



## CHAPTER 04

# Environmental, Health and Safety Management and Greenhouse Gas Management

## Management approach

As a member of the global community, BenQ has been demonstrating its support for sustainable development and implementing energy conservation and carbon reduction measures for years, and has set sustainable development goals through phased, goal-oriented planning.

### 2023 targets and results:

Item	Target	Performance
1. With 2020 as the base year, BenQ's head office in Taiwan has continued to reduce carbon emissions annually.	1%	Not achieved
2. Compared to 2022, electricity consumption in public areas has decreased by 1% in 2023.	1%	Achieved
3. Zero occupational accidents and fires throughout the year	0%	Achieved

※ Explanation for non-achievement: Scope 1 and 2 greenhouse gas emissions in 2023 increased by 25.21% compared to 2020. This was due to the impact of the pandemic from 2020 to 2022, during which there were 3 to 4 months of work-from-home (WFH) each year, and a full return to office work in 2023, resulting in the increase of total electricity usage and in turn impacting the amount of carbon emissions.

### 2024 targets:

1. With 2020 as the base year, BenQ's head office in Taiwan will continue to reduce carbon emissions by 1% annually.
2. Compared to 2023, electricity consumption in public areas has reduced by 1% in 2024.
3. Zero occupational accidents and fires throughout the year



# 4.1 Environmental Health and Safety Management

## 4.1.1 Social Responsibility and Environmental Health and Safety Policy

- BenQ sets and implements social responsibility and environmental health and safety policies based on the following principles:
- Promote corporate social and environmental responsibility, and comply with regulatory standards.
- Design green products to reduce the use of substances that may impact the environment.
- Prevent pollution, save energy, ensure health and safety, and continuously improve processes and products to reduce risks to health and safety.
- Provide a healthy and safe working environment to maintain the physical and mental health of employees.
- Provide a safe and healthy work environment to maintain employees' physical and mental health.



For our environmental health and safety policy, please refer to the page on policy commitments on our official website.

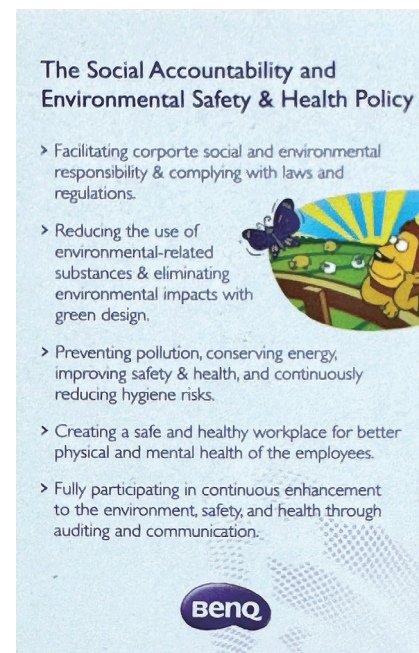


Figure 4.1 BenQ's social responsibility and environmental health and safety policy

### Approach:

- Internal checks, reviews, and improvements to improve the rights of employees
- Invest in green product design, reduce the impact of pollution, protect the environment, and do our part as an environmental citizen
- Actively prevent pollution and save energy, continuously improve to maintain health and safety
- Comply with government standards and regulations, and meet customer requirements
- Educate employees about the importance of the environment, health and safety so they can fully understand and implement related policies

## 4.1.2 BenQ's Environmental Health and Safety Organization and Responsibilities

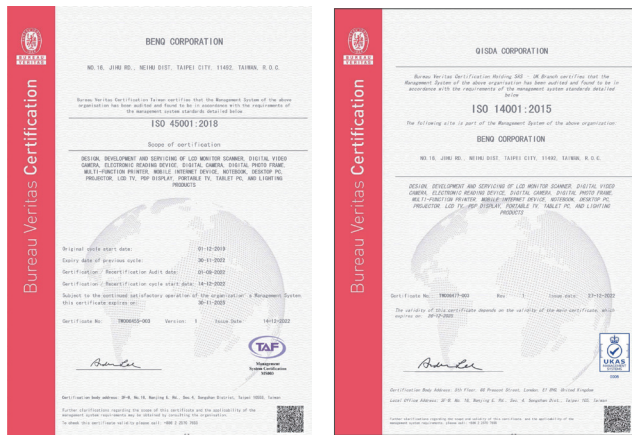
To implement environmental health and safety management, BenQ's President convenes the heads of all departments to form the "Social Responsibility and Environmental Health and Safety Management Committee" at our head office. The President assigns a management representative to manage environmental and safety matters and set up a promotion team within the Company. The implementation of BenQ's environmental health and safety policy is formulated by the President, and



