



GIGA-BYTE TECHNOLOGY CO.,LTD

# 2024 CDP Corporate Questionnaire 2024

Word version

**Important: this export excludes unanswered questions**

This document is an export of your organization's CDP questionnaire response. It contains all data points for questions that are answered or in progress. There may be questions or data points that you have been requested to provide, which are missing from this document because they are currently unanswered. Please note that it is your responsibility to verify that your questionnaire response is complete prior to submission. CDP will not be liable for any failure to do so.

[Terms of disclosure for corporate questionnaire 2024 - CDP](#)

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## C1. Introduction

### (1.3) Provide an overview and introduction to your organization.

#### (1.3.2) Organization type

Select from:

Privately owned organization

#### (1.3.3) Description of organization

*GIGABYTE is a Taiwanese technology firm founded in 1986 and has become one of the world's leading brands of motherboards and graphics cards. As we believe in excellent quality, innovation, and service, we have continually expanded our product variety to satisfy consumer needs over the years. We are confident in our continuing ability to provide high-quality products in our core businesses such as motherboards, graphics cards, laptop computers, and servers. The following is a simple description of our various products: Motherboards: GIGABYTE's motherboard offerings cater to the requirements of a wide range of users from gamers to professionals by providing models of varying specifications that satisfy any performance requirement. GIGABYTE motherboards are known for their high quality, stability, and reliability. Support for PCIe 4.0, Thunderbolt 4, and Wi-Fi 6E ensures our customers can access the latest and most advanced technologies. Graphics Cards: Graphics cards developed by GIGABYTE focus on providing high performance, low power consumption, and premium functions such as ray tracing technology. Graphics cards of varying specifications are provided to satisfy any customer requirement. Graphics cards enjoy a wide range of applications from gaming to cryptocurrency mining. GIGABYTE continues to invest in R&D to push the latest, most advanced graphics card technology to market. Laptop Computers: The design of GIGABYTE laptops focuses on performance, portability, and user experience. We offer laptop models with various display sizes, processing power, and battery life to satisfy the requirements of varying customers. In addition to advanced technologies such as Intel Evo, NVIDIA RTX graphics cards, and AI noise reduction, GIGABYTE laptops also feature upgraded cooling performance to ensure they remain cool and quiet under high loading. Servers: Server products aim to provide high performance, reliability, and scalability to satisfy the requirements of enterprise customers. In addition to providing models of varying specifications to satisfy the application requirements of small enterprises to large data centers, our servers have adopted advanced technologies such as AMD EPYC processors, PCIe Gen 4.0, and NVMe SSD to provide optimal performance and efficiency. The Company continues to invest in performance improvements of our server products to decrease energy consumption and carbon footprint. GIGABYTE is always aware of our production processes' impacts on the natural and social environment, and we have increased our attention and actions on assuming corporate social responsibilities (CSR). Through continuous learning and improvement, we aim to become a fully sustainable and leading company.*

[Fixed row]

**(1.4) State the end date of the year for which you are reporting data. For emissions data, indicate whether you will be providing emissions data for past reporting years.**

**(1.4.1) End date of reporting year**

12/31/2023

**(1.4.2) Alignment of this reporting period with your financial reporting period**

Select from:

Yes

**(1.4.3) Indicate if you are providing emissions data for past reporting years**

Select from:

Yes

**(1.4.4) Number of past reporting years you will be providing Scope 1 emissions data for**

Select from:

2 years

**(1.4.5) Number of past reporting years you will be providing Scope 2 emissions data for**

Select from:

2 years

**(1.4.6) Number of past reporting years you will be providing Scope 3 emissions data for**

Select from:

2 years

[Fixed row]



## **(1.5) Provide details on your reporting boundary.**

### **(1.5.1) Is your reporting boundary for your CDP disclosure the same as that used in your financial statements?**

Select from:

No

### **(1.5.2) How does your reporting boundary differ to that used in your financial statement?**

*GIGABYTE monitors and discloses environmental data and performance at its operational headquarters and Taipei Silicon Valley Park Offices in New Taipei City, which includes the offices of its subsidiaries, such as Giga Computing, G-Style, Bestyield International, Selita Precision, and GIGAIPC, and its factories in Taoyuan, Taiwan, and Dongguan and Ningbo in China. These boundaries are the same as those used in CDP reporting, but smaller than in its financial report. GIGABYTE's consolidated financial report covers, aside from the above sites, other overseas subsidiaries and branches. Despite this difference in coverage, the revenue generated from the reporting boundaries to CDP accounts for approximately 99% in 2023.*

[Fixed row]

## **(1.6) Does your organization have an ISIN code or another unique identifier (e.g., Ticker, CUSIP, etc.)?**

### **ISIN code - bond**

#### **(1.6.1) Does your organization use this unique identifier?**

Select from:

No

### **ISIN code - equity**

#### **(1.6.1) Does your organization use this unique identifier?**

Select from:

Yes

## (1.6.2) Provide your unique identifier

TW0002376001

### CUSIP number

## (1.6.1) Does your organization use this unique identifier?

Select from:

No

### Ticker symbol

## (1.6.1) Does your organization use this unique identifier?

Select from:

No

### SEDOL code

## (1.6.1) Does your organization use this unique identifier?

Select from:

No

### LEI number

## (1.6.1) Does your organization use this unique identifier?

Select from:

No

## D-U-N-S number

### (1.6.1) Does your organization use this unique identifier?

Select from:

Yes

### (1.6.2) Provide your unique identifier

656017233

## Other unique identifier

### (1.6.1) Does your organization use this unique identifier?

Select from:

No

[Add row]

## (1.8) Are you able to provide geolocation data for your facilities?

### (1.8.1) Are you able to provide geolocation data for your facilities?

Select from:

Yes, for some facilities

### (1.8.2) Comment

We can provide the location of the headquarters, the Taipei Silicon Valley Park offices, the Taoyuan Nanping Factory in Taiwan, and the two main manufacturing sites in China, Dongguan and Ningbo.  
[Fixed row]

**(1.8.1) Please provide all available geolocation data for your facilities.**

**Row 1**

**(1.8.1.1) Identifier**

*The Headquarter in New Taipei City, Taiwan*

**(1.8.1.2) Latitude**

24.978907

**(1.8.1.3) Longitude**

121.543365

**(1.8.1.4) Comment**

*no comment*

**Row 2**

**(1.8.1.1) Identifier**

*Nanping Factory in Taoyuan City, Taiwan*

**(1.8.1.2) Latitude**

24.919991

### (1.8.1.3) Longitude

121.205714

### (1.8.1.4) Comment

*no comment*

## Row 3

### (1.8.1.1) Identifier

*Taipei Silicon Valley Park Office in New Taipei City, Taiwan*

### (1.8.1.2) Latitude

24.984588

### (1.8.1.3) Longitude

121.539939

### (1.8.1.4) Comment

*no comment*

## Row 4

### (1.8.1.1) Identifier

*Dongguan Factory in Guangdong Province, China*

### **(1.8.1.2) Latitude**

22.898419

### **(1.8.1.3) Longitude**

114.011642

### **(1.8.1.4) Comment**

*no comment*

## **Row 5**

### **(1.8.1.1) Identifier**

*Ningbo Factory in Zhejiang Province, China*

### **(1.8.1.2) Latitude**

29.930646

### **(1.8.1.3) Longitude**

121.833234

### **(1.8.1.4) Comment**

*no comment*

*[Add row]*

## **(1.24) Has your organization mapped its value chain?**

### (1.24.1) Value chain mapped

Select from:

- Yes, we have mapped or are currently in the process of mapping our value chain

### (1.24.2) Value chain stages covered in mapping

Select all that apply

- Upstream value chain
- Downstream value chain

### (1.24.3) Highest supplier tier mapped

Select from:

- Tier 1 suppliers

### (1.24.4) Highest supplier tier known but not mapped

Select from:

- Tier 2 suppliers

### (1.24.7) Description of mapping process and coverage

*GIGABYTE currently partners with more than 600 suppliers, but not all of them are critical to GIGABYTE. Some suppliers have short-term or temporary partnerships with GIGABYTE, and some are relatively replaceable. Therefore, GIGABYTE defines "critical suppliers" as the top 100 suppliers in terms of procurement amount with GIGABYTE. Every year, GIGABYTE sends sustainable supplier evaluation questionnaires to its critical suppliers in Q4 to collect environmental data, such as greenhouse gas emissions, electricity consumption, waste generated, and water use. Also, we locate suppliers on maps using their addresses so we can conduct analyses highly related to geographic locations, like water stress assessments. We sometimes also track tier-2 suppliers for the purpose of obtaining information closer to the place of production when critical components are purchased from distributors or agents rather than directly from producers.*

*[Fixed row]*

**(1.24.1) Have you mapped where in your direct operations or elsewhere in your value chain plastics are produced, commercialized, used, and/or disposed of?**

	Plastics mapping	Value chain stages covered in mapping
	<i>Select from:</i> <input checked="" type="checkbox"/> Yes, we have mapped or are currently in the process of mapping plastics in our value chain	<i>Select all that apply</i> <input checked="" type="checkbox"/> Upstream value chain

*[Fixed row]*



## **C2. Identification, assessment, and management of dependencies, impacts, risks, and opportunities**

**(2.1) How does your organization define short-, medium-, and long-term time horizons in relation to the identification, assessment, and management of your environmental dependencies, impacts, risks, and opportunities?**

### **Short-term**

**(2.1.1) From (years)**

0

**(2.1.3) To (years)**

3

**(2.1.4) How this time horizon is linked to strategic and/or financial planning**

*Technological advancements and unanticipated "black swan events" have impacted the world widely in recent years. The IT industry increasingly faces sudden and urgent changes in supply stability, market structure, and trading obstacles. GIGABYTE identifies short-term highly concerning issues as those that have the potential to significantly affect our value chain and operations within three years and force us to adjust our business strategy accordingly. Actions must be taken urgently in response to these issues.*

### **Medium-term**

**(2.1.1) From (years)**

3

**(2.1.3) To (years)**

5

## (2.1.4) How this time horizon is linked to strategic and/or financial planning

*Following the above, medium-term highly concerning issues are defined as those that have the potential to significantly affect our value chain and operations in the next three to five years. Responding actions to these issues will not be put into practice immediately but should be already considered in the independency and impact scenario analyses and risk and opportunity management strategies.*

### Long-term

#### (2.1.1) From (years)

5

#### (2.1.2) Is your long-term time horizon open ended?

Select from:

No

#### (2.1.3) To (years)

10

## (2.1.4) How this time horizon is linked to strategic and/or financial planning

*Following the above, medium-term highly concerning issues are defined as those that have the potential to significantly affect our value chain and operations in the next five to ten years. While these issues may represent moderate or minor risks or opportunities at present, a monitoring mechanism is continuously in place to control any variable resulting from changes in regulations or weather conditions.*

*[Fixed row]*

## (2.2) Does your organization have a process for identifying, assessing, and managing environmental dependencies and/or impacts?

	<b>Process in place</b>	<b>Dependencies and/or impacts evaluated in this process</b>
	Select from: <input checked="" type="checkbox"/> Yes	Select from: <input checked="" type="checkbox"/> Both dependencies and impacts

[Fixed row]

**(2.2.1) Does your organization have a process for identifying, assessing, and managing environmental risks and/or opportunities?**

	<b>Process in place</b>	<b>Risks and/or opportunities evaluated in this process</b>	<b>Is this process informed by the dependencies and/or impacts process?</b>
	Select from: <input checked="" type="checkbox"/> Yes	Select from: <input checked="" type="checkbox"/> Both risks and opportunities	Select from: <input checked="" type="checkbox"/> Yes

[Fixed row]

**(2.2.2) Provide details of your organization’s process for identifying, assessing, and managing environmental dependencies, impacts, risks, and/or opportunities.**

**Row 1**

**(2.2.2.1) Environmental issue**

Select all that apply

- Climate change

### **(2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue**

*Select all that apply*

- Dependencies
- Impacts
- Risks
- Opportunities

### **(2.2.2.3) Value chain stages covered**

*Select all that apply*

- Direct operations
- Upstream value chain
- Downstream value chain

### **(2.2.2.4) Coverage**

*Select from:*

- Partial

### **(2.2.2.5) Supplier tiers covered**

*Select all that apply*

- Tier 1 suppliers

### **(2.2.2.7) Type of assessment**

*Select from:*

- Qualitative and quantitative

### (2.2.2.8) Frequency of assessment

Select from:

- Annually

### (2.2.2.9) Time horizons covered

Select all that apply

- Short-term
- Medium-term
- Long-term

### (2.2.2.10) Integration of risk management process

Select from:

- Integrated into multi-disciplinary organization-wide risk management process

### (2.2.2.11) Location-specificity used

Select all that apply

- Site-specific
- Local
- Sub-national
- National

### (2.2.2.12) Tools and methods used

#### **Enterprise Risk Management**

- COSO Enterprise Risk Management Framework
- Internal company methods

#### **International methodologies and standards**

- ✓ Environmental Impact Assessment
- ✓ IPCC Climate Change Projections
- ✓ ISO 14001 Environmental Management Standard
- ✓ Life Cycle Assessment

#### **Databases**

- ✓ Nation-specific databases, tools, or standards

#### **Other**

- ✓ Internal company methods
- ✓ Materiality assessment
- ✓ Scenario analysis

### **(2.2.2.13) Risk types and criteria considered**

#### **Acute physical**

- ✓ Cyclones, hurricanes, typhoons

#### **Chronic physical**

- ✓ Heat stress

#### **Policy**

- ✓ Carbon pricing mechanisms
- ✓ Changes to national legislation

#### **Market**

- ✓ Changing customer behavior

#### **Reputation**

- ✓ Increased partner and stakeholder concern and partner and stakeholder negative feedback

## Technology

- Transition to lower emissions technology and products

### (2.2.2.14) Partners and stakeholders considered

Select all that apply

- Customers
- Employees
- Investors
- Suppliers
- Other, please specify :Product users

### (2.2.2.15) Has this process changed since the previous reporting year?

Select from:

- No

### (2.2.2.16) Further details of process

*GIGABYTE conducts a materiality assessment of sustainability issues every year, in which sustainability topics are updated based on international sustainability guidelines and trends, business goals, and industry material topics. In 2023, among 21 sustainability topics selected, 12 were identified as highly material, including "Climate Strategy and Risk Management" and "Greenhouse Gas and Energy Management". The next step is to look at all of GIGABYTE's business activities along our value line to assess its climate-related impacts and dependencies. Aside from own operations, GIGABYTE's upstream activities include manufacturing components ordered by GIGABYTE, as well as downstream activities such as consumer use of GIGABYTE's products. A product lifecycle assessment and related tools and databases are often used during this process to determine which resources are consumed and disposed of most in GIGABYTE's value chain. For example, GIGABYTE's products and services rely heavily on metals, minerals, and electricity. Also, plastics and paper, which are made from fossil fuels and trees, are often used for packaging products. Afterward, to identify and assess climate-related risks and opportunities, we follow three steps: Step 1. Identify and understand climate-related risks/opportunities that GIGABYTE may face locally and globally. A variety of factors are considered in this step, such as global warming and extreme weather events, changes to existing or emerging regulations that aim to strengthen climate mitigation actions, and any changes resulting from government, business, or even market dynamics. Step 2. Identify whether GIGABYTE is affected by the potential risk/opportunity sources identified in STEP 1. We link the identified risk/opportunity sources to the issues that really matter to GIGABYTE. These include decreased revenue, increased operation and manpower costs, and increased investment in technical innovation and transition. Furthermore, new efforts must be made to research, develop, and implement climate-related strategies and actions, which involve not only financial costs but also new skills and knowledge requirements.*

Step 3. Analyze GIGABYTE's exposure to each impact using a matrix based on three main criteria: (1) The scope of the risk/opportunity. This includes upstream supply chains, business operations, and downstream demand. In addition, since GIGABYTE has factories in Taiwan and China, local impacts are also considered. Depending on the effects occurring along the value chain, different management strategies should be used. (2) The time when the risk/opportunity occurs. Risk exposure is defined by its time horizon. The most urgent risks are those that will occur within three years, those that will occur within 3-5 years are considered medium urgent, and those that will occur within 5-10 years deserve more caution since they may occur sooner or later. (3) The magnitude of the risk's/opportunity's impact. A risk/opportunity with a more substantial financial impact requires immediate response or management. For instance, a failure to comply with climate-related regulations or an increase in power consumption due to summer temperatures can result in significant financial costs. As part of Step 3 of the process, scenario analysis is also used to provide quantitative and qualitative information, which helps make the impact of risks/opportunities more concrete and easier to integrate into decision-making processes.

## Row 2

### (2.2.2.1) Environmental issue

Select all that apply

- Water

### (2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

- Dependencies
- Impacts
- Risks
- Opportunities

### (2.2.2.3) Value chain stages covered

Select all that apply

- Direct operations
- Upstream value chain

### (2.2.2.4) Coverage



Select from:

- Partial

### **(2.2.2.5) Supplier tiers covered**

Select all that apply

- Tier 1 suppliers

### **(2.2.2.7) Type of assessment**

Select from:

- Qualitative and quantitative

### **(2.2.2.8) Frequency of assessment**

Select from:

- Annually

### **(2.2.2.9) Time horizons covered**

Select all that apply

- Short-term
- Medium-term
- Long-term

### **(2.2.2.10) Integration of risk management process**

Select from:

- Integrated into multi-disciplinary organization-wide risk management process

### **(2.2.2.11) Location-specificity used**

Select all that apply

- Site-specific
- Local
- Sub-national

### (2.2.2.12) Tools and methods used

#### **Commercially/publicly available tools**

- WRI Aqueduct

#### **Enterprise Risk Management**

- COSO Enterprise Risk Management Framework
- Internal company methods

#### **Databases**

- Nation-specific databases, tools, or standards
- Regional government databases

#### **Other**

- Internal company methods
- Materiality assessment

### (2.2.2.13) Risk types and criteria considered

#### **Acute physical**

- Flood (coastal, fluvial, pluvial, ground water)

#### **Chronic physical**

- Changing precipitation patterns and types (rain, hail, snow/ice)
- Water stress

## (2.2.2.14) Partners and stakeholders considered

Select all that apply

- Employees
- Investors
- Suppliers

## (2.2.2.15) Has this process changed since the previous reporting year?

Select from:

- No

## (2.2.2.16) Further details of process

*GIGABYTE conducts a materiality assessment of sustainability issues every year, in which sustainability topics are updated based on international sustainability guidelines and trends, business goals, benchmark enterprises, and industry material topics. In 2023, 21 sustainability topics were considered. "Water resource management" is among the topics yet is not identified as highly material eventually. The next step is to look at all of GIGABYTE's business activities along our value line in order to assess its water-related impacts and dependencies. Aside from its own operations, GIGABYTE's upstream activities include manufacturing components ordered by GIGABYTE, as well as downstream activities such as end-of-life treatment of GIGABYTE's products. A product lifecycle assessment and related tools and databases are often used during this process to determine which activities along the value chain are more water-intensive. Afterward, in order to identify and assess water-related risks, we follow three steps: Step 1. Identify and understand water-related risks that GIGABYTE may face locally and globally. We start with water-related issues that are commonly faced by the electronics manufacturing industry and also consider the regions where GIGABYTE's main operating bases, i.e. Taiwan and China, are located to identify potential water risks along the value chain. Step 2. Identify whether GIGABYTE is affected by the potential risk/opportunity sources identified in STEP 1. Mostly we are affected by physical risks, such as water stress, flooding, and drought, as GIGABYTE's operation does not consume too much water and thus is exposed less to transitional water risks. Step 3. Analyze GIGABYTE's exposure to each impact using a matrix based on three main criteria: (1) The scope of the risk. This includes upstream supply chains, business operations, and downstream demand. In addition, since GIGABYTE has factories in Taiwan and China, local impacts are also taken into account. Depending on the effects occurring along the value chain, different management strategies should be used. (2) The time when the risk occurs. Risk exposure is defined by its time horizon. The most urgent risks are those that will occur within three years, those that will occur within 3-5 years are considered medium urgent, and those that will occur within 5-10 years deserve more caution since they may occur sooner or later. (3) The magnitude of the risk's impact. A risk/opportunity with a more substantial financial impact requires immediate response or management. For instance, a failure to comply with climate-related regulations or an increase in power consumption due to summer temperatures can result in significant financial costs. For identifying water-related risks, we heavily rely on the WRI Aqueduct Water Risk Atlas database. The risks associated with water are often locally specific. The WRI Aqueduct helps us better identify business activities located in water-risky areas, both in operation and upstream, as well as provides water risk scenarios for the upcoming decades.*

## Row 3

### (2.2.2.1) Environmental issue

*Select all that apply*

- Plastics

### (2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

*Select all that apply*

- Dependencies
- Impacts
- Risks

### (2.2.2.3) Value chain stages covered

*Select all that apply*

- Direct operations
- Upstream value chain
- Downstream value chain

### (2.2.2.4) Coverage

*Select from:*

- Partial

### (2.2.2.5) Supplier tiers covered

*Select all that apply*

- Tier 1 suppliers

### (2.2.2.7) Type of assessment

Select from:

- Qualitative only

### (2.2.2.8) Frequency of assessment

Select from:

- Annually

### (2.2.2.9) Time horizons covered

Select all that apply

- Short-term
- Medium-term

### (2.2.2.10) Integration of risk management process

Select from:

- A specific environmental risk management process

### (2.2.2.11) Location-specificity used

Select all that apply

- Site-specific
- Local

### (2.2.2.12) Tools and methods used

#### **Enterprise Risk Management**

- Internal company methods

#### **International methodologies and standards**

- Life Cycle Assessment

#### **Databases**

- Nation-specific databases, tools, or standards

#### **Other**

- Internal company methods
- Materiality assessment

### **(2.2.2.13) Risk types and criteria considered**

#### **Technology**

- Transition to increasing recycled content

### **(2.2.2.14) Partners and stakeholders considered**

*Select all that apply*

- Employees
- Suppliers

### **(2.2.2.15) Has this process changed since the previous reporting year?**

*Select from:*

- Yes

### **(2.2.2.16) Further details of process**

*GIGABYTE conducts a materiality assessment of sustainability topics every year. Sustainability topics are updated based on international sustainability guidelines and trends, business goals, benchmark enterprises, and industry material topics. In 2023, 21 sustainability topics were considered. "Resource recyclability and circular economy" is among these topics yet is not identified as a highly material issue eventually. The next step is to look at all of GIGABYTE's business activities within operating boundaries and upstream in order to assess its plastic-related impacts and dependencies. So far, downstream activities have not been taken into account due to the*

difficulty in tracking plastic-containing products and packaging. Afterward, to identify and assess plastic-related risks that GIGABYTE may face, we consider a variety of factors such as changes to existing or emerging regulations at global and national levels that aim to reduce plastic use, and also the change in general price levels of raw and regenerated plastic. While estimating plastic-related financial impacts, we can refer to the plastic taxes on packaging or waste treatment fees GIGABYTE has already been obligated to pay. Also, the parts information suppliers must submit to us provides a valuable reference when we estimate the quantity of plastic in our products. The more plastics we use in our products, the greater our exposure to plastic-related transitional risks.

## Row 4

### (2.2.2.1) Environmental issue

Select all that apply

Biodiversity

### (2.2.2.2) Indicate which of dependencies, impacts, risks, and opportunities are covered by the process for this environmental issue

Select all that apply

Impacts

### (2.2.2.3) Value chain stages covered

Select all that apply

Direct operations

### (2.2.2.4) Coverage

Select from:

Partial

### (2.2.2.7) Type of assessment

Select from:

Qualitative only

### (2.2.2.8) Frequency of assessment

Select from:

- As important matters arise

### (2.2.2.9) Time horizons covered

Select all that apply

- Short-term

### (2.2.2.11) Location-specificity used

Select all that apply

- Local

### (2.2.2.12) Tools and methods used

#### Commercially/publicly available tools

- Encore tool
- LEAP (Locate, Evaluate, Assess and Prepare) approach, TNFD
- TNFD – Taskforce on Nature-related Financial Disclosures

#### Enterprise Risk Management

- Internal company methods

#### Databases

- Nation-specific databases, tools, or standards

#### Other

- Internal company methods
- Materiality assessment



### (2.2.2.14) Partners and stakeholders considered

Select all that apply

- Employees
- Investors
- Local communities

### (2.2.2.15) Has this process changed since the previous reporting year?

Select from:

- Yes

### (2.2.2.16) Further details of process

*GIGABYTE conducts a materiality assessment of sustainability issues every year, in which sustainability topics are updated based on international sustainability guidelines and trends, business goals, benchmark enterprises, and industry material topics. In 2023, 21 sustainability topics were considered. "Biodiversity" is among these topics yet is not identified as highly material eventually. In spite of the fact that biodiversity is not considered a material issue by GIGABYTE's stakeholders, we continue to use TNFD and LEAP methodologies to identify natural-related issues relevant to the GIGABYTE business. Our analysis shows that GIGABYTE's business activities are dependent upon mineral and energy resources, whereas its upstream processes for producing essential parts, such as integrated circuits and printed circuit boards, are highly dependent upon water resources. Consequently, GIGABYTE's operations and upstream activities would impact the environment by emitting greenhouse gases, consuming water, and depleting minerals used in electronic devices. In order to locate GIGABYTE's interface with nature, we run the following process with different frequencies: 1. In order to track greenhouse gas emissions and monitor reduction performance, GIGABYTE conducts greenhouse gas inventories annually at its headquarters and three factories. Data and inventory reports are always reviewed by a third party. Please refer to the row "climate change" for an explanation of how and where to identify risks and opportunities associated with emissions and climate change. 2. We use the WRI Aqueduct Water Risk Atlas database to locate operating sites and critical suppliers that are located in water-stress areas to identify potential risks of water depletion. Details can be found in the row "water". 3. GIGABYTE's products consist primarily of metals and minerals, but we cannot fully understand how upstream mining activities could affect the environment or communities. Our current strategy is to require all suppliers to stop using conflict minerals. Furthermore, we obtain geographical information on upstream smelters when tracing suppliers' use of conflict minerals by using the Conflict Minerals Report Template (CMRT). Then, by overlaying the location of the smelters with the World Database on Protected Areas (WDPA), we can identify the upstream mining activities that may occur within or adjacent to the protected areas, which may have a certain impact on the local environment.*

[Add row]

### (2.2.7) Are the interconnections between environmental dependencies, impacts, risks and/or opportunities assessed?

### (2.2.7.1) Interconnections between environmental dependencies, impacts, risks and/or opportunities assessed

Select from:

Yes

### (2.2.7.2) Description of how interconnections are assessed

*GIGABYTE assesses the interconnections between environmental dependencies, impacts, risks, and opportunities by following the Taskforce on Nature-related Financial Disclosures Framework and the LEAP approach the TNFD suggests. As an example, GIGABYTE identifies its high reliance on electricity, which is primarily derived from non-renewable sources after reviewing its primary business activities within operating sites and upstream supply chains. The consumption of non-renewable energy causes undesirable extra greenhouse gases to be released into the atmosphere and causes global warming to be exacerbated. The consequences of such dependencies and impacts will also present risks to GIGABYTE itself, such as an increase in indirect costs resulting from increasingly strict climate regulations and carbon pricing mechanisms, as well as an increase in power prices resulting from an unstable supply of fossil fuels as a result of geopolitical factors. Conversely, if GIGABYTE gradually transitions to using more renewable energy, it will have more opportunities to expand its market share with an increasing preference for products with low carbon footprints.*

[Fixed row]

## (2.3) Have you identified priority locations across your value chain?

### (2.3.1) Identification of priority locations

Select from:

Yes, we have identified priority locations

### (2.3.2) Value chain stages where priority locations have been identified

Select all that apply

Direct operations

Upstream value chain

### (2.3.3) Types of priority locations identified

### Sensitive locations

- Areas of limited water availability, flooding, and/or poor quality of water

### Locations with substantive dependencies, impacts, risks, and/or opportunities

- Locations with substantive dependencies, impacts, risks, and/or opportunities relating to water

## (2.3.4) Description of process to identify priority locations

*To assess priority locations, GIGABYTE first collects three sets of data: (1) The location of operating sites, including operational headquarters, factories, subsidiaries, and sub-subsidiaries; (2) The location of TOP 100 suppliers ranked in terms of procurement amounts; (3) The location of upstream smelters, for which we look up in the survey of suppliers' use of conflict materials. GIGABYTE's operations are highly dependent on electricity. In contrast with energy, water supply and ecosystem services are not directly connected to GIGABYTE's activities within its own operational boundaries. However, the manufacturing process of some materials and components essential to GIGABYTE's products, like chips and printed circuit boards (PCBs), can be water-intensive. GIGABYTE needs to know the location of these component suppliers so that it can identify upstream water-related risks. Moreover, electronic devices are largely composed of metals and minerals, which are derived from mining, one of the most environmentally destructive and biodiversity-threatening human activities. We cannot track the sources of all metals and minerals used in GIGABYTE's products; however, conflict material surveys we have conducted every year can provide information about the possible locations of partial types of metals and minerals. We then search for spatial information related to environmental issues in global and national databases. The Aqueduct Water Risk Atlas reveals levels of water stress at administrative-boundary levels around the world. The Protected Planet provides data on protected areas and other effective area-based conservation measures. A Taiwan-specific flood map provided by the National Science and Technology for Disaster Reduction is also used as GIGABYTE's headquarters and a great number of important suppliers are located in Taiwan. Using the maps of GIGABYTE's operating sites, key suppliers, and 3TG smelters overlaid on the Aqueduct water stress maps, Protected Planet protected areas maps, and Taiwan flood maps, we can determine which sites or suppliers need to be further assessed owing to their locations have potentially strong interactions with climate, water, or biodiversity.*

## (2.3.5) Will you be disclosing a list/spatial map of priority locations?

Select from:

- Yes, we will be disclosing the list/geospatial map of priority locations

## (2.3.6) Provide a list and/or spatial map of priority locations

*2024 GIGABYTE priority location mapping (example).pdf*

[Fixed row]

## (2.4) How does your organization define substantive effects on your organization?

### Risks

#### (2.4.1) Type of definition

Select all that apply

- Qualitative

#### (2.4.6) Metrics considered in definition

Select all that apply

- Time horizon over which the effect occurs
- Likelihood of effect occurring
- Other, please specify :scale of financial loss, affected scope along value chain, the extent to which operational strategies or modes need to be adjusted

#### (2.4.7) Application of definition

*GIGABYTE defines the extent of environmental-related risks through a matrix, in which several criteria are considered. 1. The likelihood of the risk occurring and the time horizon over which the risk occurs. Risks likely to occur within three years are deemed the most urgent, those that will occur in 3-5 years are considered medium urgent, and those that will appear in 5-10 years need more caution since they will happen eventually. The definition of time horizon is consistent with the response in C2.1. 2. The scale of financial loss. Environmental-related risks may cause GIGABYTE financial loss, such as decreased revenues, increased operating costs, or unexpected expenses caused by an emergency. However, not all financial losses are substantial. Take the impact on revenue as an example. During 2023, North American markets accounted for 39.82% of GIGABYTE's sales, while Taiwan accounted for just 2.01%. If environmental-related issues reduce demand for our products in North American markets, the impact on GIGABYTE will be more severe than when the same situation occurs in Taiwan. 3. The affected scope along the value chain. Environmental-related risks can influence GIGABYTE's upstream supply chain, business operations, and downstream demand. Generally, the larger the scope, the more significant the risk. Some risks may neither cause severe financial losses nor a substantial change in business strategies for GIGABYTE; however, to properly respond to the impact, we need to partner with the value chain, such as increasing communication and collaboration with suppliers and customers. 4. The extent to which operational strategies or modes need to be adjusted. In order to prevent those risks with higher costs, we must adapt or radically change original strategies or operations. For instance, we need to introduce emerging initiatives and analytical tools, invest in new examination methodologies, increase the cross-disciplinary competence of personnel responsible for these works, and automate production processes to improve environmental performance. The greater the need for strategic changes, the greater the risk. In this assessment matrix, we can identify, for example, that a risk that affects GIGABYTE's revenue in its most profitable market within three years, or inevitably requires cost-effective assistance and involvement from suppliers to mitigate the negative impacts, would be deemed extremely pressing.*

## Opportunities

### (2.4.1) Type of definition

Select all that apply

- Qualitative

### (2.4.6) Metrics considered in definition

Select all that apply

- Time horizon over which the effect occurs
- Likelihood of effect occurring
- Other, please specify :scale of financial benefits, scope of benefits along the value chain

### (2.4.7) Application of definition

*GIGABYTE defines the extent of an effect led by environmental-related opportunities through a matrix, which considers the following criteria. 1. The likelihood of the opportunity occurring and the time horizon over which the opportunity occurs. A near-term opportunity usually has a higher probability as it is based on more certainty of information such as strong existing market signals or successful breakthroughs in key technologies. Therefore, these opportunities will be more accurately assessed in terms of their impact and benefit. 2. The scale of financial benefits. GIGABYTE can benefit economically from environmental-related opportunities, including reducing operational costs, increasing revenues, and expanding markets. Moreover, the financial benefits will be greater if opportunities arise in GIGABYTE's more profitable markets, such as North America and Europe. 3. Scope of benefits along the value chain. Environmental-related opportunities can benefit not only GIGABYTE but also its upstream supply chain, business operations, and downstream demand. Generally, the larger the scope, the more beneficial the opportunity.*

[Add row]

**(2.5) Does your organization identify and classify potential water pollutants associated with its activities that could have a detrimental impact on water ecosystems or human health?**

### (2.5.1) Identification and classification of potential water pollutants

Select from:

No, we do not identify and classify our potential water pollutants

### **(2.5.3) Please explain**

*Assembly is the primary manufacturing process for GIGABYTE's products. Assembly does not require high water quality nor consumes too much water, so running water is sufficient for basic factory facilities and domestic needs. Besides, all of GIGABYTE's wastewater is domestic sewage. All of GIGABYTE's sewage is legally discharged into underground sewers in compliance with local laws and regulations. Thus, it would not impact the environment and ecology around the business locations.*

*[Fixed row]*

### C3. Disclosure of risks and opportunities

**(3.1) Have you identified any environmental risks which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?**

#### Climate change

##### **(3.1.1) Environmental risks identified**

Select from:

Yes, both in direct operations and upstream/downstream value chain

#### Water

##### **(3.1.1) Environmental risks identified**

Select from:

Yes, only in our upstream/downstream value chain

##### **(3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain**

Select from:

Environmental risks exist, but none with the potential to have a substantive effect on our organization

##### **(3.1.3) Please explain**

*According to GIGBAYTE's internal analysis based on the LEAP assessment guidance, its downstream activities are much less water-intensive than its manufacturing activities on its supply chain. Electricity is the most common natural resource consumed by GIGABYTE's downstream activities such as consumers using its servers or laptops. A company's product's energy efficiency performance is a key factor determining its competitiveness in the market, which subsequently impacts the company's*

profitability. As compared to electricity, water-related issues have a much smaller impact on downstream activities.

## Plastics

### (3.1.1) Environmental risks identified

Select from:

Yes, only within our direct operations

### (3.1.2) Primary reason why your organization does not consider itself to have environmental risks in your direct operations and/or upstream/downstream value chain

Select from:

Insufficient data

### (3.1.3) Please explain

*Plastic is an important material in GIGABYTE's products, such as the connectors in motherboards and graphic cards, and the screen frames and keyboards of laptops. Dozens of suppliers supply these plastic-made components to GIGABYTE, but not all suppliers can provide the data we need for assessment because of business size or capabilities. Furthermore, some components are provided by distributors, which makes reaching actual producers and getting the necessary data harder. Currently, GIGABYTE assesses plastics risks by analyzing material information of components given by suppliers and the composition of finished or semi-finished products.*

*[Fixed row]*

**(3.1.1) Provide details of the environmental risks identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.**

## Climate change

### (3.1.1.1) Risk identifier

Select from:



Risk1

### (3.1.1.3) Risk types and primary environmental risk driver

#### Policy

Carbon pricing mechanisms

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

Taiwan, China

### (3.1.1.9) Organization-specific description of risk

*In January 2023, the Taiwan Government amended and issued the "Climate Change Response Act", which has two critical implications for businesses in Taiwan, including legislating achieving net zero by 2050 as a law and launching a domestic carbon fee mechanism. In the first phase, businesses with direct emissions (scope 1 emissions) higher than 25,000 t-CO<sub>2</sub>e will be affected. Most of GIGABYTE's emissions come from scope 2 emissions, and the total emissions of every single site do not reach the 25,000-ton level, so we do not expect to be affected by the new regulation too soon. However, the Act and related rules may become stricter and probably will consider controlling scope 2 emissions in the next phase if the integral situation shows a necessity for doing so. We can foresee the tendency of change yet cannot be sure of when and how exactly the regulations are going to change; therefore, we see it as a risk.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

Increased indirect [operating] costs

### (3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

Medium-term

Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

Likely

### **(3.1.1.14) Magnitude**

Select from:

Medium

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*GIGABYTE expects not to be subject to a carbon fee within a short period of time since its scope 1 and scope 2 gross emissions are below the current mandatory level, i.e. 25,000 t-CO<sub>2</sub>e per year. The carbon fee policy initially targets emission-intensive industries. Consequently, we do not expect any financial impact from this risk during the reporting year or in the near future. The Taiwan government will, however, probably change the regulation in the near future as current mechanisms and policies will not be sufficient to achieve its 2050 Net Zero goal. There will be an adjustment to the mandatory level, and a wider range of industries and companies will be controlled. It is possible that GIGABYTE may also be included, which will result in an increased cost for paying carbon fees. Further, due to the increasing urgency of combating climate crises and the unavoidable rise in costs to prevent greenhouse gas emissions, this financial burden will keep increasing as carbon prices rise.*

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### **(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)**

3207267

### **(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)**

3207267

### **(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)**

9621801

### **(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)**

35279937

### **(3.1.1.25) Explanation of financial effect figure**

*Taiwan's Ministry of Environment has proposed a carbon fee rate of at least TWD300 per metric ton of emissions. Given that GIGABYTE's Taiwan-based sites still emit the same gross scope 1 and gross 2 emissions as in 2023, i.e. 10,690.89 t-CO<sub>2</sub>e, which covers the Headquarters, Nanping Factory, and Silicon Valley Offices, where several substantial subsidiaries are located. If the carbon fee is implemented and the price level is set at TWD300 per t-CO<sub>2</sub>e, the financial impact would be TWD3,207,267. As time goes on, carbon fee prices will rise. According to Greenpeace, many Taiwanese businesses have suggested setting the fee at at least TWD900 per metric ton. The too-low carbon fee will not help companies avoid carbon taxes while exporting products to countries that impose carbon taxes on imported goods. Taking CBAM in the EU as an example, its carbon price level refers to the average of all auctions of EU ETS allowances, of which the price level has once risen to EUR100 per metric ton this year (2023), equivalent to TWD3,300 per metric ton. As a result, if the carbon fee rises to at least TWD900-3,300 per metric ton in the long run, GIGABYTE will have to pay at least TWD9,621,801 and in the maximum TWD35,279,937 for its carbon fees.*

### **(3.1.1.26) Primary response to risk**

#### **Compliance, monitoring and targets**

Implementation of environmental best practices in direct operations

### **(3.1.1.27) Cost of response to risk**

2350000

### (3.1.1.28) Explanation of cost calculation

The cost of response here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. GIGABYTE has been implementing GHG inventory every year since 2010. Annual inventory costs, including a third-party verification process, could reach TWD550,000. 2. In order to manage the risk, we need to hire more personnel, which indicates higher personnel costs. An engineer at a basic level in GIGABYTE currently earns around TWD1,000,000 per year. 3. The budget for the "Sustainability Fund" in 2024 is TWD800,000.

### (3.1.1.29) Description of response

Responding strategies to this risk: Continue the GHG emission inventory annually, invest manpower in following the regulation change, operate the Green Sustainable Development Committee which serves as the gatekeeper on this issue, and budget annually for encouraging business units and employees to dedicate themselves to energy saving and emission reduction. Further details of actions that have been taken or can be taken are as follows: 1. Set a company-wide goal of emission reduction and carry out an ISO 14064 GHG emission inventory annually. The inventory result is certified by a third party. Each year a yearly review of GHG emissions is provided to the Sustainable Development Committee. 2. GIGABYTE launched its "Sustainability Fund" in 2019, whose budget is based on savings in energy consumption, water consumption, and waste generation every year. By providing monetary rewards, the program encourages factories, departments, and individual employees to reduce emissions or propose ideas for reducing energy consumption, water consumption, and waste. 3. The Green Sustainable Development Committee oversees the implementation of sustainability strategies and measures within the organization. These focuses include identifying and managing risks. Whenever a potential risk has the potential to negatively affect our operations and benefits, it will be presented to the round table, where the committee will decide what action to take. 4. Sustainable Development Office staff constantly monitors the progress of regulations and monitors global trends following the adoption of the new climate agreement. 5. Participating in forums and conferences concerning the post-Paris Agreement trend and low-carbon technology will help us anticipate future trends and prepare for them.

## Water

### (3.1.1.1) Risk identifier

Select from:

Risk10

### (3.1.1.3) Risk types and primary environmental risk driver

#### Chronic physical

Changing precipitation patterns and types (rain, hail, snow/ice)

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- China
- Thailand
- United States of America

### (3.1.1.7) River basin where the risk occurs

Select all that apply

- Other, please specify :Yong River

### (3.1.1.9) Organization-specific description of risk

*According to the official study, Taiwan has seen a decrease in total precipitation days in a year for the last 100 years, 50 years, and 30 years; on the other hand, we have seen more days of heavy precipitation and fewer days of light precipitation. This trend is expected to continue, according to the report. The uneven distribution of rain and the change in precipitation trend will result in more flooding or drought events. There have been severe droughts in Taiwan twice in the past three years, both breaking historical records. GIGABYTE's operation was not affected directly by the water shortage; however, it posed a threat to some manufacturers of critical electronic components in southern Taiwan as well as to our suppliers. In addition, we conduct water stress analyses on other GIGABYTE bases worldwide using the Aqueduct Water Risk Atlas. A recent analysis indicates that Ningbo Factory as well as our branches in the US, Netherlands, UK, and Japan, are facing medium-high to high water stress. The branch in the US, located in Los Angeles, is particularly at an extremely high risk of water depletion due to its location. When it comes to flooding risks, Ningbo Factory and the India branch are exposed to coastal and river flooding risks because they are located near coastlines and the main rivers in that region. The level of risk will become even greater as climate change continues to increase the variability of precipitation patterns and rising sea levels.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

- Disruption in upstream value chain

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

Medium-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

Likely

### **(3.1.1.14) Magnitude**

Select from:

Medium

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*The shutdown of any of GIGABYTE's sites due to natural disasters or water shortages would result in losses to production and output value. Further, the cost of manpower will double because the factories will have to pay employees not only for the day during which they are closed due to a natural disaster event but also for overtime they worked on holidays in order to make up for the lost production.*

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### **(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)**

5988000

### **(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)**

### (3.1.1.25) Explanation of financial effect figure

We assume that any natural disaster that shuts down any of GIGABYTE's factories would cause a loss of TWD3,000,000 per day. On average, Ningbo Factory produces 9,500 motherboards per day. A shutdown results in a loss of productivity, and employees still have to be paid even though they are not at work. An average day's workforce costs around TWD1,450,000. A shutdown also results in factories working overtime to compensate for lost production, which increases their energy and manpower costs. The 2023 electricity bill shows that Ningbo Factory's electricity usage costs at least TWD88,000 per day. Therefore, we estimate that shutting down a factory for per day would cost TWD5,988,000. Besides estimating the daily financial losses resulting from natural disasters, we also consider the impact on our asset value, which is not included in the figures calculated and provided above. For GIGABYTE's sites that are exposed to medium or high levels of water stress, the net asset value in 2023 is TWD2.19 billion, and for the sites facing coastal or river flooding risks, TWD4.09 billion. Also, there is a possibility that 20% of the Company's revenue may be affected if the Ningbo Factory, one of its primary manufacturing bases, completely closes down.

### (3.1.1.26) Primary response to risk

#### Compliance, monitoring and targets

Promotion of best practice and awareness in the value chain

### (3.1.1.27) Cost of response to risk

1840000

### (3.1.1.28) Explanation of cost calculation

The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The costs associated with these management actions are relatively low as these are part of the ISO 14001 environmental management standard. The validity period of ISO14001 is 3 years, thus re-certification is required every 3 years. The certification cost is about TWD200,000. 2. A total investment of TWD1,500,000 was made in the water recycling and sewage treatment systems of all factories, and a yearly management cost of TWD110,000. 3. The additional expense of manpower for examining the extent of damage during the disaster and monitoring the progress of recovery after the disaster is around TWD3,000 per person per day, and we assume that at least 10 persons are needed to complete the process.

### (3.1.1.29) Description of response

Strategies to address this risk: Formulate an emergency management procedure for storms and flooding, drill the factories in a water shortage, and establish water

recycling systems in factories. Further details of actions that have been taken or can be taken are as follows: 1. Establish the 'Risk Emergency Management Procedure' based on ISO 14001 standards. The procedure helps to respond to various emergencies immediately and effectively and to prevent or mitigate the negative impacts that may be caused. Responding measures for storms and floods are included in the document, and a detailed procedure of how to cope with the emergency is provided. Moreover, the document also provides a guide to reallocating productivity if partial facilities are damaged during the disaster. 2. Exercise a drill of water shortage at Nanping Factories to be prepared for stricter water rationing caused by persisting drought. 3. Establish water recycling systems in factories, especially Ningbo Factory.

## Plastics

### (3.1.1.1) Risk identifier

Select from:

Risk13

### (3.1.1.3) Risk types and primary environmental risk driver

#### Technology

Transition to increasing recycled content

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

China

Taiwan, China

### (3.1.1.9) Organization-specific description of risk

Electronic products have gradually become one of the most energy- and resource-intensive products due to advances in science and technology. Depletion of resources



has led to the rise of circular economy thinking. Sustainable recycling and lower carbon emissions will eventually become a trend of information product development. The most commonly used recycled materials in information products are aluminum and plastic, followed by magnesium. For GIGABYTE, the top four purchased raw materials by weight are (in no particular order) plastic, steel, aluminum, and copper. Through the development and introduction of recycled plastic into products, GIGABYTE can improve the plastic footprint of its supply chain and product lifecycle. Furthermore, Taiwan's Ministry of Environment encourages electronic producers to use at least 25% recycled plastic materials in order to comply with the emerging Global Plastics Treaty. A 15% discount will be applied to the collection rate for recycling and removal of their products if they reach this threshold. Therefore, in the future, products manufactured with virgin plastic will cost more than those produced with recycled plastic.

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Increased direct costs

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Likely

### **(3.1.1.14) Magnitude**

Select from:

- Medium-high

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

The quality and precision of parts are very important in electronic products. Therefore, adding recycled materials to electronic materials is very challenging. Furthermore, the complicated designs of electronic materials make disassembling and recycling difficult, hampering recycling rates. As a result of these challenges, there are currently

very few recycled plastics that can be used in electronic products, and the technology is relatively expensive. GIGABYTE will have to bear higher costs in the short term if it plans to increase recycled plastics in its products.

### (3.1.1.26) Primary response to risk

#### Infrastructure, technology and spending

- Increase investment in R&D

### (3.1.1.29) Description of response

Collaborate with government, academic, and industrial peers and invest in research and technical development on the use of recycled plastics in electronic products.

