04

Climate Change and Adaptation

Climate Change and Adaptation

4.1 Climate Change and Adaptation Management

Material Topics Management - Climate Change and Adaptation

Description of Impact	Actual positive impact: The Company has the potential to reduce operational costs and greenhouse gas (GHG) emissions by reducing the use of high-carbon emission fossil fuels and transitioning to solar power generation. Real-time monitoring of carbon emissions can help optimize production processes and establish effective emission reduction measures. Along with obtaining GHG system accreditation, companies can enhance energy efficiency, reduce environmental pollution, build a green and environmentally friendly corporate image, and boost competitiveness. This aligns with the expectations and requirements of both the government and the public for environmental protection.	
	Potential negative impact: The Company's product exports may face additional costs due to the introduction of carbon fees domestically and carbon tariffs imposed by other countries. In addition, companies that fail to meet customer requirements regarding environmental protection and carbon reduction may risk losing orders, which could adversely affect their production management.	
Policy/ Commitment	1. According to the "Sustainable Development Roadmap" published by the FSC, the parent company should complete the GHG inventory by 2026 and complete assurance by 2028.Subsidiaries should complete their inventory by 2027 and complete assurance by 2029. The Company will conduct GHG inventory and assurance in accordance with the ISO 14064-1:2018 standard, and will continuously monitor the status of GHG inventory and track the disclosure timeline of assurance in accordance with the relevant guidelines of the competent authority. 2. The Group's current carbon reduction strategy focuses on the use of low-carbon energy. Photovoltaic power generation has been adopted at the Kunshan plant.	
Actions Taken	1. In 2023, we rolled out the carbon inventory at the Mexico subsidiary.In 2024, the implementation of carbon inventory was expanded to the entire group. Third-party verification bodies were engaged to conduct carbon inventory verification in accordance with the ISO 14064-1:2018 standard. 2. The Company has implemented an environmental safety department responsible for the supervision of matters related to environmental management and industrial safety. The management rules have established "Management Standards for Environmental Substances" to ensure that all raw materials comply with regulations such as RoHS and REACH by directly managing raw materials with lower environmental impact at the source of production. By obtaining an IECQ compliant certification, the Company establishes rigorous systems to control hazardous substances and further reinforce the control and management of hazardous substances used in products.	
Tracking and Evaluation Mechanism	1. Carbon inventory progress is periodically reported to the Board of Directors ("Board"). An evaluation mechanism is established by obtaining statements from engaged third-party verification bodies in accordance with the ISO 14064-1:2018 standard. 2. To implement an effective environmental management system, the Company has obtained the certification for ISO 14001:2015 - Environmental management systems, ensuring that plant operations comply with relevant regulations.	
Management Goals	Short-term Goals (within 3 years)	Medium- and Long-term Goals (3–7 years)
	1. Phase out old and outdated equipment with high energy consumption and replace it with low energy or new process, new energy models. 2. Encourage employees to use green energy transportation for commuting and travel.	Medium-term goals: 3–7 years Reduce consumption of utility power and gradually increase the proportion of green electricity use. In 2024, the proportion of rooftop photovoltaic power generation at company plants reached 28%. Long-term goals: 7 years or more 1. Achieve carbon neutrality across the Group. 2. Work with the supply chain to achieve carbon neutrality, encouraging more supply chain partners to join our sustainability efforts.
Annual Performance	1. Earlier than required by the FSC, the carbon inventory for 2022 was completed for the Mexico subsidiary in 2023 and underwent verification by a third-party verification body, with the verification statement obtained in January 2024.The carbon inventory for 2023 was completed for the entire group in 2024 and underwent verification by a third-party verification body, with the verification statement obtained in February 2025. 2. Lighting in the production workshop was replaced with light guide plate LED lamps to save energy and reduce carbon emissions. 3. Air compressor pipelines were renovated, along with the shared pipeline renovation project, to improve the utilization efficiency of air compressors and reduce the number of compressors in operation. 4. Old and outdated air compressors were downgraded to serve as backup machines, and fixed-frequency air compressors were decommissioned. 5. A 5MW distributed photovoltaic power station was installed at the Kunshan plant. In 2024, the total photovoltaic power generation was 4,471,069 kWh, saving approximately RMB 533,000 in electricity costs, and reducing the original electricity consumption by 1,467 tons of standard coal equivalent, 5,812 tons of clean water, 4,458 tons of carbon dioxide, 134 tons of sulfur dioxide, and 67 tons of nitrogen oxides.	
Stakeholder Involvement	1. Government agencies: Regularly publish sustainability information on ESGgenplus built by the TWSE, including GHG emissions data, climate-related issue management, energy management, water resource management, and waste management. 2. Customers: Investigate GHG emissions data, hold irregular meetings to share knowledge on energy and carbon reduction technology applications, promote energy-saving measures in the industry, and refine environmental protection and sustainable development strategies.	

