4.2.3 Water Resource Management

Zig Sheng continues to collect statistics on the water consumption of each unit, review whether there is unreasonable water consumption on a monthly basis, and implement improvements as needed. The plant has two wastewater treatment facilities, where the treated water is regularly tested for discharge quality. The facilities adhere to approved water pollution prevention plans and possess the required permits.

The primary water sources are tap water and recycled water. In recent years, the Company has been planning water-saving initiatives, such as rainwater recycling system, reclaimed water recycling, condensate water recycling, etc. In addition to water conservation in the process, we also continue to promote the importance of water conservation in daily life. Based on the average water consumption of the previous five years, we aim to reduce water consumption by 2% per year. In 2023, the Company reduced water consumption by 26.6%.

In 2023, the pure water system at the Dayuan Plant was upgraded from ion-exchange resin treatment to an RO/EDI system, which is expected to reduce the generation of wastewater by 885 tons per year (approximately 14% of pure water consumption). The new system also eliminates the need to use regeneration chemicals such as hydrochloric acid and liquid caustic soda. reducing personnel and environmental hazards.

The water consumption and wastewater treatment volume of each plant in Taoyuan is as follows:

Water consumption statistics

	Water consumption (tons)	Water consumption intensity (tons)	Production volume (tons)
2021	695,569	3.00	232,057
2022	545,553	3.18	171,540
2023	512,364	3.35	152,882

Note: Water consumption intensity = water consumption (tons) / production volume (tons)
Note: Guanyin Plants includes Guanyin Plant 2, Guanyin Plant 3, and Guanyin Plant 4.

Wastewater treatment volume (tons)

	2021	2022	2023
Guanyin Plants	216,324	207,572	206,926
Dayuan Plant	64,221	53,479	45,920
Total	280,545	261,051	252,846

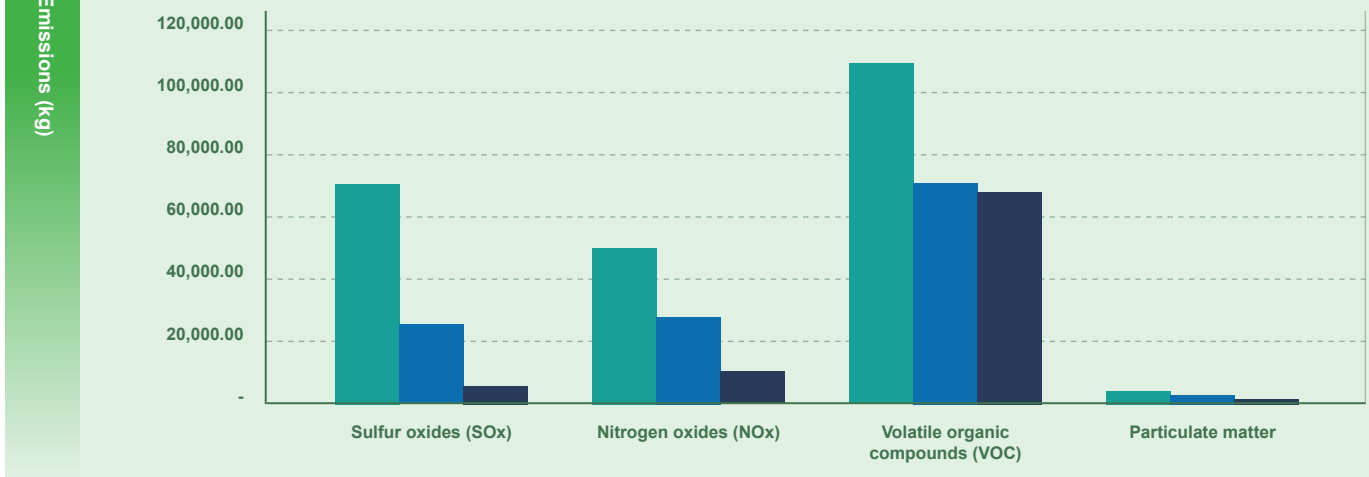
4.3 Energy Transformation

4.3.1 Natural Gas

From 2020 to 2023, we will complete the conversion of seven oil-fired boilers to natural gas boilers to reduce emissions and comply with regulatory standards. In 2023, we will complete one of the natural gas boilers, using 1877 km³ of natural gas. This transition has reduced coal usage, resulting in an estimated reduction of 1,639 metric tons of CO_2e emissions.