## Climate change

### (3.1.1.1) Risk identifier

Select from:

- Risk2

### (3.1.1.3) Risk types and primary environmental risk driver

#### Policy

- Changes to national legislation

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- China
- India
- Japan
- Spain
- Canada
- Taiwan, China
- Republic of Korea
- United States of America
- United Kingdom of Great Britain and Northern Ireland
- Turkey
- Germany
- Australia
- Singapore
- Netherlands

### **(3.1.1.9) Organization-specific description of risk**

*The Taiwan Financial Supervisory Commission (FSC) released the Roadmap for the Sustainable Development of Listed Companies in March 2022, which stipulates that listed companies must take inventory of and disclose their greenhouse gas inventory no later than 2027 and obtain external verification of their emission data no later than 2029. Moreover, the inventory information shall be identical in scope to that of their consolidated financial statements. GIGABYTE has conducted a greenhouse gas emissions inventory since 2009. Our latest inventory covers five main operational areas. In terms of consolidated revenue, the inventoried scope accounts for 99.36%. It is not easy to access necessary data that are qualitatively sufficient for the emissions verification standard for some overseas subsidiaries. Although challenging, GIGABYTE will have to extend its GHG inventory scope to all affiliated enterprises included in our consolidated financial reports to comply with FCS regulations. Thus, we consider it a risk that will occur quickly. FCS will also revise its internal control requirement targeting listed companies for further sustainability information in response to the ISSB IFRS S1 and S2 issued in 2023. GIGABYTE will then need to conduct more detailed climate-related information collection, systematic analysis, and comprehensive disclosures.*

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Increased indirect [operating] costs

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

Very likely

### **(3.1.1.14) Magnitude**

Select from:

Medium-high

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*If GIGABYTE cannot meet the regulation requiring listed companies to complete greenhouse gas emission inventories for all affiliated enterprises included in our consolidated financial reports by 2027 and obtain third-party greenhouse gas inventory verifications for the same reporting boundary by 2029, it would be fined based on the "Securities and Exchange Act."*

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### **(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)**

10000000

### **(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)**

220000000

### **(3.1.1.25) Explanation of financial effect figure**

*According to the "Securities and Exchange Act," a company that makes false statements on financial reports or any other business documents as required to be produced*

*in compliance with acts or regulations prescribed by the Competent Authority shall be punished with imprisonment for not less than one year and not more than seven years and, in addition, a fine of not more than TWD20 million may be imposed. In addition, a Sustainability Report is seen as one of the business documents belonging to the "Securities and Exchange Act." When the essential content of the business documents contains misrepresentations or nondisclosures, the issuer shall be punished with imprisonment not less than three years and not more than ten years, as well as a fine not less than TWD10 million and no more than TWD200 million. Therefore, listed companies that fail to meet FCS's emission inventory and reporting requirements will face a fine of up to TWD220 million in the most serious situation.*

### **(3.1.1.26) Primary response to risk**

#### **Compliance, monitoring and targets**

Greater compliance with regulatory requirements

### **(3.1.1.27) Cost of response to risk**

1250000

### **(3.1.1.28) Explanation of cost calculation**

*The cost of response here corresponds to the strategies and actions answered in the next column (3.1.1.29). If the reporting boundary is extended to include all of GIGABYTE's overseas sites, the annual GHG inventory costs can reach TWD750,000. In addition, personnel costs for running all communication and data collection are estimated to be TWD500,000 each year, which is calculated based on possible working hours and GIGABYTE's basic-level engineer wage.*

### **(3.1.1.29) Description of response**

*GIGABYTE has been implementing GHG inventory every year since 2010. GIGABYTE's current GHG inventory covers five major operational sites, covering more than 95% of the company's revenue. In order to comply with the regulation, we must expand the inventory to all overseas sites, subsidiaries, and subsidiaries listed in the consolidated financial report. Apart from more investments in technical processes of inventory, we will also need more manpower to manage the communication with overseas sites and to collect, check, and archive any data that comes from them.*

## **Climate change**

### **(3.1.1.1) Risk identifier**

Select from:

Risk3

### (3.1.1.3) Risk types and primary environmental risk driver

#### Policy

Changes to national legislation

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

Taiwan, China

### (3.1.1.9) Organization-specific description of risk

*The Taiwan government has set up a goal of increasing the ratio of power generated from renewable energy from the current 7-8% to 20% in 2025. Furthermore, Taiwan's Pathway to Net-Zero Emissions in 2050, released in March 2022, aims to increase the proportion of electricity generated from renewable sources to 60-70% by 2050. To achieve these goals, the "Renewable Energy Development Act" requires power users whose chartered capacity higher than 5,000 kW to self-generate or purchase 10% of their power from renewable sources. The compulsory user of renewable energy can fulfill its obligation by installing renewable energy generation equipment, installing energy storage equipment, purchasing T-RECs, or paying money substitution. So far, GIGABYTE has not been included in the lists that are subject to the Acts. Our energy consumption capacity is below the regulated levels. However, as these regulations are reviewed and adjusted regularly according to the global trends as well as the pressures from value chains and industries, the requirements may become stricter in the future and GIGABYTE will be likely to become restricted. Moreover, the electricity utilities have invested in various renewable energy plans and the costs have been reflected on the power fees. If GIGABYTE keeps relying on the power provided by the electricity utilities instead of developing our own renewable energy sources, our expenditure on purchased electricity would be likely to go higher and higher.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

- Increased indirect [operating] costs

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term
- Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Very likely

### **(3.1.1.14) Magnitude**

Select from:

- Medium-high

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*As a corporate, the appropriate approach to address this risk is to establish renewable energy equipment or to collaborate with external renewable energy power plants to purchase green energy. With fossil-fuel-based electricity fees expected to rise in the long run, these could help save energy costs. Furthermore, if GIGABYTE effectively enhances the energy efficiency of equipment and reduces power consumption, the expenditure on purchasing renewable energy would also decrease. As opposed, if the Company continues to use non-renewable energy, it will have to purchase substitutes for green energy required by the regulation, namely, buying vouchers or T-RECs, and keep paying its regular electricity bills. Because these expenditures benefit the company only through compliance with regulations, we consider them to be a negative impact derived from this risk. As we expect GIGABYTE to become subject to the "Renewable Energy Development Act" in 3-5 years, this financial impact will also be felt during this time period. The financial effect will become higher in the long-term as the cost of purchasing alternatives to green energy is expected to rise due to stricter regulations, other carbon pricing mechanisms implemented domestically and internationally, as well as increasing technical difficulties in maintaining alignment with the national net zero target. Besides, non-renewable electricity fees will become more expensive as global fuel price keeps growing.*

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### (3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

68690000

### (3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

74936000

### (3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

79097500

### (3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

85343500

### (3.1.1.25) Explanation of financial effect figure

*GIGABYTE's operation and manufacturing rely heavily on electricity more than other energy resources. In 2023, GIGABYTE's Headquarters, Nanping factory, and Taipei Silicon Velly Office consumed 20,815 MWh of electricity. If GIGABYTE is required to ensure 10% of its electricity use (2,082 MWh) complies with the regulation but does not intend to invest in the use of renewable energy, we would need to purchase T-RECs or pay money substitution. Taiwan Renewable Energy Certificates (T-REC) are currently priced between TWD1 and TWD2.2 per kWh. Purchasing 2,082 MWh of T-RECs would cost us TWD2,082,000 to TWD4,580,400 a year. If we choose to pay money substitution, it would cost us TWD8,328,000 per year. Besides buying these renewable energy substitutes, we still have to pay our electricity bills. At present, power prices are around TWD3.2 per kWh, but they may increase by 10-15% every three to five years. If power prices in Taiwan reach TWD3.7 per kWh over the long run, our financial burden on energy consumption will grow to TWD77,015,500. In summary, the total cost in the medium term is estimated to range from TWD 68,690,000 to TWD 74,936,000; in the long run, it will increase to TWD79,097,500 to TWD85,343,500.*

### (3.1.1.26) Primary response to risk

#### Infrastructure, technology and spending

Increase environment-related capital expenditure



### **(3.1.1.27) Cost of response to risk**

37822173

### **(3.1.1.28) Explanation of cost calculation**

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The Nanping Factory roof can accommodate 1,088 kW of solar power, and the total cost of installation will be TWD 72,293,217. In case green energy is purchased from external renewable energy power plants. In Taiwan, renewable power costs an average of TWD5.5 per kWh. So it would cost us TWD 11,451,000 a year to purchase 2,082 MWh of renewable electricity. 2. Energy-saving and energy-efficient equipment replacement costs vary depending on the budget and urgency level. The cost of equipment renewal in 2023 was TWD25,941,173. 3. Internal environmental education activities cost around TWD250,000 per year. 4. The fee for introducing MFCA to the Nanping factory was around TWD180,000. 5. The Sustainability Fund budget in 2024 is TWD800,000. Given that all of our use of renewable energy is purchased externally, the total cost of the responding measure listed above is TWD 37,822,173.*

### **(3.1.1.29) Description of response**

*Strategies to address this risk: use renewable energy by installing renewable energy equipment or signing a CPPA with external renewable power plants; reduce electricity consumption continuously. Further details of actions that have been taken or can be taken are as follows: 1. GIGABYTE has assessed the feasibility of installing solar panels on the roofs of three factories, Taoyuan Nanping, Donggian, and Ningbo. Furthermore, we search for opportunities to invest in external renewable power plants, where the cost of using green power should be lower than the cost of purchasing T-RECs or paying money substitution. 2. In order to reduce electricity consumption and improve energy efficiency, several measures have been implemented. It includes replacing old facilities with more energy-saving ones and hosting a variety of internal education activities to raise employees' awareness of the environment and encourage them to change their behavior. 3. Introduce new tools to assist in examining other emission sources that have previously been overlooked. For example, we introduced MFCA to Nanping Plant in 2018 to discover emission hot spots in manufacturing processes that can be reduced. 4. Encourage energy conservation with innovative management methods. For instance, we launched the "Sustainability Fund" project in 2019 with a budget derived from savings in energy consumption, water usage, and waste management. The Fund provides monetary rewards to factories that achieve yearly emission reduction targets as well as to departments or individual employees who develop energy-saving projects and low-carbon products. Through the promotion of the Fund, GIGABYTE hopes to reduce not only its own energy consumption but also the emissions intensity and carbon footprint of its products.*

## **Climate change**

### **(3.1.1.1) Risk identifier**

Select from:

- Risk4

### (3.1.1.3) Risk types and primary environmental risk driver

#### Policy

- Carbon pricing mechanisms

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Downstream value chain

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- |  |  |
|--|--|
| <input checked="" type="checkbox"/> China  | <input checked="" type="checkbox"/> Latvia                   |
| <input checked="" type="checkbox"/> Italy  | <input checked="" type="checkbox"/> Poland                   |
| <input checked="" type="checkbox"/> Spain  | <input checked="" type="checkbox"/> Sweden                   |
| <input checked="" type="checkbox"/> France   | <input checked="" type="checkbox"/> Belgium                  |
| <input checked="" type="checkbox"/> Greece   | <input checked="" type="checkbox"/> Czechia                  |
| <input checked="" type="checkbox"/> Denmark  | <input checked="" type="checkbox"/> Portugal                 |
| <input checked="" type="checkbox"/> Germany  | <input checked="" type="checkbox"/> Lithuania                |
| <input checked="" type="checkbox"/> Hungary  | <input checked="" type="checkbox"/> Netherlands              |
| <input checked="" type="checkbox"/> Ireland  | <input checked="" type="checkbox"/> Switzerland              |
| <input checked="" type="checkbox"/> Ukraine  | <input checked="" type="checkbox"/> United States of America |
| <input checked="" type="checkbox"/> United Kingdom of Great Britain and Northern Ireland |  |

### (3.1.1.9) Organization-specific description of risk

As 95% of GIGABYTE's products are exported, climate-related policies and regulations implemented in target markets will affect GIGABYTE's sales and profitability. In

2023, North America, Europe (EU), and Asia are the largest export markets for GIGABYTE, accounting for 39.82%, 27.5%, and 29.24% of sales, respectively. Some of these markets are developing carbon pricing mechanisms. 1. In 2023, the EU launched the CBAM with a transition period between 2023 and 2025 during which designated products will not be taxed until 2026. The CBAM is likely to expand its controlled industries to be in line with EU ETS as it aims to merge with it eventually. Electronic equipment was not subject to CBAM initially, but we still consider it a regulatory risk. 2. The U.S. Senate proposed the "Clean Competition Act (CCA)" in June 2022, putting a tax on energy-intensive imported products. Taxes on imported products are determined by the difference between their carbon content and the average carbon content in the US. The carbon price is proposed as USD 55 per ton and will be increased annually to keep pace with inflation. 3. The China ETS was inaugurated in 2021, which initially regulated the power sector. China is one of GIGABYTE's most popular distribution areas. Our two other factories are also situated in China. If CN ETS expands its regulatory control to the electronics industry, GIGABYTE will be affected, resulting in an increase in operational costs.

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Increased direct costs

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Likely

### **(3.1.1.14) Magnitude**

Select from:

- High

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

The cost of GIGABYTE's products would increase if major markets levy carbon taxes on electronic products, thereby affecting the gross profits from these sales.

Furthermore, compliance with these regulations will require us to increase operational expenditures for inventorying product carbon footprints, appointing regulatory counsel, obtaining third-party verifications, as well as running all those complicated administrative and declaring processes.

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### **(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)**

489192946

### **(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)**

3639192946

### **(3.1.1.25) Explanation of financial effect figure**

*These carbon pricing mechanisms are based on the carbon footprints of imported products. Although electronic products are not subject to the EU CBAM or US CCA at the moment, we are still estimating GIGABYTE's potential financial impact. Based on our calculations and analyses, the carbon content of our products is 63 kilograms-CO<sub>2</sub>e per motherboard, 31 kilograms-CO<sub>2</sub>e per video card, 130 kilograms-CO<sub>2</sub>e per laptop, and 442 kilograms-CO<sub>2</sub>e per piece of server. 1. According to sales statistics in 2023, the cradle-to-gate carbon footprint of EU-bound products was 153,098 t-CO<sub>2</sub>. Given that the CBAM certificate fee is EUR 70 (around TWD 2,460) per metric ton of CO<sub>2</sub>e, GIGABYTE would have to pay approximately TWD376,619,872 to purchase sufficient CBAM certificates for the year. 2. According to sales statistics in 2023, the products sold to the North American market had a cradle-to-gate carbon footprint of 63,243 t-CO<sub>2</sub>e. Given that US CCA levies US\$50 (around TWD 1,780) per metric ton of CO<sub>2</sub>e, GIGABYTE would have to pay an additional TWD112,573,074 to the US government. 3. Due to the fact that two of our major factories are in China, the new regulations in China will have significant financial implications for us. If we were subject to the cap and trade system, our operating costs would increase. As of now, there are no sufficient criteria to estimate the amount of financial loss from the regulations. However, what can be estimated is that the two factories in China temporarily shut down due to failing to meet the government's demands. It would result in at least a TWD10 million loss in output value per day, equal to TWD3,000 million per year. In addition, the loss of manpower costs TWD150 million a year. Overall, this risk is estimated to have a financial impact ranging from TWD489,192,946 to TWD3,639,192,946.*

### **(3.1.1.26) Primary response to risk**

**Engagement**

Engage with suppliers

### (3.1.1.27) Cost of response to risk

4640500

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The manpower cost of managing the risk is around TWD1,000,000 per year. 2. The cost of Product carbon footprint calculation and LCA System is at least TWD1,500,000 including manpower cost and the expenditure on purchasing and training. Another TWD 90,500 is required each year to renew the software. 3. The budget for running supply chain environmental initiatives in 2024 is around TWD2,050,000.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Invest manpower in following the regulation change; Sustainable Development Committee serves as the gatekeeper; conduct the calculation of the carbon footprint of all products; collaborate with the supply chain to reduce product carbon footprint. Further details of actions that have been taken or can be taken are as follows: 1. The Sustainable Development Office invests exclusive manpower in continuously monitoring any potential changes in regulations with regard to trading, carbon reduction policies, environmental protection policies, and so on. 2. The Sustainable Development Committee identifies risks and takes responses accordingly to ensure the internal sustainability strategies and measures functioning properly. 3. Carry out the product carbon footprint calculation for all main types of GIGABYTE's products such as motherboards and laptops. An internal Product Carbon Footprint Calculation System (LCA System) was established by the end of 2018. The method is based on the methodology suggested by the EPA of Taiwan, and the emission factors refer to the database of SimaPro. Moreover, we continue to update the database in order to improve the system's accuracy, comprehensiveness, and credibility. Verification by a third party in the future is also taken into account. 4. Collaborate with suppliers to reduce emissions along the supply chain. GiGABYTE launched "333 Reduction" in 2016 and called on suppliers to reduce emissions, water use, and waste generation by 3% a year. A further initiative GIGABYTE launched in 2023 was the "Smart Circular Low-Carbon Supply Chain Management Promotion Project", which selected 10 suppliers to conduct greenhouse gas inventories and set emission reduction targets. Our hope is that this project will demonstrate how GIGABYTE and its suppliers can work together to achieve high-quality, high-value, and low-carbon operations and products.*

## Climate change

### (3.1.1.1) Risk identifier

Select from:

Risk5

### (3.1.1.3) Risk types and primary environmental risk driver

#### Technology

Transition to lower emissions technology and products

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

China

Taiwan, China

### (3.1.1.9) Organization-specific description of risk

*More than 95% of GIGABYTE's products are exported. That means we would face increasing demands from customers or the markets we put our products in to ask us to present carbon footprint data for products. For example, in recent years, many potential customers have begun to include "product carbon footprint" as a necessary criterion in their supplier selection processes. To maintain orders, GIGABYTE has to analyze and disclose the carbon footprint of our products. Selection mechanisms like this reflect the fact that low-carbon products are more competitive. The lower the carbon footprint of a product, the greater the chances of winning an order. Conversely, GIGABYTE's revenue would be affected if competitors' products had lower carbon content than GIGABYTE's. The carbon tax will also increase when we export products with high emissions intensity to markets levying carbon taxes. To prevent losses, we must keep reducing carbon emissions from R&D and manufacturing processes. GIGABYTE successfully developed and launched an internal "Product Carbon Footprint Calculation System" in 2017. The system can calculate the carbon footprint of each product at the design and development stages. However, to make it easier for users, the platform uses a simplified LCA methodology. Besides, it has not been verified through an internationally accepted standard, like ISO 14067, by a third party. Therefore, even if the system has been set, the uncertainty of solving this risk remains high.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

- Decreased revenues due to reduced demand for products and services

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Very likely

### **(3.1.1.14) Magnitude**

Select from:

- High

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*When markets prefer products with low carbon footprints and low emissions intensity, the primary financial impact of this risk will be reducing GIGABYTE's revenues if its products fail to meet expectations. Particularly, the markets that pay higher attention to products' sustainability performances, as well as the disclosure of environmental information, are the same markets in which GIGABYTE is doing most of its business.*

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

- Yes

### **(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)**

91000000000

### (3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

9100000000

### (3.1.1.25) Explanation of financial effect figure

*The risk could affect our sales rate as well as revenue. Exports accounted for 97.99% of our revenue in 2023. We assume that the EU and North American markets place a greater emphasis on sustainability and low-carbon performance among different markets. Their governments have implemented or plan to implement management regulations on imported products with high carbon footprints. Due to this, our revenue from these two markets is most likely to be affected. In 2023, approximately TWD91 billion was generated in sales in European and North American markets, accounting for 67% of total sales.*

### (3.1.1.26) Primary response to risk

#### **Infrastructure, technology and spending**

Increase investment in R&D

### (3.1.1.27) Cost of response to risk

29131673

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The financial outgoings for replacing old equipment with more energy-saving and energy-efficient ones vary year by year, depending on the budget as well as the extent of urgency. The total cost of renewing equipment in 2023 was around TWD 25,941,173. 2. The cost of Product carbon footprint calculation and LCA System is at least TWD 1,500,000, including manpower cost and the expenditure on purchasing and training. Another TWD 90,500 is required each year to renew the software. 3. The budget for the "Sustainability Fund" in 2024 is TWD800,000. 4. The manpower cost in following and managing the risk resulting from the relevant tendency is around TWD 800,000 per year.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Conduct the calculation of the carbon footprint of all products and publicize the data to consumers, and enhance the energy efficiency of operation and production processes to reduce product carbon footprint in the assembly stage. Further details of actions that have been taken or can be taken are as follows: 1. Continually invest in improving processing equipment and stimulating assembly line automation for the purpose of reducing the emission intensity of*



production and business operations. 2. Carry out the product carbon footprint calculation for all main types of GIGABYTE's products such as motherboards and laptops. An internal Product Carbon Footprint Calculation System (LCA System) was established in 2018. The method refers to the Taiwan EPA and the emission factors are from the database of SimaPro. Moreover, the database is updated regularly to ensure accuracy, comprehensiveness, and credibility. Verification by a third party in the future is also taken into account. 3. The "Sustainability Fund" was launched in 2019, which budget comes from the money saved from cutting energy consumption, water use, and generated waste in the previous year. It aims to provide monetary feedback and encourage factories, departments, and individual employees that achieve or propose ideas for reducing energy consumption, water use, and waste. 4. GIGABYTE has disclosed Product Environmental Reports of several main product lines on our CSR website. The reports tell consumers about the impacts of the product on the environment such as climate change and air quality. Also, it includes recycling information to educate consumers on the proper way to recycle WEEE. 5. Invest manpower in following the progress of standards and regulations, and also maintain and conduct the product life cycle assessment system.

## Climate change

### (3.1.1.1) Risk identifier

Select from:

Risk6

### (3.1.1.3) Risk types and primary environmental risk driver

#### Reputation

Increased partner and stakeholder concern or negative partner and stakeholder feedback

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Downstream value chain

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

China

Spain

Germany

Australia

- Canada
- France
- Belgium
- Republic of Korea
- United States of America
- United Kingdom of Great Britain and Northern Ireland

- Singapore
- Netherlands
- Taiwan, China

### **(3.1.1.9) Organization-specific description of risk**

*Corporate reputation has been increasingly linked to its efforts to protect the environment in recent years. Businesses, regardless of how large their scales are, have faced a similar trend of being boycotted by the public if they ignore environment-friendly principles like pollution avoidance and food safety. In the case of businesses that own brands, their market cap and brand value would also be affected. Concerned consumers may increase their consumption habits by buying products that have lower carbon footprints to reduce the environmental impact of their behavior as the climate change issue becomes more prevalent in civil society. Consumers are also more informed about which companies are relatively environmentally friendly since more companies are publishing CSR reports and disclosing environmental information to the public. In contrast, a producer who continues providing products with apparent harm to the environment will likely see a reduction in consumer demand. GIGABYTE is an Original Brand Manufacturer (OBM). We place a high value on brand value and consumer loyalty. Since consumers are the final users of our products, their inclinations, interests, and feelings are considered in product design and marketing strategies. Due to this, any change in consumer preferences is essential to GIGABYTE.*

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Decreased revenues due to reduced demand for products and services

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Likely

### (3.1.1.14) Magnitude

Select from:

High

### (3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

*GIGABYTE will lose market share and revenue if it fails to adapt and meet changing consumer expectations. The impact of this will be amplified in the medium term as markets and consumers become increasingly accustomed to receiving sustainability information, which companies are required to disclose based on regulations introduced in recent years, such as CSRD, ESRD, and the US Securities and Exchange Commission's climate disclosure rule.*

### (3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

Yes

### (3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

22500000000

### (3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

22500000000

### (3.1.1.25) Explanation of financial effect figure

*GIGABYTE will lose market share and revenue if it fails to adapt and meet changing consumer preferences. According to our previous experience, a change in consumer preference can reduce revenue from a certain type of product by nearly 30%. Moreover, to regain our reputation, we have to not only comply with all requirements and standards but also invest more in advertisements and disclosures. The total amount of GIGABYTE's marketing and service expenditures in 2023 was around TWD795.6 million. In addition, we estimate the potential costs of regaining the Company's reputation in the B2C market by using 30% of motherboards and graphic cards revenues, which was approximately TWD 21.7 billion in 2023. Therefore, we estimate that consumers' preference changes can affect our revenue by TWD22.5 billion.*

### (3.1.1.26) Primary response to risk

#### Infrastructure, technology and spending

Increase investment in R&D

### (3.1.1.27) Cost of response to risk

2751800000

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The R&D and product design investment was TWD 2,75 billion in 2023, accounting for 2% of the annual revenue. 2. The manpower cost of researching the development of the market demands and consumer preference is up to TWD1,000,000 at the Sustainable Development Office. 3. The budget of the Sustainability Fund in 2023 is TWD800,000. 4. The cost of running the committee and other associated processes is relatively low as the mechanism has been proceeding for years.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Invest in product R&D to meet the market demands, disclose product environmental impact information to the public, and the Sustainable Development Committee serves as a supervisor and gatekeeper. Further details of actions that have been taken or can be taken are as follows: 1. Around 3% of the Company's revenue is dedicated to R&D to ensure our products are more market-favorable and user-friendly. 2. The Sustainable Development Committee holds monthly meetings to cope with the risks that are very likely to influence our operation and benefits. The committee will decide on subsequent responses and actions. 3. The "Sustainability Fund" launched in 2019 also provides monetary feedback to departments or individual employees who develop low-carbon products or green products. The better the product's sustainability, the higher the reward. We hope the Fund could stimulate more green ideas from employees and motivate the R&D department to design and create low-carbon and environmentally-friendly products.*

## Climate change

### (3.1.1.1) Risk identifier

Select from:

Risk7

### (3.1.1.3) Risk types and primary environmental risk driver

#### Market

- Changing customer behavior

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Downstream value chain

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- France
- Germany
- Spain
- United Kingdom of Great Britain and Northern Ireland

### (3.1.1.9) Organization-specific description of risk

*Not only consumers but also producers are becoming more aware of the consequences of failing to meet stakeholders' expectations in the area of climate-related performance as climate change becomes more prominent in civil society. In order to combat the climate crisis, many companies ask their suppliers to collaborate, setting a common goal, for example, saving energy, obtaining certificates for reducing energy consumption or using renewable energy, or assessing suppliers based on their environmental performance. Over the past few years, GIGABYTE has also increasingly received customer requests that ask us to complete questionnaires regarding corporate governance, social engagement, and environmental performance. Also, some customers include "product carbon footprint" in their supplier screening processes. For instance, since January 2023, we have been asked to assess and provide carbon footprints for more than 40 server products, which is two times the number of requests we received between 2021 and 2022. In order to obtain the order, GIGABYTE has to analyze and disclose our products' carbon footprints. Apparently, low-carbon products are more competitive under such a screening mechanism. In order to maintain our downstream chain demands, we need to adequately respond to our customers' concerns about sustainability and CSR performance.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

- Decreased revenues due to reduced demand for products and services

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Short-term
- The risk has already had a substantive effect on our organization in the reporting year

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Virtually certain

### **(3.1.1.14) Magnitude**

Select from:

- High

### **(3.1.1.15) Effect of the risk on the financial position, financial performance and cash flows of the organization in the reporting year**

*Taking the disclosure of product carbon footprint as an example, in 2023, the number of customers requiring GIGABYTE to provide product carbon footprint reports of servers had increased by 57% compared to the total cases between 2021 and 2022. These included customers demanding the most advanced and high-spec AI servers. In the last two years, GIGABYTE's revenue share from AI servers has significantly increased, and nearly 40% of server demands by the end of 2023 were AI servers.*

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*As mentioned above, GIGABYTE is increasingly receiving requests from customers to disclose product carbon footprints and other ESG indicators such as corporate government, emission inventory, and social and environmental impacts along the supply chain. The requirements are embedded in the supplier screening processes of these customers, which enhance the supply management not only for internal risk management but also for compliance with regulations requiring corporates to perform*

due diligence. Due to the rapid development of AI technology, GIGABYTE's main B2B products, AI servers, have experienced an increase in demand over the past months, which is expected to continue for another 1-3 years. Therefore, we expect customers' requests for continual improvements in products' sustainability and information disclosure to continue for quite some time. Taking a blinkered view of these customers' requirements may harm our revenue as well as sales.

### (3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

Yes

### (3.1.1.18) Financial effect figure in the reporting year (currency)

52700000000

### (3.1.1.19) Anticipated financial effect figure in the short-term – minimum (currency)

60000000000

### (3.1.1.20) Anticipated financial effect figure in the short-term – maximum (currency)

90000000000

### (3.1.1.25) Explanation of financial effect figure

*Our sales amount and revenue will be impacted if we do not meet our customers' requirements regarding environmental performance and disclosure. The financial impact of this risk type could be up to TWD 52.7 billion in 2023, as 38.5% of our revenue came from B2B products. The revenue generated by GIGABYTE's B2B products has grown five times compared to 2023 Q1. It is conservatively estimated that B2B revenue will rise by 20% per year within 1-3 years compared to 2023, which will increase the estimated financial impact to around TWD 60-90 billion in the short run.*

### (3.1.1.26) Primary response to risk

#### Compliance, monitoring and targets

Implementation of environmental best practices in direct operations

### (3.1.1.27) Cost of response to risk

2779031673

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The R&D and product design investment was TWD 2,75 billion in 2023, accounting for 2% of the annual revenue. 2. The expenditure on greenhouse inventory and third-party verification per year is at least TWD500,000. 3. The investment in improving manufacturing processes and replacing equipment with more energy-saving and energy-efficient ones varies year by year, depending on the budget as well as the extent of urgency. The total cost of renewing equipment in 2023 was around TWD25,941,173. 4. The cost of Product carbon footprint calculation and LCA System is at least TWD1,500,000, including manpower cost and the expenditure on purchasing and training. Another TWD90,500 is required each year to renew the software. 5. The manpower cost of Scope 3 emission inventory and value chain management is around TWD1,000,000 per year.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Invest in product R&D to reduce the environmental impacts of products, make great efforts to cut the emissions emitted from the company, and enhance supply chain management to reduce the possibility of problematic products. Further details of actions that have been taken or can be taken are as follows: 1. Around 3% of the Company's revenue is dedicated to R&D to ensure our products are more market-favorable and user-friendly. We aim to improve products by reducing carbon footprint, enhancing energy efficiency, and decreasing waste from packaging. 2. Set a group-wide target of carbon reduction and carry out several energy-saving projects and activities at all the sites. The total carbon emission has decreased by 43.95% in 2023 since 2009. 3. Voluntarily adopt emission management and analysis tools such as LCA and Scope 3 emission inventory to help us with fulfilling environmental responsibility. We completed conducting a life cycle analysis of all main types of GIGABYTE's products in 2018. We also share this information by publishing "Product Environment Reports" on our CSR Website. The consumers and stakeholders can know the extent of the impact the product will have to climate change, air quality, ecological impact, etc. Moreover, it includes recycling information to educate consumers about the proper way to recycle WEEE. Additionally, 11 categories of Scope 3 emissions related to GIGABYTE are calculated based on the methodology provided by the GHG Protocol. 4. Continue to carry out annual supplier audits and evaluation processes. GIGABYTE has done it for 10 years and has seen a trend that more and more major suppliers recognize the purpose of the evaluation.*

## Climate change

### (3.1.1.1) Risk identifier

Select from:

Risk8



### (3.1.1.3) Risk types and primary environmental risk driver

#### Acute physical

- Cyclone, hurricane, typhoon

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- China
- Taiwan, China

### (3.1.1.9) Organization-specific description of risk

*About one-third of typhoons occur yearly in the north-western Pacific region, out of which 13% pass by Taiwan. Historical records show that there is a trend that more typhoons pass through Taiwan, as we have seen a northward shift in the average path of typhoons. Records also show that there is a trend of typhoons reaching Taiwan at their strongest in the aspect of rain and wind. Typhoon Megi attacking Taiwan in September 2016, forced most businesses and factories to call off work for two days, leading to immense financial losses. As typhoons become more and more severe, they may bring damage, power shortage, and casualties, which will affect our operation. Moreover, some of the typhoons in the north-western Pacific reach China's coasts, with more incidences in the south than in the north. Our suppliers in China, as a result, will be affected.*

### (3.1.1.11) Primary financial effect of the risk

Select from:

- Disruption in production capacity

### (3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization

Select all that apply

Medium-term

### (3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon

Select from:

More likely than not

### (3.1.1.14) Magnitude

Select from:

Medium

### (3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

*Although Taiwan is hit by a few typhoons every year, GIGABYTE has not been affected directly by them. The financial impact of typhoon-caused production disruptions will become evident in the medium term as seawater warms, providing better conditions for powerful cyclones. A rise in operating costs is also expected due to trade restrictions on chips, which have forced GIGABYTE to move most of our high-end production lines back to Taiwan, including AI servers and gaming graphic cards. The financial loss from production disruption resulting from typhoons will thus be higher than before.*

### (3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

Yes

### (3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

8900000

### (3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

8900000

### (3.1.1.25) Explanation of financial effect figure

*Typhoons may result in a loss of thousands to millions of dollars per day by disrupting GIGABYTE's production lines. Taking Nanping Factory as an example, extreme climate events leading to factory shutdown could cause a cost of at least TWD3,000,000 per day due to the loss of productivity. In addition, in Taiwan, the government would call off work if a typhoon is sure to encroach upon Taiwan. When it happens, companies shall still pay each employee a one-day salary even though productivity is zero. For GIGABYTE, the amount of the payment is at least TWD1,450,000 per day. In recent years, on average, Taiwan has been influenced by two typhoons per year, so we assume that GIGABYTE will likely face at least 2-day shut down every year because of increasingly severe typhoons. That is, GIGABYTE would confront a loss of TWD8.9 million every year.*

### (3.1.1.26) Primary response to risk

#### **Policies and plans**

Other policies or plans, please specify :Risk Emergency Management

### (3.1.1.27) Cost of response to risk

260000

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The costs associated with these management actions are relatively low as these are part of the ISO 14001 environmental management standard. The validity period of ISO14001 is 3 years, thus re-certification is required every 3 years. The certification cost is about TWD200,000. 2. On average, 2 typhoons hit Taiwan per year. The additional expense of manpower for examining the extent of damage during the disaster and monitoring the progress of recovery after the disaster is around TWD3,000 per person per day, and we assume that at least 10 persons are needed to complete the process.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Formulate an emergency management procedure for typhoons, and allocate supply chain risk by increasing the diversification of suppliers. Further details of actions that have been taken or can be taken are as follows: 1. Establish the 'Risk Emergency Management Procedure' based on ISO 14001 standards. The procedure helps to respond to various emergencies immediately and effectively and to prevent or mitigate the negative impacts that may be caused. Responding measures for typhoons, storms, and floods are included in the document, and a detailed procedure of how to cope with the emergencies is provided. Moreover, the document also provides a guide to reallocating productivity if partial facilities are damaged during the disaster. 2. Lower supply chain risks by working on diversifying our*

suppliers, ensuring that there are always substitutes to supply us with the components we need should an unexpected event occurs.

## Climate change

### (3.1.1.1) Risk identifier

Select from:

Risk9

### (3.1.1.3) Risk types and primary environmental risk driver

#### Chronic physical

Heat stress

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Direct operations

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

China

Taiwan, China

### (3.1.1.9) Organization-specific description of risk

Taiwan's Central Weather Bureau shows that Taiwan's mean temperature has been rising for the past 100 years, 50 years, and 30 years. Particularly in the past two decades, we have seen an increase in temperatures extremes, including extremely high summer temperatures and rapid freezing temperatures in winter. Based on downscaling data analyzed by Taiwan Climate Change Projection Information and Adaptation Knowledge Platform based on the SSP5-8.5 model, New Taipei City and Taoyuan, where GIGABYTE's headquarters and most of our subsidiaries are based, are expected to experience a temperature increase of 0.8C between 2021 and 2040, and 1.6C between 2041 and 2060. As it gets hotter, we will need more electricity to cool. Additionally, extreme heat waves can cause health problems for employees. As

mentioned in Risk 3, electricity fees in Taiwan will rise as the electricity utility will invest in more renewable energy development. Based on Taiwan's energy transition roadmap, the percentage of electricity generated by renewable energy sources would increase from 7-8% to 20% by 2025, and to 60-70% by 2050. Thus, GIGABYTE faces a risk that energy expenditure will increase due to, on the one hand, an increase in cooling and air conditioning in response to the warming climate, and on the other hand, an increase in electricity prices. One recent example is that GIGABYTE's headquarters consumed 1.8% less electricity in 2023 than in 2022, but its electricity bills increased by 24%.

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Increased indirect [operating] costs

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term
- Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Virtually certain

### **(3.1.1.14) Magnitude**

Select from:

- Medium-high

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

A possible financial impact of temperature extremes is an increase in indirect operational costs caused by the need for more electricity for cooling. Additionally, as electricity prices keep rising, electricity bills may increase faster than electricity consumption. That means that reducing energy use does not always mean reducing energy costs. As an example, GIGABYTE's headquarters consumed 1.8% less electricity in 2023 than in 2022, but its electricity bills increased by 24%.

### **(3.1.1.17) Are you able to quantify the financial effect of the risk?**

Select from:

Yes

### **(3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)**

7685500

### **(3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)**

8435500

### **(3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)**

10366500

### **(3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)**

15011500

### **(3.1.1.25) Explanation of financial effect figure**

*The potential financial implications that temperature extremes will cause include: 1. The too-warm temperature will disrupt the production machine due to overheating. To avoid the problem, we need to invest more in improving cooling facilities and air-conditioners in factories. In 2023, the investment related to HVAC equipment in factories was around TWD3,141,500. 2. Heatwaves affect employees' health; thus, improving the air-conditioning system of offices is also crucial. In 2023, the cost of replacing air conditioners was TWD1,207,000. 3. Besides investment in hardware, our electricity expenditure will also increase. According to our scenario analysis based on SSP5-8.5 scenario, our total power cost will rise by TWD4,087,000 in 2030 and by at least TWD10,663,000 after 2035 purely due to the increasing mean temperature in summer. Even under SSP1-2.6 scenario, the increase in power cost will reach TWD3,337,000 by 2030 and at least TWD6,018,000 after 2035. For details of the scenario analysis, please refer to Questions 5.1.1 and 5.1.2. Based on the above experiences and analyses, we expect the risk will lead to a financial implication between TWD7,685,500 and TWD8,435,500 in the medium term, and between TWD10,366,500 and TWD 15,011,500 in the long term.*

### **(3.1.1.26) Primary response to risk**

## Infrastructure, technology and spending

- Increase environment-related capital expenditure

### (3.1.1.27) Cost of response to risk

33836173

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The financial outgoings for equipment replacement or renewal vary each year, depending on the budget as well as the cost of projects. The total expenditure on electrical facilities, including air conditioners, in 2023 was TWD 25,941,173. 2. The cost for the Headquarters introducing smart power monitoring systems for its product testing laboratories in 2023 was TWD2,857,000. 3. The additional expense of manpower for examining the extent of damage during the disaster and monitoring the progress of recovery after the disaster is around TWD 3,000 per person per day, and we assume that at least 10 persons are needed to complete the process. 4. The investment in the eco-roof was TWD 4,770,000 million, and the cost of maintaining and managing the eco-roof is around TWD238,000 per year.*

### (3.1.1.29) Description of response

*Strategies to address this risk: Renovate the air conditioners to improve energy efficiency, formulate an emergency management procedure for extreme climate events, and green the rooftop to lower indoor temperature. Further details of actions that have been taken or can be taken are as follows: 1. Replace traditional and old air conditioners with inverter air conditioners at all the sites to improve electrical efficiency. 2. Utilize smart power monitoring systems to track real-time power usage of energy-consuming equipment, improve energy efficiency, and avoid power outages caused by overloading. 3. Establish the 'Risk Emergency Management Procedure' based on ISO 14001 standards. The procedure helps to respond to various emergencies immediately and effectively and to prevent or mitigate the negative impacts that may cause. Responding measures for any emergency are included in the document, and detailed procedures on how to cope with different urgent situations are provided. 4. Built the "G-HOME Sustainable Eco-roof" on the rooftop of the headquarters in 2013. The indoor temperature of the highest floor is reduced by 2.5C in the summertime because the rooftop is covered with soil and plants. In 2017, Nanping Factory also built its green roof in order to enhance the self-cooling ability of the building.*

## Water

### (3.1.1.1) Risk identifier

Select from:

Risk11

### (3.1.1.3) Risk types and primary environmental risk driver

#### Acute physical

Flooding (coastal, fluvial, pluvial, groundwater)

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

Upstream value chain

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

China

Hong Kong SAR, China

Thailand

### (3.1.1.7) River basin where the risk occurs

Select all that apply

Chao Phraya

Pearl River

### (3.1.1.9) Organization-specific description of risk

*GIGABYTE strives to increase local procurement. Most of GIGABYTE's first-tier suppliers are located in Taiwan and Dongguan and Ningbo in China, i.e., where our three factories are located, while our second-tier suppliers are located in nearby countries such as Thailand and Japan. Several of these regions are at risk of flooding. According to a World Bank study, flooding is associated with high death rates and GDP losses in China. Additionally, GIGABYTE conducts regular risk analyses using data from the Aqueduct Water Risk Atlas. According to our latest assessments of water risks in the regions where our operational bases, branch companies, and top 100 suppliers are located: 1. GIGABYTE's main suppliers of chips and software are located on the West Coast of the US. In the medium and long term, the region is exposed to relatively high*



water stress. 2. PCBs (printed circuit boards) are the foundation of electronic devices. Several of GIGABYTE's PCB suppliers are located in the Yangtze River Delta and Pearl River Delta in China, both of which are susceptible to coastal flooding. 3. Panels are essential parts of GIGABYTE's laptops, while power supplies are essential components of the server products. However, some important suppliers of power supply modules and panels located in Thailand and Vietnam are at high risk of coastal and river flooding.

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Disruption in upstream value chain

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Long-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

- Very likely

### **(3.1.1.14) Magnitude**

Select from:

- High

### **(3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

GIGABYTE's annual procurement activities are largely concentrated in Taiwan, China, and Southeast Asia, all areas that have high water stress risks or flood potential. Such local procurement ratio has significantly increased in recent years as epidemics and geopolitics have restructured global supply chains. However, with global warming changing regional precipitation patterns and intensifying extreme weather events, the more GIGABYTE relies on suppliers with high water stress, the more financial implications we would face from procurement risks.

### (3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

Yes

### (3.1.1.23) Anticipated financial effect figure in the long-term – minimum (currency)

11800000000

### (3.1.1.24) Anticipated financial effect figure in the long-term – maximum (currency)

11800000000

### (3.1.1.25) Explanation of financial effect figure

*By using the Aqueduct Water Risk Atlas database, we have identified critical component suppliers (e.g. PCBs, ICs, power supplies, and screens/panels) located in high-risk water-related areas. GIGABYTE procured TWD 11.8 billion from these suppliers in 2023, accounting for about 10% of its total procurement. Moreover, 95% of the total procurement amount in 2023 was sourced from critical first-tier suppliers in Taiwan, China, and Southeast Asia, where most coastal regions are threatened by flooding and water stress.*

### (3.1.1.26) Primary response to risk

#### **Diversification**

Increase supplier diversification

### (3.1.1.27) Cost of response to risk

2200000

### (3.1.1.28) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The cost of supplier audits, sustainability assessments, as well*

as regular review of water risk assessment every year is around TWD2,000,000 per year. 2. The cost of supplier engagement on sustainability issues, including potential physical climate risks, was TWD200,000 in 2023.

### (3.1.1.29) Description of response

Strategies to address this risk: allocate supply chain risk by increasing the diversification of suppliers. Further details of actions that have been taken or can be taken are as follows: 1. Lower supply chain risks by diversifying our suppliers, ensuring that there are always substitutes to supply us with the components we need should an unexpected event occur. 2. Conduct supplier audits and sustainability assessments annually to evaluate the extent of suppliers' coping with climate change and thus foresee the potential risk due to suppliers' failure to properly tackle climate issues.

## Water

### (3.1.1.1) Risk identifier

Select from:

- Risk12

### (3.1.1.3) Risk types and primary environmental risk driver

#### Chronic physical

- Water stress

### (3.1.1.4) Value chain stage where the risk occurs

Select from:

- Upstream value chain

### (3.1.1.6) Country/area where the risk occurs

Select all that apply

- China
- Thailand
- United States of America

- Singapore
- Taiwan, China
- Hong Kong SAR, China

### **(3.1.1.7) River basin where the risk occurs**

Select all that apply

- Chao Phraya
- Pearl River

### **(3.1.1.9) Organization-specific description of risk**

*GIGABYTE's primary manufacturing process is assembly, which does not consume water. Most of the water consumed by GIGABYTE's operational sites is for drinking and domestic purposes. Several components for GIGABYTE's products, especially PCBs and chips, can be highly water-intensive in their manufacturing processes, posing a major challenge for the upstream supply chain. In the event of drought in the region where these suppliers are located, GIGABYTE's supply chain will likely be impacted. As described by CDP in its "Navigating Troubled Waters" report, "the financial risks of water scarcity became clear in 2021 when Taiwan, which produces more than 90% of the world's most advanced chip, suffered its worst drought in more than 50 years. Water was prioritized to the semiconductor industry, it increased production costs and affected other industries domestically by reducing their access to water." As of now, a large number of high-end chips needed for GIGABYTE's most advanced servers and solution services are actually produced by semiconductor manufacturers in Taiwan. Furthermore, most of GIGABYTE's PCB suppliers are located in Taoyuan and Hsinchu in Taiwan as well as in the Pearl River Delta in China (including Dongguan, Shenzhen, Hong Kong, and Huizhou). Aqueduct Water Risk Atlas data indicate that these regions are facing medium levels of drought risk, with Huizhou, in particular, expected to experience high levels of water stress in the medium to long term.*

### **(3.1.1.11) Primary financial effect of the risk**

Select from:

- Disruption in upstream value chain

### **(3.1.1.12) Time horizon over which the risk is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term

### **(3.1.1.13) Likelihood of the risk having an effect within the anticipated time horizon**

Select from:

Likely

### (3.1.1.14) Magnitude

Select from:

High

### (3.1.1.16) Anticipated effect of the risk on the financial position, financial performance and cash flows of the organization in the selected future time horizons

*The potential financial impact is estimated using server products as an example. The reason is that server products require high levels of technical precision, which makes supplier diversification difficult. Furthermore, as AI technology is developing rapidly, which drives high demand for relevant supporting equipment, server orders to GIGABYTE have grown rapidly in quantity, as well as in urgency. There are not many alternative manufacturers that are able to provide components that meet our high standards for techniques and deadlines. Consequently, if a water shortage or drought occurs upstream, interrupting the supply of important but water-intensive components, GIGABYTE's revenue from servers will be affected.*

### (3.1.1.17) Are you able to quantify the financial effect of the risk?

Select from:

Yes

### (3.1.1.21) Anticipated financial effect figure in the medium-term – minimum (currency)

27000000000

### (3.1.1.22) Anticipated financial effect figure in the medium-term – maximum (currency)

27000000000

### (3.1.1.25) Explanation of financial effect figure

*According to GIGABYTE's financial report for 2024 Q1, network products such as servers accounted for 55% of the Company's revenue, of which approximately 40% was*

from AI-related servers. In the event that upstream supplies of critical components, such as ICs and PCBs, become unstable because of water shortages, it would affect about 1/5 of GIGABYTE Group's revenues. The ratio equates to approximately TWD 27 billion based on 2023 revenue estimates. Additionally, we have identified critical component suppliers (e.g. PCBs, ICs, power supplies, and screens/panels) located in high-risk water-related areas using the LEAP methodology. GIGABYTE procured TWD 11.8 billion from these suppliers in 2023, accounting for about 10% of its total procurement.

### (3.1.1.26) Primary response to risk

#### Compliance, monitoring and targets

- Improve monitoring of upstream and downstream activities

### (3.1.1.27) Cost of response to risk

2200000

### (3.1.1.28) Explanation of cost calculation

The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The cost of supplier audits, sustainability assessments, as well as regular review of water risk assessment every year is around TWD2,000,000 per year. 2. The cost of supplier engagement on sustainability issues, including potential physical climate risks, was TWD200,000 in 2023.

### (3.1.1.29) Description of response

Conduct supplier audits and sustainability assessments regularly to evaluate the extent of suppliers coping with climate change and thus foresee the potential risk that may happen due to suppliers' failure in properly tackling climate issues.

[Add row]

## (3.1.2) Provide the amount and proportion of your financial metrics from the reporting year that are vulnerable to the substantive effects of environmental risks.

### Climate change

### (3.1.2.1) Financial metric

Select from:

Revenue

### (3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

9100000000

### (3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

61-70%

### (3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

0

### (3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

Less than 1%

### (3.1.2.7) Explanation of financial figures

*In determining the amount of revenue vulnerable to transition risks for climate change, we consider the financial effects provided in Risk 5, Risk 6, and Risk 7. As the methods for assessing the financial effects of these three risks overlap slightly, we cannot simply sum these three figures. Considering that Risk 7 has the most significant financial impact, we use that figure as a representative. The figure is TWD91 billion, accounting for 67% of the Company's total revenue in 2023. There is no revenue identified as vulnerable to physical risks for climate change.*

## Water

### (3.1.2.1) Financial metric

Select from:

Revenue

### (3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

0

### (3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

Less than 1%

### (3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

38805988000

### (3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

31-40%

### (3.1.2.7) Explanation of financial figures

*In determining the amount of revenue vulnerable to transition risks for water, we consider the financial effects provided in Risk 10, Risk 11, and Risk 12. Increased indirect costs for disaster recovery and increased procurement costs due to the disruption of the supply chain will all lead to a decrease in revenues. Those figures total TWD38,805,988,000, which is about 32.3% of the Company's total operating costs in 2023. No revenue is identified as vulnerable to transition risks for water.*



## Climate change

### (3.1.2.1) Financial metric

Select from:

OPEX

### (3.1.2.2) Amount of financial metric vulnerable to transition risks for this environmental issue (unit currency as selected in 1.2)

3979816383

### (3.1.2.3) % of total financial metric vulnerable to transition risks for this environmental issue

Select from:

31-40%

### (3.1.2.4) Amount of financial metric vulnerable to physical risks for this environmental issue (unit currency as selected in 1.2)

91165499

### (3.1.2.5) % of total financial metric vulnerable to physical risks for this environmental issue

Select from:

Less than 1%

### (3.1.2.7) Explanation of financial figures

1. The amount of OPEX vulnerable to transition risks for climate change is the sum of the maximum financial effect figures provided in Risk 1, Risk 2, Risk 4, and Risk 4. The total of these figures is TWD3,979,816,383, which is about 34% of the total operating expense in 2023. 2. The amount of OPEX vulnerable to physical risks for climate change is the sum of the maximum financial effect figures provided in Risk 8 and Risk 9. The total of these figures is TWD91,165,499, which is about 0.8% of the total

operating expense in 2023.

[Add row]

**(3.2) Within each river basin, how many facilities are exposed to substantive effects of water-related risks, and what percentage of your total number of facilities does this represent?**

**Row 1**

**(3.2.1) Country/Area & River basin**

**Zimbabwe**

Other, please specify :Yong River

**(3.2.2) Value chain stages where facilities at risk have been identified in this river basin**

*Select all that apply*

Direct operations

**(3.2.3) Number of facilities within direct operations exposed to water-related risk in this river basin**

4

**(3.2.4) % of your organization's total facilities within direct operations exposed to water-related risk in this river basin**

*Select from:*

1-25%

**(3.2.10) % organization's total global revenue that could be affected**

Select from:

1-10%

### (3.2.11) Please explain

GIGABYTE conducts water risk analysis on its main operating sites using the Aqueduct Water Risk Atlas database. A recent analysis of 39 sites identified four sites facing moderate to high water stress levels, including the US Branch, the Dutch Branch, and the Japanese Branch. The Ningbo Factory is particularly important for GIGABYTE since it is one of its main manufacturing facilities. It is located in Ningbo City, Zhejiang Province, China, in an area with a dense network of rivers. The Yong River system (Young Jiang) accounts for 59% of the area of this basin. According to GIGABYTE's financial report for 2023, Ningbo Factory's revenue accounted for about 10% of the Group's revenue.

[Add row]

### (3.3) In the reporting year, was your organization subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations?

	Water-related regulatory violations	Comment
	Select from: <input checked="" type="checkbox"/> No	GIGABYTE was not subject to any fines, enforcement orders, and/or other penalties for water-related regulatory violations in 2023.

[Fixed row]

### (3.6) Have you identified any environmental opportunities which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future?