Climate Governance

In response to the high uncertainty in climate conditions, rapid changes in policies and markets, and to timely keep abreast of and estimate the potential impacts of climate change, the Group holds regular meetings with senior executives from various departments to jointly identify material climate risks and opportunities. Additionally, the Group conducts further assessments of the risks potentially caused by floods, droughts, typhoons, and extreme high temperatures at each operational site, in hopes of staying informed of climate changes in the external environment and market dynamics, thereby enabling more comprehensive planning for operational strategies.

The Board has established the Sustainable Development Committee, consisting of 3 members from the Board who possess professional knowledge and competence in corporate sustainability and are authorized by the Board. The committee is responsible for calling meetings and devising, advancing, and strengthening action plans and capital expenditures related to crucial sustainability policies (including climate issues) for each company under the Group. It also reviews, follows up on, and revises the implementation status and outcomes of sustainability initiatives, reporting them to the Board.

The committee is led by the Chief Sustainability Officer and includes various working groups, such as the Sustainable Environment Group, which is responsible for the environmental management system, compliance with environmental regulations and international standards, assessment of sustainable transformation, improvement of resource utilization, and climate change response mechanisms. A dedicated unit, the Sustainable Development Department, has also been established. Irregular cross-departmental meetings are held for exchanges, discussions, and coordination, working together toward the achievement of environmental sustainability.

Climate Risk Management

The Board serves as the highest decision-making body for risk management of each company within the Group and directly oversees the risk governance framework of each company within the Group. The Board is also responsible for supervising climate-related risks and opportunities. To refine risk assessment and strengthen management functions, the Board resolved in 2024 to establish the Sustainable Development Committee and appoint the Chief Financial Officer ("CFO") as the Chief Sustainability Officer. Additionally, a dedicated unit, the Sustainable Development Department, was established, bringing departments at the Group's headquarters together to identify and manage corporate operational risks, including physical and transition risks that may be brought about by climate change, and to lead the planning of relevant response measures. Based on the scope of each department's functions, risks are identified and analyzed across the following 7 main aspects: operations, finance, country, legal compliance, ESG, human resources, and information security. Based on the identified risks, each department implements response strategic planning, integrates and manages risks that may affect operations and profits, and submits reports on the implementation status of risk management and control to the Sustainable Development Committee. The committee, aiming to build a stronger organization, supervises, tracks, and reviews the implementation of risk management by the management team every 6 months.

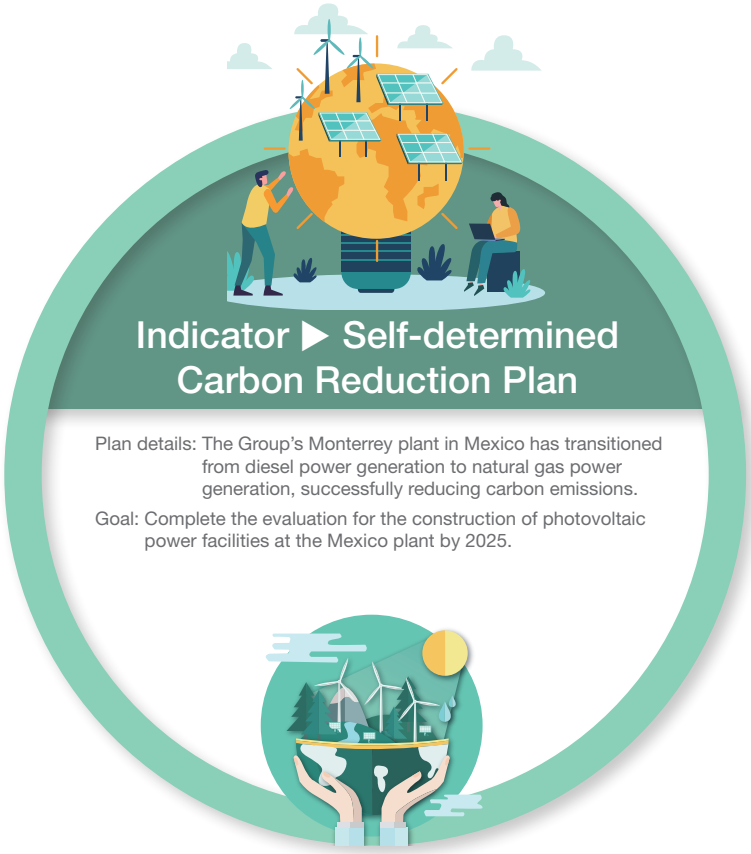
Assessment of Climate Risks and Opportunities

