



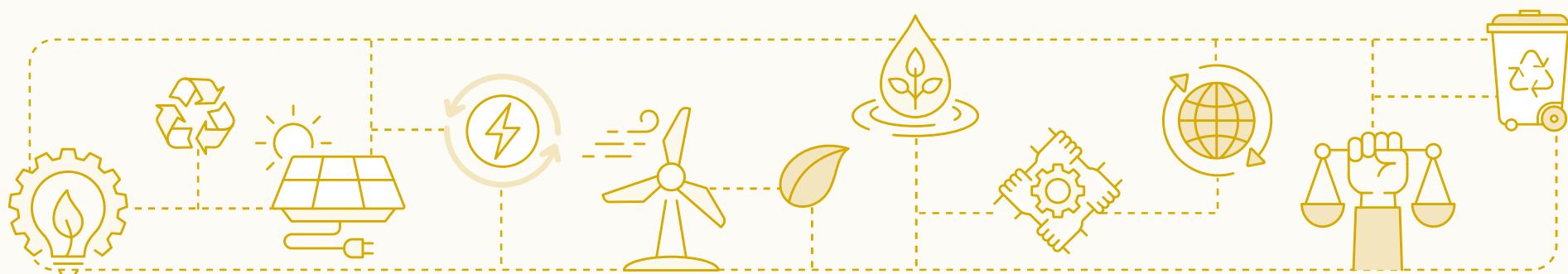
Environmental Sustainability

6

- 6.1 Task Force on Climate-Related Financial Disclosures
- 6.2 Completion of Setting SBTi Targets, Submission of Net Zero Commitment
- 6.3 Environmental Management
- 6.4 Environmental Protection Expenses

Key Results and Strategies

Strategic Approach	Commitment	KPI	2023 Goals and Performance
Climate Change Response Strategies	<ul style="list-style-type: none"> Preparation of TCFD report 	<ul style="list-style-type: none"> Preparation of TCFD report 	<ul style="list-style-type: none"> Utilizing the framework provided by the Task Force on Climate-related Financial Disclosures (TCFD), identifying climate risks and opportunities for the Company, and devising response strategies and measures.
Carbon Management and Commitment to Net-Zero Emissions	<ul style="list-style-type: none"> SBTi target setting 	<ul style="list-style-type: none"> SBTi Target Setting 	<ul style="list-style-type: none"> SBTi target setting GHG Protocol Greenhouse Gas Verification Statement
Environmental Management	<ul style="list-style-type: none"> Annual energy savings of 1% Annual water savings of 1% Waste disposal compliance with regulations 	<ul style="list-style-type: none"> Annual energy savings of 1% Annual water savings of 1% Compliance with regulations, no violations of regulations 	<ul style="list-style-type: none"> Annual energy savings of 3.2% Water intensity decreased by 0.25 (despite an increase in total employee count, resulting in no decrease in total annual water usage) Waste disposal complies with regulations, with no violations of regulations Signed a green energy procurement contract and began using green energy, with a total of 1,469 kWh of green energy supplied Implemented four energy-saving measures at a cost of NT\$5.04 million, resulting in a total energy saving of 208,456 kWh across all four projects, equivalent to a reduction of approximately 103.2 metric tons of CO₂ emissions The Hsinchu headquarters has been certified under the ISO 14001 Environmental Management System
Environmental Regulations	<ul style="list-style-type: none"> Compliance with regulations 	<ul style="list-style-type: none"> Compliance with regulations, no violations of regulations 	<ul style="list-style-type: none"> Compliance with regulations, no violations of regulations The environmental investment expenditure in 2023 amounted to approximately NT\$5,614 million.



6.1 Task Force on Climate-Related Financial Disclosures

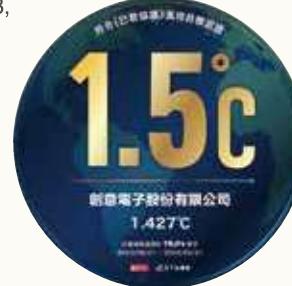
To effectively address climate change risks and fulfill corporate social responsibility, GUC adheres to the framework of Task Force on Climate-Related Financial Disclosures (TCFD). We actively examine the potential impacts of our products and services on society, the environment, and the economy, integrating climate-related opportunities and risks into our assessments. In 2023, we published our first climate-related financial disclosures report (please refer to the "[Download TCFD Report](#)" section on our company website). Additionally, the management team at GUC has completed a climate risk assessment and formulated concrete plans for achieving net-zero carbon emissions. Regular progress reports on the implementation of our carbon reduction plans are submitted to the Board of Directors.

Annual Achievement



GUC Honored with "Temperature Rising Index for Pathways" 1.5°C Temperature Control Certification

GUC is committed to environmental sustainability and actively promotes net-zero emissions. In June of 2023, we were awarded the "Temperature Rising Index for Pathways" 1.5 °C Temperature Control Certification by Common Wealth Magazine, recognizing our adherence to the 1.5 °C temperature control target set forth in the Paris Agreement. The "Temperature Rising Index for Pathways" (TRIPs) is a platform jointly launched by Common Wealth Magazine and academic partners such as Tunghai University. It scientifically evaluates the carbon reduction commitments and pathways of 725 companies in Taiwan that have submitted sustainability reports. Among these companies, 94 are in compliance with the 1.5 °C temperature control target outlined in the Paris Agreement, and GUC is honored to be among them.



6.1.1 Climate Change Governance Framework

GUC has incorporated climate change and environmental risk management into its risk management policy. Additionally, the Company has established the ESG Committee (as detailed in Section 1.2 of this report) and the Net Zero Committee, led by President who also serves as a director of the Company. These committees assist in promoting corporate sustainability and climate change-related management initiatives. An Executive Secretary has been appointed to regularly report the progress or outcomes of annual climate change risk improvements to the Board of Directors, with at least one annual report submission.

Net Zero Committee

To continuously enhance sustainable governance principles, GUC established the Net Zero Committee in 2022, with President Sean Tai serving as the Chairman to oversee related matters. The committee's main responsibilities are as follows:

1. Establish detailed schedules for each initiative, regularly track and supervise progress. Key responsibilities include:
 - Energy Management: Initiatives related to energy conservation, generation, and procurement.
 - Supply Chain Management: Collaborate with key suppliers to reduce carbon emissions across the entire supply chain.
 - Certification Management: Align with international standards, implement carbon reduction efforts according to SBTi standards, and publish TCFD reports.
2. Develop training programs, strategic objectives, control mechanisms, internal audits, and external verification plans, as well as plans for greenhouse gas inventories and reporting.
3. Assist the Board in supervising and controlling interim targets.

The Organizational Structure of the Net Zero Committee



G The GUC Net Zero Committee convened a total of three meetings, all of which were chaired by President Sean Tai in 2023.

