Alternative Raw Materials	279,141
Steel Slag	Alternative Raw Materials	219,483
Desulfurization Gypsum	Alternative clinker	196,409
Coal Slag	Alternative clinker	195,268
White Mud	Alternative Raw Materials	172,163
Silica Slag	Alternative clinker	154,025
Copper Slag	Alternative Raw Materials	150,539
Iron Tailings	Alternative Supplementary Materials	134,523
Desulfurization Gypsum	Alternative Raw Materials	134,014
Iron Ore Beneficiation Sludge	Alternative Raw Materials	125,803

CIMPOR & OYAK CEMENT

Resource Reused	Alternative Type	Usage Amount
Refuse Derived Fuel/Solid Recovered Fuel (RDF)	Alternative Fuel	456,191
Cement	Alternative Raw Materials	226,935
Other Waste (Biomass)	Alternative Fuel	127,314
Tires	Alternative Fuel	76,037
Earthwork	Alternative Raw Materials	33,396
Fly Ash	Alternative Supplementary Materials	24,741
Olive Pomace and Other Plant Biomass	Alternative Fuel	22,725
Waste Tire Shreds	Alternative Fuel	21,649
Steel Slag	Alternative Raw Materials	20,871
Lime Sludge	Alternative Raw Materials	11,004
Wood Chips	Alternative Fuel	7,660
Concrete	Alternative Raw Materials	6,274
Boiler Ash	Alternative Raw Materials	6,020
Olive Pomace and Chunks	Alternative Fuel	5,707
Water Treatment Plant Sludge	Alternative Raw Materials	5,302
Liquid Waste	Alternative Fuel	5,095

2024 Consumption of Alternative Raw Materials and Fuels Unit: metric ton

Taiwan			Mainland China			CIMPOR & OYAK CEMENT		
Resource Reused	Alternative Type	Usage Amount	Resource Reused	Alternative Type	Usage Amount	Resource Reused	Alternative Type	Usage Amount
Incinerated Recycled Aggregate	Alternative Raw Materials	5,672	Iron Tailings	Alternative Raw Materials	102,067	Construction and Demolition Waste (CDW)	Alternative Raw Materials	4,603
Mineral Fines	Alternative Raw Materials	4,474	Others	Alternative Fuel/Alternative Raw Material/Alternative Clinker/Alternative Auxiliary Material	1,474,010	Hazardous Waste (Liquid)	Alternative Fuel	3,165
Waste Refractory Materials	Alternative Raw Materials	3,910				Cementitious Materials	Alternative Raw Materials	2,838
Desulfurization Inorganic Sludge	Alternative Raw Materials	3,745				Coal Ash	Alternative Fuel	2,271
Waste Ceramics	Alternative Raw Materials	2,559				Others	Alternative Fuel/ Alternative Raw Material	13,349
Others	Alternative Fuel/Alternative Raw Material	10,808						
Subtotal		1,016,649	Subtotal		7,475,785	Subtotal		1,083,148
Total								9,575,582

TCC Key Indicators — Social

2024 Employee Diversity Composition

Employee Headcount Statistics

Items/By Category	Female					Male					Total
Employment	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	
Permanent Employee	276	1,282	1,558	390	1,948	1,046	4,821	5,867	3,934	9,801	11,749
Temporary Employee	5	-	5	37	42	12	-	12	205	217	259
Non-guaranteed Hours Employees	-	-	-	-	-	-	-	-	-	-	-
Contract Type											
Full-Time Employees	276	1,282	1,558	425	1,983	1,046	4,821	5,867	4,136	10,003	11,986
Part-Time Employees	5	-	5	2	7	12	-	12	3	15	22
Total	281	1,282	1,563	427	1,990	1,058	4,821	5,879	4,139	10,018	12,008

Full-time Employee Headcount Statistics

Items/By Category	Female					Male					Total
Age	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	
Under 30	38	84	122	101	223	104	288	392	692	1,084	1,307
30-50	204	1,180	1,384	248	1,632	647	3,496	4,143	2,698	6,841	8,473
Over 50	34	18	52	77	129	295	1,037	1,332	746	2,078	2,207
Education Level											
Doctoral Degree	-	-	-	1	1	5	-	5	3	8	9
Master's Degree	58	9	67	84	151	107	16	123	204	327	478
Bachelor's Degree	190	159	349	222	571	547	383	930	628	1,558	2,129
Associate Degree	26	275	301	-	301	304	804	1,108	-	1,108	1,409
Senior Secondary Education or Below	2	839	841	118	959	83	3,618	3,701	3,297	6,998	7,957
Job Category											
Senior-Level Supervisor	5	3	8	7	15	13	99	112	34	146	161
Mid-Level Supervisor	34	38	72	35	107	96	264	360	151	511	618
Entry-Level Supervisor	32	94	126	44	170	70	685	755	269	1,024	1,194
Professionals	93	270	363	284	647	158	804	962	712	1,674	2,321
Direct Employees	112	877	989	55	1,044	709	2,969	3,678	2,969	6,647	7,691

Number of Workers Who Are Not Employees

Items/By Category	Female					Male					Total
Number of Workers	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	Taiwan	Mainland China	Subtotal	CIMPOR & OYAK CEMENT	Total	
Who Are Not Employees	103	218	321	71	392	260	209	469	1,366	1,835	2,227

Note 1: In Taiwan, senior management is defined as department directors and associate general managers or above; middle management refers to managers and deputy managers; first-line supervisors are section chiefs; professionals include engineers, specialists, researchers, and management trainees; direct personnel refer to all other positions, such as batching plant operators, machinery operators, and clerks.
Note 2: In Mainland China, senior management is defined as deputy general manager level or above; middle management refers to mid-level managers; first-line supervisors correspond to job grades 1-3; professionals are at job grades 4-5; and direct personnel are those at job grades 6-10.
Note 3: Non-employee workers include personnel dispatched from external companies, such as cleaning staff, security guards, chefs/kitchen workers, pump operators, and landscaping personnel.
Note 4: Part-time employees include rehired senior workers.
Note 5: As of 2024, the number of employees with disabilities across cross-strait cement operations (including Wanching, Hesheng, Mining Company, Envi-ronmental Technology Company, and Hong Kong Cement) includes 3 female and 35 male employees.
Note 6: The above information is based on the number of employees as of December 31, 2024. Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR and OYAK CEMENT.

Employee Nationality Diversity Composition in 2024 Unit: Persons

Items/By Category	Full-time Employee				Number of Employees in Management Positions			
Ethnicity	Taiwan	Mainland China	Total	Percentage in the Total Workforce	Taiwan	Mainland China	Total	Percentage in the Total Workforce
Asian (Han Chinese + All Ethnic Minorities)	1,250	5,252	6,502	87.6%	243	1,018	1,261	88.3%
Indigenous Peoples	72	851	923	12.4%	2	165	167	11.7%
Total	1,322	6,103	7,425	100%	245	1,183	1,428	100%

Items/By Category	Full-time Employee				Number of Employees in Management Positions			
Nationali-ty/Region	Taiwan & Mainland China	CIMPOR & OYAK CEMENT	Total	Percentage in the Total Workforce	Taiwan & Mainland China	CIMPOR & OYAK CEMENT	Total	Percentage in the Total Workforce
Taiwan	1,355	-	1,355	11.5%	276	-	336	16.5%
Mainland China	6,050	1	6,051	51.4%	1,145	1	1,146	56.3%
Türkiye	-	3,100	3,100	26.3%	-	321	321	15.8%
Portugal	-	895	895	7.6%	-	-	-	8.0%
Others	20	358	378	3.2%	2,933	163	3,069	3.4%
Total	7,425	4,354	11,779	100%	4,354	1,488	4,839	100%

Note 1: Other countries include Indonesia, Canada, the Philippines, Vietnam, Kenya, Benin, Burkina Faso, the Central African Republic, Cameroon, Ghana, Guinea, Togo, Côte d'Ivoire, Mali, the Democratic Republic of the Congo, the United States, Angola, Argentina, Brazil, the United Kingdom, Cape Verde, Guinea-Bissau, Moldova, Mozambique, Romania, Spain, Ukraine, and Venezuela.
Note 2: Indigenous peoples and ethnic minorities include the Sakizaya, Truku, Amis, Atayal, Puyuma, Saisiyat, Seediq, Rukai, Bunun, Paiwan, Li, Yi, Gelao, Chuanqing, Hui, Bai, Tujia, Mongol, Shui, Ge, Yao, Mulao, She, Bouyei, Zhuang, Miao, Dong, and Manchu, among others.
Note 3: The above information is based on the number of employees as of December 31, 2024. Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR and OYAK CEMENT.

New Hires and Departures in 2024

		Taiwan		Mainland China		Subtotal		CIMPOR & OYAK CEMENT		Total	
New Hires		Headcount	Percentage	Headcount	Percentage	Headcount	Percentage	Headcount	Percentage	Headcount	Percentage
Gender	Female	78	5.90%	8	0.13%	86	1.16%	115	2.52%	201	1.68%
	Male	114	8.62%	18	0.29%	132	1.78%	816	17.89%	948	7.91%
Age	Under 30	64	4.84%	9	0.15%	73	0.98%	377	8.27%	450	3.75%
	30-50	125	9.46%	17	0.28%	142	1.91%	492	10.79%	634	5.29%
	Over 50	3	0.23%	0	0.00%	3	0.04%	62	1.36%	65	0.54%
Total		192	14.52%	26	0.43%	218	2.94%	931	20.41%	1,149	9.59%
Departed Employees											
Gender	Female	45	3.40%	163	2.67%	208	2.80%	44	0.96%	252	2.10%
	Male	117	8.85%	495	8.11%	612	8.24%	497	10.9%	1,109	9.25%
Age	Under 30	58	4.39%	95	1.56%	153	2.06%	245	5.37%	398	3.32%
	30-50	70	5.30%	466	7.64%	536	7.22%	136	2.98%	672	5.61%
	Over 50	34	2.57%	97	1.59%	131	1.76%	160	3.51%	291	2.43%
Total		162	12.25%	658	10.78%	820	11.04%	541	11.86%	1,361	11.35%
Voluntary Departures											
Gender	Female	31	2.34%	79	1.29%	110	1.48%	44	0.96%	154	1.28%
	Male	83	6.28%	343	5.62%	426	5.74%	497	10.9%	923	7.7%
Age	Under 30	42	3.18%	68	1.11%	110	1.48%	245	5.37%	355	2.96%
	30-50	59	4.46%	301	4.93%	360	4.85%	136	2.98%	496	4.14%
	Over 50	13	0.98%	53	0.87%	66	0.89%	160	3.51%	226	1.89%
Total		114	8.62%	422	6.91%	536	7.22%	541	11.86%	1,077	8.99%

New Employee Hiring Statistics for the Last Four Years

Item	2021	2022	2023	2024
Taiwan & Mainland China	145	114	213	218
CIMPOR & OYAK CEMENT	435	467	888	913
Total	580	581	1,101	1,149

Note 1: Voluntary departures exclude retirees
Note 2: The new hire and turnover rates are calculated based on the total number of employees in cement business units (including mining operations) in each region.
Note 3: Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR and OYAK CEMENT.