With the support of senior executives, climate-related risks and opportunities are identified in accordance with the TCFD framework, and solutions are actively developed, in hopes of reducing the operational and financial impacts caused by climate change and enhancing the organization's climate resilience. According to the climate change risk and opportunity assessment methodology, the "short-term" is defined as a period within 3 years, the "medium-term" as 3 to 5 years, and the "long-term" as 5 years or more. These periods are used to evaluate the potential impact duration, with risks categorized into transition risks and physical risks.

Risk Category	Risk Aspect	Risk Description (Risk Factors)	Duration of Impact	Impact on the Company's Strategy, Operations, and Finances	Response Strategies	Financial Impact of Response Strategies	Results and Performance
Transition risk	Reputation	Goodwill risk related to climate change	Short-term	Information disclosure or response plans failing to meet stakeholders' expectations will damage the Company's reputation and cause a decline in sales.	Pay close attention to and respond to climate-related issues. Actions taken include the following: A. The Kunshan plant has signed a power purchase agreement (PPA) as an agreement between the electricity sales company and the electricity user company. The distributed rooftop photovoltaic power station is currently in use and its electricity is being consumed, enhancing customers' sense of recognition. B. Completed the carbon inventory information and assurance for the consolidated company ahead of regulatory requirements by 4 years. C. Submitted a compliant ESG report and obtained assurance.	The cooperation model for the distributed rooftop photovoltaic power station at the Kunshan plant involves providing the rooftop without requiring any capital contribution, resulting in no capital expenditures.	A. The Group completed the carbon inventory for 2023 and obtained a third-party verification statement from a third-party verification company. B. Prepared an ESG report as required by the competent authority, with third-party assurance indicators, disclosing the impact of climate issues on ESON and outlining response plans to meet stakeholder expectations.
Physical risk	Immediate	Flooding (Heavy rainfall)	Short-term	Flooding (heavy rainfall) will affect the daily operations of factories and the safety of employees.	In the event of flooding, an emergency response team is activated to ensure essential personnel remain on standby, conducting inspections to maintain the normal operation of critical equipment. Disaster insurance is procured to mitigate the impact of such disasters.	The related disaster insurance expenditure was RMB 93,634 in total.	A. Completed insurance purchase for related disasters in September 2024. B. Conducted inspections of inner and outer ditches before the rainy season. Regularly cleaned the drainage pipes within the plant premises every 5 years. For areas outside the plant, any blockages are reported to the relevant authorities for further action. C. Formed a disaster response team each year and conducted 2 internal training sessions.
Opportunity Type	**Opportunity Description**	**Duration of Impact**	**Impact on the Company's Strategy, Operations, and Finances**	**Response Strategies**	**Financial Impact of Response Strategies**	**Results and Performance**	
Energy resource utilization efficiency	Shortening downstream transportation distances, reducing carbon emissions	Long-term	Currently, the global product development center located in Kunshan simultaneously features mass production capabilities and serves as support for global production; the remaining factories, including those in China, Asia, and North America, are responsible for mass production and delivery and in principle service the needs of nearby clients. Resources from various locations are integrated to provide mutual support. This will reduce transportation cost and distance, and have a positive impact on transportation efficiency and the environment.	Set up a new plant in Monterrey, Mexico, guided by the principle of meeting nearby customers' needs for global mass production, to reduce transportation distances.	The capital expenditure for the construction of the new plant in Monterrey, Mexico was USD 29.7 million. An investment of USD 10.88 million is expected next year.	After the completion of the construction of the new plant in Monterrey, Mexico, we have acquired new customers in the Central U.S. eastward (including Texas) and central Mexico.	
Type of energy source	Use of low-carbon energy	Long-term	The Kunshan plant reduces the use of electricity generated from traditional high-carbon sources, such as coal-fired power generation, and has installed solar panels on its roof, using solar photovoltaic power generation to reduce operating and production costs.	The Kunshan plant has signed a power purchase agreement (PPA) as an agreement between the electricity sales company and the electricity user company. The distributed rooftop photovoltaic power station is currently in use and its electricity is being consumed, with the total photovoltaic power generation in 2024 reaching 28% of the plant's total annual electricity consumption.	Electricity can be purchased at 15% lower than the national grid price during the first 5 years of construction; in the subsequent 15 years, electricity can be purchased at 20% lower than the national grid price.	In 2024, the total photovoltaic power generation was 4,471,069 kWh, saving approximately RMB 533,000 in electricity costs, and reducing the original electricity consumption by 1,467 tons of standard coal equivalent, 5,812 tons of clean water, 4,458 tons of carbon dioxide, 134 tons of sulfur dioxide, and 67 tons of nitrogen oxides.	