Key conclusions and progress are as follows:

1. Completion of goal setting for achieving 2050 Net Zero emissions, along with corresponding interim targets.
2. Submission of the commitment letter to the SBTi in August, followed by the submission of the comprehensive SBTi plan in October.
3. Issuance of the first TCFD report in November, further enhancing the Company's transparency.
4. Initial implementation of externally procured green energy in December, marking the commencement of environmentally friendly practices.

6.1.2 Climate Change Response

The Board of Directors of GUC reviewed the progress of ESG initiatives in 2022 and formulated the ESG execution objectives for 2023 on February 2, 2023. In addition to aiming for significant progress in the 2023 ESG assessment, the Company intends to enhance information disclosure regarding the TCFD to assess and address the impacts of climate-related risks and opportunities, along with corresponding measures. Regarding the establishment of carbon reduction targets, the Company actively participates in the Science-Based Targets initiative (SBTi). Based on the 2022 base year, the Company sets the goal of reducing Scope 2 emissions by 42% and Scope 3 emissions by 25% by 2030 under a scenario where the average global temperature rise does not exceed 1.5°C. Additionally, the Company aims to reduce total greenhouse gas emissions by 90% by 2050. These targets will be periodically reviewed by the Board of Directors.

Climate Change Scenario Setting

GUC has conducted scenario setting based on the identification of significant risks and opportunities. Given that climate-related risks and opportunities will impact future strategies and financial planning, the Company has adopted the SSP5 baseline scenario to analyze and assess the resilience of climate strategies. Additionally, as physical risks were not identified as significant risks in the identification process, they are omitted from this report. However, proactive risk assessments have been conducted through the following scenarios, detailed in the "3.1 Climate Risk Scenario Setting - Physical Risks" section of the Company's TCFD report.

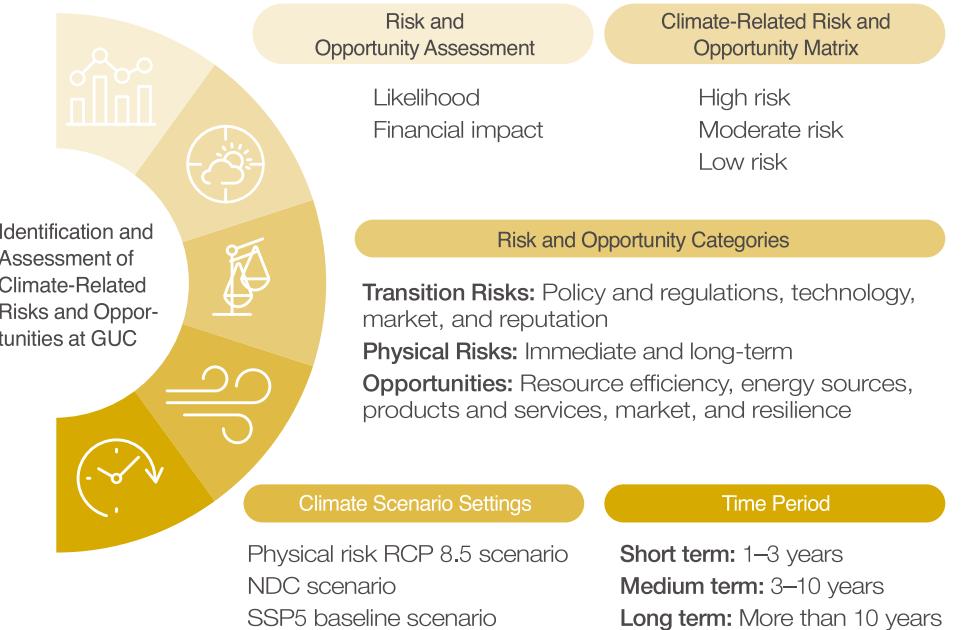
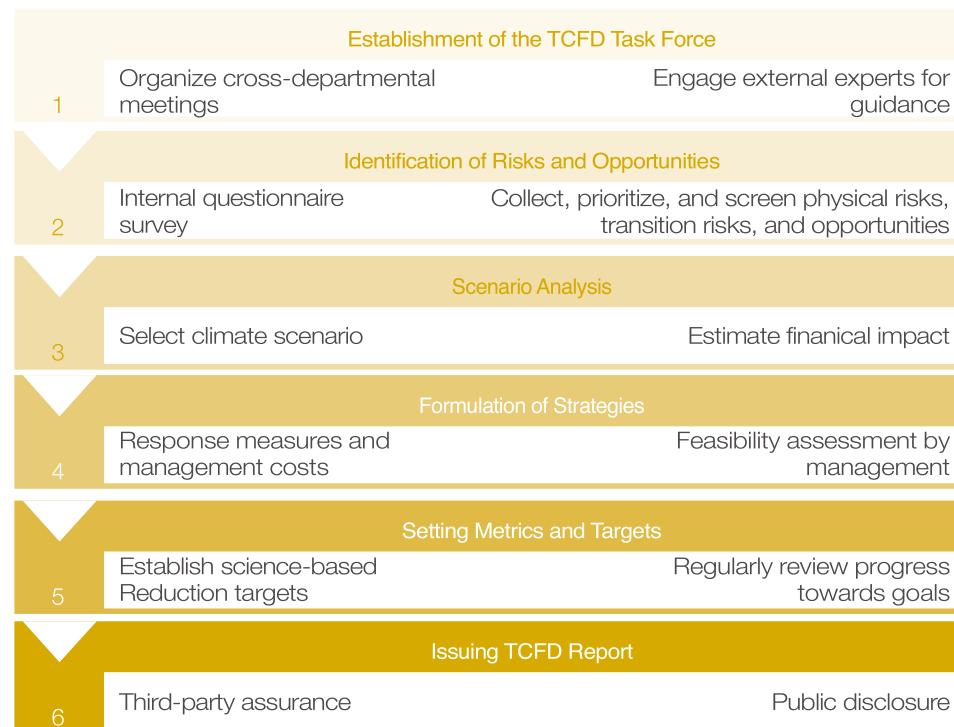
Types of Climate-Related Risks	The Company Assesses Risks and Strategies	Scenario Content
Transition Risks	<ul style="list-style-type: none"> • 1.5°C Scenario • Taiwan's 2050 Net Zero Emissions Pathway and Strategy • Taiwan's 2030 Nationally Determined Contribution (NDC) • Estimating Carbon Emission Growth Rate based on SSP5 Baseline Scenario • Calculating Carbon Fee at NT\$300 per metric ton as estimated by the Environmental Protection Administration; NT\$1,500 per metric ton for calculating the cost of excess carbon emissions 	<p>In December 2022, the National Development Council announced the interim goals and key strategies for the 2050 net-zero transition. They proposed a 25% reduction target in greenhouse gas emissions by 2030 as part of the Nationally Determined Contribution (NDC). According to the reduction target, the Global Unichip Corporation assessed potential operational impacts.</p> <p>Additionally, a simulation under the SSP5 baseline scenario was conducted to estimate the growth rate of carbon emissions under the worst-case scenario.</p>

