

# 2025 TCC Just Transition Report



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## Foreword

As the TCC Sustainability Team puts pen to paper for this report, our hearts are heavy with complex emotions, especially in light of the recent fire at our group's Molie Quantum Energy Xiaogang plant. We are keenly aware that no written promise can replace real-life experience, and this recent incident has given us our most profound understanding that safety, which we had taken for granted, is actually the cornerstone of all transformation and development. The core of a just transition lies in ensuring that every stakeholder is properly cared for during the process of transformation and is neither sacrificed nor forgotten because of change. We must face head on the concerns and anxieties in the hearts of all our stakeholders. This issue is not just a corporate social responsibility; it is the key to achieving true sustainable development.

We have come to the deep realization that, although TCC has a grand vision and strong beliefs on its path to low-carbon transition and has invested in advanced research, development, and talent cultivation, the most critical link in the transformation roadmap is actually trust: trust from the community, from our employees, and from every partner. In the past, the manufacturing industry often tried to handle trust with technical expertise, but we have long understood from our communication process between the cement plant and the local community that this mindset needs a fundamental change. The fire incident at our green energy business served as a profound reminder that this lesson has not yet been fully implemented in every business unit, especially in the emerging fields of our transition.

This challenge is not the only one we have encountered on our transformation journey. Over the past eight years, TCC has continuously learned and evolved from the setbacks it has faced. Whether communicating with the local community in Hualien about the resource circulation model of high-temperature co-processing technology in cement kilns or building the green energy industry chain, truly achieving justice requires in-depth, honest, and two-way dialogue with the local community. When our license for an aquavoltaics project was revoked due to a dispute with an individual fish farmer, it taught us that a closer understanding of and companionship with the local community can build deeper trust. We immediately put this lesson into practice. After a major typhoon hit southern Taiwan in July, we worked with suppliers to help repair elderly villagers' damaged roofs. At the same time, we invested in the Green Care project for the elderly communities surrounding the aquavoltaics project site.

In the Ho-Ping Industrial Zone in Hualien, which is undergoing active transformation, we chose a daily-life approach like the "Carbon Reduction Parent-Child Bankbook" to walk into the tribes neighboring the industrial zone. We adopted this approach not only to achieve knowledge popularization, but also to initiate dialogue efforts, conveying that net-zero emissions can help address global warming while ensuring the common well-being of all. Although such efforts might seem like an extremely taboo direct conversation to many, we firmly believe that it is a necessary path for building trust and sustainable development.



The TCC Group's transformation has never been only a single storyline of moving from cement to green energy. On our journey across 11 diverse industries with a footprint in Asia, Europe, and Africa, each industry has raised different challenges, and the stakeholders in each location are unique. Fully promoting a just transition is an extremely daunting task that involves not only in-depth communication with external stakeholders, but also internal governance challenges within the group. TCC transformed into a group holding company in 2024. In the process of expanding to span multiple industries and regions, we have continuously explored and optimized our understanding of how to provide appropriate management and effective authorization to each subsidiary, allowing them to maintain operational flexibility while ensuring the implementation of the group's sustainability spirit. We are actively reviewing and adjusting the group's internal governance model to ensure that all business units regard safety and the just transition as their top priorities.

TCC's Office of Responsibility & Sustainability



## Our Commitment To Just Transition

The 2015 Paris Agreement underscored the importance of a just transition for the workforce. The International Labour Organization (ILO) also provides relevant guidance. The spirit advocated by these international trends perfectly aligns with our own corporate sustainability mission of "seeking a balanced relationship between human civilization and nature" and "pursuing the interests of society."

In our journey toward achieving a net-zero transition, we adhere to TCC's "Stakeholder Engagement Policy" by proactively maintaining open dialogue with all parties, including our employees, the communities where we operate, our supply chain partners, and our consumers. This action is how we comprehensively implement our Total Care Commitment and Total Climate Commitment.