Transition Actions, Indicators, and Goals

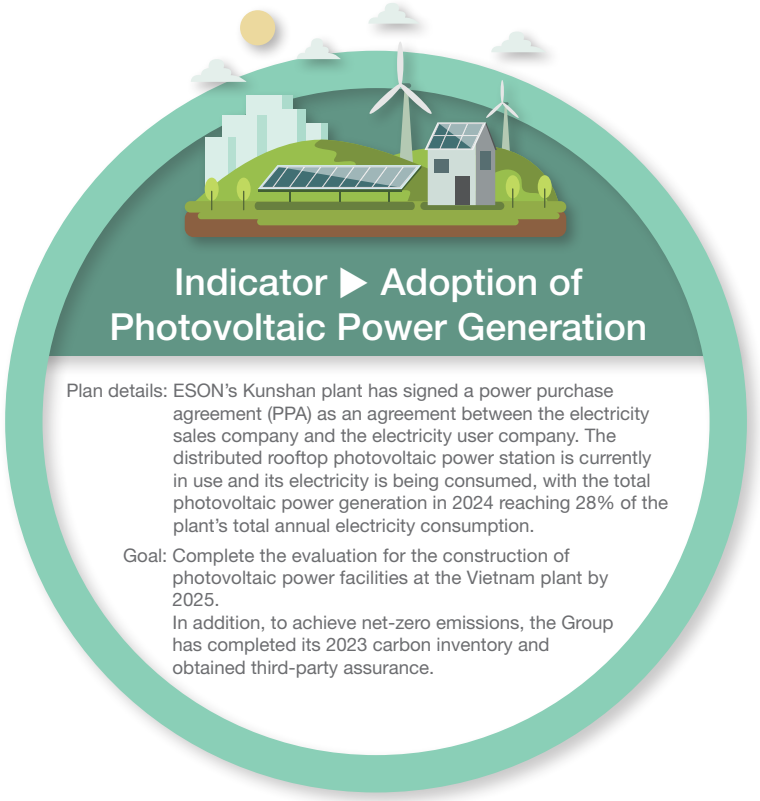
To manage the following climate-related risks and opportunities: (1) transition risk - goodwill risk related to climate change and (2) climate opportunity - use of low-carbon energy, the Company's Board approved a carbon reduction strategic plan in 2024, aiming to use low-carbon energy for carbon emission reduction:



Indicator ▶ Self-determined Carbon Reduction Plan

Plan details: The Group's Monterrey plant in Mexico has transitioned from diesel power generation to natural gas power generation, successfully reducing carbon emissions.

Goal: Complete the evaluation for the construction of photovoltaic power facilities at the Mexico plant by 2025.



Indicator ▶ Adoption of Photovoltaic Power Generation

Plan details: ESON's Kunshan plant has signed a power purchase agreement (PPA) as an agreement between the electricity sales company and the electricity user company. The distributed rooftop photovoltaic power station is currently in use and its electricity is being consumed, with the total photovoltaic power generation in 2024 reaching 28% of the plant's total annual electricity consumption.

Goal: Complete the evaluation for the construction of photovoltaic power facilities at the Vietnam plant by 2025.
In addition, to achieve net-zero emissions, the Group has completed its 2023 carbon inventory and obtained third-party assurance.

4.2 Energy Management

Energy Management

In 2024, the energy consumption of ESON's Kunshan plant mainly consisted of purchased electricity 41,978.11 (GJ) and photovoltaic power generation 16,099.51 (GJ), with renewable energy accounting for 26.43% of the total energy consumed. In 2023, the energy consumption mainly consisted of purchased electricity 43,375.77 (GJ) and photovoltaic power generation 11,376.93 (GJ), with renewable energy accounting for 19.82% of the total energy consumed. The overall energy consumption in 2024 increased compared to 2023, mainly due to an increase of NTD 85.03 million in revenue in 2024 compared to 2023. If revenue is used as the denominator for calculating total energy consumption, the energy consumption intensity (energy consumption per million NTD of revenue) in 2024 was 33.03 (GJ/million NTD), representing an increase of 0.41 (GJ/million NTD), or approximately 1.24%, compared to 2023.

