



2024

Coretronic Corporation
TCFD Report

Contents

Climate Change Overview

01 Net-Zero Actions

02 Climate Governance

2.1 Board of Directors	05
2.2 ESG Committee	06
2.3 Environmental Protection Committee and TCFD Team	07

03 Climate Strategies

3.1 Greenhouse Gas Management	08
3.2 Energy Management	10
3.3 Waste Management	12
3.4 Environmental Resource Management	14

04 Climate Risk Management

4.1 Risk Identification	16
4.2 Risk Response Strategies	18

05 Metrics and Targets

5.1 Strategy, Targets, and Performance of Environmental Indicators	22
5.2 Net-Zero Targets and Progress	22

06 Prospects

Appendix

About the Report	24
TCFD Disclosure Index	24



Climate Change Overview

Core Elements	Management Strategies and Actions	2024 Implementation Status
Governance	<ul style="list-style-type: none"> The Board of Directors regularly reviews climate-related risks and opportunities. The ESG Committee regularly reports to the Board of Directors on climate-related strategies and implementation results. The Environmental Protection Committee and the Sustainable Energy Committee are responsible for setting goals and plans and executing related strategies in coordination with the TCFD Team. Participate in domestic and international initiatives. 	<ul style="list-style-type: none"> The ESG Committee is led by the Chairman, and the committee member and executive representative—the Chief Financial Officer reports to the Board of Directors annually. The report includes the results of the sustainability project implementation, the climate change risk management framework and response strategies (TCFD), various environmental indicators, SBT carbon reduction targets and pathway, renewable energy strategies, and future sustainability development directions. Additionally, the GHG inventories implementation status is reported to the Board of Directors on a quarterly basis. The Environmental Protection Committee is chaired by the head of the Integrated Business Service. Its subordinate Sustainable Energy Committee and EPC Team are responsible for setting short-, medium-, and long-term environmental goals and strengthening strategy implementation. The TCFD Team is convened by the head of the Integrated Business Service and conducts climate-related risk and opportunity assessments every two years. It develops response strategies and solutions based on the assessment results to mitigate negative impacts and enhance organizational climate resilience. Coretronic has signed and expressed support for the TCFD, joined the “Taiwan Climate Partnership” and the “Taiwan Alliance for Net Zero Emission”, responded to CDP Climate Change and Water Security questionnaires, set SBT carbon reduction targets based on the 1.5°C scenario, submitted to SBTi, and received SBTi approval in 2024.
Strategy	<ul style="list-style-type: none"> Identify short-, medium-, and long-term climate-related risks and opportunities through cross-departmental discussions. Assess the potential operational and financial impacts of significant climate-related risks and opportunities on the Company. Conduct scenario analysis and evaluate SBT carbon reduction targets. 	<ul style="list-style-type: none"> Short-, medium-, and long-term environmental sustainability goals were set through discussions between the Environmental Protection Committee and relevant units, and identified Climate-related risks and opportunities across all timeframes. Then, based on these results, the Company evaluated the potential operational and financial impacts of climate change. Developed low-carbon technologies and designed energy-efficient, low-power green products In alignment with the Paris Agreement goal of “limiting global warming to below 2°C”, adopting the 1.5°C scenario for setting absolute emission reduction targets under the SBT framework Established SBT carbon reduction targets, strategies, and pathway
Risk Management	<ul style="list-style-type: none"> Use the TCFD framework to identify the Company’s climate risk identification process. Develop corresponding response plans based on the results of climate risk identification and prioritization. Integrate climate risk identification and assessment into the enterprise risk management process. 	<ul style="list-style-type: none"> Assessed the types of potential operational and financial impacts associated with climate-related risks and opportunities Incorporated climate change risk issues into the Company’s risk management process and annual material topics Began publishing an annual TCFD Report starting in 2023
Metrics and Targets	<ul style="list-style-type: none"> Establish climate-related management metrics. Conduct regular GHG inventories in line with ISO 14064-1. Review and manage energy performance regularly in line with ISO 50001. Set environmental management targets and periodically review progress and actual performance. Plan and implement product carbon footprint inventory. 	<ul style="list-style-type: none"> Set environmental performance indicators including absolute and intensity-based GHG emissions, electricity intensity, waste generation intensity, water consumption, and renewable energy usage, with quarterly and annual reviews to reduce environmental impacts. Since 2016, GHG emissions have been verified annually. From 2020, the scope of inventory has expanded to include Scope 3, using ISO 14064-1:2018, followed by implementation of emission reduction measures based on the inventory results. Taiwan plants, Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), and Coretronic Projection (Kunshan) have implemented the ISO 50001 Energy Management System, effectively reducing absolute GHG emissions through energy-efficient equipment upgrades and other conservation measures. The SBT carbon reduction targets, “Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe,” were approved by SBTi in April 2024. The Company is gradually progressing toward SBT and 2050 Net-Zero targets through solar power generation system installation, production process optimization, increased renewable energy usage, equipment upgrades, and low-carbon product development. Solar system capacity at Chunan Plant, Tainan Plant 1, and Tainan Plant 2 reached 817.31 kW, generating 1.018 GWh of electricity in 2024. Combined with green power wheeling, total renewable energy usage reached 1.117 GWh. The installed capacity of solar power generating systems at the China plants totaled 6,549 kW, generating 4.738 GWh of electricity in 2024 and adding 1 GWh from renewable energy certificates. Together, Taiwan and China plants used or traded a total of 6.855 GWh of renewable energy, accounting for 15% of annual electricity use and exceeding the short-term target. The Headquarters completed installation of a 98.4 kW solar power generation system in December 2024, expected to generate 120,000 kWh of electricity annually, supporting long-term renewable energy goals. Three laser projector models and two LCD monitor models have passed ISO 14067 verification, serving as benchmarks for the Company’s development of future sustainable products. A green product development strategy and product carbon footprint inventory platform were established. In the future, Coretronic will prioritize conducting product carbon footprint inventories for newly developed products and identifying carbon emission hotspots during the product development and design stages. Through technological innovation, material substitution, and performance optimization, the Company aims to reduce its environmental impact and set the standards for the development of new-generation products, providing more environmentally friendly and energy-efficient green products that meet customer needs. For more details, please refer to Section 4.2 Risk Response Strategies of this report.



01 Net-Zero Actions

Coretronic announced its “[Net Zero Commitment](#)” in 2022, committing to achieving net-zero emissions by 2050. The Company actively formulates and implements climate action measures to mitigate the environmental impact of climate change, while also responding proactively to domestic and international climate initiatives to contribute to global climate governance efforts.

In 2023, Coretronic disclosed climate-related financial information in accordance with the TCFD framework and updated its assessment of climate change-related risks and opportunities, further developing response strategies. The Company also submitted its science-based targets to the Science Based Targets initiative (SBTi) for review in 2023, and [officially received approval in 2024](#). The approved targets commit to “Reduce absolute scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute scope 3 GHG emissions 30% within the same timeframe,” while concurrently implementing relevant carbon reduction actions.

Since 2019, the Company has responded to the CDP questionnaire for 6 consecutive years. In 2024, it received “[A List](#)” leadership level ratings for the first time in both the [Climate Change](#) and [Water Security](#) categories, as well as an “A” leadership level in the Supplier Engagement Assessment, demonstrating outstanding sustainability performance. Coretronic also joined the Taiwan Climate Partnership (TCP) and the Taiwan Alliance for Net Zero Emission (TANZE) in 2022. In 2024, the Company received the “[Silver Net Zero Label](#)” from TANZE, recognizing its firm commitment and tangible progress in sustainable development.

Coretronic is actively investing in and promoting the use of renewable energy as a core driver toward achieving net zero. Since 2022, rooftop solar power generation systems have been installed and commissioned at the Chunan Plant, Tainan Plant 1, and Tainan Plant 2. In 2024, the Headquarters was added, with power generation expected to commence in 2025. Through self-use solar power generation, green power wheeling, and the purchase of renewable energy certificates, the Company continues to increase the proportion of renewable energy use year by year, reducing reliance on traditional energy sources. In 2024, renewable energy accounted for 15% of the Company’s total annual electricity consumption, successfully achieving its short-term target.

To fulfill the Company’s carbon reduction commitment and achieve its net-zero goals, the Company actively promotes a wide range of carbon reduction initiatives. These include upgrading energy-saving equipment, increasing the proportion of renewable energy used, strengthening water conservation and waste reduction management, and optimizing air conditioning and production energy efficiency. At the same time, the Company enhances product energy performance through green technology innovation, adopt low-carbon design, and select low-carbon raw materials to reduce resource consumption, developing more competitive green products that achieve both environmental sustainability and business growth.

At Coretronic, net-zero development strategy is at the core of its operations. The Company integrates multiple approaches, such as green products, renewable energy, energy conservation and carbon reduction, circular economy, sustainable value chain, TCFD, and SBT frameworks, to comprehensively drive sustainable transformation. On the path of sustainability, the Company continues to advance by implementing decarbonization actions while actively deepening green technology innovation to promote industrial upgrading and sustainable development. Coretronic is steadily following its net-zero roadmap and striving to realize its net-zero vision.



- Responded to CDP questionnaire for 6 consecutive years
- Climate Change rating received A (Leadership level)
- Water Security rating received A (Leadership level)
- Supplier Engagement Assessment received A (Leadership level)



- Promoting the integration of Taiwan's supply chain with the international community towards net-zero goals and combine the strengths of alliance partners to collaborate with international climate advocacy organizations actively
- Joined as one of the first members in 2022, and renewed membership in 2024



- Signed to support and implement the TCFD framework in 2020
- First-time implementation of climate change risks and opportunities identification impact analysis in 2021
- Reassessed, updated risks and opportunities concerns, and preliminarily assessed financial impacts and formulated response strategies accordingly in 2023
- Starting to issue the TCFD Report annually in 2023



- Submitted a commitment letter to SBTi in 2022, committing to set emission reduction targets based on the SBT 1.5°C scenario
- Submitted science-based targets to SBTi for review in 2023
- Reduction targets were approved by SBTi in 2024: “Reduce absolute scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute scope 3 GHG emissions 30% within the same timeframe.”



- Follow the alliance's goal of “net zero emissions at office locations by 2030, and service sites by 2050”
- Awarded the “Green Net Zero Label” in 2022~2023
- Awarded the “Silver Net Zero Label” in 2024 and invited to share outstanding practices in energy saving and carbon reduction



02

2.1 Board of Directors

2.2 ESG Committee

2.3 Environmental Protection Committee and TCFD Team

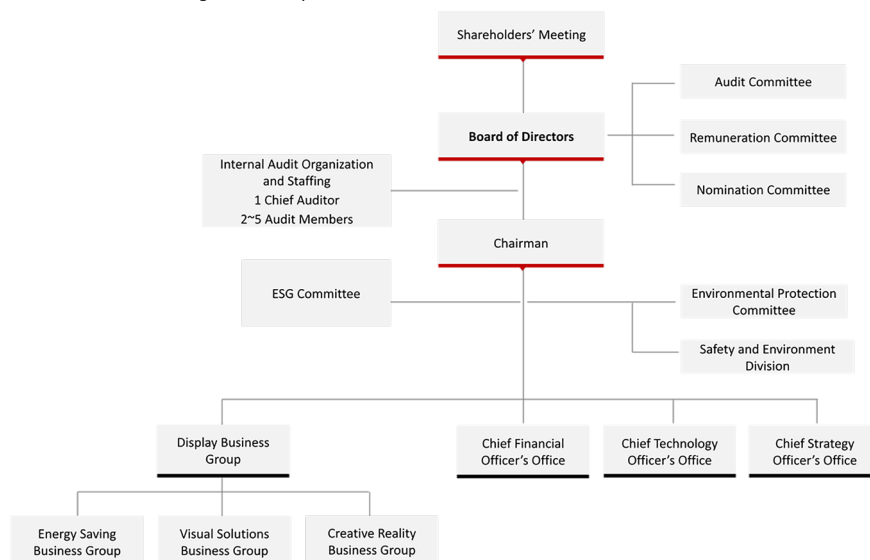
2.1 Board of Directors

The Board of Directors is the highest governing and decision-making unit for major operational decisions of the Company. Its responsibilities include appointing and overseeing the Company's management, monitoring operational performance, preventing conflicts of interest, and ensuring that the Company complies with various laws, company charters, and resolutions passed at the shareholders' meeting in exercising its powers and striving to maximize shareholders' interests.

The Board of Directors convenes at least once every quarter, during which the Company's management team presents reports on operational performance. The Board then deliberates on future business strategies and other major policies.

The Board has established three functional committees: the Audit Committee, the Remuneration Committee, and the Nomination Committee. Resolutions from these committees are submitted to the Board for discussion, allowing the Board to perform its oversight responsibilities more effectively and enhance shareholder value.