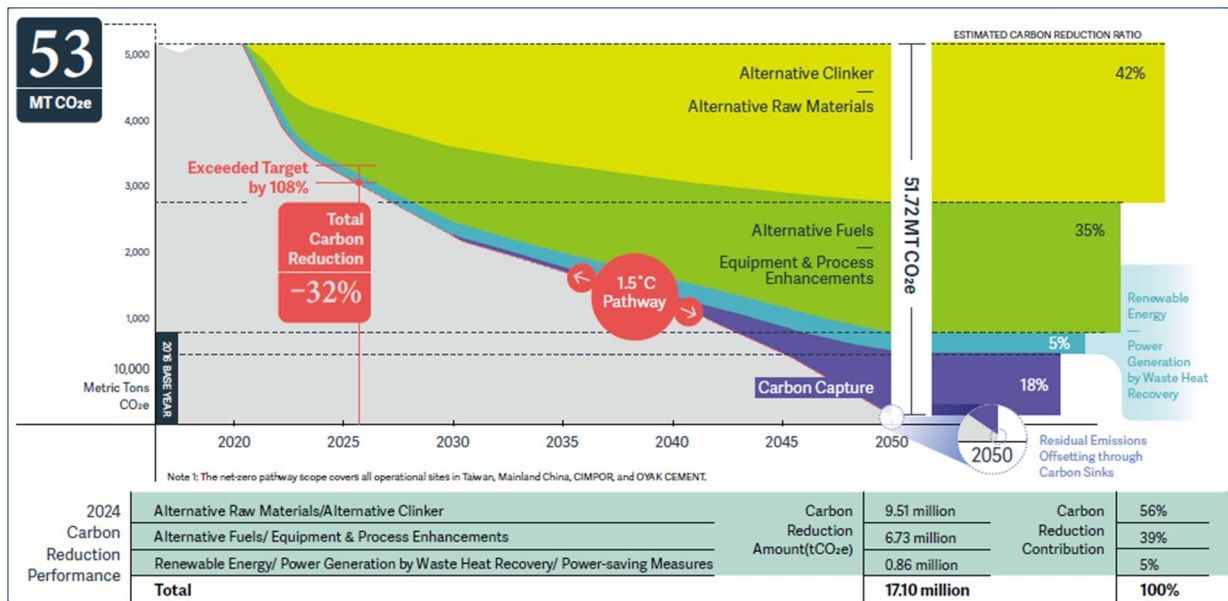
To this end, we are dedicated to establishing distinct engagement strategies and methods for different stakeholder groups. We aim to gain a deeper understanding of their perspectives and expectations, evaluate the potential impacts of the transition, and seek a viable and achievable consensus. We believe that through continuous collaboration with government agencies, non-governmental organizations, and other stakeholders, we can collectively address the challenges brought by the transition and fulfill our corporate sustainability mission positively and fully.

## TCC's Net Zero Journey

TCC's business portfolio spans 11 industries and includes 27 major subsidiaries. Among these, the cement and Energy for Social Transformation businesses (Ho-Ping Power Plant) are not only our primary sources of revenue, but are also hard-to-abate industries, making them key targets for our transition plans. TCC's comprehensive net-zero strategy is guided by the dual core principles of "driving carbon reduction through industrial transition and actively participating in energy transition," thereby steadily and firmly moving toward our long-term goal of having net-zero emissions by 2050.

TCC actively implements climate action. In 2020, it became the first cement company in East Asia to have its targets approved by SBT for the Well-Below 2°C pathway. Over the past four years, it has continuously tracked its carbon reduction performance against SBT targets, successfully meeting its annual reduction goals each year. In 2023, TCC's Scope 1 carbon reduction performance was already on the 1.5°C pathway. In July 2024, it submitted its 2030 carbon reduction targets aligned with the 1.5°C pathway and committed to achieving net-zero emissions by 2050, becoming a net-zero partner of the Science Based Targets initiative (SBTi).