ESON's Kunshan plant has partnered with Jiangsu Mingxi New Energy to jointly invest in photovoltaic power generation projects. The Company provides idle spaces as the foundation for the construction and operation of facilities for photovoltaic power generation. Agreed upon with its partner, the Company enjoys photovoltaic power at utility power rates and is entitled to prioritize the use of electricity generated from photovoltaic power. This preferential agreement ensures that ESON's Kunshan plant has priority access to stable and sustainable power supply while reducing energy costs.

Energy Type	Unit	2023	2024
Natural gas	Gigajoules (GJ)	962.13	1,079.05
Gasoline		1,072.31	1,162.18
Diesel		599.66	584.54
Purchased electricity		43,375.77	41,978.11
Renewable energy		11,376.93	16,099.51
Total energy consumption		57,386.80	60,903.39
Energy intensity	(GJ/million NTD in revenue)	32.62	33.03
Share of energy consumption from purchased electricity	(%)	75.58%	68.93%
Share of energy consumption from renewable sources	(%)	19.82%	26.43%

Note 1: Energy (GJ) = Activity data (e.g., cubic meters, liters) × heating value (kcal/activity data unit) × 4.187 (kJ/kcal) / 1,000,000 (kJ/GJ).
Note 2: Energy heating value conversion is based on the "Heat Content of Energy Products" published by the Energy Administration, Ministry of Economic Affairs: Natural gas: 9,000 kcal/cubic meter. Diesel: 8,400 kcal/kg. Gasoline: 7,800 kcal/kg; unit conversion: 4.187 kJ/kcal; unit conversion: 1 MWh= 3.6 GJ.
Note 3: Energy intensity is calculated by dividing gigajoules (GJ) by million NTD in revenue. The revenue of ESON's Kunshan plant in 2023 and 2024 was NTD 1,759 million and NTD 1,844 million, respectively.
Note 4: Data boundaries include ESON's Kunshan plant.
Note 5: Renewable energy refers to solar energy generated by photovoltaic power generation systems.

Reduction Actions and Results

To improve energy efficiency and reduce overall energy consumption, we have effectively reduced energy consumption through equipment upgrades and multiple energy-saving measures. We continue to take action in energy conservation, emission reduction, and green operations. In 2024, a total of 3 energy-saving measures were implemented at ESON's Kunshan plant, achieving a total energy saving of approximately 3,482 gigajoules (GJ) compared to the previous year, with an electricity-saving rate of 33%.

Item	Name of Energy-saving Project/ Policy	Description	Implementation Site/Unit	Energy-saving Results			
				2023	2024	Actual Reduction	Data Unit
1	Energy-saving lighting	Replacement of old lighting with LEDs	Each workshop	388	194	194	GJ
2	Air compressor pipeline renovation	Decommissioning some equipment through integration of pipelines	Air compressor rooms in plants	6,999	5,288	1,711	GJ
3	Downgrading old air compressors as backup machines	Decommissioning fixed-frequency air compressors	Air compressor rooms in plants	3,154	1,577	1,577	GJ

4.3 Greenhouse Gas and Emissions Management

In response to the challenges of global climate change, companies must continuously reduce their GHG emissions during operations to mitigate their negative impact on the climate. Therefore, since 2023, ESON has gradually built up its GHG inventory capacity and disclosed its GHG emissions. Each year, our Taiwan branch and all global manufacturing plants complete ISO 14064-1 certification and are verified by independent third-party verification bodies. Organizational boundaries are defined based on operational control. Each subsidiary or branch of the Group has gradually reduced the consumption of utility power, increased the use of green electricity, and promoted the use of sustainable energy. At the same time, we encourage employees to commute by bus or electric bicycle and advocate for the use of green energy transportation to reduce carbon emissions. Additionally, we are phasing out energy-consuming old equipment and refrigeration equipment to reduce overall energy consumption and improve energy efficiency.