To strengthen the association between business operations and sustainability, and to meet the requirements of domestic and international ratings and awards, the Company officially incorporated sustainability performance into the performance evaluation metrics for senior management in 2024. Sustainability indicators, categorized into governance (e.g., corporate governance evaluations, product R&D and patent portfolio, sustainable supply chain), environment (e.g., green product design and development, use of low-carbon materials), and society (e.g., social inclusion projects, diverse communication channels), are used as benchmarks. KPI scores for senior management are weighted by $\pm 15\%$ based on performance that exceeds, meets, or falls behind expectations. ESG performance will be linked to senior management compensation, with results to be disclosed in 2025.



Periodic Review

- The ESG committee member and executive representative - the Chief Financial Officer reports to the Board of Directors annually. The report includes the results of sustainable project implementation, the climate change risk management framework and response strategies (TCFD), various environmental indicators, SBT carbon reduction targets and pathway, renewable energy strategies, and future sustainability development directions. Additionally, the GHG inventories implementation status is reported to the Board of Directors on a quarterly basis.
- The Chairman of the Board of Directors quarterly reviews and supervises the ESG Committee's management representative's report on the annual progress of sustainable plan implementation, including environmental sustainability, climate change, net-zero, renewable energy, social engagement, labor, and human rights issues.
- Annual material topics are submitted to the Board of Directors for approval annually. The material topics of the environmental aspect were "Green Process and Product Management" and "Climate Change" in 2024.

Approved Policies and Projects

- The "Material Topics of the 2024 Sustainability Report" were approved by the Board of Directors on February 17, 2025.
- The Chairman of the Board of Directors approved and signed the "[Environmental Sustainability Policy](#)", "[Net Zero Commitment](#)", "[RE100 and EV100 Statement](#)", "[Carbon Neutrality Commitment](#)", "[Biodiversity Conservation and No Gross Deforestation Commitment](#)", "[Plastic Reduction Commitment](#)", and "[Sustainable Raw Material Policy](#)". Those are publicly disclosed on the Company's ESG website for all stakeholders to access.

Education of Directors

To enhance all directors' competencies in sustainable management and corporate governance, and to ensure effective oversight of sustainability-related strategies, risks, and opportunities, the Company arranges regular training programs for the Board of Directors each year. In 2024, the directors completed a total of 107 training hours. Among these, the environment- and climate governance-related courses included, but were not limited to the following. For details of other training programs, please refer to pages 38–39 of the 2024 Annual Report.

- New Energy Era
- The Development and Prospects of Taiwan's Cable Industry and Creating a Friendly Workplace (including Sexual Harassment Prevention)
- Ways to Strengthen Corporate Sustainability: Create Positive Corporate Value through Diversified Controls
- How the Board of Directors Reviews the ESG Report



02

2.2 ESG Committee

To promote sustainable development, Coretronic established the “Corporate Social Responsibility Management Committee” in 2008, which was renamed the “ESG Committee” in 2020. Following the “Sustainable Development Best Practice Principles” approved by the Board of Directors, the Chairman serves as the “Committee Chair” of the ESG committee, with the President and Chief Financial Officer (CFO) as “Committee Members”. The “Management Representative” role is assumed by the Spokesperson. The ESG Committee also authorizes “Executive Representatives” from governance/economic, social, and environmental departments to assist in advancing ESG-related initiatives.

Currently, the ESG Committee operates as an independent organization. In addition to approving the “Sustainable Development Best Practice Principles”, the “Sustainability Report Preparation and Verification Procedures”, the “Sustainability Report Material Topics”, and the “Sustainability Report”, the Board of Directors also regularly receives reports from the management team (including updates on sustainability plans, targets, and implementation status). The management team is responsible for formulating sustainability plans and targets and regularly reviewing their implementation status. The Board of Directors periodically reviews and supervises the progress of ESG initiatives and urges the management team to adjust as necessary.

Operation

- The ESG Committee members and executive representatives review the status and results of sustainability implementation through quarterly briefings and hold quarterly meetings with the ESG Team. Executive representatives and ESG Team members attend these meetings to discuss the Sustainability Report published for the year and major sustainability awards, to formulate the sustainability plans and targets for the following year.
- The management representative reports the progress of the annual sustainability plan execution each quarter to the Chief Commissioner, committee members, and executive representatives, and presents the annual sustainability performance, along with the key focus areas and plans for the following year, during the annual group meeting.
- The Chief Financial Officer (CFO), both an ESG Committee member and executive representative, provides an annual report to the Board of Directors. The report includes updates on the implementation results of sustainability projects, the climate change risk management framework and response strategies (TCFD: Task Force on Climate-related Financial Disclosures), various environmental indicators, the net-zero pathway, renewable energy strategies, and the future direction for sustainable development. In addition, quarterly updates on the execution of greenhouse gas inventory activities are reported to the Board of Directors.
- ESG Team members establish [sustainability policies](#) in accordance with international standards and government regulations and strengthen the execution of sustainability strategies through internal and external training programs.
- Annual material topics are identified by the ESG Team following the Material Topic Identification Process and are reassessed every two years. The material topics for each year are submitted to the Board of Directors for approval.
- The Sustainability Report is compiled by the ESG Team based on information collected from each department. It is then reviewed in sequence by the management representative, executive representatives, and Committee members, and finalized for issuance after approval by the Board of Directors.

Education and Training

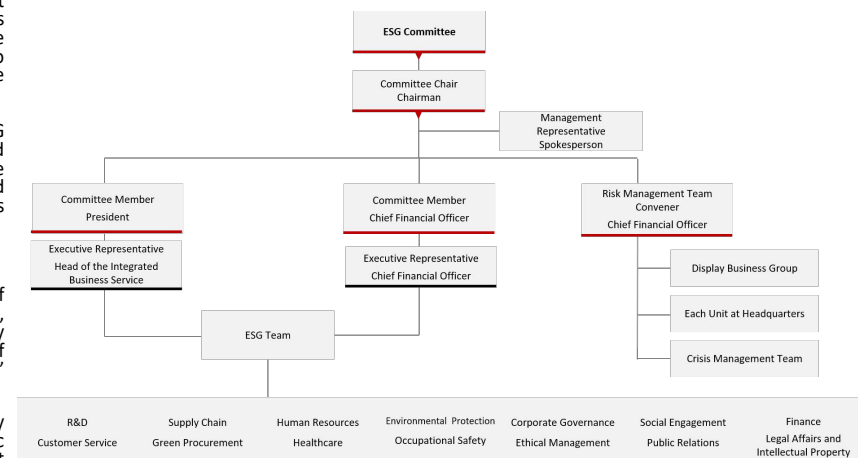
Through participation in internal and external training courses, the issuance of a quarterly ESG e-newsletter, and the sharing of ESG knowledge and activities on electronic and physical bulletin boards, Coretronic seeks to enhance employees’ ESG awareness and understanding, ultimately integrating ESG concepts into daily business operations. At the same time, photos and videos from sustainability activities are compiled and disseminated through various channels, including the official website, social media platforms, and Wikipedia, to promote sustainability values and achievements to stakeholders.

► Key Internal Training Programs

- **Required Annual Course—“ESG: From Concept to Practice”:** To strengthen sustainability awareness among all indirect labors in Taiwan, an annual required sustainability training course was developed. The course covers definitions of key sustainability terms, the two major sustainability organizations within the Company and their respective responsibilities, stakeholders and material topics, and domestic and international sustainability initiatives. It also trains employees on how to read the annual Sustainability Report. A total of **1,583** participants completed the course and passed the post-course assessment (with a passing score of 70), achieving a **100%** course completion rate.
- **“Product Carbon Footprint (ISO 14067) Workshop”:** To enhance the knowledge of the Green Product Team and ESG Team members regarding product carbon footprints and embed the green product concept into daily operations and product design, Coretronic invited an expert from the Industrial Technology Research Institute (ITRI) to serve as the instructor. The workshop introduced ISO 14067 standards and international trends toward net-zero emissions, and guided participants through hands-on exercises in product carbon footprint calculations. A total of 136 employees participated, accumulating a total of 272 training hours.

► Key External Training Programs

- **“Certified Professional in Corporate Sustainability Management” training program:** To enhance the quality of the Sustainability Report and strengthen the professional knowledge of dedicated sustainability personnel, Coretronic assigned two employees to participate in the 80-hour “Certified Professional in Corporate Sustainability Management” training program organized by the Taiwan Institute for Sustainable Energy (TAISE). As of the end of 2024, a total of **3** team members have obtained the “Certified Professional in Corporate Sustainability Management” certification.
- **“International Certified Professional in Net Zero Management Program”:** To strengthen the Company’s capability in planning net-zero pathways and to cultivate professionals specialized in climate risk management, Coretronic assigned one employee to participate in the 62-hour “International Certified Professional in Net Zero Management Program” organized by TAISE. The participant obtained the “Greenhouse Gas Organization Level Emissions and Removals Lead Verifier Training Course (ISO 14064-1:2018)” qualification certified by the British Standards Institution (BSI) and is expected to receive the “Net Zero Manager” certification in 2025.





02

2.1 Board of Directors

2.2 ESG Committee

2.3 Environmental Protection Committee and TCFD Team

2.3 Environmental Protection Committee and TCFD Team

Environmental Protection Committee

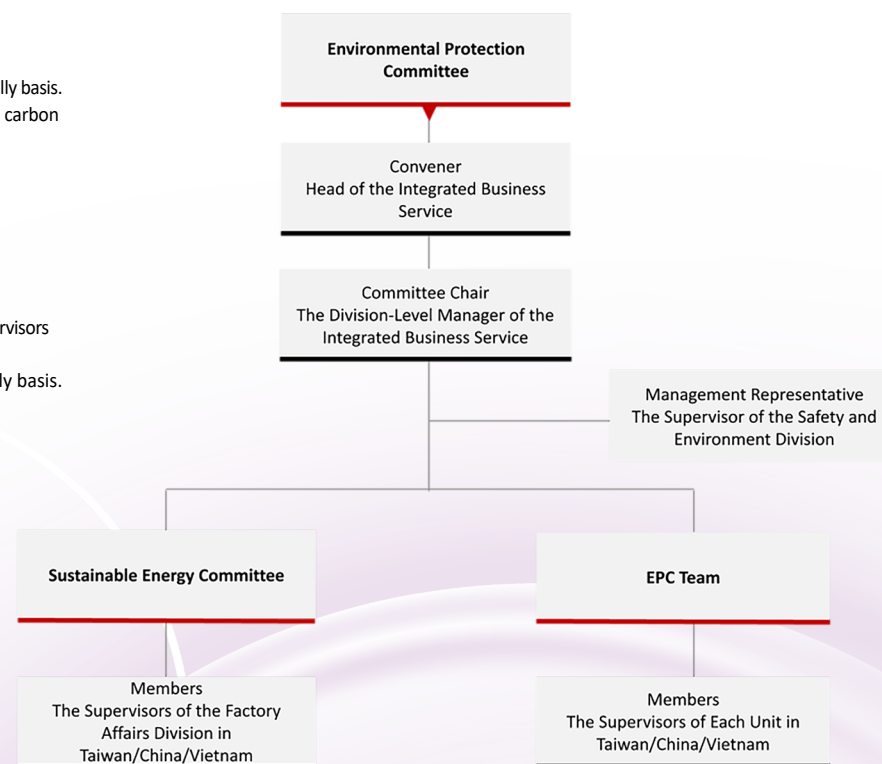
Upholding the aim to implement energy conservation mechanisms, reduce greenhouse gas emissions, fulfill corporate social responsibility, improve the overall corporate image, reduce operating cost, and assure sustainable business and development, Coretronic established the Environmental Protection Committee (EPC) in 2015. The head of the Integrated Business Service serves as the “Convener”, the division-level manager of the Integrated Business Service serves as the “Committee Chair”, the supervisor of the Safety and Environment Division serves as the “Management Representative”, and the supervisors of each unit or representative such as R&D, Manufacturing, Quality Assurance, Procurement, Facility Management, Safety and Environment, and Factory Affairs serve as “Members”. Additionally, the Company set up the Sustainable Energy Committee and the EPC Team under the jurisdiction of the EPC.

- **Environmental Protection Committee and EPC Team**

- ✓ Review short-, medium-, and long-term net-zero goals and implementation results on a quarterly and annually basis.
- ✓ Establish, plan, and implement targets, strategies, and action plans for climate change, carbon peaking, carbon neutrality, and net-zero.
- ✓ Conduct climate-related risks and opportunities identification.
- ✓ Promote pollution prevention, emergency response, and preventive measures.
- ✓ Focus on and advocate key points of international initiatives.
- ✓ Integrate and implement measures related to green actions.