Year-by-year comparison of air pollutant emissions

Note: Calculated based on the emission coefficients announced by the Ministry of Environment



Year	Sulfur oxides (SOx)	Nitrogen oxides (NOx)	Volatile organic compounds (VOC)	Particulate matter
2021 Total	72,253.47	50,065.11	109,910.04	4,273.37
2022 Total	24,833.17	27,611.26	74,991.52	2,692.87
2023 Total	5,979.93	10,236.66	70,845.24	1,052.08

4.3.2 Solar Power

Zig Sheng has been actively building renewable energy facilities since 2018 and continues to build solar power panels on the roofs of its plants, reaching a capacity of 3,368.38 kW. We will continue to make plans to find space to install more solar panels to increase our solar energy capacity in the future. In 2023, the power generation amounted to 4,022,511 kWh, a reduction of approximately 1,991 tons of CO_2e.

Year	Total power generation (kWh)
2021	3,039,715
2022	3,455,053
2023	4,022,511

4.4 Circular Economy

4.4.1 Waste Management

Zig Sheng places great emphasis on waste management. The main types of waste include household waste and waste generated during the production process. To prevent waste from causing ecological damage, all general industrial waste, sludge, slag, and similar materials are transported and processed by qualified vendors.

All of the waste generated is non-hazardous business waste, and the total amount removed in 2023 was 1,228.08 metric tons, which is approximately 18% less than the total amount in 2022 (1,494.30 metric tons). In particular, due to the switch to natural gas to reduce the use of coal, the output and transportation of coal bottom ash has been greatly reduced. In 2023, it was 542.16 tons, a decrease of about 27% from 745.03 tons in 2022.

The waste reduction target for 2024 will focus on reducing the output of combustible and non-combustible waste that is not directly related to production volume or processes. The goal is to reduce the average waste output by 10%, based on the average output from 2022 and 2023, and this target will be included in the KPI efficiency management system.

The declared waste disposal volume in 2023 is as follows:

Type of Waste	Treatment Method	Amount to be Treated in 2023				
		Plant 1	Plant 2	Plants 3 and 4	Plant 5	Total
Combustible waste (domestic waste)	Incineration	19.03	47.62	148.06	85.69	300.40
Waste plastic mixture	Incineration	0.24	86.31	45.26	36.79	168.60
Organic waste liquid or waste solvents	Incineration	14.62	-	-	-	14.62
Waste (polluted) water (pH 6.0-9.0)	Incineration	-	-	8.06	-	8.06
Waste lubricants	Physical treatment	0.86	-	90.61	-	91.47
Bottom ash	Recycled and reused	-	445.73	96.43	-	542.16
Organic sludge	Heat treating	-	-	102.77	-	102.77

Unit: Ton

4.4.2 Resource Recycling

Each year, we set annual recycling targets in accordance with our environmental policy. We selected recyclable packaging materials for domestically-sold products(polymer bags, filament hole boards, and paper tubes) that are available in large quantities for recycling management, and we keep monthly statistics on the recycled quantity, recycling rate, and achievement rate. The implementation results are reported to senior management in the management meeting on a quarterly basis. In 2023, all of our targets were reached; details are as follows:

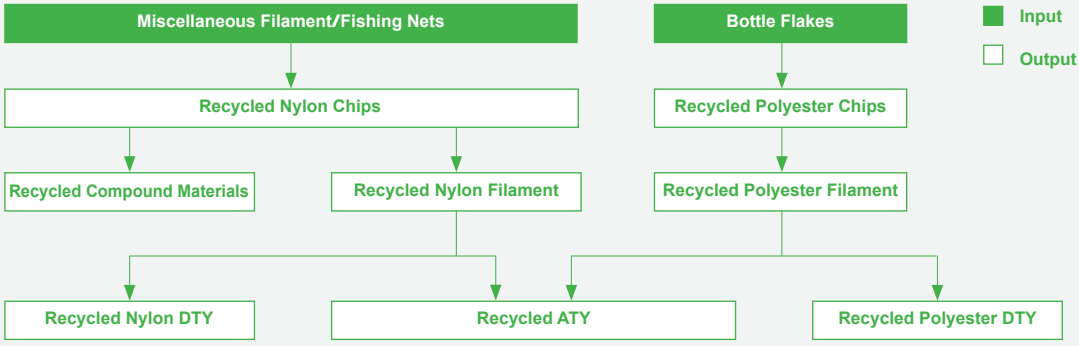
Item \ Year	2021	2022	2023			2024
	Actual Value	Actual Value	Target Value	Actual Value	Recycled amount (piece)	Target Value
Polymerization Plant-polymer bag recycling rate	100%	100%	100%	100%	7,516	100%
Spinning Plant-hole board recycling rate	100%	100%	100%	100%	366,425	100%
Spinning Plant I-paper tube recycling rate	80%	87%	80%	93%	1,192,072	85%
Spinning Plant No.2-paper tube recycling rate	95%	100%	100%	100%	873,529	100%

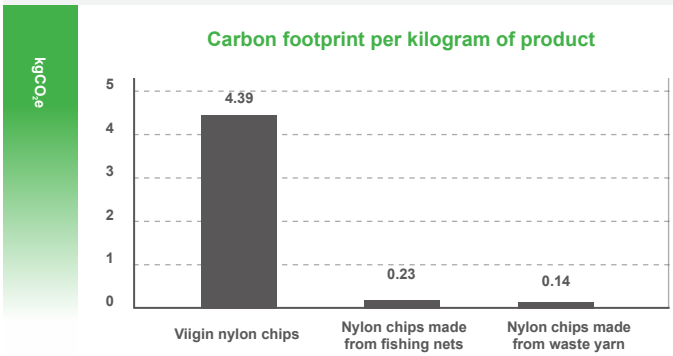
Recycling rate: Recycled amount ÷ Amount of domestic sales x 100%

4.4.3 Eco-friendly Recycled Products

To implement the resource recycling part of our environmental policy, we produce high-quality recycled products that meet international environmental standards, including nylon chips, nylon filament, polyester chips, polyester filament, DTY, ATY, and compound materials, totaling seven product categories. We have also continued to accept third-party certification by the GRS Global Recycling Standard System. In addition to meeting the needs of our customers, we also do our part to protect the environment.

In addition to recycling waste filament from the Company's own spinning plant, purchasing discarded fishing nets, putting the materials through regenerative processes, as well as integrating spinning processes and the production line of recycled bottle chips, the Company will add a new composite material plant that is GRS-certified in 2023, using waste filament to replace some of the industrial-plastic-grade raw materials, and producing recycled composite materials that can be utilized in goods used in daily lives and sporting goods. This will not only allow us to do our part in environmental protection, but also increase the added value of our products and improve profitability.





The Company completed a carbon footprint inventory of its nylon chip products in 2022, which was verified by a third party (BSI). The results of the inventory showed that the use of recycled nylon chips resulted in a 95-97% reduction in carbon footprint when compared to regular nylon chips. Green products accounted for 8.3% of total revenue in 2023. The Company aims to increase this share to 10% by 2025.

Restricted Substance Management

In order to prevent the use of restricted substances in production, we start from the procurement control at the source, requiring suppliers to comply with the ZDHC Conformance or related safety standards and to provide inspection reports and Safety Data Sheets (SDS). After entering the plant, the raw material acceptance operation is carried out to confirm again whether the chemicals contain restricted substances, and the list of chemicals is regularly updated to keep track of all the chemicals used in the products. The production data is stored in accordance with the regulations and is traceable.