Scope of GHG Emissions	Category		2023		2024	
			Emissions (tons of CO_2e)	Intensity (tons of CO_2e/million NTD)	Emissions (tons of CO_2e)	Intensity (tons of CO_2e/million NTD)
Scope 1 Emissions (tons of CO_2e)	Category 1	Stationary combustion	1,463.7994	0.31	3,107.6728	0.41
		Mobile combustion	1,644.4126		1,808.9491	
		Industrial processes	56.3758		62.9053	
		Fugitive emissions	438.5404		444.8658	
		Land use	-		-	
	Total		3,603.1282		5,424.3930	
Scope 2 Emissions (tons of CO_2e)	Category 2	Electricity imported	26,292.6430	2.27	40,496.0615	3.09
		Energy imported	-		-	
	Total		26,292.6430		40,496.0615	

Scope of GHG Emissions	Category		2023		2024	
			Emissions (tons of CO_2e)	Intensity (tons of CO_2e/million NTD)	Emissions (tons of CO_2e)	Intensity (tons of CO_2e/million NTD)
Scope 3 Emissions (tons of CO_2e)	Category 3	Emissions from upstream transportation/ distribution	1.0543	5.62	0.4879	8.58
		Emissions from downstream transportation/distribution	-		0.5200	
		Waste-generated emissions	3.2763		0.1947	
		Emissions from employee commuting	10.2469		7.9077	
		Emissions from transportation of customers and visitors	-		-	
		Emissions from business travel	52.7030		-	
	Category 4	Emissions from purchased goods	46,926.4874		88,998.1667	
		Energy procurement	11,468.7828		15,127.3962	
		Emissions from capital goods	5,355.4142		7,073.3624	
		Emissions from solid and liquid waste disposal	957.2515		856.1506	
		Emissions from asset use	2.6388		-	
		Emissions from the use of services not described in the above subcategories (such as consulting, cleaning, maintenance, mail delivery, and banking)	-		-	
		Water consumption	196.2064		269.9886	
	Category 5	Product use-phase emissions	-		-	
		Emissions from downstream leased assets	-		-	
		Product end-of-life phase	-		-	
		Emissions from investments	-		-	
	Category 6	Others	-		-	
	Total		64,974.0616		112,334.1748	
Grand Total			**94,869.8328**	**8.21**	**158,254.6293**	**12.08**

Note 1: The emission factors for Taiwan are based on the electricity carbon emission factor, GWP values, and the Environmental Protection Administration Greenhouse Gas Emission Factor Management Table (version 6.0.4).
Note 2: The emission factors for China are based on the electricity factors published by the Chinese government.
Note 3: The emission factors for Mexico are based on the electricity factors published by the Mexican government.
Note 4: The inventory scope includes offices in Taiwan and operational sites in China, Mexico, Vietnam, Malaysia, and Slovakia.
Note 5: The external verification body for 2023 was AFNOR Asia. As of the publication date of this Report, the external verification of GHG emissions for 2024 has not been completed. Only data from the inventory conducted by the Group itself has been disclosed.
Note 6: Intensity: Tons of CO_2e/million NTD in consolidated revenue of the Group.The Group's consolidated revenue in 2023 and 2024 was NTD 11,562 million and NTD 13,094 million, respectively.

4.4 Water Resource Management

The Company uses the World Resources Institute's global water risk mapping tool, Aqueduct Water Risk Atlas, to analyze the Water Stress Index (WSI) of the primary operational site, ESON's Kunshan plant, and assess the risk level of water resources. Considering that all primary operational sites, including the Kunshan plant, are currently located in areas of high water stress, the Company actively promotes various water-saving measures, while recording and disclosing information on water withdrawal sources, water bodies receiving discharge, and wastewater treatment units, ensuring compliance with discharge standards established by local regulatory authorities.

At present, the majority of water used at ESON's Kunshan plant is centrally supplied by the municipal water company. The water used for operations is mainly for domestic use and process use. Industrial consumption is primarily for cleaning lines. Domestic water flows into septic tanks for sedimentation and separation before being discharged into the municipal sewage network.Wastewater from cleaning lines is collected and recycled through the central water treatment system, then treated at the plant's internal sewage station before being discharged to the Wusong River Sewage Treatment Plant. In 2024, water withdrawal was 179.068 megaliters, process water discharge was 11.197 megaliters, and domestic water consumption was 167.871 megaliters.

Considering that ESON's Kunshan plant is located in a water-stressed region, the plant manages its water resources with caution. At the end of each year, the plant submits an estimated water consumption plan for the following year to the water company. The Company has trained one employee responsible for water conservation and conducts water balance tests at the plant once a year to prevent leakage and spillage. The water storage facilities at ESON's Kunshan plant include a 5T elevated water tank in the employee dormitories, which ensures water supply to dormitories and the canteen, and a 20T firefighting water tank for fire emergency.

The wastewater is pre-treated to meet standards before being discharged to the Wusong River Sewage Treatment Plant (an urban sewage treatment plant). Flow meters are installed at the sewage treatment plant to calculate the daily wastewater discharge to the Wusong River Sewage Treatment Plant. Around the 10th of each month, the sewage treatment plant sends a daily wastewater operation report for the previous month to ESON's Kunshan plant, which is then stamped by the Company with a departmental seal and scanned back to the sewage treatment plant. In 2024, there were no incidents of non-compliance with discharge limits at ESON's Kunshan plant.