- **Sustainable Energy Committee**

- The division-level manager of the Integrated Business Service serves as the “Committee Chair”, and the supervisors of the Factory Affairs Division from each factory serve as “Members”.
- ✓ Review electricity, renewable energy, and water resource usage on a weekly, monthly, and quarterly basis.
 - ✓ Promote corporate energy conservation, carbon reduction projects, and energy transition.
 - ✓ Implement short-, medium-, and long-term net-zero strategies and goals.
 - ✓ Report the status of goal achievement to the EPC on a quarterly basis.



TCFD Team

Coretronic officially signed and supported TCFD in 2020, and established TCFD Team which convened by the head of the Integrated Business Service, with members spanning safety and environment, factory affairs, accounting, finance, stock affairs, investor relations, ESG, procurement, manufacturing, production management, sales, product management, and R&D departments.

- Continually follow international initiatives, regulatory changes related to climate, and the progress of net-zero targets.
- Implement climate-related risks and opportunities identification every two years, and formulate response strategies and solutions to reduce the negative impacts, and enhance organizational climate resilience.



03

3.1 Greenhouse Gas Management

- 3.1 Greenhouse Gas Management
- 3.2 Energy Management
- 3.3 Waste Management
- 3.4 Environmental Resource Management

To effectively mitigate the significant economic, social, and environmental impacts of extreme climate events, Coretronic adopted the Task Force on Climate-related Financial Disclosures (TCFD) framework in 2020 to reassess climate change risks. Centered around low-carbon products and green operations, the Company has formulated energy-saving and carbon reduction strategies to help curb the greenhouse effect. In alignment with the “Paris Agreement”, Coretronic set its carbon reduction targets based on the Science-Based Targets (SBT)¹ absolute reduction pathway under the “1.5°C warming” scenario. In 2022, the Company publicly announced its [“Net Zero Commitment”](#) and submitted its commitment letter to the SBTi. In 2023, it submitted its SBT carbon reduction targets: **Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe.** These targets were approved by the SBTi in 2024. To achieve net zero by 2050, Coretronic is actively reducing fossil fuel use, increasing renewable energy usage, transitioning to innovative low-carbon technologies, and incorporating the environmental cost of carbon emissions into business planning through internal carbon pricing and other diversified measures. In 2024, the Company conducted its greenhouse gas inventory following the ISO 14064:2018 standard, identifying emission sources for Scope 1 through Scope 3. The organizational boundary for this inventory includes facilities under operational control at Taiwan plants (Headquarters, Chunan Plant, Tainan Plant 1, and Tainan Plant 2) and China plants (Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), and Coretronic Optics (Kunshan)).

1: Science-Based Targets (SBT) aim to limit global warming within 1.5°C by scientifically calculating the reasonable carbon reduction quotas for global industries and enterprises.

Strategies	2024 Results
<ul style="list-style-type: none">Set SBT carbon reduction targets and pathway, and 2050 net-zero targets.Conduct GHG inventory in accordance with ISO 14064-1 and obtain third-party verification.Implement the ISO 50001 Energy Management System to identify energy-saving opportunities.The Environmental Protection Committee establishes the Environmental Sustainability Policy and regularly reviews carbon reduction performance to achieve GHG reduction goals.A “Sustainable Energy Committee” was established under the Environmental Protection Committee to strengthen the SBT carbon reduction pathway and energy initiatives, and to regularly review energy-saving performance.Improve energy efficiency and utilization through regular maintenance, equipment upgrades, process optimization, and system integration.Assess energy consumption at each plant and formulate corresponding energy-saving measures.Install solar power generation systems to increase renewable energy usage and meet renewable energy targets.Set short-, medium-, and long-term targets for green products, with specific implementation items and measurement indicators. <div> Establish an internal carbon pricing mechanism.</div>	<ul style="list-style-type: none"> SBT carbon reduction targets —“Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe”—were approved by SBTi.GHG emissions (Scope 1 and 2) decreased by 51% compared to the 2021 baseline year, achieving the short-term target.GHG emission intensity (Scope 1 and 2) decreased by 43% compared to the 2021 baseline year, achieving the short-term target.Electricity intensity decreased by 15% compared to the 2021 baseline year, achieving the short-term target.Passed ISO 14064-1 GHG Inventory verification and ISO 50001 Energy Management System certification.Chunan Plant received LEED Gold Certification for existing buildings from the U.S. Green Building Council. Headquarters completed installation of a 98.4 kW solar power generation system, expected to generate 120,000 kWh of electricity per year.Total renewable energy consumption reached 6.855 GWh, accounting for 15% of total electricity use, achieving the short-term target. Internal carbon price set at NT\$942 per metric ton of CO₂e, used to simulate the future impact of carbon costs on business operations and investment decisions.Publicly announced “RE100 and EV100 Statement”, pledging to achieve 100% electrification of transportation vehicles by 2030 and 100% renewable energy usage by 2040.

- Greenhouse Gas Inventory
- Coretronic conducts annual greenhouse gas (GHG) inventories by ISO 14064-1, covering Scope 1 to Scope 3 emission sources. The inventory includes 7 types of gases: carbon dioxide (CO₂), methane (CH₄), nitrous oxide (N₂O), hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulfur hexafluoride (SF₆), and nitrogen trifluoride (NF₃), to ensure accurate tracking of GHG emissions and serves as a basis for verifying the effectiveness of reduction efforts. Although not currently subject to mandatory regulatory requirements for GHG inventory or emissions reduction, Coretronic has set phased reduction targets and conducts annual reviews to drive continuous improvement. The Company reduces emissions by monitoring energy use, improving equipment efficiency, establishing an effective energy management system, and investing in renewable energy infrastructure, all aimed at minimizing reliance on traditional energy sources and maximizing energy efficiency to meet its GHG reduction goals. In 2024, all plants successfully passed ISO 14064-1 GHG inventory verification.
 - GHG emissions (Scope 1 and 2) totaled 23,404.7 tCO₂e in 2024, representing an 8% reduction compared to 2023 and a 51% reduction from the 2021 baseline year, meeting the short-term target. Taiwan plants saw a 10% reduction from 2023 and a 28% reduction from the 2021 baseline year. China plants saw a 7% reduction from 2023 and a 56% reduction from the 2021 baseline year.
 - Total GHG emissions (Scope 1~3) reached 535,904.9 tCO₂e, marking a 69% reduction from 2023 and indicating a significant improvement in carbon reduction performance.
 - GHG emissions intensity (Scope 1 and 2) decreased by 5% compared to 2023 and by 43% compared to the 2021 baseline year, achieving the short-term target.
 - The main source of Scope 3 emissions is “purchased goods and services”. Moving forward, the Company will actively collaborate with suppliers to improve production processes and reduce Scope 3 emissions.

**Greenhouse Gas Emissions Summary Table**

Region	Taiwan				China			
Indicator/Year	2021	2022	2023	2024	2021	2022	2023	2024
Scope 1—Direct Emissions (tCO ₂ e)	223.1	246.1	238.3	144.3	678.8	1,655.5	1,824.7	1,844.0
Scope 2— Purchased Electricity (tCO ₂ e)	7,985.1	7,726.6	6,324.3	5,787.4	38,858.2	20,382.9	16,938.6	15,629.0
Total GHG Emissions (tCO ₂ e)—Scope 1 and 2	8,208.2	7,972.7	6,562.6	5,931.7	39,537.0	22,038.4	18,763.3	17,473.0
GHG Emissions Intensity (tCO ₂ e/NT\$ million) ¹ —Scope 1 and 2	0.31	0.24	0.24	0.21	0.99	0.51	0.58	0.62
Scope 3—Indirect Emissions (tCO ₂ e)	7,651.7	42,818.8	13,508.0	9,411.4	-	623,822.8	1,676,712.0	503,088.8
Total GHG Emissions (tCO ₂ e)—Scope 1~3	15,859.9	50,791.5	20,070.6	15,343.1	-	645,861.2	1,695,475.3	520,561.8
GHG Emissions Intensity (tCO ₂ e/NT\$ million) ¹ —Scope 1~3	0.59	1.52	0.74	0.54	-	14.80	52.37	18.33

1: Revenue coverage scope for 2021~2023: Taiwan plants include Coretronic, Young Green Energy, uCare Medical Electronics, Champ Vision Display, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, and Coretronic Intelligent Logistic Solutions. China plants include Coretronic Display (Suzhou), Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), and Coretronic Optics (Kunshan).

Revenue coverage scope for 2024: Taiwan plants include Coretronic, Young Green Energy, uCare Medical Electronics, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, and Coretronic Intelligent Logistic Solutions. China plants include Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), and Coretronic Optics (Kunshan).

2: The carbon emission factor for electricity at Taiwan plants in 2024 is referenced from the Energy Bureau's carbon emission data, 1 kWh = 0.495 kgCO₂e; the carbon emission factor for electricity at China plants is referenced from the Ministry of Ecology and Environment of People's Republic of China's "Notice on Properly Handling Greenhouse Gas Emission Reporting Management for Power Generation Enterprises in 2023-2025", 1 kWh = 0.5366 kgCO₂e. The GWP values are cited from the global warming potential value and inventory scope refer to the operational control approach of 2021 IPCC's 6th Assessment Report.

Scope 3 Greenhouse Gas Emissions Summary TableUnit : tonCO₂e

Scope 3 Category		Taiwan				China			
GHG Inventory Standard ISO 14064-1:2018		2021	2022	2023	2024	2021	2022	2023	2024
Category 3: Indirect GHG emissions from transportation	Upstream Transportation and Distribution	33.9	42.3	33.9	51.2	-	57,980.9	3,461.1	880.2
	Downstream Transportation and Distribution	112.2	65.5	45.4	78.9	-	1,400.8	4,219.6	1,003.5
	Employee Commuting	1,343.9	1,137.9	1,239.7	1,182.5	-	122.2	322.7	305.6
	Business Travel	3.1	62.0	103.3	124.6	-	460.3	109.3	116.7
Category 4: Indirect GHG emissions from products provided by other organizations	Purchased Goods and Services	4,702.6	39,956.9	10,691.5	6,686.8	-	563,753.8	1,667,797.7	497,025.7
	Fuel- and Energy-Related Activities	1,335.0	1,366.4	1,263.4	1,156.6	-	-	-	2,194.2
	Capital Goods	-	-	-	-	-	-	-	388.0
	Waste Generated in Operations	86.8	149.3	85.2	91.5	-	104.8	739.2	1,110.3
Upstream Leased Assets		34.2	38.5	45.6	39.3	-	-	62.4	64.6
Total Scope 3 Emissions		7,651.7	42,818.8	13,508.0	9,411.4	-	623,822.8	1,676,712.0	503,088.8



03

3.2 Energy Management

- 3.1 Greenhouse Gas Management
- 3.2 Energy Management
- 3.3 Waste Management
- 3.4 Environmental Resource Management

► Energy Management System

- The Chairman signed the “[RE100 and EV100 Statement](#)”, committing to the goals of achieving 100% electrification of transportation vehicles by 2030 and 100% renewable energy usage by 2040.
- Implemented an energy-saving project for the chilled water HVAC systems to improve the energy efficiency of the air conditioning system
- Installed solar power generation systems to increase the use of renewable energy
- Proposed and implemented various electricity-saving measures annually, including lighting and equipment upgrades, and optimization of operational processes
- To support the continuous implementation and certification of the ISO 50001 while enhancing the Company’s energy efficiency, internal auditors for ISO 50001 and energy-saving-related training courses were arranged for employees and contractors. A total of 153 employees and contractors were trained with 671 hours. Chunan Plant has passed ISO 50001 certification for 9 consecutive years; Headquarters, Tainan Plant 1, and Tainan Plant 2 have been certified for 3 consecutive years; Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), and Coretronic Projection (Kunshan) have been certified for 2 consecutive years.
- Chunan Plant improved energy efficiency through its management system, selected eco-friendly and recyclable materials, and established an indoor air quality monitoring system to enhance workplace environmental quality. In March 2024, it received the LEED Gold Certification (LEED v4.1 for Operations and Maintenance) from the U.S. Green Building Council (USGBC)—marking Coretronic’s first plant to receive an international green building certification.

► Energy Usage Overview

To reduce energy consumption, Coretronic has implemented the ISO 50001 Energy Management System, carried out energy-saving projects for chill water of air conditioning systems, upgraded lighting and related equipment, optimized operational processes, adopted recycled materials, and developed low-carbon products. In addition, the Company has actively promoted the development of renewable energy to increase its usage ratio. In 2024, total energy consumption was 49,497 MWh, representing a 5% reduction compared to 2023 and a 27% reduction compared to the 2021 baseline year. Taiwan plants reached 7% reduction compared to 2023 and 19% reduction compared to the 2021 baseline year. China plants reached 4% reduction compared to 2023 and 30% reduction compared to the 2021 baseline year.