Item	2020 年			2021 年			2022 年			2023 年		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Disabling Frequency Rate (FR)	0	0	0	0	0	0	0	0	0	0	0	0
Lost Day Rate (LDR)	0	0	0	0	0	0	0	0	0	0	0	0
Occupational Diseases Rate (ODR)	0	0	0	0	0	0	0	0	0	0	0	0
Total number of work-related fatalities	0	0	0	0	0	0	0	0	0	0	0	0

**Table 4.1 Comparison chart of performance in health and safety management**

- Note 1: Disabling Frequency Rate (FR) = Cases of occupational accidents × 200,000\* / total number of hours worked (\* refers to the rate per 100 employees based on 40 hours of work per week for 50 weeks per year.)
- Note 2: Lost Day Rate (LDR) = Total number of lost workdays × 200,000 / total number of hours worked.
- Note 3: Occupational Diseases Rate (ODR): Total number of cases of occupational disease × 200,000 / total number of hours worked.
- Note 4: Occupational accidents refer to cases in which a worker's performance of duties results in death, permanent total disability, permanent partial disability, temporary total disability, or other injuries or illnesses that result in a loss of more than one day (including traffic accidents that occur during commute).
- Note 5: Occupational diseases refer to diseases caused by long-term exposure to chemical, physical, biological, anthropogenic, and psychosocial hazards during the performance of one's duties, which results in a physical illness, and is diagnosed by a specialist physician or identified as an occupational disease by the competent authority.



**Figure 4.3 ISO 14001 and ISO 45001 certificates**

#### 4.1.4 Waste Management

BenQ adopted a proactive approach to waste management. We continue to save energy and reduce waste wherever we can; we reduce waste at the source by classifying materials by recyclability and increase resource recovery. At the same time, we engage in promotion on a sporadic basis to embed the habits of energy saving and waste reduction into our corporate culture. We encourage employees to help save energy and reduce waste to make BenQ a green brand that truly loves the Earth.

Currently, the types of waste generated by BenQ are general waste, paper, aluminum cans, metal cans, PET bottles, plastic bottles, aluminum foil packaging and food waste, and we produce no hazardous waste as defined by the Basel Convention in our operations.

In 2023, due to the easing of the pandemic, employees made a full return to the office, thus the amount of general waste increased along with the amount of resources recovered. Along with the implementation of the multiple use drinking cup policy within the Company, the reuse of waste paper and becoming a paperless office have effectively reduced the use of paper, thus the amount of paper recycled has decreased significantly.

Time	General waste	Paper	Aluminum and metal cans	PET and plastic bottles	Aluminum foil packaging
2020	31,777	5,955	822	351	275
2021	30,745	4,345	756	301	220
2022	37,698	4,048	1,013	310	228
2023	42,221	3,483	1,146	337	205

Table 4.2 Waste/resource recovery statistics for 2020-2023 (Unit: kg)

### 4.1.5 Water Resource Management

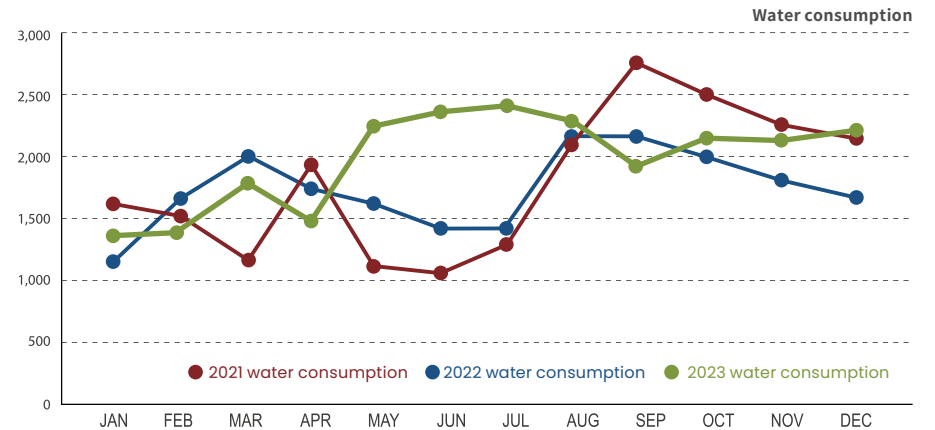
BenQ's head office in Taipei City, Taiwan uses 100% tap water, and does not use groundwater or other sources of water. The tap water is supplied by the Taipei Water Department.

The total water consumption in 2023 was approximately 23,000 m<sup>3</sup>/year, an increase of approximately 10.4% compared to 2022 in terms of water management performance. The reason is that the total water consumption in 2022 was lower due to employees working from home because of the COVID-19 pandemic, but then the pandemic subsided in 2023 and employees returned to the office, thus the increase in total water consumption reflected normal consumption during office hours.