## TCC Global Cement Business Net Zero Roadmap

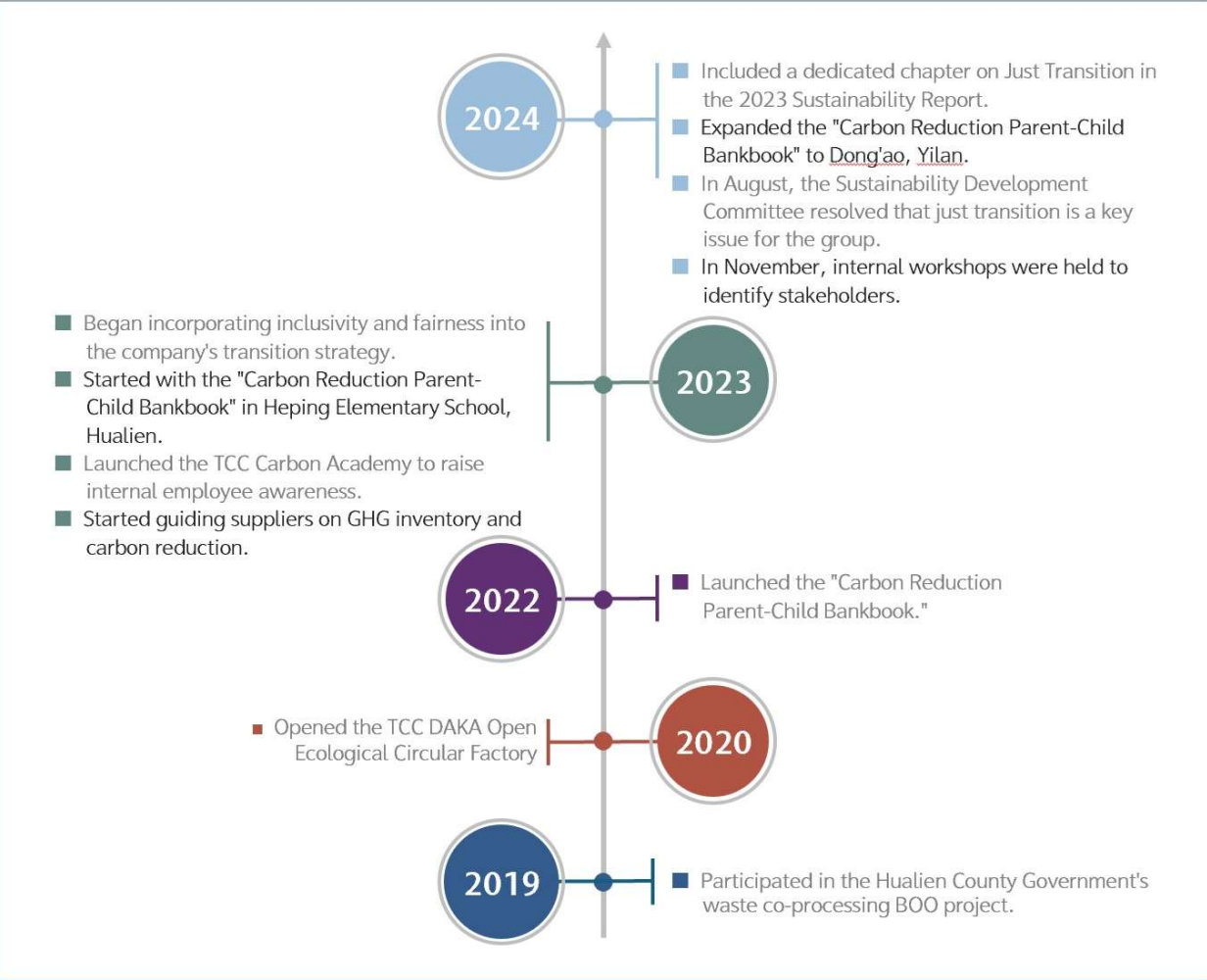


TCC's 2050 global cement and concrete business net-zero roadmap also aligns with the Science Based Target (SBT) 1.5°C methodology and the ISO IWA 42 net-zero guidance, while also referencing the IEA's net-zero roadmap report and the 2024 Energy Outlook report. It primarily uses alternative clinker, alternative raw materials, alternative fuels, waste heat recovery, process improvements, self-generated renewable energy, and carbon capture as its key carbon reduction strategies. For carbon sinks, we initiated forest and soil surveys in 2023 as a viable solution for net-zero carbon removal.

TCC's involvement in diverse industries entails having numerous stakeholders so our cement and energy for social transformation industries each require different net-zero transition strategies. The cement industry is one of the hard-to-abate sectors, as it faces challenges like difficult equipment replacement, high reliance on fossil fuels, and inherent CO<sub>2</sub> emissions from the chemical processes. It thus requires enhanced efficiency, improved processes, increased use of alternative fuels and raw materials, or the promotion of industrial energy transition. This means employees need to receive new skills training, or new job openings may displace existing ones. The Energy for Social Transformation business, which relies on fossil fuel combustion, may thereby face a phase-out and transitioning to other forms of power generation. This transition will have multiple impacts, such as existing employees having to face potential redeployment or reassignment, thereby creating a power gap and further affecting local community economic income.

In 2019, TCC signed a "BOO Contract for Co-processing of Waste" with the Hualien County Government, planning to use the high temperatures of its Ho-Ping cement kiln to assist in treating waste from Hualien County and build gasification furnace equipment. This marked the beginning of our realization of the importance of transitioning together with stakeholders, leading to a series of actions related to just transition.

Through internal workshops initiated in late 2024 and a prioritization assessment that is based on influence, impact, and dependency, TCC has identified the key stakeholders affected by the net-zero transition—primarily employees, local communities, suppliers, and consumers. We will continue to promote relevant and effective initiatives to assist these different stakeholders, as they face the challenges brought by the transition.



## TCC's Just Transition Action Plan

### 1. Employees

In TCC's journey toward net-zero, we deeply understand that the core issue is people. TCC regards its employees as important partners. We fully uphold the principles of "diversity, inclusivity, and equal employment opportunity," ensuring that employees, regardless of their personal gender (including sexual orientation), race, class, age, marital status, or religion, receive equal opportunities and support during the transition. We will also provide employees with the necessary training



opportunities to develop their careers.

In the face of the operational changes brought about by the transition, TCC is committed to "respecting the fundamental human rights of our employees, upholding their right to organize unions and engage in collective bargaining, and also providing diverse communication mechanisms and platforms to ensure harmonious and win-win labor relations." We also follow the spirit of our "Stakeholder Engagement Policy," to ensure positive opportunities for employee or employee representative participation that will foster harmonious and win-win labor relations overall.

## 1.1 Workforce Transition under Dual Transformation: Learning from Practice

The World Economic Forum's "Future of Jobs Report 2025" points out that due to automation, smart technology, and other factors, 156 million new jobs are expected to be created by 2030, while 92 million jobs will be replaced, resulting in a net increase of 78 million jobs. The jobs being replaced are mostly repetitive, routine manufacturing and operational roles. Those with lower skill thresholds and older workers will face higher employment risks <sup>[1]</sup>. Facing this trend, TCC's "dual transformation" is not just a technological evolution but a people-centric transformation.

In order to reduce the impact of automation and AI technologies on employees, we have always believed that talent is one of the most important foundations of a company. Through training and job redesign, we help colleagues acquire new skills and transition into new roles, rather than relying solely on layoffs or redundancies as the only option to meet challenges. In 2022, when unmanned mining trucks were first introduced at our Jurong Plant in Jiangsu, we took the first step in this transformation. By redesigning job responsibilities, we enabled former drivers to successfully transition to new positions while receiving ongoing training and support. This experience further strengthened our conviction that employees are the company's most valuable assets and partners, and that every individual should have the opportunity for continuous growth and development. Continuing this commitment, we have applied the same approach at our Yingde Plant in Guangdong. With more comprehensive training and proactive communication, we anticipate that about 67% of dispatchers in the future will be transitioned from current mine truck drivers.