Internal Job Vacancy Fulfillment Rate in Taiwan and Mainland China in 4 Years

Item	2021	2022	2023	2024
Taiwan & Mainland China	48%	44%	44%	82%

Scope of Employee Engagement Surveys Conducted in 4 Years

Item	2021	2022	2023	2024
Employee Engagement Survey Scores	96.10%	90%	92.96%	87%
Response Rate	96.71%	97.60%	95%	98%

2024 Training Hours and Investment

Items	Taiwan		Mainland China		Subtotal		CIMPOR & OYAK CEMENT		Total Hours	Average Hours
Age	Female	Male	Female	Male	Female	Male	Female	Male		
Under 30	3,097.10	6,415.10	4,727.23	16,443.57	7,824.33	22,858.67	7,516.00	27,787.15	65,986.15	50.49
30-50	5,001.80	26,991.00	44,551.80	162,117.02	49,553.60	189,108.02	9,631.13	91,273.98	339,566.73	40.08
Over 50	860.30	7,132.50	287.62	48,541.77	1,147.92	55,674.27	749.25	15,485.64	73,057.07	33.10
Job Level										
Senior-Level Supervisor	63.40	244.70	17.18	1,588.20	80.58	1,832.90	324.30	767.28	3,005.06	333.90
Mid-Level Supervisor	941.90	4,705.80	1,977.63	8,322.60	2,919.53	13,028.40	782.58	5,805.71	22,536.22	47.15
Entry-Level Supervisor	799.70	3,860.00	3,428.95	23,887.75	4,228.65	27,747.75	2,448.75	16,365.75	50,790.90	23.86
Professionals	4,248.40	9,058.90	13,316.58	29,943.43	17,564.98	39,002.33	12,730.00	31,644.83	100,942.15	71.64
Direct Employees	2,905.80	22,669.20	30,826.40	163,360.37	33,732.20	186,029.57	1,017.75	82,023.20	302,802.72	38.05
Total Hours	8,959.20	40,538.60	49,566.65	227,102.35	58,525.85	267,640.95	17,896.38	134,546.77	478,609.95	-
Average Hours	31.88	38.32	38.66	47.11	37.44	45.52	41.91	32.51	-	39.93
Average Training and Development Cost per Full-time Employee										NT$ 135,557.71

Note: Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR and OYAK CEMENT.

Return on Human Capital Investment in 4 Years

	2021	2022	2023	2024
Return on Human Capital	12.7	11.7	10.3	8.7

Note 1: Return on Human Capital Investment = (Operating Revenue - (Operating Expenses - Employee Benefits Expenses)) / Employee Benefits Expenses
Note 2: Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants, 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, CIMPOR and OYAK CEMENT.

Parental Leave Usage in Taiwan for the Past Two Years

Items	2023		2024	
	Female	Male	Female	Male
Number of Employees Eligible for Parental Leave in the Year (A)	22	72	6	36
Number of Employees Who Applied for Parental Leave in the Year (B)	4	1	4	2
Expected Number of Employees Returning to Work in the Year (C)	3	3	2	1
Actual Number of Employees Who Returned to Work (D)	1	2	2	1
Number of Employees Still Employed 12 Months After Returning to Work (E)	4	1	0	0
Return-to-Work Rate After Parental Leave (D/C)	33%	67%	100%	100%
One-Year Retention Rate After Returning to Work (E/Previous Year's D)	100%	100%	0%	0%

Note 1: The number of employees eligible for parental leave in the year refers to full-time employees who have worked for six months or more. Note 2: The scope of the above statistics does not yet include Fong Sheng Industrial.

2024 Occupational Injury Statistics

Site	Occupational Accident			Fatality Rate	Rate of High-consequence Work-related Injuries	Rate of Recordable Work-related Injuries (TRIR)	Work-related Injury Rate (LTIR)	Actual Working Hours
	Fatalities	Number of High-consequence Work-related Injuries	Number of Recordable Work-related Injuries					
Work-related Injuries of Employees								
Taiwan	0	0	4	0	0.00	1.18	1.18	3,385,334
Mainland China	0	1	14	0	0.07	1.01	1.01	13,865,459
Subtotal	0	1	18	0	0.06	1.04	1.04	17,250,792
CIMPOR & OYAK CEMENT	0	8	34	0	0.84	3.58	3.58	9,503,042
Total	0	9	52	0	0.34	1.94	1.94	26,753,834
Work-related Injuries of Contractors								
Taiwan	1	0	4	0.52	0.00	2.08	1.56	1,919,376
Mainland China	3	0	5	2.28	0.00	3.80	1.52	1,314,128
Subtotal	4	0	9	1.24	0.00	2.78	1.55	3,233,504
CIMPOR & OYAK CEMENT	0	5	27	0.00	0.76	4.09	4.09	6,601,174
Total	4	5	36	0.41	0.51	3.66	3.25	9,834,678

Note 1: Occupational injury data calculations are primarily based on monthly occupational accident statistics reported by each plant. Note 2: The main types of occupational injuries include entanglement, impact, falling, and cuts. Note 3: Fatality Rate = (Number of Fatalities / Total Actual Working Hours) x 1,000,000. Note 4: Rate of High-consequence Work-related Injuries = (Number of High-consequence Work-related Injuries / Total Actual Working Hours) x 1,000,000. Note 5: Rate of Recordable Work-related Injuries = (Number of Recordable Work-related Injuries / Total Actual Working Hours) x 1,000,000. Note 6: Injury Rate = (Number of Recordable Work-related Injuries - Number of Fatalities / Total Actual Working Hours) x 1,000,000. Note 7: Some actual working hours are estimated by multiplying the number of entries by 8 hours. Note 8: Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, Feng Sheng Enterprise Company, E.G.C. Cement Corp., Ho Sheng Mining Co., Ltd,Wanching Mining Co., Ltd, , TCC Jiuyuan (Guangan) Environmental Technology Co., Ltd.,Hangzhou Operations Center, Guangdong–Guangxi Operations Center, TCC Yingde Mining Industrial Company Limited, TCC Guigang Mining Industrial Company Limited, TCC Jiangsu Mining Industrial Company Limited , Hong Kong Cement, CIMPOR and OYAK CEMENT.

Occupational Injury Statistics in 4 Years

Site	2021			2022			2023			2024		
	Number of Fatalities	Lost Time Injury Frequency Rate (LTIFR)	Total Recordable Injury Frequency Rate (TRIFR)	Number of Fatalities	Lost Time Injury Frequency Rate (LTIFR)	Total Recordable Injury Frequency Rate (TRIFR)	Number of Fatalities	Lost Time Injury Frequency Rate (LTIFR)	Total Recordable Injury Frequency Rate (TRIFR)	Number of Fatalities	Lost Time Injury Frequency Rate (LTIFR)	Total Recordable Injury Frequency Rate (TRIFR)
Employees	0	0.32	0.32	0	1.59	1.59	0	1.70	1.70	0	1.94	1.94
Contractors	0	0	0	1	2.20	2.20	1	1.70	1.70	4	3.25	3.66

Note 1: Newly added in 2024: Huaihua, and Liaoning cement plants; Fuzhou and Liuzhou grinding plants; 123 Environmental Protection Technology Co., Ltd., Beijing TCC Environmental Technology Co., Ltd., TCC (Guangdong) Renewable Resources Technology Company Limited, Feng Sheng Enterprise Company, E.G.C. Cement Corp., Ho Sheng Mining Co., Ltd,Wanching Mining Co., Ltd, , TCC Jiuyuan (Guangan) Environmental Technology Co., Ltd.,Hangzhou Operations Center, Guangdong–Guangxi Operations Center, TCC Yingde Mining Industrial Company Limited, TCC Guigang Mining Industrial Company Limited, TCC Jiangsu Mining Industrial Company Limited , Hong Kong Cement, CIMPOR and OYAK CEMENT.

Total Injury Rate in Taiwan Over the Past Three Years

Site	2022			2023			2024		
	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)
Taiwan									
Employees	1.65	81	0.36	0.81	25	0.14	0.17	47.7	0.09
Contractors	1.72	14	0.15	1.7	6,810	3.4	0.61	1,855	1.07
Ho Sheng Mining Co., Ltd,									
Employees	0	0	0	0	0	0	0	0	0
Contractors	0	0	0	0	0	0	0	0	0

Note 1: Newly added in 2024: Feng Sheng Enterprise Company, E.G.C. Cement Corp. and Ho Sheng Mining Co., Ltd

6.1.3 TCC Key Indicators — Energy for Social Transformation

TCC Key Indicators — Environmental

GHG Emissions in 4 Years Unit: tCO_2e

Site	Items	2021	2022	2023	2024
Ho-Ping Power Company	Scope 1	7,530,599	7,380,815	7,995,242	6,936,330
	Scope 2	333	750	1	2,787
	Total Scope 1 and Scope 2 Emissions	7,530,932	7,381,565	7,995,243	6,939,117

Energy Use in 4 Years

Site			2021	2022	2023	2024
Ho-Ping Power Company	Energy Usage | Raw Consumption	Coal (thousand metric ton)	3,210	3,162	3,402	2,990
		Diesel (KL)	3,896	7,599	3,697	8,633
		Gasoline (KL)	17	15	8	7
		Purchased Electricity (GWh)	1	2	0	6
		Renewable Energy (kWh)	-	322,501	660,338	808,122
	Energy Usage | In terms of Gigajoule (GJ)	Coal	74,838,190	73,735,718	79,333,950	69,716,746
		Diesel	136,996	267,204	130,002	303,557
		Gasoline	546	486	246	224
		Purchased Electricity	2,356	5,451	10	20,312
		Renewable Energy	-	1,161	2,377	2,909
		Total	74,978,088	74,010,020	79,466,585	70,043,748