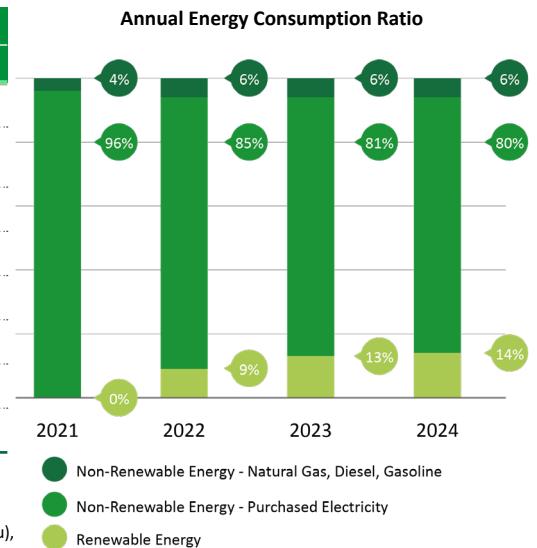
Energy Usage Summary Table

Region		Taiwan				China			
Item/Year		2021	2022	2023	2024	2021	2022	2023	2024
Renewable Energy	Renewable Energy ¹ (MWh) ²	0	96	950	1,117	0	5,171	5,809	4,738
	Purchased Electricity—with Renewable Energy Certificates (MWh)	-	-	-	-	-	-	-	1,000
Non-Renewable Energy	Purchased Electricity (MWh)	15,907	15,105	12,776	11,715	49,016	35,741	29,701	28,126
	Natural Gas (MWh)	233	245	284	176	1,234	2,198	1,217	1,656
	Diesel (MWh)	30	32	25	40	310	184	175	158
	Gasoline (MWh)	104	123	93	65	1,057	648	1,090	706
Total Energy Consumption (MWh)		16,274	15,601	14,128	13,113	51,617	43,942	37,992	36,384
Energy Intensity (MWh/NT\$ million) ³		0.61	0.47	0.52	0.46	1.29	1.01	1.17	1.28

1: Includes electricity consumption from self-generated solar power and green power purchased through renewable energy wheeling.

2: 1 MWh = 0.000036 GJ

3: Revenue coverage for 2021~2023: Taiwan plants: Coretronic, Young Green Energy, uCare Medical Electronics, Champ Vision Display, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, Coretronic Intelligent Logistic Solutions; China plants: Coretronic Display (Suzhou), Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan).
Revenue coverage for 2024: Taiwan plants: Coretronic, Young Green Energy, uCare Medical Electronics, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, Coretronic Intelligent Logistic Solutions; China plants: Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan).





► Renewable Energy

Commitments and Targets	Strategies
<ul style="list-style-type: none"> 2025: 15% of renewable energy in annual electricity consumption 2026~2028: 21% of renewable energy in annual electricity consumption 2029~2031: 27% of renewable energy in annual electricity consumption 2040: 100% of renewable energy in annual electricity consumption 	<ul style="list-style-type: none"> 2016~2017: Purchased green electricity 2018: Installed a solar power generation system at Tainan Plant 1 2020: Set renewable energy targets 2021: Installed solar power generation systems for Coretronic Display (Suzhou), Coretronic Optotech (Suzhou), and Coretronic Optics (Suzhou) with installed capacities of 1,207.8, 4,068.9, and 653.4 kW respectively 2022: Installed a solar power generation system for Coretronic Projection (Kunshan) and Coretronic Optics (Kunshan) with an installed capacity of 618.9 kW; Taiwan plants began purchasing renewable energy certificates and sourcing green power via renewable energy wheeling 2023: Installed solar power generation systems for Chunan Plant, Tainan Plant 1, and Tainan Plant 2 with installed capacities of 367.41, 317.46, and 132.44 kW respectively 2024: Installed a solar power generation system for the Headquarters with an installed capacity of 98.4 kW
2024 Results	
<ul style="list-style-type: none"> The Headquarters completed the installation of a 98.4 kW solar power generation system, which will begin generating electricity in 2025. Through a combination of self-generated solar power, green power purchased via renewable energy wheeling, and renewable energy certificates, total renewable energy usage reached 6,855 MWh, achieving a carbon reduction of 3,631 metric tons. Renewable energy accounted for 15% of total annual electricity consumption. The Chairman signed the “RE100 and EV100 Statement”, pledging to achieve 100% electrification of transportation vehicles by 2030 and 100% renewable energy usage by 2040. 	

1: Annual electricity consumption includes both purchased electricity and renewable energy use.

2: China plants' emission factor used is 0.5366 tCO₂e/MWh, which is the 2024 national grid average emission factor in China.

► Energy-Saving Measures and Performance

Since 2015, Coretronic has actively promoted energy management. In addition to setting clear energy-saving targets and management strategies, the Company has implemented energy-saving initiatives across three key areas: air conditioning systems, electrical lighting, and other electricity usage. These measures include improving energy efficiency, using outdoor solar-powered streetlights, controlling weekend and nighttime HVAC schedules on production lines, optimizing variable-frequency air conditioning, replacing all lighting with LED fixtures and installing variable-frequency air compressors, implementing automatic temperature control systems, and replacing transformers. From 2015 to 2024, Coretronic implemented 389 energy-saving projects across Taiwan and China plants, reducing electricity consumption by 31,933 MWh and cutting carbon emissions by nearly 18,000 metric tons of CO₂e, equivalent to the annual carbon absorption of 48 Da'an Forest Parks. Going forward, the Company will continue to strengthen its energy management efforts to further improve efficiency, reduce carbon emissions, and move toward its carbon neutrality goals.

- In 2024, Coretronic carried out 30 energy-saving initiatives, reducing electricity consumption by 1,721 MWh and 868 metric tons of CO₂e.
- Total electricity consumption in 2024 was 46,696 MWh, a 5% reduction compared to 2023. Electricity intensity decreased by 15% compared to the 2021 baseline year, achieving the short-term target.

Item	Region and Year		Taiwan			China					Taiwan and China
	2021	2022	2023	2024	2024 vs 2023	2021	2022	2023	2024	2024 vs 2023	2024 vs 2023
Electricity Savings from Energy—Saving Initiatives (MWh)	2,346	1,827	741	1,288	Reduced total electricity use by 894 MWh (7%)	2,111	13,473	1,325	433	Reduced total electricity use by 1,646 MWh (5%)	Reduced total electricity use by 2,540 MWh (5%)
Carbon Reduction from Energy—Saving Initiatives (tCO ₂ e)	1,178	904	367	636		1,672	7,684	756	232		
Total Electricity Consumption (MWh) ¹	15,907	15,201	13,726	12,832		49,016	40,912	35,510	33,864		
Electricity Intensity (MWh/NT\$ million) ²	0.59	0.46	0.51	0.45		1.23	0.94	1.10	1.19		

1: Total electricity consumption includes both purchased electricity and renewable energy usage (i.e., self-generated solar power and green power via renewable energy wheeling).

2: Revenue coverage for 2021~2023: Taiwan plants: Coretronic, Young Green Energy, uCare Medical Electronics, Champ Vision Display, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, Coretronic Intelligent Logistic Solutions; China plants: Coretronic Display (Suzhou), Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan). Revenue coverage for 2024: Taiwan plants: Coretronic, Young Green Energy, uCare Medical Electronics, Coretronic Intelligent Cloud Service, Coretronic Intelligent Robotics, Innospectra, Coretronic MEMS, Coretronic Reality, Coretronic Intelligent Logistic Solutions; China plants: Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan).



03

3.3 Waste Management

- 3.1 Greenhouse Gas Management
- 3.2 Energy Management
- 3.3 Waste Management
- 3.4 Environmental Resource Management

Coretronic's waste generated from operating activities is mainly non-hazardous waste. However, other flammable mixtures and electronic components arising from research and experimental processes are classified as hazardous industrial waste, which are incinerated and physically treated. The Company manages hazardous industrial waste through the control and categorization of scrap materials to reduce the generation of hazardous industrial waste. The Company also requires suppliers to implement waste flow control measures jointly, thus fulfilling the environmentally friendly commitment.

Taiwan plants, Wujiang plants, and Coretronic Projection (Kunshan)* have introduced and obtained ISO 14001 Environmental Management System certification. Through the lens of a product's life cycle, Coretronic examines the detailed processes of waste generation, removal, treatment, and recycling at different stages, implementing waste reduction strategies through system management and formulates an audit plan to prevent unlawful activities or environmental risks resulting from improper handling.

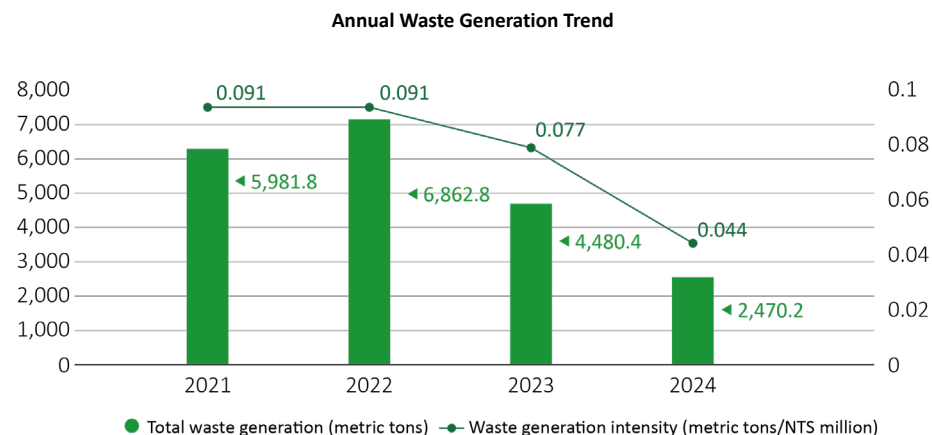
* Coretronic Optics (Kunshan) is an upstream supplier of Coretronic Projection (Kunshan), and its environmental management system is jointly managed with Coretronic Projection (Kunshan). It is expected to obtain ISO 14001 certification in the future in response to customer requirements.

Strategies	2024 Results
<p>NEW Establish and publicly announce a “Plastic Reduction Commitment”, encouraging all employees to sign the pledge</p> <ul style="list-style-type: none"> Strengthen waste management and increase the recycling rate Design volume-reducing and material-saving products to minimize waste generation Prioritize the use of recycled materials to reduce waste and promote circular utilization Raise employees' waste reduction awareness Commission licensed contractors for proper waste disposal 	<ul style="list-style-type: none"> Waste generation intensity decreased by 43% compared to 2023 and 52% compared to 2021, achieving the short-term target. At Taiwan plants, waste generation intensity decreased by 13% compared to 2023 and 24% compared to 2021. At China plants, waste generation intensity decreased by 42% compared to 2023 and 47% compared to 2021. Promoted 6 packaging material reuse initiatives, reducing 1,658 tCO₂e and saving NT\$210,000 in pallet purchase and disposal costs. Tainan Plant 1 implemented a tray recycling program, recovering 0.1 metric tons of trays and reducing 0.2 tCO₂e. Kunshan plants launched chemical container lightweighting and reduction measures, reducing 0.8 metric tons of hazardous waste and 0.2 tCO₂e, and saving NT\$13,000 in disposal costs. Audits of 40 waste disposal contractors were planned and conducted, achieving a 100% audit completion rate. All employees were invited to sign the “Company-Wide Plastic Reduction Commitment”, achieving a 99.6% signing rate. And waste reduction training courses were held at the China plants, with a total of 596 employees completing the training.

Waste Generation Status

Coretronic is fully committed to the three principles of waste reduction, reuse, and recycling, integrating circular economy concepts into product manufacturing, strengthening source reduction, and implementing pollution prevention measures to continuously improve waste management performance.

The company categorizes waste based on its environmental impact into hazardous and non-hazardous waste. Non-hazardous waste is further divided into domestic waste, recyclable waste, and general waste, and is managed under five categories based on disposal methods. Except for domestic and recyclable waste, all other waste originates from the manufacturing process. In 2024, the Taiwan plants produced 377.6 metric tons of waste, of which hazardous directly disposed waste accounted for 2%, non-hazardous directly disposed waste accounted for 45%, and non-hazardous recycled waste accounted for 53%. China plants produced 2,092.6 metric tons of waste, of which hazardous directly disposed waste accounted for 0.9%, non-hazardous directly disposed waste accounted for 30.4%, and non-hazardous recycled waste accounted for 67.4%.





