

4 Environmental Sustainability

- 4.1 Climate Change Strategy
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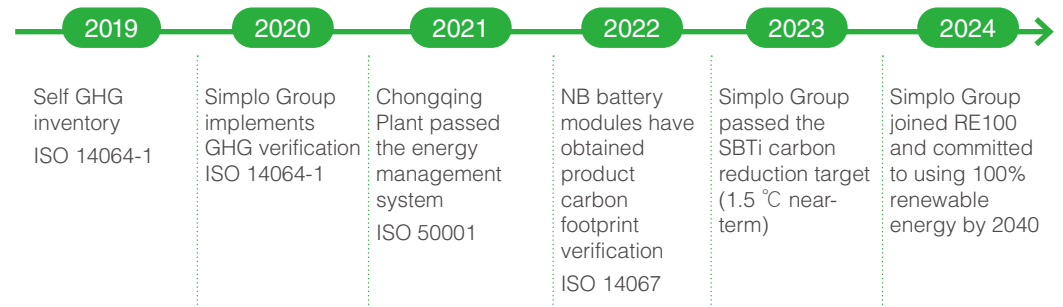




4.1 Climate Change Strategy

Climate change adaptation

© Carbon management history



Task Force on Climate-Related Financial Disclosures (TCFD)

Simplo Group references the core elements of TCFD for disclosing information related to "climate governance, strategy, risk management, and goals". This helps assess climate-related risks and opportunities affecting business operations, formulate strategies and actions to address climate change, enhance transparency in disclosure, and implement corporate climate governance effectively.

© I. Governance_ Disclose the organization's governance status of climate-related risks and opportunities

Item	Description
a) Board of directors supervision methods b) Management roles	<ol style="list-style-type: none"> Regularly report on the results to the Board of Directors The Board of Directors serves as the highest decision-making body for climate risk management, supervising and guiding the Company's climate strategy and the progress of climate-related objectives. Material issue management The management regularly reviews climate risk issues, incorporating them into material issue management through the operation of the CSR Sustainability Committee.

© II. Strategy_ For material disclosures, reveal the potential and actual impacts of climate-related risks and opportunities on the organization's operations, strategies, and financial planning

Item	Description
a) Climate-related risks and opportunities b) Impact of climate-related risks and opportunities on the organization's business, strategies, and financial planning c) Climate scenario analysis	<ol style="list-style-type: none"> According to the internal risk control and management timeline, short-term is defined as 1 to 3 years, mid-term as 3 to 5 years, and long-term as 5 to 10 years. Collect stakeholder needs and climate change issues accordingly. Assess climate change scenarios and evaluate related risks and opportunities based on the TCFD framework.

© III. Risk management_ Disclose how the organization identifies, assesses, and manages climate-related risks

Item	Description
a) Evaluation process b) Management process c) Risk management system	1. Referencing ISO 31000 risk management guidelines, establish a quantitative risk assessment method. Utilize the operation of a risk working group to conduct risk assessments, enabling risk monitoring and management 2. Risk identification process <ul style="list-style-type: none"> Establish a risk working group composed of managers and above from various departments. This group will report its operations to the Board of Directors. Conduct inventory and verification of Scope 1, 2, and 3 GHG every year Launch product lifecycle inventory and improvement of critical areas

© IV. Indicators and targets - For material information, disclose indicators and targets for assessing and managing climate-related risks and opportunities

Item	Description
a) Indicators for assessing climate-related risks and opportunities b) GHG emission volume Goal implementation review	1. Passed the review of the SBTi (1.5 °C near-term) target, using 2020 as the base year, aim to reduce absolute Scope 1 and 2 GHG emissions by 51% by 2030. Additionally, reduce absolute Scope 3 emissions related to "purchased goods and services" by 25%. 2. Joining RE100 and committing to use 100% renewable energy in global operations of Simplo Group by 2040. 3. Conduct annual organizational ISO 14064-1 GHG inventory and verification to review progress towards carbon reduction targets. 4. Continuously engage with suppliers to achieve supply chain management goals.(refer to 3.1 Supply Chain Management)

