

## SECOND PARTY OPINION (SPO)

Sustainability Quality of the Issuer and Green Financing Framework

TCC Group Holdings Co. Ltd.

6 February 2025

### VERIFICATION PARAMETERS

Type(s) of instruments contemplated

- Green financing instruments

Relevant standards

- Green Bond Principles, ICMA, June 2021 (with June 2022 Appendix 1)
- Green Loan Principles, LMA, February 2023

Scope of verification

- TCC Group Holdings Co. Ltd.'s Green Financing Framework (as of Feb. 5, 2025)
- TCC Group Holdings Co. Ltd.'s eligibility criteria (as of Feb. 5, 2025)

Validity

- Valid as long as the cited Framework remains unchanged

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## SCOPE OF WORK

TCC Group Holdings Co. Ltd. (“the Issuer,” “the Company” or “TCC”) commissioned ISS-Corporate to assist with its green financing instruments by assessing three core elements to determine the sustainability quality of the instrument:

1. TCC Group Holdings Co. Ltd.’s Green Financing Framework (as of Feb. 5, 2025), benchmarked against the International Capital Market Association's (ICMA) Green Bond Principles (GBP) and the Loan Market Association’s (LMA) Green Loan Principles (GLP).
2. The eligibility criteria — whether the project categories contribute positively to the United Nations Sustainable Development Goals (U.N. SDGs) and how they perform against ISS-Corporate’s proprietary issuance-specific key performance indicators (KPIs) (see Annex 1).
3. Consistency of the green financing instruments with TCC’s sustainability strategy, drawing on the key sustainability objectives and priorities defined by the Issuer.

## TCC BUSINESS OVERVIEW

TCC is a cement producer headquartered in Taiwan. Apart from cement production, TCC also operates in industries including green energy, battery, energy storage charging, transportation, information technology, shipping, power generation, waste management, property management and applied building materials. TCC’s main business lines cover conventional businesses of cement manufacturing and conventional power generation, and transformation businesses including green energy, battery electrical vehicle charging systems provision and battery manufacturing. The company was founded in May 1946 and privatized in 1954.

### *ESG risks associated with the Issuer’s industry*

TCC is classified in the construction materials industry, as per ISS ESG’s sector classification. Key sustainability issues faced by companies<sup>1</sup> in this industry are eco-efficiency of production, labor standards and working conditions, environmental impacts of raw material extraction, products and services with environmental benefits, and business ethics.

This report focuses on the sustainability credentials of the issuance. Part III of this report assesses the consistency between the issuance and the Issuer’s overall sustainability strategy.

<sup>1</sup> Please note that this is not a company-specific assessment but rather areas that are of particular relevance for companies within this industry.


## ASSESSMENT SUMMARY

SPO SECTION	SUMMARY	EVALUATION <sup>2</sup>
<p><b>Part I:</b></p> <p><b>Alignment with GBP and GLP</b></p>	<p>The Issuer has defined a formal concept for its green financing instruments regarding use of proceeds, processes for project evaluation and selection, management of proceeds, and reporting. This concept is in line with the GBP and GLP.</p>	<p><b>Aligned</b></p>
<p><b>Part II:</b></p> <p><b>Sustainability quality of the eligibility criteria</b></p>	<p>The green financing instruments will (re)finance the following eligible asset categories:</p> <p>Green categories: Manufacture of Cement, Circular Economy Adapted Products, Production Technologies and Processes, Energy Efficiency, Pollution Prevention and Control, Sustainable Water and Wastewater Management, Renewable Energy, Clean Transportation, Green Buildings, Environmentally Sustainable Management of Living Natural Resources and Land Use</p> <p>Product and/or service-related use of proceeds categories<sup>3</sup> individually contribute to one or more of the following SDGs:</p> <div data-bbox="517 1294 1098 1527" data-label="Image"> <p>The image shows six Sustainable Development Goal (SDG) icons arranged in two rows. The top row contains icons for SDG 7 (Affordable and Clean Energy), SDG 11 (Sustainable Cities and Communities), SDG 12 (Responsible Consumption and Production), SDG 13 (Climate Action), and SDG 14 (Life Below Water). The bottom row contains the icon for SDG 15 (Life on Land).</p> </div> <p>Process-related use of proceeds categories<sup>4</sup> individually (i) improve the Issuer’s operational impacts and (ii) mitigate potential negative externalities of the Issuer’s sector on one or more of the following SDGs:</p>	<p><b>Positive</b></p>

<sup>2</sup> The evaluation is based on TCC’s Green Financing Framework (Feb. 5, 2025 version), on the analyzed eligibility criteria as received on Feb. 5, 2025.

<sup>3</sup> Manufacture of Cement, Circular Economy Adapted Products, Production Technologies and Processes, Renewable Energy, Clean Transportation, Green Buildings, Environmentally Sustainable Management of Living Natural Resources and Land Use

<sup>4</sup> Circular Economy Adapted Products, Production Technologies and Processes, Energy Efficiency, Pollution Prevention and Control, Sustainable Water and Wastewater Management, Renewable Energy, Clean Transportation, Green Buildings

	 <p>The environmental and social risks associated with the use of proceeds categories are managed.</p>	
<p><b>Part III:</b></p> <p><b>Consistency of green financing instruments with TCC's sustainability strategy</b></p>	<p>The key sustainability objectives and rationale for issuing green financing instruments are clearly described by the Issuer. All of the project categories considered are in line with the Issuer's sustainability objectives.</p>	<p><b>Consistent with Issuer's sustainability strategy</b></p>

## SPO ASSESSMENT

### PART I: ALIGNMENT WITH THE GREEN BOND PRINCIPLES AND GREEN LOAN PRINCIPLES

This section evaluates the alignment of TCC’s Green Financing Framework (as of Feb. 5, 2025) with the GBP and GLP.

GBP AND GLP	ALIGNMENT	OPINION
<p><b>1. Use of Proceeds</b></p>	<p>✓</p>	<p>The use of proceeds description provided by TCC’s Green Financing Framework is <b>aligned</b> with the GBP and GLP.</p> <p>The Issuer’s green categories align with the project categories as proposed by the GBP and GLP. Criteria are defined clearly and transparently. Disclosure of an allocation period and commitment to report by project category has been provided and environmental benefit is described and quantified.</p> <p>The Issuer defines a look-back period of three calendar years preceding the issuance, in line with best market practice.</p>
<p><b>2. Process for Project Evaluation and Selection</b></p>	<p>✓</p>	<p>The process for project evaluation and selection description provided by TCC’s Green Financing Framework is <b>aligned</b> with the GBP and GLP.</p> <p>The project selection process is defined. ESG risks associated with the project categories are identified and managed appropriately. Moreover, the projects selected show alignment with the Issuer’s sustainability strategy.</p> <p>The Issuer involves various stakeholders in this process and defines exclusion criteria for harmful projects categories. Moreover, TCC references the EU Taxonomy and the 2023 Climate Transition Finance Handbook for its Green Finance Framework and</p>