Air Pollutant Emissions in 4 Years Unit: metric ton

Site	Items	2021	2022	2023	2024
Ho-Ping Power Company	NOx	2,267.25	2,129.32	2,193.51	1,857.43
	SOx	2,945.41	1,993.20	1,945.75	1,866.56
	Particulate Matter	278.21	249.52	183.27	132.21
	VOC/THC	0.31	0.32	0.31	0.33
	PCDD/F	0.0944	0.0687	0.0591	0.0419
	Mercury Emissions (Hg) (Unit: gI-TEQ)	0.0436	0.0485	0.0291	0.0127

Water Resource Use in 4 Years Unit: million liters

Site	Ho-Ping Power Company			
Items	2021	2022	2023	2024
Water Withdrawal				
Third-Party Water_Municipal Water	29	25	21	29
Third-Party Water_Industrial Water	1,514	1,533	1,676	1,482
Surface Water_Rivers	-	-	-	-
Surface Water_Mines	-	-	-	-
Surface Water_Lakes	-	-	-	-
Surface Water_Rainwater/Spring Water	-	-	-	53
Groundwater	-	-	-	-
Seawater	1,209,710	1,231,339	1,274,384	1,219,195
Discharged Reclaimed Water	247	230	194	139
Total	1,211,500	1,233,127	1,276,275	1,220,898
Water discharge				
Surface Water	244	217	184	184
Groundwater	-	-	-	-
Seawater	1,209,710	1,231,339	1,274,384	1,219,195
Third-Party Water	-	-	-	-
Total	1,209,954	1,231,556	1,274,568	1,219,379
Water Consumption				
Water Consumption	1,546	1,571	1,707	1,519
Recycled water				
Process Recycled Water	147,510	167,255	141,238	77,465
Other Recycled Water	99,507	62,921	52,557	61,197

Note 1: Ho-Ping Power Company is not located in a water-stressed area.

Waste Treatment in 4 Years Unit: metric ton

Total Waste	2021	2022	2023	2024
Non-Hazardous Waste	1,385.45	4,260.46	799.88	2,262.02
Hazardous Waste	-	-	-	-
Total	1,385.45	4,260.46	799.88	2,262.02

Total Waste		2021	2022	2023	2024
In-House Waste Reuse Amount		-	-	-	-
Outsourced Waste Disposal Amount	Landfilling	286.60	311.82	40.32	-
	Off-site Incineration (with energy recovery)	-	-	34.58	116.19
	Off-site Incineration (without energy recovery)	-	-	-	-
	Off-site Recycling and Reuse	1,098.85	3,948.64	724.98	2,145.83
Total		1,385.45	4,260.46	799.88	2,262.02

TCC Key Indicators — Social

2024 Employee Diversity Composition

Items/By Category		Female	Male	Total
Employment Relationship	Permanent Employee	30	264	294
	Temporary Employee	0	0	0
	Non-guaranteed Hours Employees	0	0	0
Contract Type	Full-Time Employees	30	264	294
	Part-Time Employees	0	0	0
Total		30	264	294

2024 Employee Diversity Composition

Statistics of Full-time Employees Items / Breakdown by Type		Female	Male	Total
Age	Under 30	8	24	32
	30-50	14	166	180
	Over 50	8	74	82
Education Level	Doctoral Degree	-	-	-
	Master's Degree	4	15	19
	Bachelor's Degree	16	56	72
	Associate Degree	7	106	113
Job Category	Senior Secondary Education or Below	3	87	90
	Senior-Level Supervisor	-	6	6
	Mid-Level Supervisor	-	17	17
	Entry-Level Supervisor	5	25	30
	Professionals	9	86	95
	Direct Employees	16	130	146

Non-Employee Workers Items / Breakdown by Type	Female	Male	Total
Total Number of Non-Employee Workers	33	18	51

Note 1: Management definitions: Senior managers are Directors and Assistant Vice Presidents (and above), middle managers are Managers and Deputy Managers, entry-level managers are Supervisors, professionals are Engineers, Administrators, Researchers and Management Trainees, direct employees are other positions such as Mixer Operators, Machine Operators, Clerks.
Note 2: Non-employee workers such as personnel stationed by external companies: Cleaning Staff, Security Personnel, Chefs/Kitchen Workers, Pump Operators, Landscaping Staff, Packaging and Shipping Personnel, Long Belt Corridor Workers, Mining Explosives Storage Workers, Central Control Room Personnel, Fire Safety Inspectors/Elevator Maintenance Personnel
Note 3: The definition of part-time employee includes re-hired senior personnel
Note 4: The above information is based on employee headcount statistics as of December 31, 2024

Employee Nationality Diversity Composition in 2024 Unit: Persons

Ho-Ping Power Company		Full-Time Employees		Management Staff	
Items/By Category		Headcount	Percentage of Total Workforce	Headcount	Percentage of Total Workforce
Ethnicity	Asian (Han Chinese + All Ethnic Minorities)	225	76.5%	49	92.5%
	African American	-	0.0%	-	0.0%
	Hispanic or Latino	-	0.0%	-	0.0%
	White	-	0.0%	-	0.0%
	Indigenous Peoples	69	23.5%	4	7.5%
Nationality/Region	Taiwan	294	100.0%	53	100.0%
	Mainland China	-	0.0%	-	0.0%
	Türkiye	-	0.0%	-	0.0%
	Portugal	-	0.0%	-	0.0%
	Others	-	0.0%	-	0.0%
Total		294	100.0%	53	100.0%

Note 1: Definition of Indigenous Peoples and Ethnic Minorities: Includes the Truku, Atayal, Seediq, Bunun, Sakizaya, and Amis peoples.
Note 2: The above information is based on employee headcount statistics as of December 31, 2024

New Hires and Departures in 2024

		Ho-Ping Power Company	
New Hires		Headcount	Percentage
Gender	Female	9	3.06%
	Male	12	4.08%
Age	Under 30	6	2.04%
	30-50	13	4.42%
	Over 50	2	0.68%
Total		21	7.14%
Departed Employees			
Gender	Female	9	3.06%
	Male	80	27.21%
Age	Under 30	18	6.12%
	30-50	52	17.69%
	Over 50	19	6.46%
Total		89	30.27%
Voluntary Departures			
Gender	Female	3	1.02%
	Male	8	2.72%
Age	Under 30	5	1.70%
	30-50	5	1.70%
	Over 50	1	0.34%
Total		11	3.74%

Note 1: Voluntary departures exclude retirees.
Note 2: New hire and departure rates are calculated based on total employees headcount of Ho-Ping Power Company.

2024 Training Hours and Investment

Items		Training Hours		Total Hours	Average Hours
		Ho-Ping Power Company			
		Female	Male		
Age	Under 30	521.4	1,183.3	1,704.7	53.3
	30-50	455.4	5,761.2	6,216.6	34.5
	Over 50	309.3	2,620.0	2,929.3	35.7
Job Level	Senior-Level Supervisor	-	156.7	156.7	26.1
	Mid-Level Supervisor	137.8	1,661.8	1,799.6	105.9
	Entry-Level Supervisor	39.4	138.2	177.6	5.9
	Professionals	299.9	3,702.1	4,002.0	42.1
	Direct Employees	809.0	3,905.7	4,714.7	32.3
Total Hours		1,286.1	9,564.5	10,850.6	-
Average Hours		42.9	36.2	-	36.9
Average Training and Development Cost per Full-time Employee					NT$ 4,875

Parental Leave Usage in 2024

Ho-Ping Power Company	2024	
Items	Female	Male
Number of Employees Eligible for Parental Leave in the Year (A)	30	264
Number of Employees Who Applied for Parental Leave in the Year (B)	0	2
Expected Number of Employees Returning to Work in the Year (C)	0	2
Actual Number of Employees Who Returned to Work (D)	0	2
Number of Employees Still Employed 12 Months After Returning to Work (E)	0	0
Return-to-Work Rate After Parental Leave (D/C)	0%	100%
One-Year Retention Rate After Returning to Work (E/Previous Year's D)	0%	0%

Note 1: Number of employees eligible for parental leave in the year refers to full-time employees who have worked for six months or more

2024 Occupational Injury Statistics

Work-Related Injuries								
Site	Occupational Accident			Fatality Rate	Rate of High-consequence Work-related Injuries	Rate of Recordable Work-related Injuries (TRIR)	Work-related Injury Rate (LTIR)	Actual Working Hours
	Fatalities	Number of High-consequence Work-related Injuries	Number of Recordable Work-related Injuries					
Employee	0	0	0	0	0	0	0	597,636
Contractors	0	0	0	0	0	0	0	524,404

Total Injury Frequency Index (FSI) in Taiwan Over the Past Three Years

Site	2022			2023			2024		
	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)	Frequency Rate (FR) per Million Working Hours	Severity Rate (SR) per Million Working Hours	Full Spectrum Injury Rate (FSI)
Employees	1.81	54	0.31	1.75	52	0.3	0	0	0
Contractors	0	0	0	0	0	0	0	0	0

Note 1: Occupational injury data calculations are primarily based on monthly occupational accident statistics reported by each plant
Note 2: The main types of occupational injuries include entanglement, impact, falling, and cuts
Note 3: Fatality Rate = (Number of Fatalities / Total Actual Working Hours) x 1,000,000
Note 4: Rate of High-consequence Work-related Injuries = (Number of High-consequence Work-related Injuries / Total Actual Working Hours) x 1,000,000
Note 5: Rate of Recordable Work-related Injuries = (Number of Recordable Work-related Injuries / Total Actual Working Hours) x 1,000,000
Note 6: Injury Rate = (Number of Recordable Work-related Injuries - Number of Fatalities / Total Actual Working Hours) x 1,000,000
Note 7: Some actual working hours are estimated based on the number of plant entries x 8 hours

6.2

Sustainability Disclosure for the Listed Cement Companies

Cement Industry Sustainability Disclosure Indicators

Cement Industry Sustainability Disclosure Indicators

The calculation scope of indicators 2 to 4 includes Construction Materials operations in Taiwan, Mainland China, CIMPOR and OYAK CEMENT.