Risk and Opportunity Identification and Assessment Process

GUC has established a TCFD cross-departmental task force under the coordination of the Net Zero Committee to mitigate the impacts of climate change. This initiative involves convening senior executives from various units for interdepartmental communication regarding climate change issues, company characteristics, and relationships within the subordinate supply chain. Drawing upon categories of transformational risks, physical risks, and opportunities under the TCFD framework, the task force identifies significant risks and opportunities. Subsequently, different scenario analyses are conducted to

evaluate and formulate response strategies to mitigate potential financial losses resulting from risks. Moreover, these strategies aim to transform crises into opportunities, thereby creating greater benefits for the Company. It is noteworthy that climate change risk management has been integrated into the Company's risk management policy, ensuring that the process of identifying risks and opportunities complies with established policies. The process for identifying risks and opportunities adopted by GUC is outlined as follows:

The process for identifying risks and opportunities related to climate change



The Outcomes of Climate Change Risk and Opportunity Identification

Following deliberation by the TCFD cross-departmental task force and external experts, considering the Company's characteristics and relationships within the supply chain, two significant transformational risks and two major climate opportunities have been identified after removing and consolidating risks and opportunities.

Identification Results of Climate Risks and Opportunities for GUC

Category	Impact Timeline	Risk and Opportunity	Description of Risk and Opportunity	Related Response Measures
Transition Risks	Medium term	Policy and Regulation: Renewable Energy Regulations and Carbon Fees	According to Article 12 of the Renewable Energy Development Act, large electricity consumers are obliged to increase their use of renewable energy. Electricity consumers with contract capacities exceeding a certain threshold are required to install renewable energy or energy storage facilities of a certain capacity. If they are unable to comply with this requirement, they can fulfill their obligation by purchasing green electricity (renewable energy certificates) or paying a fee. Our Company's contract capacity is 800 kilowatts, which does not meet the requirement of 5,000 kilowatts as stipulated in the Renewable Energy Development Act. However, there are proposals from advocacy groups to lower the threshold from 5,000 kilowatts to 800 kilowatts. Additionally, local governments may set their own thresholds for large electricity consumers based on local autonomy regulations. For example, under the Taichung City local autonomy regulations, enterprises with contract capacities exceeding 800 kilowatts are required to install renewable energy facilities equivalent to 10% of their electricity consumption within three years from the date of announcement. Therefore, similar measures may still need to be implemented in the future.	The Company has actively implemented risk response measures to reduce organizational carbon emissions. The details are as follows: <ul style="list-style-type: none"> Commencing from 2023, we have aligned with the SBTi to set carbon reduction goals and have begun procuring green electricity. Upgraded or replaced existing equipment with more energy-efficient alternatives to reduce energy consumption. Every year, we conduct the inventory of our carbon emissions and undergo third-party external verification. As the Company has submitted a reduction target to the Science Based Targets initiative (SBTi) in 2023, the Company will use the GHG Protocol to conduct the inventory of greenhouse gas starting in 2023, in accordance with SBTi guidelines.
	Medium term	Market: Shift in Customer Behavior	Customers are demanding carbon monitoring and reduction, requiring a commitment to join SBTi or other climate initiatives. Failure to comply may affect future revenue growth momentum.	Engagement with professional guidance resources for SBTi participation.
Climate Opportunities	Short-term	Energy Source: Utilizing Low-Carbon Energy	Installing solar panels to generate green electricity can reduce the electricity and carbon fees associated with our Company's operational expenses.	In order to further reduce carbon emissions, GUC will continue to assess and establish self-use solar photovoltaic systems based on the size, location, legality, and safety of each office. This initiative aims to increase the use of clean energy sources to reduce carbon emissions. This will contribute to increasing the proportion of clean energy usage and further lowering our carbon footprint. <ul style="list-style-type: none"> Energy-efficient improvements in server room (Replacing HDD storage with SSD) Replacement of compressed air system adsorption dryers with energy-efficient units Comprehensive replacement of traditional lighting fixtures with LED fixtures Energy-efficient improvements in chiller systems
	Short-term	Resource Efficiency: Utilizing Energy-Efficient Equipment	Continuously promoting various energy performance management initiatives, such as updating building lighting and air conditioning equipment, can reduce the electricity and carbon fees associated with our Company's operational expenses.	

Climate-Related Risks/Opportunities and Financial Assessment

Following the identification of significant climate-related risks and opportunities, GUC conducted a financial impact assessment based on the corresponding scenarios to comprehensively understand the specific effects of these risks and opportunities on the Company's financial position. This assessment process aids GUC in formulating more forward-thinking and sustainable operational policies to address the increasingly complex

challenges of climate change. For detailed information, please refer to the "3.2 Financial Assessment of Climate-Related Risks and Strategies" and "3.3 Financial Assessment of Climate-Related Opportunities and Strategies" sections of the "GUC TCFD Report." The estimated investment cost for 2023 is approximately NT\$152 million.

GUC Financial Impacts of Identified Climate-Related Major Risks

Risk Type	Risk Items	Timeline	Probability of Occurrence	Financial Impact	Risk Position
Transition Risks	Policy and Regulation: Re-newable Energy Regulations and Carbon Fees	Medium term	Normal	Very High	The Company itself
	Market: Shift in Customer Behavior	Medium term	Normal	Very High	Customers

GUC Financial Impacts of Identified Climate-Related Major Opportunities

Opportunity Type	Opportunity Item	Timeline	Probability of Occurrence	Financial Impact	Risk Position
Climate Opportunities	Energy Source: Utilizing Low-Carbon Energy	Short-term	Very High	Low	The Company itself
	Resource Efficiency: Utilizing Energy-Efficient Equipment	Short-term	Very High	Low	The Company itself

6.2 Completion of Setting SBTi Targets, Submission of Net Zero Commitment

GUC has established the Net Zero Committee with a commitment to achieving net zero emissions by 2050, setting greenhouse gas reduction targets using scientific methods, and submitting related reduction plans to SBTi for review. The company has voluntarily implemented greenhouse gas inventory and management, devised a schedule for achieving net zero emissions, and actively promoted energy conservation, carbon reduction, and the use of renewable energy. These actions demonstrate GUC's dedication and determination towards achieving its commitment to "net zero carbon emissions" and "energy conservation and carbon reduction," advancing towards the goal of corporate and environmental sustainability.

In 2022, the Company completed the roadmap planning for achieving its sustainable development goal of net zero carbon emissions by 2050, including greenhouse gas inventory and net-zero emissions promotion and implementation schedules for all

subsidiary companies in the consolidated financial statements. In 2023, GUC submitted a carbon reduction commitment to the Science Based Targets initiative (SBTi), pledging a 42% reduction in Scope 2 emissions and a 25% reduction in Scope 3 emissions by 2030, with the ultimate goal of achieving net zero emissions by 2050.