Category	Region	Taiwan				China			
	Item/Year	2021	2022	2023	2024	2021	2022	2023	2024
Hazardous Waste ¹	Total	4.1	4.2	4.3	6.3	19.2	24.2	39.5	45.6
	Direct Disposal—Incineration Only	3.1	2.8	1.8	1.5	5.2	7.1	7.9	19.1
	Direct Disposal—Other Disposal Operations	1.0	1.4	2.5	4.8	0	0	0	0
	Recycle—Reuse for Original Purpose	0	0	0	0	3.5	6.0	21.7	20.5
	Recycle—Recycling	0	0	0	0	10.5	11.1	9.9	6.0
Non-Hazardous Waste ²	Total	432.4	491.5	376.3	371.3	5,526.1	6,342.9	4,060.3	2,047.0
	Direct Disposal—Incineration Only	200.8	228.4	166.3	165.1	289.1	743.9	520.7	636.9
	Direct Disposal—Landfill	0	0	0.2	0	0	0	0	0
	Direct Disposal—Other Disposal Operations	8.7	2.0	5.2	6.4	0	0	0	0
	Recycle—Reuse for Original Purpose	0.9	3.6	1.5	7.2	0	0	0	0
	Recycle—Recycling	222.0	257.5	203.1	192.6	5,237.0	5,599.0	3,539.6	1,410.1
Total Waste Generation (metric tons)		436.5	495.7	380.6	377.6	5,545.3	6,367.1	4,099.8	2,092.6
Waste Generation Intensity (metric tons/NT\$ million) ³		0.017	0.016	0.015	0.013	0.139	0.146	0.127	0.074

1: It refers to mercury lamps, empty bottles, waste liquids, electronic waste, etc., which are identified as hazardous waste by local environmental authorities during the disposal stage. They are collected and classified according to their hazardous characteristics, and then handed over to qualified disposal companies for processing.

2: It refers to domestic waste, unclassified combustible general waste, waste plastics, wastepaper, waste metals, and publicly announced recyclable and reusable waste. Recyclable and reusable waste is collected by local qualified recycling companies for recycling and reuse. Other waste is disposed of by qualified disposal companies and transported to processing plants according to waste disposal methods.

3: Coverage of revenue: Taiwan plants including Coretronic, Young Green Energy, uCare Medical Electronics, Coretronic Intelligent Cloud Service, Innospectra, Coretronic MEMS, Coretronic Reality, Coretronic Intelligent Logistic Solutions; China plants including Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan)

4: All generated waste is transported by qualified disposal companies to qualified processing plants for disposal, and there is no transfer of disposal.

5: The data on waste generation, transfer, and disposal comes from the Industrial Waste Report and Management Information System of the Environmental Protection Administration and the "One Enterprise, One File" Management System for Pollution Sources in Jiangsu Province. The data on recycling and reuse comes from internal records and accounting statements of the plants.

Waste Reduction Strategies

► Reuse of Packaging Materials

In 2024, Coretronic implemented 6 packaging material recycling initiatives, achieving an overall recovery rate of 96%. The recycling results were counted by pieces, with 97% for trays, 76% for pallets, 67% for plastic pads, and 95% for paper boxes. In total, 805 metric tons of reusable packaging materials were recovered, resulting in a reduction of 1,658 tCO₂e and cost savings of NT\$210,000 in pallet purchasing and waste disposal fees. (According to the Low Carbon Sustainable Information System website, each metric ton of waste generates 2.06 tCO₂e.)

► Circular Economy Alliance

- Pallet reuse: Since 2017, Coretronic has partnered with local logistics suppliers for 8 consecutive years to recover and reuse original pallets for transportation. From 2017 to 2024, a total of 494.6 metric tons of pallets were recovered, reducing 1,019 tCO₂e and saving NT\$2.26 million in pallet purchase and waste disposal costs.
- Tray recycling and reprocessing: Tainan Plant 1 has recycled defective trays, which were reprocessed for reuse. From 2021 to 2024, 1.8 metric tons of trays were recovered, reducing 3.7 tCO₂e.

► Lightweight Chemical Containers

Since 2022, the Kunshan plants have replaced 500 mL glass ethanol containers with 2.5 L plastic bottles. Each liter of ethanol used results in a 0.768 kg reduction of hazardous industrial waste. From 2022 to 2024, this initiative reduced 4.5 metric tons of waste and 1.4 tCO₂e and saved RMB 17,580 (approximately NT\$77,000) in waste disposal fees. (According to the Carbon Footprint Information Platform website, each metric ton of hazardous industrial waste disposed of by landfill generates 0.3 tCO₂e.)

► End-of-Life Product Tracking

To ensure that reused products are handled legally, Coretronic has established clear waste management operating procedures and conducts annual on-site audits of waste disposal companies' compliance with regulations and their downstream processing capabilities. If non-compliance is found, guidance and follow-up improvements are provided, and if the issues persist, the disposal contract will be terminated to ensure proper and legal waste disposal. In 2024, Coretronic audited 40 waste disposal companies, covering general, recyclable, and hazardous waste, with a 100% audit completion rate and no irregularities found.

03

3.4 Environmental Resource Management

Air Pollution Control

The Company voluntarily reports and regularly monitors emissions from pollution sources to ensure continuous tracking and oversight. Currently, the main sources of air pollutants are organic solvents used in manufacturing processes, such as cleaning agents. For plants without regular testing, emissions data are compiled based on declarations submitted to the “Ministry of Environment’s Air Pollution Control Fee and Emissions Reporting Integrated Management System”. For plants with regular testing, data are based on the results of scheduled monitoring reports.

In 2024, the total emissions of volatile organic compounds (VOCs) amounted to 2.868 metric tons, showing a slight increase compared to 2023. This was due to the following two reasons: (1) At the Headquarters, starting in 2023, a new self-reporting item-storage tank (diesel tank refueling volume) was added in compliance with the requirements of the Environmental Protection Bureau of Hsinchu City. (2) At Coretronic Optics (Suzhou), an increase in product shipments led to higher ethanol usage for product wiping, which in turn raised VOC emissions. However, all emissions remained within the limits set by the Jiangsu Province “Integrated Emission Standard of Air Pollutants”. The Company will continue to track and monitor emissions in the future.

Types of Air Pollutants/Year	2021	2022	2023	2024
VOCs (metric tons)	5.385	2.874	2.569	2.868

Note: The above data covers 100% of the scope disclosed in this Report, including Coretronic’s Taiwan plants (Headquarters, Chunan Plant, Tainan Plant 1, and Tainan Plant 2) and China plants (Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou), Coretronic Projection (Kunshan), Coretronic Optics (Kunshan)). Tainan Plant 2 was confirmed by the Tainan Environmental Protection Bureau during its voluntary reporting application that its emissions are below regulatory thresholds, and therefore reporting was not required.

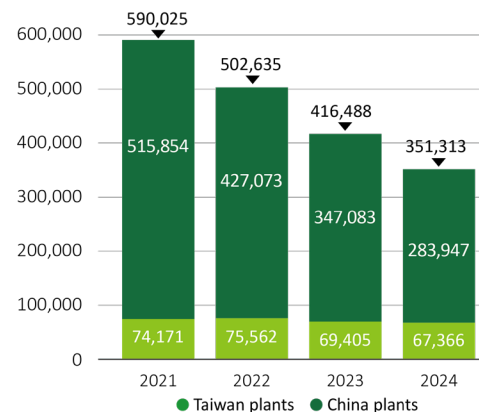
Water Resource Management

Coretronic primarily sources its water from municipal supplies, with usage mainly for air conditioning, domestic needs, and catering services. Water users include employees, visitors, and contractors. Since there is no process water demand, the environmental impact is relatively low. However, considering that water resources are a globally significant sustainability concern, Coretronic conducts a comprehensive water risk analysis using the Aqueduct Water Risk Atlas developed by the World Resources Institute (WRI). The analysis results indicate that Taiwan plants are classified as low to medium water risk areas (levels 1~2), while China plants face high water risk levels (levels 3~4). In light of the potential exacerbation of water scarcity risks due to climate change, Coretronic will continue to monitor water usage and water stress levels, regularly assess and revise water optimization strategies to ensure effective management and sustainable use of water resources. Currently, all sites implement water recycling and conservation measures to mitigate water-related impacts. The Company also promotes water-saving awareness to proactively prevent potential water shortages during dry seasons.

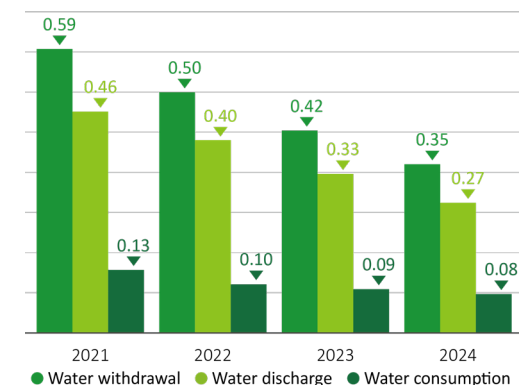
► Water Resource Management Strategies

- Maximize water use efficiency
- Enhance awareness and water conservation efforts throughout the upstream and downstream value chain
- Set water-saving targets and regularly review progress to ensure achievement of these goals
- Continuously promote and implement various water conservation initiatives to realize tangible results
- Identify feasible water-saving measures through routine management and inspections
- Promote water resource education to improve stakeholders’ water literacy

Annual Water Usage Trend (Metric Tons)



Annual Water Withdrawal, Discharge, and Consumption (Million Metric Tons)





► Water Quality Management

Coretronic's manufacturing process mainly focuses on product assembly, which does not require water usage and generate no process wastewater. The wastewater primarily originates from employee domestic sewage. In 2024, Coretronic discharged 0.27 million cubic meters of wastewater. All wastewater discharges comply with local regulatory requirements. Wastewater is strictly treated by local laws and regulations, with regular water quality testing conducted to monitor discharge conditions. This ensures that the discharge quality meets local regulatory standards. If any non-compliance is detected, a corrective action plan will be immediately implemented to prevent any adverse impact on natural water bodies and the ecological environment.

Region		Taiwan				China		
Indicator		Headquarters	Chunan Plant	Tainan Plant 1	Tainan Plant 2	Coretronic Projection (Kunshan), Coretronic Optics (Kunshan) ¹	Coretronic Optotech (Suzhou)	Coretronic Optics (Suzhou)
Result	PH	8	7.6	7.5	7.7	7.3	7.6	7.4
	SS (mg/L)	2.6	8.9	31	1	16	21	10
	COD (mg/L)	12	36.4	67.5	7.6	25	248	37
	BOD (mg/L)	3.4	13.8	22.3	<1.0	-	73.8	5.6
Standard	PH	5.0~9.0	5.0~9.0	5.0~10.0	5.0~10.0	6.5~9.0	6.5~9.5	6.5~9.5
	SS (mg/L)	300	300	250	250	200	400	400
	COD (mg/L)	500	500	450	450	350	500	500
	BOD (mg/L)	300	300	250	250	-	350	350

1: Coretronic Projection (Kunshan) and Coretronic Optics (Kunshan) are located at the same site and share a common drainage system; therefore, their water quality testing data are disclosed together.

► Water Usage Status

Although water resources are not a major environmental impact area in Coretronic's operations, water issues have become a global concern. Coretronic has set water reduction targets and promoted water conservation through awareness campaigns and various saving and recycling measures. In 2024, water consumption at Taiwan plants decreased by 3% compared to 2023 and by 9% compared to 2021. At plants in China, water usage in 2024 dropped by 18% from 2023 and by 45% from 2021, both achieving short-term targets. Overall, total water consumption across Taiwan and China plants fell by 16% from 2023 and by 40% from 2021. Looking ahead, the Company will continue implementing proactive water-saving measures to mitigate the impacts of climate change.

► Water Conservation Measures—Recycling Systems and Water-Saving Devices

- All Taiwan plants and Coretronic Optics (Suzhou) are equipped with recycling systems that primarily collect surface water, raft foundation water, air conditioning condensate, and rainwater for landscape irrigation and secondary domestic use. Each plant also implements water-saving measures such as adjusting the concentration of water replacement in air conditioning systems, installing water-saving devices on faucets (aerators and motion-sensor taps), monitoring water use in catering services, and reducing cleaning-related water consumption to achieve short-term water reduction targets.

- Since 2018, Coretronic has promoted various recycling and water-saving initiatives. As of 2024, the total volume of water saved and recycled reached 207,000 metric tons, resulting in a carbon reduction of 223.6 metric tons.

👍 In the 2024 Carbon Disclosure Project (CDP) "Water Security" questionnaire, Coretronic received an "A" leadership rating (A List).