For detailed energy consumption information, please refer to 6.1.2 TCC Key Indicators | Construction Materials

	Indicator	Indicator Type	2024 Disclosure Status	Unit	Notes
1	Total energy consumption, percentage of purchased electricity, and utilization rate[1]	Quantitative	The energy consumption by operational sites in Taiwan and Mainland China: 92,088,519GJ Percentage of purchased electricity: 9.37% Renewable energy usage rate: 0.27%	Gigajoule (GJ) Percentage (%)	1.The percentage of purchased electricity represents the ratio of purchased electricity consumption to total energy consumption. 2.The renewable energy usage rate represents the ratio of renewable energy consumption to total energy consumption.
2	Total water withdrawal and total water consumption	Quantitative	Total water withdrawal: 45,118 thousand cubic meters Total water consumption: 19,096 thousand cubic meters	thousand cubic meters (1,000m³)	
3	Weight of waste generated, percentage of hazardous waste, and percentage of recycling[1]	Quantitative	The weight of waste generated by operational sites in Taiwan and Mainland China: 34,930 metric tons Percentage of hazardous waste: 1.6% Percentage of waste recycling: 98.4% Note1: In light of the project timeline, the data on waste treatment for CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official	Tonnnes(t) percentage(%)	1.The percentage of hazardous waste represents the percentage of hazardous waste weight over total waste weight. 2.The percentage of waste recycling represents the percentage of total weight of waste recycled both on-site and off-site (excluding waste incinerated for power generation) over total waste weight.
4	Number of employees in and rate of occupational accidents	Quantitative	For TCC employee and contractor occupational injury numbers and rates, please refer to 6.1.2 TCC Key Indicators | Social - 2024 Occupational Injury Statistics	Quantity rate(%)	
5	Production by product category	Quantitative		Metric tons	

Product Category	Taiwan	Mainland China	OYAK CEMENT+CIMPOR	Total
Clinker	4,224,284	25,613,238	12,818,111	42,655,633
Cement	4,323,185	26,866,352	16,419,579	47,609,117
Cementitious materials	4,598,399	31,818,605	16,988,667	53,405,671
280 specification concrete	6,262,643	-	-	6,262,643
350 specification concrete	2,062,133	-	-	2,062,133
420 specification concrete	1,167,822	-	-	1,167,822
Concrete subtotal	9,492,597	-	18,201,033	27,693,631

Climate-related Information for TWSE/TPEx Listed Companies - Climate Change Risks and Opportunities for the Company and Related Response Measures Taken

	Items	Corresponding Sections	Page Number
1	Describe the board of directors' and management's oversight and governance of climate-related risks and opportunities.	Please refer to the 2024 Annual Report	97
2	Describe how the identified climate risks and opportunities affect the business, strategy, and finances of the business (short, medium, and long term).	Please refer to the 2024 Annual Report	97-98
3	Describe the financial impact of extreme weather events and transformative actions.	Please refer to the 2024 Annual Report	98
4	Describe how climate risk identification, assessment, and management processes are integrated into the overall risk management system.	Please refer to the 2024 Annual Report	98
5	If scenario analysis is used to assess resilience to climate change risks, the scenarios, parameters, assumptions, analysis factors and major financial impacts used should be described.	Please refer to the 2024 Annual Report	99
6	If there is a transition plan for managing climate-related risks, describe the content of the plan, and the indicators and targets used to identify and manage physical risks and transition risks.	Please refer to the 2024 Annual Report	99-100
7	If internal carbon pricing is used as a planning tool, the basis for setting the price should be stated.	Please refer to the 2024 Annual Report	100
8	If climate-related targets have been set, the activities covered, the scope of greenhouse gas emissions, the planning horizon, and the progress achieved each year should be specified. If carbon credits or renewable energy certificates (RECs) are used to achieve relevant targets, the source and quantity of carbon credits or RECs to be offset should be specified.	Please refer to the 2024 Annual Report	100
9	GHG inventory and assurance status, reduction targets, strategies, and specific action plans	Please refer to the table below	

Greenhouse Gas Inventory Information

Company Basic Information:

•Companies with capital of NT$10 billion or more, steel industry, and cement industry.

•In accordance with the Sustainable Development Guidemap for TWSE/TPEx Listed Companies, the minimum disclosure requirements are: Parent company entities shall begin inventory from 2023, and subsidiaries included in consolidated financial statements shall begin inventory from 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). Since 2016, we have conducted regular inventories of our parent company entities, and since 2005, we have gradually extended greenhouse gas emission inventories for subsidiaries included in consolidated financial statements. This enables comprehensive monitoring of greenhouse gas usage and emissions, and verification of the effectiveness of reduction actions. In addition, the greenhouse gas inventory data for the past two years has been compiled using the operational control approach, including greenhouse gas emissions from the company and all subsidiaries in the consolidated financial statements, as described below:

Items	2023		2024	
Parent Company	Emissions (metric tons CO_2e)	Intensity (metric tons CO_2e/million NTD revenue)	Emissions (metric tons CO_2e)	Intensity (metric tons CO_2e/million NTD revenue)
Scope 1	3,459,664	133.0	3,303,179	126.7
Direct greenhouse gas emissions				
Scope 2	195,661	7.5	206,001	7.9
Indirect greenhouse gas emissions				
Subsidiaries in Consolidated Financial Statements				
Scope 1	-	-	36,500,100	279.0
Direct greenhouse gas emissions				
Scope 2	-	-	1,256,511	9.6
Indirect greenhouse gas emissions				
Total	3,655,324	140.5	41,265,791	266.9

Note 1: The parent company's direct emissions (Scope 1) and energy indirect emissions (Scope 2) data coverage includes: The Company's cement and concrete operations in Taiwan, including cement manufacturing at Hoping Plant and Suao Plant of Hoping Branch; ready-mixed concrete manufacturing at Taipei, Taichung, and Kaohsiung RMC Plants and their 22 subordinate locations, Kaohsiung and Taichung Port shipping stations; as well as offices including the Group Operations Headquarters and Low-carbon R&D Center.

Note 2: The energy intensity for the parent company in 2024 and 2023 was calculated using TCC's standalone net revenue of NTD 26,077,189 thousand and NTD 26,021,513 thousand, respectively. The energy intensity for subsidiaries in consolidated financial statements in 2024 was calculated using net revenue of NTD 154,606,511 thousand.

Note 3: The Company's direct emissions (Scope 1) and energy indirect emissions (Scope 2) data for 2024 and 2023 have been verified by third-party organizations, including British Standards Institution (BSI) Taiwan Branch and SGS Taiwan Ltd. The relevant certificates can be viewed on the Sustainability Certification page of the Company's official website.

Note 4: The operating revenue of subsidiaries OYAK CEMENT and CIMPOR has been officially included in the Company's consolidated financial statements since March 2024. The greenhouse gas emissions of OYAK CEMENT and CIMPOR from March to December 2024 are disclosed in the above table. If GHG Protocol's all-year option is applied to include OYAK CEMENT and CIMPOR's full-year greenhouse gas emissions for 2024, the direct and indirect greenhouse gas emissions of subsidiaries in consolidated financial statements for 2024 would amount 38,010,464 and 1,340,890 metric tons CO_2e, respectively. Furthermore, assuming OYAK CEMENT and CIMPOR's operating revenue was included in the Company's consolidated financial statements from the beginning of 2024, the pro forma revenue for 2024 would be NTD 139,305,507 thousand. Based on this, the energy intensity of subsidiaries in consolidated financial statements for 2024 would be calculated as 272.9and 9.6 metric tons CO_2e per million NTD revenue for direct and indirect greenhouse gas emissions, respectively.

Greenhouse Gas Assurance Information

The Company's minimum assurance coverage requirements as specified in the Sustainable Development Guidemap for TWSE/TPEx Listed Companies:

- The parent company's standalone entity should begin assurance implementation starting in 2024.
- Subsidiaries in consolidated financial statements should begin assurance implementation starting in 2027.

The Company's greenhouse gas inventory assurance status for the past two years is described below:

Items		2023 Emissions (metric tons CO_2e)	2024 Emissions (metric tons CO_2e)
Parent Company	Scope 1	3,459,664	3,303,179
	Direct greenhouse gas emissions		
	Scope 2	195,661	206,001
	Indirect greenhouse gas emissions		
	Total	3,655,324	3,509,180
	Percentage of disclosed inventory data	100%	100%
Assurance Agency		British Standards Institution (BSI) Taiwan Branch and SGS Taiwan Ltd.	British Standards Institution (BSI) Taiwan Branch
Assurance Description		Assurance Standard ISO 14064-3:2019	Assurance Standard ISO 14064-3:2019
Assurance Opinion and Conclusion		Unqualified Opinion	Unqualified Opinion

Greenhouse Gas Reduction Targets, Strategies, and Specific Action Plans

Please refer to the Total Climate Commitment section

6.3

Global Reporting Initiative Index

Statement of Use	TCC Group Holdings CO., LTD. has reported in accordance with the GRI Standards for the period from January 1, 2024, to December 31, 2024.
GRI 1 Adopted	GRI 1: Foundation 2021
Applicable GRI Sector Standards	GRI 14: Mining Sector

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
General Disclosures				
GRI 2: General Disclosures 2021				
2-1 Organizational details	About This Report	37		
2-2 Entities included in the organization's sustainability reporting	About This Report	37		
2-3 Reporting period, frequency and contact point	About This Report	37		
2-4 Restatements of information	-		No restatements of information in 2024	
2-5 External assurance	About This Report	37		
	Appendix AA1000 Assurance Statement	267		
	Appendix ISAE3000 Assurance Report	267		
2-6 Activities, value chain and other business relationships	Appendix ISAE3000 Assurance Report	267	In 2024, TCC expanded its operational scope to include overseas subsidiaries OYAK CEMENT and CIMPOR	
	TCC Vision & Drivers | Product and Service	34		
	Value Chain			
	1.7 Sustainable Supply Chain Management	71		
2-7 Employees	6.1 ESG Data	227.237		
	TCC Key Indicators | Social			
2-8 Workers who are not employees	6.1 ESG Data	227.237		
	TCC Key Indicators | Social			
2-9 Governance structure and composition	1.1 Governance Structure	40		
2-10 Nomination and selection of the highest governance body	1.1 Governance Structure	40		