		<p>certain green projects, in line with best market practice.</p>
<p><b>3. Management of Proceeds</b></p>	<p>✓</p>	<p>The management of proceeds provided by TCC’s Green Financing Framework is <b>aligned</b> with the GBP and GLP.</p> <p>The net proceeds collected will equal the amount allocated to eligible projects. The net proceeds are tracked appropriately and managed on an aggregated basis for multiple green bonds (portfolio approach). Moreover, the Issuer discloses the temporary investment instruments for unallocated proceeds. Where a green loan takes the form of one or more tranches of a loan facility, TCC confirms that each loan tranche will be clearly labeled as green.</p> <p>TCC discloses ESG criteria for temporary investments. In addition, the Issuer commits to segregate the proceeds collected by having them in a separate account directly managed by the company as a temporary measure, in line with best market practice.</p>
<p><b>4. Reporting</b></p>	<p>✓</p>	<p>The allocation and impact reporting provided by TCC’s Green Financing Framework is <b>aligned</b> with the GBP and GLP.</p> <p>The Issuer commits to disclose the allocation of proceeds transparently and report with appropriate frequency. The reporting will be publicly available on the Issuer’s website. TCC has disclosed the type of information that will be reported and explains that the level of expected reporting will be at the project category level. Moreover, the Issuer commits to report annually until the proceeds have been fully allocated or the bond matures.</p>

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		<p>TCC is transparent on the level of impact reporting and the information reported and further defines the duration and frequency of the impact reporting. Furthermore, the Issuer discloses the location and <a href="#">link</a> of the report(s). TCC also commits to get the allocation report audited by an external party, in line with best market practices.</p>
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## PART II: SUSTAINABILITY QUALITY OF THE ELIGIBILITY CRITERIA

### A. CONTRIBUTION OF THE GREEN FINANCING INSTRUMENTS TO THE U.N. SDGs<sup>5</sup>

The Issuer can contribute to the achievement of the SDGs by providing specific services/products that help address global sustainability challenges, and by being responsible actors, working to minimize negative externalities in their operations along the entire value chain. This section assesses the SDG impact of the UoP categories financed by the Issuer in two different ways, depending on whether the proceeds are used to (re)finance:

- Specific products/services
- Improvements of operational performance


#### 1. Products and services

The assessment of UoP categories for (re)financing products and services is based on a variety of internal and external sources, such as the ISS ESG SDG Solutions Assessment (SDGA), a proprietary methodology designed to assess the impact of an Issuer's products or services on the U.N. SDGs, as well as other ESG benchmarks (the EU Taxonomy Climate Delegated Acts, the Green Bond Principles and other regional taxonomies, standards and sustainability criteria).

The assessment of UoP categories for (re)financing specific products and services is displayed on a three-point scale:






Each of the green financing instruments' use of proceeds categories has been assessed for its contribution to, or obstruction of, the SDGs:

USE OF PROCEEDS (PRODUCTS/SERVICES)	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Manufacture of Cement</b></p> <p><i>Cement manufacturing facilities, R&amp;D and/or application of technology that are expected to result in one of the following:</i></p>	<p><b>Contribution<sup>9</sup></b></p>	

<sup>5</sup> The impact of the UoP categories on U.N. Sustainable Development Goals is assessed with proprietary methodology and may therefore differ from the Issuer's description in the Framework.

<sup>9</sup> The Issuer has aligned its selection criteria with the technical screening criteria for a substantial contribution to Climate Change Mitigation of the EU Taxonomy Climate Delegated Act (June 2023).

USE OF PROCEEDS (PRODUCTS/SERVICES)	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
<ul style="list-style-type: none"> <li>▪ Grey cement clinker where the specific GHG emissions<sup>6</sup> are lower than 0.722 tCO<sub>2</sub> per ton of grey cement clinker</li> <li>▪ Cement from grey clinker or alternative hydraulic binder, where the specific GHG emissions<sup>7</sup> from the clinker and cement or alternative binder production are lower than 0.469 tCO<sub>2</sub> per ton of cement or alternative binder manufactured</li> </ul> <p>Where CO<sub>2</sub> that would otherwise be emitted from the manufacturing process is captured for the purpose of underground storage, the CO<sub>2</sub> is transported and stored underground, in accordance with the technical screening criteria set out in sections 5.11 and 5.12 of the EU Taxonomy Climate Delegated Act Annex 1.<sup>8</sup></p>	<p style="text-align: center;"><b>Contribution</b></p>	
<p><b>Circular Economy Adapted Products, Production Technologies and Processes</b></p> <p>Waste coprocessing and collaboration with industry partners to build a sustainable ecosphere through:</p> <p>Conversion into secondary raw materials and alternative cement raw materials and fuels, with conversion rate of minimum 50% (in terms of weight) of the separately collected waste into secondary raw materials that are suitable for the substitution of primary raw material in production processes.</p>		
<p><b>Renewable Energy – Solar, Wind, Geothermal and Marine</b></p> <p>Development, acquisition, maintenance and operation of renewable energy, including solar, wind, geothermal and marine energy with direct life cycle emissions of less than 100 gCO<sub>2e</sub>/kWh and energy storage solutions.</p> <p>Example: solar-plus storage system that consists of solar PV and battery storage.</p>		 

<sup>6</sup> Calculated in accordance with Commission Delegated Regulation (EU) 2019/331 of 19 December 2018 determining transitional Union-wide rules for harmonized free allocation of emission allowances pursuant to Article 10a of Directive 2003/87/EC of the European Parliament and of the Council (OJ L 59, 27.2.2019, Page 8).

<sup>7</sup> Calculated in accordance with Regulation (EU) 2019/331.

<sup>8</sup> The Issuer confirms that if a local taxonomy is implemented outside of the EU, the Issuer shall also apply the requirements of local taxonomy where the activity is applicable.

USE OF PROCEEDS (PRODUCTS/SERVICES)	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS	
<p><b>Renewable Energy – Battery Storage and Microgrids</b></p> <ul style="list-style-type: none"> <li>▪ <i>Modular utility-scale battery storage systems to provide grid stabilization services and enable the integration of more renewable energy into the grid</i></li> <li>▪ <i>Industrial microgrids that combine distributed renewable energy sources, storage capacity and conventional backup to supplement or replace grid supply for both single and multiple users</i></li> </ul>	<p><b>Contribution</b></p>		
<p><b>Clean Transportation</b></p> <p><i>Design, development, construction, acquisition, operation, maintenance and upgrades of zero tailpipe emission vehicles, dedicated infrastructure and e-mobility solutions</i></p> <ul style="list-style-type: none"> <li>▪ <i>EV charging infrastructure, equipment and stations</i></li> <li>▪ <i>Infrastructure projects associated with electric vehicles</i></li> <li>▪ <i>Charging solutions for electric vehicles</i></li> <li>▪ <i>Advanced charging technology that enables the use of parked electric vehicles as energy storage systems for grid stabilization</i></li> <li>▪ <i>Manufacturing facilities and manufacture of raw materials <sup>10</sup> to produce devices and batteries for electric vehicles</i></li> </ul>		<p><b>Contribution</b></p>	
<p><b>Green Buildings<sup>11</sup></b></p> <p><i>Energy-efficient buildings that have obtained or will obtain minimum certification for:</i></p> <ul style="list-style-type: none"> <li>▪ <i>BREEAM Excellent</i></li> <li>▪ <i>LEED Gold</i></li> <li>▪ <i>EEWH Gold</i></li> </ul>			<p><b>Contribution</b></p>

<sup>10</sup> Battery raw materials include imported lithium and cathode powder with recycled content. Raw material mining, extraction and refinery are not involved.