Addressing climate risks and opportunities

© Financial impacts and response to climate-related risks

Type	Climate-related risks	Potential financial impact	Response actions
Transformation risk	Policies and regulations 1. Carbon pricing: Carbon fees/taxes 2. GHG 3. Electricity conservation requirements for large consumers	Responding to regulatory requirements leading to increased operational costs.	<ul style="list-style-type: none"> Energy conservation and carbon reduction solutions ISO 50001 continuous improvement Installation of renewable energy (PV) in the plant Purchase renewable energy certificates
	Technology 1. Investment in new technology 2. Costs of low-carbon transformation	1. Customers request the use of renewable energy 2. The increased cost of developing low-carbon products 3. Costs incurred from new process development	<ul style="list-style-type: none"> Low-carbon technology transformation and introduction of low-carbon processes Management of circular resource use and reuse Responding to international ecolabelling requirements
	Market 1. Changes in customer behavior 2. Market information uncertainty 3. Increased raw material costs	1. Customer and market demand changes affecting orders 2. Uncertainties such as green inflation	<ul style="list-style-type: none"> Assessing new markets for green transformation Developing energy storage business to meet market demand
	Reputation Impact on the Company's image	Inability to meet customer or stakeholder expectations leading to revenue decline.	<ul style="list-style-type: none"> Increase stakeholder trust Enhancing transparency of disclosure of sustainability information Engaging deeply in external communication with stakeholders Strengthening external ESG performance evaluations

Type	Climate-related risks	Potential financial impact	Response actions
Physical risk	Immediateness Extreme weather led to an increase in abnormal rainfall and droughts	<ol style="list-style-type: none"> 1. Decreased production capacity or disruptions (e.g. shutdowns, transportation difficulties, supply chain interruptions) 2. Impact on the workforce (e.g. health and safety, absenteeism) 	<ul style="list-style-type: none"> • Enhance emergency response capabilities • Ensuring safety inventory in the supply chain to avoid supply chain disruptions
	Long-term Extreme variability in climate patterns	Chronic climate change (e.g. average temperature rise/sea level rise)	<ul style="list-style-type: none"> • Enhance emergency response capabilities • Ensuring safety inventory in the supply chain to avoid supply chain disruptions



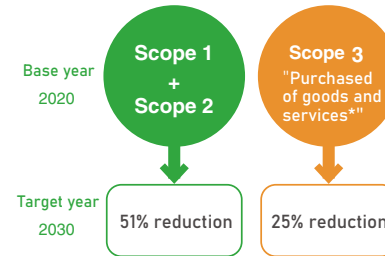
© Financial impacts and response to climate-related opportunities

Type	Climate-related opportunities	Potential financial impact	Response actions
Resource efficiency	Improve operational management efficiency	<ol style="list-style-type: none"> 1. Enhance resource usage efficiency 2. Increase production capacity and increase revenue 	<ul style="list-style-type: none"> • Introducing post-consumer recyclable plastic materials (PCR) and reusable packaging materials (Tray)
Energy sources	Using low-carbon energy and evaluate participation in the carbon trading markets	<ol style="list-style-type: none"> 1. Reduce the risk of GHG emissions 2. Increased investor confidence, enhanced reputation, and higher demand for products and services 	<ul style="list-style-type: none"> • Energy conservation and carbon reduction solutions • ISO 50001 continuous improvement • Installation of renewable energy (PV) in the plant • Purchase renewable energy certificates
Products and services	<ol style="list-style-type: none"> 1. Increasing opportunities for low-carbon products and services 2. Enhancing R&D and innovation through a low-carbon economy 3. Diversification of business activities 	Harnessing the advantages of new technologies to enhance the performance of various products and achieve market-leading energy efficiency	<ul style="list-style-type: none"> • Meeting climate adaptation needs through innovative solutions to increase revenue
Resilience	<ol style="list-style-type: none"> 1. Improve the adaptability and resilience of business operations 2. Use high-efficiency raw materials to reduce costs 	<ol style="list-style-type: none"> 1. Assess supply chain operational capabilities 2. Develop new products and services to increase revenue 	<ul style="list-style-type: none"> • Increase R&D capacity and continuous innovation • Develop energy storage market