In addition, the office building is equipped with an air conditioning condensate recycling system, and most of the recycled water is used by the sprinklers to water plants and the toilets for flushing.

Comparison of water consumption													
	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC	Annual Total
2021 water consumption	1,147	1,593	1,976	1,735	1,585	1,438	1,437	2,087	2,098	1,976	1,794	1,635	20,501
2022 water consumption	1,635	1,494	1,159	1,917	1,108	1,031	1,340	2,058	2,751	2,464	2,226	2,116	21,299
2023 water consumption	1,357	1,398	1,822	1,487	2,184	2,364	2,412	2,189	1,934	2,093	2,138	2,138	23,516

Table 4.3 Water consumption from 2021 to 2023



In the course of BenQ's operations, product design and development processes and provision of services, only a small amount of chemical solvents is used (for surface cleaning), and there has been no spillage of chemical solvents in the process; the rest is only domestic wastewater. Therefore, to manage domestic wastewater, oil-water separators operated and maintained by professionals have been installed, and they are incorporated into the government's sewage system, having no impact on water sources or the land in the process.

In addition, a wastewater testing company accredited by the Ministry of Environment is commissioned to take samples of our wastewater discharge and test their quality every year; at the same time, the government also monitors the quality of the Company's wastewater discharge every six months, and takes samples for analysis on a regular basis and at random intervals.

Inspection date	Standard	Result	
Item		2023/10/25	
Hydrogen ion concentration index	pH 5-9	8.1	Qualified
Water temperature	45°C	27	Qualified
Suspended solids	600 mg/L	159	Qualified
Chemical oxygen demand	1,200 mg/L	362	Qualified
Biochemical oxygen demand	600 mg/L	163	Qualified
Total lipids	Lipids (mineral): 10 mg/L	4.3	Qualified
	Lipids (animal and plant): 30 mg/L	5.5	
Sulfides	90 mg/L	0.13	Qualified

Table 4.4 Standards and results of the 2023 government inspection of discharge water quality



#### 4.1.6 Ecological Management

The headquarters of BenQ are located in the Neihu Technology Park. BenQ does not own, lease, or manage any office building located in an ecological protection zone or water resource protection zone. BenQ is purely a branding and design company without any production line, and does not engage in any activity that would have a negative impact on biodiversity. Our operations, product design and development processes, and provision of services do not affect the environment and ecosystems.

As for utility equipment, we use diesel to power emergency generators. This diesel fuel, when burned, produces a very small amount of SO<sub>x</sub>, which has a minimal impact on the environment, so SO<sub>x</sub> and NO<sub>x</sub> are not measured.



## 4.2 Greenhouse Gas Management

The distribution of BenQ's energy use did not change significantly in 2023. It mostly consists of purchased electricity needed for the Company's operations, as well as gasoline and diesel used for the Company's internal operations, which takes up the majority of the emissions produced by the Company, whose internally consumed energy use is shown in Table 4.5.

Furthermore, the Company continues to promote greenhouse gas inventories and verification programs, and refers to ISO 14064-1 and the requirements of greenhouse gas inventory protocols to establish a greenhouse gas inventory mechanism, compile a complete inventory of greenhouse gas emissions, and successfully pass the verification of an independent third party. In 2023, BenQ's total greenhouse gas emissions were about 1,112.1332 tCO<sub>2</sub>e/year, as shown in Table 4.6.

Item	2020 年	2021 年	2022 年	20223 年
Direct energy consumption				
Gasoline (1000 L)	4.9661	3.7533	10.1013	9.3283
Diesel fuel (1000 L)	0	0	2.2429	1.6112
Indirect energy consumption				
Purchased electricity (kWh)	1,217.6763	1,166.1735	1,352.6650	1,664.3071

Note 1:

Standards, methodologies and assumptions used for calculating internal energy consumption: The amount of energy consumed is the sum of the amount of consumption on the bills provided to the Company by the energy provider.

Note 2:

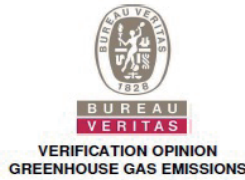
Starting from 2022, gasoline and diesel are included in the fuel consumption of company vehicles assigned to managers.