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
2-11 Chair of the highest governance body	1.1 Governance Structure	40		
2-12 Role of the highest governance body in overseeing impact management	1.1 Governance Structure Stakeholder and Material Topic Analysis	40 197		
2-13 Delegation of responsibility for managing impacts	1.1 Governance Structure	40		
2-14 Role of the highest governance body in sustainability reporting	About This Report	37		
2-15 Conflicts of interest	1.1 Governance Structure	40	For important Board resolutions and directors' recusal due to conflicts of interest, please refer to the Board of Directors Section on TCC's official website	
2-16 Communication of critical concerns	1.1 Governance Structure 1.3 Risk Management Framework	40 46	For related communication matters, please refer to the Board of Directors and Sustainability Committee meeting minutes in the Investor Relations - Committees section on TCC's official website	
2-17 Collective knowledge of the highest governance body	1.1 Governance Structure	40		
2-18 Evaluation of the performance of the highest governance body	1.1 Governance Structure	40		
2-19 Remuneration policies	1.1 Governance Structure	40	Please refer to TCC Group Holdings CO., LTD.'s Annual Report for details on the remuneration paid to directors, supervisors, President and Vice Presidents. Currently, TCC does not have a clawback mechanism for remuneration	
2-20 Process to determine remuneration	1.1 Governance Structure	40	Please refer to TCC Group Holdings CO., LTD.'s Remuneration Committee Charter	
2-21 Annual total compensation ratio	-		In 2024, the median ratio of the total annual remuneration of the highest-paid internal manager to the total annual remuneration of general employees was 44:1 (remuneration includes: salary, year-end bonus, and variable bonus) The total remuneration change rate for 2024 was -10% (The above ratios were calculated based on the renumeration of the Chairman of TCC, Mr. Nelson An-ping Chang)	

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
2-22 Statement on sustainable development strategy	Letter to Our Stakeholders	04		
2-23 Policy commitments	TCC Vision & Drivers	08		
2-24 Embedding policy commitments	5.5 Human Rights Protection	180		
2-25 Processes to remediate negative impacts	Stakeholder and Material Topic Analysis	197		
	5.5 Human Rights Protection	180		
2-26 Mechanisms for seeking advice and raising concerns	1.5 Ethical Management	61		
2-27 Compliance with laws and regulations	1.5 Ethical Management	61	All fines paid in the year 2024 were incurred due to violations of regulations that occurred within the current reporting period. There were no fines paid for violations that occurred in previous reporting periods.	
2-28 Membership associations	-		Please refer to the ESG section on the TCC website for details on TCC's membership in associations.	
2-29 Approach to stakeholder engagement	Stakeholder and Material Topic Analysis	197		
2-30 Collective bargaining agreements	5.5 Human Rights Protection	180		
			Taiwan & Mainland China 91% CIMPOR &OYAK CEMENT 51% Total 76% Note: The scope of Taiwan & Mainland China includes cement plants (not yet included Longshan), RMC plants, grinding plant, Ho Sheng Mining Co., Ltd., and Ho-Ping Power Company. The scope of CIMPOR & OYAK CEMENT not yet include included the cement plant in Cameroon.	
Material Topics				14.1.1
GRI 3: Material Topics 2021				14.2.1
3-1 Process to determine material topics	Stakeholder and Material Topic Analysis	197		
3-2 List of material topics	Stakeholder and Material Topic Analysis	197		14.2.2
Material Topic | Climate Action and Net-Zero Emissions				
GRI 3: Material Topics 2021				
3-3 Management of material topics	Stakeholder and Material Topic Analysis	197		
GRI 201: Economic Performance 2016				
201-2 Financial implications and other risks and opportunities due to climate change	1.4 TCFD	51		

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
GRI 302: Energy 2016				
302-1 Energy consumption within the organization[1]	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	In 2024, the energy consumption by operational sites in Taiwan and Mainland China was 92,088,519 GJ, comprising 90,306,520 GJ of non-renewable energy and 1,781,999 GJ of renewable energy. Renewable energy fuel types include coal, diesel, gasoline, natural gas, purchased electricity, waste heat power generation, and non-renewable alternative fuels, of which non-renewable alternative fuels totaled 13,325,135 GJ. Renewable energy sources include renewable biofuels and self-generated solar power for internal use. Renewable biofuels equivalent to approximately 1,531,469GJ. Self-generated solar power for internal use is converted at a rate of 3.6 GJ per thousand kWh, equivalent to approximately 250,530GJ.	14.1.2
302-3 Energy intensity	Sustainability Goals and Tracking	35		14.1.3
302-4 Reduction of energy consumption	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	In 2024, the plant's energy-saving projects saved 42,850 thousand kWh of electricity and 52,161 metric tons of coal, and 200 liters of diesel, equivalent to 1,357,933 GJ. Please refer to 6.1.2 TCC Key Indicators | Construction Materials - 2024 Energy Conservation Programs.	14.1.4
GRI 305: Emissions 2016				
305-1 Direct (Scope 1) GHG emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental 6.2 Sustainability Disclosure for the Listed Cement Companies	209,234 242	Greenhouse gases include CO_2, CH_4, N_2O, and HFCs, with no emissions of PFCs, SF_6, or NF_3.	14.1.5
305-2 Energy indirect (Scope 2) GHG emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental 6.2 Sustainability Disclosure for the Listed Cement Companies	209,234 242		14.1.6
305-3 Other indirect (Scope 3) GHG emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental 6.2 Sustainability Disclosure for the Listed Cement Companies	209,234 242		14.1.7
305-4 GHG emissions intensity	6.1 ESG Data Sheet TCC Key Indicators | Environmental 6.2 Sustainability Disclosure for the Listed Cement Companies	209,234 242		14.1.8

Note1: In light of the schedule, information on Energy consumption by CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
Material Topic | Resource Co-processing				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.5.1
GRI 306: Waste 2020				
306-1 Waste generation and significant waste-related impacts	2.2 Low-Carbon Production Management	89		14.5.2
	2.3 Resource Recycling	99		
306-2 Management of significant waste-related impacts	2.2 Low-Carbon Production Management	89		14.5.3
	6.1 ESG Data Sheet	209,234		
	TCC Key Indicators | Environmental			
306-3 Waste generated	6.1 ESG Data Sheet	209,234		14.5.4
	TCC Key Indicators | Environmental			
306-4 Waste diverted from disposal	6.1 ESG Data Sheet	209,234		14.5.5
	TCC Key Indicators | Environmental			
Material Topic | Green Energy and Energy Storage				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		
GRI 302: Energy 2016				
302-1 Energy consumption within the organization[1]	6.1 ESG Data Sheet	209,234	In 2024, the energy consumption by operational sites in Taiwan and	
	TCC Key Indicators | Environmental		Mainland China was 92,088,519 GJ, comprising 90,306,520 GJ of	
			non-renewable energy and 1,781,999 GJ of renewable energy.	
			Renewable energy fuel types include coal, diesel, gasoline, natural gas,	
			purchased electricity, waste heat power generation, and non-renewable	
			alternative fuels, of which non-renewable alternative fuels totaled	
			13,325,135 GJ. Renewable energy sources include renewable biofuels	
			and self-generated solar power for internal use. Renewable biofuels	
			equivalent to approximately 1,531,469GJ. Self-generated solar power for	
			internal use is converted at a rate of 3.6GJ per thousand kWh, equiva-	
			lent to approximately 250,530GJ.	
302-3 Energy intensity	6.1 ESG Data Sheet	209,234		
	TCC Key Indicators | Environmental			

Note1: In light of the schedule, information on Energy consumption by CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
302-4 Reduction of energy consumption	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	In 2024, the plant's energy-saving projects saved 42,850 thousand kWh of electricity and 52,161 metric tons of coal, and 200 liters of diesel, equivalent to 1,357,933 GJ. Please refer to 6.1.2 TCC Key Indicators | Construction Materials - 2024 Energy Conservation Programs.	
Material Topic | Low-Carbon Products and Services				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		
GRI 301: Materials 2016				
301-2 Recycled input materials used	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234		
Material Topic | Legal Compliance				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		
GRI 205: Anti-corruption 2016				
205-3 Confirmed corruption incidents and actions taken	1.5 Ethical Management	61		
GRI 206: Anti-competitive Behavior 2016				
206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1.5 Ethical Management	61	TCC had no incidents of anti-competitive behavior, anti-trust, and monopoly practices in 2024	
Material Topic | Workplace Health and Safety				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.16.1
GRI 403: Occupational Health and Safety 2018				
403-1 Occupational health and safety management system	5.4 Occupational Health and Safety	173		14.16.2
403-2 Hazard identification, risk assessment, and incident investigation	5.4 Occupational Health and Safety	173	In accordance with Article 18 of the Occupational Safety and Health Act, workers who identify potential hazards may leave work conditions they believe could cause injury or illness and must immediately report the situation to their direct supervisor without facing disciplinary action	14.16.3
403-3 Occupational health services	5.4 Occupational Health and Safety	173		14.16.4
403-4 Worker participation, consultation, and communication on occupational health and safety	5.4 Occupational Health and Safety	173		14.16.5
403-5 Worker training on occupational health and safety	5.4 Occupational Health and Safety	173		14.16.6
403-6 Promotion of worker health	5.4 Occupational Health and Safety	173		14.16.7

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5.4 Occupational Health and Safety	173		14.16.8
403-8 Workers covered by occupational health and safety management system	5.4 Occupational Health and Safety	173		14.16.9
403-9 Work-related injuries	6.1 ESG Data Sheet: TCC Key Indicators | Social	227,237		14.16.10
403-10 Work-related ill health	5.4 Occupational Health and Safety 6.1 ESG Data Sheet: TCC Key Indicators | Social	173 227,237	In 2024,there were no reported cases of occupational diseases at TCC's Taiwan plants. However, at Mainland China facilities, two employees were diagnosed with occupational diseases, both involving hearing impairment. Following labor-management agreements, these cases were managed according to occupational injury procedures. Due to equipment limitations, direct equipment noise reduction was not feasible. Subsequently, on-site management procedures were adjusted, requiring workers to wear protective equipment consistently and to minimize time spent in the affected work area, aiming to reduce occupational injuries.	14.16.11
Material Topic | R&D Innovation				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		
Material Topic | Biodiversity				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.4.1
GRI 101 Biodiversity 2024				
101-1 Policies to halt and reverse biodiversity loss	4.1 TCC Nature Action	126		14.4.2
101-2 Management of biodiversity impacts	4.1 TCC Natural Action 4.2 Forest & Soil - TCC Restoration Map 4.3 Marine Rehabilitation 4.4 OECMs (Other Effective area-based Conservation Measures) 4.5 Nature-based Solutions (NbS)	126 136 148 153 154		14.4.3
101-3 Access and benefit-sharing	4.6 Natural Benefit Sharing	156		
101-4 Identification of biodiversity impacts	4.1 TCC Nature Action	126		14.4.4