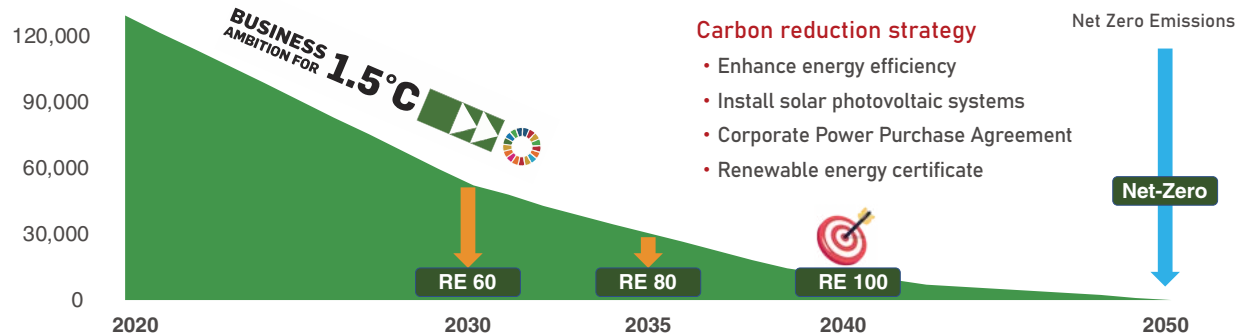
Science-Based Targets initiative (SBTi)

In May 2023, Simplo Group passed a near-term target review ^(Note 1), becoming the first company in the global battery modules manufacturing industry to do so. The goal is to reduce absolute GHG emissions by 51% in Scope 1 and 2 compared to the 2020 base year by 2030, and to reduce Scope 3 emissions for purchased goods and services by 25%. In addition, Simplo Group joined the RE100 initiative in 2024, with the goal of achieving 100% use of renewable energy in operational sites by 2040, and moving towards the goal of achieving Net Zero Emissions by 2050.

Carbon reduction roadmap of Simplo Group



Global carbon emissions (ton CO₂e)



Note:

- 1. The data coverage of Simplo Group includes the headquarters and subsidiaries of the consolidated financial statements.
- 2.*Purchasing goods and services classified according to the GHG protocol.

Internal Carbon Pricing (ICP) Strategy

Facing the generation of low-carbon emission or zero-carbon emission, the international community has promoted carbon fees and Carbon Border Adjustment Mechanism (CBAM), which will increase the carbon cost burden of the industry. Carbon risk management has become an important topic for companies, and companies are also aware of the profound impact of carbon risks on operations, thus launching the ICP mechanism. Simplo Group is committed to implementing the sustainable strategy blueprint, moving towards the goal of low carbon emissions or even net zero carbon emissions.

In order to accelerate the group's carbon reduction actions, Simplo Group actively develops an ICP mechanism and tracks the international carbon trading market as reference for internalize external costs. Valuation of carbon emissions promotes the reduction of carbon emissions in the group's internal activities. In addition to developing low-carbon processes in the manufacturing process, it can also encourage employees to implement energy conservation and carbon reduction in their work, and strengthen the company's low-carbon culture.

Carbon Disclosure Project (CDP)

In 2023, Simplo Group was awarded a "B" rating" by CDP. According to the CDP guidelines, a B rating indicates that a company is showing some evidence of managing its environmental impact. At the same time, CDP announced the results of the 2023 Supplier Engagement Rating (SER), and Simplo Group was rated "A-", which shows that our carbon reduction management efforts and action results are both affirmed by international evaluations.

Commitment to biodiversity conservation

In 2021, the UN and international organizations collaborated to launch the Taskforce on Nature-related Financial Disclosures (TNFD) initiative. The goal is to increase the transparency of nature-related financial risks and integrate nature into financial and business decision-making. The TNFD report framework was released in September 2023.