"I had never been exposed to high-tech things before, so I was hesitant, afraid that I was too old to learn. But the company provided training, and I gradually learned. I used to work outdoors in high temperatures, but now the office environment is more comfortable and also safer." – Boqian Li, a mining truck driver at the Yingde plant, expresses not just his personal feelings, but the most tangible embodiment of TCC's just transition at the workforce level.



## 1.2 Building Green Skills and Transition Awareness

A 2022 document from the EU's "Just Transition Platform" points out that supporting the capacity building of stakeholders is key to ensuring their continuous participation, and emphasizes that "communication must be conducted in a language they can understand" <sup>[2]</sup>. The experience of the South-to-South Just Transition Network further shows that to achieve successful social dialogue, it is necessary to help different stakeholders enhance their relevant knowledge and awareness <sup>[3]</sup>.

Research by the Economist indicates that to promote an organization's green transformation, soft skills are a key factor in addition to professional skills <sup>[4]</sup>. We firmly believe that the key to ensuring employees are not left behind in the transition is to help them cultivate "green skills" and an awareness of "just transition." To this end, we have established a top-down training plan:

- **Aligning with International Trends- The MIT Program:** Since 2020, TCC has participated in the MIT Industrial Liaison Program (MIT ILP), continuously aligning with international innovative thinking and technological development. In 2024, the collaboration deepened, focusing on the core issues of energy and sustainable transition, and expanding to include cooperation with the MIT Energy Initiative (MITeI). The collaboration includes forums, keynote speeches, and online webinars, which have been integrated with our internal learning platform to help key talent grasp global trends, deepen their transitional perspective, and comprehensively promote TCC's dual transformation.
- **Integrating Just Transition into High-Level Governance:** To ensure that just transition permeates our corporate culture, we will formally include the "just transition" topic in our existing governance courses for directors, supervisors, and senior executives starting from the end of 2024. This will deepen their understanding of its importance. We have also invited a just transition scholar with an NGO background to provide professional perspectives and practical insights to our executives.
- **TCC Carbon Academy:** In January 2025, TCC launched the "TCC Carbon Academy" learning platform. With internal and external instructors appointed by the company, it provides all colleagues with a learning map that ranges from basic to advanced, covering "awareness building, professional skills, certification training, trend analysis, and low-carbon living." As of August 2025, the Carbon Academy has launched 26 online courses, allowing our many shift-based colleagues to learn according to their own schedules. The number of online course views by TCC Group employees in Taiwan and Mainland China has reached 48,807, with an average course pass rate of 84%. The "Just Transition" course has a pass rate as high as 89%, demonstrating our colleagues' high level of importance and enthusiasm for the topic, laying a solid foundation for future transition work. Additionally, some certification courses are conducted

in person to ensure learning quality.

- **Empowering Frontline Colleagues for Transition:** Considering that Ho-Ping Power Company, a subsidiary of TCC Group, is set to decommission its coal-fired units by 2040, we have specifically organized a corporate carbon management course for the colleagues at the Ho-Ping Power Plant. This allows them to think from their own perspectives on how to cope with the potential impacts of the transition.
- **Creating Green Job Opportunities through Internal Transfers:** The net-zero transition not only brings challenges but also creates new opportunities. TCC is actively expanding into green energy industries such as solar, wind, geothermal, and energy storage, creating 1,433 green jobs since 2018. At the same time, we promote an internal transfer system, allowing colleagues from traditional manufacturing sectors to learn and start a new chapter in their careers through transfers. Several managers and colleagues from Ho-Ping Power Plant have already successfully transferred to TCC's green energy projects, opening up new career paths. This is not only about the company's sustainable development but also about providing more possibilities for employees' careers.

## 2. Communities

TCC believes that our plants are not isolated entities but rather are the integral part of their surrounding environment and communities. On our net-zero journey, TCC aims to create a positive social impact on the communities where we operate. By deepening our local connections, we seek to enhance residents' awareness of and support for the low-carbon transition and encourage them to take practical actions in their daily lives to jointly build a sustainable future.

### ■ 2.1 TCC DAKA and Building Resilient Communities: Open Communication and Deep Dialogue ■

As early as 2020, TCC began a dialogue with the community with an open attitude, opening up parts of the Hoping cement plant in Hualien to create the TCC DAKA Open Ecological Circular Factory (TCC DAKA). This is not only the first cement plant in Taiwan open to visitors but also the first to integrate a cement plant, industrial port, and power plant in Asia, committed to being a communication platform for transitioning together with society. It allows the public to enter a cement plant in the most natural way and is open 24 hours a day in a friendly manner.