The Company's management team has assessed climate risks and formulated specific plans for net zero carbon reduction. Regular progress reports on carbon reduction plans are provided to the Board of Directors. Despite being a small-scale IC design service company without factories, GUC does not reduce its efforts to mitigate climate change. The Company continuously reviews and promotes net zero carbon reduction through internal control processes such as risk management, striving to fulfill its commitment to providing a sustainable future for future generations.



6.2.1 Greenhouse Gas Inventory

GUC is committed to environmental and ecological sustainability. Since 2019, the Company has voluntarily conducted greenhouse gas inventories and management. Starting from 2021, GUC has followed the ISO 14064-1 standard for inventorying and has undergone external verification to ensure that its inventory process meets the highest standards. In 2022, GUC made a concrete commitment to achieve net zero emissions by 2050 and to disclose its future carbon footprint. 2022 served as the base year for the Company's greenhouse gas inventories and management. In 2023, to comply with the SBTi Scope 3 categorization and verification standards, the inventory method was switched to the Greenhouse Gas Protocol. Verification will be completed in the second quarter of 2024.

In 2023, GUC's total greenhouse gas emissions amounted to 205,815.289 tCO₂e. Scope 3 emissions accounted for 94.97% of the total emissions, while the remainder came from energy use (Scope 2). Other emissions sources included stationary sources (emergency diesel generators), mobile sources (company vehicles using gasoline), and fugitive sources (refrigerants, fire extinguishers) (Scope 1). As a company with purely office operations and no manufacturing processes, GUC had no emissions from process sources.

Direct emissions (Scope 1) in 2023 totaled 933.0934 tCO₂e, accounting for 0.45% of the total emissions. These emissions were solely related to employee life necessities (company vehicles, refrigerators, water dispensers, air conditioning, etc.). While the Company is committed to reducing energy consumption and greenhouse gas emissions in these areas, it currently lacks suitable alternative solutions due to technological constraints. However, GUC remains committed to exploring relevant technologies to pursue greenhouse gas reduction efforts.

Greenhouse Gas Emissions and Emission Intensity for GUC Over the Past Three Years

(Unit: tCO₂e)

Total Emissions		2021	2022	2023
Scope 1	Category Subtotals	110.8457	174.8613	933.0934
Scope 2	Category Subtotals	6,618.7579	8,708.6177	9,417.9627
Scope 3	Category Subtotals	776.0102	1,598.0109	195,464.2331
Total Greenhouse Gas Emissions		7,505.6140	10,481.4900	205,815.2890
Annual Revenue (NT\$ million)		15,108	24,040	26,241
Greenhouse Gas Emission Intensity (including Scope 3)		0.000050%	0.000044%	0.000784%

Note 1: The conversion coefficients are sourced from the Environmental Protection Administration's Greenhouse Gas Emission Coefficient Management Table version 6.0.4.(Direct greenhouse gas emission calculation basis)

Note 2: The method for aggregating greenhouse gas amounts is based on operational control, equity ownership ratios, or financial control.

Note 3: The global warming potentials (GWP_s) for various greenhouse gases are selected from the IPCC Sixth Assessment Report's estimates. (Latest version or AR4 as required by the Ministry of Environment) (Greenhouse gas conversion to carbon dioxide equivalents is based on this.)

Note 4: The carbon emission coefficient for electricity was 0.509 kg CO₂e/kWh in 2021; in 2022, it was 0.495 kg CO₂e/kWh. The carbon emission coefficient for electricity in 2023 has not been released; therefore, the calculation is based on the 2022 coefficient.

Note 5: Formula for carbon emission intensity: Total greenhouse gas emissions (in metric tons tCO₂e) / Revenue.

Note 6: Data verification: The data for Scope 1 and Scope 2 emissions in 2022 were updated after third-party verification, and information was recompiled in 2023.

Note 7: Scope 3 inventory items include:

Audit Year	2021	2022	2023
Audit Criteria	ISO 14064-1	ISO 14064-1	GHG Protocol
Scope 3 Audit Items	B.4.2(b) Downstream Transportation B.4.2(e) Employee Travel and Business Trips B.4.2(e) Employee Travel and Business Trips B.5.1 Purchase of Electricity B.5.2(a) Purchase of Goods B.5.4(a) Waste Disposal	B.4.2(b) Downstream Transportation B.4.2(e) Employee Travel and Business Trips B.4.2(e) Employee Travel and Business Trips B.5.1 Purchase of Electricity B.5.2(a) Purchase of Goods B.5.4(a) Waste Disposal	C1 Procurement of Goods C2 Capital Goods C3 Upstream Fuel and Energy C4 Upstream Transportation C5 Waste C6 Business Travel C7 Commute C8 Upstream Leasing C9 Downstream Transportation C10 Product Processing C11 Product Usage C12 Finished Product C13 Downstream Leasing

GUC's 2023 Scope 1 Greenhouse Gas Emissions Statistics Table

	CO ₂	CH ₄	N ₂ O	HFCs	PFCs	SF ₆	NF ₃	Total amount
Emissions Equivalent (tCO ₂ e/year)	7.3665	2.7326	0.2127	922.7781	0.0000	0.0035	0.0000	933.0934
Gas Type Distribution (%)	0.7895	0.2929	0.0228	98.8945	0.0000	0.0004	0.0000	100.0000

Note: The Global Warming Potential (GWP) values are referenced from the IPCC 2021 Sixth Assessment Report, and the emission factors are sourced from the Ministry of Environment's Greenhouse Gas Emission Coefficient Management Table version 6.0.4.

6.2.2 GHG Emission Reduction Action

Specific Measures for Sustainable Energy Conservation

Energy Conservation Guideline	Time Control Management	Performance Maintenance
<ul style="list-style-type: none"> Encourage taking the stairs more often to reduce elevator electricity usage. Turn off the lights, air conditioning and projector in the conference room after the meeting. Turn off the computer and switch off the screen when you leave work. Turn off the lights in the office area during lunch break. The public corridor area by the window utilizes natural lighting, and some areas are constructed skylight cover as the ceiling. Energy and water saving slogans are posted on proper spots. 	<ul style="list-style-type: none"> The water dispenser is managed by an electronic timer, which controls the dispenser to disinfect water during off-peak hours, reducing electricity consumption during peak hours. Fresh air intake, toilet ventilation and exhaust, open office area, and cubicle office air conditioning are set separately. Time control management to reduce air conditioning loss and unnecessary electricity consumption. SCADA controls the equipment to start and stop at necessary times to save energy and reduce energy consumption Shorten the operation time of the parking lot exhaust fan, and do not turn it on during the rest of the day except for the commuting period. The start and stop time of the escape staircase firefighting positive pressure fan is electronically controlled to reduce the use of electricity. Parking lot lights are turned off half of them during non-working hours. The escape staircase has natural light through windows and is equipped with lighting time control settings. 	<ul style="list-style-type: none"> Choose home appliances such as air conditioners and refrigerators that comply with the energy-saving label. Regular maintenance of air conditioners to maintain high efficiency. Set the chilled water temperature of the main unit above 8°C . The recommended indoor temperature for air conditioning is 26 °C , taking into account different levels of sunlight and heat load, and appropriate installation of curtains and heat-insulating film. Determine the cooling fan of each cooling tower unit according to the return water temperature, and install a control valve for heat dissipation. Reduce energy consumption by using high efficiency energy-saving lamps and natural light. Office lighting with electronic high-efficiency lighting fixtures and lamps.