Simplo Group reviewed its operational sites and their surrounding areas, confirming that they are not located in natural ecological protection zones or environmentally sensitive areas. Therefore, there is no significant direct or indirect impact on biodiversity.

Simplo Group grasps the international sustainability trend and continues environmental management in its operations to reduce the impact on the natural ecosystem. Established the "Simplo Group Biodiversity and Forest Conservation Commitment". This commitment is promoted to all employees through the internal sustainability newsletter to emphasize the importance of biodiversity conservation. Additionally, communication with suppliers is planned to raise awareness of ecological conservation.



Simplo Group's Biodiversity and Forest Conservation Commitment

Biodiversity has long provided essential resources for human survival, and maintaining biodiversity is fundamental to sustainable human development. In order to mitigate the impact of organizational operations on biodiversity and forest conservation, we commit to:

- Ensure our operations comply with biodiversity-related laws or specific regulations, and support biodiversity and forest conservation-related initiatives.
- Commit to no deforestation and adhere to international and site-specific laws or regulations.
- Evaluate the use of renewable materials to minimize environmental impact as much as possible, and implement the principles of circular economy.
- Effectively use international biodiversity risk evaluation tools to understand the risks at operational sites.
- Promote biodiversity awareness to enhance ecological conservation among employees, supply chain, and other stakeholders.

Please refer to the official website

https://www.simplo.com.tw/article_d.php?lang=tw&tb=9&id=1075



4.2 GHG Inventory

Simplo Group refers to ISO 14064-1:2018 GHG inventory standards and guidelines such as the Greenhouse Gas Protocol published by the World Resources Institute (WRI) to establish a GHG inventory mechanism. Since 2019, annual GHG inventory have been conducted at each plant to comprehensively understand GHG usage and emissions. Starting from 2021, these data have been verified by third parties.

Direct and energy indirect GHG emissions (Scope 1 and Scope 2)

Simplo Group's 2023 Scope 1 emissions totaled 1,949 metric tons of CO₂e, while Scope 2 emissions totaled 26,179 metric tons of CO₂e. The main source was purchased electricity. The combined total emissions for Scope 1 and 2 amounted to 28,128 metric tons of CO₂e. with a carbon intensity of 0.33 metric tons of CO₂e NTD per million of revenue. The absolute amount of Scope 1 and Scope 2 carbon emissions in 2023 will be reduced by 78% compared with the 2020 base year.

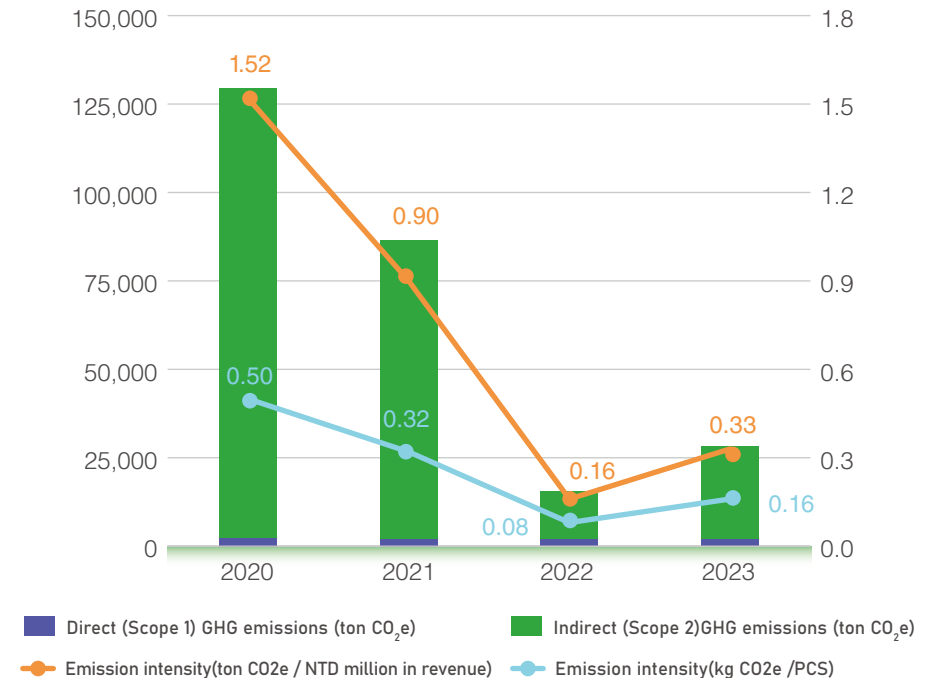
In 2023, the significant increase in Scope 2 emissions from purchased electricity was due to adjustments in hydroelectric power contracts at the China plant, which were not internationally recognized as renewable energy sources. Additionally, the electricity emission factor increased from 0.5703 kg CO₂e/kWh to 0.5942 kg CO₂e/kWh. Furthermore, the slowdown in demand from the NB market in 2023 led to a decrease in revenue and production volumes, resulting in an increase in carbon intensity.