#### Climate change

#### (3.6.1) Environmental opportunities identified

Select from:

Yes, we have identified opportunities, and some/all are being realized

## Water

### (3.6.1) Environmental opportunities identified

Select from:

No

### (3.6.2) Primary reason why your organization does not consider itself to have environmental opportunities

Select from:

Judged to be unimportant or not relevant

### (3.6.3) Please explain

*GIGABYTE's manufacturing process consumes little water, and tap water is used for basic factory facilities and domestic water. In accordance with our definition of "substantial impact" in Question 2.4, no water-related opportunities would be financially or strategically beneficial to GIGABYTE. In comparison to other issues like power consumption and energy efficiency, water-related issues do not provide significant opportunities or benefits for GIGABYTE.*

*[Fixed row]*

**(3.6.1) Provide details of the environmental opportunities identified which have had a substantive effect on your organization in the reporting year, or are anticipated to have a substantive effect on your organization in the future.**

## Climate change

### (3.6.1.1) Opportunity identifier

Select from:

Opp1

### (3.6.1.3) Opportunity type and primary environmental opportunity driver

#### Resource efficiency

- Increased efficiency of production and/or distribution processes

### (3.6.1.4) Value chain stage where the opportunity occurs

Select from:

- Direct operations

### (3.6.1.5) Country/area where the opportunity occurs

Select all that apply

- China
- Taiwan, China

### (3.6.1.8) Organization specific description

*GIGABYTE is constantly improving production processes to maximize energy efficiency. Since 2009, the intensity of our emissions per 1,000 pieces of products has decreased from 3.16 t-CO<sub>2</sub>e to 2.76 t-CO<sub>2</sub>e, while the revenue per tonne of emissions has increased by 5.7 times. Improving energy efficiency and controlling emission intensity also help GIGABYTE respond to climate-related policies and regulations in Taiwan and China as early as possible. As an example, Taiwan has committed to a net zero target by 2050, and it plans to enact a carbon fee mechanism soon. Additionally, China launched its National Emission Trade Scheme (CN ETS) in July 2021 and aims to reach carbon neutrality by 2060. Despite GIGABYTE not being required to comply with these two regulations, climate-related regulations will inevitably be imposed upon the electronic manufacturing industry. The earlier we respond, the less we will have to pay for compliance. Furthermore, the implementing process facilitates GIGABYTE's examination of the sources of critical or unnecessary emissions. Headquarters and all manufacturing bases report their environmental data to the Sustainable Development Office every year. The Office can then not only review the group's environmental performance but also analyze resource-saving potentials, estimate future resource use pathways, and, based on these results, conduct cost-effectiveness analyses of possible avoiding or improving strategies and measures.*

### (3.6.1.9) Primary financial effect of the opportunity

Select from:

- Reduced indirect (operating) costs

### **(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization**

Select all that apply

Medium-term

### **(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon**

Select from:

Likely (66–100%)

### **(3.6.1.12) Magnitude**

Select from:

Medium

### **(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*There are two financial implications to this opportunity: cost savings that can be realized from improving resource efficiency in business operations and avoiding future fines and ineffective costs associated with noncompliance with related regulations. Moreover, we believe that the impact of this will become more apparent over the medium term not only because compliance with relevant regulations will go from voluntary to obligatory, but also because energy conservation will result in more substantial savings as electricity prices rise*

### **(3.6.1.15) Are you able to quantify the financial effects of the opportunity?**

Select from:

Yes

### **(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)**

52265000

### **(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)**

### **(3.6.1.23) Explanation of financial effect figures**

*Since 2009, when we launched the "Green Action Plan" and set up our first targets for emissions, water, and waste reduction, GIGABYTE has saved TWD730,304,000 on purchasing energy and resources, including electricity, water, fuel, and steam. In other words, by improving resource efficiency on production lines, offices, and other controlled infrastructures, we have saved an average of TWD52,165,000 per year over the last decade. Taking action beforehand reduces the risk of penalties if we fail to meet an obligation. For example, according to the "Measures for Inventory Registration and Inspection Management of Greenhouse Gas Emissions", entities that fail to meet requirements and register GHG emissions or make a false report about GHG emission data would face a fine of between TWD100,000 and TWD1 million. This opportunity would therefore bring GIGABYTE total financial benefits of TWD 52,265,000 to 53,165,000.*

### **(3.6.1.24) Cost to realize opportunity**

5740500

### **(3.6.1.25) Explanation of cost calculation**

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. Greenhouse gas emission inventory and certification cost TWD500,000 per year. 2. The manpower cost of carrying out LCA, Scope 3 emission inventory, and setting an SBT is around TWD1,850,000 per year. 3. The cost of product carbon footprint calculation and maintaining the LCA System is at least TWD1,500,000, including manpower costs, training, and purchasing sample products for analyses. Another TWD90,500 is required each year to renew the software. 4. The budget of the "Sustainability Fund" in 2024 is TWD800,000. 5. If we want to verify a Science-based Target (SBT), the verification fee as well as the consulting fee will be at least TWD1,000,000.*

### **(3.6.1.26) Strategy to realize opportunity**

*Strategies to address this opportunity: Continue to carry out annual emission management mechanisms, and invest more manpower in conducting carbon-emission-related analyses or projects in anticipation of regulatory changes in the future. Further details of actions that have been taken or can be taken are as follows: 1. We set an emission reduction goal in 2010 and have conducted an ISO 14064 GHG emission inventory annually since then. The inventory is always certified by a third party. 2. Implement emission management and analysis tools such as LCAs and Scope 3 emissions inventories voluntarily. In 2018, we established life cycle assessment methodologies for all its main product types. In addition, 11 categories of Scope 3 emissions related to the Company are calculated annually in accordance with the GHG Protocol. 3. GIGABYTE launched a "Sustainability Fund" in 2019, which is budgeted from savings from reducing energy use, water use, and generated waste. The program rewards factories, departments, and individual employees who reduce emissions or come up with innovative waste-reduction, water-saving, and energy-saving ideas. 4. Invest manpower in developing a science-based target (SBT), representing a more ambitious commitment to emission reduction.*

## Climate change

### (3.6.1.1) Opportunity identifier

Select from:

- Opp2

### (3.6.1.3) Opportunity type and primary environmental opportunity driver

#### Markets

- Stronger competitive advantage

### (3.6.1.4) Value chain stage where the opportunity occurs

Select from:

- Downstream value chain

### (3.6.1.5) Country/area where the opportunity occurs

Select all that apply

- Spain
- France
- Germany
- Netherlands
- United States of America
- United Kingdom of Great Britain and Northern Ireland

### (3.6.1.8) Organization specific description

*The growing development of green economies, along with the Paris Agreement and following initiatives, has led to the formation of regional climate policies and requirements, such as the "European Green Deal," as well as several regulations at the national and local levels that are aimed at encouraging energy-saving and environmentally friendly products. Over the past few years, more and more energy-efficient products have been released. Low-carbon product and service producers will*



benefit from these local, national, and regional regulations if they want to develop and sell their products there. As a result, GIGABYTE views this as an opportunity since our products, especially those that are efficient, power-efficient, and long-lasting, will have a competitive advantage in these markets. For example, GIGABYTE is the first company to introduce solid-state capacitors to motherboards. The technological revolution improves motherboard stability, saves power, and extends motherboards' lifecycles and warranty periods. This saves power costs for our consumers while reducing e-waste, which has grown rapidly in recent decades and poses greater threats to ecological and human health. Growing market demand for green products motivates GIGABYTE to invest more in advancing climate-friendly products, which will further enhance our brand value and reputation. In turn, this will create a win-win-win situation that is beneficial to businesses and consumers as well as the environment.

### **(3.6.1.9) Primary financial effect of the opportunity**

Select from:

- Increased revenues resulting from increased demand for products and services

### **(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization**

Select all that apply

- The opportunity has already had a substantive effect on our organization in the reporting year

### **(3.6.1.12) Magnitude**

Select from:

- High

### **(3.6.1.13) Effect of the opportunity on the financial position, financial performance and cash flows of the organization in the reporting period**

As European and North American markets have already implemented strict regulations regarding energy efficiency, ecological design, use of harmful substances, packaging materials, etc. In addition, the two markets will soon become world pioneers in imposing carbon tariffs on imported goods. Therefore, we anticipate that our climate-friendly products and services will be relatively preferred in these markets, leading to an increase in revenues.

### **(3.6.1.15) Are you able to quantify the financial effects of the opportunity?**

Select from:

- Yes

### **(3.6.1.16) Financial effect figure in the reporting year (currency)**

5870000000

### **(3.6.1.23) Explanation of financial effect figures**

*Recent years have seen an increase in demand from EU and North American markets. It is expected that revenue from these regions will continue to grow. According to GIGABYTE's 2023 financial report, the company generated TWD91.45 billion from the EU and North American markets, which makes up nearly 66.9% of total revenue. As compared to the previous year, revenues in the EU have grown by 16.5% and revenues in North America by 79.4%. Even though not all of the increased revenue can be attributed to the improvement of energy efficiency and sustainability in products, we still estimate that 20% of the growth is due to the preferences of these markets for high-efficiency, low-energy-intensity products with low social and environmental impacts. Based on 2023 financial statistics, the figure would be TWD5.87 billion.*

### **(3.6.1.24) Cost to realize opportunity**

2751783400

### **(3.6.1.25) Explanation of cost calculation**

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The R&D and product design investment was TWD 2,75 billion in 2023, accounting for 2% of the annual revenue. 2. The budget for managing the laboratories for testing different functions and the quality of products in 2024 is TWD1,783,400. 3. The cost of running the Committee is relatively low as it has been ongoing regularly for years.*

### **(3.6.1.26) Strategy to realize opportunity**

*Strategies to address this opportunity: Invest in R&D to design and produce products that are more user- and environmental-friendly and more favorable to the market demands, and the Sustainable Development Committee plays the role of gatekeeper to ensure our products meet all relevant regulations. Further details of actions that have been taken or can be taken are as follows: 1. Each year, 3% of annual revenue is dedicated to the R&D of products or services that are more market-favorable and more beneficial to upgrading consumers' lives. Moreover, R&D personnel would take into account requirements for eco-design products in different regions and nations during the stage of the product design in order to ensure our products stay competitive with competitors. 2. The Sustainable Development Committee carries out a cross-departmental meeting monthly. The products or services that may be problematic in terms of meeting environmental standards would be evaluated at the meeting.*

## **Climate change**

### (3.6.1.1) Opportunity identifier

Select from:

- Opp3

### (3.6.1.3) Opportunity type and primary environmental opportunity driver

#### Products and services

- Ability to diversify business activities

### (3.6.1.4) Value chain stage where the opportunity occurs

Select from:

- Downstream value chain

### (3.6.1.5) Country/area where the opportunity occurs

Select all that apply

- Spain
- France
- Germany
- Netherlands
- United States of America
- United Kingdom of Great Britain and Northern Ireland

### (3.6.1.8) Organization specific description

*GIGABYTE began as a manufacturer of motherboards. Since we were established, motherboards, graphics cards, and computer peripherals have been our main products. Due to climate change and resource depletion, global markets are increasingly focused on low-carbon products as well as business models and solutions that can reduce waste generation, improve resource efficiency, and promote circular economies. In response, GIGABYTE has invested actively in two markets: 1. High-speed computing servers with excellent energy efficiency: With the development of AI and 5G technology, data centers have become increasingly important. 1% of the world's electricity is consumed by data centers, according to the EIA, and that ratio is expected to rise. GIGABYTE has innovated HPC servers with advanced cooling technology that enhances scalability, performance, and energy efficiency. GIGABYTE's Immersion Cooling Solution, for example, improves PUE (power usage effectiveness) from 1.7, the level an air-*

cooled room used to have, to 1.08. 2. Reverse logistics for electronic products: Many materials from discarded electronic products can be reused. In 2018, GIGABYTE established Bestyield International, which aims to develop business models to encourage electronic product recycling without restrictions on brand names. It repaired 531,590 temporarily broken electronic products and refurbished 30,308 pieces of e-waste in 2023, reducing e-waste generation by approximately 795 metric tons.

### **(3.6.1.9) Primary financial effect of the opportunity**

Select from:

- Increased revenues through access to new and emerging markets

### **(3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization**

Select all that apply

- Medium-term

### **(3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon**

Select from:

- Very likely (90–100%)

### **(3.6.1.12) Magnitude**

Select from:

- High

### **(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*Due to the inevitable trend of future industrial development and the transition to a low-carbon economy, the Company will increase its revenues by expanding to new markets and focusing on energy efficiency and circular economy. GIGABYTE has already benefited from this trend and anticipates it to become more significant over the next 3 to 5 years. Moreover, diversifying product types and portfolios, as well as expanding into other markets besides consumer electronics, will reduce potential operational risks resulting from uncertainly sudden changes in demand.*

### **(3.6.1.15) Are you able to quantify the financial effects of the opportunity?**

Select from:

Yes

### (3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)

5300000000

### (3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)

5300000000

### (3.6.1.23) Explanation of financial effect figures

*Since 2021, when GIGABYTE established a subsidiary to focus on R&D, design, and manufacturing of server products, the Company's server revenues have increased 1.6 times, exceeding TWD 50 billion. GIGABYTE's server revenue share has risen from 16.5% to 38.5% over the years. From the reverse logistics market expansion, Bestyield's revenue has increased 55 times since its launch in 2018. In 2023, its revenue almost reached TWD 1 billion. In light of these development trends, it is estimated that GIGABYTE will make at least TWD 5,300,000,000 per year from this opportunity of business diversification, with a revenue growth rate of at least 10% for servers and 30% for refurbished e-products.*

### (3.6.1.24) Cost to realize opportunity

2753373900

### (3.6.1.25) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The R&D and product design investment was TWD2,75 billion in 2023, accounting for 2% of the annual revenue. 2. The budget for managing the laboratories for testing different functions and the quality of products in 2024 is TWD1,783,400. 3. The cost of the Product carbon footprint calculation System is at least TWD1,500,000, including manpower cost and the expenditure on purchasing and training. Another TWD90,500 is required each year to renew the software. 4. The cost of running the Committee is relatively low as it has been ongoing regularly for years.*

### (3.6.1.26) Strategy to realize opportunity

*Strategies to address this opportunity: Invest in R&D to design and produce products that are more user- and environmental-friendly and more favorable to the market demands, and the Sustainable Development Committee plays the role of gatekeeper to ensure our products meet all relevant regulations. Further details of actions that*

have been taken or can be taken are as follows: Each year, 3% of annual revenue is dedicated to the R&D of products or services that are more market-favorable and more beneficial to upgrading consumers' lives. Moreover, R&D personnel would take into account the requirements of the eco-designed products in different regions and nations during the stage of the product design in order to ensure our products stay competitive with competitors. Carry out product carbon footprint calculations for all main types of GIGABYTE's products and publish Product Environment Reports on our CSR website to actively disclose the impacts our products have on the environment to show the responsibility as an electronic product producer. The Sustainable Development Committee carries out a cross-departmental meeting monthly. The products or services that may be problematic in terms of meeting environmental standards would be evaluated at the meeting.

## Climate change

### (3.6.1.1) Opportunity identifier

Select from:

- Opp4

### (3.6.1.3) Opportunity type and primary environmental opportunity driver

#### Resilience

- Increased upstream value chain resilience

### (3.6.1.4) Value chain stage where the opportunity occurs

Select from:

- Upstream value chain

### (3.6.1.5) Country/area where the opportunity occurs

Select all that apply

- China
- Hong Kong SAR, China
- Taiwan, China
- Thailand
- United States of America

### (3.6.1.6) River basin where the opportunity occurs

Select all that apply

- Other, please specify :Not specific to one river basin

### (3.6.1.8) Organization specific description

*GIGABYTE once faced disruptions to its upstream supply chain due to floods in Thailand. In response to that experience, we developed a strategic supplier management plan to handle the risks caused by climate change, natural disasters, and other unpredictable events threatening our operation, supply chain, and downstream distribution. To analyze the extent of water stress in the regions where GIGABYTE's operational bases, branch companies, and top 100 1-tier suppliers are located, GIGABYTE conducts a water pressure risk analysis on a regular basis, using data from the World Resources Institute's Aqueduct Water Risk Atlas (Aqueduct). According to the results of the latest analysis, which was conducted in 2024, since most of these research sites are located in the coastal regions of China, Japan, and Southeast Asian countries, practically all of these sites are exposed to medium to very high risk of water stress and risks. Our risk evaluation and identification of alternative suppliers and backups beforehand allow us to lower losses and reduce the cost of recovery once the undesirable event occurs. Additionally, we would need comprehensive information about all suppliers to manage suppliers and backup solutions, which would enhance our sustainable supply chain management.*

### (3.6.1.9) Primary financial effect of the opportunity

Select from:

- Reduced direct costs

### (3.6.1.10) Time horizon over which the opportunity is anticipated to have a substantive effect on the organization

Select all that apply

- Medium-term

### (3.6.1.11) Likelihood of the opportunity having an effect within the anticipated time horizon

Select from:

- Likely (66–100%)

### (3.6.1.12) Magnitude

Select from:

High

### **(3.6.1.14) Anticipated effect of the opportunity on the financial position, financial performance and cash flows of the organization in the selected future time horizons**

*The AI wave has swept the world in recent years. In recent years, orders for GIGABYTE products that are related to artificial intelligence have increased significantly, and customers' requirements on delivery deadlines have shortened significantly as well. Thus, if the supply chain upstream cannot be stabilized or alternative suppliers cannot be located in advance when original suppliers are unable to supply parts accidentally, temporary shipments may increase the direct cost of the product, or delayed shipments may damage reputation and revenue.*

### **(3.6.1.15) Are you able to quantify the financial effects of the opportunity?**

Select from:

Yes

### **(3.6.1.19) Anticipated financial effect figure in the medium-term - minimum (currency)**

90900000000

### **(3.6.1.20) Anticipated financial effect figure in the medium-term - maximum (currency)**

90900000000

### **(3.6.1.23) Explanation of financial effect figures**

*With the driver, GIGABYTE can facilitate the enhancement of our supply chain management, especially in regions that are highly vulnerable to climate disasters and water stress, such as Southeast Asia and coastal areas in Southeast China. Around 20.6% of GIGABYTE's first-tier suppliers were located in China and Southeast Asia in 2023. Nevertheless, they accounted for 75.8% of the annual procurement amount, which was approximately TWD90.9 billion. Having a stable and secure supply chain would prevent upstream uncertainty and ensure product quality and competitiveness.*

### **(3.6.1.24) Cost to realize opportunity**



### (3.6.1.25) Explanation of cost calculation

*The response cost here corresponds to the strategies and actions answered in the next column (3.1.1.29). 1. The budget for supplier evaluation per year is around TWD800,000. The expenditure for holding the Supplier Sustainability Award ceremony is around TWD1,850,000 each year. 2. The manpower cost of sustainable supply chain management is at least TWD1,000,000 in the Sustainable Development Office. Other business units also invest manpower in supplier management, yet the accurate value is hard to estimate.*

### (3.6.1.26) Strategy to realize opportunity

*Strategies to address this opportunity: Enhance supply chain management and reduce the risk caused by climatic factors together with our suppliers. Further details of actions that have been taken or can be taken are as follows: 1. GIGABYTE has launched a supplier sustainability assessment and supplier audit every year since 2012. The evaluation covers diversified facets including environmental management system, green certification, financial, personnel, machinery, material, and equipment audit, productivity audit, and up/downstream supplier audit. The suppliers with excellent performance are awarded the Supplier Sustainability Award by the end of the year. 2. In 2015, GIGABYTE called on our suppliers to be involved in the Sustainable Supply Chain Initiative, sharing a goal of reduction in carbon emission, water use, and waste with suppliers and achieving the goal with a collaborative effort. This also helps to reinforce the resilience of our suppliers in terms of extreme climate events. 3. The Sustainable Development Office invests manpower in researching and framing responding strategies and better management of climate change risks and opportunities.*  
[Add row]

## **(3.6.2) Provide the amount and proportion of your financial metrics in the reporting year that are aligned with the substantive effects of environmental opportunities.**

### **Climate change**

#### **(3.6.2.1) Financial metric**

Select from:

Revenue

#### **(3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)**

1117000000

### (3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

1-10%

### (3.6.2.4) Explanation of financial figures

*The amount of revenue aligned with opportunities for climate change includes the figures provided in Opp 2 and Opp3 in Question 3.6.1. These figures total TWD 11.17 billion, which is around 8.2% of the Group's total revenue in 2023.*

## Climate change

### (3.6.2.1) Financial metric

Select from:

OPEX

### (3.6.2.2) Amount of financial metric aligned with opportunities for this environmental issue (unit currency as selected in 1.2)

52265000

### (3.6.2.3) % of total financial metric aligned with opportunities for this environmental issue

Select from:

Less than 1%

### (3.6.2.4) Explanation of financial figures

*The amount of revenue aligned with opportunities for climate change includes the figures provided in Opp 1 in Question 3.6.1. It is TWD 52,265,000, which is around 0.45% of the Company's total operating expense in 2023.*

*[Add row]*

## C4. Governance

### (4.1) Does your organization have a board of directors or an equivalent governing body?

#### (4.1.1) Board of directors or equivalent governing body

Select from:

Yes

#### (4.1.2) Frequency with which the board or equivalent meets

Select from:

More frequently than quarterly

#### (4.1.3) Types of directors your board or equivalent is comprised of

Select all that apply

Executive directors or equivalent

Independent non-executive directors or equivalent

#### (4.1.4) Board diversity and inclusion policy

Select from:

Yes, and it is publicly available

#### (4.1.5) Briefly describe what the policy covers

*In order to strengthen corporate governance and promote the sound development of the composition and structure of the Board of Directors, GIGABYTE advocates a board diversity policy to improve the overall performance of the Company. The composition of the board of directors should consider various needs such as the company's operating structure, business development direction, and future development trends, and should evaluate various aspects of diversity, such as: basic composition, professional experience, professional knowledge and skills. In order to strengthen the functions of the board of directors and achieve the ideal goals of corporate*

governance, the company has formulated the "Code of Practice for Corporate Governance", which stipulates that the board of directors should have the following capabilities as a whole: 1. operation judgment ability; 2. accounting and financial analysis ability 3. operation and management ability; 4. crisis management ability; 5. Industry knowledge ability; 6. legal ability;7. leadership; 8. decision-making ability. The policy can be found at pp.18-19 in 2023 GIGABYTE Annual Report: <https://www.gigabyte.com/FileUpload/Global/SiteMap/83/images/AnnualReportEng-2023.pdf>

#### (4.1.6) Attach the policy (optional)

2023\_GIGABYTE Annual Report\_EN.pdf

[Fixed row]

#### (4.1.1) Is there board-level oversight of environmental issues within your organization?

	Board-level oversight of this environmental issue
Climate change	Select from: <input checked="" type="checkbox"/> Yes
Water	Select from: <input checked="" type="checkbox"/> Yes
Biodiversity	Select from: <input checked="" type="checkbox"/> Yes

[Fixed row]

**(4.1.2) Identify the positions (do not include any names) of the individuals or committees on the board with accountability for environmental issues and provide details of the board's oversight of environmental issues.**

**Climate change**

#### **(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue**

*Select all that apply*

- Board chair
- Chief Operating Officer (COO)
- Other, please specify :Sustainable Development Committee

#### **(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board**

*Select from:*

- Yes

#### **(4.1.2.3) Policies which outline the positions' accountability for this environmental issue**

*Select all that apply*

- Other policy applicable to the board, please specify :Corporate Social Responsibility Best Practice Principles

#### **(4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item**

*Select from:*

- Scheduled agenda item in some board meetings – at least annually

#### **(4.1.2.5) Governance mechanisms into which this environmental issue is integrated**

*Select all that apply*

- Reviewing and guiding annual budgets
- Overseeing the setting of corporate targets
- Monitoring progress towards corporate targets
- Approving corporate policies and/or commitments
- Approving and/or overseeing employee incentives
- Overseeing and guiding the development of a business strategy

#### **(4.1.2.7) Please explain**

*In 2009, GIGABYTE officially established the Green Sustainable Development Committee (the Committee), chaired by the Board Chair, as the highest level in charge of sustainability of business governance, including climate-related management and issues. Under the supervision of the Chair, the Senior Director of the Sustainable Development Office serves as the convener of the Committee. Committee members include the presidents of all business units and subsidiaries, the VP of the Group's Resource Management Center, the COO of the Group's Operations Management Center, and the Director of the Customer Service Center. The Committee convenes monthly meetings across business units, plants, and subsidiaries and reports the conclusions or decisions-to-be-made biweekly to the Board Chair. At the end of each year, the Committee reports the sustainability-related accomplishments of the year to the Board of Directors. They then review the company's sustainability performance and approve the actions to be implemented next year. The topics discussed at Committee meetings include a wide range of green technical and strategic issues. Climate-related topics are one of the crucial focuses. The following are some examples of Climate-related issues that have been discussed at the meetings and proceeded to the Board of directors afterward: 1. Approved by the Chair and directors of the Board, the "Green Action Plan" was launched in 2009 as GIGABYTE's core policy and guiding strategy for sustainable development. It sets company-wide long-term targets to reduce carbon emissions, water use, and waste. Also, the 333 Reduction Plan was established as a short-term target. The Board monitors and reviews both targets' progress every year. 2. The 3rd phase of the Green Action Plan contains various projects and actions. For example, in 2019, the "Sustainability Fund" was approved and founded to provide monetary rewards to the factories that achieve yearly emission reduction targets, and the individuals or departments who propose innovative reduction measures or develop cost-effective green products. The implementation and performance of these projects are supervised by the Board chair as well as the Committee. 3. A comprehensive sustainability assessment is applied to critical suppliers every year. The board chair reviews and approves the assessment results and the list of suppliers excellent in sustainability management. He presents awards to them at the Supplier End-of-Year Party. 4. Climate scenario analysis is conducted or updated at least once a year. The results of scenario analyses as well as identified climate-related risks and opportunities are disclosed in the annual Sustainability Report, of which the publication is reviewed and approved by the board chair. (For more details on the GIGABYTE Green Sustainable Development Committee, please refer to the GIGABYTE CSR website: <https://csr.gigabyte.tw/en/commitment-to-csr-en/>)*

## **Water**

### **(4.1.2.1) Positions of individuals or committees with accountability for this environmental issue**

*Select all that apply*

- Board chair
- Chief Operating Officer (COO)
- Other, please specify :Sustainable Development Committee

### **(4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board**

*Select from:*

- Yes

### (4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

- Other policy applicable to the board, please specify :Corporate Social Responsibility Best Practice Principles

### (4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

- Scheduled agenda item in some board meetings – at least annually

### (4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

- Overseeing the setting of corporate targets
- Monitoring progress towards corporate targets
- Overseeing and guiding the development of a business strategy
- Reviewing and guiding annual budgets
- Approving and/or overseeing employee incentives

### (4.1.2.7) Please explain

*In 2009, GIGABYTE officially established the Green Sustainable Development Committee (the Committee), chaired by the Board Chair, as the highest level in charge of sustainability of business governance, including climate-related management and issues. Under the supervision of the Chair, the Senior Director of the Sustainable Development Office serves as the convener of the Committee. Committee members include the presidents of all business units and subsidiaries, the VP of the Group's Resource Management Center, the COO of the Group's Operations Management Center, and the Director of the Customer Service Center. The Committee convenes monthly meetings across business units, plants, and subsidiaries and reports the conclusions or decisions-to-be-made biweekly to the Board Chair. At the end of each year, the Committee reports the sustainability-related accomplishments of the year to the Board of Directors. They then review the company's sustainability performance and approve the actions to be implemented next year. The topics discussed at Committee meetings include a wide range of green technical and strategic issues. Water-related topics are regarded as one of the crucial focuses on these issues. The following are some examples of water-related issues that have been discussed at the meetings and presented to the Board of directors afterward: 1. Approved by the Chair and directors of the Board, the "Green Action Plan" was launched in 2009 as GIGABYTE's core policy and guiding strategy for sustainable development. It sets company-wide long-term targets to reduce water use. Also, the 333 Reduction Plan was established as a short-term target later in 2016. The Board monitors and reviews both targets' progress every year. 2. The 3rd phase of the Green Action Plan contains various projects and actions. For example, in 2019, the "Sustainability Fund" was approved and founded to provide monetary rewards to the factories that achieve yearly emission reduction*



targets, and the individuals or departments who propose innovative reduction measures or develop cost-effective green products. The implementation and performance of these projects are supervised by the Board chair as well as the Committee. 3. A comprehensive sustainability assessment is applied to critical suppliers every year. The board chair reviews and approves the assessment results and the list of suppliers excellent in sustainability management. He presents awards to them at the Supplier End-of-Year Party. (For more details on the GIGABYTE Green Sustainable Development Committee, please refer to the GIGABYTE CSR website: <https://csr.gigabyte.tw/en/commitment-to-csr-en/>)

## Biodiversity

### (4.1.2.1) Positions of individuals or committees with accountability for this environmental issue

Select all that apply

- Board chair
- Other, please specify :Sustainable Development Committee

### (4.1.2.2) Positions' accountability for this environmental issue is outlined in policies applicable to the board

Select from:

- Yes

### (4.1.2.3) Policies which outline the positions' accountability for this environmental issue

Select all that apply

- Other policy applicable to the board, please specify :Corporate Social Responsibility Best Practice Principles

### (4.1.2.4) Frequency with which this environmental issue is a scheduled agenda item

Select from:

- Scheduled agenda item in some board meetings – at least annually

### (4.1.2.5) Governance mechanisms into which this environmental issue is integrated

Select all that apply

- Monitoring progress towards corporate targets

- Reviewing and guiding annual budgets

#### (4.1.2.7) Please explain

*In 2009, GIGABYTE officially established the Green Sustainable Development Committee (the Committee), chaired by the Board Chair, as the highest level in charge of sustainability of business governance, including climate-related management and issues. The Committee convenes monthly meetings across business units, plants, and subsidiaries and reports the conclusions or decisions-to-be-made biweekly to the Board Chair. The topics discussed at Committee meetings include a wide range of green technical and strategic issues. Biodiversity-related issues will be put on the meeting table when the issue is essential for GIGABYTE's attention. In 2016, GIGABYTE adopted the methodology developed by SDG Compass, a guide for business action to align their strategies with the realization of the Sustainability Development Goals, to identify the SDGs with high priority. Although GIGABYTE's operation does not directly depend on ecology-related issues, we still include SDG 14: Life Below Water and SDG 15: Life on Earth as targets GIGABYTE can voluntarily respond. We then incorporated these goals into our CSR strategy map and developed corresponding actions to ensure that every sustainability action was connected to the global consensus for co-prosperity. The Board chair and the Committee have approved various positive action plans and education projects that aim at enhancing wildlife habitats and raising employees' awareness of ecological conservation. For instance, we have cooperated with the Plant-for-the-Planet Foundation and the government to carry out several forest and habitat restoration activities, which not only respond to GIGABYTE's carbon reduction target but also stabilize the local ecosystem. Furthermore, we have joined several marine conservation campaigns that aim to remove marine debris and protect marine life. As of cultivating awareness, GIGABYTE launched a series of lectures, held working holidays, and started an internal environmental club. This helps employees acknowledge ecological issues as well as make a contribution to nature. In 2017, G-HOME, an ecological roof at our Xindian headquarters, was built for employees to get closer to nature and learn the spirit of living in harmony with it.*

[Fixed row]

### (4.2) Does your organization's board have competency on environmental issues?

#### Climate change

##### (4.2.1) Board-level competency on this environmental issue

Select from:

- Yes

##### (4.2.2) Mechanisms to maintain an environmentally competent board

Select all that apply

- Having at least one board member with expertise on this environmental issue

### (4.2.3) Environmental expertise of the board member

#### Experience

- Management-level experience in a role focused on environmental issues
- Experience in an organization that is exposed to environmental-scrutiny and is going through a sustainability transition

## Water

### (4.2.1) Board-level competency on this environmental issue

Select from:

- No, and we do not plan to within the next two years

### (4.2.4) Primary reason for no board-level competency on this environmental issue

Select from:

- Not an immediate strategic priority

### (4.2.5) Explain why your organization does not have a board with competence on this environmental issue

*Water-related issues have not been identified as a material topic by GIGABYTE. Neither GIGABYTE's operations nor its products are water-intensive. So far, no GIGABYTE board members have expertise in water-related topics, but the company employs personnel with backgrounds in environmental issues.*

*[Fixed row]*

## (4.3) Is there management-level responsibility for environmental issues within your organization?

	Management-level responsibility for this environmental issue
Climate change	Select from: <input checked="" type="checkbox"/> Yes
Water	Select from: <input checked="" type="checkbox"/> Yes
Biodiversity	Select from: <input checked="" type="checkbox"/> Yes

[Fixed row]

**(4.3.1) Provide the highest senior management-level positions or committees with responsibility for environmental issues (do not include the names of individuals).**

## Climate change

### (4.3.1.1) Position of individual or committee with responsibility

#### Committee

Sustainability committee

### (4.3.1.2) Environmental responsibilities of this position

#### Dependencies, impacts, risks and opportunities

Managing environmental dependencies, impacts, risks, and opportunities

#### Engagement

- Managing supplier compliance with environmental requirements

#### **Policies, commitments, and targets**

- Measuring progress towards environmental corporate targets
- Setting corporate environmental targets

#### **Strategy and financial planning**

- Implementing the business strategy related to environmental issues
- Managing annual budgets related to environmental issues

### **(4.3.1.4) Reporting line**

Select from:

- Reports to the board directly

### **(4.3.1.5) Frequency of reporting to the board on environmental issues**

Select from:

- More frequently than quarterly

### **(4.3.1.6) Please explain**

*As mentioned in C4.1.2, the GIGABYTE Green Sustainable Development Committee is the primary decision-making and operational organization for promoting sustainable development affairs, in which climate-related management is one of the most critical issues. Representatives from each BU, site, and subsidiary meet every 1-2 months. Each representative reports the current status or trend of sustainability issues, environmental issues, and product regulations and proposes responding strategies in order to help the Company timely adjust its internal policy and keep up with global tendencies. The conclusions and messages from the monthly meetings are regularly reported to the Board Chair/President during the joint monthly meetings. In addition, the yearly outcomes of implemented sustainable development actions and an executive plan for the next year are also reported to the board of directors for further decision-making that can effectively integrate corporate governance policies with sustainable development trends. (For more details on the GIGABYTE Green Sustainable Development Committee, please refer to the GIGABYTE CSR website: <https://csr.gigabyte.tw/en/commitment-to-csr-en/>)*

## **Water**

#### (4.3.1.1) Position of individual or committee with responsibility

##### **Committee**

- Sustainability committee

#### (4.3.1.2) Environmental responsibilities of this position

##### **Engagement**

- Managing value chain engagement related to environmental issues

##### **Policies, commitments, and targets**

- Measuring progress towards environmental corporate targets
- Setting corporate environmental targets

##### **Strategy and financial planning**

- Conducting environmental scenario analysis
- Implementing the business strategy related to environmental issues

#### (4.3.1.4) Reporting line

*Select from:*

- Reports to the board directly

#### (4.3.1.5) Frequency of reporting to the board on environmental issues

*Select from:*

- More frequently than quarterly

#### (4.3.1.6) Please explain

*As mentioned in C4.1.2, the GIGABYTE Green Sustainable Development Committee is the primary decision-making and operational organization for promoting*

sustainable development affairs, including water-related management. Representatives from each BU, site, and subsidiary meet every 1-2 months. Each representative reports the current status or trend of sustainability issues, environmental issues, and product regulations and proposes responding strategies in order to help the Company timely adjust its internal policy and keep up with global tendencies. The conclusions and messages from the monthly meetings are regularly reported to the Board Chair/President during the joint monthly meetings. In addition, the yearly outcomes of implemented sustainable development actions and an executive plan for the next year are also reported to the board of directors for further decision-making that can effectively integrate corporate governance policies with sustainable development trends. (For more details on the GIGABYTE Green Sustainable Development Committee, please refer to the GIGABYTE CSR website: <https://csr.gigabyte.tw/en/commitment-to-csr-en/>)

## Biodiversity

### (4.3.1.1) Position of individual or committee with responsibility

#### Other

Other, please specify :Sustainable Development Office

### (4.3.1.2) Environmental responsibilities of this position

#### Dependencies, impacts, risks and opportunities

Managing environmental dependencies, impacts, risks, and opportunities

#### Strategy and financial planning

Implementing the business strategy related to environmental issues

### (4.3.1.4) Reporting line

Select from:

Reports to the Chief Operating Officer (COO)

### (4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

- As important matters arise

#### **(4.3.1.6) Please explain**

*The Sustainable Development Office (the Office) is responsible for managing, implementing, and monitoring most of GIGABYTE's sustainability-focused measures and performance, particularly environmental-related issues. The Office comprises 2 departments and 1 division. Each department implements and monitors various programs, projects, or actions depending on its profession. Some of these practices are related to biodiversity conservation. For example, 1. Serve as the main implementer and monitor of the "Green Action Plan". Besides setting company-wide environmental performance targets, the Plan also holds several lectures, seminars, voluntary working holidays, and environmental services every year to educate employees and their families about nature and how to protect it. 2. Work with international and domestic partners to initiate tree-planting initiatives and encourage our partners, suppliers, consumers, and other stakeholders to participate in these activities and attach greater importance to trees' role in mitigating global warming. 3. With public attention on corporate impacts on biodiversity increasing, the Office also studies and monitors external trends, such as relevant regulations and disclosure requirements. Afterward, it proposes the most feasible responses to the Green Sustainable Development Committee and the Board. 4. Collect ESG information, including the outcome of biodiversity-related projects, and disclose it through various corporate channels, such as sustainability reports, annual reports, and the official website. Each department and division reports to the Office's director weekly. Remarkable outcomes or decision-to-be-made will be reported to the COO and the Board Chair at monthly meetings for further decisions.*

### **Climate change**

#### **(4.3.1.1) Position of individual or committee with responsibility**

##### **Executive level**

- Chief Operating Officer (COO)

#### **(4.3.1.2) Environmental responsibilities of this position**

##### **Dependencies, impacts, risks and opportunities**

- Managing environmental dependencies, impacts, risks, and opportunities

##### **Strategy and financial planning**

- Managing annual budgets related to environmental issues
- Managing major capital and/or operational expenditures relating to environmental issues



## Other

- Providing employee incentives related to environmental performance

### (4.3.1.4) Reporting line

Select from:

- Reports to the board directly

### (4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

- More frequently than quarterly

### (4.3.1.6) Please explain

*The GIGABYTE Green Sustainable Development Committee is convened and administratively operated by the Sustainable Development Office, which is subordinate to the Group Operations Management Center led by the Chief Operating Officer (COO). That is, the Board Chair serves as the chair of the Committee, while the COO directs and manages the Committee's executive unit. More details of the responsibilities of the Sustainable Development Office are provided in the next row. The personnel of the Office in charge of each program, project, and action reports the progress or periodical outcomes to the Office's director at weekly meetings. Remarkable periodical outcomes or decision-to-be-made would be selected and reported to the Chief Operation Officer (COO) and the Board Chair at monthly meetings in order to make further decisions and ensure all implementations are on track.*

## Climate change

### (4.3.1.1) Position of individual or committee with responsibility

#### Other

- Other, please specify :Sustainable Development Office

### (4.3.1.2) Environmental responsibilities of this position

### **Dependencies, impacts, risks and opportunities**

- Assessing environmental dependencies, impacts, risks, and opportunities
- Assessing future trends in environmental dependencies, impacts, risks, and opportunities

### **Engagement**

- Managing value chain engagement related to environmental issues

### **Policies, commitments, and targets**

- Monitoring compliance with corporate environmental policies and/or commitments
- Measuring progress towards environmental corporate targets

### **Strategy and financial planning**

- Conducting environmental scenario analysis
- Developing a business strategy which considers environmental issues
- Implementing the business strategy related to environmental issues
- Managing environmental reporting, audit, and verification processes

### **Other**

- Providing employee incentives related to environmental performance

## **(4.3.1.4) Reporting line**

*Select from:*

- Reports to the Chief Operating Officer (COO)

## **(4.3.1.5) Frequency of reporting to the board on environmental issues**

*Select from:*

- More frequently than quarterly

## **(4.3.1.6) Please explain**

The Sustainable Development Office (the Office) is responsible for managing, implementing, and monitoring most of GIGABYTE's sustainability-focused measures and performance, particularly environmental-related issues. The following are specific climate-related responsibilities of the Office: 1. Plan, track, and manage group-wide climate-related programs, projects, or actions: Serve as the main implementer and monitor of the "Green Action Plan", which sets a group-wide emission reduction target; research and monitor external trends of climate-related issues and propose responding strategies that are the most feasible by GIGABYTE to the Green Sustainable Development Committee and the Board; collect ESG statistics, including climate-related data, from all bases annually and conduct comprehensive analyses and evaluations of annual ESG performance; disclose GIGABYTE's ESG information through various corporate channels like sustainability reports, annual reports, the official website, etc. 2. Implement specific climate mitigation and adaptation programs: Conduct an annual greenhouse emission inventory and analyze and identify hotspots for reducing emissions along our value chain; implement and monitor the "333 Reduction Plan; develop an internal carbon footprint calculation platform and conduct life-cycle analyses for all main product lines; cooperate with various international and domestic partners to initiate tree-planting actions and encourage stakeholders to join. 3. Promote sustainable supply chain management: Conduct sustainable supply chain assessment annually, by which we collect suppliers' climate-related information, such as greenhouse gas inventory and water-saving actions, which help us identify climate risks and opportunities along the supply chain. Each department and division reports to the Office's director weekly. Remarkable outcomes or decision-to-be-made will be reported to the COO and the Board Chair at monthly meetings for further decisions.

## Water

### (4.3.1.1) Position of individual or committee with responsibility

#### Executive level

- Chief Operating Officer (COO)

### (4.3.1.2) Environmental responsibilities of this position

#### Policies, commitments, and targets

- Measuring progress towards environmental corporate targets

#### Strategy and financial planning

- Managing annual budgets related to environmental issues

#### Other

- Providing employee incentives related to environmental performance

#### (4.3.1.4) Reporting line

Select from:

- Reports to the board directly

#### (4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

- More frequently than quarterly

#### (4.3.1.6) Please explain

*The GIGABYTE Green Sustainable Development Committee is convened and administratively operated by the Sustainable Development Office, which is subordinate to the Group Operations Management Center led by the Chief Operating Officer (COO). That is, the Board Chair serves as the chair of the Committee, while the COO directs and manages the Committee's executive unit. More details of the responsibilities of the Sustainable Development Office are provided in the next row. The personnel of the Office in charge of each program, project, and action reports the progress or periodical outcomes to the Office's director at weekly meetings. Remarkable periodical outcomes or decision-to-be-made would be selected and reported to the Chief Operation Officer (COO) and the Board Chair at monthly meetings in order to make further decisions and ensure all implementations are on track.*

### Water

#### (4.3.1.1) Position of individual or committee with responsibility

##### Other

- Other, please specify :Sustainable Development Office

#### (4.3.1.2) Environmental responsibilities of this position

##### Dependencies, impacts, risks and opportunities

- Assessing environmental dependencies, impacts, risks, and opportunities
- Assessing future trends in environmental dependencies, impacts, risks, and opportunities
- Managing environmental dependencies, impacts, risks, and opportunities

## Engagement

- Managing value chain engagement related to environmental issues

## Policies, commitments, and targets

- Measuring progress towards environmental corporate targets

## Strategy and financial planning

- Conducting environmental scenario analysis

## Other

- Providing employee incentives related to environmental performance

### (4.3.1.4) Reporting line

Select from:

- Reports to the Chief Operating Officer (COO)

### (4.3.1.5) Frequency of reporting to the board on environmental issues

Select from:

- More frequently than quarterly

### (4.3.1.6) Please explain

*The Sustainable Development Office (the Office) is responsible for managing, implementing, and monitoring most of GIGABYTE's sustainability-focused measures and performance, particularly environmental-related issues. The Office comprises the Corporate Sustainable Development Department, the Quality and Risk Management Department, and the Environmental Health and Safety Division. Each department monitors water-related issues depending on its responsibilities and profession, including:*

- 1. Plan, track, and manage group-wide water-related programs, projects, or actions: Serve as the main implementer and monitor of the "Green Action Plan", which sets a company-wide water reduction target; collect ESG statistics, including water-related data, from all bases annually and conduct comprehensive analyses and evaluations of annual ESG performance; disclose GIGABYTE's ESG information through various corporate channels like sustainability reports, annual reports, the official website, etc.*
- 2. Implement specific water programs and projects such as the "Sustainability Fund". The fund provides incentives to factories, departments, or individual employees who*

propose effective and efficient measures to reduce resource consumption, including water use. 3. Promote sustainable supply chain management, in which water reduction is one of the targets. Each department and division reports to the Office's director weekly. Remarkable outcomes or decision-to-be-made will be reported to the COO and the Board Chair at monthly meetings for further decisions.

[Add row]

## **(4.5) Do you provide monetary incentives for the management of environmental issues, including the attainment of targets?**

### **Climate change**

#### **(4.5.1) Provision of monetary incentives related to this environmental issue**

Select from:

Yes

#### **(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue**

0

#### **(4.5.3) Please explain**

GIGABYTE only provides monetary incentives to factory chiefs when their factories meet an emission reduction target. Board members and C-suite managers do not receive monetary incentives.

### **Water**

#### **(4.5.1) Provision of monetary incentives related to this environmental issue**

Select from:

Yes

#### **(4.5.2) % of total C-suite and board-level monetary incentives linked to the management of this environmental issue**

### (4.5.3) Please explain

*GIGABYTE only provides monetary incentives to factory chiefs when their factories meet an emission reduction target. Board members and C-suite managers do not receive monetary incentives.*

*[Fixed row]*

### (4.5.1) Provide further details on the monetary incentives provided for the management of environmental issues (do not include the names of individuals).

#### Climate change

#### (4.5.1.1) Position entitled to monetary incentive

##### Board or executive level

Other C-Suite Officer, please specify :Factory Chief

#### (4.5.1.2) Incentives

*Select all that apply*

Bonus – set figure

#### (4.5.1.3) Performance metrics

##### Targets

Achievement of environmental targets

##### Strategy and financial planning

Increased investment in environmental R&D and innovation

### **Emission reduction**

- Implementation of an emissions reduction initiative
- Reduction in emissions intensity
- Reduction in absolute emissions

### **Resource use and efficiency**

- Reduction in total energy consumption

### **Engagement**

- Increased engagement with suppliers on environmental issues

## **(4.5.1.4) Incentive plan the incentives are linked to**

Select from:

- Both Short-Term and Long-Term Incentive Plan, or equivalent

## **(4.5.1.5) Further details of incentives**

*GIGABYTE launched a 6-year program "Sustainability Fund" in 2019. The Fund is funded from the energy and water savings from the previous year, and it invests in three objectives: Factory Reduction Reward, Reduction Proposal Reward, and Green Project. A Factory Reduction Reward would be offered to factory chiefs if their factories meet yearly emission reduction targets. The chiefs can then decide how to use the reward, such as investing in equipment improvements or distributing it to employees. Only one of the three factories reached the predefined emission reduction goal in 2023. A total of TWD200,000 was awarded to the factory chief.*

## **(4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan**

*Since the "Green Action Plan" was initiated in 2009, GIGABYTE has invested in various measures to reduce emissions, such as replacing low-efficient equipment with more energy-saving ones. As a result, the group's emissions have successfully been cut by nearly 44% compared to the 2009 level. However, the effectiveness of those measures has somehow reached limits. Moreover, the Company faces increasing external pressures on climate-related performance from target markets, downstream stakeholders, and emerging ESG or climate regulations. Hence, achieving more efficient emission reductions by means of more aggressive, strategically integrated, and motivation-connected measures is urgently required. Therefore, the Sustainability Fund is designed and launched to provide a new scheme that enables all Company members to become not only contributors but also beneficiaries of improvement in reduction performance. As mentioned above, the Fund's objectives include Factory Reduction*



Reward, Reduction Proposal Reward, and Green Project. The Factory Reduction Reward can be further divided into an Energy-saving Equipment Reward and an Emission Reduction Reward. The Energy-saving Equipment Reward will be issued only when GIGABYTE reduces its gross emissions (scope 12) by 3% compared with the previous year, in line with its reduction objective "Reduction 333". For factories that successfully reduce their yearly emissions or lower their emission intensity by a certain level, their factory chiefs will be further awarded the Emission Reduction Reward. Clearly, the Energy-saving Equipment Reward is intended to reward all employees for collective carbon reduction, and the Emission Reduction Reward is intended to encourage factories to reduce emissions. They both contribute to achieving the Group's emissions reduction targets.

## Water

### (4.5.1.1) Position entitled to monetary incentive

#### Senior-mid management

- Other senior-mid manager, please specify :Any employee meets the requirement, regardless of their job positions

### (4.5.1.2) Incentives

Select all that apply

- Bonus – set figure

### (4.5.1.3) Performance metrics

#### Resource use and efficiency

- Reduction of water withdrawals – direct operations
- Reduction in water consumption volumes – direct operations
- Improvements in water efficiency – upstream value chain (excluding direct operations)

### (4.5.1.4) Incentive plan the incentives are linked to

Select from:

- Short-Term Incentive Plan, or equivalent, only (e.g. contractual annual bonus)

### (4.5.1.5) Further details of incentives

The "Green Action Plan" was launched in 2009 with the goal of reducing environmental impacts from our operations. Measures such as replacing water-consuming facilities and recycling water are among these measures. To accelerate performance, we launched the "Sustainability Fund" in 2019. Its budget is derived from the savings made in the previous year by reducing energy use and saving water. Whenever factories achieve a yearly reduction goal, the fund would be rewarded to factory managers. Managers will then decide how the reward will be used (e.g. investing in equipment improvements or distributing to employees). A total of TWD200,000 was provided to factory managers in 2023. A portion of the Fund is also dedicated to rewarding departments or individuals, regardless of their job positions, for developing excellent water reduction strategies. Prizes range from TWD3,000 to TWD10,000, depending on the level of benefit or value that their proposals or products can create. As of August 2024, the total reward given back to departments and individual employees was TWD 937,000.

### (4.5.1.6) How the position's incentives contribute to the achievement of your environmental commitments and/or climate transition plan

In 2009, GIGABYTE introduced the "Green Action Plan" that included various water-saving measures. In contrast with 2010, the group has cut its water withdrawals by 35.17%. These measures, however, seem to have reached their limits in terms of effectiveness. It is urgently necessary to achieve more efficient water reductions through more aggressive, strategically integrated, and motivation-driven measures. This is why the Sustainability Fund has been developed and launched to provide an innovative scheme that will enable all Company members to contribute as well as benefit from reduction performance improvements. Moreover, the reduction proposal reward mentioned in the previous column is initially open to individual departments or employees, not to executive managers. It turns out, however, that the mechanism has stimulated positive competition between factories that factory chiefs actively encourage their subordinates to take part in. In other words, the reward has indeed motivated factories to take resource conservation measures seriously and to improve performance, thereby contributing to the company's overall reduction targets.