DAKA means "lookout" in the local Taroko language. To date, TCC DAKA park has been visited by over 8 million people, demonstrating our commitment to creating a public space that is friendly and attractive to the public, giving more people the opportunity to get close to and understand industrial



transformation. On the basis of reaching a wide audience, we have engaged in dialogue with 30,666 people through small-group in-depth tours, proactively revealing the process of industrial transformation—from the lower-carbon and more environmentally friendly mining methods to the use of cement bio cubes at the Hoping EcoPort to conserve coral reefs—allowing the public to witness and participate in our sustainability journey. TCC DAKA has thus increasingly become an indispensable part of the life of the surrounding communities. Even after the 2024 Taiwan (Hualien) Earthquake, TCC DAKA was still the third most visited attraction in Hualien in the first half of the year. This figure is particularly significant in the post-disaster context, marking TCC DAKA not only as a tourist landmark but also as an emotional connection that is integrated and coexists with local residents.

## 2.2 From Feedback to Empowerment for Economic Resilience

TCC DAKA is located in Xiulin Township, Hualien, a remote area. TCC DAKA not only shoulders the mission of promoting communication between industry and society but also strives to drive the development of disadvantaged areas by providing non-manufacturing employment opportunities. We provide the space and resources for TCC DAKA market, allowing surrounding community residents to start businesses at a low cost and enhance their self-confidence through self-realization, thereby promoting the rise of local "woman power." Not only have many tribal women started operating handicraft shops, but other stall owners have also successfully developed business models and moved on to open stores in the city or even run travel agencies. Since the establishment of the TCC DAKA park, the non-manufacturing employment rate in the local tribe has increased by 2.5%. This shift from simple feedback to "providing a venue for people to get returns through their own efforts" is our practice of the just transition concept.



The "Hsiu-Hua Workshop," which has been stationed at TCC DAKA for over five years, is the best example. The workshop is run by Ms. Hsiu-Hua Shih-Ma and her sister, Hsiu-Ying Shih-Ma, who are dedicated to preserving the dream of Taroko totem weaving. The shop space at TCC DAKA serves as Ms. Hsiu-Hua's storefront for receiving orders, allowing her to directly converse with visitors while showcasing Taroko totem textiles, turning each unique piece of weaving into a bridge for cultural inheritance and giving traditional craftsmanship a new life in the wave of transformation. Through this in-depth, local, and collaborative approach, we create value together with our community partners.

We also collaborate with well-known brands, such as 7-Eleven and Starbucks' first "Community Store" in Taiwan, selected by the Starbucks global group. This store aims to translate every purchase into a contribution to the local emergency relief fund through a revenue-sharing model, allowing every visitor to DAKA to become a participant in sustainability.

TCC DAKA has also become a base for promoting sustainability initiatives. We incorporate sustainability concepts into daily life by organizing green markets, farmers' markets, and "My Low-Carbon Trip" activities. We also launched the "Good Recycling, Great Hoping Action" smart recycling station, which has collected a total of 79,320 plastic bottles, which were used to make towels for the Taroko Gorge Marathon runners, encouraging everyone to put "carbon reduction" and "resource circulation" into action. TCC DAKA, analyzed using the UK-originated "Social Return on Investment (SROI)" methodology, creates NT3.54 of social value for every NT1 invested. According to a 2022 tribal consultation vote, over 82% of the Wukutzu tribe supported TCC's mining, and in the Knlibu tribe, closest to TCC's Hoping plant, the approval rate exceeded 97%, reflecting the trust relationship built through TCC's long-term local engagement.

### ■ 2.3 Building a Community Safety Network in Daily Life ■

To foster a "resilient community" in partnership with local residents, TCC integrates daily services into community life. We launched the "TCC Home Repair Service", which has assisted 200 households with plumbing and electrical problems. The "Hoping Village Care Bus," which provides free daily round trips from Hoping Village to the nearby city, had served 2,082 people by the end of 2024, making it convenient for all villagers to shop or seek medical care. We also converted an idle old office into a shelter, helping to settle villagers after the 2024 Taiwan (Hualien) Earthquake by providing hot showers and simple cooking facilities that eased the hardship of displacement.

### ■ 2.4 The Carbon Reduction Parent-Child Bankbook: From One-Way Support to Joint Action ■

The "Carbon Reduction Parent-Child Bankbook" originated from TCC's experience in promoting local communication in the Ho-Ping Industrial Zone in Hualien. Its core concept is to transform abstract environmental and climate change issues into concrete actions that residents can participate in. Beyond spreading knowledge on energy conservation and carbon reduction, the program encourages intergenerational participation and dialogue, reinforcing that net-zero is not only an environmental issue but also a matter of shared well-being and survival.

We believe that the challenge of climate change knows no geographical boundaries, but there is a gap in awareness of response actions between residents in metropolitan areas and those in remote regions. Therefore, we firmly believe we must face it "head-on" and use innovative methods to elevate carbon reduction awareness from an "environmental issue" to a level "concerning survival and common well-being." This project was launched at Heping Elementary School in Hualien in 2023, in response to the fact that the younger generation will be on the front lines of the intensifying effects of climate change in the future.