Unit: Megaliters

Water Source	Water Quality Indicator	2022		2023		2024	
		All Regions	Water-stressed Regions	All Regions	Water-stressed Regions	All Regions	Water-stressed Regions
Third-party partners' water withdrawal	Fresh water	251.855	251.855	197.148	197.148	179.068	179.068
Total water withdrawal		251.855	251.855	197.148	197.148	179.068	179.068

Note 1: Water resource data includes ESON's Kunshan plant.
Note 2: The water referred to in the data is all classified as fresh water (≤ 1,000 mg/L total dissolved solids).
Note 3: 1 megaliter = 1,000 cubic meters (1,000 m^3). The total water withdrawal in 2024 was 179.068 thousand cubic meters (1,000 m^3).
Note 4: Water withdrawal is measured using water meters installed at the Kunshan plant by the municipal water company, with data recorded daily, monthly, and annually, and reported on a monthly basis.

Unit: Megaliters

Wastewater Discharge Regions	Effluent Quality Indicator	2022 All Regions	2022 Water-stressed Regions	2023 All Regions	2023 Water-stressed Regions	2024 All Regions	2024 Water-stressed Regions
Third-party partners' water discharge	Fresh water	21.677	21.677	9.442	9.442	11.197	11.197
Total water discharge		21.677	21.677	9.442	9.442	11.197	11.197

Note 1: Water resource data includes ESON's Kunshan plant.
Note 2: The water referred to in the data is all classified as fresh water (≤ 1,000 mg/L total dissolved solids).
Note 3: 1 megaliter = 1,000 cubic meters (1,000 m³). The total water discharge in 2024 was 11.197 thousand cubic meters (1,000 m³).
Note 4: Effluent conforms to the following standards:
(1) Production wastewater discharge standard: National Standard of the People's Republic of China: GB 8978-1996 Integrated wastewater discharge standard (Ammonia nitrogen: 15mg/L; chemical oxygen demand: 200mg/l; pH: 6-9mg/l; total phosphorus: 3mg/L; suspended solids: 400mg/L; anionic surfactants: 10mg/L; BOD5: 10mg/L; petroleum-based: 10mg/L; total nitrogen: 30mg/L)
(2) Domestic sewage discharge standard: National Standard of the People's Republic of China: GB/T 31962-2015 Wastewater quality standards for discharge to municipal sewers (pH: 6-9mg/L; chemical oxygen demand: 200mg/L; total phosphorus: 3mg/L; ammonia nitrogen: 15mg/L; BOD5: 10mg/L; total nitrogen: 30mg/L; suspended solids: 400mg/L)

Unit: Megaliters

Item	2022 All Regions	2022 Water-stressed Regions	2023 All Regions	2023 Water-stressed Regions	2024 All Regions	2024 Water-stressed Regions
Total water withdrawal (a)	251.855	251.855	197.148	197.148	179.068	179.068
Total water discharge (b)	21.677	21.677	9.442	9.442	11.197	11.197
Total water consumption (a)-(b)	230.178	230.178	187.706	187.706	167.871	167.871

Note 1: Water resource data includes ESON's Kunshan plant.
Note 2: The water referred to in the data is all classified as fresh water (≤ 1,000 mg/L total dissolved solids).
Note 3: 1 megaliter = 1,000 cubic meters (1,000 m³). The total water consumption in 2024 was 167.871 thousand cubic meters (1,000 m³).

4.5 Waste Management

The Company has established a dedicated management unit in accordance with the ISO 14001 management procedures to effectively monitor the sources, output, and management measures of waste. Additionally, the Company conducts a detailed analysis and response regarding the actual and potential impacts related to waste. In 2024, the total waste output of ESON's Kunshan plant was 1,825.47 tons, representing a decrease of approximately 15.58% compared to 2023. This was mainly due to ESON's efforts in conducting training and awareness campaigns to improve employees' knowledge of energy conservation and emission reduction, reducing the use of raw materials that generate waste to minimize waste production at the source, implementing reasonable maintenance and repair plans for machinery and equipment to reduce waste generation, purchasing raw and auxiliary materials with greater durability and environmental friendliness, and enhancing employees' professional competence, which reduced product defect rates and decreased the generation of end-of-life products. ESON's Kunshan plant does not directly dispose of hazardous industrial waste, non-hazardous industrial waste, or general waste. All waste generated is transported and transferred by qualified disposal service providers for off-site disposal. The Company enters into contracts with these disposal service providers, expressly specifying that the disposal service providers shall dispose of all waste in accordance with the law. In addition, the Company uses a Supplier Audit Checklist to verify whether its disposal service providers dispose of waste in accordance with the law. Information on the entire waste lifecycle, from generation to lawful disposal, is available on the government environmental protection website, ensuring the lawfulness and safety of the final treatment.