[Add row]

### (4.6) Does your organization have an environmental policy that addresses environmental issues?

	<b>Does your organization have any environmental policies?</b>
	Select from: <input checked="" type="checkbox"/> Yes

[Fixed row]

## **(4.6.1) Provide details of your environmental policies.**

### **Row 1**

#### **(4.6.1.1) Environmental issues covered**

Select all that apply

Climate change

#### **(4.6.1.2) Level of coverage**

Select from:

Organization-wide

#### **(4.6.1.3) Value chain stages covered**

Select all that apply

Direct operations

Upstream value chain

Downstream value chain

#### **(4.6.1.4) Explain the coverage**

*The coverage of GIGABYTE's environmental policies and commitment comprises: 1. Direct operations: The headquarters, the Taipei Silicon Valley Park office, and Nanping Factory in Taiwan, as well as Dongguan Factory and Ningbo Factory in China. These sites are where GIGABYTE's main business activities are operated. The Taipei Silicon Valley Park office is also where some of GIGABYTE's substantial subsidiaries, e.g. Bestyield International, GIGAIPC, and G-STYLE, are located. 2. Upstream value chain: Electronic producers may have hundreds of upstream suppliers, making it impossible to manage all tiers of the supply chain. Therefore, GIGABYTE defines a critical supplier based on two factors: the amount of procurement each year and the degree of essentiality the supplier's goods have to GIGABYTE's product line. Those suppliers will receive priority for participation in environmental or social surveys, be required to provide relevant data, and be invited to participate in sustainable supplier evaluations on an annual basis. 3. Downstream value chain: GIGABYTE is most concerned about the downstream use of its products. Based on the latest greenhouse gas inventory, scope 3 emissions account for 99.53 % of our gross emissions, about 78% of which can be attributed to the use of GIGABYTE's products.*

#### (4.6.1.5) Environmental policy content

##### Environmental commitments

- Commitment to comply with regulations and mandatory standards

##### Climate-specific commitments

- Other climate-related commitment, please specify :Cimmitment to reduce greenhouse gas emissions

##### Social commitments

- Commitment to respect internationally recognized human rights

##### Additional references/Descriptions

- Description of environmental requirements for procurement

#### (4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals

Select all that apply

- No, but we plan to align in the next two years

#### (4.6.1.7) Public availability

Select from:

- Publicly available

#### (4.6.1.8) Attach the policy

GIGABYTE CSR Website screen print\_Question 4.6.1 Climate.pdf

### Row 2

#### (4.6.1.1) Environmental issues covered

Select all that apply

- Water

### (4.6.1.2) Level of coverage

Select from:

- Organization-wide

### (4.6.1.3) Value chain stages covered

Select all that apply

- Direct operations
- Upstream value chain

### (4.6.1.4) Explain the coverage

*1. Direct operations: The coverage of GIGABYTE's water policies and commitment includes the headquarters and Nanping Factory in Taiwan, as well as Dongguan Factory and Ningbo Factory in China. These sites are where GIGABYTE's main business activities are operated. 2. Upstream value chain: Electronic producers may have hundreds of upstream suppliers, making it impossible to manage all tiers of the supply chain. Therefore, GIGABYTE defines a critical supplier based on two factors: the amount of procurement each year and the degree of essentiality the supplier's goods have to GIGABYTE's product line. Those suppliers will receive priority for participation in environmental or social surveys, be required to provide relevant data, and be invited to participate in sustainable supplier evaluations on an annual basis.*

### (4.6.1.5) Environmental policy content

#### **Environmental commitments**

- Commitment to avoidance of negative impacts on threatened and protected species

#### **Water-specific commitments**

- Commitment to reduce water consumption volumes
- Commitment to reduce water withdrawal volumes

#### **Additional references/Descriptions**

- Description of environmental requirements for procurement

**(4.6.1.6) Indicate whether your environmental policy is in line with global environmental treaties or policy goals**

Select all that apply

No, and we do not plan to align in the next two years

**(4.6.1.7) Public availability**

Select from:

Publicly available

**(4.6.1.8) Attach the policy**

GIGABYTE CSR Website screen print\_Question 4.6.1 Water.pdf

[Add row]

**(4.10) Are you a signatory or member of any environmental collaborative frameworks or initiatives?**

	<b>Are you a signatory or member of any environmental collaborative frameworks or initiatives?</b>
	Select from: <input checked="" type="checkbox"/> No, but we plan to within the next two years

[Fixed row]

**(4.11) In the reporting year, did your organization engage in activities that could directly or indirectly influence policy, law, or regulation that may (positively or negatively) impact the environment?**

#### **(4.11.1) External engagement activities that could directly or indirectly influence policy, law, or regulation that may impact the environment**

Select all that apply

Yes, we engaged indirectly through, and/or provided financial or in-kind support to a trade association or other intermediary organization or individual whose activities could influence policy, law, or regulation

#### **(4.11.2) Indicate whether your organization has a public commitment or position statement to conduct your engagement activities in line with global environmental treaties or policy goals**

Select from:

No, but we plan to have one in the next two years

#### **(4.11.5) Indicate whether your organization is registered on a transparency register**

Select from:

No

#### **(4.11.8) Describe the process your organization has in place to ensure that your external engagement activities are consistent with your environmental commitments and/or transition plan**

*All environmental-related activities GIGABYTE directly or indirectly engages in are channeled through the Sustainable Development Office, afterward discussed and decided at the Green Sustainable Development Committee, and then reported to the Board of Directors. Such a procedure ensures that our participation is consistent with our company strategy on climate change. Take an indirect activity held by the Taipei Computer Association as an example. The Association sometimes co-sponsors industry seminars organized by the Taiwanese government and invites various computer companies as well as their suppliers to share knowledge on how to meet environmental standards, improve energy efficiency, and reduce the carbon footprint. GIGABYTE's COO serves as one of the directors of the Association, and the representative of GIGABYTE that attends the activities is usually the head of the Sustainable Development Department. So that we can share ideas from GIGABYTE's perspective based on our efforts and knowledge, which will stay in tune with the company's overall climate change strategy.*

*[Fixed row]*

**(4.11.2) Provide details of your indirect engagement on policy, law, or regulation that may (positively or negatively) impact the environment through trade associations or other intermediary organizations or individuals in the reporting year.**

**Row 1**

**(4.11.2.1) Type of indirect engagement**

Select from:

- Indirect engagement via other intermediary organization or individual

**(4.11.2.2) Type of organization or individual**

Select from:

- Non-Governmental Organization (NGO) or charitable organization

**(4.11.2.3) State the organization or position of individual**

*The Taiwan Computer Association (TCA), founded in 1974, is the leading industrial organization in Taiwan. TCA facilitates the growth of the ICT industry by continuously seeking new opportunities and acting as a bridge to the government, academics, and the general public, as well as a window for international professional bodies. GIGABYTE has long been one of TCA's members, and the chief of operations (COO) is serving as a supervisor of TCA.*

**(4.11.2.5) Environmental issues relevant to the policies, laws, or regulations on which the organization or individual has taken a position**

Select all that apply

- Climate change

**(4.11.2.6) Indicate whether your organization's position is consistent with the organization or individual you engage with**



Select from:

Consistent

#### **(4.11.2.7) Indicate whether your organization attempted to influence the organization or individual's position in the reporting year**

Select from:

Yes, we publicly promoted their current position

#### **(4.11.2.8) Describe how your organization's position is consistent with or differs from the organization or individual's position, and any actions taken to influence their position**

*In recent years, as the issue of climate change has become increasingly important worldwide, TCA has aimed to find ways to help members better adapt to climate change and gather industrial voices to influence government policy on sustainable development. In 2022, TCA established the "Taiwan Climate Alliance" which echoes the national reduction targets stated to achieve net zero carbon emissions by 2050. GIGABYTE has long been one of TCA's members. We have announced a goal of reducing carbon emissions by 50% in 2025 compared to the base year 2009 and will strive to align with the national reduction goal in the near future.*

#### **(4.11.2.9) Funding figure your organization provided to this organization or individual in the reporting year (currency)**

15000

#### **(4.11.2.10) Describe the aim of this funding and how it could influence policy, law or regulation that may impact the environment**

*Despite a gradual decrease in the epidemic over the last three years, the global economic and political environment has become more volatile. With the global economy in recession, geopolitical risks becoming more serious, wars becoming more frequent, and climate change accelerating net-zero carbon emission actions, the global situation is highly uncertain. Through 2024, TCA will work with its members to overcome the challenges, find new opportunities, and implement the vision of a digital transition, an intelligent nation, and a sustainable Taiwan in the midst of challenges. Each year, GIGABYTE pays TCA member fees to support its services. Those projects include conferences, expos, opinion exchanges, talent camps, legal consultants, policy advisory, and counseling projects that facilitate a positive relationship between the electronics industry and government.*

### **(4.11.2.11) Indicate if you have evaluated whether your organization's engagement is aligned with global environmental treaties or policy goals**

Select from:

Yes, we have evaluated, and it is not aligned

[Add row]

### **(4.12.1) Provide details on the information published about your organization's response to environmental issues for this reporting year in places other than your CDP response. Please attach the publication.**

#### **Row 1**

#### **(4.12.1.1) Publication**

Select from:

In mainstream reports, in line with environmental disclosure standards or frameworks

#### **(4.12.1.2) Standard or framework the report is in line with**

Select all that apply

GRI

TCFD

Other, please specify :SASB

#### **(4.12.1.3) Environmental issues covered in publication**

Select all that apply

Climate change

Water

#### (4.12.1.4) Status of the publication

Select from:

- Complete

#### (4.12.1.5) Content elements

Select all that apply

- Strategy
- Governance
- Emission targets
- Emissions figures
- Risks & Opportunities
- Value chain engagement
- Water accounting figures
- Content of environmental policies

#### (4.12.1.6) Page/section reference

Section 3.1 Environmental management: pp.30-35 Section 3.2 Climate change mitigation and adaptation: pp.36-44 Section 3.3 Product Stewardship: pp.45-46 Section 3.4 Circular economy: pp.43-45 Section 3.5 Disclosure of Product Environmental Impact p.49 Appendix IV. TCFD Index p.85

#### (4.12.1.7) Attach the relevant publication

2023\_GIGABYTE Sustainability Report\_EN.pdf

#### (4.12.1.8) Comment

The attached file is the 2023 GIGABYTE CSR Report. One can find environmental-related information disclosed in Chapter 3. Particularly, Climate-related disclosing content can be found in Section 3.2 in Chapter 3 and Appendix 4. The full report can be viewed and downloaded at <https://csr.gigabyte.tw/en/csr-report-en/>

### Row 2

#### (4.12.1.1) Publication

Select from:

- In mainstream reports

### (4.12.1.3) Environmental issues covered in publication

Select all that apply

- Climate change

### (4.12.1.4) Status of the publication

Select from:

- Complete

### (4.12.1.5) Content elements

Select all that apply

- Governance
- Risks & Opportunities
- Strategy
- Emissions figures
- Emission targets

### (4.12.1.6) Page/section reference

*Promotion status of sustainable development, deviations from Sustainable Development Best Practice Principles for TWSE/TPEX Listed Companies and reasons: pp.52-55*  
*Climate-related Information of TWSE/TPEX Listed Companies: pp.67-70* *Information on environmental protection expenditure in the most recent year and up to the publication date of the annual report (I) Losses and fines due to pollution in the most recent year: pp.116-122*

### (4.12.1.7) Attach the relevant publication

2023\_GIGABYTE Annual Report\_EN.pdf

### (4.12.1.8) Comment

The attached file is the English version of the 2023 GIGABYTE Annual Report. The climate-related content can be found at pp.52-55, pp.67-70, and pp.116-122. The full report can also be downloaded from the GIGABYTE Investor Global Website: <https://www.gigabyte.com/FileUpload/Global/SiteMap/83/images/AnnualReportEng-2023.pdf> or from the Market Observation Post system set up by the Taiwan Stock Exchange: [https://doc.twse.com.tw/pdf/2023\\_2376\\_20240612FE4\\_20240731\\_154624.pdf](https://doc.twse.com.tw/pdf/2023_2376_20240612FE4_20240731_154624.pdf)

### Row 3

#### (4.12.1.1) Publication

Select from:

- In voluntary communications

#### (4.12.1.3) Environmental issues covered in publication

Select all that apply

- Climate change
- Water

#### (4.12.1.4) Status of the publication

Select from:

- Complete

#### (4.12.1.5) Content elements

Select all that apply

- Strategy
- Governance
- Emission targets
- Emissions figures
- Risks & Opportunities
- Value chain engagement
- Water accounting figures
- Content of environmental policies

#### (4.12.1.6) Page/section reference

### (4.12.1.7) Attach the relevant publication

GIGABYTE CSR Website screen print\_Question 4.12.1.pdf

### (4.12.1.8) Comment

We also communicate these issues through the GIGABYTE CSR Website.

## Row 4

### (4.12.1.1) Publication

Select from:

In voluntary communications

### (4.12.1.3) Environmental issues covered in publication

Select all that apply

Climate change

Water

### (4.12.1.4) Status of the publication

Select from:

Complete

### (4.12.1.5) Content elements

Select all that apply

Strategy

Governance

Water accounting figures

- ☑ Emission targets
- ☑ Emissions figures
- ☑ Risks & Opportunities

#### (4.12.1.6) Page/section reference

*Full file*

#### (4.12.1.7) Attach the relevant publication

*2023\_GIGABYTE TCFD Report\_EN.pdf*

#### (4.12.1.8) Comment

*GIGABYTE published its first independent TCFD Report in 2023. It discloses climate-related information in accordance with the TCFD framework and the Taiwan Financial Supervisory Commission's requirements, as well as partially complying with the IFRS S2 standard. The full report can also be downloaded at: [\*\[https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\\\_%E5%85%AC%E9%96%8B%E7%89%88\\\_ENV1\\\_%E4%BF%9D%E5%85%A8.pdf\]\(https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\_%E5%85%AC%E9%96%8B%E7%89%88\_ENV1\_%E4%BF%9D%E5%85%A8.pdf\)\*](https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-</a></i></p></div><div data-bbox=)*

*[Add row]*

## C5. Business strategy

(5.1) Does your organization use scenario analysis to identify environmental outcomes?

### Climate change

#### (5.1.1) Use of scenario analysis

Select from:

Yes

#### (5.1.2) Frequency of analysis

Select from:

Annually

### Water

#### (5.1.1) Use of scenario analysis

Select from:

Yes

#### (5.1.2) Frequency of analysis

Select from:

Every two years

[Fixed row]

(5.1.1) Provide details of the scenarios used in your organization's scenario analysis.



## Climate change

### (5.1.1.1) Scenario used

#### Climate transition scenarios

- IEA B2DS

### (5.1.1.3) Approach to scenario

Select from:

- Qualitative and quantitative

### (5.1.1.4) Scenario coverage

Select from:

- Organization-wide

### (5.1.1.5) Risk types considered in scenario

Select all that apply

- Chronic physical
- Policy
- Market

### (5.1.1.6) Temperature alignment of scenario

Select from:

- 1.5°C or lower

### (5.1.1.7) Reference year

2021

### (5.1.1.8) Timeframes covered

Select all that apply

- 2030
- 2050

### (5.1.1.9) Driving forces in scenario

#### Local ecosystem asset interactions, dependencies and impacts

- Climate change (one of five drivers of nature change)

#### Finance and insurance

- Cost of capital
- Other finance and insurance driving forces, please specify :energy price

#### Regulators, legal and policy regimes

- Global regulation
- Methodologies and expectations for science-based targets
- Other regulators, legal and policy regimes driving forces, please specify :Climate-related regulation in Taiwan

#### Macro and microeconomy

- Globalizing markets

### (5.1.1.10) Assumptions, uncertainties and constraints in scenario

*GIGABYTE employs the "Impact-Uncertainty Matrix" and references the "Social, Technological, Economic, Environmental, and Political (STEEP) Drivers Model" to identify the social, technological, economic, environmental, and political drivers that will impact GIGABYTE's future operating environment. We categorize factors with high impact but medium to low uncertainty as baseline factors, which remain consistent across all scenarios. Conversely, factors with high impact and high uncertainty are categorized as differentiating factors, which are given varying assumptions across different climate scenarios. According to the aforementioned procedure, legal regulations, energy policies, trade laws, and trade protection measures have been identified as the primary factors that will significantly impact GIGABYTE's future operations in relation to climate-related issues. As a result, the degree of global warming, "the development extent of renewable energy", "the carbon pricing mechanism", and "the costs of*

potential carbon reduction actions" are set as the primary adjusted parameters in each scenario analysis, serving as key conditions for responding to critical questions in the analysis results. On the other hand, "operational conditions" and "electricity price increases", mainly influenced by policy, emerging technologies, market trends, and financial capital, are defined as baseline factors that remain consistent across all scenarios. For more details on GIGABYTE's climate scenario, please refer to the 2023 GIGABYTE TCFD Report: [https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\\_%E5%85%AC%E9%96%8B%E7%89%88\\_ENv1\\_%E4%BF%9D%E5%85%A8.pdf](https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8_%E5%85%AC%E9%96%8B%E7%89%88_ENv1_%E4%BF%9D%E5%85%A8.pdf) The latest version (2024) will be disclosed at the end of 2024.

### **(5.1.1.11) Rationale for choice of scenario**

GIGABYTE currently is facing four main pressures related to climate transition. First, there is the pressure from Taiwan's new climate law, which will implement a carbon pricing mechanism and other related regulations. Second, over 95% of GIGABYTE's products are exported. As carbon pricing mechanisms and other environmental regulations gradually come into effect in major international trade markets, we must address this issue with seriousness. The third pressure comes from customers. Increasingly, GIGABYTE is receiving requests from customers for product environmental information or to achieve specific carbon reduction targets. Finally, the government, industry peers, media, and civil society are continuously monitoring whether GIGABYTE is making more proactive efforts in transitioning to low-carbon energy. These are the reasons GIGABYTE defines legal regulations, energy policies, and trade laws or trade protection measures, as mentioned in the previous column, as primary factors significantly impacting GIGABYTE's future operations in relation to climate-related issues. Based on this, five scenario descriptions focusing on changes in these critical factors have been developed, and suitable climate scenario models have been selected. IEA B2DS is adopted by the scenario "Fast results but high cost". In this scenario, we assume that GIGABYTE is subject to all international and domestic climate-related regulations and must realize its ambitious emission reduction target in line with the Paris Agreement. The Company is therefore forced to adopt less cost-effective energy conservation and carbon reduction measures to realize carbon reduction targets within a short period of time. 1. Time horizon: 2021 is set as the base year in all five scenarios. This is because, firstly, GIGABYTE slightly adjusted the boundary of electricity and greenhouse gas inventory in 2021. Secondly, GIGABYTE's operational strategy has been changing since 2021, the year GIGABYTE's annual revenue surpassed TWD 100 billion. The target years are set at 2030 and 2050 as the global agreement suggests. 2. Climatic model used: To obtain the closest climatic scenario under the circumstance that the globe successfully limits warming by 1.5, this analysis makes use of the downscaling SSP1-2.6 model provided by the Taiwan Climate Change Projection and Information Platform (TCCIP). As for the model in China, we refer to research published in Acta Meteorologica Sinica in 2019.

## **Water**

### **(5.1.1.1) Scenario used**

#### **Water scenarios**

- WRI Aqueduct

### **(5.1.1.3) Approach to scenario**

Select from:

- Qualitative

#### (5.1.1.4) Scenario coverage

Select from:

- Country/area

#### (5.1.1.5) Risk types considered in scenario

Select all that apply

- Acute physical
- Chronic physical

#### (5.1.1.7) Reference year

2015

#### (5.1.1.8) Timeframes covered

Select all that apply

- 2025
- 2030
- 2040
- 2050

#### (5.1.1.9) Driving forces in scenario

##### **Local ecosystem asset interactions, dependencies and impacts**

- Changes to the state of nature
- Speed of change (to state of nature and/or ecosystem services)
- Climate change (one of five drivers of nature change)

### **(5.1.1.10) Assumptions, uncertainties and constraints in scenario**

*GIGABYTE uses the World Resource Institute's Aqueduct Water Risk Atlas tool to conduct scenario analyses for its own operational sites and critical 1-tier suppliers. We follow the assumptions, indicators, and uncertainties outlined in the tool's methodology. It is about every two years that GIGABYTE conducts a water scenario analysis, depending on the time of year when the Aqueduct Water Risk Atlas updates its database or methodology. The latest analysis was performed in July 2024. This latest update has three main constraints. Because water risks are very location-specific, the more precise the geographical location, the greater the reference value of the analysis results. However, most of the spatial information available to us is the registration addresses of operational sites and suppliers, hardly indicating where business activities actually take place. Second, GIGABYTE's upstream production lines can be much more water-intensive than its own. Certain water-intensive components, however, are purchased from distributors rather than manufacturers, making it more difficult and time-consuming to determine exactly where these components are produced. Lastly, Taiwan is the home of GIGABYTE as well as most of its critical 1-tier suppliers. Aqueduct Water Risk Atlas has reduced the dataset resolution for Taiwan in its latest version. Prior to version 4.0, data was available down to a township level, whereas now only national data is available.*

### **(5.1.1.11) Rationale for choice of scenario**

*According to statistical data from the Central Weather Administration of Taiwan, while the annual total number of rainfall days over the past 100, 50, and 30 years has decreased, the frequency of extreme rainfall events has increased. This indicates that while the duration of rainfall is becoming more concentrated, the spatial distribution of rainfall remains uneven. For instance, Taiwan experienced its most severe drought in a century during the spring of 2021, a record that was surpassed just two years later. During the spring drought of 2023, the water storage levels of all major reservoirs in southern Taiwan fell below 20%, leading to severe water shortages in several scientific parks and agricultural areas. Although these droughts did not directly impact GIGABYTE's operations, they posed a threat to suppliers located in central and southern Taiwan. Therefore, we acknowledge the potential impact on our operations. Furthermore, the majority of GIGABYTE's first and second-tier suppliers are located in coastal cities such as Dongguan and Ningbo in China, as well as in coastal countries like Thailand and Japan. According to World Bank research on global natural disaster hotspots, mainland China and Thailand are among the regions with the highest mortality rates and GDP losses due to flooding. Since 2019, GIGABYTE has been assessing water stress risk maps for its global operational sites and supply chain. The most recent results indicate that most first-tier suppliers are located in areas of moderate to extreme water stress risk. Therefore, we consider water resources to be a critical issue for operations and supply chain management.*

## **Climate change**

### **(5.1.1.1) Scenario used**

#### **Climate transition scenarios**

IEA APS

### (5.1.1.3) Approach to scenario

Select from:

- Qualitative and quantitative

### (5.1.1.4) Scenario coverage

Select from:

- Organization-wide

### (5.1.1.5) Risk types considered in scenario

Select all that apply

- Chronic physical
- Policy
- Market

### (5.1.1.6) Temperature alignment of scenario

Select from:

- 3.0°C - 3.4°C

### (5.1.1.7) Reference year

2021

### (5.1.1.8) Timeframes covered

Select all that apply

- 2030
- 2050

### (5.1.1.9) Driving forces in scenario

#### Local ecosystem asset interactions, dependencies and impacts

- Climate change (one of five drivers of nature change)

#### Finance and insurance

- Cost of capital
- Other finance and insurance driving forces, please specify :Energy price

#### Regulators, legal and policy regimes

- Global regulation
- Level of action (from local to global)

#### Macro and microeconomy

- Globalizing markets

### (5.1.1.10) Assumptions, uncertainties and constraints in scenario

*GIGABYTE employs the "Impact-Uncertainty Matrix" and references the "Social, Technological, Economic, Environmental, and Political (STEEP) Drivers Model" to identify the social, technological, economic, environmental, and political drivers that will impact GIGABYTE's future operating environment. We categorize factors with high impact but medium to low uncertainty as baseline factors, which remain consistent across all scenarios. Conversely, factors with high impact and high uncertainty are categorized as differentiating factors, which are given varying assumptions across different climate scenarios. According to the aforementioned procedure, legal regulations, energy policies, trade laws, and trade protection measures have been identified as the primary factors that will significantly impact GIGABYTE's future operations in relation to climate-related issues. As a result, the degree of global warming, "the development extent of renewable energy", "the carbon pricing mechanism", and "the costs of potential carbon reduction actions" are set as the primary adjusted parameters in each scenario analysis, serving as key conditions for responding to critical questions in the analysis results. On the other hand, "operational conditions" and "electricity price increases", mainly influenced by policy, emerging technologies, market trends, and financial capital, are defined as baseline factors that remain consistent across all scenarios. For more details on GIGABYTE's climate scenario, please refer to the 2023 GIGABYTE TCFD Report: [https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\\_%E5%85%AC%E9%96%8B%E7%89%88\\_ENv1\\_%E4%BF%9D%E5%85%A8.pdf](https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8_%E5%85%AC%E9%96%8B%E7%89%88_ENv1_%E4%BF%9D%E5%85%A8.pdf) The latest version (2024) will be disclosed at the end of 2024.*

### (5.1.1.11) Rationale for choice of scenario

GIGABYTE is facing climate transition pressures. Taiwan's new climate law will implement a carbon pricing mechanism and other regulations. Besides, over 95% of GIGABYTE's products are exported, while carbon pricing mechanisms and more environmental regulations are put into effect in its major international trade markets. Pressure also comes from customers. GIGABYTE is receiving increasing requests from customers for product environmental information. Lastly, the government, industrial peers, media, and civil society continuously monitor GIGABYTE's low-carbon energy transition efforts. To sum up, legal regulations, energy policies, and trade laws or trade protection measures, as mentioned in the previous column, are primary factors affecting GIGABYTE's future operations in relation to climate change. We then develop five scenarios focusing on changes in these critical factors and choose suitable climate scenario models. APS is adopted by two scenarios. In the "Orderly and painless transition" scenario, we assume that GIGABYTE is not subject to international and domestic climate-related regulations, but it still accelerates the realization of a science-based emission reduction target through effective energy management and use of renewable energy together with the investment of returns in carbon neutrality projects. In the "Internalization of increased carbon costs" scenario, GIGABYTE is subject to international and domestic climate-related regulations, but its emissions continue to grow due to inadequate performance in energy conservation and emission reduction projects, with the consequences reflected in the increase in compliance costs. 1. Time horizon: 2021 is set as the base year in all five scenarios. This is because, firstly, GIGABYTE slightly adjusted the boundary of electricity and greenhouse gas inventory in 2021. Secondly, GIGABYTE's operational strategy has been changing since 2021, the year GIGABYTE's annual revenue surpassed TWD 100 billion. The target years are set at 2030 and 2050 as the global agreement suggests. 2. Climatic model used: The IPCC SSP2-4.5 describes a scenario where global social, economic, and technological trends do not deviate significantly from historical patterns. Hence, we use the downscaling SSP2-4.5 model provided by the Taiwan Climate Change Projection and Information Platform (TCCIP). As for the model in China, we refer to research published at Acta Meteorologica Sinica in 2019.

## Climate change

### (5.1.1.1) Scenario used

#### Physical climate scenarios

- RCP 8.5

### (5.1.1.2) Scenario used SSPs used in conjunction with scenario

Select from:

- SSP5

### (5.1.1.3) Approach to scenario

Select from:

- Qualitative and quantitative



#### (5.1.1.4) Scenario coverage

Select from:

- Organization-wide

#### (5.1.1.5) Risk types considered in scenario

Select all that apply

- Chronic physical
- Market

#### (5.1.1.6) Temperature alignment of scenario

Select from:

- 4.0°C and above

#### (5.1.1.7) Reference year

2021

#### (5.1.1.8) Timeframes covered

Select all that apply

- 2030
- 2050

#### (5.1.1.9) Driving forces in scenario

##### **Local ecosystem asset interactions, dependencies and impacts**

- Climate change (one of five drivers of nature change)

##### **Finance and insurance**

- Other finance and insurance driving forces, please specify :carbon price level, energy price level

## Regulators, legal and policy regimes

- ☑ Global regulation

## Macro and microeconomy

- ☑ Globalizing markets

### (5.1.1.10) Assumptions, uncertainties and constraints in scenario

GIGABYTE employs the "Impact-Uncertainty Matrix" and references the "Social, Technological, Economic, Environmental, and Political (STEEP) Drivers Model" to identify the social, technological, economic, environmental, and political drivers that will impact GIGABYTE's future operating environment. We categorize factors with high impact but medium to low uncertainty as baseline factors, which remain consistent across all scenarios. Conversely, factors with high impact and high uncertainty are categorized as differentiating factors, which are given varying assumptions across different climate scenarios. According to the aforementioned procedure, legal regulations, energy policies, trade laws, and trade protection measures have been identified as the primary factors that will significantly impact GIGABYTE's future operations in relation to climate-related issues. As a result, the degree of global warming, "the development extent of renewable energy", "the carbon pricing mechanism", and "the costs of potential carbon reduction actions" are set as the primary adjusted parameters in each scenario analysis, serving as key conditions for responding to critical questions in the analysis results. On the other hand, "operational conditions" and "electricity price increases", mainly influenced by policy, emerging technologies, market trends, and financial capital, are defined as baseline factors that remain consistent across all scenarios. For more details on GIGABYTE's climate scenario, please refer to the 2023 GIGABYTE TCFD Report: [https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\\_%E5%85%AC%E9%96%8B%E7%89%88\\_ENv1\\_%E4%BF%9D%E5%85%A8.pdf](https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8_%E5%85%AC%E9%96%8B%E7%89%88_ENv1_%E4%BF%9D%E5%85%A8.pdf) The latest version (2024) will be disclosed at the end of 2024.

### (5.1.1.11) Rationale for choice of scenario

GIGABYTE currently is facing four main pressures related to climate transition. First, there is the pressure from Taiwan's new climate law, which will implement a carbon pricing mechanism and other related regulations. Second, over 95% of GIGABYTE's products are exported. As carbon pricing mechanisms and other environmental regulations gradually come into effect in major international trade markets, we must address this issue with seriousness. The third pressure comes from customers. Increasingly, GIGABYTE is receiving requests from customers for product environmental information or to achieve specific carbon reduction targets. Finally, the government, industry peers, media, and civil society are continuously monitoring whether GIGABYTE is making more proactive efforts in transitioning to low-carbon energy. These are the reasons GIGABYTE defines legal regulations, energy policies, and trade laws or trade protection measures, as mentioned in the previous column, as primary factors significantly impacting GIGABYTE's future operations in relation to climate-related issues. Based on this, five scenario descriptions focusing on changes in these critical factors have been developed, and suitable climate scenario models have been selected. RCP8.5 is adopted by the scenario "Business as usual". In this scenario, no new climate policies and regulations will be implemented worldwide, and thus GIGABYTE is not subject to any climate obligations, and thus is not motivated

to fulfill any reduction target. The Company's emissions keep increasing due to stagnation in its energy management methods with no reduction or carbon neutrality actions taken. 1. Time horizon: 2021 is set as the base year in all five scenarios. This is because, firstly, GIGABYTE slightly adjusted the boundary of electricity and greenhouse gas inventory in 2021. Secondly, GIGABYTE's operational strategy has been changing since 2021, the year GIGABYTE's annual revenue surpassed TWD 100 billion. The target years are set at 2030 and 2050 as the global agreement suggests. 2. Climatic model used: We make use of the downscaling SSP5-8.5 module by the Taiwan Climate Change Projection and Information Platform (TCCIP) to estimate the future climate condition in Taiwan. As for the future climate in China, we refer to research published at Acta Meteorologica Sinica in 2019.

## Climate change

### (5.1.1.1) Scenario used

#### Climate transition scenarios

- IEA NZE 2050

### (5.1.1.3) Approach to scenario

Select from:

- Qualitative and quantitative

### (5.1.1.4) Scenario coverage

Select from:

- Organization-wide

### (5.1.1.5) Risk types considered in scenario

Select all that apply

- Chronic physical
- Policy
- Market

### (5.1.1.6) Temperature alignment of scenario

Select from:

- 1.5°C or lower

### (5.1.1.7) Reference year

2021

### (5.1.1.8) Timeframes covered

Select all that apply

- 2030
- 2050

### (5.1.1.9) Driving forces in scenario

#### Local ecosystem asset interactions, dependencies and impacts

- Climate change (one of five drivers of nature change)

#### Finance and insurance

- Cost of capital
- Other finance and insurance driving forces, please specify :energy price level

#### Stakeholder and customer demands

- Consumer attention to impact

#### Regulators, legal and policy regimes

- Global regulation
- Level of action (from local to global)
- Global targets
- Methodologies and expectations for science-based targets

#### Macro and microeconomy

### (5.1.1.10) Assumptions, uncertainties and constraints in scenario

*GIGABYTE employs the "Impact-Uncertainty Matrix" and references the "Social, Technological, Economic, Environmental, and Political (STEEP) Drivers Model" to identify the social, technological, economic, environmental, and political drivers that will impact GIGABYTE's future operating environment. We categorize factors with high impact but medium to low uncertainty as baseline factors, which remain consistent across all scenarios. Conversely, factors with high impact and high uncertainty are categorized as differentiating factors, which are given varying assumptions across different climate scenarios. According to the aforementioned procedure, legal regulations, energy policies, trade laws, and trade protection measures have been identified as the primary factors that will significantly impact GIGABYTE's future operations in relation to climate-related issues. As a result, the degree of global warming, "the development extent of renewable energy", "the carbon pricing mechanism", and "the costs of potential carbon reduction actions" are set as the primary adjusted parameters in each scenario analysis, serving as key conditions for responding to critical questions in the analysis results. On the other hand, "operational conditions" and "electricity price increases", mainly influenced by policy, emerging technologies, market trends, and financial capital, are defined as baseline factors that remain consistent across all scenarios. For more details on GIGABYTE's climate scenario, please refer to the 2023 GIGABYTE TCFD Report: [https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8\\_%E5%85%AC%E9%96%8B%E7%89%88\\_ENv1\\_%E4%BF%9D%E5%85%A8.pdf](https://csr.gigabyte.tw/wp-content/uploads/2024/09/2023-%E6%8A%80%E5%98%89%E7%A7%91%E6%8A%80TCFD%E5%A0%B1%E5%91%8A%E6%9B%B8_%E5%85%AC%E9%96%8B%E7%89%88_ENv1_%E4%BF%9D%E5%85%A8.pdf) The latest version (2024) will be disclosed at the end of 2024.*

### (5.1.1.11) Rationale for choice of scenario

*GIGABYTE is currently facing four main pressures related to climate transition. First, there is the pressure from Taiwan's new climate law, which will implement a carbon pricing mechanism and other related regulations. Second, over 95% of GIGABYTE's products are exported. As carbon pricing mechanisms and other environmental regulations gradually come into effect in major international trade markets, we must address this issue with seriousness. The third pressure comes from customers. Increasingly, GIGABYTE is receiving requests from customers for product environmental information or to achieve specific carbon reduction targets. Finally, the government, industry peers, media, and civil society are continuously monitoring whether GIGABYTE is making more proactive efforts in transitioning to low-carbon energy. These are the reasons GIGABYTE defines legal regulations, energy policies, and trade laws or trade protection measures, as mentioned in the previous column, as primary factors significantly impacting GIGABYTE's future operations in relation to climate-related issues. Based on this, five scenario descriptions focusing on changes in these critical factors have been developed, and suitable climate scenario models have been selected. IEA NZE 2050 is adopted in the "Net Zero by 2050" scenario. It assumes that the global community as well as GIGABYTE all strive to realize the target of net zero carbon emissions by 2050 through the aggressive implementation of all effective mechanisms and measures. 1. Time horizon: 2021 is set as the base year in all five scenarios. This is because, firstly, GIGABYTE slightly adjusted the boundary of electricity and greenhouse gas inventory in 2021. Secondly, GIGABYTE's operational strategy has been changing since 2021, the year GIGABYTE's annual revenue surpassed TWD 100 billion. The target years are set at 2030 and 2050 as the global agreement suggests. 2. Climatic model used: Climatic information related to increasing temperature is necessary as cooling and air-conditioning is one of GIGABYTE's main emission sources. The IPCC SSP1-1.9 scenario is most likely to provide similar information under this scenario. For GIGABYTE's bases in China, we refer to research published at Transactions of Atmospheric Sciences in 2022. No downscaling*

projections under SSP1-1.9 scenario are available in Taiwan, so we adopt the SSP1-2.6 model provided by the Taiwan Climate Change Projection and Information Platform (TCCIP).

[Add row]

## **(5.1.2) Provide details of the outcomes of your organization's scenario analysis.**

### **Climate change**

#### **(5.1.2.1) Business processes influenced by your analysis of the reported scenarios**

Select all that apply

- Risk and opportunities identification, assessment and management
- Strategy and financial planning
- Target setting and transition planning

#### **(5.1.2.2) Coverage of analysis**

Select from:

- Organization-wide

#### **(5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues**

*Facing the four internal and external pressures on climate transition, as mentioned in 5.1.1.11 "Rationale for choice of scenario", GIGABYTE addresses four focal questions and conducts climate scenario analyses to grasp future situations. The result of the analyses is as follows: 1. Over 90% of GIGABYTE's emissions are attributed to electricity usage. To achieve its carbon reduction goals, it is crucial to understand the electricity usage patterns of GIGABYTE under various climate scenarios. [Result] GIGABYTE's operational bases are located in tropical regions, where rising temperatures are expected to lead to increased electricity consumption. The RCP8.5 (BAU) scenario shows GIGABYTE's electricity consumption is projected to increase by 2.31% by 2030 and 7.49% by 2050 solely due to temperature rise. In the IEA APS scenario, which considers regulatory and operational developments, the figures are 2.07% by 2030 and 6.60% by 2050. If the global achieves net zero by 2050 (IEA NZE 2050 Scenario), the power consumption will only increase by 1.76% compared to 2021 by 2030, and 4.94% by 2050. However, according to the analysis results, the primary driver of future changes in electricity consumption will still be the company's own operational conditions, particularly variations in production levels. 2. GIGABYTE is headquartered in Taiwan, and as a publicly listed company, it faces significant policy pressure from the Taiwan government. The implementation of existing and future climate-related regulations by the Taiwan government will have financial impacts and changes for GIGABYTE. [Result] Under the IEA APS scenario, in which GIGABYTE is*

subject to regulations but adopts a passive carbon reduction approach, our total emissions will increase to approximately 31,700 metric tons by 2030 and rise to 43,500 metric tons by 2050, nearly returning to 2009 emission levels. At that time, GIGABYTE will have to pay carbon fees to the Taiwan government up to TWD 13 million. However, if we actively engage in various feasible carbon reduction measures and aim to achieve our reduction targets (IEA B2DS), the carbon fees in 2030 would decrease to TWD 5.08 million and further reduce to approximately TWD 700,000 by 2050. 3. If external environments adhere to the commitments of the Paris Agreement and actively implement pathways to limit global warming to 1.5C, GIGABYTE will also need to align with this target. We will need to evaluate the financial impacts and changes we will face under these conditions. [Result] According to the latest SBTi standards, GIGABYTE must reduce its emissions by 63% from 2021 levels by 2035, equivalent to approximately 18,700 metric tons, to meet the science-based requirement. To achieve this, we plan to undertake various carbon reduction actions, including continuously optimizing process energy efficiency, installing renewable energy facilities, signing CPPAs with power generators, and so on. Based on the IEA B2DS scenario analysis, the cumulative cost of implementing these carbon reduction actions is projected to reach TWD 733 million by 2030 and TWD 3.917 billion by 2050. 4.

Considering the aforementioned issues, achieving the 2050 net zero emissions or carbon neutrality goal would have financial impacts and necessitate changes for both the external environment and GIGABYTE [Result] In the IEA NZE 2050 Scenario, GIGABYTE anticipates needing to eliminate approximately 41,300 metric tons of Scope 1 and Scope 2 greenhouse gas emissions and offset up to 1,682,100 metric tons of Scope 3 greenhouse gas emissions in that year. To achieve this, it is projected that GIGABYTE will need to accumulate an investment of TWD 12.653 billion by 2050. It is anticipated that the annual investment costs will represent approximately 0.17% of the anticipated revenue in 2030, and approximately 2.73% of the revenue in 2050. Besides, this scenario shows the lowest cumulative loss costs for addressing physical risks, accounting for only 7% of the accumulated loss in the BAU scenario. For more details on GIGABYTE's climate scenario, please refer to the 2023 GIGABYTE TCFD Report: <https://csr.gigabyte.tw/en/climate-change-mitigation-and-adaption-en/>. The latest version (2024) will be disclosed at the end of 2024.

## Water

### (5.1.2.1) Business processes influenced by your analysis of the reported scenarios

Select all that apply

- Risk and opportunities identification, assessment and management

### (5.1.2.2) Coverage of analysis

Select from:

- Country/area/region

### (5.1.2.3) Summarize the outcomes of the scenario analysis and any implications for other environmental issues

Water scenario analysis using Aqueduct Water Risk Atlas version 4.0 provides GIGABYTE with more insight into identifying water-related risks within its operations and upstream supply chain. The risks in this section are the same as those described in Question 3.1.1.1. 1. Changes in precipitation patterns increase water stress at

GIGABYTE's operating sites. According to the Aqueduct water stress map, Ningbo Factory in China, as well as the North American, Dutch, UK, and Japanese branches, face moderate to high levels of water stress. Additionally, our North American branch in California is also located in an area with a high risk of water depletion. 2. Flood risks pose a threat to critical suppliers located along coastal areas. A majority of GIGABYTE's 1st-tier suppliers are located along the southeastern coast of China, while some of its second-tier suppliers are located in Thailand and Japan. The Aqueduct water risk map indicates that these areas are exposed to medium-to-high water stresses. By looking at the details of regions, risk types, and components these suppliers provide, we discover: a. Water stress will threaten GIGABYTE's critical chip and software suppliers on the west coast of the US for a long time. b. PCBs are fundamental components of electronic devices and equipment. GIGABYTE's key PCB suppliers and agents are mainly located in China's Yangtze River Delta and Pearl River Delta, which are exposed to coastal flooding due to their low-lying terrain. c. Some power supply and panel manufacturers located in Vietnam and Thailand are at risk of coastal flooding and river flooding. 3. Drought affects the supply of water-consuming components upstream. The manufacturing of certain components necessary for GIGABYTE products, such as PCBs, ICs, and panels, consumes significant amounts of water. It would be a threat to the stability of our supply chain if these manufacturers were located in areas prone to water depletion or water stress. PCB and panel suppliers for GIGABYTE are concentrated in Taozhu, Taiwan, and the Pearl River Delta, China (Dongguan, Shenzhen, Hong Kong, Huizhou). According to the Aqueduct water risk map, these areas are at moderate risk of drought. Huizhou, in particular, will face medium-to-high water stress in the medium to long term.

[Fixed row]

## **(5.2) Does your organization's strategy include a climate transition plan?**

### **(5.2.1) Transition plan**

Select from:

No, but we are developing a climate transition plan within the next two years

### **(5.2.15) Primary reason for not having a climate transition plan that aligns with a 1.5°C world**

Select from:

Lack of internal resources, capabilities, or expertise (e.g., due to organization size)

### **(5.2.16) Explain why your organization does not have a climate transition plan that aligns with a 1.5°C world**

GIGABYTE considers climate change a serious issue affecting our business activities and operations. We have yet to develop an official transition plan aligned with a 1.5 world. One of the main concerns affecting GIGABYTE progressing a climate transition plan is the availability of renewable energy. Our operations are heavily reliant on electricity. However, due to geographical limitations, accessing to renewable energy is not easy and cost-effective in Taiwan, particularly for companies whose power



consumption is not extremely high, such as GIGABYTE. Even so, GIGABYTE has carried out a number of preparatory measures. For instance, we conduct and update climate scenarios yearly, considering the domestic and international climate-related regulations we will be subject to and the measures we will implement to reduce emissions. Furthermore, to understand the gap between the current Group's emission target and the 1.5 target pathway, we have employed guidance and tools provided by SBTi. A target emission reduction pathway in line with SBTi's standard has also been developed. This is an important reference for GIGABYTE while setting a new emission reduction target as well as developing a climate transition plan in the next stage. GIGABYTE also keeps communicating with our stakeholders about our climate targets and yearly achievement and performance through diverse channels. For shareholders, GIGABYTE discloses climate-related information, including carbon management policies, practices, yearly performance, brief results of scenario analyses, and low carbon technology development, in annual reports. It is one of the essential documents for AGMs every year. At least three weeks before the AGM, the annual report is made available through MOPS, a company reporting system maintained by the Taiwan Stock Exchange (TSE), so shareholders can review it. The 2023 GIGABYTE Annual Report can be found at: [https://doc.twse.com.tw/pdf/2023\\_2376\\_20240612FE4\\_20240808\\_114616.pdf](https://doc.twse.com.tw/pdf/2023_2376_20240612FE4_20240808_114616.pdf) For other stakeholders, GIGABYTE publishes Sustainability Reports in June every year (by September for the English version). The Report discloses GIGABYTE's climate policies and strategies since its first issue in 2011 and has aligned with TCFD recommendations since 2019. All stakeholders can find GIGABYTE's Sustainability Reports over the years at the official CSR website: <https://csr.gigabyte.tw/en/csr-report-en/>. In addition, we welcome any feedback sent to the exclusive mailbox: [csr@gigabyte.com](mailto:csr@gigabyte.com)

[Fixed row]

### **(5.3) Have environmental risks and opportunities affected your strategy and/or financial planning?**

#### **(5.3.1) Environmental risks and/or opportunities have affected your strategy and/or financial planning**

Select from:

Yes, both strategy and financial planning

#### **(5.3.2) Business areas where environmental risks and/or opportunities have affected your strategy**

Select all that apply

Products and services

Upstream/downstream value chain

Investment in R&D

Operations

[Fixed row]

## (5.3.1) Describe where and how environmental risks and opportunities have affected your strategy.

### Products and services

#### (5.3.1.1) Effect type

Select all that apply

- Risks
- Opportunities

#### (5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

- Climate change

#### (5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

*[Time horizon] GIGABYTE has been already influenced by climate-related issues in the aspect of products, and we believe the influence will sustain for more than 10 years as a low-carbon transition and technology are already a global trend. [Affected strategy] 1. Due to several reasons like increasing energy prices and emerging policies or regulations that aim to adjust the energy structure, people and companies would be more preferable to electronic products that consume less power. Hence, GIGABYTE has set improving the stability, energy efficiency, and lifetime of our motherboards and peripheral products as the main objective of product innovation. In the long run, we hope that our products are not only user-friendly but also environmentally friendly. 2. With rising awareness of climate change and green consumption, disclosing environment-related information on products or services becomes more and more imperative to businesses. Therefore, besides continually innovating eco-friendly products, we also invest a lot in assessing and disclosing the impact of products and services. [Example of strategical decision change resulted from the affect] In 2017, we set up an internal Product Footprint Assessment System for R&D and PMs to assess the carbon footprint of their products. After then, we continually release and update the Product Environment Reports of the main product lines on the GIGABYTE CSR website. Through active disclosure, we communicate with our consumers about the environmental footprint of GIGABYTE's products they purchase. The information in the Reports includes the product's impact level on 16 environmental aspects following the PEF, particularly climate change, air pollution, and ecological protection, which are analyzed based on the latest database of SimaPro. Moreover, it discloses GIGABYTE's product stewardship strategies at each stage of the product lifecycle.*

### Upstream/downstream value chain

#### (5.3.1.1) Effect type

Select all that apply

- Risks
- Opportunities

### (5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

- Climate change
- Water

### (5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

*[Time horizon] Our supply chain was once disrupted by the Thailand Flood in 2011, we identified that the exposure of the supply chain to physical climate impacts is a medium- to long-term risk. Also, we already face pressure from stakeholders on the demand side. Some customers are concerned with GIGABYTE's carbon management performance. [Affected strategy] 1. Most of our suppliers are located in Taiwan and the southeast coastal area in China. In these regions, heavy rainfall occurs especially in the plum rain season and typhoon season. To lower the risk of supply chain disruption caused by climatic factors, we have established a backup mechanism for alternative suppliers. 2. On the demand side, GIGABYTE receives more and more requirements of replying to CSR audit questionnaires and surveys or providing environment-related information about our products to B2B customers. As GIGABYTE is extending the markets in Europe and the US where the environmental policies are stricter than in other areas, the pressures from downstream stakeholders will become greater. The GIGABYTE Green Sustainable Development Committee continually updates internal green product requirements in order to be in line with the latest overseas regulations and holds monthly meetings to keep all business units updated. [Example of strategical decision change resulted from the effect] To ensure our products meet the standards of customers, we keep adjusting internal product-related requirements and, in the meanwhile, require the upstream suppliers to meet the same level of standards. To monitor and stimulate the environmental management performance and climate resilience of our first-tier suppliers, GIGABYTE has conducted Sustainable Supply Chain Evaluation every year since 2012. The main suppliers are asked to respond to a questionnaire covering CSR management, environmental protection, supply chain responsibility, etc. The suppliers who perform better will be awarded by GIGABYTE at the end-of-year supplier party. Moreover, GIGABYTE adjusted the method for ranking suppliers' risks in 2022 which integrates the indicators of Sustainable Supply Chain Evaluation with the original structure so that the new rating mechanism could consider quality, delivery date, nontoxicity, and low environmental impacts of procured components, as well as the extent of extended responsibility the supplier has at the same time.*

## Investment in R&D

### (5.3.1.1) Effect type

Select all that apply

- Risks
- Opportunities

### (5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

- Climate change

### (5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

*[Time horizon] GIGABYTE has been already influenced by climate-related issues in the aspect of investment and R&D, and we believe the influence will become more and more significant as low carbon transition or even zero carbon technology are already an irresistible general trend. [Affected strategy] As mentioned above, to echo the global trend of the energy transition as well as strengthen operational resilience to climate-related risks, we have invested greatly in designing more energy-efficient products, improving the efficiency of assembly processes, and substituting more low-carbon materials to traditional ones. These investments also contribute to our competitiveness in the market. [Example of strategy change led by the influence] GIGABYTE appropriates 3% of annual revenue in R&D every year. Besides, in order to encourage more innovation and motivation in improving the energy efficiency of processes and the development of green products, we initiated an internal reward mechanism "Sustainability Fund" in 2019. It provides bonuses to factories that achieve the yearly emissions reduction targets and individuals or departments who innovate low-carbon and environmental-friendly measures or products. For the latter, departments and employees so far have submitted 348 emission reduction and low-carbon product proposals, and 228 proposals have been awarded between TWD3,000 and TWD10,000. The accumulative bonus the Fund has rewarded to factories, departments, or individual employees so far is TWD3,838,000.*

## Operations

### (5.3.1.1) Effect type

Select all that apply

- Risks
- Opportunities

### (5.3.1.2) Environmental issues relevant to the risks and/or opportunities that have affected your strategy in this area

Select all that apply

- Climate change

Water

### (5.3.1.3) Describe how environmental risks and/or opportunities have affected your strategy in this area

*[Time horizon] GIGABYTE has already been influenced by climate-related issues in the aspect of operation and the influence is believed to become more significant. Companies are expected to take more responsibility for emission reduction, such as setting an SBT or using renewable energy. Taking these actions would unavoidably affect operational strategies and finances. [Affected strategy] To combat the climate crisis, many countries have launched various policies and regulations related to greenhouse gas emission control, use of renewable energy, disclosure of corporate environmental performance, etc. GIGABYTE's products are sold worldwide and thus are tightly affected by these regulations. The Taiwanese government has promoted several policies and regulations in recent years to meet its ambitious goal of emission reduction and energy transition. Also, to fulfill its commitment to 2050 net zero, the Government will carry out a compulsory carbon fee mechanism in 2026. These all have gained or will soon gain GIGABYTE's operational costs. Facing the increasing intensity of climate events led by climate change, we have set up mechanisms for responding to supply chain disruptions and emergencies caused by extreme events. In addition, our power consumption has continued to increase because of rising temperatures and extending high-temperature days per year. The energy bill will get even more expensive as the government aims to reduce the proportion of coal-fired power generation in future energy structures. The generation cost of renewable energy and gas power is much higher than coal-fired power. [Example of strategy change led by the influence] The foundation of the "Sustainability Fund" mentioned above also encourages individuals or departments to propose good ideas for reducing emissions, water consumption, and waste. To reduce the climate-related risks of the operation, both motivational top-down strategies and active bottom-up practices are needed. Employees are more familiar with the practical operation and production processes, so they are more likely to explore potentials within daily operations that could be conducive to effective reduction. The initiation of the Fund is therefore to stimulate more internal incentives to keep carrying out new and creative actions contributing to the mitigation of climate change.*

*[Add row]*

### (5.3.2) Describe where and how environmental risks and opportunities have affected your financial planning.

#### Row 1

#### (5.3.2.1) Financial planning elements that have been affected

Select all that apply

Revenues

#### (5.3.2.2) Effect type

Select all that apply

- Risks
- Opportunities

### (5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

- Climate change

### (5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

*[Time horizon] For GIGABYTE, revenues will be greatly influenced by climate-related risks and opportunities in 3-5 years. Moreover, the climate-related opportunities influence GIGABYTE's revenues more than climate-related risks do in recent years. [Example of effects] If we take ambitious actions to tackle the risks, our revenue will increase either because of growth in product demands or a decrease in operational costs. However, if our response remains passive and underestimates the impacts and severity of climate change, revenues would decrease mainly due to the rising costs resulting from regulation compliance expenditure on recovery from disasters, increasing energy fees, and also a loss of orders from B2B customers as GIGABYTE does not meet their requirements on product carbon content. The changing consumer preferences and behaviors led by the rising awareness of environmental problems and global attention to climate crisis also have affected the competitiveness of our products in certain markets. For example, semiconductor manufacturing processes have kept advancing. The transistor density of a chip continually increases and thus the temperature rises synchronously with the processor power. Therefore, the demand from the semiconductor industry for servers that can achieve high-performance computing (HPC) and energy saving at the same time increases. GIGABYTE's Network and Communication BU which has been devoted to developing HPC servers for years has received more orders than before and thus the revenues keep growing in recent years.*

## Row 2

### (5.3.2.1) Financial planning elements that have been affected

Select all that apply

- Direct costs
- Indirect costs

### (5.3.2.2) Effect type

Select all that apply

- Risks
- Opportunities

### (5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

- Climate change
- Water

### (5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

*Direct costs: [Time horizon] GIGABYTE will be influenced by domestic climate-related policies in 3 years and by international carbon pricing requirements within 10 years. These would lead to an increase in direct costs in order to comply with the regulations. [Example of effects] In order to comply with more and more carbon management measures and requirements in target markets such as Europe, GIGABYTE has devoted itself to enhancing the energy efficiency of production processes and lowering the carbon footprint of our products. For instance, we invest around TWD2,000,000 in maintaining the product carbon footprint calculation and the LCA system and millions in introducing process automation every year. Indirect costs: [Time horizon] Already influenced, and it is believed that the impact will continue for a long period as the low-carbon transition is a trend of the times. [Example of effects] 1. The new requirements and obligations of climate, energy, and corporate disclosure policies and regulations have increased our operational cost, including additional expenditure for recruiting personnel to investigate related issues and propose responding strategies, running regular procedures to ensure all the processes meet the regulation, etc. 2. GIGABYTE's daily operation highly relies on electricity. Air conditioning in offices and cooling systems in R&D laboratories account for a great proportion of power consumption. These cannot be seen as direct costs because have an indirect link to our products. Electricity price is also a substantial impact on our operation. However, the Taiwan government aims to raise the energy structure, thus the cost of developing renewable energy sources will unavoidably reflect on electricity fees. As the result, our electricity bill will be very likely to go up, especially if we do not reduce our power consumption.*

## Row 3

### (5.3.2.1) Financial planning elements that have been affected

Select all that apply

- Capital expenditures

### (5.3.2.2) Effect type

Select all that apply

Risks

### (5.3.2.3) Environmental issues relevant to the risks and/or opportunities that have affected these financial planning elements

Select all that apply

Climate change

Water

### (5.3.2.4) Describe how environmental risks and/or opportunities have affected these financial planning elements

*[Time horizon] It is already influencing GIGABYTE's factories and office facilities as well as manufacturing equipment. The impact will continue for a long period as the low-carbon transition is a trend of the times. [Example of effects] To reduce greenhouse emissions, we have invested more than TWD1,000,000 in replacing plenty of old equipment with more energy-saving ones every year. For instance, most of the lighting in offices, factories, and public areas has been replaced with LED lighting. Additionally, our factories have implemented several energy-improving projects such as renovating SMT machines, installing frequency inverters for air compressors, and establishing water recycling systems. Furthermore, to increase the share of energy consumption from renewable sources, GIGABYTE is planning to invest in renewable energy generation facilities. Although the capital expenditure is quite high in the beginning, the cost has returned or will be returned within a few years as the new equipment contributes to saving a great deal of energy and water resources and helps to avoid risks from governmental regulation or customers' requirements of resource use.*

*[Add row]*

**(5.4) In your organization's financial accounting, do you identify spending/revenue that is aligned with your organization's climate transition?**



	<b>Identification of spending/revenue that is aligned with your organization's climate transition</b>
	<i>Select from:</i> <input checked="" type="checkbox"/> No, but we plan to in the next two years

*[Fixed row]*

**(5.9) What is the trend in your organization's water-related capital expenditure (CAPEX) and operating expenditure (OPEX) for the reporting year, and the anticipated trend for the next reporting year?**

**(5.9.1) Water-related CAPEX (+/- % change)**

0

**(5.9.2) Anticipated forward trend for CAPEX (+/- % change)**

0

**(5.9.3) Water-related OPEX (+/- % change)**

-0.82

**(5.9.4) Anticipated forward trend for OPEX (+/- % change)**

-1.5

**(5.9.5) Please explain**

The figure provided above is the change in total water bills between 2023 and 2022. GIGABYTE's water withdrawals are mostly due to domestic water withdrawals for employees, not manufacturing processes. Thus, water-related OPEX only considers water fees from the headquarters and three factories. In 2023, the total water withdrawal was 1.26% less than that in 2022, leading to a decrease in water-related OPEX. Following Question 9.2 and according to the average decrease rate of water fees since 2010, we anticipate that our water fee will reduce by 1.5% per year in the near future, and so will our water fees, except for a significant rise in water prices due to a local policy change or a shortage of water.