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
101-5 Locations with biodiversity impacts	4.1 TCC Nature Action	126	▌For detailed information, please refer to TCC's 2023 TNFD Report	14.4.5
101-6 Direct drivers of biodiversity loss	4.1 TCC Nature Action	126	▌In 2023, the TNFD LEAP methodology was applied to analyze cement	14.4.6
101-7 Changes to the state of biodiversity	4.1 TCC Nature Action	126	plants and mines in Taiwan, Ho-Ping Power Company, and Hoping	14.4.7
101-8 Ecosystem services	4.1 TCC Nature Action	126	EcoPort. Future plans include expanding the assessment scope to	14.4.8
			cover other operational sites and suppliers	
Material Topic | Local Inclusion				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.10.1
GRI 413: Local Communities 2016				
413-1 Operations with local community engagement,	5.6 Social Engagement Partners	185	▌The Hoping Plant has completed comprehensive local community	14.10.2
impact assessments, and development programs			communication and impact assessments, accounting for 50% of	
413-2 Operations with significant actual and potential	5.6 Social Engagement Partners	185	cement plant operating sites in Taiwan	14.10.3
negative impacts on local communities			▌In 2024, the Hoping Emergency Relief Fund approved assistance for	
			74 cases for assistance, with a subsidy amount of NTD 750,000	
			▌TCC introduced Social Return On Investment (SROI) and received	
			verification from Social Value International, UK, in December 2021,	
			confirming that for every NTD 1 invested in the overall DAKA project,	
			NTD 3.54 of social value is generated.	
			Related Report Content Please refer to TCC's SROI Report	
Material Topic | Talent Cultivation and Development				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.17.1
GRI 404: Training and Education 2016				
404-1 Average hours of training per year per employee	6.1 ESG Data Sheet	227,237		14.17.7
	TCC Key Indicators | Social			
404-3 Percentage of employees receiving regular	5.3 Employee Remuneration and Benefits	169		
performance and career development reviews				
Material Topic | Pollution Control and Management				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.3.1
GRI 305: Emissions 2016				
305-7 Nitrogen oxides (NOx), sulfur oxides (SOx),	6.1 ESG Data Sheet	209,234		14.3.2
and other significant emissions	TCC Key Indicators | Environmental			

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
Material Topic | Water Resource Management				
GRI 3: Material Topics 2021				
3-3 Management of Material Topics	Stakeholder and Material Topic Analysis	197		14.7.1
GRI 303: Water 2018				
303-1 Interactions with water as a shared resource	2.2 Low-Carbon Production Management	89		14.7.2
303-2 Management of water discharge-related impacts	2.2 Low-Carbon Production Management	89		14.7.3
303-3 Water withdrawal	6.1 ESG Data Sheet	209,234	Water withdrawn at operational sites in Taiwan and Mainland	14.7.4
	TCC Key Indicators | Environmental		China was fresh water.	
303-4 Water discharge	6.1 ESG Data Sheet	209,234		14.7.5
	TCC Key Indicators | Environmental			
303-5 Water consumption	6.1 ESG Data Sheet	209,234		14.7.6
	TCC Key Indicators | Environmental			
Topic-specific Disclosures				
GRI 204: Procurement Practices 2016				
204-1 Proportion of spending on local suppliers	1.7 Supply Chain Management	71		
GRI 401: Employment 2016				
401-1 New employee hires and employee turnover	6.1 ESG Data Sheet	227,237		
	TCC Key Indicators | Social			
401-2 Benefits provided to full-time employees that are not provided to temporary or part-time employees	5.3 Employee Remuneration and Benefits	169	In 2024, TCC also employed part-time staff who are not fully eligible for the benefits provided to full-time employee, such as inclusion in the Employee Welfare Committee	
401-3 Parental leave	6.1 ESG Data Sheet	227,237		
	TCC Key Indicators | Social			
GRI 405: Diversity and Equal Opportunity 2016				
405-1 Diversity of governance bodies and employees	1.1 Governance Structure	41		
	5.2 Employee Development	163		
	6.1 ESG Data Sheet	227,237		
	TCC Key Indicators | Social			

GRI Standards/Disclosures	Corresponding Sections	Page Number	Notes/Omission Justification	Reference number of disclosures in GRI Sector Standards
405-2 Ratio of basic salary and remuneration of women to men			2024 TCC salary ratio: female to male employees (Female : Male)	

Employee Level	Base Salary	Base Salary + Other Cash Incentives
Top management level (executive level)	109:100	132:100
Management level	104:100	109:100
Non-management level	102:100	101:100

Note 1: The top management level is defined as Assistant Vice President and higher; the management level covers positions from Supervisor to Senior Manager; and the non-management level consists of individual contributors, such as staff, administrators, engineers, and researchers.
Note 2: The term "base salary" is defined to include the year-end bonus.
Note 3: The major operating sites of TCC correspond to the scope of operations as outlined in this report.

Note 1: The disclosure topics without corresponding GRI Sector Standards are not of the material topics identified this year, including topics 14.6, 14.8 to 14.15, and 14.18 to 14.25.
Note 2: The Material Topic “Talent Cultivation and Development” corresponds to the disclosure items in “Topic 14.17 Employment practices” of GRI 14; nevertheless, since items 14.17.2 to 14.17.6 and 14.17.9. to 14.17.10 have low relevance to talent cultivation and development, they are not applicable to the Material Topic.
Note 3: Information for disclosure items 14.1.9, 14.5.6, 14.10.4, and 14.16.9 have not been fully collected yet for the company's mining-related subsidiaries, as GRI 14 will be issued in 2024. The information will be disclosed once it is complete.

6.4

Sustainability Accounting Standards Board Index

Topic	Code	Category	Metric	Page		
Greenhouse gas emissions	EM-CM-110a.1	Quantitative	Global Scope 1 Emissions	(ESG Data Sheet)	The proportion of global regulated emissions is approximately	
			Percentage covered under emissions-limiting regulations	-	6.50 %.	
	EM-CM-110a.2	Qualitative	Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	Carbon Competitiveness Science Based Targets (SBT) Reduction Goals		
Air Quality	EM-CM-120a.1	Quantitative	Air emissions of the following pollutants: (1) NOx (excluding N_2O), (2) SOx, (3) particulate matter (PM10), (4) dioxins/furans, (5) volatile organic compounds (VOCs), (6) polycyclic aromatic hydrocarbons (PAHs), and (7) heavy metals	(ESG Data Sheet)	Disclosure scope primarily focused on stationary sources.	
Energy Management	EM-CM-130a.1	Quantitative	Total Energy Consumed[1]	-	In 2024, the energy consumption by operational sites in Taiwan and Mainland China was 92,088,519 GJ.	The energy consumption by operational sites in Taiwan and Mainland China in 2024, including alternative fuel consumption, is 14,856,604 GJ
			Percentage grid electricity	-	9.37%	The proportion of grid electricity refers to the share of purchased electricity in the total energy consumption.

Note1: In light of the project timeline, the data for CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

Topic	Code	Category	Metric	Page		
Energy Management	EM-CM-130a.1	Quantitative	Proportion of Alternative	-	Taiwan: 11.85% Taiwan and Mainland China (weighted average): 16.13%	"The proportion of alternative energy refers to the share of alternative fuels (including wood chips, SRF, waste paper, etc.) in the total energy consumption."
			Percentage renewable	-	Taiwan: 0.14% Taiwan and Mainland China (weighted average): 0.27%	The proportion of renewable energy refers to the share of self-generated and self-used renewable energy in the total energy consumption.
Water Management	EM-CM-140a.1	Quantitative	Total Water Storage Volume	(ESG Data Sheet)	The percentage of water withdrawal from areas with high or extremely high water stress accounts for 9% of the total water withdrawal.	
			Total Water Consumption	(ESG Data Sheet)		
			Percentage in regions with High or Extremely High Baseline Water Stress	-	The percentage of water consumption in areas with high or extremely high water stress accounts for 21% of the total water consumption.	
Waste Management[1]	EM-CM-150a.1	Quantitative	Amount of waste generated	-	The weight of waste generated by operational sites in Taiwan and Mainland China: 34,930 metric tons Percentage of hazardous waste: 1.6% Percentage of waste recycling: 98.4%	
			Percentage hazardous	-		
			Percentage recycled	-		
Biodiversity Impacts	EM-CM-160a.1	Qualitative	Description of environmental management policies and practices for active sites	-	TCC (Taiwan Cement Corporation) has committed to achieving zero net deforestation by 2040, and aims to reach No Net Loss and move toward a Nature Positive Impact. All operational sites will be 100% located outside of UNESCO World Heritage areas and IUCN Protected Areas Categories I–IV. TCC has also established a Biodiversity Management Policy, with 100% of mining sites in Taiwan and Mainland China having Biodiversity Management Plans (BMP), and 100% of mining sites in Taiwan, Mainland China, Türkiye, and Portugal having Quarry Rehabilitation Plans (QRP).	
	EM-CM-160a.2	Quantitative	Terrestrial acreage disturbed	-		
			Percentage of impacted area restored	-		

	Mined Area	Rehabilitated Area
Taiwan	144.85	76.37
Mainland China	765.01	230.76
Combined Total	909.86	307.13

Note1: In light of the project timeline, the data for CIMPOR and OYAK CEMENT will be disclosed in the ESG section of TCC's official website.