6.3 Environmental Management

GUC adheres to relevant government environmental regulations, establishing an integrated management system. Following the PDCA management process, environmental management is integrated into the organization to enhance environmental protection and energy efficiency. The Company devises, advocates, and sustains systems for environmental management and action strategies. It reviews overall operational processes, conducts greenhouse gas inventories and reductions, manages water resources, and implements waste reduction/recycling measures. Improvement measures are implemented at the source to effectively manage greenhouse gas emissions reduction.

6.3.1 Environmental, Safety, and Health Policy

GUC, a SoC (System on Chip) Design Foundry providing design and turnkey services, recognizes environmental protection, safety and health (ESH) issues as an important cornerstone of the company's business and operations. With the continuing drive for quality of services and products, we are therefore committed to achieving "safety and zero accidents, environmental sustainability", and becoming a world-class ESH benchmark enterprise.

To achieve the above ESH goals, we have been implementing and continued the following polices:

1. Ensuring that operations and services comply with or exceed applicable ESH regulations and standards.
2. Operating in a more environmentally-sound manner, so as to realize green designs and provide green products and services.
3. Constructing a safe working environment, preventing occupational injuries and diseases, and maintaining the physical and mental health of employees.
4. Paying attention to global ESH issues, assessing their risks, and taking effective risk management or control measures.
5. Strengthening the awareness and responsibility of all employees in ESH issues, and establish an ESH-friendly culture.
6. Constructing a green supply chain and continuously improving the safety and health management system, and enhancing the overall ESH efficiency through experience sharing and joint cooperation.

7. Strengthening communication and participation with all stakeholders, taking the initiative to disclose and share relevant information and experience, and promoting the benign improvement of the industry and society.

GUC Biodiversity Statement

Biodiversity conservation and forest preservation play crucial roles in maintaining natural ecosystems, and contributing to climate change mitigation and adaptation. They further serve as essential foundations for global agricultural development, food security, public health, and economic prosperity. The primary operational offices of GUC are situated in technology parks or conventional office buildings, which refrain the corporation from conducting business activities in significant biodiversity hotspots.

GUC is committed to actively responding to initiatives such as the United Nations Convention on Biological Diversity (CBD) in safeguarding biodiversity. The company aspires to achieve the United Nations Sustainable Development Goals (SDGs): SDG 7 Affordable and Clean Energy, SDG 9 Industry, Innovation and Infrastructure, SDG 13 Climate Action, SDG 14 Life below Water, SDG 15 Life on Land, and SDG 17 Partnerships for the Goals. Through these commitments, we aim to protect biodiversity, ensure sustainable utilization, advance biodiversity awareness, enhance public environmental consciousness, and foster ecological conservation efforts.

Commitments:

1. Ensure that operational activities comply with international, national, local biodiversity and zero-deforestation laws.
2. Avoid engaging in operational activities near global or national significant key biodiversity areas.
3. Refrain from actions that harm endangered and protected species; actively promote environmental education and ecological restoration.
4. Support and promote nature and biodiversity education, enhance awareness of environmental friendliness and ecological conservation.
5. Dedicate efforts to biodiversity conservation; adhere to international and local forest-related laws or specific regulations to prevent deforestation.
6. Collaborate with supply chain partners to reduce biodiversity damage, and achieve mutual prosperity between business and environment; mitigate and minimize environmental impacts in response to the challenges posed by climate change on ecological environments, collectively safeguarding natural ecosystems.



Introduction of ISO 14001 Verification

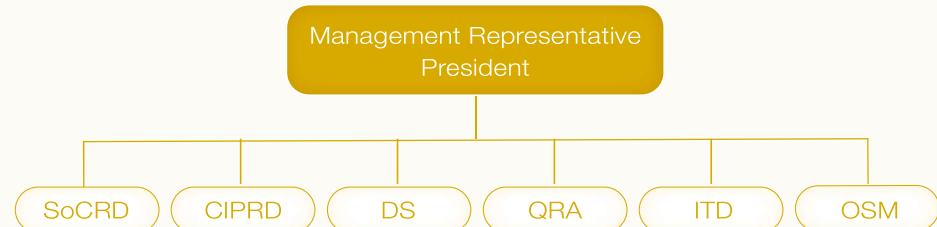
GUC has established an ISO 14001 Implementation Committee to identify major environmental considerations annually and propose solutions for management. The committee is chaired by the President and is responsible for reviewing and approving resolutions. Representatives from various departments are appointed as committee members to ensure the establishment, implementation, and regular review and evaluation of the environmental management system. They also plan and implement internal audit programs in accordance with ISO 14001:2015 Environmental Management System International Standards (including updates to new standards). The committee promotes the participation and awareness of all employees within



ISO 14001 Certificate

the organization. The implementation of the environmental management system and the verification of ISO 14001:2015 were completed in 2023. This management system helps the Company reduce environmental impacts and better manage controls, minimizing fines resulting from environmental responsibilities.

Organizational Chart of GUC's ISO 14001 Implementation Committee



Environmental Education Courses

To enhance employee environmental awareness, GUC initiated environmental education courses starting in 2023. Employees are encouraged to actively participate in these courses to gain a deeper understanding of the importance of environmental protection.