<sup>11</sup> The review is limited to certifications spelled out in the Framework.

USE OF PROCEEDS (PRODUCTS/SERVICES)	CONTRIBUTION OR OBSTRUCTION	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Environmentally Sustainable Management of Living Natural Resources and Land Use</b></p> <p><i>Financing related to the maintenance and sustainable management of natural resources such as land, water, air, minerals, forests, wild flora and fauna, including:</i></p> <ul style="list-style-type: none"> <li>Protection of the Indigenous species (restoration of local species and habitats by ecosystem rebuilding and modelling to address ecology challenges)</li> <li>Environmentally sustainable forestry, including afforestation or reforestation and preservation or restoration of natural landscapes and resources</li> </ul>	<p><b>Contribution<sup>12</sup></b></p>	
<p><b>Environmentally Sustainable Management of Living Natural Resources and Land Use</b></p> <p><i>Financing related to the maintenance and sustainable management of natural resources such as land, water, air, minerals, forests, wild flora and fauna, including:</i></p> <ul style="list-style-type: none"> <li>Protection of the Indigenous species through coral restoration and conservation</li> </ul>		<p><b>Contribution<sup>13</sup></b></p>

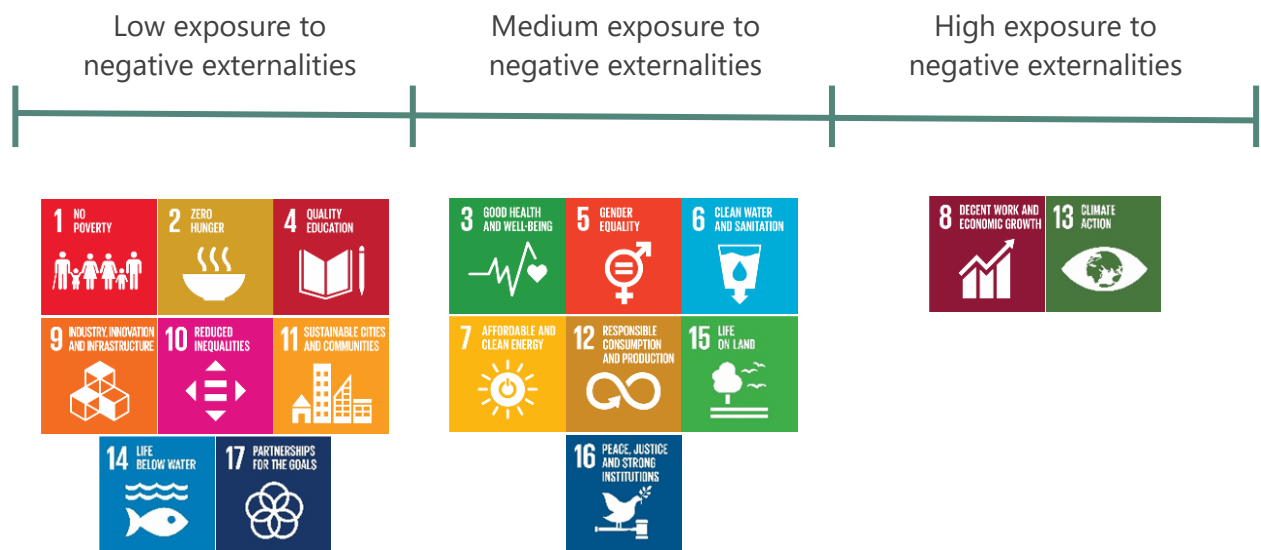
<sup>12</sup> Contribution granted is limited to the Ho-Ping Ark Ecological Program ([TCC Group Holdings Sustainability Report](#), Page 123), Hoping Mine Reforestation Project ([TCC Group Holdings Sustainability Report](#), pages 117-118), Taibaishan Mine Ecological Restoration Project ([TCC Group Holdings Sustainability Report](#), pages 117-118), Hualien Hoping Industrial Park Nature Conservation Project, and Hoping Mine Restoration Area Forest and Soil Rehabilitation Project ([TCC Group Holdings Sustainability Report](#), Page 121).

<sup>13</sup> Contribution granted is limited to the Coral Rehabilitation Project at Hoping EcoPort. ([TCC Group Holdings Sustainability Report](#), Page 124)

**2. Improvements of operational performance (processes)**

The below assessment qualifies the direction of change (or “operational impact improvement”) resulting from the operational performance projects (re)financed by the UoP categories, as well as related SDGs impacted. The assessment displays how the UoP categories mitigate the exposure to the negative externalities relevant to the Issuer’s business model and sector.

According to ISS ESG SDG Impact Rating methodology, potential impacts on the SDGs related to negative operational externalities in the construction materials sector (to which TCC belongs) are the following:



The table below displays the direction of change resulting from the operational performance improvement projects. The outcome displayed does not correspond to an absolute or net assessment of the operational performance.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>14</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Circular Economy Adapted Products, Production Technologies and Processes</b></p> <p><i>Waste coprocessing and collaboration with industry partners to build a sustainable ecosphere through:</i></p> <p><i>Reduction and recycling of wastes and the dedicated collection and transport activities.</i></p>		

<sup>14</sup> Limited information is available on the scale of the improvement as no threshold is provided. Only the direction of change is displayed.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>14</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Circular Economy Adapted Products, Production Technologies and Processes</b></p> <p><i>Waste coprocessing and collaboration with industry partners to build a sustainable ecosphere through:</i></p> <p><i>Conversion into secondary raw materials and alternative cement raw materials and fuels, with conversion rate of minimum 50% (in terms of weight) of the separately collected waste into secondary raw materials that are suitable for the substitution of primary raw material in production processes.</i></p>		
<p><b>Energy Efficiency</b></p> <p><i>Equipment and process enhancements, measures that could result in increased energy efficiency based on best efforts to ensure projects achieve at least a 30% energy efficiency improvement, including investments in energy efficiency systems, lighting upgrades, smart devices to optimize energy consumption, energy-efficient ventilation units.</i></p> <p><i>Expenditures related to waste heat electricity generation systems and flash distillation technology to enhance heat recovery efficiency and reduce purchased electricity.</i></p>		
<p><b>Pollution Prevention and Control</b></p> <p><i>Technology to eliminate or significantly reduce and mitigate air pollutants<sup>15</sup> through:</i></p> <ul style="list-style-type: none"> <li>▪ <i>NO<sub>x</sub> control technologies</i></li> <li>▪ <i>Air pollutant emissions management such as the 24-hour continuous emission monitoring systems</i></li> </ul>		
<p><b>Pollution Prevention and Control</b></p>		

<sup>15</sup> TCC commits to ensure that air pollutant emissions after implementing NO<sub>x</sub> control technologies and relevant air pollutant emissions management measures are at least 40% below national standards. If the activity does not meet the requirement, it will be deemed ineligible for this Framework and will be subsequently removed from (re)financing.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>14</sup>	SUSTAINABLE DEVELOPMENT GOALS
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*Technology to eliminate or significantly reduce and mitigate air pollutants through R&D and installation of CCUS*

**Pollution Prevention and Control**

*Financing related to the development and acquisition of alternative fuel for manufacturing process:*



*Green hydrogen<sup>16</sup>*

**Pollution Prevention and Control**

*Financing related to the development and acquisition of alternative fuels for manufacturing process:*



*Solid recovered fuel<sup>17</sup>*

**Pollution Prevention and Control**

*Financing related to the development and acquisition of alternative fuels for manufacturing process:*



*Bioenergy and agricultural residual materials<sup>18</sup>*

**Sustainable Water and Wastewater Management**

*Water efficiency and water-saving solutions to reduce leakage, reduce water use or increase water reused.*



*Examples: Wastewater recycling, Membrane bioreactor treatment system, water use control and rainwater harvesting*

<sup>16</sup> Produced entirely with the use of solar energy.