[Fixed row]

### (5.10) Does your organization use an internal price on environmental externalities?

	Use of internal pricing of environmental externalities	Environmental externality priced
	Select from: <input checked="" type="checkbox"/> Yes	Select all that apply <input checked="" type="checkbox"/> Carbon

[Fixed row]

#### (5.10.1) Provide details of your organization's internal price on carbon.

##### Row 1

#### (5.10.1.1) Type of pricing scheme

Select from:

Shadow price

#### (5.10.1.2) Objectives for implementing internal price

Select all that apply

Navigate regulations

Incentivize consideration of climate-related issues in decision making

- Drive energy efficiency
- Identify and seize low-carbon opportunities
- Influence strategy and/or financial planning
- Setting and/or achieving of climate-related policies and targets
- Incentivize consideration of climate-related issues in risk assessment

### (5.10.1.3) Factors considered when determining the price

Select all that apply

- Alignment with the price of allowances under an Emissions Trading Scheme
- Alignment with the price of carbon border adjustment mechanism
- Benchmarking against peers
- Cost of required measures to achieve climate-related targets
- Price/cost of voluntary carbon offset credits

### (5.10.1.4) Calculation methodology and assumptions made in determining the price

*In determining GIGABYTE's internal carbon price level, we make reference to NGO research, industry peers, the ETS relevant to our operations, and well-known voluntary carbon trading markets, along with an acceptable internal cost-effectiveness level. Here are some examples: The Taiwan Climate Change Response Act stipulates that any company that is required to report its GHG emissions to the government but fails to do so will be fined TWD1,500 per tonne of emissions, equivalent to 50. The Environmental Protection Tax was implemented in China in 2018. For each kilogram of air pollutants, corporations in Zhejiang Province, where our Ningbo Factory is located, face a tax of RMB1.2. In Guandong Province, where our Dongguan Factory is located, the tax rate is RMB1.8/kg. Upon conversing, these would be 170 and 250 per tonne of air pollutants, respectively. Several Taiwanese electronic companies, such as Delta Electronic, Lite-On, and ASUS, have also installed internal carbon. Depending on their objectives, the price level can range from 1 to 300 per t-CO<sub>2</sub>e.*

### (5.10.1.5) Scopes covered

Select all that apply

- Scope 2
- Scope 3, Category 1 - Purchased goods and services

### (5.10.1.6) Pricing approach used – spatial variance

Select from:

Uniform

### (5.10.1.8) Pricing approach used – temporal variance

Select from:

Evolutionary

### (5.10.1.9) Indicate how you expect the price to change over time

*Some of the carbon prices mentioned above fluctuate over time. We will consider changing the internal carbon price level when it no longer adequately reflects the potential costs we will face in practice, or when it is too low to motivate further advances in internal changes and a low-carbon transition. As more and more countries and regional markets set net-zero targets, global energy demand continues to grow while energy prices continue to fluctuate, and mandatory and voluntary emission trading markets are expected to continue to expand, the level of global carbon prices will continue to rise. Consequently, we expect our internal carbon pricing level to increase moderately in the future as well.*

### (5.10.1.10) Minimum actual price used (currency per metric ton CO2e)

1640

### (5.10.1.11) Maximum actual price used (currency per metric ton CO2e)

1640

### (5.10.1.12) Business decision-making processes the internal price is applied to

Select all that apply

Operations

Product and R&D

Risk management

Value chain engagement

### (5.10.1.13) Internal price is mandatory within business decision-making processes

Select from:

No

#### (5.10.1.14) % total emissions in the reporting year in selected scopes this internal price covers

21.28

#### (5.10.1.15) Pricing approach is monitored and evaluated to achieve objectives

Select from:

Yes

#### (5.10.1.16) Details of how the pricing approach is monitored and evaluated to achieve your objectives

*As of now, GIGABYTE has not been subject to any carbon pricing mechanisms, but we have been devoted to reducing our emissions from our operations and meeting our short-term and long-term reduction targets. In 2019, GIGABYTE launched the "Sustainability Fund," which aims to reward employees who come up with solutions that reduce operational emissions and product carbon footprints. When evaluating proposals, we use the Internal Carbon Price (ICP) to quantify the financial implications of reducing carbon emissions. The "Sustainability Fund" is implemented at Headquarters, three factories, and five subsidiaries. There are two impacts expected from the implementation of ICP. Firstly, despite not being subject to carbon fees or taxes, we hope that our employees are becoming more aware of "the cost of carbon emissions" and can internalize the awareness into their work and reduce emissions from all aspects. Secondly, we are also preparing for the possibility of paying a charge for our excess emissions in the future due to stricter regulations. As an example, when assessing the extent to which a proposed low-carbon product will contribute to reducing the carbon content and thus avoiding carbon tariffs, we start by calculating the carbon footprint of the proposal. After multiplying its total carbon footprint with a carbon price, a total "carbon impact cost" can be calculated. Then various indicators are used to compare the reduction performance of each similar proposal, such as "ratio of product cost to carbon impact cost" or "carbon impact cost per piece of a motherboard". Since 2019, 348 proposals have been received. The total emission reduction of all proposals is 8,107.7 t-CO<sub>2</sub>e per year. Among the emissions covered by this internal price in 2023 are scope 2 emissions as well as scope 3 emissions from purchased goods. The percentage thus amounted to 21.28%.*

*[Add row]*

### (5.11) Do you engage with your value chain on environmental issues?

#### Suppliers

### (5.11.1) Engaging with this stakeholder on environmental issues

Select from:

Yes

### (5.11.2) Environmental issues covered

Select all that apply

Climate change

Water

Plastics

## Customers

### (5.11.1) Engaging with this stakeholder on environmental issues

Select from:

Yes

### (5.11.2) Environmental issues covered

Select all that apply

Climate change

## Investors and shareholders

### (5.11.1) Engaging with this stakeholder on environmental issues

Select from:

Yes

### (5.11.2) Environmental issues covered

Select all that apply

Climate change

## Other value chain stakeholders

### (5.11.1) Engaging with this stakeholder on environmental issues

Select from:

No, and we do not plan to within the next two years

### (5.11.3) Primary reason for not engaging with this stakeholder on environmental issues

Select from:

Judged to be unimportant or not relevant

### (5.11.4) Explain why you do not engage with this stakeholder on environmental issues

*Suppliers, investors, shareholders, and customers are currently the only stakeholders identified as urgently important to engage on environmental issues.*

*[Fixed row]*

## (5.11.1) Does your organization assess and classify suppliers according to their dependencies and/or impacts on the environment?

### Climate change

#### (5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

Yes, we assess the dependencies and/or impacts of our suppliers

#### (5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment

Select all that apply

Contribution to supplier-related Scope 3 emissions

### (5.11.1.3) % Tier 1 suppliers assessed

Select from:

1-25%

### (5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment

*GIGABYTE assesses the cradle-to-gate carbon footprint of all purchased components every year in order to identify the hot spots of emissions along the supply chain. A supplier may be considered a key contributor to reducing upstream emissions if the total carbon content of the particular component type it supplies in the year exceeds GIGABYTE's scope 1 and scope 2 emissions for the year. In our experience, PCBs, connectors, chips, and packaging have higher upstream carbon footprints.*

### (5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

Select from:

Less than 1%

### (5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment

5

## Water

### (5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment

Select from:

Yes, we assess the dependencies and/or impacts of our suppliers



### **(5.11.1.2) Criteria for assessing supplier dependencies and/or impacts on the environment**

Select all that apply

Dependence on water

### **(5.11.1.3) % Tier 1 suppliers assessed**

Select from:

1-25%

### **(5.11.1.4) Define a threshold for classifying suppliers as having substantive dependencies and/or impacts on the environment**

*GIGABYTE uses Aqueduct Water Risk Atlas' tools and database to assess water dependency and risk for 1-tier suppliers. The assessed suppliers would be classified as having substantial dependencies and/or impacts on water issues if any of the following indicators are identified as medium-to-high-risk, high-risk, or extremely-high-risk levels by the Aqueduct Water Risk Atlas database: water stress, water depletion, drought risk, riverine flood risk, and coastal flood risk.*

### **(5.11.1.5) % Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment**

Select from:

1-25%

### **(5.11.1.6) Number of Tier 1 suppliers meeting the thresholds for substantive dependencies and/or impacts on the environment**

17

## **Plastics**

### **(5.11.1.1) Assessment of supplier dependencies and/or impacts on the environment**

Select from:

No, we do not currently assess the dependencies and/or impacts of our suppliers, but we plan to do so within the next two years

[Fixed row]

## **(5.11.2) Does your organization prioritize which suppliers to engage with on environmental issues?**

### **Climate change**

#### **(5.11.2.1) Supplier engagement prioritization on this environmental issue**

Select from:

Yes, we prioritize which suppliers to engage with on this environmental issue

#### **(5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue**

Select all that apply

In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to climate change

Procurement spend

Product lifecycle

#### **(5.11.2.4) Please explain**

*Since 2022, GIGABYTE has adopted a new supplier tier management process. Firstly, suppliers are categorized into four levels based on yearly procurement amounts. After that, each supplier is rated as grade A-D using an integrated rating system considering supplier contracts (CMRT, RBA), material rating (quality, delivery, cost, and service), as well as their performance at the yearly supplier sustainability assessment. A supplier rated as grade D will be weeded out if they do not improve. Often, GIGABYTE prioritizes suppliers at level 1 and level 2, to which the procurement amount exceeds NTD100 million, to engage with environmental and other ESG issues. The high transaction values and amounts usually indicate that GIGABYTE is highly dependent on this supplier. Finding alternative suppliers can be challenging. Due to this, it is more necessary to engage with these suppliers in order to strengthen supply chain resilience and avoid risks associated with ESG.*

### **Water**

#### **(5.11.2.1) Supplier engagement prioritization on this environmental issue**

Select from:

- Yes, we prioritize which suppliers to engage with on this environmental issue

#### (5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

- In line with the criteria used to classify suppliers as having substantive dependencies and/or impacts relating to water
- Procurement spend
- Product lifecycle

#### (5.11.2.4) Please explain

*Since 2022, GIGABYTE has adopted a new supplier tier management process. Firstly, suppliers are categorized into four levels based on yearly procurement amounts. After that, each supplier is rated as grade A-D using an integrated rating system considering supplier contracts (CMRT, RBA), material rating (quality, delivery, cost, and service), as well as their performance at the yearly supplier sustainability assessment. A supplier rated as grade D will be weeded out if they do not improve. Often, GIGABYTE prioritizes suppliers at level 1 and level 2, to which the procurement amount exceeds NTD100 million, to engage with environmental and other ESG issues. The high transaction values and amounts usually indicate that GIGABYTE is highly dependent on this supplier. Finding alternative suppliers can be challenging. Due to this, it is more necessary to engage with these suppliers in order to strengthen supply chain resilience and avoid risks associated with ESG.*

### Plastics

#### (5.11.2.1) Supplier engagement prioritization on this environmental issue

Select from:

- Yes, we prioritize which suppliers to engage with on this environmental issue

#### (5.11.2.2) Criteria informing which suppliers are prioritized for engagement on this environmental issue

Select all that apply

- Material sourcing

#### (5.11.2.4) Please explain

As mentioned in Question 7.54.2, GIGABYTE set a goal in 2021 to reduce plastic usage or increase the percentage of recycled materials in the packaging and components it purchased from suppliers. Following that, we continue to track the composition and amount of packaging materials purchased from our packaging suppliers on a regular basis.

[Fixed row]

## **(5.11.5) Do your suppliers have to meet environmental requirements as part of your organization's purchasing process?**

### **Climate change**

#### **(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process**

Select from:

Yes, environmental requirements related to this environmental issue are included in our supplier contracts

#### **(5.11.5.2) Policy in place for addressing supplier non-compliance**

Select from:

No, we do not have a policy in place for addressing non-compliance

#### **(5.11.5.3) Comment**

*The environmental requirements given to suppliers are more like an initiative that aims to call on suppliers to strive for emission reduction together with GIGABYTE. Therefore, no specific rules for non-compliance.*

### **Water**

#### **(5.11.5.1) Suppliers have to meet specific environmental requirements related to this environmental issue as part of the purchasing process**

Select from:

- Yes, suppliers have to meet environmental requirements related to this environmental issue, but they are not included in our supplier contracts

### **(5.11.5.2) Policy in place for addressing supplier non-compliance**

Select from:

- No, we do not have a policy in place for addressing non-compliance

### **(5.11.5.3) Comment**

*The environmental requirements given to suppliers are more like an initiative that aims to call on suppliers to strive for water use reduction together with GIGABYTE. Therefore, no specific rules for non-compliance.*

*[Fixed row]*

## **(5.11.6) Provide details of the environmental requirements that suppliers have to meet as part of your organization's purchasing process, and the compliance measures in place.**

### **Climate change**

#### **(5.11.6.1) Environmental requirement**

Select from:

- Environmental disclosure through a non-public platform

#### **(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement**

Select all that apply

- Supplier scorecard or rating
- Supplier self-assessment

#### **(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement**

Select from:

76-99%

**(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement**

Select from:

1-25%

**(5.11.6.7) % tier 1 supplier-related scope 3 emissions attributable to the suppliers required to comply with this environmental requirement**

Select from:

76-99%

**(5.11.6.8) % tier 1 supplier-related scope 3 emissions attributable to the suppliers in compliance with this environmental requirement**

Select from:

1-25%

**(5.11.6.9) Response to supplier non-compliance with this environmental requirement**

Select from:

Retain and engage

**(5.11.6.10) % of non-compliant suppliers engaged**

Select from:

1-25%

**(5.11.6.11) Procedures to engage non-compliant suppliers**

Select all that apply

- Other, please specify :Continually invite the non-compliant suppliers to participate in the annual supplier sustainability assessment, and their participation will affect their rating at GIGABYTE's supplier tier management system

### **(5.11.6.12) Comment**

Since 2018, GIGABYTE has invited suppliers whose annual transaction amount is more than TWD10 million to join the "333 Reduction Plan" and provided their data on disclosed energy consumption, greenhouse gas emissions, and climate-related managing processes. The result report is disclosed on GIGABYTE's CSR website as well as sent to all alliance members on a yearly basis. GIGABYTE then introduced a new supplier rating system in 2022, which considers suppliers' participation in annual sustainability supplier evaluation and the "333 Reduction Plan" as well as their achievement in emission reduction targets as parts of the criteria for rating. The rating system is integrated into our procurement process and used as a reference when purchasers are placing an order.

## **Water**

### **(5.11.6.1) Environmental requirement**

Select from:

- Environmental disclosure through a non-public platform

### **(5.11.6.2) Mechanisms for monitoring compliance with this environmental requirement**

Select all that apply

- Supplier scorecard or rating
- Supplier self-assessment

### **(5.11.6.3) % tier 1 suppliers by procurement spend required to comply with this environmental requirement**

Select from:

- 76-99%

### **(5.11.6.4) % tier 1 suppliers by procurement spend in compliance with this environmental requirement**

Select from:

1-25%

**(5.11.6.5) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue required to comply with this environmental requirement**

Select from:

26-50%

**(5.11.6.6) % tier 1 suppliers with substantive environmental dependencies and/or impacts related to this environmental issue that are in compliance with this environmental requirement**

Select from:

1-25%

**(5.11.6.9) Response to supplier non-compliance with this environmental requirement**

Select from:

Retain and engage

**(5.11.6.10) % of non-compliant suppliers engaged**

Select from:

1-25%

**(5.11.6.11) Procedures to engage non-compliant suppliers**

Select all that apply

Other, please specify :Continually invite the non-compliant suppliers to participate in the annual supplier sustainability assessment, and their participation will affect their rating at GIGABYTE's supplier tier management system

**(5.11.6.12) Comment**



Since 2018, GIGABYTE has invited suppliers whose annual transaction amount is more than TWD10 million to join the "333 Reduction Plan" and provided their data to disclose water consumption, water discharge, and the proportion of recycled water used. The result report is disclosed on GIGABYTE's CSR website as well as sent to all alliance members on a yearly basis. GIGABYTE then introduced a new supplier rating system in 2022, which considers suppliers' participation in annual sustainability supplier evaluation and the "333 Reduction Plan" as well as their achievement in water reduction targets as parts of the criteria for rating. The rating system is integrated into our procurement process and used as a reference when purchasers are placing an order.

[Add row]

## **(5.11.7) Provide further details of your organization's supplier engagement on environmental issues.**

### **Climate change**

#### **(5.11.7.2) Action driven by supplier engagement**

Select from:

- Emissions reduction

#### **(5.11.7.3) Type and details of engagement**

##### **Capacity building**

- Provide training, support and best practices on how to measure GHG emissions
- Provide training, support and best practices on how to mitigate environmental impact

##### **Financial incentives**

- Feature environmental performance in supplier awards scheme

##### **Information collection**

- Collect GHG emissions data at least annually from suppliers
- Collect targets information at least annually from suppliers

##### **Innovation and collaboration**

- Collaborate with suppliers on innovations to reduce environmental impacts in products and services

#### (5.11.7.4) Upstream value chain coverage

Select all that apply

Tier 1 suppliers

#### (5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

76-99%

#### (5.11.7.6) % of tier 1 supplier-related scope 3 emissions covered by engagement

Select from:

1-25%

#### (5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action

Since 2012, GIGABYTE has invited 1-tier suppliers to engage in the "Supplier Sustainability Assessment" every year. Initially, we selected the suppliers that have long-term cooperation with GIGABYTE, or the suppliers of whom the annual procurement amount is relatively large. In other words, the suppliers selected by us to join in the Assessment are the most important upstream partners of GIGABYTE. We send self-assessment questionnaires to these major suppliers of the motherboards, VGA, laptops, and subsidiary Giga Computing.. The assessment framework includes six main dimensions: CSR management, environmental protection, labor rights, fair trade, supplier responsibility, and contribution to society and community. Through the questionnaires, we collect CSR-related information, including carbon emissions, water use, climate strategies and actions, and so on from our major supplier. Currently, GIGABYTE has over 600 1-tier suppliers. In 2023, 121 critical suppliers participated in the Supplier Sustainability Assessment, accounting for 85.68% of procurement and 17.88% of total suppliers. In addition, we estimated that 17.94% of scope 3 emissions are related to these important suppliers. [Impact of engagement] The "Supplier Sustainability Assessments" can benefit GIGABYTE's supply chain risk management. In order to reduce the environmental impact of the products, GIGABYTE must not only improve energy efficiency but also assess and reduce its carbon footprint throughout its life cycle. Collecting environmental information from suppliers is therefore crucial. It helps us identify hotspots in the supply chain and detects a risk of our products becoming illegal in downstream countries or regional markets as early as possible. [Measures of success] Each year we measure the success of the Supplier Sustainability Assessment by looking at questionnaire responses and how important the Assessment is to suppliers. We also adjust the questionnaire regularly based on the trends to collect more information on suppliers' CSR performance. Further, GIGABYTE invites suppliers to join the "333 Reduction Plan" and evaluates their environmental performance through the questionnaire. The data provided by the 56 joined companies (including GIGABYTE) in 2023 shows that we emitted 4,518,640 tons of CO<sub>2</sub>e in total in 2022. Compared with the previous year, 35 joined suppliers achieved cutting emissions by more than 3%, i.e., they achieved the yearly target of the "333 Reduction Plan".

### (5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue

Select from:

Yes, please specify the environmental requirement :Many of GIGABYTE's suppliers are also supplying products to other Taiwan and overseas OBM and OEM companies, the engagement would help them comply with environmental requirements from other customers.

### (5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

Yes

## Water

### (5.11.7.2) Action driven by supplier engagement

Select from:

Total water withdrawal volumes reduction

### (5.11.7.3) Type and details of engagement

#### Financial incentives

Feature environmental performance in supplier awards scheme

#### Information collection

Collect water quantity information at least annually from suppliers (e.g., withdrawal and discharge volumes)

### (5.11.7.4) Upstream value chain coverage

Select all that apply

Tier 1 suppliers

### **(5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement**

Select from:

76-99%

### **(5.11.7.7) % tier 1 suppliers with substantive impacts and/or dependencies related to this environmental issue covered by engagement**

Select from:

100%

### **(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action**

Since 2012, GIGABYTE has invited 1-tier suppliers to engage in the "Supplier Sustainability Assessment" every year. Initially, we selected the suppliers that have long-term cooperation with GIGABYTE, or the suppliers of whom the annual procurement amount is relatively large. In other words, the suppliers selected by us to join in the Assessment are the most important upstream partners of GIGABYTE. We send self-assessment questionnaires to these major suppliers of motherboards, VGA, laptops, and subsidiary Giga Computing. The assessment framework includes six main dimensions: CSR management, environmental protection, labor rights, fair trade, supplier responsibility, and contribution to society and community. Through the questionnaires, we collect CSR-related information, including carbon emissions, water use, climate strategies and actions, and so on from our major suppliers. Currently, GIGABYTE has over 600 1-tier suppliers. In 2023, 121 critical suppliers participated in the Supplier Sustainability Assessment, accounting for 85.68% of procurement and 17.88% of total suppliers. In addition, we estimated that 17.94% of scope 3 emissions are related to these important suppliers. [Impact of engagement] The "Supplier Sustainability Assessments" can benefit GIGABYTE's supply chain risk management. In order to reduce the environmental impact of the products, GIGABYTE must not only improve energy efficiency but also assess and reduce its carbon footprint throughout its life cycle. Collecting environmental information from suppliers is therefore crucial. It helps us identify hotspots in the supply chain and detects a risk of our products becoming illegal in downstream countries or regional markets as early as possible. [Measures of success] Each year we measure the success of the Supplier Sustainability Assessment by looking at questionnaire responses and how important the Assessment is to suppliers. We also adjust the questionnaire regularly based on the trends to collect more information on suppliers' CSR performance. Further, GIGABYTE invites suppliers to join the "333 Reduction Plan" and evaluates their environmental performance through the questionnaire. The data provided by the 56 joined companies (including GIGABYTE) in 2023 shows that we consumed 9,261,323 tonnes of water in total in 2022. Compared with the previous year, 28 joined suppliers achieved reducing water use by more than 3%, i.e., they achieved the yearly target of the "333 Reduction Plan".

### **(5.11.7.10) Engagement is helping your tier 1 suppliers meet an environmental requirement related to this environmental issue**

Select from:

- No, this engagement is unrelated to meeting an environmental requirement

### (5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action

Select from:

- Unknown

## Plastics

### (5.11.7.2) Action driven by supplier engagement

Select from:

- Waste and resource reduction and improved end-of-life management

### (5.11.7.3) Type and details of engagement

#### Information collection

- Other information collection activity, please specify :collect proportion of plastic used in products at least annually from suppliers

#### Innovation and collaboration

- Collaborate with suppliers on innovations to reduce environmental impacts in products and services

### (5.11.7.4) Upstream value chain coverage

Select all that apply

- Tier 1 suppliers

### (5.11.7.5) % of tier 1 suppliers by procurement spend covered by engagement

Select from:

- Unknown

### **(5.11.7.9) Describe the engagement and explain the effect of your engagement on the selected environmental action**

*In 2021, GIGABYTE launched the Product Packaging and Incoming Packaging Reduction Plan, which aims to eliminate the use of disposable packaging materials completely: - By 2030, all paper packaging made from virgin pulp shall be 100% certified by FSC; all manuals and color boxes shall be made of recycled pulp; the PS use shall be reduced by 20%; The plastic packaging shall be composed of at least 20% Post-Consumer Recycled Plastics (PCR). - By 2025, the use of paper made of virgin pulp shall be reduced by 20%; The PS use reduces by 50%, and the ratio of PCR in plastic packaging shall rise to 50%. - The ultimate goal in 2030 is to eliminate all use of disposable materials in packaging. The target covers paper and plastic packaging materials purchased by all BUs and subsidiaries of GIGABYTE. As part of our step-by-step commitment to reach this target, we have begun engaging with 1st tier suppliers of the materials mentioned above.*

### **(5.11.7.11) Engagement is helping your tier 1 suppliers engage with their own suppliers on the selected action**

Select from:

Unknown

[Add row]

### **(5.11.9) Provide details of any environmental engagement activity with other stakeholders in the value chain.**

#### **Climate change**

#### **(5.11.9.1) Type of stakeholder**

Select from:

Customers

#### **(5.11.9.2) Type and details of engagement**

##### **Education/Information sharing**

- Run an engagement campaign to educate stakeholders about the environmental impacts about your products, goods and/or services
- Share information on environmental initiatives, progress and achievements

##### **Innovation and collaboration**

- Align your organization's goals to support customers' targets and ambitions

### (5.11.9.3) % of stakeholder type engaged

Select from:

1-25%

### (5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

26-50%

### (5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

GIGABYTE successfully set up its internal Product Carbon Footprint Calculation System in 2017. The system includes carbon footprint data for all single components purchased from our suppliers. Therefore, engineers can obtain the lifetime carbon footprint of a product or a model by entering the BOM list into the system. Moreover, we have continued to publish environmental reports of several major product lines on our CSR website since 2018 to inform our consumers about how much emissions a product has generated during its life cycle. Initially, the reports cover impacts on climate change (carbon emissions), air quality (PM2.5/10), and ecological balance (land/water acidification). Climate change impact is largely estimated based on the result of the Product Carbon Footprint Calculation System. In 2022, we released the 3rd version of the Product Environmental Report. This includes 16 aspects of environmental impact to share more comprehensive information about the product with our consumers. To review the publicized Product Environmental Reports, please refer to the page "Extended Product Responsibility" at <https://csr.gigabyte.tw/en/extended-product-responsibility-en/> In order to estimate the scope of the engagement, we collect the volume and amount of sales of the products for which product environmental reports have been released to date. These products accounted for 46.94% of the total sales volume for the year, and their revenue ratio in 2023 was 16.60%.

### (5.11.9.6) Effect of engagement and measures of success

1. Impact of engagement: We cannot exactly know how many consumers review the Product Environment Reports of GIGABYTE's products they purchase. However, in recent years, we have received more and more requests from customers asking for information on the carbon footprint data of the products we sell. It may be a result of our engagement with the downstream value chain, but it may also be a result of the international trend toward disclosure of product environmental impacts. In any case, since GIGABYTE prepared in advance, we will be able to provide sufficient quantitative data to prove our products' environmental friendliness when communicating climate-related concerns with consumers and customers. 2. Measures of success: It is possible to measure the success of this communication by looking at the sales volume and amount of the products for which Environment Reports have been published. Since 2022, we have been accelerating the pace of product environmental impact analyses and covering as many main product models as possible. As compared with last year, the annual sales of products with environmental reports published have increased by 5.51%, a sign that more and more major best-selling products are being included in environmental reports. GIGABYTE launches various new models every

year due to the industry's characteristics. To communicate with consumers in a timely manner, we will publish the environmental reports within a certain period after the new models are launched.

## Climate change

### (5.11.9.1) Type of stakeholder

Select from:

- Investors and shareholders

### (5.11.9.2) Type and details of engagement

#### Education/Information sharing

- Share information about your products and relevant certification schemes
- Share information on environmental initiatives, progress and achievements

### (5.11.9.3) % of stakeholder type engaged

Select from:

- 26-50%

### (5.11.9.4) % stakeholder-associated scope 3 emissions

Select from:

- Less than 1%

### (5.11.9.5) Rationale for engaging these stakeholders and scope of engagement

GIGABYTE is a publicly traded company in Taiwan, and 95% of its products are sold internationally. As a result of the rapid development of artificial intelligence technology around the world since 2020, GIGABYTE has witnessed significant growth in its revenues, which exceeded TWD100 billion after 2021. The company's impressive financial performance has attracted the interest of more and more investors both domestically and internationally. In Taiwan's market, this is reflected by growing stock prices and stock trading volume. As for the global investing markets, GIGABYTE has been requested or required to participate in ESG assessment systems



since 2021, such as S&P Global CSA, MSCI ESG rating, FTSE Russell ESG rating, Sustainalytics, etc. In order to provide comprehensive and effective information that meets investors' expectations, GIGABYTE has continued to improve the quality and transparency of its ESG disclosures.

#### **(5.11.9.6) Effect of engagement and measures of success**

GIGABYTE measures investor engagement effectiveness and extent by looking at two aspects. Every year, we review the latest ESG scores rated by global ESG assessment systems, such as the S&P Global CSA, the FTSE Russell, MSCI, CDP, and Sustainalytics. These assessments are designed to provide investors with useful information for their investment decisions, so GIGABYTE's score may indicate how transparently and effectively it has disclosed its sustainability information. Second, by tracking the shareholding ratio of foreign capital and investment institutions, we can estimate at least how many investors may be paying particular attention to GIGABYTE's ability to realize sustainable operations in addition to creating financial performance.

[Add row]

#### **(5.12) Indicate any mutually beneficial environmental initiatives you could collaborate on with specific CDP Supply Chain members.**

##### **Row 1**

#### **(5.12.1) Requesting member**

Select from:

#### **(5.12.2) Environmental issues the initiative relates to**

Select all that apply

Climate change

#### **(5.12.4) Initiative category and type**

##### **Change to supplier operations**

Implement energy reduction projects

### (5.12.5) Details of initiative

*GIGABYTE's current long-term reduction goal is to cut 50% of gross emissions from the 2009 level by 2025. We also initiated the "333 Reduction Plan" in 2016 which aims at cutting emissions, water use, and waste by 3% each year. To achieve these goals, we continue carrying out emission reduction measures and programs. Our scope 12 emissions in 2023 have decreased by 43.95% compared to the 2009 level, and by 1.69% compared to the previous year. Also, we collaborate with our supply chain partners to reduce scope 3 emissions. Firstly, we call on suppliers to join in the "Reduction. Sharing. Love the Earth Alliance" and make an effort to reach the "333 Reduction" target together with GIGABYTE. In 2023, 55 1-tier suppliers responding to the Plan provided environmental data to GIGABYTE. Besides, for the purpose of improving the sustainability of our suppliers, we developed GIGABYTE "Supplier Sustainability Assessment" to help our suppliers to meet our expectations on CSR management, the prohibition of corruption and bribery, basic human rights of employees, the prohibition of child labor, health and safety for employees, environmental protection, supply chain responsibility, and contribution to society and community. The supplier who receives the highest score from the Assessment would be awarded the Supplier Sustainability Award at the GIGABYTE's supplier end-of-year party. The Award scheme encourages our suppliers to work with us in order to improve product quality and corporate responsibility. The Award has been held for 12 consecutive years since 2012.*

### (5.12.6) Expected benefits

*Select all that apply*

- Reduction of own operational emissions (own scope 1 & 2)
- Other, please specify :Reduction of customers' upstream emissions (customer scope 3)

### (5.12.7) Estimated timeframe for realization of benefits

*Select from:*

- 0-1 year

### (5.12.8) Are you able to estimate the lifetime CO2e and/or water savings of this initiative?

*Select from:*

- Yes, lifetime CO2e savings only

### (5.12.9) Estimated lifetime CO2e savings

1.16

### **(5.12.11) Please explain**

*If GIGABYTE itself and most of our key suppliers achieve in cut by 3% tons of scope 12 emissions in 2024, we estimate around 52.62 tons of CO2e savings along the supply chain would be associated with Marvell Technology calculated on the basis of the proportion of the product sold to Marvell Technology in 2023.*

*[Add row]*

### **(5.13) Has your organization already implemented any mutually beneficial environmental initiatives due to CDP Supply Chain member engagement?**

#### **(5.13.1) Environmental initiatives implemented due to CDP Supply Chain member engagement**

*Select from:*

No, and we do not plan to within the next two years

#### **(5.13.2) Primary reason for not implementing environmental initiatives**

*Select from:*

Lack of internal resources, capabilities, or expertise (e.g., due to organization size)

#### **(5.13.3) Explain why your organization has not implemented any environmental initiatives**

*GIGABYTE gives priority to engaging environmental issues with suppliers with large procurement amounts or high dependency (i.e. critical components). However, currently, those who meet these definitions have not become a member of the CDP Supply Chain.*

*[Fixed row]*

## C6. Environmental Performance - Consolidation Approach

**(6.1) Provide details on your chosen consolidation approach for the calculation of environmental performance data.**

### Climate change

#### (6.1.1) Consolidation approach used

Select from:

Operational control

#### (6.1.2) Provide the rationale for the choice of consolidation approach

*GIGABYTE manages and monitors its climate-related environmental performance based on locations and factories. This coverage includes the Headquarters, Nanping Factory, and Taipei Silicon Valley Park Office, where many of GIGABYTE's substantial subsidiaries are based, in Taiwan as well as Dongguan Factory and Ningbo Factory in China.*

### Water

#### (6.1.1) Consolidation approach used

Select from:

Operational control

#### (6.1.2) Provide the rationale for the choice of consolidation approach

*GIGABYTE manages and monitors its water-related environmental performance based on locations and factories. This coverage includes the Headquarters, Nanping Factory in Taiwan as well as Dongguan Factory and Ningbo Factory in China.*

### Plastics

### (6.1.1) Consolidation approach used

Select from:

Operational control

### (6.1.2) Provide the rationale for the choice of consolidation approach

*GIGABYTE manages and monitors its plastic-related environmental performance by tracking which sites or business units use plastic-containing materials. Data can be obtained from the procurement records of Nanping Factory, Dongguan Factory, and Ningbo Factory. Plastic materials may be used in GIGABYTE's production lines, products, or packaging.*

## Biodiversity

### (6.1.1) Consolidation approach used

Select from:

Operational control

### (6.1.2) Provide the rationale for the choice of consolidation approach

*GIGABYTE manages and monitors its biodiversity-related environmental performance based on locations and factories. This coverage includes the Headquarters, Nanping Factory in Taiwan, Dongguan Factory and Ningbo Factory in China, as well as most of overseas branches or subsidiaries.*

*[Fixed row]*

## C7. Environmental performance - Climate Change

**(7.1.1) Has your organization undergone any structural changes in the reporting year, or are any previous structural changes being accounted for in this disclosure of emissions data?**

	Has there been a structural change?
	Select all that apply <input checked="" type="checkbox"/> No

[Fixed row]

**(7.1.2) Has your emissions accounting methodology, boundary, and/or reporting year definition changed in the reporting year?**

	Change(s) in methodology, boundary, and/or reporting year definition?
	Select all that apply <input checked="" type="checkbox"/> No

[Fixed row]

**(7.3) Describe your organization's approach to reporting Scope 2 emissions.**

### (7.3.1) Scope 2, location-based

Select from:

- We are reporting a Scope 2, location-based figure

### (7.3.2) Scope 2, market-based

Select from:

- We have operations where we are able to access electricity supplier emission factors or residual emissions factors, but are unable to report a Scope 2, market-based figure

### (7.3.3) Comment

*There used to be only one electricity supplier in Taiwan, Taipower, which combined an electricity generation company with a transmission and distribution company, a retailing utility, and an electricity transmission and distribution company. In 2020, Taiwan's government amended the Renewable Energy Development Act and liberalized the electricity market. The development of renewable energy in Taiwan, however, remains in its infancy. Several issues remain to be resolved, including land acquisition, environmental impact assessments, and the impact on local development. In consequence, Taiwan's renewable electricity supply is currently insufficient. It is difficult for small and medium-sized businesses to purchase renewable electricity from private renewable energy generators, and so is GIGABYTE. Our sites in both Taiwan and China still purchase electricity from regional or local electricity utilities like the Taipower Company. These utilities only provide average emissions factors of the grids, thus we could only report location-based scope 2 emissions.*

*[Fixed row]*

## (7.5) Provide your base year and base year emissions.

### Scope 1

#### (7.5.1) Base year end

12/31/2009

## **(7.5.2) Base year emissions (metric tons CO2e)**

1105.16

## **(7.5.3) Methodological details**

*GIGABYTE conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard for the first time in 2010. The inventory boundary covered the scope 1 and scope 2 emissions emitted from the Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2009, to December 31, 2009. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

## **Scope 2 (location-based)**

### **(7.5.1) Base year end**

12/31/2009

### **(7.5.2) Base year emissions (metric tons CO2e)**

47851.98

### **(7.5.3) Methodological details**

*GIGABYTE conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard for the first time in 2010. The inventory boundary covered the scope 1 and scope 2 emissions emitted from the Headquarters, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2009, to December 31, 2009. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

## **Scope 2 (market-based)**

### **(7.5.3) Methodological details**

*Currently, GIGABYTE can neither calculate nor provide market-based scope 2 emissions. The reason is provided in 7.3.*



## Scope 3 category 1: Purchased goods and services

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

1515136.6

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## Scope 3 category 2: Capital goods

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

1860.45

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by*

*Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

### **Scope 3 category 3: Fuel-and-energy-related activities (not included in Scope 1 or 2)**

#### **(7.5.1) Base year end**

12/30/2021

#### **(7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)**

739.74

#### **(7.5.3) Methodological details**

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

### **Scope 3 category 4: Upstream transportation and distribution**

#### **(7.5.1) Base year end**

12/30/2021

## **(7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)**

234.74

## **(7.5.3) Methodological details**

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## **Scope 3 category 5: Waste generated in operations**

### **(7.5.1) Base year end**

12/30/2021

### **(7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)**

1464.5

### **(7.5.3) Methodological details**

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## Scope 3 category 6: Business travel

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

24.13

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## Scope 3 category 7: Employee commuting

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

1201.65

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by*

*Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## **Scope 3 category 8: Upstream leased assets**

### **(7.5.3) Methodological details**

*According to its materiality analysis, GIGABYTE has no indirect emissions relevant to upstream leased assets. So, no figures are provided here.*

## **Scope 3 category 9: Downstream transportation and distribution**

### **(7.5.1) Base year end**

*12/30/2021*

### **(7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)**

*40088.61*

### **(7.5.3) Methodological details**

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## Scope 3 category 10: Processing of sold products

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

1722.91

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## Scope 3 category 11: Use of sold products

### (7.5.1) Base year end

12/30/2021

### (7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)

4239140.03

### (7.5.3) Methodological details

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by*

*Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## **Scope 3 category 12: End of life treatment of sold products**

### **(7.5.1) Base year end**

12/30/2021

### **(7.5.2) Base year emissions (metric tons CO<sub>2</sub>e)**

10931.82

### **(7.5.3) Methodological details**

*GIGABYTE conducted a materiality analysis for scope 3 emissions in 2012 and calculated the four categories with high materiality using methods suggested by Greenhouse Gas Protocol Guidance. Through continuous improvements in data collection and methodological formulation, the calculation expanded to cover 8 categories in 2015 and to 11 categories in 2018. The inventory boundaries for each category varied initially based on the data quality available to us. While some covered the whole Group's operations, others concentrated on just a specific operating site or product line. In 2021, to obtain a certificate in accordance with ISO 14064-1: 2018, we revised calculating methods for six highly material categories so that their reporting boundaries would be consistent with scope 1 and scope 2. As of now, GIGABYTE has not set any reduction targets for scope 3 emissions, but we provide the emissions figures covering the period January 1, 2021, to December 31, 2021, here since this was the year we made a relatively large adjustment to the scope 3 emissions inventory.*

## **Scope 3 category 13: Downstream leased assets**

### **(7.5.3) Methodological details**

*According to its materiality analysis, GIGABYTE has no indirect emissions relevant to downstream leased assets. So, no figures are provided here.*

## Scope 3 category 14: Franchises

### (7.5.3) Methodological details

*According to its materiality analysis, GIGABYTE has no indirect emissions relevant to franchises. So, no figures are provided here.*

## Scope 3 category 15: Investments

### (7.5.3) Methodological details

*According to its materiality analysis, GIGABYTE has no indirect emissions relevant to investments. So, no figures are provided here.*

*[Fixed row]*

## (7.6) What were your organization's gross global Scope 1 emissions in metric tons CO<sub>2</sub>e?

### Reporting year

#### (7.6.1) Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)

832.862

### (7.6.3) Methodological details

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 1 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2023, to December 31, 2023. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

### Past year 1

#### (7.6.1) Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)



627.806

### **(7.6.2) End date**

12/30/2022

### **(7.6.3) Methodological details**

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 1 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2022, to December 31, 2022. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

## **Past year 2**

### **(7.6.1) Gross global Scope 1 emissions (metric tons CO<sub>2</sub>e)**

1063.518

### **(7.6.2) End date**

12/20/2021

### **(7.6.3) Methodological details**

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 1 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2021, to December 31, 2021. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

*[Fixed row]*

## **(7.7) What were your organization's gross global Scope 2 emissions in metric tons CO<sub>2</sub>e?**

## Reporting year

### (7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

26606.402

### (7.7.4) Methodological details

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 2 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2023, to December 31, 2023. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

## Past year 1

### (7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

27283.639

### (7.7.3) End date

12/30/2022

### (7.7.4) Methodological details

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 2 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2022, to December 31, 2022. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

## Past year 2

### (7.7.1) Gross global Scope 2, location-based emissions (metric tons CO2e)

28874.428

### (7.7.3) End date

12/30/2021

### (7.7.4) Methodological details

*GIGABYTE has conducted a greenhouse gas emissions inventory in accordance with ISO 14064-1 standard on a yearly base since 2010. The inventory boundary of the figure provided here covered the scope 2 emissions emitted from the Headquarters, Taipei Silicon Valley Park Offices, Taoyuan Nanping Factory, China Dongguan Factory, and China Ningbo Factory from January 01, 2021, to December 31, 2021. The emissions factors were referred to publically available documents released by national or local governments. The result of the inventory was then set as the base year emission level for the current GIGABYTE's emission reduction targets.*

*[Fixed row]*

## (7.8) Account for your organization's gross global Scope 3 emissions, disclosing and explaining any exclusions.

### Purchased goods and services

#### (7.8.1) Evaluation status

Select from:

Relevant, calculated

#### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

1213983.278

#### (7.8.3) Emissions calculation methodology

Select all that apply

Average data method

Average product method

## (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

100

## (7.8.5) Please explain

*GIGABYTE measures and tracks the change in Category 1 every year since 2012 since it is one of our highly material scope 3 categories for our business operations. [Use of suppliers' data] To calculate, we need the number and weight of purchased components provided by upstream suppliers. Suppliers are required to submit detailed information about their products to our factories, which will be included in our bill of materials (BOM). [Calculation methodology] In 2017, GIGABYTE established an internal Product Carbon Footprint Calculation System equipped with a comprehensive database, which includes emission data for all components purchased from our suppliers. The Platform enables us to calculate the carbon footprint of a developed product, a developing product, or a prospective product in its conceptual stage. To calculate emissions from purchased goods, we collect procurement information from January 1, 2023, to December 31, 2023, from all business units (BUs). After sorting and counting by part number, the total purchased quantity and the net weight are input into the Product Carbon Footprint Calculation System. The Platform applies the average-data method as suggested in "Category 1: Purchased goods and services", from Technical Guidance for Calculating Scope 3 Emissions published by the Greenhouse Gas Protocol. The formula is as follows: Emissions =  $\sum$  (unit of purchased goods (pieces) emission factor of purchased goods per reference unit (kg CO2e/piece)). The emission factors used in the Platform mainly refer to the Ecoinvent 3 (SimaPro 9.1). [Verification] The emissions from Scope 3 Category 1 in 2022 have been verified by a third party. Please find the verification statement in 7.9.3.*

## Capital goods

## (7.8.1) Evaluation status

Select from:

Relevant, calculated

## (7.8.2) Emissions in reporting year (metric tons CO2e)

580.913

## (7.8.3) Emissions calculation methodology

Select all that apply

Average spend-based method

## **(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners**

0

## **(7.8.5) Please explain**

*According to our analysis of materiality, indirect emissions from capital goods are of lower materiality. Despite this, we still calculate our carbon footprint every year since 2018 to get a better understanding of our environmental impact. [Use of suppliers' data] Calculations are primarily based on financial reports rather than directly from suppliers. [Calculation methodology] To calculate, we collected the figures of capital goods expenditures from the 2023 Financial Report but excluded depreciation expenses from the capital goods that were not purchased during the reporting period. For emissions factors, we used to refer to the "Scope 3 Evaluator" developed by the Greenhouse Gas Protocol. The Evaluator terminated its service in August 2023. However, we still use it for calculating this category's emissions in 2023 in order to be consistent with the previous years. A new method will be applied in the next reporting year.*

## **Fuel-and-energy-related activities (not included in Scope 1 or 2)**

### **(7.8.1) Evaluation status**

Select from:

Relevant, calculated

### **(7.8.2) Emissions in reporting year (metric tons CO2e)**

3188.275

### **(7.8.3) Emissions calculation methodology**

Select all that apply

Average data method

## **(7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners**

50

## (7.8.5) Please explain

*Our materiality analysis shows that indirect emissions from this category have a relatively low materiality level. We have, however, decided to calculate this category since 2018 in order to gain a more complete understanding of our carbon footprint. [Use of suppliers' data] A portion of the data and figures required for the calculation are provided by Taipower Company, which supplies electricity to GIGABYTE. Accordingly, 50% of emissions are calculated using information from suppliers. [Calculation methodology] The emissions from upstream fuel-and-energy-related activities calculated here are based on the lifetime emissions of the electricity generators that generate the electricity that GIGABYTE purchases and uses. The primary source of our GHG emissions is electricity consumption, which represents approximately 95% of our gross scope 2 emissions. However, due to the lack of related information in China, we can only calculate such emissions for Taiwan-based sites. To calculate the upstream emissions of electricity GIGABYTE purchases, we use the "average-based method" suggested by the Greenhouse Gas Protocol. The emissions from the combustion stage of power generation are excluded to prevent double counting. We first collected the national emission factor [A] of electricity from the Bureau of Energy, Ministry of Economic Affairs, Taiwan. The factor [A] takes into account the total emissions from combustion processes by power generators but does not include the emissions from fuel or electricity used for the generators' operation (e.g. offices). Then, we obtain the gross emissions [B] and the total power generation [C] from Taipower Company, the primary power generator in Taiwan which provides more than 80% of electricity, from its Sustainability Report. Afterward, we calculate the lifetime emission factor of Taipower Company [D] by using the formula  $\{[B]-([A]*[C])\}/C$ . Finally, we multiply the factor [D] by our total electricity consumption in the reporting year to get the result.*

## Upstream transportation and distribution

### (7.8.1) Evaluation status

Select from:

Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

617.354

### (7.8.3) Emissions calculation methodology

Select all that apply

Distance-based method

### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

### (7.8.5) Please explain

The material assessment for this category is low due to two factors. We had little influence over indirect emissions resulting from upstream transportation. Also, around three-quarters of components and materials are purchased locally, so emissions are not too high. In spite of that, we have calculated Category 4 emissions annually since 2016 for the purpose of improving our supply chain management. [Use of suppliers' data] In order to calculate Scope 3 Category 4, GIGABYTE needs both the total quantity of delivered products as well as the address information from our suppliers. We require suppliers to provide basic information about their companies and products. The percentage of data collected from suppliers is therefore 100%. However, due to a lack of geographical data in the China region, we can only measure emissions at Taiwan-based sites for this category. [Calculation methodology] The distance-based method, as proposed in "Category 4: Upstream transportation and distribution" from the Technical Guidance for Calculating Scope 3 Emissions published by the Greenhouse Gas Protocol, is used to calculate emissions from upstream transportation and distribution. The formula is as follows: Emissions  $\Sigma$  (mass of goods purchased (metric ton) distance traveled in transport leg (km) x emission factor of transport vehicle type (kg CO<sub>2</sub>e/ton/km)). To calculate emissions, we first collect purchase orders from our Channel Solution BU and sum up the total weight of goods each supplier delivered to GIGABYTE's factories in 2023. As for the transport distance, since we cannot obtain actual distance data from logistics companies, we use Google Maps to calculate the travel distance of each domestic delivery. For international deliveries, we refer to SeaRate.com, a public port-to-port shipping distance calculator, and PIER2PIER2.COM (<http://www.pier2pier.com/Co2/>) to obtain port-to-port shipping and flying distances. A truck's emission factor in Taiwan refers to the Carbon Footprint Calculation Platform established by the Taiwan Environmental Protection Agency. Cross-national shipping and air transport emission factors are obtained from the latest "Greenhouse Gas Protocol Emission Calculation - Emission Factors from Cross-Sector Tools".