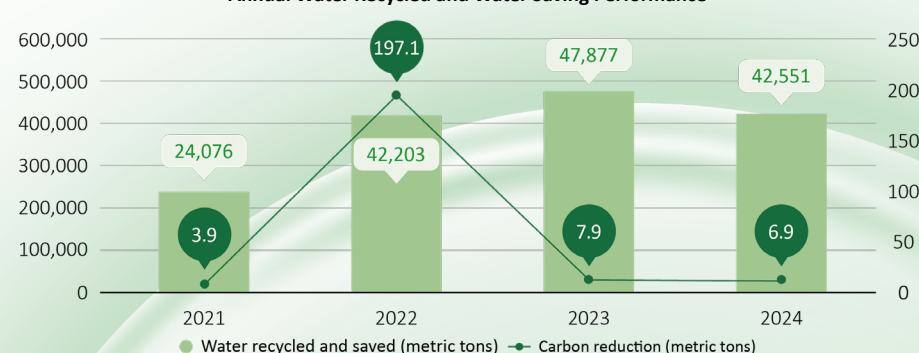
► Water Conservation Performance

Region	Taiwan	Taiwan and China		
Item/Year	2021	2022	2023	2024
Water Saved (metric tons)	16,822	27,956	30,297	26,928
Water Recycled (metric tons)	7,254	14,247	17,580	15,623
Water Recycled and saved (metric tons)	24,076	42,203	47,877	42,551
Carbon Reduction (metric tons) ¹	3.9	197.1 ²	7.9	6.9

1: The carbon emission per cubic meter of water used at Taiwan plants is calculated based on values published by the Taiwan Water Corporation; for China plants, it is based on the annual GHG inventory emission factor.

2: In 2022, the carbon emissions per metric ton of water at China plants reached 12.32 kgCO₂e, significantly higher than in other years, resulting in a substantial increase in carbon reduction.

Annual Water Recycled and Water Saving Performance





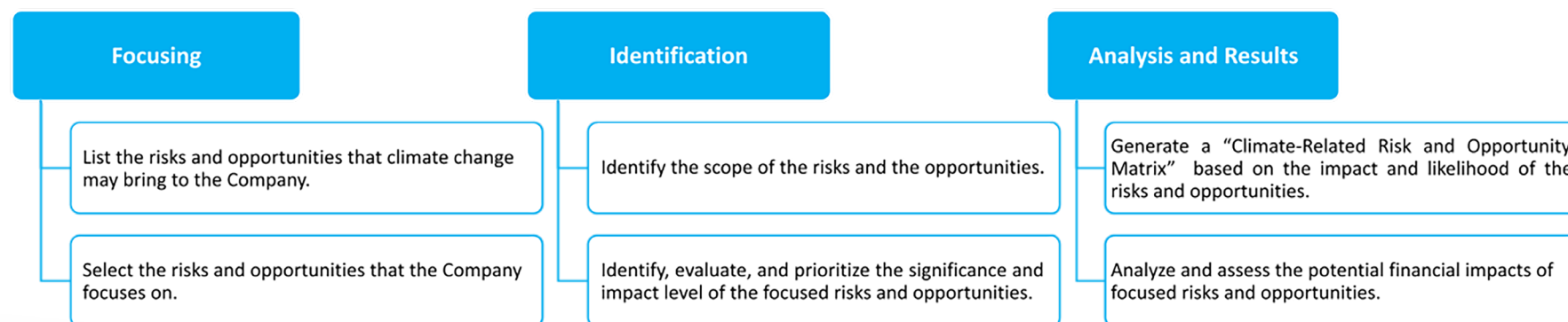
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4.1 Risk Identification

4.2 Risk Response
Strategies

4.1 Risk Identification

Amid growing attention to climate-related regulations and net-zero targets, Coretronic has proactively engaged in and monitored international sustainability initiatives. In 2021, the Company conducted its first climate-related risk and opportunity identification and financial impact analysis using the TCFD framework, and updated the assessment with revised risk and opportunity focus areas in 2023. Based on international climate change trends and stakeholder concerns, various climate-related risks and opportunities were identified in 2023, including transition risks (policy and legal risks, technology risks, market risks, and reputational risks), physical risks (acute and chronic), and other risks and opportunities. A comprehensive list of climate risks and opportunities was established, resulting in the identification of 6 transition risks, 1 physical/other risk, and 7 opportunities. Each identified risk and opportunity were quantitatively evaluated based on the potential impact type, impact severity, and occurrence likelihood. The risks and opportunities were then categorized and ranked according to the assessment results. Corresponding response strategies were developed to mitigate negative impacts, enhance organizational climate resilience, and create future business opportunities. In addition to climate-related risk and opportunity identification, potential financial impact of each item was analyzed to support the development of targeted response strategies.



The First Stage—Focusing

In 2023, the TCFD risk and opportunity identification questionnaire was distributed to 211 members of the TCFD Team. Based on the Company's operations and future development, the members of the TCFD Team selected 10 risks and 10 opportunities related to climate change from a list of the 39 risks and the 24 opportunities. A total of 203 responses were collected, with a 96% response rate. Ultimately, the 7 risks and the 7 opportunities were prioritized for further focus.

The Second Stage—Identification

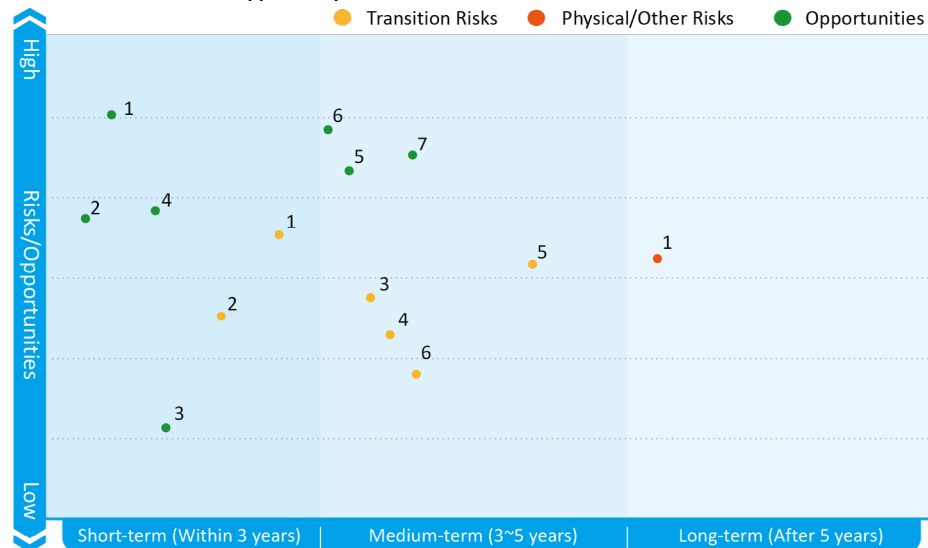
The results of the first-stage questionnaire were distributed to 85 division-level and above supervisors and members of the TCFD Team to identify the significance and impact of risks and opportunities. A total of 84 responses were collected, with a 99% response rate.

The Third Stage—Analysis and Results

The results of the second-stage questionnaire were analyzed, generate the Climate-Related Risk and Opportunity Matrix. Further, the financial impacts of the 7 risks and the 7 opportunities were assessed.



Climate-Related Risk and Opportunity Matrix



Transition Risks

- 1 Climate Change Response Act, GHG cap and carbon taxes, carbon fees, and other climate change regulations
- 2 Renewable energy regulations
- 3 GHG cap/Emissions trading
- 4 Demand for low-carbon products and services
- 5 Transformation to innovative low-carbon technologies or services
- 6 Rising raw material procurement costs



Opportunities

- 1 Promoting low-carbon green production
- 2 Using recycled materials/recycling and reuse
- 3 Supply chain stability
- 4 More efficient transportation and distribution processes
- 5 Using renewable energy/low-carbon energy
- 6 Enhancing corporate reputation
- 7 Finding new business opportunities

Physical/Other Risks

- 1 Social uncertainty/Geopolitics

Potential Financial Risk Analysis Climate-Related Risks and Opportunities

Risk/ Opportunity	Category	Risk/Opportunity Items	Potential Financial Impact		
			Costs	Capital Expenditures	Operating Revenue
 Risk	Policy and Legal	Climate Change Response Act, GHG cap and carbon taxes, carbon fees, and other climate change regulations	▲		
		Renewable energy regulations	▲	▲	
		GHG cap/Emissions trading	▲		▼
	Technology	Demand for low-carbon products and services			▼
		Transformation to innovative low-carbon technologies or services	▲	▲	▼
	Market	Rising raw material procurement costs	▲		▼
 Opportunity	Others	Social uncertainty/Geopolitics		▲	▼
	Resource Efficiency	Promoting low-carbon green production	▼		▲
		Using recycled materials/recycling and reuse	▼		▲
		Supply chain stability			▲
		More efficient transportation and distribution processes	▼		▲
	Energy Source	Using renewable energy/low-carbon energy	▼	▲	
	Reputation	Enhancing corporate reputation			▲
	Markets	Finding new business opportunities			▲

* Coretronic will estimate the financial impact, costs, or revenue projections related to risks and opportunities, and disclose the results once completed.



04

4.2 Risk Response Strategies

4.1 Risk Identification

4.2 Risk Response Strategies

Coretronic conducts climate-related risk and opportunity assessments every two years. Based on international climate change trends and stakeholder concerns, various climate-related risks and opportunities were identified in 2023, including transition risks (policy and legal risks, technology risks, market risks, and reputational risks), physical risks (acute and chronic), and other risks and opportunities. A comprehensive list of climate risks and opportunities was established, resulting in the identification of 6 transition risks, 1 physical/other risk, and 7 opportunities. Based on the risks identified in 2023, Coretronic will continue to implement mitigation strategies in 2024 to effectively address future climate challenges.

In response to high-impact and short-term transition risks such as “Climate Change Response Act, GHG cap and carbon taxes, carbon fees, and other climate change regulations”, and opportunities such as “Promoting low-carbon green production”, “Using recycled materials/ recycling and reuse”, and “More efficient transportation and distribution processes”, the Company has planned and implemented response strategies.

Risks/ Opportunities	Scenario	Risk/Opportunity Items	Potential Financial Impact	Response Strategies
Transition Risks	NZE ¹	Climate Change Response Act, GHG cap and carbon taxes, carbon fees, and other climate change regulations	Operating Costs ↑	<ul style="list-style-type: none"> Carbon reduction target setting: Setting SBT carbon reduction targets and corresponding reduction methodologies. Carbon pricing mechanism: Implementing internal carbon pricing as a reference for decision-making on emission reduction. Digitalized management: Developing a carbon management platform to promote systematic management of carbon-related information. GHG oversight: The Board of Directors reviews the implementation of GHG inventories quarterly and evaluates environmental performance indicators and emission reduction progress annually to strengthen climate governance.
		Promoting low-carbon green production	Operating Costs ↓ Revenue ↑	<ul style="list-style-type: none"> Incorporating low-carbon thinking into product design and manufacturing process development, with ongoing investment in energy-saving product R&D and eco-design. Self-conducting product carbon footprint while formulating and implementing carbon reduction measures for high-emission hotspots.
Opportunities	NZE ¹	Using recycled materials / recycling and reuse	Operating Costs ↓ Revenue ↑	<ul style="list-style-type: none"> Establishing targets for the proportion of recycled material usage and continuously increasing the ratio. Using eco-packaging materials like paper pulp and folded paper as cushioning, and adopting FSC certified or recycled pulp-based paperboard products for shipping. Recycling and reprocessing discarded trays.
		More efficient transportation and distribution processes	Operating Costs ↓ Revenue ↑	<ul style="list-style-type: none"> Designing products with reduced volume and material usage to enhance transportation efficiency, while prioritizing lower-carbon transportation modes. Using sustainable aviation fuel for transportation to reduce carbon emissions.

1: Net Zero Emissions by 2050 Scenario (NZE): Developed by the International Energy Agency (IEA), this scenario outlines the technological and policy roadmap for achieving global net-zero greenhouse gas emissions by 2050. It aligns with the Paris Agreement target of limiting global temperature rise to within 1.5°C.

Transition Risk Response Strategy—“Climate Change Response Act, GHG cap and carbon taxes, carbon fees, and other climate change regulations”

► SBTi Carbon Reduction Targets

- In alignment with the SBT 1.5°C scenario, Coretronic have set carbon reduction targets: “Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe.” The company submitted science-based targets to SBTi for review in 2023 and the targets were approved by SBTi in April 2024.

NEW Internal Carbon Pricing

- Although Coretronic has not yet reached the carbon fee threshold set by the Ministry of Environment, the Company proactively introduced an internal carbon pricing strategy in 2021 to better manage operational risks associated with climate change. Based on scenario analyses of emission risks at each plant, an internal carbon price of NT\$942 per metric ton of CO₂e was set to simulate the potential impact of future carbon costs on business operations and investment decisions.
- Since 2022, the Company has applied internal carbon pricing to evaluate the investment benefits of ESCO energy-saving projects and solar power generation system installations, supporting more optimized internal resource allocation. Then, it upgraded to energy-efficient equipment and increased the use of renewable energy. In 2024, Scope 1 and 2 greenhouse gas emissions totaled 23,404.7 tCO₂e, representing a 51% reduction compared to the 2021 baseline year, significantly exceeding the short-term target and demonstrating the effectiveness of internal carbon pricing in supporting decision-making.
- Looking ahead, Coretronic will dynamically adjust its carbon price and scenario analyses in response to international trends, regulatory policies, market developments, and internal emissions performance. This will help optimize carbon reduction strategies, enhance sensitivity to climate risks, and promote more forward-looking carbon reduction actions to achieve both carbon reduction goals and operational success.