GHG Emissions

Item	Unit	2020	2021	2022	2023
Direct (Scope 1) GHG emissions	ton CO ₂ e	2,355	1,997	1,911	1,949
Indirect (Scope 2)	ton CO ₂ e	127,178	84,391	13,568	26,179
GHG emissions	ton CO ₂ e	129,533	86,388	15,479	28,128
Emission intensity	ton CO ₂ e / NTD million in revenue	1.52	0.90	0.16	0.33
Emission intensity	kg CO ₂ e /PCS	0.50	0.32	0.08	0.16

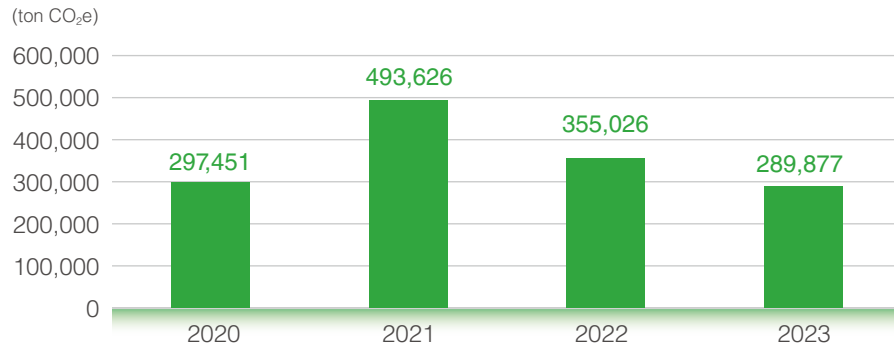
Note 1. The disclosure scope of the data in the above table is the parent and subsidiary companies of Simplo Group's consolidated financial statements.

2. The inventory is done with the operation control. The figures of the GHG inventory are certified by third-party.



Other indirect GHG emissions (Scope 3)

Simplo Group has established a GHG inventory and assesses the significance of the items in the C1-C15 categories by GHG protocol. Based on the significance of the analysis results, seven categories were included in the inventory items, and verified by a third party in accordance with ISO 14064-1. The item with the highest emissions is the purchased goods and services, accounting for 90%, which is a key item for the subsequent reduction.



Note :

1. The disclosure scope of the data in the above table is the parent and subsidiary companies of Simplo Group's consolidated financial statements.
2. Including GHG protocol categories 1, 3, 4, 5, 6, 7, 9.