Training Category	Training Courses in 2023	Number of Participants (individuals)	Training Hours (hours)	Person*Hours	Date of Event
Environmental Protection Training	ISO 14001:2015 Internal Auditor Training	11	6	66	June 19 and August 23, 2023
	Climate Change Inception Meeting and Climate Scenario Explanation Course	15	7	105	April 6, 2023
	SBTi Project Introduction Course	15	7	105	April 7, 2023
	SBTi Project Discussion and Greenhouse Gas Data Discussion Course	49	2.5	122.5	May 11, May 25, June 6 and July 25, 2023
	ISO 14001 Management System Introduction Course	8	2	16	June 2, 2023
	ISO 14001 Management System Project Course - Environmental Considerations	11	6	66	July 4, 2023
	ISO 14001 Management System Project Course - Management Objectives, Policy Planning	7	3	21	August 11, 2023
	ISO 14001 Management System Project Course - Internal Audit Workshop	11	3	33	October 2, 2023
	GHG Greenhouse Gas Inventory Course (GHG Protocol)	26	3	78	December 18, 2023
Total		153	39.5	612.5	

6.3.2 Energy Management

In response to the impact of climate change, reducing energy consumption and greenhouse gas emissions has become an issue of concern for companies pursuing sustainable operations today. GUC's energy use is mainly for facility and office equipment, and the main source of energy is purchased electricity (supplied by Taiwan Power Company's grid; Scope 2), accounting for 100% of the total energy consumption. In 2023, the Hsinchu headquarters used 5,930,900 kWh. To reduce greenhouse gas emissions, our Company has set energy-saving and carbon reduction goals, taking more

actions to mitigate climate change. We focused on green innovative design and green office promotion, and continues to raise employees' green awareness and conducts following actions, improving the efficiency of plant equipment, replacing old equipment, and reducing energy consumption by optimizing plant equipment. We also promote energy saving and carbon reduction measures in our offices, and through training and policy regulation, employees will voluntarily undertake energy conservation activities to contribute to the global environment.

GUC Hsinchu Headquarters Electricity Consumption (Scope 2) and Greenhouse Gas Emissions Statistics for the Past Five Years

Year	2019	2020	2021	2022	2023
Electricity Consumption	6,714,000	6,408,300	6,345,500	6,129,100	5,930,900
GJ	24,170	23,070	22,843	22,065	21,351
tCO ₂ e	3,579	3,262	3,185	3,120	2,977

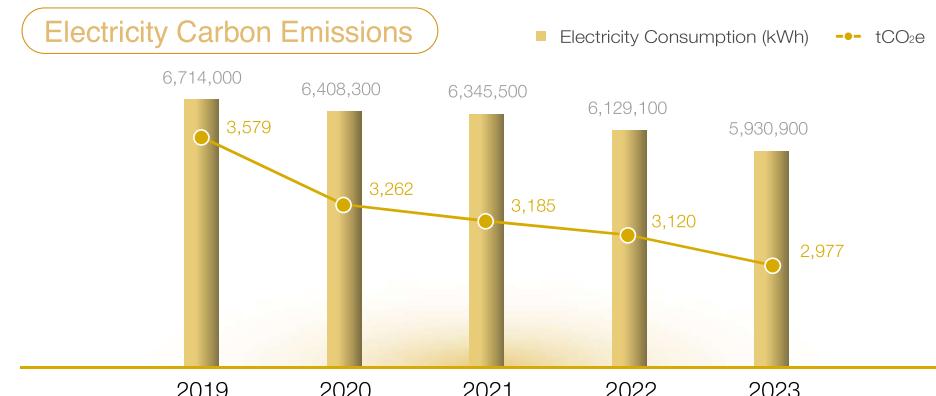
Note 1: The coefficient of electricity carbon emission in 2021 was 0.509 kgCO₂e/kWh; the coefficient of electricity carbon emission in 2022 was 0.495 kgCO₂e/kWh.

Note 2: 1 degree (kwh)=0.0036 G joules

Note 3: Carbon emissions from electricity consumption = (kWh consumption x current year's electricity emission factor)/1,000

Note 4: According to GRI Standards, in units of tCO₂e.

Note 5: Greenhouse gases are aggregated for the operation control method.



Energy Intensity

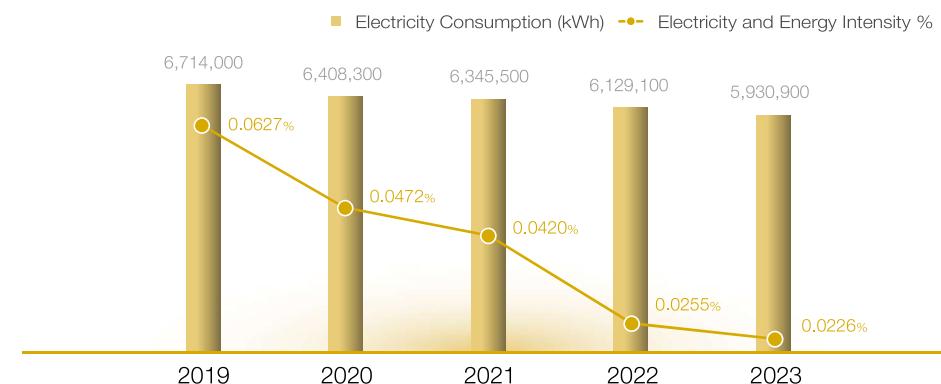
Electricity energy intensity in 2023 was 0.0226%, a decrease of 0.0029% from the previous year (0.0255% in the previous year) and a 3.2% decrease in energy use (198,200 kWh).

GUC Hsinchu Headquarter's Energy Intensity Statistics for the Past Five Years

Year	2019	2020	2021	2022	2023
Annual Revenue (NTS million)	10,710	13,569	15,108	24,040	26,241
Annual Electricity Usage (kWh)	6,714,000	6,408,300	6,345,500	6,129,100	5,930,900
Electricity and Energy Intensity (%)	0.0627	0.0472	0.0420	0.0255	0.0226

Note: Energy intensity calculation formula: Annual electricity usage / Annual revenue

Electricity Energy Intensity



Energy-Saving Accomplishments

In 2023, the total number of investment projects for energy conservation measures was 4, and the amount of investment was NT\$5.04 million. The 4 projects saved 208,456 kWh of electricity and reduced about 103.2 metric tons of carbon dioxide, and the main energy conservation plans were implemented with the following reference: GUC continues to move towards energy efficiency in 2024, with an estimated total investment exceeding NT\$ 7 million.