**► Carbon Management Platform**

- **Product Carbon Footprint Inventory Platform:** Based on the inventory results of the EX1 laser projector platform, the Company has independently planned and established a product carbon footprint inventory platform aligned with product BOM data. In 2024, the “Material Emission Factor Database” was completed, which prioritizes the verification of carbon emission data for new product components. The “Manufacturing Stage Database” is scheduled for completion in 2025, with full platform deployment targeted for 2026.
- **Organizational Carbon Inventory Platform:** To effectively monitor the GHG inventory progress and emission data of each site and subsidiary, Coretronic is planning and building the Organizational Carbon Inventory Platform, which will serve as a critical foundation for formulating emission reduction strategies. It is scheduled to build in 2025 and will be officially launched in 2026, with its scope gradually expanding to overseas sites and subsidiaries.

► GHG Governance and Oversight

- Coretronic conducts annual GHG inventories by ISO 14064-1 to ensure accurate tracking of GHG emissions and serves as a basis for verifying the effectiveness of reduction efforts. Although not currently subject to mandatory regulatory requirements for GHG inventory or emissions reductions, Coretronic has set phased reduction targets and continuously improved through annual reviews. The Company aims to maximize energy utilization by tracking energy consumption, enhancing equipment efficiency, improving energy management, and deploying renewable energy systems, advancing toward low-carbon goals.
- The Board of Directors quarterly reviews the Company’s GHG inventory implementation, including the progress and emission data of each plant and subsidiary. These reviews serve as a key reference for adjusting GHG management and reduction strategies. In addition, the ESG committee member and executive representative—the Chief Financial Officer reports to the Board of Directors annually. The report includes updates on the implementation results of sustainability projects, the climate change risk management framework and response strategies (TCFD), various environmental indicators, SBT carbon reduction targets and pathway, renewable energy strategies, and future direction for sustainability development. These efforts strengthen the Board’s oversight responsibility of sustainability issues, ensuring these issues continue to receive attention and effective governance.

**Opportunity Response Strategy—“Promoting low-carbon green production”, “Use of recycled/reused materials”, and “More efficient transportation and distribution processes”
[Green Design]**

- **R&D Patents:** Green thinking is integrated into R&D technologies, and active patent applications are pursued to design green products that help customers save energy and reduce carbon emissions. In 2024, 58% of the proposals at Taiwan plants were related to energy conservation and carbon reduction.

► Projectors and Visual Solutions

- Continued optimization of the optical design of mainstream projectors has significantly enhanced overall product performance. Compared to 2023, energy efficiency improved by 74%, with an estimated annual electricity savings of 44.29 GWh, equivalent to a carbon reduction of 21,877 metric tons.
- Solid-state light source (SSI) projectors are more energy-efficient than lamp-based projectors. The EX/EU laser projector series platform models consume 54% less energy than comparable lamp-based models.
- Certain models of smart projectors use solar-powered remote controls and reduce material usage for individual components by 50%, effectively lowering raw material consumption and environmental impact.
- In collaboration with customers, the D32 platform key component revitalization program was launched. This program enhances key component quality through core technologies, enabling easier disassembly and recycling. Recycled components can be reintegrated into the production process, achieving a 60% reuse rate.
- Power consumption in standard operation and standby modes complies with EU energy-saving standards.
- Equipped with an automatic power-off safety feature (including automatic power-off for no signal source and sleep mode).
- Reduced the need for post-processing designs (such as electroplating, painting, printing) depending on the product category.
- Adopted environmentally friendly solid-state light sources (SSI) such as LED and laser, as well as other mercury-free materials, to introduce completely mercury-free projectors.
- Compared to traditional lamp projectors, the lifespan of the light source in LED and laser projectors can be up to 5 times longer, eliminating the need for lamp replacement and reducing environmental impact.

► Backlight Modules and Energy Saving Products

- **Development of High-Efficiency Backlight Modules to Reduce Energy Consumption:** By optimizing the optical film materials and microstructure design of the light guide plate, the light emitted from the light guide plate can achieve higher efficiency through the optical films, effectively reducing energy consumption. The newly developed LCD modules in 2024 achieved an energy-saving rate of 5.3%.
- **Low-Carbon Backlight Board Technology:** The Tainan Plant 1 enhanced optical brightness technology, resulting in a 25% reduction in lighting power consumption. In 2024, 62,292 units were produced. Assuming 10 hours of daily use over 365 days, this led to an electricity saving of over 1.89 GWh and a carbon reduction of 934 metric tons.
- **Lightweight Backlight Board Design:** The Tainan Plant 1 reduced the thickness of composite optical films and redesigned structural components, lowering the material usage of optical films and back plates. The average weight was reduced by approximately 7%. In 2024, 486,480 units were produced, achieving a total weight reduction of 36 metric tons, which translates to a carbon reduction of 73 metric tons.
- **Lightweight Optical Film Design:** Coretronic Optotech (Suzhou) optimized the optical structural design, replacing the original 0.45 mm POP film with a 0.32 mm MOP film while maintaining optical performance. This lightweight design reduced the weight by about 31%. In 2024, 1,083 units of small-sized lightweight products were introduced, reducing the overall product weight by 5 kg, with a carbon reduction of 0.01 metric tons.
- **Optimized Circuit Design:** Coretronic Optics (Suzhou) implemented a circuit optimization project for a 14.9-inch automotive touch display module, reducing the number of flexible flat cables (FFC) from 6 to 4. In 2024, 2,700 touch display modules were produced, resulting in a carbon reduction of 0.05 metric tons.



【Low-Carbon Materials】

To align with international sustainability trends and customer requirements and to effectively reduce Scope 3 GHG emissions, Coretronic has established the “Sustainable Raw Material Policy” following discussions by the Green Projector Development Team and Green Product R&D Team. The policy aims to “increase the use of recycled raw materials”, “achieve a 30% absolute reduction in Scope 3 GHG emissions by 2032”, and reach “net-zero emissions by 2050”. The policy was signed by the Chairman and publicly announced on the official website.

- To reduce raw material consumption and promoting a circular economy, the Company has used 50% post-consumer recycled plastic (PCR) for product casings since 2022. In 2024, the number of PCR-integrated models for mainstream and commercial projectors continued to increase, with PCR-equipped units accounting for 12% of the total annual shipments in these two categories, achieving the short-term target.
- The projector models utilizing PCR consumed a total of 59 metric tons of plastic, of which 19.7 metric tons were PCR, representing 33% of the total plastic used.
- In collaboration with customers, recycled aluminum materials were added to the back covers of newly developed laptop models. The proportion of models using recycled aluminum has been gradually increased, and in 2024, 3.8% of newly developed laptop models incorporated recycled aluminum, achieving the short-term target.
- The newly developed laptop models that used recycled aluminum consumed a total of 7.756 metric tons of aluminum, including 0.0222 metric tons of recycled aluminum, accounting for 0.29% of the total aluminum used.

【Green Manufacturing】

► Production Process Optimization

- Chunan Plant adjusted the production temperature in the light guide plate process, saving 0.25 kWh of electricity per hour. In 2024, with a total of 3,466 production hours, this resulted in a saving of 867 kWh of electricity and a carbon reduction of 0.4 metric tons.
- NEW** Coretronic Optics (Suzhou) continued adopting cold bending process to replace the traditional hot bending process. By applying cold bending to 12.3-inch automotive touch display materials, carbon emissions per unit area were reduced by 30%. In 2024, a total of 68,000 displays were produced, with a processed area of 36,627 square feet, resulting in a carbon reduction of 549 metric tons.
- NEW** Following local regulatory requirements under the “National Pollution Prevention and Control Technology Guidance Catalogue (2024, Restricted and Eliminated Categories)”, Coretronic Optics (Suzhou) phased out the UV photolysis exhaust gas treatment process, saving 31,500 kWh of electricity and reducing 17 metric tons of carbon emissions in 2024.
- Due to organizational restructuring, Kunshan plants integrated production processes, resulting in a savings of 74,880 kWh of electricity and a carbon reduction of 42.7 metric tons in 2024.

► Project Teams

- Green Projector Development Team: The highest executives of the mainstream, commercial, and smart projector business groups appointed the R&D managers to form the Green Product Development Team. This team leads a comprehensive review of the carbon emissions generated during the projector product development and design processes. Implementing environmentally friendly designs based on the product characteristics and advantages, gradually conducting product carbon footprint inventories and establishing a comprehensive product carbon footprint database. Through continuous product optimization and performance enhancement, aiming to achieve carbon reduction targets.
- Green Product R&D Team: With green design as its core concept, this team focuses on developing products with features such as “low energy consumption”, “lightweight design”, and the “use of recycled materials”. In 2024, the team regularly held working group meetings and initiated 34 product development projects. These included integrating recycled aluminum back panels and recycled plastic frames into new products, as well as developing high-efficiency backlight modules to reduce energy consumption. The team also continued to implement low-carbon technologies for light guide plates and lightweight optical films in mass production to meet customer needs.

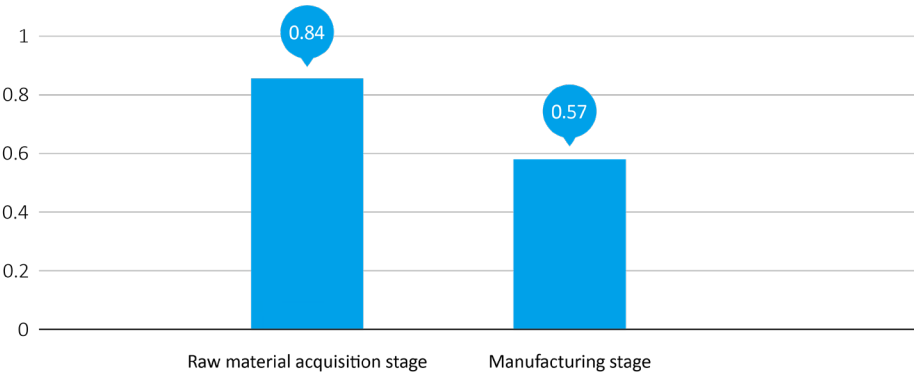
► Product Carbon Footprint Inventory

- Product Carbon Footprint Inventory Platform: Based on the inventory results of the EX1 laser projector platform, the Company has independently planned and established a product carbon footprint inventory platform aligned with product BOM data. In 2024, the “Material Emission Factor Database” was completed, which prioritizes the verification of carbon emission data for new product components. The “Manufacturing Stage Database” is scheduled for completion in 2025, with full platform deployment targeted for 2026.
- ISO 14067 Verification: In 2022, three mainstream EX1 laser projector models, one 15-inch LCD monitor model, and one 43-inch LCD monitor model were selected for ISO 14067 B2B product carbon footprint inventory and verification. According to the carbon footprint inventory of the EX1 laser projectors, the most significant emission phase was the B2B “raw material acquisition” stage. Moving forward, the Company will utilize its in-house carbon footprint inventory platform to identify emission hotspots and focus on raw material substitution, low-carbon material selection, and recycled material adoption. These actions aim to optimize product design and continuously develop sustainable, green products with competitive advantages for consumers.
- Self-Conducted Inventory: Since 2016, the Company has independently conducted carbon footprint inventories for its backlight module products for nine consecutive years. In 2024, the carbon footprint of a 14-inch backlight module was 1.41 kgCO₂e per unit, a 25% reduction compared to 2023. This improvement was primarily due to a 38% reduction in electricity consumption per unit, a 21% reduction in back panel weight, a 35% reduction in production time, and an 11% decrease in plant electricity usage. The Company will continue promoting green product development, diverse energy-saving initiatives, and increased renewable energy use to support the development of low-carbon products.



14-inch Backlight Module Life Cycle Stage Emission Statistics			
Life Cycle Stage	Category	Carbon Emissions (kg)	Percentage (%)
Manufacturing	Electricity	0.54	38.3
	Others	0.03	2.1
Raw Material Acquisition	BACK COVER	0.33	23.4
	L.G.P. PRINTLESS	0.19	13.5
	LED LIGHT BAR	0.18	12.8
	Film Material	0.11	7.8
	Others	0.03	2.1
Total		1.41	100

14-inch Backlight Module Life Cycle Stage Emissions (kg/pcs)



【 Green Packaging 】

- Eco-friendly cushioning materials: For mainstream and smart projector shipments, eco-packaging materials like paper pulp and folded paper were used as cushioning. These environmentally friendly materials were used in 90% of annual shipments for these two projector categories.
- Use of recycled pulp cartons for shipments: Projectors are shipped in cartons made from FSC-certified or recycled pulp-based paperboard products, covering 96% of total projector shipments annually.
- Reprocessing of discarded trays: Once trays have been reused multiple times and no longer meet quality standards, they are fully returned to the tray supplier for remanufacturing. This approach aims to achieve waste-to-resource conversion, replacement of natural resource extraction, complete material circulation, and zero waste. In 2024, 1,185 discarded trays were remanufactured, reducing 0.1 metric tons of waste and 0.2 metric tons of carbon emissions.

