

## 4.2 Process Improvement

### 4.2.1 Greenhouse Gas Emission Management

In order to implement the Company's environmental policy of greenhouse gas carbon management, we regularly conduct an inventory of greenhouse gas emissions every year.

Since 2012, the Company has been collecting data in compliance with ISO/CNS 14064-1 for information management. In 2012, Guanyin Plant 4 and Dayuan Plant 5 expanded their production lines, and formally started mass production in 2013. The audits have continuously been verified and approved by the Taiwan branch of BSI Group Singapore Pte Ltd.

We referred to the ISO 14064-1 standards, the Greenhouse Gas Emissions Inventory Guidelines of Taiwan's Environmental Protection Administration, and the requirements and suggestions of the WBCSD/WRI greenhouse gas verification protocol to set the boundaries of our greenhouse gas emission sources, which is 100% operational control; therefore, all five of our plants are covered in the inventory, including the Guishan Plant, the three plants in Guanyin, and the Dayuan Plant. In 2022, the scope of the inventory was expanded to include our Taipei office, and starting in 2023, the subsidiary Suzhou Hongyousheng was also included. The Company has completed the greenhouse gas inventory for the 2023 consolidated financial report ahead of schedule, making 2023 the baseline year for the Group's greenhouse gas inventory.

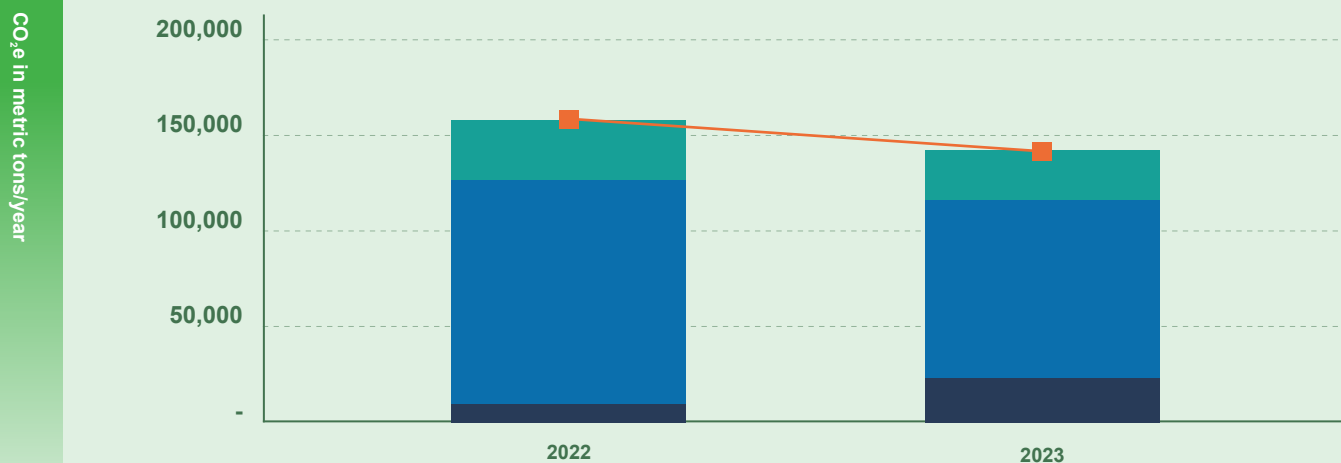
2023 (Jan. 1, 2023-Dec. 31, 2023) was the twelfth year that we have conducted an inventory of our greenhouse gas emissions. The inventory was conducted in accordance with ISO 14064-1:2018 and the requirements of the Ministry of Environment, and other indirect emissions (upstream electricity) was disclosed from 2020 onwards to provide our management with information to refer to when making operational performance decisions for continuous improvement.

The types of greenhouse gases verified in 2023 are based on the seven greenhouse gases defined by the ISO 14064-1 standards; they include carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, sulfur hexafluoride, and nitrogen trifluoride. The activities, products, and services of each plant have been taken into consideration, and the survey results show that carbon dioxide emissions takes up the majority of emissions.

The coefficient is based on the GHG emission factor management table version 6.0.4, Taipower's electricity coefficient of 0.495 kg CO<sub>2</sub>e/kWh in 2022, and the upstream electricity coefficient of 0.0973 kg CO<sub>2</sub>e announced on the EPA's product carbon footprint information website in 2023.

	2022	2023
Direct emissions-CO <sub>2</sub> e in metric tons	27,860	23,883
Indirect emissions through energy consumption-CO <sub>2</sub> e in metric tons	129,452	101,062
Other indirect emissions-CO <sub>2</sub> e in metric tons	3,223	18,487
<b>Total</b>	<b>160,536</b>	<b>143,431</b>

Volume of Greenhouse Gas Emissions



\* Note on scope of the figures:  
 2022: Plant 1-5, Taipei Office, and other indirect emissions from Plant 1, Plant 4, and Taipei Office only.  
 2023: Direct, energy indirect, and other indirect emissions include Plants 1 to 5 (including off-site dormitories), the Taipei Office, and the subsidiary Suzhou Hongyousheng.

\*This chart uses inventory coefficients based on IPCC AR6.

Comparison of Greenhouse Gas Emissions of Each Plant			
Plant	2022	2023	Difference from the previous year
Guishan Plant 1	14,712	11,058	(3,654)
Guanyin Plant 2	42,181	40,784	(1,397)
Guanyin Plant 3	60,670	50,308	(10,362)
Guanyin Plant 4	3,968	2,406	(1,562)
Dayuan Plant 5	35,678	20,286	(15,392)
Taipei Office	104	100	(4)
Subsidiary – Hongyousheng	-	3	3
<b>Total</b>	<b>157,313</b>	<b>124,945</b>	<b>(32,368)</b>
<b>Emission Intensity</b>	<b>0.92</b>	<b>0.82</b>	<b>-</b>

\*The scope of emissions in this table is only direct emissions and indirect emissions from energy sources.  
 \*Emission intensity = emissions (direct + energy indirect) metric tons of CO<sub>2</sub>e/production (tons)

Unit: CO<sub>2</sub>e in metric tons

Since 2020, the Company has been adjusting its energy sources by gradually replacing fuel oil with natural gas.

The natural gas improvement project was completed in 2022, and the key activity data for 2023 show the following changes:

- Electricity decreased by 33,169.89 kWh,**
- Fuel oil decreased by 1,561.3 kiloliters**
- Bituminous coal decreased by 3,491.364 metric tons**
- Steam increased by 369 metric tons,**
- Natural gas increased by 3,555.69 thousand cubic meters.**

As a responsible global citizen, and in line with the Company's commitment to environmental protection, the following greenhouse gas reduction initiatives will continue under the Company's greenhouse gas policy in 2024:

- Continued promotion of energy conservation measures
- Full participation in energy saving and carbon reduction activities
- Comply with environmental regulations, customer needs, and other relevant regulations

## 4.2.2 Energy Management

### (1) Energy Consumption Statistics

To continuously save energy and reduce carbon emissions while considering our use of electricity, fuel oil, natural gas, bituminous coal and steam, we aim to consume less energy each year compared to the previous year.