The project uses a "physical bankbook" to record students' daily carbon reduction behaviors, such as recycling and saving electricity, and rewards them with "carbon coins." The accumulated carbon coins can be "traded" at the Hoping plant for products with carbon labels, linking daily environmental actions with tangible rewards and encouraging students to bring their carbon reduction habits from school to their homes. The promotion of this project also began to convey to the residents of Hoping Village that the coal-fired units of the Ho-Ping Power Plant will face decommissioning in the future, which is a practical action for us to think together with local residents on how to embrace a low-carbon future.

In 2024, the project expanded to Dong'ao Elementary School in Yilan, and also invited local employees and the tribal mothers' classrooms in Hoping Village to participate, ensuring that the community is not left behind and benefits simultaneously during the transition process.

Year	Location	Participants
2023	Hualien	■ Heping Elementary School   100% of students
2024	Yilan	■ Dong'ao Elementary School   100% of students
	Hualien	■ Hoping Village employees   112 people ■ Tribal Mothers' Classroom   39 people

## 2.5 Aquavoltaics: Reshaping Community Relations from Setbacks

Taiwan, a densely populated island with limited land resources, is facing the dual challenges of demographic change and climate change. To balance food security, energy development, and rural revitalization, the government has promoted the "aquavoltaics" policy. Supporting Taiwan's energy transition, TCC's subsidiary TCC Chia-Chien Green Energy pioneered the nation's first large-scale aquavoltaics project in Yizhu Township, Chiayi County. Phase I covers Caipu, Dongrong, Longjiao, and Jiangshan villages. As it was the first aquavoltaics project to break ground in Taiwan, with no



precedent to follow and a lack of guidelines at the time, both the TCC Chia-Chien Green Energy team and the local fish farmers were learning as they went. This led to insufficient communication with individual fish farmers and the experience of having our license revoked. This setback prompted us to reflect deeply and realize that only with a closer understanding and companionship with the local community can we build deeper trust and better handle the just transition issues brought by aquavoltaics, including the potential impacts on the livelihoods of local fish farmers and the community.

This realization prompted us to take immediate action. Not only do we recognize the principle of prioritizing fisheries with coexisting power generation, but original fish farmers are also given priority to continue their farming. In Yizhu Phase I, Zones A-F, 48% of the original fish farmers chose to continue farming. For the fishponds where landowners did not wish to continue, we offer rental discounts to local young fish farmers for professional aquaculture and assist them in obtaining production and sales traceability certification. At the same time, after a major typhoon Danas hit southern Taiwan in July 2025, we worked with local suppliers to help elderly villagers repair their damaged roofs.



We also collaborated with community development associations, responding to the Ministry of Agriculture's "Green Care Policy," to launch a project for aging communities, providing a model of co-learning and co-creation for local elders. These actions embody TCC's commitment to being an important part of the community's co-prosperity network, responding to local needs with practical actions.

## 2.6 Molie Plant Fire: Admitting Responsibility and Rebuilding Trust

TCC's investment in the battery business is a crucial part of the group's journey toward net-zero transition and the promotion of new energy businesses. However, on July 14, 2025, a fire occurred at the Xiaogang plant of TCC's subsidiary, Molie Quantum Energy Corp. Although the incident did not cause major casualties, it sparked anxiety among surrounding community residents about the battery plant and highlighted that while pursuing industrial innovation, the foundation of

communication and trust with the local community needs to be strengthened. We are deeply aware that true corporate sustainable development can only take root when the community is seen as an important partner on the transition path, not just a neighbor.

The chairman and management team of TCC express their sincerest apologies to all stakeholders for this incident. After the incident, we have adhered to the principle of openness and transparency. In addition to issuing a press release immediately, we also proactively released reports two weeks and one month after the incident to disclose the investigation progress and response measures to the public.

This incident has caused inconvenience and anxiety for the local community and the environment. To rebuild and strengthen mutual trust with the community, the Xiaogang plant team has established a neighborhood affairs group. In addition to cooperating with public sector monitoring, the Molie Xiaogang plant plans to proactively release third-party monitoring reports on key environmental indicators from August to December in 2025 for community reference, starting in early September. For all subsequent waste removal operations, we will fully communicate with the local village chiefs in advance after complying with regulations and obtaining approval from the public sector.

At the same time, we recognized the importance of caring for our employees. We promptly activated the Employee Assistance Program (EAP), providing multilingual counseling and interest-free emergency loans to support colleagues' physical and mental recovery.

This experience has reinforced our conviction that genuine sustainable development is grounded in deep trust and shared responsibility with the community. TCC is committed to turning this challenge into an opportunity to forge closer partnerships and to co-create a safer, more resilient future.

### 3. Suppliers

#### ■ 3.1 From Collaboration to Empowerment: Partnering with Suppliers in the Carbon Reduction Transition ■

TCC recognizes that the net-zero transition is not just an internal issue for a single company but an ecosystem engineering that requires the participation of the entire value chain. To ensure that every partner in the supply chain is not left behind during the transition, we extend the concept of just transition to supplier management, committed to building a mutually beneficial, prosperous, and more resilient low-carbon supply chain.

#### ■ 3.2 Capacity Building and Technical Training ■

We believe that providing necessary assistance, rather than just making one-way demands, is key

to ensuring the implementation of a just transition in the supply chain. To build long-term relationships with partners who are willing to grow with us, TCC plays the role of a collaborator, providing support to enable suppliers to keep pace with the transition. We regularly hold supplier briefings and workshops to share the latest carbon reduction trends and technologies, and provide professional training such as carbon inventory, helping suppliers build their own sustainability capabilities from scratch.