Topic	Code	Category	Metric	Page	
Workforce Health & Safety	EM-CM-320a.1	Quantitative	Total recordable incident rate (TRIR) for full-time employees and contract employees	(ESG Data Sheet)	
			Near miss frequency rate (NMFR) for full-time employees and contract employees	-	Near Miss Frequency Rate (NMFR) in Taiwan: 1.30 per 200,000 working hours Near Miss Frequency Rate (NMFR) in Mainland China: 0.23 per 200,000 working hours. Near Miss Frequency Rate (NMFR) in CIMPOR & OYAK CEMENT: 5.49 per 200,000 working hours.
	EM-CM-320a.2	Quantitative	Number of reported cases of silicosis	-	No cases of silicosis reported at TCC in 2024.
Product Innovation	EM-CM-410a.1	Quantitative	Percentage of products that qualify for cred-its in sustainable building design and construc-tion certifications		TCC's low-carbon products in Taiwan include the Portland Type I cement, Portland Type II (MH) cement, and Portland limestone cement that have obtained carbon reduction labels and Gold-level environmental protection marks, as well as concrete with a cement content below 50% of the binder and concrete made with Portland limestone cement. In Mainland China, low-carbon products refer to cement products certified as low-carbon products. For CIMPOR and OYAK CEMENT, low-carbon products refer to cements other than Portland Type I and the concrete produced using those cements. The Taiwan and Mainland China operating sites generated revenue of NT$32,672,421 thousand from low-carbon products meeting the above definitions in 2024. After TCC's consolidation of CIMPOR and OYAK CEMENT in March 2024, according to CIMPOR and OYAK CEMENT's definitions of low-carbon cement and concrete, low-car-bon product revenue included in consolidated operating revenue from March to December 2024 totaled NT$39,599,537 thousand.
	EM-CM-410a.2	Quantitative	Total addressable market and share of market for products that reduce energy, water, and/or material impacts during usage and/or production		TCC is the largest cement manufacturer in Taiwan, sixth in Mainland China, and the largest in both Portugal and Türkiye. Across all markets, TCC is committed to offering low-carbon cement products to reduce environmental impact.
Pricing Integrity & Transparency	EM-CM-520a.1	Quantitative	Total amount of monetary losses as a result of legal proceedings associated with cartel activi-ties, price fixing, and anti-trust activities	-	None
Activity Metrics	EM-CM-000.A	Quantitative	Production volume of main product lines	(Sustainability Disclosure Indicators for the Cement Industry)	

6.5

European Sustainability Reporting Standards Index

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
ESRS 2 General Disclosures					
ESRS 2 BP-1	General Basis for Preparation of Sustainability Statements	Legal Compliance	About This Report	37	Required Disclosures
			1.9 Intellectual Property Management	80	
ESRS 2 BP-2	Disclosures Related to Specific Circumstances		About This Report	37	Required Disclosures
			1.9 Intellectual Property Management	80	
ESRS 2 GOV-1	Roles of Administrative, Management and Supervisory Bodies		1.1 Governance Structure	40	Required Disclosures
ESRS 2 GOV-2	Information Provided to and Sustainability Issues Addressed by the Undertaking's Administrative, Management and Supervisory Bodies		1.2 Sustainability Management Framework	43	Required Disclosures
ESRS 2 GOV-3	Integration of Sustainability-related Performance in Incentive Schemes		1.2 Sustainability Development Implementation Framework - Management Team Remuneration Policy	45	Required Disclosures
ESRS 2 GOV-4	Due Diligence Statement		5.5 Human Rights Protection	180	Required Disclosures
ESRS 2 GOV-5	Risk Management and Internal Control of Sustainability Reporting		1.3 Risk Management Framework	46	Required Disclosures
			1.5 Ethical Management - Audit and Internal Control Management System	65	
ESRS 2 SBM-1	Strategy, Business Model and Value Chain		Product & Service Value Chain	34	Required Disclosures
ESRS 2 SBM-2	Stakeholder Interests and Perspectives		Stakeholder and Material Topic Analysis	197	Required Disclosures
ESRS 2 SBM-3	Significant Impacts, Risks and Opportunities and Their Interaction with Strategy and Business Model		Stakeholder and Material Topic Analysis	197	Required Disclosures
ESRS 2 IRO-1	Description of Process for Identifying and Assessing Significant Impacts, Risks and Opportunities		Stakeholder and Material Topic Analysis	197	Required Disclosures
ESRS 2 IRO-2	Disclosure Requirements in ESRS Covered by Corporate Sustainability Statement		Stakeholder and Material Topic Analysis	197	Required Disclosures

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
ESRS 2 MDR-P	Policies Adopted for Managing Material Sustainability Matters		Stakeholder and Material Topic Analysis	197	Required Disclosures
ESRS 2 MDR-A	Actions and Resources Related to Material Sustainability Matters		Stakeholder and Material Topic Analysis	197	Required Disclosures
ESRS 2 MDR-M	Indicators Related to Material Sustainability Matters		Sustainability Goals and Tracking	35	Required Disclosures
ESRS 2 MDR-T	Monitoring the Effectiveness of Policies and Actions through Targets		Sustainability Goals and Tracking	35	Required Disclosures
ESRS E1 Climate Change					
E1 - ESRS 2 GOV-3	Incorporating Sustainability Performance into Incentive Plans	Climate Action and Net-Zero Emissions	5.3 Employee Remuneration and Benefits	169	Required Disclosures
DR E1-1	Transition Plans for Climate Change Mitigation	Green Energy and Energy Storage	Driver | Carbon Competitiveness	11	This Topic is Not Material
E1 - ESRS 2-SBM-3	Significant Impacts, Risks and Opportunities and Their Interaction with Strategy and Business Model		1.4 TCFD	51	Required Disclosures
E1 - ESRS 2-IRO-1	Description of Processes for Identifying and Assessing Material Climate-related Impacts, Risks and Opportunities		1.4 TCFD	51	Required Disclosures
DR E1-2	Policies Related to Climate Change Mitigation and Adaptation	Climate Action and Net-Zero Emissions	Driver | Carbon Competitiveness	11	This Topic is Not Material
DR E1-3	Actions and Resources Related to Climate Change Policies	Climate Action and Net-Zero Emissions	Driver | Carbon Competitiveness	11	This Topic is Not Material
DR E1-4	Goals Related to Climate Change Mitigation and Adaptation	Climate Action and Net-Zero Emissions	Driver | Carbon Competitiveness	11	This Topic is Not Material
DR E1-5	Energy Consumption and Mix	Climate Action and Net-Zero Emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	This Topic is Not Material
DR E1-6	Scope 1, 2, 3 and Total Greenhouse Gas Emissions	Climate Action and Net-Zero Emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	This Topic is Not Material
DR E1-7	Greenhouse Gas Removal and Emission Reduction Projects Funded Through Carbon Credits	Climate Action and Net-Zero Emissions	6.1 ESG Data Sheet TCC Key Indicators | Environmental	209,234	This Topic is Not Material

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
DR E1-8	Internal Carbon Pricing	Climate Action and Net-Zero Emissions	2.1 Low-Carbon Construction Materials	83	This Topic is Not Material
DR E1-9	Expected Financial Impact of Material Physical and Transition Risks and Potential Climate-Related Opportunities	Climate Action and Net-Zero Emissions	1.4 TCFD	51	This Topic is Not Material
ESRS E2 Pollution					
E2 - ESRS 2-IRO-1	Description of Process for Identifying and Assessing Material Pollution-Related Impacts, Risks and Opportunities		2.3 Resource Recycling	99	Required Disclosures
DR E2-1	Pollution-Related Policies		2.3 Resource Recycling	99	This Topic is Not Material
DR E2-2	Pollution-Related Actions and Resources		6.1 ESG Data	209,234	This Topic is Not Material
			TCC Key Indicators | Environmental		
DR E2-3	Pollution-Related Targets		2.3 Resource Recycling	99	This Topic is Not Material
DR E2-4	Air, Water and Soil Pollution		6.1 ESG Data	209,234	This Topic is Not Material
			TCC Key Indicators | Environmental		
DR E2-5	Substances of Concern and Substances of Very High Concern		-		This Topic is Not Material
DR E2-6	Expected Financial Impacts of Material Pollution-Related Impacts, Risks and Opportunities		-		This Topic is Not Material
ESRS E3 Water and Marine Resources					
E3 - ESRS 2-IRO-1	Description of Processes for Identifying and Assessing Material Impacts, Risks and Opportunities Related to Water and Marine Resources		4.3 Marine Rehabilitation	148	Required Disclosures
DR E3-1	Water and Marine Resources-Related Policies		4.3 Marine Rehabilitation	148	This Topic is Not Material
DR E3-2	Water and Marine Resources-Related Actions and Resources		6.1 ESG Data Sheet	209,234	This Topic is Not Material
			TCC Key Indicators | Environmental		
DR E3-3	Water and Marine Resources-Related Targets		Sustainability Goals and Tracking	35	This Topic is Not Material
			2.2 Low-Carbon Production Management	89	
DR E3-4	Water Consumption		6.1 ESG Data Sheet	209,234	This Topic is Not Material
			TCC Key Indicators | Environmental		
DR E3-5	Expected Financial Impacts of Material Impacts, Risks and Opportunities Related to Water and Marine Resources		-		This Topic is Not Material

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
ESRS E4 Biodiversity and Ecosystems					
DR E4-1	Consideration of Biodiversity and Ecosystems in Transformation Plans, Strategies and Business Models	Biodiversity	4.1 TCC Nature Action	126	
E4 - ESRS 2-SBM 3	Significant Impacts, Risks and Opportunities and Their Interaction with Strategy and Business Model		4.1 TCC Nature Action	126	Required Disclosures
E4 - ESRS 2-IRO-1	Description of the Process for Identifying and Assessing Material Biodiversity and Ecosystem-Related Impacts, Risks, Dependencies and Opportunities		4.1 TCC Nature Action	126	Required Disclosures
DR E4-2	Biodiversity and Ecosystem-Related Policies		4.1 TCC Nature Action	126	This Topic is Not Material
DR E4-3	Biodiversity and Ecosystem-Related Actions and Resources		4.1 TCC Nature Action	126	This Topic is Not Material
DR E4-4	Biodiversity and Ecosystem-Related Targets		4.1 TCC Nature Action	126	This Topic is Not Material
DR E4-5	Impact Indicators Related to Biodiversity and Ecosystem Changes		-		This Topic is Not Material
DR E4-6	Expected Financial Impacts of Material Biodiversity and Ecosystem-Related Risks and Opportunities		-		This Topic is Not Material
ESRS E5 Circular Economy					
E5 - ESRS 2-IRO-1	Description of processes for identifying and assessing impacts, risks and opportunities related to material resource use and circular economy	Co-processing of Renewable Resources	2.3 Resource Recycling	99	Required Disclosures
DR E5-1	Policies Related to Resource Use and Circular Economy	Low-Carbon Products and Services	2.3 Resource Recycling	99	This Topic is Not Material
DR E5-2	Actions and Resources Related to Resource Use and Circular Economy		2.3 Resource Recycling	99	This Topic is Not Material
DR E5-3	Targets Related to Resource Use and Circular Economy		2.3 Resource Recycling	99	This Topic is Not Material
DR E5-4	Resource Inflow		2.3 Resource Recycling	99	This Topic is Not Material
DR E5-5	Resource Outflow		2.3 Resource Recycling	99	This Topic is Not Material
DR E5-6	Expected Financial Impacts and Impacts, Risks and Opportunities Related to Material Resource Use and Circular Economy		-		This Topic is Not Material