Scope3 Category	2023 carbon emissions (ton CO ₂ e)
(C1) Purchased Goods and Services	261,635
(C3) Fuel- and Energy-Related Activities (Not Included in Scope 1 or Scope 2)	11,840
(C4) Upstream Transportation and Distribution	5,559
(C5) Waste Generated in Operations	70
(C6) Business Travel	816
(C7) Employee Commuting	1,000
(C9) Downstream Transportation and Distribution	8,957

4.3 Energy Management

◎ Energy Management Policy

- 1 Compliance with energy laws and regulations
- 2 Enhancement of all employees' communication mechanisms
- 3 Implementation of the energy management system
- 4 Continuous improvement of energy performance

Simplo Group is a professional lithium-ion battery module manufacturer, and the main energy used is purchased power, followed by the utilization of diesel and gasoline. Total energy consumption in 2023 is decreased, compared to the previous year, while energy intensity increased by 12% compared with 2022. The impact is due to the reduction of production process requirements in line with customer needs, the construction of high-efficiency automated processes, and the addition of unmanned workshops and automated production line equipment. However, this is affected by the decline in output. impact, causing energy intensity to increase. Simplo Chongqing has introduced the ISO 50001 energy management system in 2022 and obtained third-party verification. In the future, it will continue to monitor and develop energy-saving measures to improve electricity efficiency and achieve energy conservation and carbon reduction.

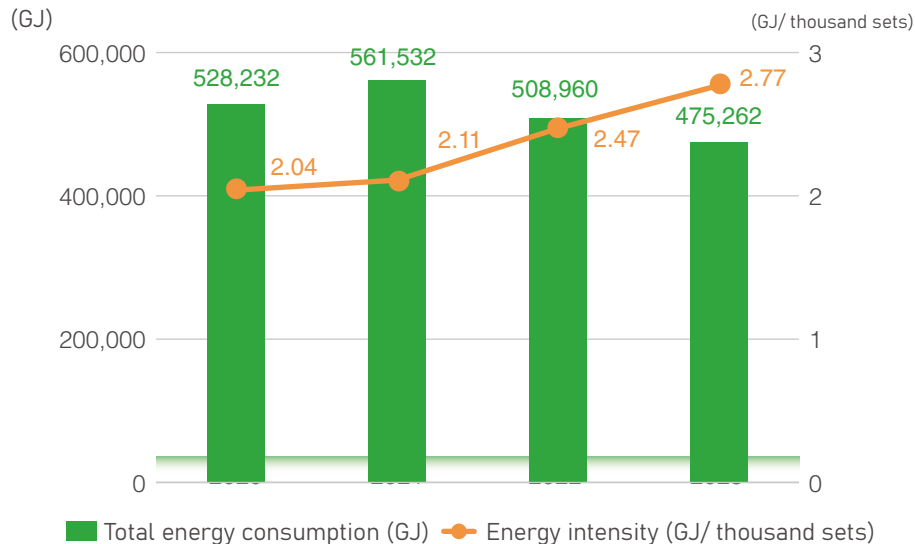


☉ Energy Efficient

Year	Diesel fuel (GJ)	Gasoline (GJ)	Electricity -non-renewable energy (GJ)	Electricity -renewable energy (GJ)	Total energy consumption (GJ)	Output (thousand set)	Energy intensity (GJ/ thousand sets)
2021	626	1,887	400,363	158,656	561,532	266,600	2.11
2022	444	1,343	90,966	416,206	508,960	206,250	2.47
2023	438	1,661	167,058	306,105	475,262	171,300	2.77

Note:

1. Electricity conversion factor: 1 kWh=0.0036 GJ.
2. Heat conversion factors: diesel- Taiwan =0.035169 GJ/L, China= 0.042652 GJ/kg; gasoline- Taiwan = 0.032657GJ/L, China= 0.043070 GJ/kg.
3. Energy intensity formula: energy consumption (GJ)/ thousand sets of battery modules.
4. The disclosure scope of the data in the above table is the parent and subsidiary companies of Simplo Group's consolidated financial statements.



Energy Conservation

Simplo Group is not high energy consuming industry, we committed to enhancing the energy utilization efficiency. For the energy saving, include the lighting, air-compression, chiller and other energy saving apply to effectively lower energy consumption.