**Table 4.5 Internal energy consumption in 2023**

Scope	Category	2020 Emissions (tCO <sub>2</sub> e/year)	2021 Emissions (tCO <sub>2</sub> e/year)	2022 Emissions (tCO <sub>2</sub> e/year)	2023 Emissions (tCO <sub>2</sub> e/year)
Scope 1	(Category 1) Direct GHG emissions	67.4964	8.8626	29.7585	36.7099
Scope 2	(Category 2) Indirect GHG Emissions from energy input	619.7972	585.4191	688.5065	823.8320
Scope 3	(Category 3) Indirect GHG emissions from transportation – business travel	N/A	30.8830	79.8825	124.9544
	(Category 4) Indirect GHG emissions from organization's use of products – upstream energy emissions	N/A	N/A	127.5789	126.6369
	Total	N/A	30.8830	207.4614	251.5913
Total GHG emissions		687.2936	625.1647	925.7264	1,112.1332

<sup>1</sup> 1. Greenhouse gas emissions are aggregated as follows: greenhouse gas emissions = activity data x greenhouse gas emission factor x GWP (global warming power) value.  
 2. Emission coefficients are based on the "Management Table of Greenhouse Gas Emission Coefficients (Version 6.0.4)," as published by the Ministry of Environment.  
 3. The 2023 GWP value is based on the sixth IPCC Report published in 2021.  
 4. The 2023 electricity emission coefficients are based on the Annual Electricity Emission Coefficient of 0.495 kgCO<sub>2</sub>e/kWh as published in 2022 by the Energy Administration of the Ministry of Economic Affairs.  
 5. The organizational boundary is BenQ's head office in Taiwan (No. 16, Jihu Road, Neihu District, Taipei City).  
 6. The approach used to consolidate GHG emissions is the operational control method; tenants are excluded.  
 7. The Company has no biogenic CO<sub>2</sub> emissions from direct (Scope 1) greenhouse gas emissions.  
 8. N/A means not calculated for the current year.





茲證明

## 明基電通股份有限公司

台北市內湖區基湖路16號

持有聲明書編號：TWN13006801GT-2/C Rev.1

台灣衛理國際品保驗證股份有限公司對明基電通股份有限公司所報告的溫室氣體聲明進行了獨立查證，此查證聲明適用於以下描述工作範圍內的相關資訊。

明基電通股份有限公司負責報告溫室氣體聲明。台灣衛理國際品保驗證股份有限公司的責任為對其所報告溫室氣體聲明的準確性，以及用於蒐集、分析和審查資訊的基礎系統和過程提供獨立查證。

查證範圍：

- 明基電通股份有限公司，位於台北市內湖區基湖路16號。
- 盤查期間：2023年01月01日至2023年12月31日

報告邊界及查證數據：

- 類別 1：直接溫室氣體排放與移除：36,7099 公噸二氧化碳當量
- 類別 2：輸入能源之間接溫室氣體排放：823,8320 公噸二氧化碳當量
- 類別 3：運輸之間接溫室氣體排放：124,9544 公噸二氧化碳當量
- 類別 4：組織使用產品之間接溫室氣體排放：126,6369 公噸二氧化碳當量

查證意見：

依據台灣衛理國際品保驗證股份有限公司所進行之查證過程與程序，有充分證據顯示明基電通股份有限公司之類別 1,2 溫室氣體聲明為實質正確且公正地呈現溫室氣體數據及相關資訊，以及根據 ISO 14064-1:2018 所準備，符合查證協議之合理保證等級。

無證據顯示明基電通股份有限公司之類別 3,4 溫室氣體聲明不為實質正確、未公正地呈現溫室氣體數據及相關資訊，以及未根據 ISO 14064-1:2018 所準備，符合查證協議之有限保證等級。

技術審查：劉建宏

最初發行日期：22/04/2024

副總經理：徐佩詩

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Figure 4.4 ISO 14064-1 Statement

BenQ's pursuit of sustainable development means that we spare no effort in environmental protection and promoting key actions, especially since global warming and greenhouse gases have received worldwide attention and since Taiwan's government has made reaching net zero emissions by 2050 its goal. The Company will follow in the direction of the Group in the implementation of measures, formulate impactful strategies and action plans to save energy and reduce carbon, and gradually expand our inventory of indirect greenhouse gas emissions. We are actively saving energy and reducing carbon, and have achieved outstanding results through many effective improvement measures.

- The Company included business travel as Category 3 in 2021, and upstream energy emissions as Category 4 in 2022.
- Emissions generated within the Company mostly come from electricity consumption, thus Category 2 is the focus of our energy saving and carbon reduction efforts. Through the energy saving and carbon reduction programs listed in the table below, it is estimated that 11.40 tCO<sub>2</sub>e emissions can be reduced annually.

Reduction type	Major programs	Estimated annual electricity savings (MWh)	Estimated annual energy savings (GJ)	Estimated annual carbon reduction (tCO <sub>2</sub> e/年)
Equipment Optimization	Lights in fire escape signs replaced with LEDs	4.77	17.16	2.43
Operation optimization	The running time of chillers was adjusted	17.18	61.85	8.75
Operation optimization	Nighttime energy management	0.38	1.35	0.19
Operation optimization	The air conditioning in the lobby was optimized	0.06	0.20	0.03

Table 4.7 BenQ's energy conservation programs in 2023