【 Green Transportation 】

- The overall volume design of mainstream laser projectors was optimized, reducing average dimensions by 36%, resulting in an estimated annual carbon reduction of approximately 2.7 metric tons.
- To balance timeliness with carbon reduction, some cargo originally scheduled for air freight was shipped via sea freight instead, leading to a carbon reduction of nearly 2.9 metric tons in 2024.
- Sustainable aviation fuel adoption: For two consecutive years, DHL’s “GoGreen Plus Sustainable Air Transport Solution” has been adopted, using sustainable aviation fuel (SAF) to reduce carbon emissions. In 2024, the total carbon emissions amounted to 50.03 metric tons, representing a reduction of 45.38 metric tons compared to conventional air freight, which is equivalent to a 48% decrease in carbon emissions.



05

5.1 Strategy, Targets, and Performance of Environmental Indicators

5.2 Net-Zero Targets and Progress

5.1 Strategy, Targets, and Performance of Environmental Indicators

★ The following data is compared with the 2021 baseline year

Year	Systematic Management	Indicator	Target	2024 Performance
Short-Term 2025	Introduction of Environmental Management Systems for the Taiwan plants, Wujiang plants, and Coretronic Projection (Kunshan)	Reduction in absolute GHG emissions (Scope 1 and 2)	18.3%	<ul style="list-style-type: none"> ISO 14001, ISO 50001, and ISO 14064-1 have all passed verification/certification Absolute GHG emissions (Scope 1 and 2) reduced by 51%, achieving the short-term target GHG emission intensity (Scope 1 and 2) reduced by 43%, achieving the short-term target Electricity intensity reduced by 15%, achieving the short-term target Renewable energy accounted for 15% of annual electricity consumption, achieving the short-term target Waste generation intensity reduced by 52%, achieving the short-term target Water consumption reduced by 40%, achieving the short-term target A total of 22 environmental protection events were held, achieving the short-term target 1. A total of 25,171 participants engaged in five major environmental theme day events 2. Adopted the Long Fong Fishing Port for 8 consecutive years and held annual coastal and mountain clean-up events, removing a total of 2.9 metric tons of waste 3. Established 4 environmental statements and commitments (RE100 and EV100, Biodiversity Conservation and No Gross Deforestation, Carbon Neutrality, and Plastic Reduction) 4. Visit to environmental education sites (Flying Cow Ranch and Tsou Ma Lai Recreational Farm) 5. Collected 3,770 points for Green Earth Point Collection
		Reduction in GHG emission intensity (Scope 1 and 2)	6%	
		Reduction in electricity intensity	7%	
		Reduction in waste generation intensity	5%	
		Reduction in water usage	6%	
		The ratio of renewable energy in annual electricity consumption	15%	
		Number of environmental protection events	11	
Medium-Term 2026~2028	Introduction of Environmental Management Systems for the Taiwan plants, Wujiang plants, and Coretronic Projection (Kunshan)	Reduction in absolute GHG emissions (Scope 1 and 2)	32%	
		Reduction in GHG emission intensity (Scope 1 and 2)	10%	
		Reduction in electricity intensity	10%	
		Reduction in waste generation intensity	8%	
		Reduction in water usage	9%	
		The ratio of renewable energy in annual electricity consumption	21%	
		Number of environmental protection events	13	
Long-Term 2029~2031	Introduction of Environmental Management Systems for the Taiwan plants, Wujiang plants, and Coretronic Projection (Kunshan)	Reduction in absolute GHG emissions (Scope 1 and 2)	45.8%	
		Reduction in GHG emission intensity (Scope 1 and 2)	13%	
		Reduction in electricity intensity	13%	
		Reduction in waste generation intensity	11%	
		Reduction in water usage	10.5%	
		The ratio of renewable energy in annual electricity consumption	27%	
		Number of environmental protection events	13	

5.2 Net-Zero Targets and Progress

- Coretronic announced its “[Net Zero Commitment](#)”, joined the “Taiwan Climate Partnership” and the “Taiwan Alliance for Net Zero Emission”, and actively supports and participates in key domestic and international initiatives such as TCFD, CDP, and SBTi, demonstrating its strong commitment to environmental sustainability.
- 👍 In 2022, Coretronic submitted the commitment letter to the SBTi, setting targets based on the 1.5°C scenario. In 2023, the Company formally submitted science-based targets aligned with the 1.5°C scenario: “Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe.” These targets were officially approved by SBTi in 2024, laying a solid foundation for the Company’s long-term carbon reduction strategy.
- 👍 Coretronic has submitted CDP disclosures for 6 consecutive years. In 2024, the Company received a double “A” rating (A List) for both Climate Change and Water Security, demonstrating outstanding performance in climate action and water resource management.
- 👍 In 2024, the Company’s Scope 1 and 2 GHG emissions totaled 23,404.7 tCO₂e, representing a **51% reduction** compared to 2021, **significantly exceeding** the expected SBT carbon reduction pathway.



06

Prospects

In response to the global net-zero transition trend and the development of domestic climate regulations, Coretronic actively promotes climate governance and undertakes diverse climate adaptation initiatives. The Company officially signed and adopted the TCFD framework in 2020, conducting assessments to identify and evaluate the potential financial impacts of climate-related risks and opportunities every two years. Simultaneously, for high-impact risks and opportunities with a high probability of occurring in the short term, Coretronic develops and implements corresponding strategies and action plans to mitigate negative operational impacts on the environment, enhance organizational climate resilience, and create green business opportunities.

While strengthening climate governance, Coretronic has set carbon reduction targets in alignment with the SBT 1.5°C scenario: “Reduce absolute Scope 1 and 2 GHG emissions 50.4% by 2032 from a 2021 base year, and reduce absolute Scope 3 GHG emissions 30% within the same timeframe.” These targets were approved by the SBTi in 2024, fully demonstrating Coretronic’s achievements and commitment to sustainability transformation. Furthermore, Coretronic has responded to the CDP questionnaire for six consecutive years. In 2024, the Company received “A” leadership level ratings in both the “Climate Change” and “Water Security” (an “A List company”), showcasing its outstanding sustainability performance. Coretronic also joined the Taiwan Climate Partnership (TCP) and the Taiwan Alliance for Net Zero Emission (TANZE) in 2022. In 2024, the Company received the “Silver Net Zero Label” from TANZE, recognizing its firm commitment and tangible progress in sustainable development.

Regarding the promotion of energy transition, while Coretronic's annual electricity consumption does not meet the 100 million kWh threshold to apply for RE100 membership, the Company is publicly committed to “achieving 100% renewable energy use by 2040”. Currently, the Company has established eight self-generated solar power systems in its Taiwan and China plants. Through green power wheeling and the procurement of renewable energy certificates, the renewable energy utilization rate reached 15% in 2024. Additionally, to fulfill its carbon reduction commitments and achieve net-zero goals, the Company is steadily progressing through proactive measures such as implementing energy management systems, reducing fossil fuel consumption, increasing renewable energy use, adopting systematic management, and transitioning to innovative low-carbon technologies.

To collaborate with stakeholders in co-creating a sustainable era, Coretronic requires its suppliers to sign and adhere to its “Sustainability Commitment Statement”, strengthening a shared commitment to social and environmental responsibility across the supply chain. In 2024, the Company officially launched an “Environmental Management System”, inviting and guiding its top 100 suppliers by annual transaction volume to submit environmental performance data for environmental risk assessment. Moving forward, the Company will assist suppliers in setting renewable energy utilization rates and carbon reduction targets to achieve net zero emissions gradually. Coretronic will also incorporate suppliers’ carbon reduction performance as a key indicator in evaluating their sustainable operations and consider it in future investment decisions, gradually building a more resilient and responsible sustainable supply chain. Furthermore, Coretronic shares emerging sustainability trends during its Annual Supplier Conference and recognizes supplier partners who have demonstrated excellence in environmental protection and carbon reduction with “Energy Saving and Emission Reduction Contribution Awards” and “Outstanding Supplier Sustainability Awards”. Moreover, the Company actively collaborates with suppliers to promote “Waste Recycling and Reuse Program”, implementing the recycling and reuse of packaging materials such as plastics and paper, and adopting reusable packaging for material delivery and collection. It can significantly reduce the consumption of raw materials used in packaging or containers, thereby implementing the circular economy concept of waste reduction. In 2024, 15 suppliers participated in this program, with recycled quantities accounting for 97% of total shipments, establishing substantial results in building a sustainable supply chain.

In terms of green products, Coretronic has clearly defined strategies and quantitative targets for each stage of the product lifecycle. It promotes and implements measures related to “green design”, “low-carbon materials”, “green manufacturing”, “green packaging”, and “green transportation”. Additionally, to continuously strengthen product carbon footprint management, Coretronic has independently conducted carbon footprint inventories for its backlight module product for nine consecutive years since 2016. In 2024, the carbon footprint of its 14-inch backlight module product was 1.41 kgCO₂e per unit, a 25% reduction compared to 2023, demonstrating significant achievements in optimizing manufacturing efficiency and material decarbonization. In the same year, the Company also established a “Material Emission Factor Database” for product carbon footprints, which prioritizes the verification of carbon emission data for new product components. The Company is simultaneously planning to complete the establishment of a “Manufacturing Stage Database” in 2025, to understand product carbon emission structures, optimize product design, enhance energy efficiency, and increase the use of low-carbon materials to strengthen products’ sustainable competitiveness. In the future, Coretronic will continue to incorporate green thinking into product development and design, low-carbon materials selection, and energy consumption reduction in manufacturing processes, fully committing to developing more innovative and competitive low-carbon green products.

Looking ahead, Coretronic will center its core actions on “Climate Governance, Low-Carbon Technology, and Sustainable Value Chain”. The Company is committed to empowering sustainability with green technology and driving transformation with innovative thinking, actively implementing climate risk management and carbon reduction initiatives. The Company will also strengthen the integration of sustainable strategies with the operating model, continuously deepen its renewable energy deployment, actively expand innovative carbon reduction solutions, and work hand-in-hand with stakeholders to co-create a new net-zero sustainable life.



About the Report

With the trend of net-zero transformation and increasingly stringent international regulations, climate change and the issue of achieving net-zero emissions have become focal points in recent years for sustainability. To precisely address stakeholders' concerns regarding the potential risks and opportunities associated with climate change, Coretronic has annually published the TCFD Report since 2023. This report observes the framework suggested by TCFD and discloses the Company's climate governance, strategies, risk management, metrics and targets.

The scope of this report includes Coretronic Taiwan plants (Headquarters, Chunan Plant, Tainan Plant 1, and Tainan Plant 2) and China plants (Kunshan plants: Coretronic Projection (Kunshan), Coretronic Optics (Kunshan); Wujiang plants: Coretronic Optotech (Suzhou), Coretronic Optics (Suzhou)).

The reporting period is from January 1, 2024 to December 31, 2024, and the Chinese and English version of this report will be published in August 2025 on [Coretronic ESG website](#). For any questions or valuable suggestions about this report, please feel free to contact us at ESG@coretronic.com.

TCFD Disclosure Index

Core Elements	TCFD Recommended Disclosures	Chapters	Pages
Governance	The board's oversight of climate-related risks and opportunities.	2.1 Board of Directors	5
	Management's role in assessing and managing climate-related risks and opportunities.	2.2 ESG Committee	6
		2.3 Environmental Protection Committee and TCFD Team	7
Strategy	The climate-related risks and opportunities the organization has identified over the short, medium, and long-term.	4.1 Risk Identification	16 ~ 17
	The impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	4.1 Risk Identification	16 ~ 17
	The resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	4.2 Risk Response Strategies	18
Risk Management	The organization's processes for identifying and assessing climate-related risks.	4.1 Risk Identification	16
	The organization's processes for managing climate-related risks.	4.1 Risk Identification	16
	How processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	4.1 Risk Identification	16
Metrics and Targets	The metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	1 Net-Zero Actions	4
		5.2 Net-Zero Targets and Progress	22
	Scope 1, Scope 2 and, if appropriate, Scope 3 greenhouse gas (GHG) emissions and the related risks.	3.1 Greenhouse Gas Management	8 ~ 9
	The targets used by the organization to manage climate-related risks and opportunities and performance against targets.	3 Climate Strategies	8 ~ 15
		4.2 Risk Response Strategies	18 ~ 21
		5 Metrics and Targets	22