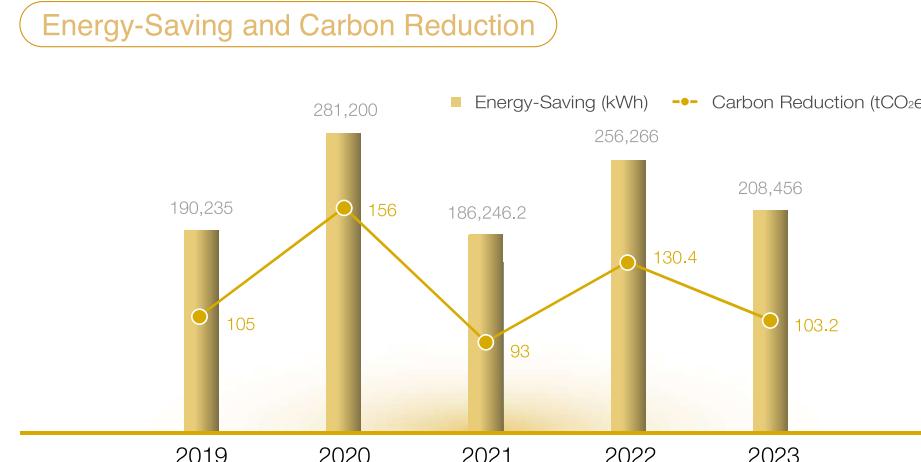
Measures	Performance	Scope
Energy saving replacement for office lighting	Annual energy conservations of 20.9 kWh (equivalent to 0.078 GJ), with replacement completed in July; reducing CO ₂ emissions by 0.0052tCO ₂ e/ year in 2023.	Scope 2
Ice and water mainframe with additional inverter energy conservation	Annual energy conservations of 81,514.2 kWh (equivalent to 293.45G GJ), were completed in December, reducing CO ₂ emissions by 3.36tCO ₂ e/year in 2023.	Scope 2
Replacement of chilled water system cooling pump set with IE3 high efficiency units	Annual energy conservations of 41,110.8 kWh (equivalent to 148.0 GJ), with replacement completed in December; reducing CO ₂ emissions by 1.7tCO ₂ e/ year in 2023.	Scope 2
Replacement of compressed air system adsorption dryers with energy-efficient units	Annual energy conservations of 85,810 kWh (equivalent to 12.9 GJ), with replacement completed in August; reducing CO ₂ emissions by 17.7tCO ₂ e/ year in 2023.	Scope 2

Note 1: 1 kWh = 3,600,000 Joule

Note 2: GUC also participated in ITRI's High Efficiency Motor Application Promotion Project and received a NT\$200,000 energy conservation grant to replace its air compressors.

Note 3: This table uses the 2022 Electricity Emission Factor standard, which produces 0.495 kilograms of carbon dioxide equivalent for every 1 kWh of electricity.

Note 4: In 2022, GUC pledged net-zero emission by 2050, conducted a GHG inventory and set 2022 as the base year.



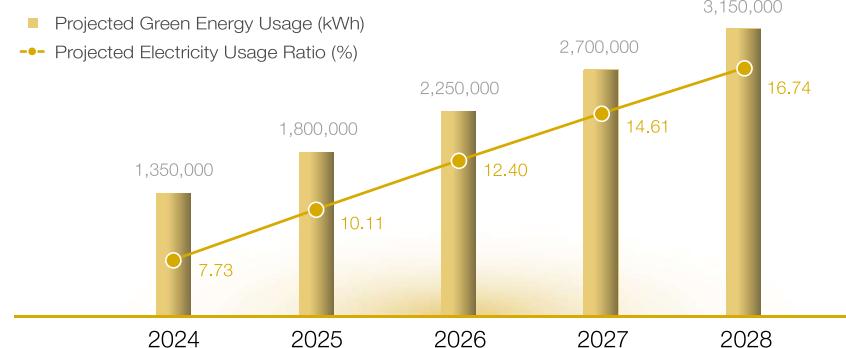
Investment in Renewable Energy: Purchase of Green Electricity - Solar Power Generation

As a member of the global community, GUC is committed to reducing carbon emissions and using sustainable energy. Since 2022, GUC installed self-generated solar photovoltaic systems. In 2023, the solar photovoltaic systems generated a total of 13,499 kWh of electricity. Through the planning and installation of green energy equipment, we contribute our efforts to reduce global warming and environmental pollution.

In order to further reduce carbon emissions, GUC will continue to assess and establish self-use solar photovoltaic systems based on the size, location, legality, and safety of each office. This initiative aims to increase the use of clean energy sources to reduce carbon emissions. This will contribute to increasing the proportion of clean energy usage and further lowering our carbon footprint.

Since December 2023, GUC has been utilizing externally sourced green electricity. In the course of that year, the total consumption amounted to 1,469 kWh. The Company commits to increasing the proportion of externally purchased green electricity each year, aiming to achieve the RE20 target by 2030. We will continue to promote the application of renewable energy to achieve more environmentally friendly energy usage.

Green Energy Usage Plan



6.3.3 Water Management

Assessment of Water Resources Risk

GUC's main water source is 100% from the Taiwan Water Company. We do not use groundwater, surface water, rainwater, or other water sources, and have no negative impact on the surrounding environment or water quality. Water consumption is mainly for air conditioning and domestic use by employees (including drinking, washing, and cleaning surrounding environments), and we keep long-term records of water consumption statistics to monitor our use of local water resources and calculate carbon dioxide equivalents based on these records. By implementing water conservation measures, the water intensity in 2023 decreased by 0.25 compared to 2022. All wastewater from GUC Headquarters is domestic sewage. Wastewater discharge is legally treated through sewage drains, complying with the management standards regulated by the Hsinchu Science Park.

In 2023, the discharge volume amounted to 13,268 million liters (13,268 cubic meters), no pollution occurred and there was no significant impact on environmental water sources.

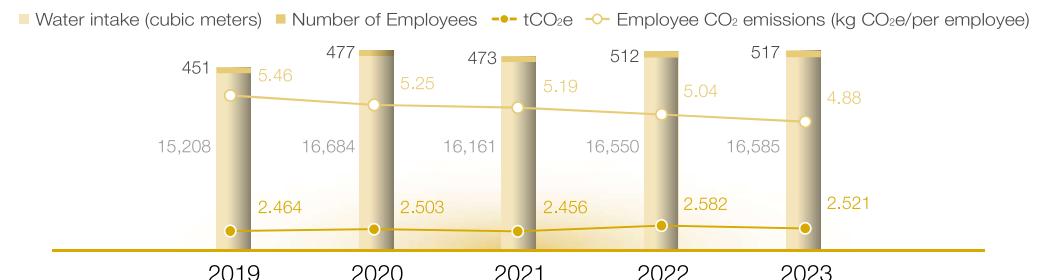
GUC Hsinchu Headquarter's Water Withdrawal and Greenhouse Gas Emission Statistics for the Past Five Years

Year	2019	2020	2021	2022	2023
Water intake (cubic meters)	15,208	16,684	16,161	16,550	16,585
tCO ₂ e	2,464	2,503	2,456	2,582	2,521
kgCO ₂ e/per employee	5.46	5.25	5.19	5.04	4.88

Note 1: Taiwan Water Company announced the emission coefficient of water consumption in 2022, which is estimated to produce 0.156 kg of carbon dioxide equivalent per unit of water.

Note 2: According to GRI Standards, the unit is tCO₂e.

Note 3: The information has been revised due to updates in employee headcount from 2019 to 2022 and water intake volumes for 2022.