Since 2023, TCC has regularly held GHG inventory workshops for its suppliers. In 2024, we established the "Green Supply Chain Alliance," calling on several key suppliers to join, whose procurement amount accounts for 37% of the total. They have jointly committed to reducing their own carbon emissions by 10% by 2030.

### ■ 3.3 Joint Development and Innovation ■

Beyond compliance, we co-develop low-carbon products and solutions with suppliers, embedding carbon reduction into daily operations. As transportation generates a large amount of carbon emissions, we are committed to creating green transportation. Our subsidiary, Taiwan Transport & Storage Corp., has introduced electric tractors, and Ta-Ho Maritime Corp. has adopted new environmentally friendly vessels, reducing carbon emissions by 32% and 16%, respectively. Furthermore, TCC has set a target to reduce Scope 3 upstream and downstream transportation emissions by 3% each by 2030, using 2023 as the base year. We continue to communicate with transportation providers, for example, successfully promoting the purchase of electric trucks by a transportation service provider at our Guigang plant in Guangxi.

To encourage suppliers to move towards a low-carbon future with us, TCC announced on its Sunshine Procurement Platform that starting in 2025, supplier selection will include specific product carbon footprint data, and a third-party verification statement will be required from 2026. To this end, we held a carbon footprint workshop for transportation and raw material suppliers and provided one-on-one coaching to help our partners smoothly adapt. The procurement amount of the participating suppliers reached 40% of the total.

### ■ 3.4 Co-existing With Nature ■

Due to the nature of our industry, TCC's operations are closely tied to the natural world. We adhere to the philosophy of "Do less harm, do more good," and actively prioritize biodiversity together with our supply chain partners through business partnerships. In 2024, the teams at TCC's Ho-Ping Power Plant and Hoping EcoPort discovered for the first time that the Little Tern, a second-level protected migratory bird, had appeared in the Ho-Ping Industrial Zone. They immediately collaborated with the Wild Bird Society of Hualien and invited local supplier partners to join in the conservation efforts, setting a three-year conservation goal with the hope of continuously increasing the Little Tern's





breeding success rate.

Through the dedicated protection of local partners, the breeding results of the Little Terns improved significantly in 2024: the number of nests increased from 126 to 213, a growth of about 69%; the number of successful breeding nests also increased from 59 to 104, a growth of about 76%. We firmly believe that sustainability is not just about numbers, but about the transmission of knowledge and the sprouting of awareness. Therefore, at the end of the breeding season, we guided visitors to observe the Little Terns through telescopes with minimal disturbance. We also brought our conservation passion to schools, having accumulated 30 environmental education courses to date, reaching 1,834 people, and allowing the seeds of nature conservation to sprout in children's hearts.

We believe that through this collaborative model, from the inside out and from top to bottom, we can transform the net-zero challenge into a growth opportunity, moving towards a more sustainable future together with our supplier partners.

#### 4. Consumers

According to UN estimates, 68% of the world's population will be concentrated in cities by 2050, and carbon emissions from urban buildings and public works will account for 43% of the global total. Facing this challenge, TCC understands that the net-zero transition is not just an internal issue for the company but requires collaboration with a wide range of consumers. We hope to assist consumers in practicing carbon reduction in their daily lives by providing a full range of low-carbon products and services, gradually moving towards a low-carbon economic transition.



Our commitment goes beyond products to active consumer engagement. At the 2023 Taipei Building Show and the 2024 Asia-Pacific Sustainability Expo, we showcased TCC's advances in low-carbon materials, recycling, and green energy. At TCC DAKA Hualien, nearly one million annual visitors engage with our net-zero transition journey through accessible exhibits and dialogue, helping to translate complex concepts into practical understanding.

#### ■ 4.1 Joining Hands with Downstream Partners to Create a Low-Carbon Construction Ecosystem ■

In the path to achieving the 2050 net-zero goal, low-carbon building materials play a key role. TCC continues to explore and develop low-carbon building materials, hoping to practice carbon reduction together with our customers.

TCC's low-carbon products meet the Low Carbon Rating (LCR) standards issued by the Global Cement and Concrete Association (GCCA). Whether in Taiwan, Mainland China, Türkiye, Portugal, or West Africa, we are committed to providing low-carbon products that meet international standards and align with global trends.

To build industry consensus and action, TCC held a "Low-Carbon Concrete Launch Event" at the end of 2024 and established the "Low-Carbon Construction Pioneer Alliance." We invited representatives from construction and building companies that had actually used low-carbon cement and concrete in the past year, hoping to promote the application of low-carbon building materials together with industry partners through this platform. Currently, the alliance has grown to 242 members and has been applied in 2,867 projects. By using TCC's low-carbon concrete, projects can expect to reduce carbon emissions by 11% to 15%, allowing carbon reduction goals to be achieved more pragmatically.