<sup>17</sup> Where applicable, for waste from energy facilities outside the EU, the Climate Bond Standard’s Waste Management Criteria is aligned with. This includes plant efficiency: at least 25%; bottom ash recovery: at least 90% recovery of metal from ash; average carbon intensity of electricity and/or heat over the life of the plant: no greater than waste management allowance; capacity of the plant does not exceed the calculated residual waste at any time in the plant’s life. The Issuer also confirms that waste from energy facilities in the EU are not eligible under the Framework.

[https://www.climatebonds.net/files/files/Waste%20Management%20Criteria\\_August2022.pdf](https://www.climatebonds.net/files/files/Waste%20Management%20Criteria_August2022.pdf)

<sup>18</sup> Note that only examples provided are assessed, which includes spent mushroom compost, waste rice husks and rice straws, waste cooking oil, and waste wood chips from white popinac.

USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>14</sup>	SUSTAINABLE DEVELOPMENT GOALS
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**Renewable Energy - Solar**

*Development, acquisition, maintenance and operation of renewable energy with direct life cycle emissions of less than 100 gCO<sub>2e</sub>/kWh:*



*Solar PV and battery storage*

**Clean Transportation**

*Design, development, construction, acquisition, operation, maintenance and upgrades of zero tailpipe emission vehicles and dedicated infrastructure through:*



*TCC's own electric vehicle and electric truck fleet*

**Clean Transportation**


*Purchase, financing, operation and investment of vessels that meet the following thresholds:*

- *Zero direct (tailpipe) CO<sub>2</sub> emissions; or*
- *Able to run on zero direct (tailpipe) CO<sub>2</sub> emission fuels or on fuels from renewable sources have an attained Energy Efficiency Design Index (EEDI) value equivalent to reducing the EEDI reference line by at least 20 percentage points below the EEDI requirements applicable on April 1, 2022, and are able to plug-in at berth. For gas-fueled ships, demonstrate the use of state-of-the-art measures and technologies to mitigate methane slippage emissions; or*
- *Until Dec. 31, 2025, vessels which have an attained EEDI value 10% below the EEDI requirements applicable on April 1, 2022, if the vessels are able to run on zero direct (tailpipe) CO<sub>2</sub> emission fuels or on fuels from renewable sources<sup>19</sup>*



<sup>19</sup> Fuels that meet the technical screening criteria specified in sections 3.10 and 4.13 of the EU Taxonomy Climate Delegated Act.



USE OF PROCEEDS (PROCESSES)	OPERATIONAL IMPACT IMPROVEMENT <sup>14</sup>	SUSTAINABLE DEVELOPMENT GOALS
<p><b>Green Buildings</b></p> <p><i>Investments and expenditures relating to the renovation of buildings:</i></p> <p><i>Leading to a reduction of primary energy demand of at least 30%</i></p>		
<p><b>Green Buildings<sup>20</sup></b></p> <p><i>Investments and expenditures relating to the renovation of buildings:</i></p> <p><i>Achieving one of the green building certification levels (minimum certification: BREEAM Excellent, LEED Gold or EEWH Gold) as a result of the retrofit.</i></p>		

<sup>20</sup> The review is limited to certifications spelled out in the Framework.

**B. MANAGEMENT OF ENVIRONMENTAL AND SOCIAL RISKS ASSOCIATED WITH THE ELIGIBILITY CRITERIA**

The table below evaluates the eligibility criteria against issuance-specific KPIs. All of the assets are/will be located in Taiwan, mainland China, Australia, the EU, the U.K., Africa and the Americas.

**ASSESSMENT AGAINST KPIs**

**All categories**

**Environmental impacts**



The Issuer has measures in place to systematically ensure that environmental impacts are considered. TCC states that all cement plants, ready-mix concrete (RMC) plants, operation headquarters and all other business units are ISO 14001 and ISO 50001 certified. TCC has action plans to reduce waste generation and recycling programs to minimize the waste ending in landfills. Regarding air pollution, the cement plants undergo environmental protection equipment upgrades to reduce pollutant emissions.

**Labor, health and safety**



The Issuer has policies and measures in place ensuring high labor, health and safety standards are respected. TCC has a [Human Rights Policy](#) and an [Occupational Safety and Health Policy Statement](#) applicable to all employees of the company, its subsidiaries, joint ventures and business partners. The policies prohibit child labor, human trafficking, forced labor and employment discrimination. Also, there is zero tolerance for discrimination based on gender, sexual orientation, race, social status, age, marital status, language, religion, political affiliation or appearance. Freedom of association and collective bargaining are allowed and respected.

In addition, all cement and RMC plants in Taiwan, mainland China and the operation headquarters are ISO 45001 certified.

**Supply chain**



The Issuer has policies and measures in place to systematically ensure that high environmental standards are respected in the supply chain. TCC's [Supplier Code of Conduct](#) requires suppliers to consider environmental protection, reducing pollution during production and manufacturing processes, conserving resources, reducing waste, and recycling. TCC supports [green procurement](#) and prioritizes products that are government certified ecolabels. Furthermore, ESG questionnaires are issued and required to be

completed by suppliers as part of its auditing process, and suppliers that are unable to meet the required standards are put through a mentoring partnership program called the Sustainable Supplier Management Process.<sup>21</sup> The process references the United Nations Global Compact and integrates the principles of ISO 20400, and involves five steps: i) risk and impact assessment, ii) sustainability performance evaluation, iii) correction and improvement, iv) training, empowerment and cooperation capacity-building program, and v) supervision, assessment and mutual learning.



The Issuer has policies and measures in place ensuring high labor, health and safety standards are respected in the supply chain. The Supplier Code of Conduct ensures the respect of the fundamental labor rights such as freedom of association and collective bargaining, prohibition of forced labor, prohibition of child labor, and prohibition of discrimination. Also, suppliers must perform health and safety audits, training on relevant issues and emergency response measures. Furthermore, TCC's Supplier Code of Conduct is binding and required to be signed by suppliers as an acknowledgement of its policies. Additionally, suppliers that have a poor supplier rating, raise significant environmental and labor, health and safety concerns, or are unwilling to sign the Supplier Code of Conduct will not be procured and used.