## Waste generated in operations

### (7.8.1) Evaluation status

Select from:

Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

1911.105

### (7.8.3) Emissions calculation methodology

Select all that apply

- Distance-based method
- Waste-type-specific method

#### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

50

#### (7.8.5) Please explain

*Even though the indirect emissions from waste generated in our operations are not large, GIGABYTE can still control them rather actively in terms of emission reductions. We have calculated this category since 2015 every year to get a better understanding of its carbon footprint. [Use of suppliers' data] The calculations require data from each GIGABYTE base, namely the headquarters and three factories in Taiwan and China. Each base provides data based on its own records as well as that of the cooperative waste collection companies. Therefore, 50% of the data used for calculation comes from suppliers. [Calculation methodology] To calculate, we use the waste-type-specific method suggested in the Technical Guidance for Calculating Scope 3 Emissions published by the Greenhouse Gas Protocol in "Category 5: Waste generated in operations." The formula is  $\Sigma(\text{waste produced (metric ton)} \times \text{waste type and waste treatment specific emission factor (kg-CO}_2\text{e/metric ton)})$ . We require each operational base to provide quantitative data on general waste, recyclable waste, and toxic waste generated during January 1, 2023, to December 31, 2023. Following that, for waste of Taiwan bases, emission factors for treating general waste, recyclable waste, and toxic waste are derived from the Taiwan EPA's Carbon Footprint Calculation Platform. For waste generated by China bases, emission factors are taken from the most relevant rest-of-world {RoW} factors from the Ecoinvent 3 database (SimaPro 9.1). Total emissions are then calculated by summing up the total emissions generated by each type of waste treatment. [Verification] Scope 3 Category 5 emissions in 2023 have been verified by a third party. Please find the verification statement in 7.9.3.*

### Business travel

#### (7.8.1) Evaluation status

Select from:

- Relevant, calculated

#### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

548.165

#### (7.8.3) Emissions calculation methodology



Select all that apply

Distance-based method

#### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

#### (7.8.5) Please explain

*Despite GIGABYTE's production bases in Taiwan and China, our suppliers, related companies, dealers, distributors, and customers are spread around the globe. Traveling overseas for business used to be quite common before the COVID-19 pandemic. The category was first calculated in 2015, primarily based on emissions generated by international air travel. [Use of suppliers' data] This category is calculated using data derived from internal business travel records. Afterward, we input the departure and arrival cities for each business trip to the International Civil Aviation Organization (ICAO) Carbon Emissions Calculator to automatically calculate the distance and emissions. The data are therefore not from suppliers or partners in the value chain. [Calculation methodology] We refer to the distance-based method to calculate travel emission:  $\Sigma$  (distance traveled by vehicle type (passenger-km) vehicle-specific emission factor (kg-CO<sub>2</sub>e/passenger-km)), as suggested in "Category 6: Business Travel", from the Technical Guidance for Calculating Scope 3 Emissions published by the Greenhouse Gas Protocol. First, we collect employees' travel records for overseas business by administration department employees. Each record contains the departure and arrival cities. By using the Carbon Emissions Calculator established by the International Civil Aviation Organization (ICAO), we calculate the emissions from each air travel record. Lastly, we total the emissions generated by business travels for the reporting year by adding up each travel record's emissions. [Verification] Scope 3 Category 6 emissions in 2023 have been verified by a third party. Please find the verification statement in 7.9.3.*

### Employee commuting

#### (7.8.1) Evaluation status

Select from:

Relevant, calculated

#### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

1028.976

#### (7.8.3) Emissions calculation methodology

Select all that apply

Distance-based method

#### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

#### (7.8.5) Please explain

*In 2015, we began conducting employee commuting surveys and calculating Category 7 emissions. Initially, the survey was conducted only at Taiwanese bases. In 2022, GIGABYTE included two factories in China in the inventory boundary, so the emission figure provided here includes employee commute emissions throughout all of its main bases. [Use of suppliers' data] Activity data are collected by conducting a questionnaire survey directly with employees at each base. An average of 46% of questionnaires are returned. The emission factors of different vehicles in Taiwan are based on the Taiwan EPA's Carbon Footprint Calculation Platform, while in China, the Ecoinvent 3 database is used (SimaPro 9.1). Therefore, no data are from suppliers or value chain partners. [Calculation methodology] We combine the distance-based method with the average-data method suggested in "Category 7: Employee Commuting" of the Technical Guidance for Calculating Scope 3 Emissions published by the Greenhouse Gas Protocol. As a first step, we send anonymous questionnaires to employees to collect their commuting data during January 1, 2023, to December 31, 2023. After receiving sufficient valid questionnaires (samples), we use the formula:  $\Sigma$  (daily one-way distance between home and work x 2 x number of commuting days in the reporting year) to determine the total traveling distance of each vehicle type. The overall emissions generated from employee commuting of the Company are then estimated by summing the emissions from responding employees and dividing them by the questionnaire response rate. [Verification] Scope 3 Category 7 emissions in 2023 have been verified by a third party. Please find the verification statement in 7.9.3*

### Upstream leased assets

#### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

#### (7.8.5) Please explain

*We do not lease assets upstream. Thus, this category is not applicable to GIGABYTE.*

### Downstream transportation and distribution

### (7.8.1) Evaluation status

Select from:

Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO2e)

44405.989

### (7.8.3) Emissions calculation methodology

Select all that apply

Distance-based method

### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### (7.8.5) Please explain

*GIGABYTE began measuring Category 9 emissions annually in 2016 to improve our value chain management. 95% of GIGABYTE's products are sold internationally, either by air or by ship. Therefore, the number of sales, the location of target markets, as well as the mode of transportation greatly influence the emissions. In other words, the farther the target markets, the greater the emissions. [Use of suppliers' data] Here, downstream transportation and distribution emissions are calculated based on sales of motherboards and graphics cards, which represent 80.6% of all products produced in 2023. Data comes mainly from internal records of sales, including the amounts delivered from factories to different countries. Emission factors are based on Taiwan EPA and "Greenhouse Gas Protocol Emission Calculation - Emission Factors from Cross-Sector Tools". There are no data from suppliers or value chain partners. [Calculation methodology] We refer to the formula of the distance-based method:  $\Sigma$  (mass of goods sold to a country (tonne) distance traveled in transport leg (km) emission factor of vehicle type (t-CO<sub>2</sub>e per tonne-kilometer), as suggested in "Category 9: Downstream transportation and distribution", from Technical Guidance for Calculating Scope 3 Emissions published by Greenhouse Gas Protocol. The emission factors for air transport, ocean shipping, and land transportation are based on the Greenhouse Gas Protocol Emission Calculation Tools and Taiwan EPA. Because it is not possible to get actual transport distances from logistics companies, we refer to Ports.com (<http://ports.com/sea-route/>) for port-to-port shipping distances and PIER2PIER.COM (<https://www.pier2pier.com/Co2/>) for port-to-port flying distances. The total emissions from downstream transportation and distribution are calculated by summing up the transport emissions of all products sold to each country.*

## Processing of sold products

### (7.8.1) Evaluation status

Select from:

Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO2e)

1541.801

### (7.8.3) Emissions calculation methodology

Select all that apply

Average data method

### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

30

### (7.8.5) Please explain

*These emissions result from the assembling stage of our customers when they assemble our semi-finished motherboards into desktop PCs or servers. Due to the difficulty in obtaining processing data or emission factors from our customers, downstream processing has a moderate materiality level. Even so, we have tracked this Category's change annually since 2012 using simplified methods. [Use of suppliers' data] In order to calculate the emissions under this category, we need the amount of semi-finished products delivered to our downstream customers, which can be directly obtained from their orders. As a result, approximately 30% of the data comes from value chain partners. [Calculation methodology] We refer to the formula of processing of sold intermediate product:  $\Sigma$  (mass of sold intermediate product (kg) emission factor of processing of sold products (kg CO2e/kg of the final product)), as suggested in "Category 10: Processing of sold products", from Technical Guidance for Calculating Scope 3 Emissions published by Greenhouse Gas Protocol. By counting the orders we receive from our customers, we determine how many semi-finished motherboards we sell from January 1, 2023, to December 31, 2023. Then we refer to DELL and FUJITSU's published carbon footprint reports to get the emission figures we need at the assembly stage (kg-CO2e per product), since we cannot get emission figures directly from our customers. After multiplying the number of semi-finished motherboards sold by the emission figure per product, the result is obtained.*

## Use of sold products

### (7.8.1) Evaluation status

Select from:

- Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO<sub>2</sub>e)

4525119.429

### (7.8.3) Emissions calculation methodology

Select all that apply

- Average data method
- Average product method
- Other, please specify :Energy Star Specifications for Desktop Computers

### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

0

### (7.8.5) Please explain

Scope 3 category 11 is the most important to our business operations. It accounts for 78.68% of scope 3 emissions. The methodology has been amended greatly in 2021 in order to meet ISO 14064-1:2018 standard. This category encompasses seven of GIGABYTE's main products, including motherboards, VGAs, servers, mini PCs, laptops, monitors, and power supplies. [Use of suppliers' data] Calculation requires data on power consumption and sales for each type of product, which are provided by the R&D department and the internal ERP system. Additionally, we collect grid emission factors for Taiwan, North America, Europe, China, and other regions from local governments, regional associations, the GHG Protocol, and Ecoinvent 3 (SimaPro9.1). Therefore, no data are obtained from value chain partners. [Calculation methodology] The calculating method refers to the sold intermediate product formula:  $\Sigma$  (total final products sold / total lifetime uses of final sold product \* emissions per use of the sold final product (kg CO<sub>2</sub>e/use)), as suggested in "Category 11: Use of sold products", from Technical Guidance for Calculating Scope 3 Emissions published by Greenhouse Gas Protocol. Each product type contains a variety of models. We classify models according to component features (e.g. chipsets) in order to simplify the quantifying process and then choose a representative model per group to take power consumption testing. For the use time of each product per year, we refer to Energy

Star Specifications for Desktop Computers version 5.0 and R&D department experiences. Besides, we assume products' service life based on the warranty period disclosed on the official GIGABYTE website. Lastly, each product's total electricity use can be calculated by multiplying its power consumption data, use time per year, service life, and sales amount from January 1, 2023, to December 31, 2023. By converting the grid emission factors from different sales regions and adding them together, we then determine the total emissions for this category. [Verification] Scope 3 Category 11 emissions in 2023 have been verified by a third party. Please find the verification statement in 7.9.3.

## End of life treatment of sold products

### (7.8.1) Evaluation status

Select from:

Relevant, calculated

### (7.8.2) Emissions in reporting year (metric tons CO2e)

8757.157

### (7.8.3) Emissions calculation methodology

Select all that apply

Average data method

Average product method

Waste-type-specific method

### (7.8.4) Percentage of emissions calculated using data obtained from suppliers or value chain partners

75

### (7.8.5) Please explain

Category 12 is identified as one of GIGABYTE's material scope 3 categories. We have been measuring and tracking it since 2012. It consists of two parts. The first part is the emissions from the end-of-life treatment of seven types of sold products, including motherboards, server boards, servers, VGAs, laptops, mini PCs, and monitors. Another part is emissions from packaging disposal treatment. [Use of suppliers' data] In order to estimate the weight of a product, we need the details of the components

and materials used in the product, as well as the packaging. These are provided by upstream suppliers. Other essential data, such as sales amount and emission factors of end-of-life treatment, are obtained from the internal ERP system and Ecoinvent 3.0 (SimaPro 9.1) database. Thus, around 75% of the data came from suppliers. [Calculation methodology] We refer to the following formula for calculation:  $\Sigma$  (total mass of sold products and packaging from the point of sale to end of life after consumer use (kg) % of total waste being treated by waste treatment method emission factor of waste treatment method (kg-CO<sub>2</sub>e/kg)), as suggested in "Category 12: End of Life Treatment of Sold Products", from Technical Guidance for Calculating Scope 3 Emissions published by Greenhouse Gas Protocol. GIGABYTE has published Product Environmental Reports for most of its product types since 2018. We average the weights for each product type based on published product reports. The total mass of sold products is calculated by multiplying the weight and the total sales amount. We derive our total packaging mass from January 1, 2023, to December 31, 2023, from our internal ERP system. The waste treatment method is determined by the type of packaging materials (e.g., carton, colored paper, PET, PP), which have also been evaluated during product life cycle assessments. And the emission factors of different waste treatment methods, including electronic equipment and different types of packaging material, are obtained from the global average data {GLO} in Ecoinvent 3.0 (SimaPro 9.1). [Verification] Scope 3 Category 12 emissions in 2023 have been verified by a third party. Please find the verification statement in 7.9.3.

## Downstream leased assets

### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

### (7.8.5) Please explain

We do not lease assets. Thus, this category is not applicable to GIGABYTE.

## Franchises

### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

### (7.8.5) Please explain

We do not operate any franchise. Thus this category is not applicable to GIGABYTE.

## Investments

### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

### (7.8.5) Please explain

*We do not make investment. Thus, this category is not applicable to GIGABYTE.*

## Other (upstream)

### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

### (7.8.5) Please explain

*No other upstream indirect emissions are identified as related and substantial.*

## Other (downstream)

### (7.8.1) Evaluation status

Select from:

Not relevant, explanation provided

### (7.8.5) Please explain

*No other downstream indirect emissions are identified as related and substantial.*

*[Fixed row]*



**(7.8.1) Disclose or restate your Scope 3 emissions data for previous years.**

**Past year 1**

**(7.8.1.1) End date**

12/30/2022

**(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)**

892256.599

**(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)**

1217.489

**(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

776.941

**(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)**

58.318

**(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)**

1238.664

**(7.8.1.7) Scope 3: Business travel (metric tons CO2e)**

128.345

#### **(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)**

1867.535

#### **(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)**

28051.447

#### **(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)**

2312.986

#### **(7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)**

5689602.279

#### **(7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)**

8089.726

#### **(7.8.1.19) Comment**

*The above figures for GIGABYTE's scope 3 emissions in 2022 were also disclosed in the 2023 CDP Climate questionnaire. According to GIGABYTE's materiality analysis, the following categories were identified as not relevant, so we did not measure emissions: upstream leased assets, downstream leased assets, franchises, investments, other (upstream), and other (downstream).*

### **Past year 2**

#### **(7.8.1.1) End date**

12/30/2021

#### **(7.8.1.2) Scope 3: Purchased goods and services (metric tons CO2e)**

1515136.596

**(7.8.1.3) Scope 3: Capital goods (metric tons CO2e)**

1860.447

**(7.8.1.4) Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2) (metric tons CO2e)**

739.744

**(7.8.1.5) Scope 3: Upstream transportation and distribution (metric tons CO2e)**

234.742

**(7.8.1.6) Scope 3: Waste generated in operations (metric tons CO2e)**

1464.497

**(7.8.1.7) Scope 3: Business travel (metric tons CO2e)**

24.128

**(7.8.1.8) Scope 3: Employee commuting (metric tons CO2e)**

1201.651

**(7.8.1.10) Scope 3: Downstream transportation and distribution (metric tons CO2e)**

40088.606

**(7.8.1.11) Scope 3: Processing of sold products (metric tons CO2e)**

1722.911

### (7.8.1.12) Scope 3: Use of sold products (metric tons CO2e)

4239140.029

### (7.8.1.13) Scope 3: End of life treatment of sold products (metric tons CO2e)

10931.824

### (7.8.1.19) Comment

The above figures for GIGABYTE's scope 3 emissions in 2021 were also disclosed in the 2022 CDP Climate questionnaire. According to GIGABYTE's materiality analysis, the following categories were identified as not relevant, so we did not measure emissions: upstream leased assets, downstream leased assets, franchises, investments, other (upstream), and other (downstream).

[Fixed row]

## (7.9) Indicate the verification/assurance status that applies to your reported emissions.

	Verification/assurance status
Scope 1	Select from: <input checked="" type="checkbox"/> Third-party verification or assurance process in place
Scope 2 (location-based or market-based)	Select from: <input checked="" type="checkbox"/> Third-party verification or assurance process in place
Scope 3	Select from: <input checked="" type="checkbox"/> Third-party verification or assurance process in place

[Fixed row]

**(7.9.1) Provide further details of the verification/assurance undertaken for your Scope 1 emissions, and attach the relevant statements.**

**Row 1**

**(7.9.1.1) Verification or assurance cycle in place**

Select from:

Annual process

**(7.9.1.2) Status in the current reporting year**

Select from:

Complete

**(7.9.1.3) Type of verification or assurance**

Select from:

Reasonable assurance

**(7.9.1.4) Attach the statement**

*2023\_ISO14064-1\_GIGA-BYTE TECHNOLOGY\_EN.PDF*

**(7.9.1.5) Page/section reference**

*pp.1-9 in the 2023 Greenhouse Gas Verification Opinion by SGS Taiwan Ltd.. Referring to the ISO14064-1: 2018 standard, "scope 1 emission" in the statement is phrased as "direct emissions".*

**(7.9.1.6) Relevant standard**

Select from:

ISO14064-1

### (7.9.1.7) Proportion of reported emissions verified (%)

100

[Add row]

**(7.9.2) Provide further details of the verification/assurance undertaken for your Scope 2 emissions and attach the relevant statements.**

#### Row 1

### (7.9.2.1) Scope 2 approach

Select from:

Scope 2 location-based

### (7.9.2.2) Verification or assurance cycle in place

Select from:

Annual process

### (7.9.2.3) Status in the current reporting year

Select from:

Complete

### (7.9.2.4) Type of verification or assurance

Select from:

Reasonable assurance

### (7.9.2.5) Attach the statement

2023\_ISO14064-1\_GIGA-BYTE TECHNOLOGY\_EN.PDF

### (7.9.2.6) Page/ section reference

pp.1-9 in the 2023 Greenhouse Gas Verification Opinion by SGS Taiwan Ltd.. Referring to the ISO14064-1: 2018 standard, "scope 2 emission" in the statement is phrased as "indirect emissions from imported energy".

### (7.9.2.7) Relevant standard

Select from:

ISO14064-1

### (7.9.2.8) Proportion of reported emissions verified (%)

100

[Add row]

## (7.9.3) Provide further details of the verification/assurance undertaken for your Scope 3 emissions and attach the relevant statements.

### Row 1

#### (7.9.3.1) Scope 3 category

Select all that apply

- Scope 3: Business travel
- Scope 3: Employee commuting
- Scope 3: Use of sold products
- Scope 3: Purchased goods and services
- Scope 3: End-of-life treatment of sold products

- Scope 3: Waste generated in operations

### (7.9.3.2) Verification or assurance cycle in place

Select from:

- Annual process

### (7.9.3.3) Status in the current reporting year

Select from:

- Complete

### (7.9.3.4) Type of verification or assurance

Select from:

- Limited assurance

### (7.9.3.5) Attach the statement

2023\_ISO14064-1\_GIGA-BYTE TECHNOLOGY\_EN.PDF

### (7.9.3.6) Page/section reference

*pp.1-9 in the 2023 Greenhouse Gas Verification Opinion by SGS Taiwan Ltd.. Referring to ISO14064-1, "scope 3 emissions" in the statement is phrased as indirect emissions associated with transportation (business travel, employee commuting), products used by an organization (purchased goods and services, waste generated in operations), and indirect emissions associated with the use of products from the organization (use of sold products, end-of-life treatment of sold products).*

### (7.9.3.7) Relevant standard

Select from:

- ISO14064-1

### (7.9.3.8) Proportion of reported emissions verified (%)



**Row 2****(7.9.3.1) Scope 3 category**

*Select all that apply*

- Scope 3: Capital goods
- Scope 3: Fuel and energy-related activities (not included in Scopes 1 or 2)
- Scope 3: Upstream transportation and distribution
- Scope 3: Downstream transportation and distribution
- Scope 3: Processing of sold products

**(7.9.3.2) Verification or assurance cycle in place**

*Select from:*

- Annual process

**(7.9.3.3) Status in the current reporting year**

*Select from:*

- Complete

**(7.9.3.4) Type of verification or assurance**

*Select from:*

- Moderate assurance

**(7.9.3.5) Attach the statement**

*2023\_GIGABYTE Sustainability Report\_EN.pdf*

### (7.9.3.6) Page/section reference

*p.33 Scope 3 Greenhouse gas Inventory in the past 3 years p.87 AA1000AS Assurance Statement for GIGA-BYTE TECHNOLOGY Sustainability Report. The scope 3 emissions categories that have not been verified in accordance with ISO 14064-1 are still disclosed on p.33 in the 2023 GIGABYTE Sustainability Report. The report has been assured by another third party in accordance with AA1000AS standards. The attached file is the 2023 GIGABYTE Sustainability Report.*

### (7.9.3.7) Relevant standard

Select from:

AA1000AS

### (7.9.3.8) Proportion of reported emissions verified (%)

100

[Add row]

**(7.10.1) Identify the reasons for any change in your gross global emissions (Scope 1 and 2 combined), and for each of them specify how your emissions compare to the previous year.**

### **Change in renewable energy consumption**

#### (7.10.1.1) Change in emissions (metric tons CO<sub>2</sub>e)

0

#### (7.10.1.2) Direction of change in emissions

Select from:

No change

#### (7.10.1.3) Emissions value (percentage)

0

#### (7.10.1.4) Please explain calculation

After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. The change in renewable energy consumption has not been identified as a reduction factor in 2023.

### Other emissions reduction activities

#### (7.10.1.1) Change in emissions (metric tons CO2e)

819.73

#### (7.10.1.2) Direction of change in emissions

Select from:

Decreased

#### (7.10.1.3) Emissions value (percentage)

2.94

#### (7.10.1.4) Please explain calculation

The emission reduction actions listed in Question C7.55.2 contributed to cutting 819.73 t-CO2e in 2023. As the Scope 12 emission in 2022 was 27,439.26 t-CO2e, the calculation formula is:  $(-819.73) / 27,439.26 = -2.94\%$

### Divestment

#### (7.10.1.1) Change in emissions (metric tons CO2e)

0

### (7.10.1.2) Direction of change in emissions

Select from:

No change

### (7.10.1.3) Emissions value (percentage)

0

### (7.10.1.4) Please explain calculation

*After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. Divestment has not been identified as a reduction factor in 2023.*

## Acquisitions

### (7.10.1.1) Change in emissions (metric tons CO2e)

0

### (7.10.1.2) Direction of change in emissions

Select from:

No change

### (7.10.1.3) Emissions value (percentage)

0

### (7.10.1.4) Please explain calculation

*After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. Acquisitions have not been identified as a reduction factor in 2023.*

## Mergers

### (7.10.1.1) Change in emissions (metric tons CO2e)

0

### (7.10.1.2) Direction of change in emissions

Select from:

No change

### (7.10.1.3) Emissions value (percentage)

0

### (7.10.1.4) Please explain calculation

*After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. Mergers have not been identified as a reduction factor in 2023.*

## Change in output

### (7.10.1.1) Change in emissions (metric tons CO2e)

810.96

### (7.10.1.2) Direction of change in emissions

Select from:

Increased

### (7.10.1.3) Emissions value (percentage)

#### (7.10.1.4) Please explain calculation

Recent years have seen an increase in demand for GIGABYTE's servers due to the booming AI industry and the surge in demand for high-performance servers. AI server orders for 4U and 5U high-computing systems has increased even further since 2023. In comparison with ordinary servers, AI servers are characterized by higher power consumption and a longer testing period during production, leading to a sharp increase in power consumption at server production lines. A power tracking system at Nanping Factory revealed that the power consumed during AI server testing alone accounts for about 13% of the total factory's power consumption. Accordingly, we estimate that in 2023, the change in demand for AI sever products led to approximately 810.96 t-CO<sub>2</sub>e of additional emissions. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(810.96) / 27,911.44$  2.91%

### Change in methodology

#### (7.10.1.1) Change in emissions (metric tons CO<sub>2</sub>e)

436.07

#### (7.10.1.2) Direction of change in emissions

Select from:

 Decreased

#### (7.10.1.3) Emissions value (percentage)

1.56

#### (7.10.1.4) Please explain calculation

1. Taiwan's national electricity emission factor in 2023 was adjusted from 0.509 kg-CO<sub>2</sub>e/kWh to 0.495 kg-CO<sub>2</sub>e/kWh. That means even we consumed the same level of electricity in 2023 as we did in 2022. The emission would decrease by 287.8 t-CO<sub>2</sub>e purely due to the change in emission factor. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(-287.80) / 27,911.44$  -1.03%. 2. The emission factor of regional power grids used for calculating scope 2 emissions at Dongguan Factory in 2023 was adjusted from 0.7921 kg-CO<sub>2</sub>e/kWh to 0.7722 kg-CO<sub>2</sub>e/kWh. With the same reason described above, the emission would decrease by 244.36 t-CO<sub>2</sub>e purely due to the change in the emission factor of the year. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(-244.36) / 27,911.44$  -0.88%. 3. The emission factor of regional power grids used for calculating scope 2 emissions at Ningbo Factory in 2023 was adjusted from 0.8042

kg-CO<sub>2</sub>e/kWh to 0.7777 kg-CO<sub>2</sub>e/kWh. With the same reason described above, the emission would decrease by 217.95 t-CO<sub>2</sub>e purely due to the change in the emission factor of the year. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(-217.95) / 27,911.44 = -0.78\%$ . The emission factor for calculating the fugitive emissions from septic tanks at Donguang Factory was adjusted from 0.0002757825 t-CH<sub>4</sub>/person-hour to 0.00561414375 t-CH<sub>4</sub> person-hour, increasing by almost 20 folds, and thus led to scope 1 emissions increasing by 314.05 t-CO<sub>2</sub>e purely because of the change in emission factor. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(314.05) / 27,911.44 = 1.13\%$ . To sum up, due to the change in methodology, the total emissions decreased by approximately 436.07 t-CO<sub>2</sub>e. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the overall change rate was:  $(-436.07) / 27,911.44 = -1.56\%$ .

## Change in boundary

### (7.10.1.1) Change in emissions (metric tons CO<sub>2</sub>e)

0

### (7.10.1.2) Direction of change in emissions

Select from:

No change

### (7.10.1.3) Emissions value (percentage)

0

### (7.10.1.4) Please explain calculation

After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. The change in boundary has not been identified as a reduction factor in 2023.

## Change in physical operating conditions

### (7.10.1.1) Change in emissions (metric tons CO<sub>2</sub>e)

27.34

### (7.10.1.2) Direction of change in emissions

Select from:

Decreased

### (7.10.1.3) Emissions value (percentage)

0.1

### (7.10.1.4) Please explain calculation

1. Ningbo Factory significantly decreased the use of purchased steam by 17% in 2023, leading to its scope 2 emissions reducing by 81.74 t-CO<sub>2</sub>e in the year. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(-81.74) / 27,911.44 = -0.29\%$  2. There was a significant change in GIGABYTE's organization 2023. The network communication business unit became an independent subsidiary. Due to this, the office space configuration and personnel number were adjusted at Headquarters. Moreover, the laboratory capacity was expanded to meet the unit's product testing needs. These led to the emissions increasing by around 54.40 t-CO<sub>2</sub>e. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the calculation formula is:  $(54.40) / 27,911.44 = 0.19\%$ . To sum up, due to the change in physical operating conditions, the total emissions decreased by approximately 27.34 t-CO<sub>2</sub>e. The Scope 12 emissions in 2022 were 27,911.44 t-CO<sub>2</sub>e. Thus, the overall change rate was:  $(-27.34) / 27,911.44 = -0.10\%$ .

## Unidentified

### (7.10.1.1) Change in emissions (metric tons CO<sub>2</sub>e)

0

### (7.10.1.2) Direction of change in emissions

Select from:

No change

### (7.10.1.3) Emissions value (percentage)

0



#### (7.10.1.4) Please explain calculation

*After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. No other unidentified factors.*

#### Other

#### (7.10.1.1) Change in emissions (metric tons CO2e)

0

#### (7.10.1.2) Direction of change in emissions

Select from:

No change

#### (7.10.1.3) Emissions value (percentage)

0

#### (7.10.1.4) Please explain calculation

*After analysis, we attribute the change of gross scope 12 emissions in 2023 to internal emissions reduction activities, changes in output (product portfolio), changes in emission factors used in the calculating methods, and changes in operating conditions. No other significant reasons have been identified.*

*[Fixed row]*

**(7.15.1) Break down your total gross global Scope 1 emissions by greenhouse gas type and provide the source of each used global warming potential (GWP).**

#### Row 1

### (7.15.1.1) Greenhouse gas

Select from:

CO2

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

83.499

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 2

### (7.15.1.1) Greenhouse gas

Select from:

CH4

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

454.23

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 3

### (7.15.1.1) Greenhouse gas

Select from:

N2O

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

1.405

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 4

### (7.15.1.1) Greenhouse gas

Select from:

HFCs

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

293.728

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 5

### (7.15.1.1) Greenhouse gas

Select from:

PFCs

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 6

### (7.15.1.1) Greenhouse gas

Select from:

SF6

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

## Row 7

### (7.15.1.1) Greenhouse gas

Select from:

NF3

### (7.15.1.2) Scope 1 emissions (metric tons of CO2e)

0

### (7.15.1.3) GWP Reference

Select from:

IPCC Sixth Assessment Report (AR6 - 100 year)

[Add row]

### (7.16) Break down your total gross global Scope 1 and 2 emissions by country/area.

	Scope 1 emissions (metric tons CO2e)	Scope 2, location-based (metric tons CO2e)
China	445.254	16303.117
Taiwan, China	387.608	10303.285

[Fixed row]

### (7.17.1) Break down your total gross global Scope 1 emissions by business division.

	Business division	Scope 1 emissions (metric ton CO2e)
Row 1	Xindian Headquarters, Taiwan	303.179

	Business division	Scope 1 emissions (metric ton CO2e)
Row 2	<i>Taipei Silicon Valley Park Office, Taiwan</i>	<i>10.947</i>
Row 4	<i>Nanping Factory, Taiwan</i>	<i>73.483</i>
Row 5	<i>Dongguan Factory, China</i>	<i>304.384</i>
Row 6	<i>Ningbo Factory, China</i>	<i>140.87</i>

[Add row]

**(7.20.1) Break down your total gross global Scope 2 emissions by business division.**

	Business division	Scope 2, location-based (metric tons CO2e)
Row 1	<i>Xindian Headquarters, Taiwan</i>	<i>3658.202</i>
Row 2	<i>Taipei Silicon Valley Park Office, Taiwan</i>	<i>406.896</i>
Row 3	<i>Nanping Factory, Taiwan</i>	<i>6238.188</i>
Row 4	<i>Dongguan Factory, China</i>	<i>9606.409</i>
Row 5	<i>Ningbo Factory, China</i>	<i>6696.708</i>

[Add row]

**(7.22) Break down your gross Scope 1 and Scope 2 emissions between your consolidated accounting group and other entities included in your response.**

## Consolidated accounting group

### (7.22.1) Scope 1 emissions (metric tons CO2e)

832.862

### (7.22.2) Scope 2, location-based emissions (metric tons CO2e)

26606.402

### (7.22.4) Please explain

*The reporting boundary of the scope 1 and scope 2 emissions figures provided above is not consistent with the reporting boundary of the consolidated accounting group. Some overseas branches listed in GIGABYTE's financial report are excluded from the GHG inventory boundary at present. However, in terms of annual revenue in 2023, this coverage accounts for approximately 99.36% of the Group's consolidated revenue in 2023.*

## All other entities

### (7.22.1) Scope 1 emissions (metric tons CO2e)

0

### (7.22.2) Scope 2, location-based emissions (metric tons CO2e)

0

### (7.22.4) Please explain

*No other entities excluded from the consolidated financial report are covered by the current scope 1 and scope 2 emissions inventory boundary.  
[Fixed row]*

**(7.26) Allocate your emissions to your customers listed below according to the goods or services you have sold them in this reporting period.**

**Row 1**

**(7.26.1) Requesting member**

Select from:

**(7.26.2) Scope of emissions**

Select from:

Scope 1

**(7.26.4) Allocation level**

Select from:

Company wide

**(7.26.6) Allocation method**

Select from:

Allocation based on the volume of products purchased

**(7.26.7) Unit for market value or quantity of goods/services supplied**

Select from:

Other unit, please specify :Equivalent unit of motherboard production

**(7.26.8) Market value or quantity of goods/services supplied to the requesting member**

13981



## (7.26.9) Emissions in metric tonnes of CO<sub>2</sub>e

1.17

## (7.26.10) Uncertainty (±%)

7

## (7.26.11) Major sources of emissions

LPG, Gasoline, diesel, refrigerant solvent

## (7.26.12) Allocation verified by a third party?

Select from:

No

## (7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made

*GIGABYTE conducts its GHG emissions inventory based on its operational sites. Obtaining activity data from production lines that produce products for a single customer is difficult. Therefore, we allocate emissions to the customer based on the proportion of products they purchased compared to the total sales volume in 2023. The formula is: (the volume of equivalent product units purchased by the customer / total volume of GIGABYTE's equivalent product units) x gross scope 1 GHG emissions. There are several limitations to the method of allocation and calculation: 1. Using the proportion of products sold to a particular customer as the basis for allocation assumes that our entire GHG emissions are related to production. Therefore, the allocation could be overestimated. 2. Allocation methods may not accurately reflect the emission performance of products bought by our customers. For instance, the emissions allocated to the customer may drop because their demands are reduced instead of manufacturing processes becoming more energy efficient. 3. Uncertainty arises from parameter uncertainties, such as emission factors, GWP values, and activity data.*

## (7.26.14) Where published information has been used, please provide a reference

*GIGABYTE allocates its greenhouse emissions to our customers in accordance with the Corporate Value Chain Accounting and Reporting Standard (Chapter 8). Allocations are based on the volume of products the customer purchased from GIGABYTE in 2023. There are three steps in the allocation process. Our first step is to convert the number of products purchased by the customer into equivalent units of production, and then sum them up to get the total number of products purchased by the customer.*

Secondly, we calculate the proportion of product amounts purchased by customers to the total products we sold in 2023. Finally, multiply the GHG emissions by the proportion obtained from step two to determine the customer's share. The volume of products GIGABYTE produced and also the volume of products our customers purchased in 2023 are derived from our internal systems. GIGABYTE's greenhouse gas emissions for 2023 have been completed according to ISO14064-1: 2018 and verified by a third party. The certification is open to the public on our official CSR website: <https://csr.gigabyte.tw/en/quality-and-environmental-management-certification-en/>

## Row 2

### (7.26.1) Requesting member

Select from:

### (7.26.2) Scope of emissions

Select from:

Scope 2: location-based

### (7.26.4) Allocation level

Select from:

Company wide

### (7.26.6) Allocation method

Select from:

Allocation based on the volume of products purchased

### (7.26.7) Unit for market value or quantity of goods/services supplied

Select from:

Other unit, please specify :Equivalent unit of motherboard production

### (7.26.8) Market value or quantity of goods/services supplied to the requesting member

**(7.26.9) Emissions in metric tonnes of CO<sub>2</sub>e**

37.48

**(7.26.10) Uncertainty (±%)**

7

**(7.26.11) Major sources of emissions**

*Purchased electricity and a very small proportion of purchased steam*

**(7.26.12) Allocation verified by a third party?**

Select from:

No

**(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

*GIGABYTE conducts its GHG emissions inventory based on its operational sites. Obtaining activity data from production lines that produce products for a single customer is difficult. Therefore, we allocate emissions to the customer based on the proportion of products they purchased compared to the total sales volume in 2023. The formula is: (the volume of equivalent product units purchased by the customer / total volume of GIGABYTE's equivalent product units) x gross scope 2 GHG emissions. There are several limitations to the method of allocation and calculation: 1. Using the proportion of products sold to a particular customer as the basis for allocation assumes that our entire GHG emissions are related to production. Therefore, the allocation could be overestimated. 2. Allocation methods may not accurately reflect the emission performance of products bought by our customers. For instance, the emissions allocated to the customer may drop because their demands are reduced instead of manufacturing processes becoming more energy efficient. 3. Uncertainty arises from parameter uncertainties, such as emission factors, GWP values, and activity data.*

**(7.26.14) Where published information has been used, please provide a reference**

*GIGABYTE allocates its greenhouse emissions to our customers in accordance with the Corporate Value Chain Accounting and Reporting Standard (Chapter 8). Allocations*

are based on the volume of products the customer purchased from GIGABYTE in 2023. There are three steps in the allocation process. Our first step is to convert the number of products purchased by the customer into equivalent units of production, and then sum them up to get the total number of products purchased by the customer. Secondly, we calculate the proportion of product amounts purchased by customers to the total products we sold in 2023. Finally, multiply the GHG emissions by the proportion obtained from step two to determine the customer's share. The volume of products GIGABYTE produced and also the volume of products our customers purchased in 2023 are derived from our internal systems. GIGABYTE's greenhouse gas emissions for 2023 have been completed according to ISO14064-1: 2018 and verified by a third party. The certification is open to the public on our official CSR website: <https://csr.gigabyte.tw/en/quality-and-environmental-management-certification-en/>

### Row 3

#### (7.26.1) Requesting member

Select from:

#### (7.26.2) Scope of emissions

Select from:

Scope 3

#### (7.26.3) Scope 3 category(ies)

Select all that apply

- Category 1: Purchased goods and services
- Category 5: Waste generated in operations
- Category 6: Business travel
- Category 7: Employee commuting

#### (7.26.4) Allocation level

Select from:

Company wide

#### (7.26.6) Allocation method

Select from:

- Allocation based on the volume of products purchased

### **(7.26.7) Unit for market value or quantity of goods/services supplied**

Select from:

- Other unit, please specify :Equivalent unit of motherboard production

### **(7.26.8) Market value or quantity of goods/services supplied to the requesting member**

13981

### **(7.26.9) Emissions in metric tonnes of CO<sub>2</sub>e**

1715.18

### **(7.26.10) Uncertainty (±%)**

43

### **(7.26.11) Major sources of emissions**

*Purchased goods: Cradle-to-gate carbon footprint of goods purchased by all business units. Waste generated from the operation: indirect emissions from treating waste generated in GIGABYTE's headquarters and main factories. Employee commuting: emission from commuting by employees in Headquarters, main factories, and primary subsidiaries Business travel: emissions from cross-national business travel by air.*

### **(7.26.12) Allocation verified by a third party?**

Select from:

- No

### **(7.26.13) Please explain how you have identified the GHG source, including major limitations to this process and assumptions made**

*In 2013, GIGABYTE began inventorying scope 3 emissions according to the Greenhouse Gas Protocol. Since 2018, 11 of 15 categories relevant to GIGABYTE have been included in the annual inventory process. Starting from 2021, 6 of the categories with high and medium-high materiality have been verified by a third party. These categories are purchased goods, waste generated from the operation, employee commuting, business travel, use of sold products, and end-of-life treatment of sold products. The scope 3 emission allocation here considers only emissions from 4 upstream categories and is based on the proportion of products the customer purchased to the total sales volume in 2023. The formula is: (the volume of equivalent product units purchased by the customer / total volume of GIGABYTE's equivalent product units) x scope 3 GHG emissions. There are several limitations to the method of allocation and calculation: 1. Using the proportion of products sold to a particular customer as the basis for allocation assumes that our entire GHG emissions are related to production. Therefore, the allocation could be overestimated. 2. Allocation methods may not accurately reflect the emission performance of products bought by our customers. For instance, the emissions allocated to the customer may drop because their demands are reduced instead of manufacturing processes becoming more energy efficient. 3. Uncertainty arises from parameter uncertainties, such as emission factors, GWP values, and activity data.*

#### **(7.26.14) Where published information has been used, please provide a reference**

*GIGABYTE allocates its greenhouse emissions to our customers in accordance with the Corporate Value Chain Accounting and Reporting Standard (Chapter 8). Allocations are based on the volume of products the customer purchased from GIGABYTE in 2023. There are three steps in the allocation process. Our first step is to convert the number of products purchased by the customer into equivalent units of production, and then sum them up to get the total number of products purchased by the customer. Secondly, we calculate the proportion of product amounts purchased by customers to the total products we sold in 2023. Finally, multiply the GHG emissions by the proportion obtained from step two to determine the customer's share. The volume of products GIGABYTE produced and also the volume of products our customers purchased in 2023 are derived from our internal systems. GIGABYTE's greenhouse gas emissions for 2023 have been completed according to ISO14064-1: 2018 and verified by a third party. The certification is open to the public on our official CSR website: <https://csr.gigabyte.tw/en/quality-and-environmental-management-certification-en/>*

[Add row]

#### **(7.27) What are the challenges in allocating emissions to different customers, and what would help you to overcome these challenges?**

##### **Row 1**

#### **(7.27.1) Allocation challenges**

Select from:

Diversity of product lines makes accurately accounting for each product/product line cost ineffective

## (7.27.2) Please explain what would help you overcome these challenges

*GIGABYTE's primary product type used to be motherboards, which accounted for more than half of its total products. Because of the change in the global PC market, the booming development of AIoT and 5G technology, as well as the increased demand for remote interactive devices initially driven by the pandemic but turning out to be normal, GIGABYTE's product portfolio has constantly evolved. We have seen a dramatic increase in the markets for servers, server boards, graphics cards, and IoT solutions in recent years. Each type of product contains dozens of components purchased from a wide range of suppliers. In order to calculate the total carbon footprint of every single type of product, we must request emission data from several suppliers. Thus, it would be much more feasible to allocate emissions based on the proportion of products that we sell to customers rather than calculating emissions for each type of product.*

[Add row]

## (7.28) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

### (7.28.1) Do you plan to develop your capabilities to allocate emissions to your customers in the future?

Select from:

Yes

### (7.28.2) Describe how you plan to develop your capabilities

1. *GIGABYTE established an internal Product Carbon Footprint Calculation System in 2017. In the system, we maintain a database of data on the carbon footprints of all the components we purchase from our suppliers. By using this system, we can easily calculate the carbon footprint of all types of products. Over the last few years, GIGABYTE has developed various product lines to meet the global market's needs. Our database will be updated continuously to ensure that it is as complete as possible.*

2. *To fully understand the carbon emissions resulting from our operations, GIGABYTE has conducted an annual scope 3 emissions inventory since 2012. We have introduced new methods in order to comply with ISO14064-1: 2018, including more accurate inventorying of scope 3 emissions from purchased goods, generated waste, employee commuting, business travel, use of sold products, and end-of-life treatment of sold products. We have received third-party verification of the inventory results for 2023. With continuous measurement and tracking of emissions, we will identify more ways to reduce emissions, reduce carbon footprint in manufacturing processes, and extend product life.*

3. *Every year, GIGABYTE conducts supplier audits and sustainability questionnaire surveys. Annually, GIGABYTE requests information and data related to CSR from its largest 1-tier suppliers. We have invited suppliers to join the "Reduction. Sharing. Love the Earth Alliance" program since 2018 and respond to the "333 Reduction Plan", which asks suppliers to provide emission data to us for further analysis of sustainable supply chain management. According to the latest data, among the 55 companies participating in the Plan (including GIGABYTE), the numbers of companies who achieved cutting more than 3% of carbon emissions, water use, and waste are 35, 28, and 23, respectively.*

[Fixed row]

**(7.30) Select which energy-related activities your organization has undertaken.**

	Indicate whether your organization undertook this energy-related activity in the reporting year
Consumption of fuel (excluding feedstocks)	Select from: <input checked="" type="checkbox"/> Yes
Consumption of purchased or acquired electricity	Select from: <input checked="" type="checkbox"/> Yes
Consumption of purchased or acquired heat	Select from: <input checked="" type="checkbox"/> No
Consumption of purchased or acquired steam	Select from: <input checked="" type="checkbox"/> Yes
Consumption of purchased or acquired cooling	Select from: <input checked="" type="checkbox"/> No
Generation of electricity, heat, steam, or cooling	Select from: <input checked="" type="checkbox"/> No

[Fixed row]

**(7.30.1) Report your organization's energy consumption totals (excluding feedstocks) in MWh.**

**Consumption of fuel (excluding feedstock)**

**(7.30.1.1) Heating value**



Select from:

LHV (lower heating value)

### **(7.30.1.2) MWh from renewable sources**

0

### **(7.30.1.3) MWh from non-renewable sources**

304.47

### **(7.30.1.4) Total (renewable and non-renewable) MWh**

304.47

## **Consumption of purchased or acquired electricity**

### **(7.30.1.1) Heating value**

Select from:

LHV (lower heating value)

### **(7.30.1.2) MWh from renewable sources**

0

### **(7.30.1.3) MWh from non-renewable sources**

41410.43

### **(7.30.1.4) Total (renewable and non-renewable) MWh**

41410.43

## Consumption of purchased or acquired steam

### (7.30.1.1) Heating value

Select from:

LHV (lower heating value)

### (7.30.1.2) MWh from renewable sources

0

### (7.30.1.3) MWh from non-renewable sources

1214.51

### (7.30.1.4) Total (renewable and non-renewable) MWh

1214.51

## Total energy consumption

### (7.30.1.1) Heating value

Select from:

LHV (lower heating value)

### (7.30.1.2) MWh from renewable sources

0

### (7.30.1.3) MWh from non-renewable sources

42929.41

### (7.30.1.4) Total (renewable and non-renewable) MWh

42929.41

[Fixed row]

### (7.30.6) Select the applications of your organization's consumption of fuel.

	Indicate whether your organization undertakes this fuel application
Consumption of fuel for the generation of electricity	Select from: <input checked="" type="checkbox"/> Yes
Consumption of fuel for the generation of heat	Select from: <input checked="" type="checkbox"/> Yes
Consumption of fuel for the generation of steam	Select from: <input checked="" type="checkbox"/> No
Consumption of fuel for the generation of cooling	Select from: <input checked="" type="checkbox"/> No
Consumption of fuel for co-generation or tri-generation	Select from: <input checked="" type="checkbox"/> No

[Fixed row]

### (7.30.7) State how much fuel in MWh your organization has consumed (excluding feedstocks) by fuel type.

#### Sustainable biomass

### (7.30.7.1) Heating value

Select from:

Unable to confirm heating value

### (7.30.7.2) Total fuel MWh consumed by the organization

0

### (7.30.7.3) MWh fuel consumed for self-generation of electricity

0

### (7.30.7.4) MWh fuel consumed for self-generation of heat

0

### (7.30.7.8) Comment

*No sustainable biomass was consumed in 2023.*

## Other biomass

### (7.30.7.1) Heating value

Select from:

Unable to confirm heating value

### (7.30.7.2) Total fuel MWh consumed by the organization

0

### (7.30.7.3) MWh fuel consumed for self-generation of electricity

0

**(7.30.7.4) MWh fuel consumed for self-generation of heat**

0

**(7.30.7.8) Comment**

*No other biomass was consumed in 2023.*

**Other renewable fuels (e.g. renewable hydrogen)**

**(7.30.7.1) Heating value**

Select from:

Unable to confirm heating value

**(7.30.7.2) Total fuel MWh consumed by the organization**

0

**(7.30.7.3) MWh fuel consumed for self-generation of electricity**

0

**(7.30.7.4) MWh fuel consumed for self-generation of heat**

0

**(7.30.7.8) Comment**

*No other renewable fuel was consumed in 2023.*

## Coal

### (7.30.7.1) Heating value

Select from:

Unable to confirm heating value

### (7.30.7.2) Total fuel MWh consumed by the organization

0

### (7.30.7.3) MWh fuel consumed for self-generation of electricity

0

### (7.30.7.4) MWh fuel consumed for self-generation of heat

0

### (7.30.7.8) Comment

*No coals were consumed in 2023.*

## Oil

### (7.30.7.1) Heating value

Select from:

LHV

### (7.30.7.2) Total fuel MWh consumed by the organization

297.37

### (7.30.7.3) MWh fuel consumed for self-generation of electricity

162.23

### (7.30.7.4) MWh fuel consumed for self-generation of heat

0

### (7.30.7.8) Comment

*In 2022, 162.23 MWh of diesel oil was consumed for generating electricity; 135.14 MWh of gasoline and diesel oil were consumed for Company's cars; the total consumption of oil was therefore 297.37 MWh.*

## Gas

### (7.30.7.1) Heating value

Select from:

LHV

### (7.30.7.2) Total fuel MWh consumed by the organization

7.1

### (7.30.7.3) MWh fuel consumed for self-generation of electricity

0

### (7.30.7.4) MWh fuel consumed for self-generation of heat

7.1

### (7.30.7.8) Comment

*In 2023, 7.10 MWh of LPG was consumed for boilers in factories*

## **Other non-renewable fuels (e.g. non-renewable hydrogen)**

### **(7.30.7.1) Heating value**

Select from:

Unable to confirm heating value

### **(7.30.7.2) Total fuel MWh consumed by the organization**

0

### **(7.30.7.3) MWh fuel consumed for self-generation of electricity**

0

### **(7.30.7.4) MWh fuel consumed for self-generation of heat**

0

### **(7.30.7.8) Comment**

*No other non-renewable fuels were consumed in 2023.*

## **Total fuel**

### **(7.30.7.1) Heating value**

Select from:

LHV

### **(7.30.7.2) Total fuel MWh consumed by the organization**



304.47

**(7.30.7.3) MWh fuel consumed for self-generation of electricity**

162.23

**(7.30.7.4) MWh fuel consumed for self-generation of heat**

7.1

**(7.30.7.8) Comment**

*In 2023, 162.23 MWh of diesel oil was consumed for generating electricity, 7.10 MWh of LPG was consumed for boilers in factories, and 135.14 MWh of gasoline and diesel oil were consumed for Company's cars. So the total consumption of oil was 304.47 MWh.*

*[Fixed row]*

**(7.30.16) Provide a breakdown by country/area of your electricity/heat/steam/cooling consumption in the reporting year.**

**China**

**(7.30.16.1) Consumption of purchased electricity (MWh)**

20595.71

**(7.30.16.2) Consumption of self-generated electricity (MWh)**

0

**(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)**

1214.51

**(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)**

0

**(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)**

21810.22

**Taiwan, China**

**(7.30.16.1) Consumption of purchased electricity (MWh)**

20814.72

**(7.30.16.2) Consumption of self-generated electricity (MWh)**

0

**(7.30.16.4) Consumption of purchased heat, steam, and cooling (MWh)**

0

**(7.30.16.5) Consumption of self-generated heat, steam, and cooling (MWh)**

0

**(7.30.16.6) Total electricity/heat/steam/cooling energy consumption (MWh)**

20814.72

[Fixed row]

**(7.45) Describe your gross global combined Scope 1 and 2 emissions for the reporting year in metric tons CO2e per unit currency total revenue and provide any additional intensity metrics that are appropriate to your business operations.**

**Row 1**

**(7.45.1) Intensity figure**

0.2

**(7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)**

27439.26

**(7.45.3) Metric denominator**

Select from:

unit total revenue

**(7.45.4) Metric denominator: Unit total**

136773.41

**(7.45.5) Scope 2 figure used**

Select from:

Location-based

**(7.45.6) % change from previous year**

22.9

## (7.45.7) Direction of change

Select from:

Decreased

## (7.45.8) Reasons for change

Select all that apply

Other emissions reduction activities

Change in output

Change in revenue

Change in physical operating conditions

## (7.45.9) Please explain

*The unit of metric denominator here is TWD million. The gross emissions in 2022 were 27,911.45 metric tons, and in 2022 they decreased by 1.69% to 27,439.26 metric tons, while the revenue saw an obvious growth in the same year. GIGABYTE's revenue in 2022 was TWD107,263.65 million and grew to TWD136,773.41 million in 2023, with an annual increase rate of 27.51%. Thus, emissions per TWD million revenue decreased by 22.9% in 2023, from 0.26 metric tons per TWD million in 2022 to 0.20 metric tons per TWD million. Due to the increasing demand for AI-related equipment and computers, of which prices are higher than computer peripherals, GIGABYTE's revenue grew significantly in 2023. In addition, we have introduced more automation to optimize processing in production lines, leading to further improvement in energy efficiency.*

## Row 2

### (7.45.1) Intensity figure

2.76

### (7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO<sub>2</sub>e)

27439.26

### (7.45.3) Metric denominator

Select from:

unit of production

#### (7.45.4) Metric denominator: Unit total

9924.05

#### (7.45.5) Scope 2 figure used

Select from:

Location-based

#### (7.45.6) % change from previous year

3.41

#### (7.45.7) Direction of change

Select from:

Decreased

#### (7.45.8) Reasons for change

Select all that apply

Other emissions reduction activities

Change in output

Change in physical operating conditions

#### (7.45.9) Please explain

*The unit of metric denominator here is 1,000 motherboard equivalent pieces produced. The gross emissions in 2022 were 27,911.45 metric tons, and in 2022 they decreased by 1.69% to 27,439.26 metric tons. This intensity is measured in t-CO<sub>2</sub>e per 1,000 motherboard equivalent pieces. The number of productions in 2022 was 9,750.45 thousand equivalent pieces, and in 2023 it slightly increased to 9,924.05 thousand equivalent pieces, with a 1.78% increase. As a result, emissions per thousand*

equivalent pieces decreased by 3.41% from 2.86 metric tons in 2022 to 2.76 metric tons in 2023. In 2023, GIGABYTE's production volume grew due to more demand for system products such as servers and laptops. In addition, we have introduced more automation to optimize processing in production lines, leading to further improvement in energy efficiency.