While promoting internal carbon reduction, we also actively participate in policy advocacy to create a fair market environment for the low-carbon transition. In 2024, TCC worked to promote a Taiwanese version of CBAM and address the issue of carbon leakage, and has initially engaged with public sector bodies. This initiative received public support from the President Lai, and relevant departments have already imposed taxes on cement dumped from Vietnam to ensure that domestic low-carbon products have a fair competitive advantage in the market.

#### ■ 4.2 Empowering Sustainable Living through Green Energy Services ■

The International Energy Agency (IEA) report indicates that achieving the 1.5°C target requires tripling the global renewable energy capacity by 2030 [5]. TCC hopes to contribute to the energy transition. We have installed solar panels at our operating sites in Taiwan and Mainland China to achieve self-generation and self-consumption of renewable energy. Through our subsidiary, TCC

Green Energy, we are also actively developing diverse green electricity sources, including a hybrid solar and onshore wind project in Changhua, the Hongye Valley geothermal power plant in Taitung, and an aquavoltaics project in Chiayi. We also plan to develop ocean thermal energy conversion in Hoping, Hualien, in 2025, to assist in Taiwan's energy transition.

Considering the intermittent nature of solar and wind power, energy storage systems play a key role in stabilizing the power supply. Through its subsidiary NHOA.TCC, TCC integrates domestic and international technologies and resources to continuously build energy storage systems in Taiwan, Mainland China, and Europe. In Taiwan, we participate in the electricity trading platform, storing power during off-peak hours and discharging it during peak hours, hoping to help with peak shaving and valley filling to stabilize the grid. Among these, the 100MW enhanced dynamic frequency regulation storage site in Hoping, Hualien, and the 35MW site in Su'ao, Yilan, help regulate 290MWh of peak and off-peak electricity use daily for the northern and eastern power grids.

We also extend our energy storage services to general consumers. NHOA.TCC has built "solar-charging-storage integrated" electric vehicle charging stations and provides pure green electricity charging services to EV owners through its brand "NHOA.TCC Charging Service." To encourage consumers to make green choices, NHOA.TCC launched the "Off-Peak Charging for a Better Earth" campaign in 2022, calling on EV owners to avoid peak electricity hours and charge during the off-peak period from 10 PM to 10 AM. During the campaign periods over the years, the off-peak charging rate at NHOA.TCC charging stations has increased to over 84%, with 670 EV owners responding, collectively reducing carbon emissions by approximately 9,864.14 kg

### ■ 4.3 Energy for Social Transformation - Ho-Ping Power Plant ■

TCC supports the energy transition but firmly believes that the process must ensure the public's right to a stable electricity supply. We also hope to prevent the increased cost of power generation due to the transition from being fully passed on to consumers, which could endanger vulnerable groups. As the parent company of the Ho-Ping Power Plant, TCC is aware of the social responsibility that the plant shoulders in Taiwan's energy transition process, even as we promote renewable energy development. According to the Taiwan Ministry of Economic Affairs' 2023 National Power Supply and Demand Report, the Ho-Ping Power Plant will remain an irreplaceable primary power source for the northeast power grid in the power supply plan for all thermal power units in Taiwan until 2033. Following the recommendations of IEA and in coordination with Taipower's contract renewal and grid stability needs, the coal-fired units of the Ho-Ping Power Plant will continue to operate, playing a necessary transitional role in the energy transition. The units will be shut down no later than their design lifespan ends in 2040. The continued operation of the Ho-Ping Power Plant is TCC's commitment to ensuring that consumers can enjoy stable and affordable electricity during the energy transition, in addition to our active development of green power.

## Conclusion

TCC's transformation story is not a path exclusive to TCC, but a collective journey with all stakeholders. Although promoting a just transition is a long and arduous task, we have come to a profound realization that trust is the cornerstone of all sustainable development. In the future, TCC will continue to build trust with every action through humble dialogue and transparent information disclosure. We firmly believe that only by walking hand in hand with more partners can we truly move towards a safer, more resilient, and sustainable future.



## References

- [1] "The Future of Jobs Report 2025," World Economic Forum, 2025.
- [2] "Involvement of citizens and stakeholders in just transition," 2022. [Online]. Available: <https://energy.ec.europa.eu/system/files/2022-11/Involvement%20of%20citizens%20and%20stakeholders%20in%20just%20transition%20-%20JTP%20Conference%20October%202022.pdf>.
- [3] "How to Engage Stakeholders in Just Transition Dialogues: Lessons learned from the South-to-South Just Transitions Network," Climate Strategies, 28 9 2023. [Online]. Available: <https://climatestrategies.org/how-to-engage-stakeholders-in-just-transition-dialogues-lessons-learned-from-the-south-to-south-just-transitions-network/>.
- [4] "Green skills: driving the transition to a more sustainable future," Economist Impact, 2024.
- [5] "Net Zero Roadmap: A Global Pathway to Keep the 1.5 °C Goal in Reach - 2023 Update," International Energy Agency, 2023.



TCC OFFICIAL WEBSITE



TCC ESG SECTION



TCC FACEBOOK



TCC INSTAGRAM



If you have any questions or suggestions regarding this report, please contact us.

Email: [tcc\\_csr@taiwancement.com](mailto:tcc_csr@taiwancement.com) | ( 02 ) 7719-7722