☉ Energy saving plans and carbon reduction amount in 2023

Solution	Energy saving measures	Energy saving volume (GJ)	Carbon reduction volume (ton CO ₂ e)
Lighting system	1. Warehouse lighting with infrared light control 2. Replacing office LED tubes with inefficient light decay 3. Reduce the number of lights in non-production areas	1,387	203
Air compression system	1. Reduce air compressor outlet pressure by 1kg 2. Constant air pressure operation in the plant 3. Replacing high-energy-consuming air compressors	7,085	1,167
Chiller system	1. Increase the outlet water temperature of the chiller by 1°C. 2. Installing permanent magnet pumps to replace old fixed-spaced pumps 3. Integrating chillers to reduce the number of units in operation and improve equipment utilization	2,886	465
Total		11,358	1,835

- Note 1. The disclosure scope of the data in the above table is the parent and subsidiary companies of Simplo Group's consolidated financial statements.
2. Electricity carbon emission factor: Taiwan: 0.494 kg-CO₂e/kWh; China: 0.5942 kg-CO₂e/kWh. Source: Bureau of Energy, Taiwan; Ministry of Ecology and Environment, China.

Usage of renewable energy



Simplo Taiwan



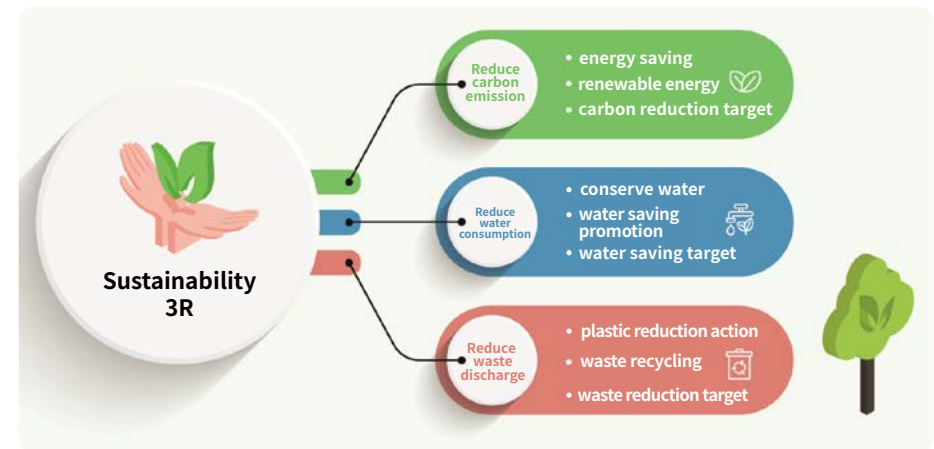
Factory in China

4.4 Pollution Prevention

© Simplo Group's 2030 environmental goals

Classification	Objectives
Waste reduction	<ul style="list-style-type: none"> Reduce non-hazardous waste ^(Note) intensity by 10% by 2030 from a 2023 base year.
Water resource management	<ul style="list-style-type: none"> Reduce water consumption intensity by 20% by 2030 from a 2021 base year.

Note: Non-hazardous waste is defined as domestic waste, kitchen waste, iron, paper, plastic, etc.



Water Resource Management

Simplo Group does not use water for manufacturing, but mainly for the domestic use of employees in the factory. Water withdrawals and discharge are following local government regulations, and all waste water is piped and discharged into the sewer system designated by the municipal government for treatment. There is no interaction of shared water resources. The company regularly tracks water consumption, and regularly entrusts testing units to monitor the discharge of water bodies in the factory area, all of which compliance with local discharge standards and have no impact on the local environment.

© Water Sourcing of Operating Site

Unit: million liters

Site	Year	2021	2022	2023
Simplo (Taiwan)	Water withdrawal	18	19	17
	Water discharge	1	1	2
	Water consumption	16	17	14
	Water recycling	NA	NA	NA
	Water recycling rate (%)	NA	NA	NA
Simplo (Chongqing)	Water withdrawal	65	53	47
	Water discharge	59	47	43
	Water consumption	7	5	5
	Water recycling	13	13	12
	Water recycling rate (%)	17%	19%	21%
Simplo (Changshu) and Huapu	Water withdrawal	440	411	322
	Water discharge	308	287	225
	Water consumption	132	124	97
	Water recycling	39	31	26
	Water recycling rate (%)	8%	7%	7%
Water intensity (million liters/ employees)		0.055	0.076	0.068