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
ESRS S1 Own Workforce					
S1 - ESRS 2-SBM-2	Stakeholder Interests and Perspectives	Talent Cultivation and Development	Stakeholder and Material Topic Analysis	197	Required Disclosures
S1 - ESRS 2-SBM-3	Significant Impacts, Risks and Opportunities and Their	Workplace Health and Safety	5.2 Employee Development	163	Required Disclosures
	Interaction with Strategy and Business Model		5.4 Occupational Health and Safety	173	
DR S1-1	Policies Related to Own Workforce		5.2 Employee Development	163	This Topic is Not Material
			5.4 Occupational Health and Safety	173	
DR S1-2	Process of Engaging with Own Workforce and Employees		5.2 Employee Development	163	This Topic is Not Material
	Regarding Impact Statements		5.4 Occupational Health and Safety	173	
DR S1-3	Process for Remedying Negative Impacts and Channels		Stakeholder Engagement		This Topic is Not Material
	for Employees to Raise Concerns				
DR S1-4	Actions Taken to Address Significant Impacts on		Stakeholder and Material Topic Analysis	197	This Topic is Not Material
	Employees, Methods for Managing Significant Risks and				
	Seeking Significant Opportunities Related to Employees,				
	and the Effectiveness of These Actions				
DR S1-5	Targets Related to Managing Significant Negative		Stakeholder and Material Topic Analysis	197	This Topic is Not Material
	Impacts, Advancing Positive Impacts, and Managing				
	Significant Risks and Opportunities				
DR S1-6	Characteristics of Business Entity Employees		6.1 ESG Data Sheet	227,237	This Topic is Not Material
			TCC Key Indicators | Social		
DR S1-7	Characteristics of Non-Employee Workers Among the		6.1 ESG Data Sheet	227,237	This Topic is Not Material
	Organization's Workforce		TCC Key Indicators | Social		
DR S1-8	Collective Bargaining Reporting and Social Dialogue		5.5 Human Rights Protection	180	This Topic is Not Material
DR S1-9	Diversity Indicators		5.2 Employee Development	163	This Topic is Not Material
DR S1-10	Adequate Wages		5.3 Employee Remuneration and Benefits	169	This Topic is Not Material

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
DR S1-11	Social Protection		5.5 Human Rights Protection	180	This Topic is Not Material
DR S1-12	Persons with Disabilities		5.5 Human Rights Protection	180	This Topic is Not Material
DR S1-13	Training and Skills Development Indicators		5.1 Climate Action Talents	161	This Topic is Not Material
			6.1 ESG Data Sheet	227,237	
			TCC Key Indicators | Social		
DR S1-14	Health and Safety Indicators		5.4 Occupational Health and Safety	173	This Topic is Not Material
DR S1-15	Work-Life Balance Indicators		5.3 Employee Remuneration and Benefits	169	This Topic is Not Material
DR S1-16	Remuneration Indicators		5.3 Employee Remuneration and Benefits	169	This Topic is Not Material
	(Pay Gap and Total Compensation)				
DR S1-17	Incidents, Complaints and Significant Human Rights		5.5 Human Rights Protection	180	This Topic is Not Material
	Impacts				
ESRS S2 Employees in Value Chain					
S2 - ESRS 2 SBM-2	Stakeholder Interests and Perspectives		Stakeholder and Material Topic Analysis	197	Required Disclosures
S2 - ESRS 2 SBM-3	Significant Impacts, Risks and Opportunities and Their		1.7 Supply Chain Management	71	Required Disclosures
	Interactions with Corporate Strategy and Business				
	Model				
DR S2-1	Policies Related to Value Chain Employees		1.7 Supply Chain Management	71	This Topic is Not Material
			2.2 Low-Carbon Production Management	89	
DR S2-2	Process of Engaging with Value Chain Employees on		Stakeholder and Material Topic Analysis	197	This Topic is Not Material
	Impacts				
DR S2-3	Process for Remedying Negative Impacts and Channels		Stakeholder Engagement		This Topic is Not Material
	for Value Chain Employees to Raise Concerns				
DR S2-4	Actions Taken to Address Significant Impacts on Value		1.7 Supply Chain Management	71	This Topic is Not Material
	Chain Employees, Mitigation of Significant Risks and				
	Opportunities Related to Value Chain Employees, and				
	the Effectiveness of These Actions				
DR S2-5	Targets Related to Managing Significant Negative		6.1 ESG Data Sheet	227,237	This Topic is Not Material
	Impacts, Advancing Positive Impacts, and Managing		TCC Key Indicators | Social		
	Significant Risks and Opportunities				

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
ESRS S3 Affected Communities					
S3 - ESRS 2 SBM-2	Relevant Disclosure Requirements - Stakeholder Interests and Perspectives	Local Inclusion	Stakeholder and Material Topic Analysis	197	Required Disclosures
S3 - ESRS 2 SBM-3	Significant Impacts, Risks and Opportunities and Their Interactions with Corporate Strategy and Business Model		Just Transition	31	Required Disclosures
DR S3-1	Policies Related to Value Chain Employees		Just Transition	31	This Topic is Not Material
DR S3-2	Process for Engaging with Affected Communities Regarding Impacts		5.6 Social Engagement Partners	185	This Topic is Not Material
DR S3-3	Process for Remedying Negative Impacts and Channels for Affected Communities to Raise Concerns		Stakeholder Engagement		This Topic is Not Material
DR S3-4	Actions Taken to Address Significant Impacts on Affected Communities, Management of Significant Risks and Opportunities Related to Affected Communities, and the Effectiveness of These Actions		Just Transition	31	This Topic is Not Material
DR S3-5	Targets Related to Managing Significant Negative Impacts, Promoting Positive Impacts, and Managing Significant Risks and Opportunities		Just Transition	31	This Topic is Not Material
ESRS S4 Consumers and End-users					
S4 - ESRS 2 SBM-2S4-ESRS2SBM-2	Stakeholder Interests and Perspectives		Stakeholder and Material Topic Analysis	197	Required Disclosures
S4 - ESRS 2 SBM-3S4-ESRS2SBM-3	Significant Impacts, Risks and Opportunities and Their Interactions with Corporate Strategy and Business Model		Stakeholder and Material Topic Analysis	197	Required Disclosures
DR S4-1DRS4-1	Policies Related to Consumers and End-users		1.8 Customer Communication	77	This Topic is Not Material
DR S4-2DRS4-2	Processes for Engaging with Consumers and End-users on Impacts		-		This Topic is Not Material
DR S4-3DRS4-3	Processes for Remedying Negative Impacts and Channels for End-users to Raise Concerns		Stakeholder Engagement		This Topic is Not Material

ESRS Number	Disclosure Requirements	Corresponding Material Topics	Corresponding Sections	Page Number	Notes
DR S4-4DRS4-4	Methods for Taking Action on Significant Impacts on		-		This Topic is Not Material
	Consumers and End-users, Managing Significant		-		
	Risks Related to Consumers and End-users, Seeking				
	Significant Opportunities, and the Effectiveness of				
	These Actions				
DR S4-5	Targets Related to Managing Significant Negative				This Topic is Not Material
	Impacts, Advancing Positive Impacts, and Managing				
	Significant Risks and Opportunities				
ESRS G1 Business Conduct					
G1 - ESRS 2-GOV-1G1-ESRS2-GOV-1	Roles of Administrative, Management	Research,	1.9 Intellectual Property Management	80	Required Disclosures
	and Supervisory Bodies	Development,			
		and Innovation			
G1 - ESRS 2-IRO-1G1-ESRS2-IRO-1	Description of Process for Identifying and Assessing		1.9 Intellectual Property Management	80	Required Disclosures
	Significant Impacts, Risks and Opportunities				
DR G1-1DRG1-1	Business Conduct and Corporate Culture		1.5 Ethical Management	61	This Topic is Not Material
DR G1-2DRG1-2	Supplier Relation Management		1.7 Supply Chain Management	71	This Topic is Not Material
DR G1-3DRG1-3	Prevention and Detection of Corruption/Bribery		1.5 Ethical Management	61	This Topic is Not Material
DR G1-4DRG1-4	Corruption and Bribery Incidents		1.5 Ethical Management	61	This Topic is Not Material
DR G1-5DRG1-5	Political Influence and Lobbying Activities		6.1 ESG Data	227,237	This Topic is Not Material
			TCC Key Indicators | Social		
DR G1-6DRG1-6	Payment Practices		-		This Topic is Not Material

6.6

Third - Party Assurance Statement

AA1000 Assurance Opinion Statement

bsi.

INDEPENDENT ASSURANCE OPINION STATEMENT

2024 TCC Group Holdings Sustainability Report

The British Standards Institution is independent to TCC Group Holdings (hereafter referred to as TCC in this statement) and has no financial interest in the operation of TCC other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of TCC only for the purpose of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by TCC. This review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to TCC only.

Scope

The scope of engagement agreed upon with TCC includes the followings:

1. The assurance scope is consistent with the description of 2024 TCC Group Holdings Sustainability Report.
2. The evaluation of the nature and extent of the TCC's adherence to AA1000 Accountability Principles (2018) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the 2024 TCC Group Holdings Sustainability Report provides a fair view of the TCC sustainability programmes and performances during 2024. The sustainability report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the TCC and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate TCC's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that TCC's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a top level review of issues raised by external parties that could be relevant to TCC's policies to provide a check on the appropriateness of statements made in the report.
- discussions with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 52 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness, and Impact as described in the AA1000AP (2018).

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness, and Impact of AA1000AP (2018) and GRI Standards is set out below:

Inclusivity

This report has reflected a fact that TCC has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the TCC's inclusivity issues.

Materiality

TCC publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of TCC and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the TCC's management and performance. In our professional opinion the report covers the TCC's material issues.

Responsiveness

TCC has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for TCC is developed and continually provides the opportunity to further enhance TCC's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the TCC's responsiveness issues.

Impact

TCC has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. TCC has established processes to monitor, measure, evaluate, and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the TCC's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

TCC provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported, or omitted. In our professional opinion the self-declaration covers the TCC's sustainability topics.

Assurance level

The moderate level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

The sustainability report is the responsibility of the TCC's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064, and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Peter Pu, Managing Director BSI Taiwan

AA1000 Licensed Report 000-4/v3-905F2

...making excellence a habit.

Statement No: SRA-TW-803868

2025-07-21

Taiwan Headquarters: 2nd Floor, No. 37, Ji-Hu Rd., Nei-Hu Dist., Taipei 114, Taiwan, R.O.C.

BSI Taiwan is a subsidiary of British Standards Institution