**All infrastructure projects**

**Community dialogue**



The Issuer has policies and measures in place to ensure community dialogue is part of its planning process. TCC has established channels to connect with local communities and participates in industry associations to ensure community rights. As part of its just transition, TCC applies for tribal consultations to protect residents' rights and has published a [Stakeholder Engagement Policy](#) to increase information. The Issuer is also piloting the Corporate Sustainability Due Diligence Directive in Taiwan, which covers all relevant stakeholders, employees, customers, communities, Indigenous groups, suppliers and contractors. TCC will track, mitigate and use remedying management mechanisms to achieve low residual risk. Stakeholder engagement guidelines include identifying, analyzing, prioritizing and determining stakeholders to address the viewpoints of the various groups and encourage participation, risk management, review and reporting, information disclosure, and management of responsibilities. In addition, TCC provides workshops, education and training to promote negotiation.

**Conservation and biodiversity management**

<sup>21</sup> As outlined in TCC's [2023 Sustainability Report](#).

The Issuer has policies and measures in place systematically ensuring biodiversity conservation and management are considered. TCC has a [Biodiversity Policy](#), a [No Deforestation Commitment](#) and a Biodiversity Management Plan in high biodiversity risk areas. TCC does not operate in International Union for Conservation of Nature Category I-IV protected areas, UNESCO-designated World Heritage Sites and Biosphere Reserves, wetlands designated under international conventions (such as the Ramsar Convention), and key biodiversity areas.



The Issuer performs environmental impact assessments (EIAs) of its mines and biodiversity risk assessments of its cement plants and mines in all locations, according to local environmental regulation. For the operations sites with a high risk of biodiversity impact, TCC creates restoration and monitoring projects. In addition, TCC adheres to the Sustainability Guidelines for Quarry Rehabilitation and Biodiversity Management established by the Global Cement and Concrete Association, which includes having biodiversity management plans. Furthermore, TCC implements environmental rehabilitation plans, environmental and social impact assessments, and biodiversity risk assessment studies. TCC also participates in the Taskforce on Nature-Related Financial Disclosures (TNFD) program and has aligned with the Science Based Targets for Nature and the Net Impact Assessment of Biodiversity in the Cement Sector, assessing the feasibility of achieving no net loss and net positive impact.

**Manufacture of Cement**

**Environmental impacts**



The Issuer has policies and measures in place systematically ensuring that assets financed under this Framework have clear processes in place to reduce water use and feature measures for solid waste disposal to avoid risk of contamination of land and aquifers. TCC implemented targets to reduce water use within its cement production processes, aiming for significant reductions by 2030. The Company [aims](#) to reduce water withdrawal intensity by 50% in its Taiwan operations and by 30% in its mainland China facilities, using 2016 as a baseline. To support this, TCC implemented a water footprint management platform to monitor and optimize water use, recycling and discharge across its plants. In addition, TCC cement plants and RMC plants in Taiwan and mainland China are ISO 14046 and ISO 46001 certified. Finally, TCC's Hualian Hoping and Yilan Suao plants in Taiwan hold Alliance for Water Stewardship Platinum Certification. Regarding solid waste disposal, the Issuer confirms that all waste from TCC plants is treated per regulations. TCC follows ISO 14001 certification, which entails that waste management regulations are established at each operation location.

- ✓ The Issuer has EIAs and specific geological studies for carbon capture, utilization and storage (CCUS) for its cement production. TCC does not currently involve underground storage in its Taiwan plants because regulations do not allow for geological storage of CO<sub>2</sub> as it is located in an earthquake zone. However, outside of Taiwan, TCC is collaborating with Thyssenkrupp Polysius, a German cement company, to develop an innovative carbon capture technology using pure oxyfuel technology to increase the concentration of carbon dioxide produced during clinker calcination. The [project](#), set to complete by 2026, aims to commercialize the technology by 2030, capturing over 100,000 tons of carbon dioxide annually. Furthermore, the Issuer confirms that all projects respect each Technical Screening Criteria of the EU Taxonomy Activity 5.12 when financing CCUS projects.
- ✓ The Issuer confirms that it currently does not have any CCUS projects and hence does not have any policies or measures regarding leakage checks and monitoring for CO<sub>2</sub> storage. However, the Issuer confirms that all projects respect each Technical Screening Criteria of the EU Taxonomy Activity 5.12 when financing CCUS projects. The Issuer confirms that it will put measures in place to ensure that the CO<sub>2</sub> is permanently and safely stored (including leakage checks and monitoring). TCC also confirms that if the activity is unable to respect the Technical Screening Criteria of the EU Taxonomy and the measures and policies that ensure CO<sub>2</sub> is permanently and safely stored, then the activity will be removed from the green bond/loan financing portfolio.
- ✓ The Issuer confirms that it currently does not have any CCUS projects and hence does not have any policies or measures regarding energy efficiency of CCUS projects. However, the Issuer confirms that all projects respect each Technical Screening Criteria of the EU Taxonomy Activity 5.12 when financing CCUS projects. The Issuer confirms that it will put measures and policies in place to ensure that CCUS projects financed are energy efficient. TCC also confirms that if the activity is deemed to be not energy efficient, then the activity will be removed from the green bond/loan financing portfolio.

**Waste Management**

**Waste reduction**

- ✓ The Issuer has measures systematically ensuring that assets financed under this Framework provide for high recycling of waste component measures. TCC has set waste reduction and recycling targets as part of its sustainability strategy. TCC aims for a 0.5% annual reduction in general waste from cement and ready-mix concrete plants. In addition, cement plants set a goal in 2024 to achieve 100% conversion of waste into renewable and energy resources, achieving 100% zero waste to landfill. To achieve those targets, TCC's plants

are ISO 14001 certified to ensure each site establishes waste management and reduction procedures. To optimize recycling and waste reduction, TCC utilizes high-temperature, high-retention kilns to treat industrial waste. Additionally, the Company aims to lower clinker use by substituting alternative raw materials and, through partnerships with industry associations and businesses, acquire and repurpose waste materials from other sectors.<sup>22</sup>

**Wastewater**

**Environmental impacts**



The Issuer has policies and measures in place that systematically ensure assets financed feature measures to reduce the environmental impacts of sewage sludge disposal. The Issuer states that TCC does not emit any sludge or industrial waste material into sewage systems and subsequently to the environment. The Issuer confirms that it collects sludge and industrial waste material and uses them for cement kiln co-processing units. The Issuer states that its Water Management Commitment was published in July 2024, where TCC has made commitments regarding wastewater discharge, including regularly monitoring and testing the quality of discharge water and wastewater for reducing hazardous substances in wastewater. The Issuer has identified its main source of wastewater from its manufacturing processes and employees. The Issuer confirms that it has measures and facilities in place to ensure that wastewater discharged complies with local standards and regulations, including concentrated treatment and sedimentation basins. The Issuer also confirms that TCC also implements membrane bioreactor treatment systems for wastewater treatment in Taiwan and implemented wastewater recycling facilities across all locations that collect and recycle wastewater from the manufacturing process. The Issuer also regularly monitors its water treatment systems in cement production units to ensure effective treatment of effluents before being discharged to the receiving environment.

**Wastewater, Water Supply**

**Environmental impacts**



The Issuer has policies and measures in place systematically ensuring that assets financed feature clear measures for leak detection methods and repair systems. The Issuer’s Water Management Commitment, published in July 2024, includes commitments to ensure the reduction of water consumption and leakage. The Issuer confirms that all of its cement manufacturing plants are ISO 46001 certified. The Issuer also states that its cement manufacturing plants are required to submit water withdrawal, usage and discharge data monthly to

<sup>22</sup> As outlined on Page 81 of TCC’s [2023 Sustainability Report](#).

identify water withdrawal irregularities and potential leakages. Furthermore, the Issuer confirms that its financed assets beyond cement manufacturing also apply measures for leak detection and repair systems, including regular inspections and routine audits to ensure compliance and efficiency.