Unit: Tons (t)

2023	Hazardous Industrial Waste	Non-hazardous Industrial Waste	General Waste	Total
Waste generated	45.11	1,799.88	317.42	2,162.41
Waste directly disposed	20.53	-	317.42	337.95
Incineration (with energy recovery)	-	-	317.42	317.42
Incineration (without energy recovery)	20.53	-	-	20.53
Waste transferred for disposal	24.59	1,799.88	-	1,824.46
Recycled	24.59	1,799.88	-	1,824.46
Waste recycling rate (%)	54%	100%	0%	84%

Unit: Tons (t)

2024	Hazardous Industrial Waste	Non-hazardous Industrial Waste	General Waste	Total
Waste generated	29.23	1,430.93	365.31	1,825.47
Waste directly disposed	15.87	-	365.31	381.18
Incineration (with energy recovery)	-	-	365.31	365.31
Incineration (without energy recovery)	15.87	-	-	15.87
Waste transferred for disposal	13.36	1,430.93	-	1,444.29
Recycled	13.36	1,430.93	-	1,444.29
Waste recycling rate (%)	46%	100%	0%	79%

Note 1: Waste data is reported within the boundary of ESON's Kunshan plant.
Note 2: The waste recycling rate is calculated as the volume of waste transferred for disposal divided by the total volume of waste generated.

Unit: Tons (t)

Hazardous Waste Category	Disposal Method	2023	2024
Oil sands waste	D10 (incineration)/off-site disposal	6.16	-
Waste oil	D10 (incineration)/off-site disposal	0.99	-
Paint-stripped waste	D10 (incineration)/off-site disposal	0.98	0.56
Paint waste	D10 (incineration)/off-site disposal	-	0.24
Cutting fluid waste	D9 (physical-chemical treatment)/off-site disposal	10.47	8.33
Sludge	R4 (recycling/reuse)/off-site disposal	24.58	13.36
Containers containing chemicals	D10 (incineration)/off-site disposal	1.93	0.76
Chemical-containing gloves and cloths	D10 (incineration)/off-site disposal	-	5.75
Spent activated carbon	D10 (incineration)/off-site disposal	-	0.23
Total weight of hazardous waste		45.11	29.23

Note 1: The data is compiled based on the Hazardous Industrial Waste Inventory Log prepared by each workshop and cross-checked with the Jiangsu Province Solid Waste Management System for hazardous industrial waste transfer manifests.
Note 2: Waste data is reported within the boundary of ESON's Kunshan plant.
Note 3: Processes used for physical-chemical treatment (e.g., evaporation, drying, neutralization, and precipitation) do not involve pre-treatment for landfill or incineration.

ESON attaches great importance to the management of waste. As the volume of waste increases, incidents such as spillage and leakage during inbound/outbound processes may cause environmental pollution, higher disposal costs, and potential administrative penalties from government environmental protection authorities. In addition, excessive waste could lead to closer supervision from regulatory authorities and pose risks of groundwater pollution. Therefore, the Company not only needs to take effective measures to reduce waste generation but also to strengthen management, ensuring environmental safety and compliance. To address these challenges, we have formulated the following response measures.

Reducing Hazardous Industrial Waste Generation	
1	Optimize production processes to improve the utilization rate of raw materials, thereby reducing waste generation.
2	Plan production schedules reasonably to avoid the excessive use of hazardous chemicals at once, thereby reducing waste generation.
3	Promote clean production and strengthen process control to reduce the use and emissions of hazardous substances during production.
4	Organize advocacy activities on waste reduction to raise employees' environmental protection awareness and encourage employees to participate in waste reduction initiatives.

Selecting Waste Disposal Service Providers	
1	Check waste disposal service providers' business license.
2	Check waste disposal service providers' waste management permit to verify whether the types of waste permitted include the types of waste generated by the Company.
3	The procurement department is responsible for reviewing waste disposal service providers' quotes.
4	When differences in quotes are not significant, priority is given to selecting disposal service providers located near the operational sites to avoid potential cumbersome environmental protection procedures and transportation inconveniences that may arise during inter-provincial waste transfers.