### Row 3

#### (7.45.1) Intensity figure

4.65

#### (7.45.2) Metric numerator (Gross global combined Scope 1 and 2 emissions, metric tons CO2e)

27439.26

#### (7.45.3) Metric denominator

Select from:

full time equivalent (FTE) employee

#### (7.45.4) Metric denominator: Unit total

5901

#### (7.45.5) Scope 2 figure used

Select from:

Location-based

#### (7.45.6) % change from previous year

0.18

#### (7.45.7) Direction of change

Select from:

Decreased

### (7.45.8) Reasons for change

Select all that apply

Other emissions reduction activities

Change in physical operating conditions

### (7.45.9) Please explain

*The gross emissions in 2022 were 27,911.45 metric tons, and in 2022 they decreased by 1.69% to 27,439.26 metric tons, primarily due to improved production efficiency. The number of employees in the covered boundary in 2022 was 5,992. It slightly decreased to 5,901 in 2023. Thus, emissions per capita decreased by 0.18% from 4.66 metric tons to 4.65 metric tons from 2022 to 2023.*

[Add row]

## (7.52) Provide any additional climate-related metrics relevant to your business.

### Row 1

#### (7.52.1) Description

Select from:

Waste

#### (7.52.2) Metric value

2512.25

#### (7.52.3) Metric numerator

Metric tons

### (7.52.5) % change from previous year

13.43

### (7.52.6) Direction of change

Select from:

Increased

### (7.52.7) Please explain

*GIGABYTE generated 2,214.82 metric tons of waste in 2022, meaning that waste in 2023 has increased by 13.43%. The increase was primarily caused by Ningbo Factory scrapping a large quantity of fixtures and equipment. The "scope 3 generated waste in operation" is categorized as a medium-high material category. Since 2021, the emissions have been verified by a third party on a yearly base. For calculating these emissions, it is essential to obtain the quantity and type of generated waste as we use the waste-type-specific method suggested by the Greenhouse Gas Protocol- Corporate Value Chain (Scope 3) Standard. Therefore, third parties also verify the waste figures.*

## Row 2

### (7.52.1) Description

Select from:

Other, please specify :water use

### (7.52.2) Metric value

249770

### (7.52.3) Metric numerator

Metric tons

### (7.52.5) % change from previous year



**(7.52.6) Direction of change**

Select from:

Decreased

**(7.52.7) Please explain**

*The quantity of water use in 2022 by GIGABYTE was 252,964, indicating that the water use in 2023 decreased by 1.26%. GIGABYTE does not consume mass water as the factories only have assembly lines.*

[Add row]

**(7.53.1) Provide details of your absolute emissions targets and progress made against those targets.****Row 1****(7.53.1.1) Target reference number**

Select from:

Abs 1

**(7.53.1.2) Is this a science-based target?**

Select from:

No, but we are reporting another target that is science-based

**(7.53.1.5) Date target was set**

04/29/2010

**(7.53.1.6) Target coverage**

Select from:

- Organization-wide

### (7.53.1.7) Greenhouse gases covered by target

Select all that apply

- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Carbon dioxide (CO<sub>2</sub>)
- Perfluorocarbons (PFCs)
- Hydrofluorocarbons (HFCs)
- Sulphur hexafluoride (SF<sub>6</sub>)
- Nitrogen trifluoride (NF<sub>3</sub>)

### (7.53.1.8) Scopes

Select all that apply

- Scope 1
- Scope 2

### (7.53.1.9) Scope 2 accounting method

Select from:

- Location-based

### (7.53.1.11) End date of base year

12/30/2009

### (7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO<sub>2</sub>e)

1105.16

### (7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO<sub>2</sub>e)

47851.98

**(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)**

0.000

**(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

48957.140

**(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100

**(7.53.1.54) End date of target**

12/30/2025

**(7.53.1.55) Targeted reduction from base year (%)**

50

**(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)**

24478.570

#### (7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

832.862

#### (7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

26606.402

#### (7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

27439.264

#### (7.53.1.78) Land-related emissions covered by target

Select from:

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

#### (7.53.1.79) % of target achieved relative to base year

87.90

#### (7.53.1.80) Target status in reporting year

Select from:

Underway

#### (7.53.1.82) Explain target coverage and identify any exclusions

*The target covers scope 12 of the GIGABYTE Headquarters, Nanping Factory in Taiwan, and two factories in China. These bases are the main operational bases of GIGABYTE. Since 2021, the Taipei Silicon Valley Park Office, where GIGABYTE's main subsidiaries International Bestyield, G-STYLE, GIGAIPC, and Selita Precision, are located, has been included in the reporting boundary of the greenhouse gas emission inventory. As the emissions from the additional boundary do not exceed the 5% significance threshold, we do not recalculate the base year emissions or replace the target.*

### **(7.53.1.83) Target objective**

1. Mitigate the impact of climate change by reducing greenhouse gas emissions and reducing the environmental footprint of operational activities. 2. Electricity consumption accounts for most of GIGABYTE's greenhouse gas emissions. Emissions can be reduced through energy efficiency improvements, while energy costs can be reduced as well. 3. About 95% of GIGABYTE's products are exported, and more than half of them are sold in European and American markets, which place a strong emphasis on environmental protection. GIGABYTE has set a group's climate management target and is committed to reducing the carbon footprint of our products. This enhances our brand reputation in these markets, as well as the competitiveness of our products.

### **(7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year**

In 2009, when initiating the "Green Action Plan," GIGABYTE set up the first group-wide GHG emission reduction target: to cut 20% of emissions by 2015 compared to the 2009 level. The target covered scope 12 of the GIGABYTE Headquarters, Nanping Factory in Taiwan, and two factories in China. This first goal was achieved in 2012, 3 years ahead of the target year. Then, we reset the target to become reducing 40% of absolute GHG emissions by 2020. Again, the revised target was achieved in 2016, 4 years ahead of the target year. We then reset the goal in 2017 by cutting 50% of emissions by 2030 compared to the 2009 level. Considering that the global attention on the extent of business ambition to cut emissions has kept rising, and various related initiatives and standards have been developed by creditable parties, in 2020, GIGABYTE decided to advance the target year from 2030 to 2025. We are moving toward the new target, cutting 50% of emissions from the 2009 level by 2025. Since 2009, GIGABYTE has reduced by 43.95% of emissions. In addition, the emission intensity per 1000-piece equivalent motherboards has reduced by 12.41%, and the emission intensity per TWD million revenue also decreases by 82.53%. These figures show that GIGABYTE's operation and manufacturing processes' energy efficiency has significantly enhanced in the past decade. Since 2019, We have introduced new measures that aim to stimulate BUs and employees to break away from the existing modes and processes and explore new hot spots of energy-saving or emission reduction based on more creative and innovative thinking. The establishment of the "Sustainability Fund" is one example. Its budget comes from the money saved from cutting energy consumption, water use, and generated waste in the previous year. It aims to provide monetary feedback and encourage factories, departments, and individual employees to cut emissions or propose ideas for reducing energy consumption, water use, and waste. As of Q2 in 2024, the C-suite of each factory and participating employees have been rewarded by around TWD1,819,863.

### **(7.53.1.85) Target derived using a sectoral decarbonization approach**

Select from:

No

**Row 2**

### **(7.53.1.1) Target reference number**

Select from:

- Abs 2

### (7.53.1.2) Is this a science-based target?

Select from:

- No, but we anticipate setting one in the next two years

### (7.53.1.5) Date target was set

04/29/2016

### (7.53.1.6) Target coverage

Select from:

- Organization-wide

### (7.53.1.7) Greenhouse gases covered by target

Select all that apply

- Methane (CH<sub>4</sub>)
- Nitrous oxide (N<sub>2</sub>O)
- Carbon dioxide (CO<sub>2</sub>)
- Perfluorocarbons (PFCs)
- Hydrofluorocarbons (HFCs)
- Sulphur hexafluoride (SF<sub>6</sub>)
- Nitrogen trifluoride (NF<sub>3</sub>)

### (7.53.1.8) Scopes

Select all that apply

- Scope 1
- Scope 2

### **(7.53.1.9) Scope 2 accounting method**

Select from:

Location-based

### **(7.53.1.11) End date of base year**

12/30/2016

### **(7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)**

644.45

### **(7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)**

28643.38

### **(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)**

0.000

### **(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

29287.830

### **(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

### **(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100.0

**(7.53.1.54) End date of target**

12/30/2030

**(7.53.1.55) Targeted reduction from base year (%)**

34.72

**(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)**

19119.095

**(7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)**

832.862

**(7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)**

26606.402

**(7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)**

27439.264

**(7.53.1.78) Land-related emissions covered by target**

Select from:

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)



### (7.53.1.79) % of target achieved relative to base year

18.18

### (7.53.1.80) Target status in reporting year

Select from:

Underway

### (7.53.1.82) Explain target coverage and identify any exclusions

*The target covers scope 12 of the GIGABYTE Headquarters, Nanping Factory in Taiwan, and two factories in China. These bases are the main operational bases of GIGABYTE. Since 2021, the Taipei Silicon Valley Park Office, where GIGABYTE's main subsidiaries International Bestyield, G-STYLE, GIGAIPC, and Selita Precision, are located, has been included in the reporting boundary of the greenhouse gas emission inventory. As the emissions from the additional boundary do not exceed the 5% significance threshold, we do not recalculate the base year emissions or replace the target.*

### (7.53.1.83) Target objective

*1. Mitigate the impact of climate change by reducing greenhouse gas emissions and reducing the environmental footprint of operational activities. 2. Electricity consumption accounts for most of GIGABYTE's greenhouse gas emissions. Emissions can be reduced through energy efficiency improvements, while energy costs can be reduced as well. 3. About 95% of GIGABYTE's products are exported, and more than half of them are sold in European and American markets, which place a strong emphasis on environmental protection. GIGABYTE has set a group's climate management target and is committed to reducing the carbon footprint of our products. This enhances our brand reputation in these markets, as well as the competitiveness of our products. 4. When compared to the "Green Action Plan" target (Abs1 in Row 1), Ab2 target "333 Reduction Plan" is stricter. It is in line with the SBTi's WB2D emissions pathway, which calls for a 2.5% reduction in scope 1 and scope 2 emissions every year. Thus, GIGABYTE views this target as an interim target before committing to a 1.5C climate transition plan.*

### (7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

*Besides the long-term goal, i.e. cutting 50% of the 2009 level by 2025, GIGABYTE also set a relatively short-term goal in 2016 to ensure that GHG emission performance continues to be aligned with the reduction path year by year. The short-term goal is called the "333 Reduction Plan", which targets to reduce carbon emissions, waste production, and water consumption by 3% each year. So, until the target year 2030, the reduction rate will be around 34.72% compared to the 2016 emission level. As mentioned above, since 2019, GIGABYTE has introduced new measures that aim to stimulate BUs and employees to break away from the existing modes and processes and explore new hot spots of energy-saving or emission reduction based on more creative and innovative thinking. The establishment of the "Sustainability Fund" is one example. Its budget comes from the money saved from cutting energy consumption, water use, and generated waste in the previous year. It aims to provide monetary*

feedback and encourage factories, departments, and individual employees to cut emissions or propose ideas for reducing energy consumption, water use, and waste. As of Q2 of 2024, the C-suite of each factory and participating employees have been rewarded by around TWD1,819,963.

### (7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

No

### Row 3

### (7.53.1.1) Target reference number

Select from:

Abs 3

### (7.53.1.2) Is this a science-based target?

Select from:

Yes, we consider this a science-based target, but we have not committed to seek validation of this target by the Science Based Targets initiative within the next two years

### (7.53.1.4) Target ambition

Select from:

1.5°C aligned

### (7.53.1.5) Date target was set

04/29/2022

### (7.53.1.6) Target coverage

Select from:

- Organization-wide

### (7.53.1.7) Greenhouse gases covered by target

Select all that apply

- Methane (CH4)
- Nitrous oxide (N2O)
- Carbon dioxide (CO2)
- Perfluorocarbons (PFCs)
- Hydrofluorocarbons (HFCs)
- Sulphur hexafluoride (SF6)
- Nitrogen trifluoride (NF3)

### (7.53.1.8) Scopes

Select all that apply

- Scope 1
- Scope 2

### (7.53.1.9) Scope 2 accounting method

Select from:

- Location-based

### (7.53.1.11) End date of base year

12/30/2021

### (7.53.1.12) Base year Scope 1 emissions covered by target (metric tons CO2e)

1063.52

### (7.53.1.13) Base year Scope 2 emissions covered by target (metric tons CO2e)

28874.43

**(7.53.1.31) Base year total Scope 3 emissions covered by target (metric tons CO2e)**

0.000

**(7.53.1.32) Total base year emissions covered by target in all selected Scopes (metric tons CO2e)**

29937.950

**(7.53.1.33) Base year Scope 1 emissions covered by target as % of total base year emissions in Scope 1**

100

**(7.53.1.34) Base year Scope 2 emissions covered by target as % of total base year emissions in Scope 2**

100

**(7.53.1.53) Base year emissions covered by target in all selected Scopes as % of total base year emissions in all selected Scopes**

100.0

**(7.53.1.54) End date of target**

12/30/2035

**(7.53.1.55) Targeted reduction from base year (%)**

63

**(7.53.1.56) Total emissions at end date of target covered by target in all selected Scopes (metric tons CO2e)**

11077.041

### (7.53.1.57) Scope 1 emissions in reporting year covered by target (metric tons CO2e)

832.862

### (7.53.1.58) Scope 2 emissions in reporting year covered by target (metric tons CO2e)

26606.402

### (7.53.1.77) Total emissions in reporting year covered by target in all selected scopes (metric tons CO2e)

27439.264

### (7.53.1.78) Land-related emissions covered by target

Select from:

No, it does not cover any land-related emissions (e.g. non-FLAG SBT)

### (7.53.1.79) % of target achieved relative to base year

13.25

### (7.53.1.80) Target status in reporting year

Select from:

Underway

### (7.53.1.82) Explain target coverage and identify any exclusions

*The target covers scope 12 of the GIGABYTE Headquarters, Nanping Factory in Taiwan, and two factories in China. These bases are the main operational bases of GIGABYTE. Since 2021, the Taipei Silicon Valley Park Office, where GIGABYTE's main subsidiaries International Bestyield, G-STYLE, GIGAIPC, and Selita Precision, are located, has been included in the reporting boundary of the greenhouse gas emission inventory. As the emissions from the additional boundary do not exceed the 5% significance threshold, we do not recalculate the base year emissions or replace the target.*

### (7.53.1.83) Target objective

1. Mitigate the impact of climate change by reducing greenhouse gas emissions and reducing the environmental footprint of operational activities. 2. Electricity consumption accounts for most of GIGABYTE's greenhouse gas emissions. Emissions can be reduced through energy efficiency improvements, while energy costs can be reduced as well. 3. About 95% of GIGABYTE's products are exported, and more than half of them are sold in European and American markets, which place a strong emphasis on environmental protection. GIGABYTE has set a group's climate management target and is committed to reducing the carbon footprint of our products. This enhances our brand reputation in these markets, as well as the competitiveness of our products. 4. GIGABYTE has not publicly announced this target as the Group's emissions reduction target. At the present stage, this target serves to demonstrate the gap between GIGABYTE's current situation and the goal of achieving the 1.5 target, which helps us develop a climate transition plan that incorporates more appropriate and feasible emission reduction options.

### (7.53.1.84) Plan for achieving target, and progress made to the end of the reporting year

GIGABYTE endeavors to reduce our negative impacts on the environment and has tried to continue cutting the emissions generated from our operation. To ensure our emissions align with or even below the emission level that aims to achieve the global goal, we tried to set a target that applies the methodologies and meets the standard provided by SBTi. In 2022, we researched setting an SBT based on the latest version of "SBTi Criteria and Recommendation" and the Absolute Contraction Approach. Although GIGABYTE has not publicly committed to setting an SBT, neither has it planned to submit this target to SBTi for verification; this target is disclosed to some stakeholders from the industry and media in Taiwan. GIGABYTE maps out a plan that considers four measures, other than enhancing the energy efficiency of processes, to achieve this ambitious goal. In order of execution priority, these are building solar panel systems on the rooftops of factories, investing in external power plant projects or signing up PPAs, supporting international tree-planting projects that can obtain carbon credits, and purchasing T-RECs (REC issued in Taiwan) to offset the emissions that exceed the reduction target. These measures also have been taken into account in the climate scenario analysis described in Question C5.1.

### (7.53.1.85) Target derived using a sectoral decarbonization approach

Select from:

No

[Add row]

### (7.54.2) Provide details of any other climate-related targets, including methane reduction targets.

Row 1

#### (7.54.2.1) Target reference number

Select from:

Oth 1

#### (7.54.2.2) Date target was set

04/29/2010

#### (7.54.2.3) Target coverage

Select from:

Organization-wide

#### (7.54.2.4) Target type: absolute or intensity

Select from:

Absolute

#### (7.54.2.5) Target type: category & Metric (target numerator if reporting an intensity target)

##### **Waste management**

metric tons of waste generated

#### (7.54.2.7) End date of base year

12/30/2010

#### (7.54.2.8) Figure or percentage in base year

2516.67

#### (7.54.2.9) End date of target

12/30/2030

**(7.54.2.10) Figure or percentage at end of date of target**

1258.33

**(7.54.2.11) Figure or percentage in reporting year**

2512.25

**(7.54.2.12) % of target achieved relative to base year**

0.3512564172

**(7.54.2.13) Target status in reporting year**

Select from:

Underway

**(7.54.2.15) Is this target part of an emissions target?**

*It is part of the Green Action Plan (Abs 1).*

**(7.54.2.16) Is this target part of an overarching initiative?**

Select all that apply

No, it's not part of an overarching initiative

**(7.54.2.18) Please explain target coverage and identify any exclusions**

*The target covers the Headquarters and Nanping Factory in Taiwan and Dongguan and Ningbo Factory in China. These four bases are the main operation and production bases of GIGABYTE.*

**(7.54.2.19) Target objective**



1. Mitigate the impact on the environment by reducing the waste generated from GIGABYTE's business activities. 2. About 95% of GIGABYTE's products are exported, and more than half of them are sold in European and American markets, which place a strong emphasis on environmental protection. GIGABYTE has set a group's environmental management target and is committed to reducing the environmental footprint of our products. This enhances our brand reputation in these markets, as well as the competitiveness of our products.

#### **(7.54.2.20) Plan for achieving target, and progress made to the end of the reporting year**

GIGABYTE also set waste reduction and water-saving targets when launching the Green Action Plan (as mentioned in Question C7.53). The water-saving target (cutting 20% of water use by 2030 compared to the 2010 level) has been achieved already, while the waste reduction target is still in progress. The target is to reduce 50% of generated waste by 3030 compared to 2010. Several actions have been implemented to reach the waste reduction target. The establishment of the "Sustainability Fund" in 2019 is one example. Its budget comes from the money saved from cutting energy consumption, water use, and generated waste in the previous year. It aims to provide monetary feedback and encourage factories, departments, and individual employees to cut emissions or propose ideas for reducing energy consumption, water use, and waste.

### **Row 2**

#### **(7.54.2.1) Target reference number**

Select from:

Oth 2

#### **(7.54.2.2) Date target was set**

03/13/2022

#### **(7.54.2.3) Target coverage**

Select from:

Organization-wide

#### **(7.54.2.4) Target type: absolute or intensity**

Select from:

Absolute

**(7.54.2.5) Target type: category & Metric (target numerator if reporting an intensity target)**

**Resource consumption or efficiency**

Percentage of paper from recycled or certified sustainable sources

**(7.54.2.7) End date of base year**

09/27/2021

**(7.54.2.8) Figure or percentage in base year**

0

**(7.54.2.9) End date of target**

12/30/2030

**(7.54.2.10) Figure or percentage at end of date of target**

100

**(7.54.2.11) Figure or percentage in reporting year**

10

**(7.54.2.12) % of target achieved relative to base year**

10.0000000000

**(7.54.2.13) Target status in reporting year**

Select from:

Underway

#### **(7.54.2.15) Is this target part of an emissions target?**

No

#### **(7.54.2.16) Is this target part of an overarching initiative?**

Select all that apply

No, it's not part of an overarching initiative

#### **(7.54.2.18) Please explain target coverage and identify any exclusions**

*The target covers the procured paper and plastic packaging materials by all BUs and subsidiaries of GIGABYTE that have products, including Channel Solution BU, Network and Communication BU, Automotive Electronics Business Unit, and G-STYLE.*

#### **(7.54.2.19) Target objective**

*1. Eliminate all use of disposable materials in packaging by 2030. 2. Mitigate plastic pollution by reducing the plastic footprint of GIGABYTE's products as well as increasing the use of reused plastics. 3. Avoid potentially increasing compliance costs on plastic packaging in the future after the Global Plastic Treaty is put into effort.*

#### **(7.54.2.20) Plan for achieving target, and progress made to the end of the reporting year**

*The target was set in 2021 and is planned to be promoted in three stages: - By 2030, all paper packaging made from virgin pulp shall be 100% certified by FSC; all manuals and color boxes shall be made of recycled pulp; the PS use shall be reduced by 20%; the plastic packaging shall be composed of at least 20% Post-Consumer Recycled Plastics (PCR). - By 2025, the use of paper made of virgin pulp shall be reduced by 20%; the PS use shall reduce by 50%, and the ratio of PCR in plastic packaging shall rise to 50%. - The ultimate goal in 2030 is to eliminate all use of disposable materials in packaging. In 2022, the Group Operation Center convened several cross-department meetings to communicate and explain the new goal of packaging reduction. The following practical strategies will be evaluated and proposed by each BU based on the characteristics of products as well as the expectations of their customers. BUs are required to provide outcomes and relevant data to the Sustainable Development Office every year in order to manage the performance and the progress of goal achievement.*

[Add row]

**(7.55.1) Identify the total number of initiatives at each stage of development, and for those in the implementation stages, the estimated CO2e savings.**

	Number of initiatives	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation	0	<i>Numeric input</i>
To be implemented	0	0
Implementation commenced	2	36.79
Implemented	15	819.73
Not to be implemented	0	<i>Numeric input</i>

*[Fixed row]*

**(7.55.2) Provide details on the initiatives implemented in the reporting year in the table below.**

**Row 1**

**(7.55.2.1) Initiative category & Initiative type**

**Energy efficiency in buildings**

Heating, Ventilation and Air Conditioning (HVAC)

**(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)**

45.27

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

- Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

- Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

231380

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2144000

### (7.55.2.7) Payback period

Select from:

- 4-10 years

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

- 16-20 years

### (7.55.2.9) Comment

*The renewal of the cooling water tower at the Headquarters building contributed to saving electricity by 91,454 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 45.27 t-CO<sub>2</sub>e.*

## Row 2

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in buildings

Lighting

### (7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

192.65

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

*Select all that apply*

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

*Select from:*

Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

984661

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2260703

### (7.55.2.7) Payback period

*Select from:*

1-3 years

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

11-15 years

### (7.55.2.9) Comment

*The replacement of lighting equipment in office areas at the Headquarters building contributed to saving electricity by 389,194 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 192.65 t-CO<sub>2</sub>e.*

## Row 3

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in buildings

Heating, Ventilation and Air Conditioning (HVAC)

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

17.03

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

#### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

87055

#### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

997500

#### (7.55.2.7) Payback period

Select from:

11-15 years

#### (7.55.2.8) Estimated lifetime of the initiative

Select from:

16-20 years

#### (7.55.2.9) Comment

*The renewal of air conditioning hosts at the Headquarters building contributed to saving electricity by 34,409 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 17.03 t-CO<sub>2</sub>e.*

### Row 4

#### (7.55.2.1) Initiative category & Initiative type

##### Energy efficiency in buildings

Other, please specify :water dispenser



### **(7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)**

5.7

### **(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur**

*Select all that apply*

Scope 2 (location-based)

### **(7.55.2.4) Voluntary/Mandatory**

*Select from:*

Voluntary

### **(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)**

29146

### **(7.55.2.6) Investment required (unit currency – as specified in C0.4)**

360000

### **(7.55.2.7) Payback period**

*Select from:*

11-15 years

### **(7.55.2.8) Estimated lifetime of the initiative**

*Select from:*

11-15 years

### **(7.55.2.9) Comment**

The replacement of all vertical water dispensers with more energy-efficient types at the Headquarters building contributed to saving electricity by 11,520 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 5.70 t-CO<sub>2</sub>e.

## Row 5

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

Machine/equipment replacement

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

39.98

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

204318

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2677500

### (7.55.2.7) Payback period

Select from:

- 11-15 years

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

- 16-20 years

### (7.55.2.9) Comment

*AI, intelligence, and automation have driven a surge in demand for high-computing (HPC) servers. Compared to normal servers, HPC servers not only require a higher power supply but also need longer hours for function testing during production. We set up a walk-in chamber expansion project at the headquarters to meet the increasing demands for HPC servers but at the same time to avoid dramatic growth in power consumption. The project contributed to saving electricity by 80,758 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 39.98 t-CO<sub>2</sub>e.*

## Row 6

### (7.55.2.1) Initiative category & Initiative type

**Energy efficiency in production processes**

- Compressed air

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

319.78

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

#### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

#### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

2099577

#### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

1201500

#### (7.55.2.7) Payback period

Select from:

<1 year

#### (7.55.2.8) Estimated lifetime of the initiative

Select from:

16-20 years

#### (7.55.2.9) Comment

*The replacement of old air compressor with permanent magnet variable frequency air compressor at Nanping Factory contributed to saving electricity by 646,024 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 319.78 t-CO<sub>2</sub>e.*

### Row 7

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

- Process optimization

### (7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

1.76

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

*Select all that apply*

- Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

*Select from:*

- Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

11559

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2952

### (7.55.2.7) Payback period

*Select from:*

- <1 year

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

- 6-10 years

### (7.55.2.9) Comment

*Accelerating the process of determining speed by adding plug-in speed-measuring jigs at Nanping Factory contributed to saving electricity by 3,557 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 1.76 t-CO<sub>2</sub>e.*

## Row 8

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

- Process optimization

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

0.9

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

- Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

- Voluntary

#### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

5879

#### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

38000

#### (7.55.2.7) Payback period

Select from:

4-10 years

#### (7.55.2.8) Estimated lifetime of the initiative

Select from:

Ongoing

#### (7.55.2.9) Comment

*The replacement of CNC machines with chamfering machine equipment contributed to saving electricity by 1,809 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 0.90 t-CO<sub>2</sub>e.*

### Row 9

#### (7.55.2.1) Initiative category & Initiative type

**Energy efficiency in production processes**

Waste heat recovery

#### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

**(7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur**

Select all that apply

- Scope 2 (location-based)

**(7.55.2.4) Voluntary/Mandatory**

Select from:

- Voluntary

**(7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)**

283920

**(7.55.2.6) Investment required (unit currency – as specified in C0.4)**

630000

**(7.55.2.7) Payback period**

Select from:

- 1-3 years

**(7.55.2.8) Estimated lifetime of the initiative**

Select from:

- Ongoing

**(7.55.2.9) Comment**

*Re-designing the testing cabinet for laptop products at Nanping Factory. The re-designing enables the waste heat generated by laptop products from several testing*



stages to be collected and then provide the ambient temperature required for the burn-in test. This waste heat recovery design contributed to saving electricity by 87,360 kWh in the year. The emission factor of power in 2023 for Taiwan sites was 0.495kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 43.24 t-CO<sub>2</sub>e.

## Row 10

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

Machine/equipment replacement

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

83.01

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

391300

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

1245200

### (7.55.2.7) Payback period

Select from:

4-10 years

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

11-15 years

### (7.55.2.9) Comment

*The introduction of an energy-saving nitrogen machine at Dongguan Factory contributed to saving electricity by 107,500 kWh in the year. The emission factor of power in 2023 for southern China area was 0.7722kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 83.01 t-CO<sub>2</sub>e.*

## Row 11

### (7.55.2.1) Initiative category & Initiative type

**Energy efficiency in buildings**

Lighting

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

19.44

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

#### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

#### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

98000

#### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

51806

#### (7.55.2.7) Payback period

Select from:

<1 year

#### (7.55.2.8) Estimated lifetime of the initiative

Select from:

11-15 years

#### (7.55.2.9) Comment

*The installation of 29 sets of solar street lightings at Ningbo Factory contributed to saving electricity by 25,000 kWh in the year. The emission factor of power in 2023 for eastern China area was 0.7777kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 19.44 t-CO<sub>2</sub>e.*

### Row 12

#### (7.55.2.1) Initiative category & Initiative type

## Energy efficiency in buildings

Heating, Ventilation and Air Conditioning (HVAC)

### (7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

14.78

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

*Select all that apply*

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

*Select from:*

Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

74480

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2693

### (7.55.2.7) Payback period

*Select from:*

<1 year

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

Ongoing

### (7.55.2.9) Comment

*Installing a WIFI control module in the canteen's air conditioner at Ningbo Factory contributed to saving electricity by 19,000 kWh in the year. The emission factor of power in 2023 for eastern China area was 0.7777kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 14.78 t-CO<sub>2</sub>e.*

## Row 13

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

Cooling technology

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

2.64

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

13328

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

2851

### (7.55.2.7) Payback period

Select from:

<1 year

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

6-10 years

### (7.55.2.9) Comment

*Installing a WIFI control module for air-conditioning fan cabinet machines at Ningbo Factory contributed to saving electricity by 3,400 kWh in the year. The emission factor of power in 2023 for eastern China area was 0.7777kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 2.64 t-CO<sub>2</sub>e.*

## Row 14

### (7.55.2.1) Initiative category & Initiative type

**Energy efficiency in production processes**

Smart control system

### (7.55.2.2) Estimated annual CO<sub>2</sub>e savings (metric tonnes CO<sub>2</sub>e)

5.98

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

Select all that apply

- Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

Select from:

- Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

30149

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

836

### (7.55.2.7) Payback period

Select from:

- <1 year

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

- 6-10 years

### (7.55.2.9) Comment

*Installing sensors in warehouses at Ningbo Factory to reduce electricity consumption. This contributed to saving electricity by 7,691 kWh in the year. The emission factor of power in 2023 for eastern China area was 0.7777kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 5.98 t-CO<sub>2</sub>e.*

## Row 15

### (7.55.2.1) Initiative category & Initiative type

#### Energy efficiency in production processes

- Process optimization

### (7.55.2.2) Estimated annual CO2e savings (metric tonnes CO2e)

27.56

### (7.55.2.3) Scope(s) or Scope 3 category(ies) where emissions savings occur

*Select all that apply*

- Scope 2 (location-based)

### (7.55.2.4) Voluntary/Mandatory

*Select from:*

- Voluntary

### (7.55.2.5) Annual monetary savings (unit currency – as specified in C0.4)

138917

### (7.55.2.6) Investment required (unit currency – as specified in C0.4)

5632

### (7.55.2.7) Payback period

*Select from:*



<1 year

### (7.55.2.8) Estimated lifetime of the initiative

Select from:

11-15 years

### (7.55.2.9) Comment

*The improvement of electromagnetic steam generators at Ningbo Factory contributed to saving electricity by 35,438 kWh in the year. The emission factor of power in 2023 for eastern China area was 0.7777kg-CO<sub>2</sub>e per kWh, consistent with that used in the greenhouse gas emission inventory in the same year. Therefore, the estimated annual CO<sub>2</sub>e savings were 27.56 t-CO<sub>2</sub>e.*

[Add row]

## (7.55.3) What methods do you use to drive investment in emissions reduction activities?

### Row 1

#### (7.55.3.1) Method

Select from:

Compliance with regulatory requirements/standards

#### (7.55.3.2) Comment

*1. In January 2023, the Taiwan government legislated "net-zero emissions by 2050" as a national goal through the "Climate Change Response Act". In the future, several managing and supporting measures will be implemented, including carbon fees, extending the scope of greenhouse emission inventories and verifications, implementing renewable energy sources, etc. 2. The "Corporate Social Responsibility Best Practice Principles for TWSE/GTSM Listed Companies", issued by Taiwan Stock Exchange Corporation (TWSE) and GreTai Securities Market (GTSM) in 2014, advises TWSE/GTSM listed companies to adopt internationally accepted standards or guidelines to enforce corporate GHG inventory and disclosure, and publish CSR reports annually. 3. Not only external regulations but also internal self-management drive our incentive to invest in emissions reduction initiatives. In 2009, GIGABYTE launched the "Green Action Plan" as the central sustainable development policy and guiding strategy. The Action includes an emission reduction target, cutting 50% of emissions by 2025 compared to 2009. To track and manage emission reduction performance, GIGABYTE has*

implemented a company-wide GHG emissions inventory following ISO 14064-1 and has obtained third-party certifications every year since 2010.

## Row 2

### (7.55.3.1) Method

Select from:

- Internal incentives/recognition programs

### (7.55.3.2) Comment

*GIGABYTE established the "Green Sustainable Development Committee" in 2009, serving a core role in promoting and implementing company-wide CSR policies and strategies and supervising all related processes and performance. The Sustainable Development Office serves as the convener of the Committee. Targeting sustainable operation and development, the Committee sets up sub-targets for each business group or department. Cross-department and cross-business-unit meetings are carried out monthly, and each unit reports its progress towards the sub-targets. Moreover, all bases, mainly the Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory have to report their CSR-related information and data to the Sustainable Development Office their environmental performance statistics yearly, including energy use, water use, generated waste, etc. The Sustainable Development Office would further integrate and analyze the data and information collected from each unit and factory. Finally, the final report, which contains the group's overall performance and individual performance on each basis, would be reported to the Board. Meanwhile, the results would be disclosed on the internal information platform GEIP and also made public through various official channels such as CSR reports and the CSR official website.*

## Row 3

### (7.55.3.1) Method

Select from:

- Dedicated budget for low-carbon product R&D

### (7.55.3.2) Comment

*GIGABYTE appropriates around 3% in R&D every year. With the increasing demand and expanding markets for low-carbon and energy-saving IT products, our expenditure in R&D has also increased in recent years. In 2023, TWD 2.75 billion was dedicated to R&D.*

## Row 4

### (7.55.3.1) Method

Select from:

- Dedicated budget for other emissions reduction activities

### (7.55.3.2) Comment

*GIGABYTE initiated the "Sustainability Fund" in 2019. The budget comes from the monetary savings from cutting power consumption, water use, and waste in the previous year. In 2024, the budget for the Sustainability Fund is TWD 800,000. The Sustainability Fund aims at three purposes: - Reward the factories that cut the most emissions in the previous year. - Encourage the individuals or departments that propose excellent emission reduction programs or high-quality eco-friendly products (proposal reward application). - Invest in other CSR-related projects such as the purchase of renewable energy certificates and tree planting. So far, the Fund has given back TWD1,819,863 to factories, units, or individual employees. By providing monetary rewards, we believe the new project will drive stronger incentives among factories and employees to invest more in emissions reduction activities.*

## Row 5

### (7.55.3.1) Method

Select from:

- Employee engagement

### (7.55.3.2) Comment

*GIGABYTE's "Green Action Plan" also regularly holds guest lectures in offices or factories to educate our employees on climate change and environmental protection. Besides, we encourage employees to participate in external activities by local governments and NGOs. In 2015, GIGABYTE started up a voluntary activity to advocate reducing the use of plastics. Wastes randomly abandoned or improperly treated have destroyed Taiwan's beautiful landscape, and plastics account for the most. Given that, we initiated a 5-to-7-year project to complete a route around Taiwan by foot and, meanwhile collect wastes along the way. The trekking plan was accomplished on Earth Day, April 22, 2023. In the past few years, accumulatively, 1,976 person times of employees have dedicated 32,388 hours to picking and removing 15,722.38kg of waste with footprints stretching 1,119.46km around the Taiwan island.*

*[Add row]*

## **(7.74.1) Provide details of your products and/or services that you classify as low-carbon products.**

### **Row 1**

#### **(7.74.1.1) Level of aggregation**

Select from:

- Group of products or services

#### **(7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon**

Select from:

- No taxonomy used to classify product(s) or service(s) as low carbon

#### **(7.74.1.3) Type of product(s) or service(s)**

##### **Other**

- Other, please specify :Server products

#### **(7.74.1.4) Description of product(s) or service(s)**

*With the accelerating growth of cloudification and digitalization for enterprise and individual applications, coupled with the increasing demand for 5G, metaverse, extended reality, and self-driving cars, HPC servers and data centers have become more and more vital. However, these facilities account for 1% of the world's total electricity consumption, according to the Environmental Investigation Agency (EIA), and the ratio is only expected to increase as technology advances. GIGABYTE has been developing and innovating HPC servers with advanced cooling technology that enables superior scalability, higher computing performance, and better energy efficiency. For example, GIGABYTE's Immersion Cooling Solution can reduce energy consumption of a data center by improving its power usage effectiveness (PUE) from 1.7, a level a traditional air-cooled room used to have, to 1.02 at the best.*

#### **(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Select from:

- Yes

### **(7.74.1.6) Methodology used to calculate avoided emissions**

Select from:

- Other, please specify :Product Category Rules (PCRs) issued by Taiwan EPA, Energy Star Standard, and GHG Protocol Scope 3 Guidance

### **(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Select from:

- Use stage

### **(7.74.1.8) Functional unit used**

*Average emissions from usage within warranty period per piece of server product (t-CO<sub>2</sub>e/pcs).*

### **(7.74.1.9) Reference product/service or baseline scenario used**

*Compare the emissions from the use stage of a server between its generations. Ideally, the carbon footprint of newer generations should be lower than older ones.*

### **(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario**

Select from:

- Use stage

### **(7.74.1.11) Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

4456.4

### **(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions**

*GIGABYTE adjusted the inventory methodology of scope 3 emissions from the use stage of 7 main product types in 2021. To calculate the emissions from using GIGABYTE's server products, we obtain energy efficiency data of the servers at several predefined operating modes from R&D departments. Also, two assumptions are given in the calculating process: 1. Given that all GIGABYTE server products will be used for 3 years, a period as same as the basic warranty period. 2. We assume that the*

servers sold in the year are the newest models, and thus ask R&D departments to provide the power information of the latest generation for each server model. After collecting the power information and the sales amount in the year, the total emissions from the use stage of the server products sold in the year could be calculated. For more details about the method and formula please refer to Question C7.8 "Use of Sold Products". According to the result, the average emissions from the use stage within the warranty period per piece of server product was 9,689.94 kg-CO<sub>2</sub>e in 2022 and 9,550.99 kg-CO<sub>2</sub>e in 2023. Thus, avoiding 138.95 kg-CO<sub>2</sub>e at the use stage per piece of server product is concluded. If multiplying the figure with the total sales volume of servers in 2023, we could estimate that 4,456.40 t-CO<sub>2</sub>e have been avoided in the year.

### (7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

38.53

## Row 2

### (7.74.1.1) Level of aggregation

Select from:

Product or service

### (7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

No taxonomy used to classify product(s) or service(s) as low carbon

### (7.74.1.3) Type of product(s) or service(s)

Power

Other, please specify :Laptops

### (7.74.1.4) Description of product(s) or service(s)

Since 2023, GIGABYTE has launched a new series of creator laptops of which environmental friendliness is improved through innovation in material selection, structure redesign, and appearance treatment. 1. The aluminum used for laptop cases is 100% from recycled aluminum ingots and scraps collected from other aluminum

processing. 2. The eco-OLED display uses one-eighth the amount of plastic as a traditional OLED, and its production has been certified to be 100% recyclable by UL Zero Waste To Landfill. 3. Change the appearance treatment processing from coating to anodizing to avoid using highly polluting and emission-intensive solvents and inks.

### **(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Select from:

Yes

### **(7.74.1.6) Methodology used to calculate avoided emissions**

Select from:

Other, please specify :GHG Protocol Scope 3 Guidance, SimaPro 9.1 database

### **(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Select from:

Cradle-to-gate

### **(7.74.1.8) Functional unit used**

*Emissions from the production for laptop products, focusing on the case, the display, and the appearance treatment processing (kg-CO<sub>2</sub>e/piece)*

### **(7.74.1.9) Reference product/service or baseline scenario used**

*The estimated emissions from the traditional production processes of a laptop product's case, display, and appearance treatment.*

### **(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario**

Select from:

Cradle-to-gate

### **(7.74.1.11) Estimated avoided emissions (metric tons CO<sub>2</sub>e per functional unit) compared to reference product/service or baseline scenario**

174.22

### (7.74.1.12) Explain your calculation of avoided emissions, including any assumptions

Calculations of avoided emissions compare the carbon footprints of the original and innovative processing of the laptop's case, OLED display, and appearance. For a piece of AERO 16, the innovative processing mentioned above can reduce 9.52 kg-CO<sub>2</sub>e by incorporating the following: 1. 5.96kg of emissions is avoided by using recycled aluminum ingots and scraps collected from other aluminum processing instead of virgin aluminum ingots. The data estimation refers to the Taiwan EPA Product Carbon Footprint Platform database. 2. 1 kg of emission is avoided by changing appearance processing from coating to anodizing, consequently using fewer chemical solvents and inks. The emission factors are derived from the SimaPro 9.1 database. 3. 2.56kg of emissions are saved from narrowing down the screen frame and choosing an eco-OLED display composed of one-eighth of plastics compared to a traditional OLED display. The estimation is made based on the data provided by the OLED display supplier and the Taiwan EPA Product Carbon Footprint Platform database. According to internal statistics, we sold out around 18,300 units of these laptop models in 2023, thus we could estimate that 174.22 t-CO<sub>2</sub>e have been avoided in the year.