### **Geothermal Energy**

#### **Environmental impacts**

✓ The Issuer has policies and measures ensuring that assets will provide for mechanisms to avoid contamination of soil and groundwater. The Issuer states that EIAs are conducted to identify risks regarding geothermal energy projects during the construction and operation phases. The Issuer states that during operations, groundwater is extracted and flows back through pipelines directly, avoiding contamination to soil and groundwater. Furthermore, the Issuer expects to finalize and publicly disclose its geothermal policy that addresses the development, production, use and management of geothermal energy by the first quarter of 2025.

✓ The Issuer does not have policies and measures ensuring that assets will include considerations on proximity of major fault lines and seismic monitoring. The Issuer confirms that, prior to drilling operations, TCC will first undergo geographical and geological assessments that include considerations and assessments for proximity from major fault lines. The Issuer also confirms that seismic hazards are monitored and reported according to requirements from local regulations.

### **Marine Energy**

#### **Conservation and biodiversity management**

✓ The Issuer confirms that it currently does not have any marine energy projects and is currently only conducting a feasibility study for one location. The Issuer states that it conducts EIAs according to local regulatory requirements. The Issuer states that it conducts feasibility studies, cultural heritage surveys and ecological impact surveys for its projects, as well. Furthermore, the Issuer states that underwater pipelines are installed beneath the seabed for water depths within 50 meters, and for pipelines in depths of 50-600 meters underwater pipelines are placed on the seabed, avoiding disruptions to ocean currents and flow regimes in the ocean. Furthermore, while the Issuer currently does not have measures and policies that monitor long term impacts on the seabed by marine energy projects, it will put relevant measures and policies in place. The Issuer also confirms that the activity will be removed from the green bond/loan financing portfolio if the projects do not employ the measures and policies to monitor long term impacts on the seabed.

**Environmental impacts**



The Issuer has policies and measures that ensure chemicals such as hydraulic oils and lubricants are safely stored, and leak detection methods, repair systems and emergency response measures are in place. However, the Issuer states that oily items are managed individually from other material, and oil intercepting and retaining equipment is installed in the respected storage areas to prevent leakage. Other chemical storage sites are equipped with monitoring systems for potential leakages. TCC also regularly conducts emergency drills for oil and chemical leakages. The Issuer states that no chemical leakage is identified in its projects regarding marine energy, and therefore does not require regular active inspections.



The Issuer confirms that it currently does not have any marine energy projects, therefore does not have policies and measures that ensure the marine energy projects financed will provide for the protection of habitats and wildlife during construction and operation, specifically for addressing underwater noise and electromagnetic fields. TCC confirms that underwater cultural heritage surveys are completed, and ecological surveys and EIAs are ongoing. The Issuer states that the first-stage capacity for the project is expected to be 1-2 MW, with plans for grid connection by 2028. The Issuer confirms that there will be policies and measures in place that provide for protection of habitats and wildlife, specifically for underwater noise and electromagnetic fields. The activity will be removed from the green bond/loan financing portfolio if the projects do not employ the measures and policies.

**Renewable Energy Components**

**Environmental impacts**



The Issuer has policies and measures that systematically ensure assets provide for monitoring technologies ensuring high operational standards. The Issuer states that it has implemented SCADA systems in Taiwan, where the Issuer's only business unit involving renewable energy components is located.

**Charging Station and Networks**

**Information technology security**



The Issuer has policies and measures in place systematically ensuring that minimum requirements for data and information security and data security in outsourced data processing are met. TCC has implemented a comprehensive [Information Security Policy](#) that includes the establishment of an Information Security Management Committee aligned with ISO 27001 standards. This committee is tasked with protecting the confidentiality, integrity and



availability of critical information systems and data. It also facilitates and audits the group's information security management system. In addition, TCC has a clear process for information security incidents, including analysis and identification via a flow chart for notification and information security to minimize misjudgment. Verified incidents trigger responses based on their security level (1 to 4). The incidents are then monitored, reported and corrected to prevent recurrence.

**Green Buildings**

**Environmental impacts**



The Issuer provides company policies and measures ensuring that current and future assets will provide for sustainable procurement of materials. Aligned with its [Environmental Protection Policy](#), TCC is committed to promoting green consumption and green product procurement. According to the [Green Procurement Policy](#), TCC aims to increase the proportion of locally sourced materials — both raw and non-raw — while also prioritizing office equipment with ecolabels and energy efficient certifications (e.g., FSC/PEFC certified paper products and ENERGY STAR certified devices). TCC avoids overly packaged products, encourages the use of renewable materials and actively supports recycling and material reuse. Additionally, TCC minimizes products containing toxic or hazardous substances in its operations.

**Site location**



The Issuer confirms that all green buildings financed under this Framework are located within a maximum of 1 kilometer from one or more modes of public transport.

**User safety**



The Issuer has measures and policies in place systematically ensuring that assets financed under this Framework provide for measures to ensure operational safety in buildings (i.e., emergency exists, fire sprinklers, fire alarm systems). The company has measures in place to foster health and safety awareness among employees through education and training initiatives.<sup>23</sup> TCC provides annual training on labor safety and accident prevention, emphasizing effective management of workspaces, equipment and hazardous materials. Additionally, fire safety drills are conducted, alongside continuous training in first aid, handling hypoxia risks and using safety equipment. Employees also participate in safety seminars and certification programs organized by government agencies. All cement and RMC plants in Taiwan, mainland China

<sup>23</sup> As outlined on pages 147-148 of TCC's [2023 Sustainability Report](#).

and the company’s operational headquarters are ISO 45001 certified, ensuring adherence to high safety standards. Furthermore, TCC implemented multiple operational safety measures in buildings, such as emergency exits, fire sprinklers and fire alarm systems, to ensure a safe work environment.

**Biomass, Waste Management**

**Environmental impacts**



The Issuer has policies and measures in place to systematically ensure cogeneration technology is applied to its biomass and waste management projects. TCC confirms that only one of its subsidiaries, CIMPOR, is relevant to the activities, and confirms that it systematically applies cogeneration technology.

**Battery Production Plants**

**Environmental impacts**



The Issuer has measures in place to ensure that the projects’ components are taken back and recycled at the end of their lives. The Issuer states that its battery production business, Molicel, aligned with EU regulations and launched a battery recycling program to connect recyclers and material suppliers to recycle and reuse cathode materials. The Issuer also states that it is looking to expand the recycling program toward other raw materials and finished products. Furthermore, Molicel has established a closed-loop recycling system for solvents and has transitioned product designs from NMP systems to water-based systems. For projects regarding solar power and renewable energy components, TCC confirms that all modules purchased are required to pay a recycling fee to ensure that renewable energy modules adhere to a circular economy model that incorporates end-of-life considerations. Regarding projects related to circular economy and energy efficiency, TCC’s suppliers are responsible for managing the products’ end-of-life recycling. The Issuer also confirms that it currently does not have any marine energy projects and therefore does not have policies and measures that ensure the marine energy projects’ components are taken back and recycled at the end of their lives. TCC currently only conducts a feasibility study for one location, and that there will be policies and measures regarding end-of-life recycling in place. The activity will be removed from the green bond/loan financing portfolio if the projects do not employ the measures and policies

**Battery Production Plants, Circular Economy, Energy Efficiency, Solar Power**

**Environmental impacts**



The Issuer has policies and measures in place that systematically ensures assets fulfill the threshold defined by the European Directive on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS Directive).