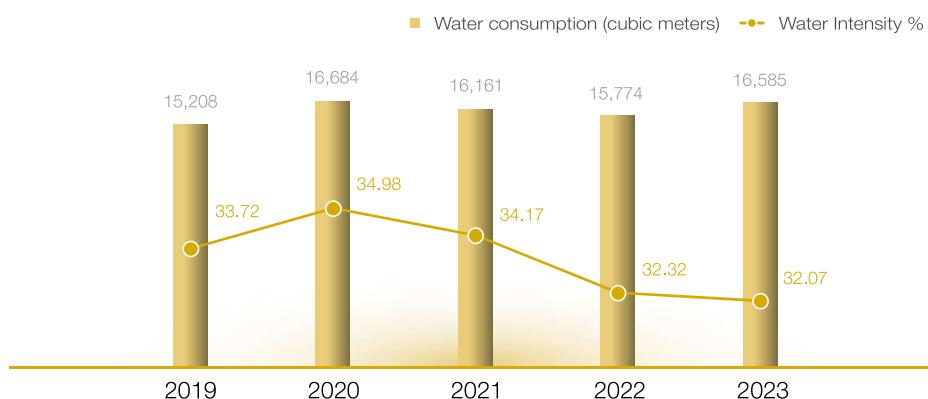
Water Consumption Intensity

GUC Hsinchu Headquarter's Water Consumption Intensity Statistics for the Past Five Years

Year	2019	2020	2021	2022	2023
Annual Use of Water Resources (cubic meters)	15,208	16,684	16,161	16,550	16,585
Number of Employees (Hsinchu Headquarters)	451	477	473	512	517
Water Intensity (%)	33.72	34.98	34.17	32.32	32.07

Note 1: In 2023, the water intensity standard was recalculated according to the number of employees.

Note 2: Water Intensity = Annual Water Usage (cubic meters) / Number of Employees



Effectiveness of Water Saving and Use of Recycled Water

In order to truly save the earth's precious water resources, GUC has developed and implemented the following measures to sustainably conserve water, reducing water consumption intensity by 0.25 in 2023 compared to 2022.

Water Saving Measures:

- Reduce the drainage of air conditioning cooling water tower to reduce air conditioning water consumption.
- Reduce the water discharge from the faucet to reduce the consumption of domestic water.

More Measures:

- Set up rainwater recycling system to water landscape plants and trees.
- Ensure the proper rate of automatic sensor faucets in toilets, and control the amount of water discharged from the faucets to save water and increase levels of sanitation.
- Ensure the proper rate of two-stage water-saving toilets in toilets, and control the water source without leakage.
- Strengthen the regular inspection of water facilities to improve the rate of proper operation and repair the damage in time.
- Strengthen water saving measures during the water saving period in accordance with the policy of the Hsinchu Science Park Bureau and keep daily water consumption records to achieve the goal of water savings in a month.
- Continuously promote water conservation measures and post water saving slogans to remind employees to develop water saving habits.

6.3.4 Waste Management

Waste Management and Regulation

GUC continues to reduce the environmental impact of its operations, including the transportation of products, other commodities, raw materials, and employee traffic, in accordance with the principles of sustainable business operations. In 2023, GUC did not violate any environmental regulations and did not receive any formal complaints from stakeholders regarding environmental impact. GUC will continue to conduct audits of the raw material supply process and strengthen its internal raw material control mechanism as a long-term goal to prevent the infiltration of conflict metals into the production process in order to protect the rights of stakeholders and to be environmentally responsible in the production process. GUC's electronic raw material supply and waste control systems are in compliance with international environmental regulations and customer requirements. We are a signatory to and advocate for the following environmental policies and regulations established by outside organizations

- Deceleration of Non-Use of Conflict Minerals
- EU RoHS Compliance
- EU PFOS Directive
- EU New Chemical Policy (Registration, Evaluation, Authorization & Restriction of Chemicals, REACH)
- Regulations on the Restriction of Hazardous Substances in Electrical and Electronic Products (China RoHS Compliance)

Waste Recycling and Reduction Accomplishment

GUC recognizes the concept of green production and responsible manufacturing, and adopts a product lifecycle management approach by examining the factors related to environmental impacts at each stage of product design, from manufacturing to final disposal, and investing significant R&D resources and innovative energy-saving technologies. The 3R green design concept of Reduce, Reuse, and Recycle is incorporated into the initial product design. Ensuring that our Company's products have minimal environmental impact throughout the lifecycle is imperative.

The services we provide include parts and intangible design/IP services. Packaging materials include cartons, cushion foam, wafer carrier boxes, and wafer carrier trays. Additionally, all products are outsourced, and suppliers are required to use qualified recycled packaging materials.



GUC's Waste Disposal in the Past Five Years

GUC is a custom IC design-service company, responsible for the design and sales of chips, and does not manufacture, package, or test them. The hazardous waste disclosed in the report is not generated from the manufacturing process, but mainly from the samples of wafers provided by the vendor for testing. The resulting defective ICs are sent

to a waste disposal vendor that has received the Ministry of Environment Class A rating for disposal plants and has obtained the ISO 14001 and ISO 9001 system certifications and other international environmental management system certifications for garbage disposal.

Hazardous Business Waste (unit: metric tons)		General Business Waste (unit: metric tons)			
Year	Waste IC	Paper	Iron	Plastics	Waste PC
2019	0.227	1.473	0.074	0.109	0
2020	1.070	0.690	0.060	0.080	0
2021	1.062	0.520	0	0.010	0
2022	1.036	1.532	1.008	0	0
2023	0.932	0.94	0	0	0
Total	4.327	5.155	1.142	0.199	0
Processing Method	Entrusted Removal (Recyclers recycle and reuse)				

Note 1: The entrusted removal companies are all citizen-operated waste removal and treatment organizations that are permitted by the competent authorities to remove and treat such waste, and there has been no violation of the laws and regulations from 2018 to 2023.

Note 2: GUC hazardous business waste is entrusted to the removal company approved by the competent authority.

Note 3: In 2023, as the waste contained a high amount of gold, there were no expenses incurred for the treatment of business waste.

Product and Activity Reduction and Recycling

We provide eco-friendly cutlery to newcomers after on-boarding to reduce the use of disposable bamboo chopsticks, thereby reducing waste generation; at the same time, we use recycled tableware in the staff cafeteria to reduce waste generation.

6.4 Environmental Protection Expenses

In 2023, GUC incurred zero instances of non-compliance with environmental laws and regulations, resulting in significant fines, as well as zero occurrences of sanctions beyond fines. No formal complaints were lodged, processed, or resolved through the environmental impact complaint mechanism.

GUC allocated approximately NT\$5.613 million in environmental expenses in 2023, as detailed in the table below:

GUC's Environmental Expenses in 2023

Environmental Expenses Items	Amount (NTD)
Environmental Management System Verification	406,000
Municipal Waste Disposal	12,000
Office Cleaning and Floor Maintenance	3,413,000
Landscape Maintenance	1,453,000
Pond Cleaning	30,000
Vector Control	39,000
Cleaning Supplies	260,000
Total Expenses Cost	5,613,000