### (7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year

1.02

#### Row 4

### (7.74.1.1) Level of aggregation

Select from:

Group of products or services

### (7.74.1.2) Taxonomy used to classify product(s) or service(s) as low-carbon

Select from:

No taxonomy used to classify product(s) or service(s) as low carbon

### (7.74.1.3) Type of product(s) or service(s)

#### Power

Other, please specify :Packaging cartons of laptops



#### **(7.74.1.4) Description of product(s) or service(s)**

*As mentioned in target Oth 3 disclosed in Question C7.54, GIGABYTE set up a goal to reduce or increase the percentage of recycled materials in the packings of products and the components purchased from suppliers. To achieve the target, the packaging cartons of laptop products have been redesigned. By minimizing the size of outer cartons as much as possible, the use of packaging materials and the indirect emissions from the shipping process and end-of-life treatment can be reduced. Thus, we regard this as a kind of low-carbon product.*

#### **(7.74.1.5) Have you estimated the avoided emissions of this low-carbon product(s) or service(s)**

Select from:

Yes

#### **(7.74.1.6) Methodology used to calculate avoided emissions**

Select from:

Other, please specify :Product Category Rules (PCRs) issued by Taiwan EPA, GHG Protocol Scope 3 Guidance, and SimaPro 9.1 database

#### **(7.74.1.7) Life cycle stage(s) covered for the low-carbon product(s) or services(s)**

Select from:

Cradle-to-gate + end-of-life stage

#### **(7.74.1.8) Functional unit used**

*Total indirect emissions per year from the production and end-of-life treatment stages of packing materials used for laptop products (t-CO<sub>2</sub>e/year)*

#### **(7.74.1.9) Reference product/service or baseline scenario used**

*The total indirect emissions per year from the production and end-of-life treatment stages of packing materials used for laptop products before re-designing.*

#### **(7.74.1.10) Life cycle stage(s) covered for the reference product/service or baseline scenario**

Select from:

Cradle-to-gate + end-of-life stage

### **(7.74.1.11) Estimated avoided emissions (metric tons CO2e per functional unit) compared to reference product/service or baseline scenario**

71.69

### **(7.74.1.12) Explain your calculation of avoided emissions, including any assumptions**

*To assess the avoided emissions, we first obtain actual weight and size figures of laptop packings before and after re-designing. Given that the shipment volume is 95,500 pieces each year, the total volume of materials used in outer packings before re-designing is 1,180.16 kg less than before per year. After conversion by the emissions factors provided by the Carbon Footprint Information Platform of Taiwan EPA, the reduced packaging contributes to avoiding 71.69 t-CO2e emissions from upstream production and end-of-life treatment stages.*

### **(7.74.1.13) Revenue generated from low-carbon product(s) or service(s) as % of total revenue in the reporting year**

8

[Add row]

### **(7.79.1) Provide details of the project-based carbon credits canceled by your organization in the reporting year.**

#### **Row 1**

#### **(7.79.1.1) Project type**

Select from:

Mixed renewables

#### **(7.79.1.2) Type of mitigation activity**

Select from:

- Emissions reduction

### (7.79.1.3) Project description

*GIGABYTE partnered with the Plant-for-the-Planet Foundation from Germany for a second time to launch a new 5-year "Plant Trees x Carbon Offset" partnership model at the end of 2022. The project commits to achieving 2,500 metric tons of carbon reduction a year by planting 12,500 trees between 2023 and 2027. For each metric ton of carbon reduction (planting 5 trees), GIGABYTE donates an additional EUR2.5 toward the training of climate justice ambassadors and purchases and retires 2,500 metric tons of CERs from UN CDM projects. In this program, GIGABYTE does not purchase CERs directly but cancels the CERs the Plant-for-the-Planet has purchased from CDM projects in advance, as the objective of this program is not to obtain carbon credit but to invest in planting trees. At the end of each year, the Plant-for-the-Planet issues a Certificate of Change to GIGABYTE, stating that how many trees have been planted and how many CERs have been permanently removed from the registry in the year by the program. This program, as well as the 2023 Certificate of Change, has been disclosed on p.34 and p.81 in the 2023 GIGABYTE Sustainability Report: <https://csr.gigabyte.tw/en/csr-report-en/> Since the CERs retired in this program are not purchased directly by GIGABYTE, they were not counted towards GIGABYTE's group GHG inventory and carbon reduction target progress for 2023.*

### (7.79.1.4) Credits canceled by your organization from this project in the reporting year (metric tons CO2e)

2500

### (7.79.1.5) Purpose of cancelation

Select from:

- Voluntary offsetting

### (7.79.1.6) Are you able to report the vintage of the credits at cancelation?

Select from:

- No

### (7.79.1.8) Were these credits issued to or purchased by your organization?

Select from:

- Purchased

### **(7.79.1.9) Carbon-crediting program by which the credits were issued**

Select from:

- CDM (Clean Development Mechanism)

### **(7.79.1.10) Method the program uses to assess additionality for this project**

Select all that apply

- Other, please specify :The statement has no details on additionality analysis, but states that the VER credits are from UN CER projects.

### **(7.79.1.11) Approaches by which the selected program requires this project to address reversal risk**

Select all that apply

- Other, please specify :The statement has no details on risk of reversal, but states that the VER credits are from UN CER projects.

### **(7.79.1.12) Potential sources of leakage the selected program requires this project to have assessed**

Select all that apply

- Other, please specify :The statement has no details on potential sources of leakage, but states that the VER credits are from UN CER projects.

### **(7.79.1.13) Provide details of other issues the selected program requires projects to address**

*The statement GIGABYTE received from the Plant-for-the-Planet has no details on the UN CDM projects issuing the CERs removed from our program. GIGABYTE does not directly purchase the CERs from CDM projects.*

### **(7.79.1.14) Please explain**

*As mentioned above, this program is a cooperation between GIGABYTE and the Plant-for-the-Planet Foundation. The project is on the basis of GIGABYTE's commitment to reducing 2,500 t-CO<sub>2</sub>e per year between 2023 and 2027. The reduction will be realized by planting 12,500 trees every year, assuming each tree absorbs 200 kg-CO<sub>2</sub>e in its lifetime, and at the same time purchasing and canceling 2,500 CERs from CDP projects. The price for planting a tree is 1, and for canceling a CER the price varies every year depending on the carbon price level of available CDM projects. In this program, GIGABYTE does not purchase CERs directly but cancels the CERs the Plant-for-the-Plant has purchased from CDM projects in advance. At the end of each year, the Plant-for-the-Planet issues a Certificate of Change to GIGABYTE, stating how many trees have been planted and how many CERs have been permanently removed from the registry in the year by the program. The CERs retired from this program are not*

*purchased directly by GIGABYTE. We do not have the credit serial numbers, nor did GIGABYTE include them in our group GHG inventory and emissions reduction target progress for 2023.*

*[Add row]*

## C9. Environmental performance - Water security

### (9.1.1) Provide details on these exclusions.

#### Row 1

##### (9.1.1.1) Exclusion

Select from:

- Specific groups, businesses, or organizations

##### (9.1.1.2) Description of exclusion

*The Taipei Silicon Valley Park Office in Xindian, in which GIGABYTE's substantial subsidiaries Bestyield International, G-STYLE, GIGAIPC, and Selita Precision, are located, is excluded from our disclosure of water-related data.*

##### (9.1.1.3) Reason for exclusion

Select from:

- Data is not available

##### (9.1.1.4) Primary reason why data is not available

Select from:

- Challenges associated with data collection and/or quality

##### (9.1.1.7) Percentage of water volume the exclusion represents

Select from:

- 11-20%

### (9.1.1.8) Please explain

All GIGABYTE bases use water primarily for drinking, watering, and flushing toilets. The production process involves primarily assembling electronic parts, which do not require a lot of water. Thus, the amount of water consumed depends primarily on the number of people on site. According to human resource statistics, the number of employees of bases excluded from the data coverage accounted for 18.74% of the total in 2023. Accordingly, we estimate the percentage of water volume from the exclusion to be around 18.74%.

[Add row]

## (9.2) Across all your operations, what proportion of the following water aspects are regularly measured and monitored?

### Water withdrawals – total volumes

#### (9.2.1) % of sites/facilities/operations

Select from:

76-99

#### (9.2.2) Frequency of measurement

Select from:

Yearly

#### (9.2.3) Method of measurement

Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office for data compilation each year. Afterward, the Company's water withdrawal information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>), and also on the CSR official website (<https://csr.gigabyte.tw/en/environmental-aspect-en/>)

#### (9.2.4) Please explain

GIGABYTE annually monitors water withdrawals at its headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory. The monitoring boundary excludes Taipei

*Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. 18.74% of employees worked in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%.*

## **Water withdrawals – volumes by source**

### **(9.2.1) % of sites/facilities/operations**

Select from:

76-99

### **(9.2.2) Frequency of measurement**

Select from:

Yearly

### **(9.2.3) Method of measurement**

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office for data compilation each year. Afterward, the Company's water withdrawal information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>).*

### **(9.2.4) Please explain**

*GIGABYTE monitors the quantity of withdrawn water of its headquarters, Nanping factory, Dongguan factory, and Ningbo factory on a yearly base. The monitoring boundary excludes Taipei Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. As these offices are part of commercial/office buildings, we cannot precisely separate GIGABYTE's water withdrawals from the total Building's withdrawals. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. There were 18.74% of employees working in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%.*

## **Water withdrawals quality**

### **(9.2.1) % of sites/facilities/operations**



Select from:

76-99

## (9.2.2) Frequency of measurement

Select from:

Yearly

## (9.2.3) Method of measurement

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office for data compilation each year. Afterward, the Company's water withdrawal information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>).*

## (9.2.4) Please explain

*GIGABYTE monitors water withdrawals at its headquarters, Nanping factory, Dongguan factory, and Ningbo factory annually. The monitoring boundary excludes Taipei Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. As these offices are part of commercial/office buildings, we cannot precisely separate GIGABYTE's water withdrawals from the total Building's withdrawals. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. There were 18.74% of employees working in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%.*

## Water discharges – total volumes

### (9.2.1) % of sites/facilities/operations

Select from:

76-99

### (9.2.2) Frequency of measurement

Select from:

Yearly

### (9.2.3) Method of measurement

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office for data compilation each year. Water withdrawals are primarily for domestic and drinking purposes. It is not possible to directly measure water discharges, so a percentage, ranging from 80-90%, is used to estimate the discharged water volume.*

### (9.2.4) Please explain

*GIGABYTE monitors water withdrawals at its headquarters, Nanping factory, Dongguan factory, and Ningbo factory annually. The monitoring boundary excludes Taipei Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. As these offices are part of commercial/office buildings, we cannot precisely separate GIGABYTE's water withdrawals from the total Building's withdrawals. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. There were 18.74% of employees working in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%. The Company's water discharge information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>), and also on the CSR official website (<https://csr.gigabyte.tw/en/environmental-aspect-en/>)*

## Water discharges – volumes by destination

### (9.2.1) % of sites/facilities/operations

Select from:

76-99

### (9.2.2) Frequency of measurement

Select from:

Yearly

### (9.2.3) Method of measurement

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office each year. Water withdrawals are primarily for domestic and drinking purposes, so the discharge quality complies with local regulations of standard effluent parameters. In addition, it is not possible to measure discharges directly, so a percentage, ranging from 80-90%, is used to estimate the discharged volume.*

#### (9.2.4) Please explain

*In GIGABYTE's factories, assembly is the primary manufacturing process, which does not require high-quality water nor consumes too much water. Running water is sufficient for basic factory facilities and domestic needs. All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers and then enters the local municipal wastewater treatment plants. The Company's water discharge information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>), and also on the CSR official website (<https://csr.gigabyte.tw/en/environmental-aspect-en/>)*

### Water discharges – volumes by treatment method

#### (9.2.1) % of sites/facilities/operations

Select from:

Not relevant

#### (9.2.4) Please explain

*All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers which connect to local wastewater treatment plants. So we do not know the methods of the wastewater at the treatment plants.*

### Water discharge quality – by standard effluent parameters

#### (9.2.1) % of sites/facilities/operations

Select from:

76-99

#### (9.2.2) Frequency of measurement

Select from:

Yearly

#### (9.2.3) Method of measurement

Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office each year. Water withdrawals are primarily for domestic and drinking purposes, so the discharge quality complies with local regulations of standard effluent parameters. In addition, it is not possible to measure discharges directly, so a percentage, ranging from 80-90%, is used to estimate the discharged volume.

#### (9.2.4) Please explain

In GIGABYTE's factories, assembly is the primary manufacturing process, which does not require high-quality water nor consumes too much water. Running water is sufficient for basic factory facilities and domestic needs. All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers, and thus is in compliance with regulations regarding standard effluent parameters. The Company's water discharge information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>), and also on the CSR official website (<https://csr.gigabyte.tw/en/environmental-aspect-en/>)

### Water discharge quality – emissions to water (nitrates, phosphates, pesticides, and/or other priority substances)

#### (9.2.1) % of sites/facilities/operations

Select from:

Not relevant

#### (9.2.4) Please explain

In GIGABYTE's factories, assembly is the primary manufacturing process, which does not require high quality water nor consumes too much water. Tap water is sufficient for basic factory facilities and domestic needs. All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers. Therefore, we do not track emissions to our wastewater.

### Water discharge quality – temperature

#### (9.2.1) % of sites/facilities/operations

Select from:

Not relevant

#### (9.2.4) Please explain

*In GIGABYTE's factories, assembly is the primary manufacturing process, which does not require high quality water nor consumes too much water. Tap water is sufficient for basic factory facilities and domestic needs. All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers. Therefore, we do not track the temperature of our wastewater.*

## **Water consumption – total volume**

### **(9.2.1) % of sites/facilities/operations**

Select from:

76-99

### **(9.2.2) Frequency of measurement**

Select from:

Yearly

### **(9.2.3) Method of measurement**

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory collect water use information from water bills and report it to the Sustainable Development Office for data compilation each year. Afterward, the Company's water consumption information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>).*

### **(9.2.4) Please explain**

*GIGABYTE monitors water withdrawals at its headquarters, Nanping factory, Dongguan factory, and Ningbo factory annually. The monitoring boundary excludes Taipei Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. As these offices are part of commercial/office buildings, we cannot precisely separate GIGABYTE's water withdrawals from the total Building's withdrawals. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. There were 18.74% of employees working in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%.*

## **Water recycled/reused**

### **(9.2.1) % of sites/facilities/operations**

Select from:

100%

### (9.2.2) Frequency of measurement

Select from:

Yearly

### (9.2.3) Method of measurement

*Recycled water is estimated by multiplying the actual water consumption of the production line by the assumed recycling ratio of the water recycling equipment.*

### (9.2.4) Please explain

*Only two factories in China, Dongguan and Ningbo Factories, have water reuse facilities. Two factories report the estimated volume of reused water each year to the Sustainable Development Office.*

## **The provision of fully-functioning, safely managed WASH services to all workers**

### (9.2.1) % of sites/facilities/operations

Select from:

76-99

### (9.2.2) Frequency of measurement

Select from:

Yearly

### (9.2.3) Method of measurement

*Secondary sources: Headquarters, Nanping Factory, Dongguan Factory, and Ningbo Factory withdraw tap water from local legal running water companies. Water use information can be collected from water bills and each base reports it to the Sustainable Development Office for data compilation each year. The Company's water*

withdrawal information is publicly disclosed in annual sustainability reports in accordance with the GRI Standards (<https://csr.gigabyte.tw/en/csr-report-en/>)

#### **(9.2.4) Please explain**

GIGABYTE withdraws tap water from local legal running water companies for its domestic needs. Also, several qualified water dispensers are installed in offices and factories to ensure employee safety and regular inspections are conducted. We monitor water withdrawals at the headquarters, Nanping factory, Dongguan factory, and Ningbo factory annually. The monitoring boundary excludes Taipei Silicon Valley Park Offices, where some departments and substantial subsidiaries are located, as well as other small overseas offices. As these offices are part of commercial/office buildings, we cannot precisely separate GIGABYTE's water withdrawals from the total Building's withdrawals. In GIGABYTE, the volume of water withdrawals is correlated with the number of users. 18.74% of employees worked in these excluded offices in 2023; therefore, this proportion ranges from 76% to 99%.

[Fixed row]

#### **(9.2.2) What are the total volumes of water withdrawn, discharged, and consumed across all your operations, how do they compare to the previous reporting year, and how are they forecasted to change?**

##### **Total withdrawals**

#### **(9.2.2.1) Volume (megaliters/year)**

249.77

#### **(9.2.2.2) Comparison with previous reporting year**

Select from:

Lower

#### **(9.2.2.3) Primary reason for comparison with previous reporting year**

Select from:

Increase/decrease in business activity

#### **(9.2.2.4) Five-year forecast**

Select from:

Lower

### (9.2.2.5) Primary reason for forecast

Select from:

Increase/decrease in business activity

### (9.2.2.6) Please explain

1. GIGABYTE's total water withdrawal in 2023 decreased by 1.26% compared to 2022 (252.964 megaliters). GIGABYTE has set up the 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. Water discharge decreased physically in 2023, but did not reach the 3% target, so we consider the decrease rate to be "lower" instead of "much lower". 2. GIGABYTE's total water withdrawal over the past five years (2019-2023) has decreased by 15.16%, so we forecast water withdrawal to continue to decline. However, considering the significant changes in demand from markets in recent years, which have resulted in the reorganization of GIGABYTE's product portfolio, we cannot expect the reduction in water usage to be much lower because several uncertainties remain.

## Total discharges

### (9.2.2.1) Volume (megaliters/year)

211.97

### (9.2.2.2) Comparison with previous reporting year

Select from:

Lower

### (9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

Increase/decrease in business activity

### (9.2.2.4) Five-year forecast



Select from:

Lower

### (9.2.2.5) Primary reason for forecast

Select from:

Increase/decrease in business activity

### (9.2.2.6) Please explain

1. GIGABYTE measures its volume of water discharge based on a specific percentage (80-90%) of water withdrawal because most of the withdrawn water is for domestic use. The total water discharge in 2023 decreased by 0.96% compared to 2022 (214.033 megaliters). GIGABYTE has set up a 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. Water discharge decreased physically in 2023, but did not reach the 3% target, so we consider the decrease rate to be "lower" instead of "much lower". 2. GIGABYTE's total water discharge over the past five years (2019-2023) has decreased by 15.67%, so we forecast water withdrawal to continue to decline. However, considering the significant changes in demand from markets in recent years, which have resulted in the reorganization of GIGABYTE's product portfolio, we cannot expect the reduction in water usage to be much lower because several uncertainties remain.

## Total consumption

### (9.2.2.1) Volume (megaliters/year)

37.8

### (9.2.2.2) Comparison with previous reporting year

Select from:

Lower

### (9.2.2.3) Primary reason for comparison with previous reporting year

Select from:

Increase/decrease in business activity

#### (9.2.2.4) Five-year forecast

Select from:

Lower

#### (9.2.2.5) Primary reason for forecast

Select from:

Increase/decrease in business activity

#### (9.2.2.6) Please explain

1. To estimate water consumption, GIGABYTE uses a company-wide calculation that subtracts discharges from withdrawals. The total water consumption in 2023 decreased by 2.91% compared to 2022 (38.931 megaliters). GIGABYTE has set up a 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. Water consumption decreased physically in 2023, but did not reach the 3% target, so we consider the decrease rate to be "lower". 2. GIGABYTE's total water consumption over the past five years (2019-2023) has decreased by 12.18%, so we forecast water withdrawal to continue to decline. However, considering the significant changes in demand from markets in recent years, which have resulted in the reorganization of GIGABYTE's product portfolio, we cannot expect the reduction in water usage to be much lower because several uncertainties remain.

[Fixed row]

**(9.2.4) Indicate whether water is withdrawn from areas with water stress, provide the volume, how it compares with the previous reporting year, and how it is forecasted to change.**

#### (9.2.4.1) Withdrawals are from areas with water stress

Select from:

Yes

#### (9.2.4.2) Volume withdrawn from areas with water stress (megaliters)

**(9.2.4.3) Comparison with previous reporting year**

Select from:

- Much lower

**(9.2.4.4) Primary reason for comparison with previous reporting year**

Select from:

- Increase/decrease in business activity

**(9.2.4.5) Five-year forecast**

Select from:

- Lower

**(9.2.4.6) Primary reason for forecast**

Select from:

- Other, please specify :Water shortage due to changing rainfall pattern

**(9.2.4.7) % of total withdrawals that are withdrawn from areas with water stress**

15.69

**(9.2.4.8) Identification tool**

Select all that apply

- WRI Aqueduct

**(9.2.4.9) Please explain**

*GIGABYTE conducted a water risk analysis of all its global operational sites for the first time in 2019 using the WRI Aqueduct's global water risk mapping tool. Updates to the analysis are made regularly, and the last one took place in 2024. According to the latest analysis, Ningbo Factory and most subsidiaries and service centers in European countries, the US, Japan, and Australia will experience high or extremely high water stress by 2030. Of these sites, only Ningbo Factory reports water withdrawals to Headquarters annually. Please see the explanation in Question C9.1. Water withdrawals at Ningbo Factory in 2023 accounted for 15.7% of all measured and reported withdrawal volumes. The proportion was lower than that in 2022 (18.36%). Taiwan, China, Europe, North America, etc., more and more regions in the world are experiencing severe seasonal rainfall unpredictability and substantial threats. In comparison with the last analysis in 2022, more of GIGABYTE's operational sites in Europe have been classified as facing "extremely high" water stress. As climate change gains seriousness, the scope of our operational sites located in high water-stress areas is likely to expand. Therefore, although we do not track water use at these sites, we expect water withdrawals from areas with water stress to decrease in the future.*

[Fixed row]

### **(9.2.7) Provide total water withdrawal data by source.**

#### **Fresh surface water, including rainwater, water from wetlands, rivers, and lakes**

##### **(9.2.7.1) Relevance**

Select from:

Not relevant

##### **(9.2.7.5) Please explain**

*GIGABYTE does not withdraw water from fresh surface water.*

#### **Brackish surface water/Seawater**

##### **(9.2.7.1) Relevance**

Select from:

Not relevant

##### **(9.2.7.5) Please explain**

*GIGABYTE does not withdraw water from brackish surface water/Seawater.*

## **Groundwater – renewable**

### **(9.2.7.1) Relevance**

Select from:

Not relevant

### **(9.2.7.5) Please explain**

*GIGABYTE does not withdraw water from renewable groundwater.*

## **Groundwater – non-renewable**

### **(9.2.7.1) Relevance**

Select from:

Not relevant

### **(9.2.7.5) Please explain**

*GIGABYTE does not withdraw water from non-renewable groundwater.*

## **Produced/Entrained water**

### **(9.2.7.1) Relevance**

Select from:

Not relevant

### **(9.2.7.5) Please explain**

GIGABYTE does not withdraw water from produced/entrained water.

## Third party sources

### (9.2.7.1) Relevance

Select from:

Relevant

### (9.2.7.2) Volume (megaliters/year)

249.77

### (9.2.7.3) Comparison with previous reporting year

Select from:

Lower

### (9.2.7.4) Primary reason for comparison with previous reporting year

Select from:

Increase/decrease in business activity

### (9.2.7.5) Please explain

1. All of GIGABYTE's used water is withdrawn from local running-water companies. 2. GIGABYTE's total water withdrawal in 2023 decreased by 1.26% compared to 2022 (252.964 megaliters). GIGABYTE has set up a 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. Water discharge decreased physically in 2023, but did not reach the 3% target, so we consider the decrease rate to be "lower" instead of "much lower".

[Fixed row]

## (9.2.8) Provide total water discharge data by destination.

## Fresh surface water

### (9.2.8.1) Relevance

Select from:

Not relevant

### (9.2.8.5) Please explain

*GIGABYTE does not discharge water to fresh surface water.*

## Brackish surface water/seawater

### (9.2.8.1) Relevance

Select from:

Not relevant

### (9.2.8.5) Please explain

*GIGABYTE does not discharge water to brackish surface water or seawater.*

## Groundwater

### (9.2.8.1) Relevance

Select from:

Not relevant

### (9.2.8.5) Please explain

*GIGABYTE does not discharge water to groundwater.*

## Third-party destinations

### (9.2.8.1) Relevance

Select from:

Relevant

### (9.2.8.2) Volume (megaliters/year)

211.97

### (9.2.8.3) Comparison with previous reporting year

Select from:

Lower

### (9.2.8.4) Primary reason for comparison with previous reporting year

Select from:

Increase/decrease in business activity

### (9.2.8.5) Please explain

*1. All of GIGABYTE's wastewater is domestic sewage and is legally discharged into underground sewers per local laws and regulations. This water goes into local third-party destinations such as sewage treatment plants. 2. GIGABYTE measures its volume of water discharge based on a specific percentage (80-90%) of water withdrawal because most of the withdrawn water is for domestic use. The total water discharge in 2023 decreased by 0.96% compared to 2022 (214.033 megaliters). GIGABYTE has set up a 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. Water discharge decreased physically in 2023, but did not reach the 3% target, so we consider the decrease rate to be "lower" instead of "much lower".*

*[Fixed row]*

**(9.3) In your direct operations and upstream value chain, what is the number of facilities where you have identified substantive water-related dependencies, impacts, risks, and opportunities?**



## Direct operations

### (9.3.1) Identification of facilities in the value chain stage

Select from:

Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

### (9.3.2) Total number of facilities identified

1

### (9.3.3) % of facilities in direct operations that this represents

Select from:

1-25

### (9.3.4) Please explain

*GIGABYTE conducted a water stress analysis for all its main operational bases for the first time in 2019, and the latest update was conducted in 2024. We input data from the Aqeduct Water Risk Atlas (by World Resource Institute) into GIS software and overlap it with the location data of 39 GIGABYTE's bases worldwide. According to the findings of the analysis, only Ningbo Factory is situated in an area with extreme water stress and also meets other definitions for substantiality. Thus, the proportion is 2.5%.*

## Upstream value chain

### (9.3.1) Identification of facilities in the value chain stage

Select from:

Yes, we have assessed this value chain stage and identified facilities with water-related dependencies, impacts, risks, and opportunities

### (9.3.2) Total number of facilities identified

17

#### (9.3.4) Please explain

*GIGABYTE conducted a water stress analysis for all its main operational bases for the first time in 2019, and the latest update was conducted in 2024. We input data from the Aqueduct Water Risk Atlas (by World Resource Institute) into GIS software and overlap it with the location data of 170 1-tier suppliers whose procurement amount ranked in the top 100 in 2023. According to the analysis, 17 suppliers are situated in an area with medium-high or above water-related risks. Thus, the proportion is 10%.  
[Fixed row]*

**(9.3.1) For each facility referenced in 9.3, provide coordinates, water accounting data, and a comparison with the previous reporting year.**

#### Row 1

##### (9.3.1.1) Facility reference number

Select from:

Facility 1

##### (9.3.1.2) Facility name (optional)

*Ningbo Factory*

##### (9.3.1.3) Value chain stage

Select from:

Direct operations

##### (9.3.1.4) Dependencies, impacts, risks, and/or opportunities identified at this facility

Select all that apply

Risks

### (9.3.1.5) Withdrawals or discharges in the reporting year

Select from:

Yes, withdrawals and discharges

### (9.3.1.7) Country/Area & River basin

**China**

Other, please specify :Yong River

### (9.3.1.8) Latitude

29.93

### (9.3.1.9) Longitude

121.83

### (9.3.1.10) Located in area with water stress

Select from:

Yes

### (9.3.1.13) Total water withdrawals at this facility (megaliters)

39.2

### (9.3.1.14) Comparison of total withdrawals with previous reporting year

Select from:

Much lower

**(9.3.1.15) Withdrawals from fresh surface water, including rainwater, water from wetlands, rivers and lakes**

0

**(9.3.1.16) Withdrawals from brackish surface water/seawater**

0

**(9.3.1.17) Withdrawals from groundwater - renewable**

0

**(9.3.1.18) Withdrawals from groundwater - non-renewable**

0

**(9.3.1.19) Withdrawals from produced/entrained water**

0

**(9.3.1.20) Withdrawals from third party sources**

39.2

**(9.3.1.21) Total water discharges at this facility (megaliters)**

31.36

**(9.3.1.22) Comparison of total discharges with previous reporting year**

Select from:

Much lower

### (9.3.1.23) Discharges to fresh surface water

0

### (9.3.1.24) Discharges to brackish surface water/seawater

0

### (9.3.1.25) Discharges to groundwater

0

### (9.3.1.26) Discharges to third party destinations

31.36

### (9.3.1.27) Total water consumption at this facility (megaliters)

7.84

### (9.3.1.28) Comparison of total consumption with previous reporting year

Select from:

Much lower

### (9.3.1.29) Please explain

*GIGABYTE measures its volume of water discharge based on a specific percentage (80-90%) of water withdrawal because most of the withdrawn water is for domestic use. The total water withdrawal, discharge, and consumption by Ningbo Factory in 2023 decreased by 15.57% compared to 2022. GIGABYTE has set up a 333 Reduction Plan that aims to reduce emissions, water use, and waste by 3% annually. As 15.57% is much higher than 3%, we consider the water use change rate in Ningbo Factory to be "much lower."*

*[Add row]*

**(9.3.2) For the facilities in your direct operations referenced in 9.3.1, what proportion of water accounting data has been third party verified?**

**Water withdrawals – total volumes**

**(9.3.2.1) % verified**

Select from:

76-100

**(9.3.2.2) Verification standard used**

AA1000

**Water withdrawals – volume by source**

**(9.3.2.1) % verified**

Select from:

Not verified

**(9.3.2.3) Please explain**

*The water withdrawals by source at a facility level are not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water withdrawals by source have not been verified.*

**Water withdrawals – quality by standard water quality parameters**

**(9.3.2.1) % verified**

Select from:

Not verified

### (9.3.2.3) Please explain

*The water withdrawals by standard water quality parameters at a facility level are not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water withdrawals by standard water quality parameters have not been verified.*

## Water discharges – total volumes

### (9.3.2.1) % verified

Select from:

Not verified

### (9.3.2.3) Please explain

*The water discharge volume at a facility level is not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water discharge volume have not been verified.*

## Water discharges – volume by destination

### (9.3.2.1) % verified

Select from:

Not verified

### (9.3.2.3) Please explain

*The water discharge volume by destination at a facility level is not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water discharge volume by destination have not been verified.*

## Water discharges – volume by final treatment level

### (9.3.2.1) % verified

Select from:

Not verified

### (9.3.2.3) Please explain

*The water discharge volume by final treatment level at a facility level is not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water discharge volume by final treatment level have not been verified.*

## Water discharges – quality by standard water quality parameters

### (9.3.2.1) % verified

Select from:

Not verified

### (9.3.2.3) Please explain

*The water discharge - quality by standard water quality parameters at a facility level is not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water discharge - quality by standard water quality parameters have not been verified.*

## Water consumption – total volume

### (9.3.2.1) % verified

Select from:

Not verified

### (9.3.2.3) Please explain

*The water consumption volume at a facility level is not disclosed in the 2023 GIGABYTE Sustainability Report. Thus, Ninbo Facoty's data on water consumption volume by source have not been verified.*

*[Fixed row]*



## **(9.5) Provide a figure for your organization's total water withdrawal efficiency.**

### **(9.5.1) Revenue (currency)**

136773409000

### **(9.5.2) Total water withdrawal efficiency**

547597425.63

### **(9.5.3) Anticipated forward trend**

*GIGABYTE's primary manufacturing process does not consume much water. Running water is sufficient for basic facilities and domestic needs. Between 2019 and 2023, our total water withdrawals decreased by 15.16%, so we forecast water withdrawal to continue to decline. However, considering the significant changes in demand from markets in recent years, which are affecting our product portfolio, we cannot expect the reduction in water usage to be much lower because several uncertainties remain.*

*[Fixed row]*

## **(9.12) Provide any available water intensity values for your organization's products or services.**

### **Row 1**

#### **(9.12.1) Product name**

*All products*

#### **(9.12.2) Water intensity value**

0.025

#### **(9.12.3) Numerator: Water aspect**

Select from:

Water withdrawn

#### (9.12.4) Denominator

*Per equivalent unit of motherboard production*

#### (9.12.5) Comment

*An average water intensity per unit of output is determined by dividing the total water withdrawal by the total quantity of equivalent product units.*

*[Add row]*

### (9.13) Do any of your products contain substances classified as hazardous by a regulatory authority?

#### (9.13.1) Products contain hazardous substances

Select from:

No

#### (9.13.2) Comment

*Ensuring our products are safe for consumers and friendly to the environment is a basic principle to GIGABYTE as a manufacturer. The trends and changes in international hazardous substances management standards are reported quarterly at the Green Sustainability Committee meetings. A cross-department response plan will be started timely when it is necessary. The plan will set a response time target in order to make sure that GIGABYTE's products comply with the latest laws and regulations in time. We issue the GIGABYTE Harmful Chemical Substances Requirements (HCSR) which classifies the substances into three levels: Level A prohibited substances, Level B prohibited substances with time limits, and Level C potentially prohibited substances in the future. By systematically managing the list of high-risk substances and forming respective responding plans according to the hazardous levels, we could quickly eliminate prohibited substances.*

*[Fixed row]*

### (9.14) Do you classify any of your current products and/or services as low water impact?

### (9.14.1) Products and/or services classified as low water impact

Select from:

No, and we do not plan to address this within the next two years

### (9.14.3) Primary reason for not classifying any of your current products and/or services as low water impact

Select from:

Important but not an immediate business priority

### (9.14.4) Please explain

*Since 2018, GIGABYTE has conducted life cycle assessments for its main product lines and publically issues product environmental reports on the official CSR website. Water use is considered in the assessment, however, according to the analyzed results, it is less important than climate change, particulate matter emissions, and depletion of abiotic resources. For details of LCA results, please refer to GIGABYTE CSR Website: <https://csr.gigabyte.tw/en/extended-product-responsibility-en/>  
[Fixed row]*

### (9.15.1) Indicate whether you have targets relating to water pollution, water withdrawals, WASH, or other water-related categories.

#### Water pollution

#### (9.15.1.1) Target set in this category

Select from:

No, and we do not plan to within the next two years

#### (9.15.1.2) Please explain

*Water use in GIGABYTE is mainly for domestic use by employees. Our production processes do not discharge polluted water, so we do not set targets for water pollution.*

## Water withdrawals

### (9.15.1.1) Target set in this category

Select from:

Yes

## Water, Sanitation, and Hygiene (WASH) services

### (9.15.1.1) Target set in this category

Select from:

No, and we do not plan to within the next two years

### (9.15.1.2) Please explain

*Water use in GIGABYTE is mainly for domestic use by employees and is sourced from tap water from local running water companies. We do not set targets for WASH.*

## Other

### (9.15.1.1) Target set in this category

Select from:

No, and we do not plan to within the next two years

### (9.15.1.2) Please explain

*No other water-related targets except water withdrawals are set.*

*[Fixed row]*

## (9.15.2) Provide details of your water-related targets and the progress made.

## Row 1

### (9.15.2.1) Target reference number

Select from:

Target 1

### (9.15.2.2) Target coverage

Select from:

Organization-wide (direct operations only)

### (9.15.2.3) Category of target & Quantitative metric

#### Water withdrawals

Reduction in total water withdrawals

### (9.15.2.4) Date target was set

04/29/2016

### (9.15.2.5) End date of base year

12/30/2016

### (9.15.2.6) Base year figure

350.32

### (9.15.2.7) End date of target year

12/30/2030

### (9.15.2.8) Target year figure

228.7

### (9.15.2.9) Reporting year figure

249.77

### (9.15.2.10) Target status in reporting year

Select from:

Underway

### (9.15.2.11) % of target achieved relative to base year

83

### (9.15.2.12) Global environmental treaties/initiatives/ frameworks aligned with or supported by this target

Select all that apply

None, no alignment after assessment

### (9.15.2.13) Explain target coverage and identify any exclusions

*This target is GIGABYTE's second water reduction target and is a part of the "333 Reduction Plan" initiated in 2016. The first target was set up while the "Green Action Plan" launched in 2009 but was achieved several years ahead. The "333 Reduction Plan" aims to cut 3% of emissions, water use, and waste each year compared to the previous year. The unit of the target is an absolute reduction in total water withdrawals. This target covers the Headquarters and Nanping Factory in Taiwan, and the Dongguan Factory and Ningbo Factory in China. These four bases are the main operation and production bases of GIGABYTE. If following the path of reducing 3% per year, absolute water withdrawal shall be reduced by 19.20% in 2023 and by 34.72% in 2030 compared to the 2016 level. The actual water withdrawal in 2023 was 249.770 megaliters, a decrease of 28.7% from 350.325 megaliters in 2016. Therefore, the process achieved is 82.68%.*

### (9.15.2.14) Plan for achieving target, and progress made to the end of the reporting year

*When the Green Action Plan (as mentioned in Question 7.53.1) launched in 2009, a water-saving target was set. It was cutting 20% of water use by 2030 compared to the 2010 level. However, this target was achieved already. In 2016, GIGABYTE set a short-term water-saving target according to our "333 Reduction Plan" to cut 3% of water use each year compared to the previous year. This is the current water use reduction target of GIGABYTE. Several actions have been implemented to reach the waste reduction target. The establishment of the "Sustainability Fund" in 2019 is one example. Its budget comes from the money saved from cutting energy consumption, water use, and generated waste in the previous year. It aims to provide monetary feedback and encourage factories, departments, and individual employees who achieve in cutting emissions or propose ideas for reducing energy consumption, water use, and waste.*

### **(9.15.2.16) Further details of target**

*No other further details.*

*[Add row]*

## C10. Environmental performance - Plastics

### (10.1) Do you have plastics-related targets, and if so what type?

#### (10.1.1) Targets in place

Select from:

Yes

#### (10.1.2) Target type and metric

##### Plastic packaging

- Reduce the total weight of plastic packaging used and/or produced
- Eliminate problematic and unnecessary plastic packaging
- Reduce the total weight of virgin content in plastic packaging
- Increase the proportion of post-consumer recycled content in plastic packaging
- Increase the proportion of plastic packaging that is recyclable in practice and at scale

#### (10.1.3) Please explain

*In 2021, GIGABYTE launched the Product Packaging and Incoming Packaging Reduction Plan, which aims to completely eliminate the use of disposable packaging materials by 2030. The target covers the procured paper and plastic packaging materials by all BUs and subsidiaries of GIGABYTE that have products, including Channel Solution BU, Network and Communication BU, Automotive Electronics Business Unit, and G-STYLE. The target is planned to be promoted in three stages: - By 2030, all paper packaging made from virgin pulp shall be 100% certified by FSC; all manuals and color boxes shall be made of recycled pulp; the PS use shall be reduced by 20%; The plastic packaging shall be composed of at least 20% Post-Consumer Recycled Plastics (PCR). - By 2025, the use of paper made of virgin pulp shall be reduced by 20%; The PS use reduces by 50%, and the ratio of PCR in plastic packaging shall rise to 50%. The ultimate goal in 2030 is to eliminate all use of disposable materials in packaging. In 2022, the Group Operation Center convened several cross-department meetings to communicate and explain the new goal of packaging reduction. The following practical strategies will be evaluated and proposed by each BU based on the characteristics of products as well as the expectations of their customers. BUs are*



required to provide outcomes and relevant data to the Sustainable Development Office every year in order to manage the performance and the progress of goal achievement.

[Fixed row]

## **(10.2) Indicate whether your organization engages in the following activities.**

### **Production/commercialization of plastic polymers (including plastic converters)**

#### **(10.2.1) Activity applies**

Select from:

No

#### **(10.2.2) Comment**

*GIGABYTE does not engage in the production or commercialization of plastic polymers (including plastic converters).*

### **Production/commercialization of durable plastic goods and/or components (including mixed materials)**

#### **(10.2.1) Activity applies**

Select from:

No

#### **(10.2.2) Comment**

*GIGABYTE does not engage in the production or commercialization of durable plastic goods and/or components (including mixed materials).*

### **Usage of durable plastics goods and/or components (including mixed materials)**

#### **(10.2.1) Activity applies**

Select from:

Yes

### (10.2.2) Comment

*The majority of plastic used by GIGABYTE comes from electronic components and packaging. Plastic's insulating properties make it a popular material for electronic components such as chassis, connectors, slots, etc. GIGABYTE assigns a part number to every material it purchases. We then analyze each part number and estimate its plastic content. Consequently, we calculate our plastic usage in components based on the quantity of each part number purchased in each reporting year.*

## Production/commercialization of plastic packaging

### (10.2.1) Activity applies

Select from:

No

### (10.2.2) Comment

*GIGABYTE does not engage in the production or commercialization of plastic packaging.*

## Production/commercialization of goods/products packaged in plastics

### (10.2.1) Activity applies

Select from:

No

### (10.2.2) Comment

*GIGABYTE does not engage in the production or commercialization of goods/products packaged in plastics.*

## Provision/commercialization of services that use plastic packaging (e.g., food services)

### (10.2.1) Activity applies

Select from:

Yes

### (10.2.2) Comment

*The majority of plastic used by GIGABYTE comes from electronic components and packaging. For plastic packaging, GIGABYTE continues streamlining packaging, increasing the ratio of recycled materials used, and replacing polystyrene padding materials in order to reduce the consumption of packaging materials and the waste they subsequently produce. We started compiling statistics on packaging materials and analyzing packaging recovery rates every year in 2011.*

## Provision of waste management and/or water management services

### (10.2.1) Activity applies

Select from:

No

### (10.2.2) Comment

*GIGABYTE does not engage in the provision of waste management and/or water management services.*

## Provision of financial products and/or services for plastics-related activities

### (10.2.1) Activity applies

Select from:

No

### (10.2.2) Comment

*GIGABYTE does not engage in the provision of financial products and/or services for plastics-related activities.*

## Other activities not specified

### (10.2.1) Activity applies

Select from:

No

### (10.2.2) Comment

*GIGABYTE does not engage in any other activities.*

*[Fixed row]*

**(10.4) Provide the total weight of plastic durable goods and durable components produced, sold and/or used, and indicate the raw material content.**

## Durable goods and durable components used

### (10.4.1) Total weight during the reporting year (Metric tons)

1131.83

### (10.4.2) Raw material content percentages available to report

Select all that apply

None

### (10.4.7) Please explain

*The total weight of plastic durable components used by GIGABYTE in the reporting is calculated by summing up the estimated plastic content in all components containing plastic that are purchased in 2023. For product quality and user safety, the plastic-containing components used in GIGABYTE's products have not used recycled or recyclable plastics. Plastic packagings are not included in these statistics.*

[Fixed row]

## **(10.5) Provide the total weight of plastic packaging sold and/or used and indicate the raw material content.**

### **Plastic packaging used**

#### **(10.5.1) Total weight during the reporting year (Metric tons)**

225.3

#### **(10.5.2) Raw material content percentages available to report**

Select all that apply

None

#### **(10.5.7) Please explain**

*The total weight of plastic packaging used by GIGABYTE in the reporting is calculated by summing up the weight of all plastic packaging materials purchased in 2023. This figure is also disclosed on p.46 of the GIGABYTE 2023 Sustainability Report, which can be downloaded at here: xxx Although GIGABYTE has set up a reduction target for plastic usage, information related to the sources of each plastic packaging material has not been recorded in the part number management system. Thus, these statistics still cannot provide raw plastic content percentages.*

[Fixed row]

## **(10.5.1) Indicate the circularity potential of the plastic packaging you sold and/or used.**

### **Plastic packaging used**

#### **(10.5.1.1) Percentages available to report for circularity potential**

Select all that apply

% technically recyclable

### **(10.5.1.3) % of plastic packaging that is technically recyclable**

43.99

### **(10.5.1.5) Please explain**

*While inventorying the indirect GHG emissions from end-of-life treatment of sold products, we include packaging materials as well as. According to our Scope 3 inventory data, the total weight of plastic packaging types that are technically recyclable, such as boxes and buffer materials, was 99.122 metric tons in 2023. Thus:*

*99.122/225.343.99%*

*[Fixed row]*

## C11. Environmental performance - Biodiversity

**(11.2) What actions has your organization taken in the reporting year to progress your biodiversity-related commitments?**

### (11.2.1) Actions taken in the reporting period to progress your biodiversity-related commitments

Select from:

Yes, we are taking actions to progress our biodiversity-related commitments

### (11.2.2) Type of action taken to progress biodiversity- related commitments

Select all that apply

Land/water protection

Education & awareness

[Fixed row]

**(11.3) Does your organization use biodiversity indicators to monitor performance across its activities?**

	<b>Does your organization use indicators to monitor biodiversity performance?</b>
	Select from: <input checked="" type="checkbox"/> No, we do not use indicators, but plan to within the next two years

[Fixed row]

## **(11.4) Does your organization have activities located in or near to areas important for biodiversity in the reporting year?**

### **Legally protected areas**

#### **(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity**

Select from:

No

#### **(11.4.2) Comment**

*GIGABYTE assesses whether its operating sites are located in or close to important biodiversity areas by using the World Database on Protected Areas (WDPA). According to the WDPA manual, the database accepts protected areas defined by IUCN and CBD. Based on the assessment results, GIGABYTE does not have any sites in or near these areas. Please find the result of this mapping in the attachment of Question 2.3.*

### **UNESCO World Heritage sites**

#### **(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity**

Select from:

No

#### **(11.4.2) Comment**

*GIGABYTE assesses whether its operating sites are located in or close to important biodiversity areas by using the World Database on Protected Areas (WDPA). According to the WDPA manual, the database accepts protected areas defined by IUCN and CBD. Based on the assessment results, GIGABYTE does not have any sites in or near these areas. Please find the result of this mapping in the attachment of Question 2.3.*



## UNESCO Man and the Biosphere Reserves

**(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity**

Select from:

Not assessed

**(11.4.2) Comment**

*GIGABYTE has not assessed whether our activities are located in UNESCO Man and the Biosphere Reserves.*

## Ramsar sites

**(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity**

Select from:

Not assessed

**(11.4.2) Comment**

*GIGABYTE has not assessed whether our activities are located in Ramsar sites.*

## Key Biodiversity Areas

**(11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity**

Select from:

No

## (11.4.2) Comment

*GIGABYTE assesses whether its operating sites are located in or close to important biodiversity areas by using the World Database on Protected Areas (WDPA). According to the WDPA manual, the database accepts protected areas defined by IUCN and CBD. Based on the assessment results, GIGABYTE does not have any sites in or near these areas. Please find the result of this mapping in the attachment of Question 2.3.*

## Other areas important for biodiversity

### (11.4.1) Indicate whether any of your organization's activities are located in or near to this type of area important for biodiversity

Select from:

No

## (11.4.2) Comment

*GIGABYTE assesses whether its operating sites are located in or close to important biodiversity areas by using the World Database on Protected Areas (WDPA). According to the WDPA manual, the database accepts protected areas defined by IUCN and CBD. Based on the assessment results, GIGABYTE does not have any sites in or near these areas. Please find the result of this mapping in the attachment of Question 2.3.*

*[Fixed row]*

### C13. Further information & sign off

(13.1) Indicate if any environmental information included in your CDP response (not already reported in 7.9.1/2/3, 8.9.1/2/3/4, and 9.3.2) is verified and/or assured by a third party?

	Other environmental information included in your CDP response is verified and/or assured by a third party
	Select from: <input checked="" type="checkbox"/> Yes

[Fixed row]

(13.1.1) Which data points within your CDP response are verified and/or assured by a third party, and which standards were used?

#### Row 1

##### (13.1.1.1) Environmental issue for which data has been verified and/or assured

Select all that apply

- Climate change
- Water

##### (13.1.1.2) Disclosure module and data verified and/or assured

#### Governance

- Environmental policies

### (13.1.1.3) Verification/assurance standard

#### General standards

- AA1000AS

### (13.1.1.4) Further details of the third-party verification/assurance process

*GIGABYTE complies with a Sustainability Report every year in accordance with the latest GRI Standards and makes it public through its CSR Website. GIGABYTE entrusted BSI Taiwan to review the report's reliability and data in accordance with AA1000 Assurance Standard (AA1000AS v3) Type I Moderate Level. The independent assurance opinion statement can be found in the next column. GIGABYTE's environmental policies, including climate and water management, are disclosed in the report and thus also verified during the assurance process.*

### (13.1.1.5) Attach verification/assurance evidence/report (optional)

*2023\_AA1000AS Assurance Statement for GIGA-BYTE TECHNOLOGY Sustainability Report.pdf*

## Row 2

### (13.1.1.1) Environmental issue for which data has been verified and/or assured

*Select all that apply*

- Climate change

### (13.1.1.2) Disclosure module and data verified and/or assured

#### Environmental performance – Climate change

- Waste data
- Fuel consumption
- Base year emissions
- Progress against targets
- Year on year change in absolute emissions (Scope 1 and 2)

- Emissions breakdown by business division

### (13.1.1.3) Verification/assurance standard

#### General standards

- AA1000AS

### (13.1.1.4) Further details of the third-party verification/assurance process

*GIGABYTE complies with a Sustainability Report every year in accordance with the latest GRI Standards and makes it public through its CSR Website. GIGABYTE entrusted BSI Taiwan to review the report's reliability and data in accordance with AA1000 Assurance Standard (AA1000AS v3) Type I Moderate Level. The independent assurance opinion statement can be found in the next column. The following climate-related data/information are disclosed in the report and thus also verified during the assurance process: fuel consumption, base year emissions, emissions breakdown by business division, year-on-year change in absolute emissions (Scope 1 and 2), and progress against targets.*

### (13.1.1.5) Attach verification/assurance evidence/report (optional)

*2023\_AA1000AS Assurance Statement for GIGA-BYTE TECHNOLOGY Sustainability Report.pdf*

## Row 3

### (13.1.1.1) Environmental issue for which data has been verified and/or assured

*Select all that apply*

- Water

### (13.1.1.2) Disclosure module and data verified and/or assured

#### Environmental performance – Water security

- Water consumption– total volume
- Water discharges– total volumes

- Water discharges – volumes by destination
- Water withdrawals– total volumes
- Water withdrawals – volumes by source

### (13.1.1.3) Verification/assurance standard

#### General standards

- AA1000AS

### (13.1.1.4) Further details of the third-party verification/assurance process

*GIGABYTE complies with a Sustainability Report every year in accordance with the latest GRI Standards and makes it public through its CSR Website. GIGABYTE entrusted BSI Taiwan to review the report's reliability and data in accordance with AA1000 Assurance Standard (AA1000AS v3) Type I Moderate Level. The independent assurance opinion statement can be found in the next column. The following water-related data/information are disclosed in the report and thus also verified during the assurance process: water consumption– total volume, water withdrawals– total volumes, and water withdrawals – volumes by source.*

### (13.1.1.5) Attach verification/assurance evidence/report (optional)

*2023\_AA1000AS Assurance Statement for GIGA-BYTE TECHNOLOGY Sustainability Report.pdf*

## Row 4

### (13.1.1.1) Environmental issue for which data has been verified and/or assured

*Select all that apply*

- Climate change

### (13.1.1.2) Disclosure module and data verified and/or assured

#### Environmental performance – Climate change

- Electricity/Steam/Heat/Cooling consumption

- Emissions breakdown by business division
- Emissions breakdown by country/area
- Fuel consumption
- Waste data

### **(13.1.1.3) Verification/assurance standard**

#### **Climate change-related standards**

- ISO 14064-1

### **(13.1.1.4) Further details of the third-party verification/assurance process**

*GIGABYTE conducts a greenhouse gas emissions inventory each year. The inventory boundary covers scope 1, scope 2, and scope 3 emissions. The following data/information was verified through the ISO14064-1 verification process: waste data (for calculating scope 3 emissions from business waste), fuel consumption, Emissions breakdown by country/area, emissions breakdown by business division, and electricity/steam/heat/cooling consumption.*

### **(13.1.1.5) Attach verification/assurance evidence/report (optional)**

*2023\_ISO14064-1\_GIGA-BYTE TECHNOLOGY\_EN.PDF*

*[Add row]*

**(13.2) Use this field to provide any additional information or context that you feel is relevant to your organization's response. Please note that this field is optional and is not scored.**

	<b>Additional information</b>
	<i>No other additional information.</i>

*[Fixed row]*

**(13.3) Provide the following information for the person that has signed off (approved) your CDP response.**

**(13.3.1) Job title**

*Chief Operating Officer, Group Operation Management Center*

**(13.3.2) Corresponding job category**

*Select from:*

Chief Operating Officer (COO)

*[Fixed row]*