### Charging Stations and Networks

#### Environmental impacts



The Issuer has measures in place to ensure that life-cycle assessments (LCAs) are conducted. The Issuer states that its business entity specializing in charging stations and networks services, NHOA, conducts LCAs for its charging stations and networks projects and states that the LCAs are conducted by external third parties.

### Circular Economy, Electric and Alternative Drive Vehicles, Renewable Energy Components

#### Environmental impacts



TCC confirms that LCAs are conducted to ensure compliance with relevant regulations and calculates the environmental impact of products or services throughout their entire life cycle.

### Concentrated Solar Power, Green Buildings, Sustainable Forestry, Water Supply

#### Water use reduction



The Issuer has policies and measures in place systematically ensuring that assets provide for water use reduction measures and strategies. The Issuer's Water Management Commitment was published in July 2024 and includes commitments to ensure the reduction of water consumption and identify opportunities and measures for water efficiency improvements, including the application of water recycling and reuse and development of diverse water sources.<sup>24</sup> The Issuer also established water reduction targets, with an annual water consumption reduction target of 0.5% for cement manufacturing plants in general, and an annual water consumption reduction target of 1.2% for cement manufacturing plants located in areas with high water stress. Furthermore, the Issuer has implemented various measures geared toward reducing water consumption, including implementing water recycling systems for water reuse, enhancing water consumption equipment, installing water conservation devices and implementing rainwater collection systems.

### Afforestation and Reforestation

<sup>24</sup> Ibid.

**Conservation and biodiversity**

- ✓ The Issuer has policies and measures to ensure that only species native to the area are identified and introduced in conservation efforts, and steps are taken to prevent monoculture practices. The Issuer states that it implements the LEAP approach (locate, evaluate, assess, prepare) as suggested by the [Taskforce on Nature-Related Financial Disclosures](#) as part of its overall biodiversity evaluation process. It also applies the methodology for Net Impact Assessment of Biodiversity in the Cement Sector, which aims for net positive impact by 2040 for its long-term restoration projects.
- ✓ The Issuer has policies and measures to ensure that projects financed prohibits the use of pesticides, chemical fertilizers or additives that could harm biodiversity.<sup>25</sup>
- ✓ The Issuer has policies and measures to ensure that projects conduct biodiversity baseline surveys and that conservation goals are clearly defined and regularly monitored. The Issuer states that it collaborates with experts to conduct ecological surveys, assessments and studies regarding carbon sequestration and biodiversity.<sup>26</sup> The Issuer states that it implements the TNFD’s LEAP approach as part of its overall biodiversity evaluation process. TCC also applies the methodology for Net Impact Assessment of Biodiversity in the Cement Sector, which aims for net positive impact by 2040 for its long-term restoration projects.<sup>27</sup> Furthermore, TCC states that it has defined a conservation goal based on the number of indigenous tree species planted, alongside third-party experts.

**Fire management**

- ✓ The Issuer commits to develop a policy regarding fire management to plan, prevent and fight fires, given that it currently does not have any fire management policies in place. The Issuer confirms that live afforestation and reforestation projects are currently ineligible for refinancing and will be considered eligible under the Framework when TCC has developed and implemented the fire management policy. The Issuer will consider new eligible projects under the Framework only after it develops and implements a fire management policy.

**Water stress**

- ✓ The Issuer commits to develop an action plan for water impact assessments and mitigative measures in case water scarcity is aggravated in areas where

<sup>25</sup> As outlined in TCC’s [2023 Sustainability Report](#).

<sup>26</sup> As outlined in TCC’s [2023 TNFD Report](#).

<sup>27</sup> Ibid.

TCC looks to conduct afforestation and reforestation projects, given that TCC currently does not have any water scarcity policies in place. Live afforestation and reforestation projects are currently ineligible for refinancing and will be considered eligible under the Framework when TCC develops and implements an action plan for water impact assessments and mitigative measures in case water scarcity is aggravated. The Issuer will consider new eligible projects under the Framework only after it develops and implements the water action plan.

### **Marine Ecosystem Restoration**

#### **Conservation and biodiversity management**



The Issuer has policies and measures to ensure that projects conduct biodiversity baseline surveys and that conservation goals are clearly defined and regularly monitored. The Issuer states that it has conducted a biodiversity baseline survey in collaboration with the National Taiwan Ocean University and has conducted an identification and distribution survey of coral species in the areas where the Issuer plans to launch a coral restoration and rehabilitation project, supported by the Taipei University of Marine Technology. The Issuer also states that it has partnered with the Taiwan University of Marine Technology to conduct quarterly surveys on the biodiversity in areas installed with artificial reefs, and conducts coral spawning monitoring quarterly with National Dong Hwa University. Furthermore, the Issuer states that it has collaborated with external third parties to define a measurable conservation goal from 2024 to 2026 for artificial reef installation based on the number and types of reefs planted and the number of piers covered.



The Issuer has measures in place to ensure that installed artificial reefs do not negatively impact the health of nearby wildlife and do not involve illegal dumping of waste and debris. The Issuer has conducted EIAs prior to beginning its BioCube Coral Creation Project, with assessments covering water quality, ecology, hydrology, bed load, nutrient salts and soundscape. Regular inspections are conducted to ensure that installed artificial reefs do not negatively impact the health of nearby wildlife. Furthermore, TCC confirms that artificial reefs used do not involve illegal dumping of waste and debris.

## PART III: CONSISTENCY OF GREEN FINANCING INSTRUMENTS WITH TCC'S SUSTAINABILITY STRATEGY

*Key sustainability objectives and priorities defined by the Issuer*

TOPIC	ISSUER APPROACH
<p><b>Strategic ESG topics</b></p>	<p>TCC has a strategic ESG focus that centers around three pillars — low-carbon construction materials, resource recycling and green energy — to balance human development with environmental sustainability, fostering societal inclusion and coprosperity with nature. This includes optimizing equipment and processes; utilizing waste heat recovery for power generation; incorporating alternative raw materials, clinker and fuels; deploying renewable energy and energy storage solutions; and investing in carbon-negative technologies like batteries and charging services.</p>
<p><b>ESG goals/targets</b></p>	<p>TCC is committed to achieving 2050 net-zero goals, including concrete carbon neutrality, guided by the SBTi's 1.5°C targets and ISO's IWA 42:2022 net-zero guidelines, with targets for 2030 and 2050 and net-zero goals. In 2024, TCC released a detailed 2050 Net-Zero Roadmap for its cement and concrete businesses, outlining strategies to reach the interim 1.5°C target. By 2023, 68% of TCC's capital expenditure (TWD 16.875 billion) was allocated to carbon reduction and green investments. Subsidiaries including CIMPOR and OYAK Cement are part of the Business Ambition for 1.5°C campaign, with OYAK leading in Turkey's cement sector for net-zero commitments. TCC also aims to phase out coal power by 2040.</p>
<p><b>Action plan</b></p>	<p>The Issuer has a plan for achieving its ESG goals that focuses on three key areas: low-carbon construction materials, resource recycling and green energy.</p> <p>For low-carbon construction materials, TCC adopts advanced pollution control technologies and has exceeded its <a href="#">EP100</a> energy efficiency target by 40%, aiming for a 50% improvement by 2040.</p>