Note :

1. The data includes Simplo (Taiwan), Simplo (Chongqing), Simplo (Changshu), and Huapu.
2. Since the first plant of Simplo (Taiwan) has not installed a flow meter for environmental declaration, only the discharge of the second plant is included.
3. Water withdrawal = water discharge + water consumption
4. Water recycling rate = water recycling / (water withdrawal + water recycling) * 100%
5. Water intensity = water withdrawal / number of employees at the end of 2023.

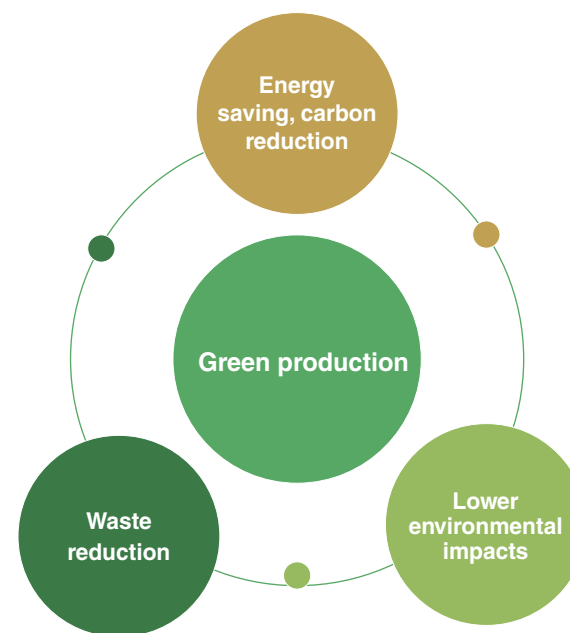
Waste management

Simplo Technology formulates waste-related management specifications in accordance with local regulations to ensure compliance with regulatory requirements. At the same time, it adheres to the concept of "source reduction and waste resource utilization" to achieve waste reduction and resource utilization as the basis for waste management. Simplo Chongqing has introduced UL2799 zero landfill certification and is expected to obtain the certification in 2024.

Waste generated during operations process includes hazardous waste and nonhazardous waste, all of which are managed and qualified local contractors for

cleanup. Recyclable and household waste are sorted and then handed over to qualified contractors for cleanup and recycling. Waste management focuses on recycling and reuse. Waste that cannot be recycled is incinerated for energy recovery, and finally, any remaining waste will be disposed of in landfills.

In 2023, the amount of waste generated will be 7,401 metric tons, of which 7,380 metric tons can be recycled and reused, and 21 metric tons cannot be recycled and reused. In addition to continuing to promote source reduction and in-factory waste recycling and reuse, we will continue to promote production to reduce the environmental load on the environment.





© Waste generation

Unit : ton

Year	2021					2022				2023		
Site	Category	Incineration (with energy recovery)	Incineration (without energy recovery)	Others	Recycle	Incineration (with energy recovery)	Incineration (without energy recovery)	Others	Recycle	Incineration (with energy recovery)	Others	Recycle
Simplo (Taiwan)	Hazardous waste	-	6	18	-	-	-	29	-	-	21	-
	General waste	29	-	-	-	34	-	1	10	49	-	6
Simplo (Chongqing)	Hazardous waste	38	-	-	167	44	-	-	179	34	-	168
	General waste	390	-	-	3,068	298	-	-	2,572	272	-	3,288
Simplo (Changshu) and Huapu	Hazardous waste	-	92	-	31	-	70	-	40	69	-	32
	General waste	-	1,512	-	1,827	-	1,008	-	1,886	282	-	3,181

Note: Description of other disposal: for Simplo (Taiwan), it is disposed of outside the borders of Taiwan ; Simplo (Changshu) and Huapu have changed their waste treatment providers starting in 2023, and their waste incineration treatment equipment uses waste heat recovery.