	<p>For resource recycling, TCC develops alternative fuels and raw materials and uses a circular economy model to reduce carbon emissions and address waste challenges.</p> <p>For green energy, TCC invests in energy storage solutions through partnerships with ENGIE EPS, NHOA Energy and EnergyArk to stabilize renewable energy use. Additionally, Molicec focuses on high-performance batteries, including the world's first 100% green-powered low-carbon battery cell plant.</p>
<p><b>Climate transition strategy</b></p>	<p>TCC has set both short- and long-term targets for reducing emissions, committing to strict scientific standards, including the 2050 net-zero target, concrete carbon neutrality and 2050 science-based targets as goals for comprehensive carbon reduction strategies. In 2024, TCC released its Road Map to 2050 Net-Zero Pathway for the Cement and Concrete Business Units Worldwide, indicating the feasibility of achieving the SBTi's interim 1.5°C target the Company submitted in 2024 and formulating a detailed net-zero pathway process. TCC's 2050 net-zero roadmap for its cement and concrete businesses follows the SBTi's 1.5°C methodology and ISO's IWA 42:2022 net-zero guidelines, with targets for 2030 and 2050 and net-zero goals.</p>
<p><b>ESG risk and sustainability strategy management</b></p>	<p>TCC has established a Risk Management Committee to conduct risk identification and analysis on seven aspects,<sup>28</sup> including ESG-related aspects based on the Company's Corporate Social Responsibility Best Practice Principles and Risk Management Committee Charter. Through this risk management process, the committee develops risk mitigation strategies with plans for continuous monitoring and review of the implementation status of these strategies. The committee reports to the Company's board of directors on the risk management status annually.<sup>29</sup></p>

<sup>28</sup> Operations, finance, national security, legal compliance, ESG (including biodiversity), personnel and information security.

<sup>29</sup> As outlined in TCC's [2023 Sustainability Report](#).

	<p>The Issuer implements a comprehensive ISO 14001 certified environmental management system to effectively manage environmental risks and enhance performance, along with ISO 14064 verification for its GHG emissions inventory to ensure accurate quantification and reporting. Additionally, TCC adheres to multiple international standards, including ISO 45001 for occupational health and safety, ISO 37001 for anti-bribery measures, ISO 46001 for water efficiency management, ISO 50001 for energy management, and ISO 9001 for quality management and assurance. These certifications reflect TCC’s commitment to sustainability, safety and operational excellence.</p>
<p><b>Sustainability reporting</b></p>	<p>The Issuer reports on its ESG performance and initiatives annually in its Sustainability Report. The report is prepared according to the Global Reporting Initiative and Sustainability Accounting Standards Board.</p>
<p><b>Industry associations, collective commitments</b></p>	<p>TCC serves as a member of the professional committee in the Taiwan Business Council for Sustainable Development and the Association of Taiwan Net Zero Emissions. TCC is also a member of the Taiwan Society for Circular Economy, Center for Corporate Sustainability, Business for Nature and ESG Global Views Common Good Ecosphere.<sup>30</sup></p> <p>Furthermore, TCC has collaborated with the Global Cement and Concrete Association on projects regarding green procurement issues, low-carbon products and net-zero emissions issues, and collaborated with the Taiwan Cement Manufacturers’ Association on the guidelines for safety and health at work for the cement industry.</p>
<p><b>Previous sustainable/sustainability-linked issuances or transactions and publication of sustainable financing framework</b></p>	<p>In September 2023, TCC <a href="#">issued</a> a green bond and published its Green Financing Framework, which amounted to USD 420 million raised in 2023.</p>

<sup>30</sup> Ibid.



*Rationale for issuance*

TCC is strongly committed to enhancing sustainability in its entire operations and value chain, and its Green Financing Framework is a step toward aligning its financing strategy with its sustainability commitments of low-carbon construction materials, resource recycling and green energy. The Framework creates further opportunity for the Issuer to communicate with investors and other market participants on their commitments. The Issuer's aim will also be to diversify TCC's investor base and engage in a sustainable dialogue with socially responsible investors.

**Opinion:** *The key sustainability objectives and the rationale for issuing green financing instruments are clearly described by the Issuer. All of the project categories financed are in line with the Issuer's sustainability objectives.*

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## ANNEX 1: METHODOLOGY

The ISS-Corporate SPO provides an assessment of labeled transactions against international standards using ISS-Corporate's proprietary [methodology](#).

## ANNEX 2: QUALITY MANAGEMENT PROCESSES

### SCOPE

TCC Group Holdings Co. Ltd. commissioned ISS-Corporate to compile a green financing instruments SPO. The second-party opinion process includes verifying whether the Green Financing Framework aligns with the GBP and GLP and assessing the sustainability credentials of its green financing instruments, as well as the Issuer's sustainability strategy.

### CRITERIA

Relevant standards for this second-party-opinion:

- Green Bond Principles, ICMA, June 2021 (with June 2022 Appendix 1)
- Green Loan Principles, LMA, February 2023

### ISSUER'S RESPONSIBILITY

TCC Group Holdings Co. Ltd.'s responsibility was to provide information and documentation on:

- Framework
- Eligibility criteria
- Documentation of ESG risk management at the Framework level

### ISS-CORPORATE'S VERIFICATION PROCESS

Since 2014, ISS Group, which ISS-Corporate is a part of, has built up a reputation as a highly reputed thought leader in the green and social bond market and has become one of the first CBI-approved verifiers.

This independent second-party opinion of the green financing instruments to be issued by TCC Group Holdings Co. Ltd. has been conducted based on proprietary methodology and in line with the Green Bond Principles and Green Loan Principles.

The engagement with TCC took place in October and November 2024.

### ISS-CORPORATE'S BUSINESS PRACTICES

ISS-Corporate has conducted this verification in strict compliance with the ISS Group Code of Ethics, which lays out detailed requirements in integrity, transparency, professional competence and due care, professional behavior and objectivity for the ISS business and team members. It is designed to ensure that the verification is conducted independently and without any conflicts of interest with other parts of the ISS Group.

## About this SPO

Companies turn to ISS-Corporate for expertise in designing and managing governance, compensation, sustainability and cyber risk programs that align with company goals, reduce risk and manage the needs of a diverse shareholder base by delivering best-in-class data, tools and advisory services.

ISS-Corporate assesses alignment with external principles (e.g., the Green/Social Bond Principles), analyzes the sustainability quality of the assets and reviews the sustainability performance of the Issuer itself. Following these three steps, we draw up an independent SPO so investors are as well-informed as possible about the quality of the bond/loan from a sustainability perspective.

Learn more: <https://www.iss-corporate.com/solutions/sustainable-finance/bond-issuers/>.

For more information on SPO services, please contact: [SPOsales@iss-corporate.com](mailto:SPOsales@iss-corporate.com).

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