



THAIRUNG

2025

Annual Environmental Report

For a Sustainable
Tomorrow



Environmental Policies and Practices

The Company prioritizes environmental management and efficient energy resource usage. It continuously reviews and communicates environmental policies to personnel through various channels, including company emails, public bulletin boards, management reviews, new employee training, and publication on the company website. This serves as an operational guideline for environmental management and energy conservation for directors, executives, and employees at all levels.

The Company makes environmental management and energy conservation an integral part of organizational operations, establishing clear roles and responsibilities while encouraging participation across all levels. Annual environmental plans and targets are formulated, covering energy reduction, water management, waste reduction, and environmental impact control, supported by regular monitoring and reporting. Key operational guidelines include:

- Integrating environmental management and energy conservation into corporate operations.
- Assigning responsibilities to executives and employees at all levels to participate in execution.
- Establishing annual environmental plans and targets with regular monitoring and reporting.
- Continuously improving energy and resource efficiency.
- Promoting training and raising environmental awareness among employees.

Furthermore, the Company defines Key Performance Indicators (KPIs) and quantitative targets in key areas to continuously monitor and evaluate operational performance.

Environmental Policy

“We are all united. Be aware of using resources efficiently.

Along with improving, fixing and developing. To maintain a sustainable environment.”

Thai Rung Union Car Public Company Limited and its subsidiaries operate in automobile assembly, automotive parts manufacturing, and related equipment. The Company intends to maintain operations and prevent business activities from causing harmful environmental impacts or public annoyance through the following policies:

Waste management and recycling policy

- Reducing waste at source: Supporting the reduction of waste generated in the production and operation processes.
- Recycling : Establish a waste separation and recycling system in the workplace and encourage the use of recyclable materials.
- Hazardous waste management : Establish measures for managing hazardous waste in accordance with international standards and as required by law.

Chemical Policy

- Controlling the use of chemicals : by setting standards and regulations on the import, use and storage of chemicals to ensure that they are properly and safely implemented as required by law.
- Impact Assessment and Monitoring : Assessment of the risk of each chemical that may cause impacts on human health and the environment.
- Education and Training : Providing education on the safe use of chemicals, including training for those involved with chemicals.

Water management policy

- Wastewater Management : Manage wastewater to meet legal standards before releasing it into the environment.
- Water Conservation : Water-saving measures in production processes and offices

Air pollution management policy

- Air Pollution Management : Manage air pollution to be within legal standards before releasing it into the environment.
- Air Pollution Reduction : Continuously improve production processes and operations to reduce air pollution

Sustainable energy use policy

- Energy Saving : Promote efficient energy use in every step of the operation.
- Use of renewable energy : Install and use energy from renewable sources such as solar power.
- Monitoring and Evaluation : Regularly monitor and report energy usage.

Greenhouse gas emissions control policy

- Greenhouse gas emission-aware production process control
- Use of technologies that support the reduction of greenhouse gas emissions

Environmental impacts of product use

- Conducting a product life cycle assessment (LCA) to identify the sources of environmental impacts, allowing for improvements in production efficiency and ways to reduce environmental impacts.
- Focus on using products that have the least environmental impact, such as promoting recyclable products

Environmental Targets

Category	Qualitative Target	Quantitative Target
Energy	Promote and improve work processes for efficient energy utilization	Reduce electricity consumption by 10% from the previous year
Air	Control air pollution emissions to remain within legal standards	Monitor air quality 2 times/year
Water	Utilize water efficiently and manage wastewater effectively	Reduce water consumption by 5% compared to the previous year
Waste	Reduce waste generation and promote waste management following 3Rs	Reduce total waste and refuse volume by 10% from the previous year
Energy & Fuel	Enhance energy and fuel efficiency in operational processes	Reduce energy and fuel consumption by 10% from the previous year
CFO (Carbon Footprint)	Reduce GHG emissions and promote efficient resource utilization	Reduce GHG emissions by 5% compared to base year 2024

Operational Performance Results (Year 2025)

Category	Qualitative Performance Result	Quantitative Performance Result
Energy	Prepared continuous energy reduction improvement plans	Reduced electricity consumption by 8%, saving THB 3.32 million
Air	Stack emissions measured well within legal standards	Completed stack measurements 2 times/year (100% compliance)
Water	Effluent quality was better than legal limits; wastewater systems upgraded as appropriate	Reduced water consumption by 7.9% (5,006.00 m ³), saving THB 85,494.80/year
Waste	Separated waste by type, promoted reuse and recycling, controlled proper hazardous waste disposal	Increased waste reuse/recycling rate by 21.48% (849,797 kg)
Energy & Fuel	Monitored energy and fuel usage; implemented process improvements for efficiency	Reduced energy and fuel usage by 8%, saving THB 3.32 million
CFO (Carbon Footprint)	Implemented energy saving measures and GHG-related process improvements	Reduced corporate GHG emissions by 4.27%

Environmental Management System (ISO 14001)

The Company has been audited and certified by United Registrar of Systems (Thailand) Limited (URS Thailand), an independent international Certification Body (CB) accredited by global Accreditation Bodies (AB). Re-certification has been maintained annually:

Standard	2023	2024	2025
Environmental Management System (ISO 14001:2015)	100%	100%	100%

**Certification covers two entity locations: Thai Rung Union Car Public Co., Ltd. and Thai Rung Tools and Dies Co., Ltd.*

Energy Management

The Company established an Energy Management working team to execute energy policies. Action plans control peak load usage, inspect machinery to prevent energy waste, and replace equipment with energy-efficient models. Progress is reported at quarterly productivity meetings.

Energy Management: Fuel Consumption

Fuel Type	Unit	2023	2024	2025
Diesel Oil	Liters	186,110	148,045	147,173
LPG	Kilograms	316,591	315,984	299,944

Energy Management: Electricity Consumption

Category	Unit	2023	2024	2025
Total Electricity Consumption	kWh	8,390,442	8,696,724	7,858,991
Purchased Electricity	kWh	7,428,190	7,591,000	6,854,000
Electricity Purchase Cost	THB	35,943,309	32,258,806	29,686,159
Renewable Electricity Generated (Solar)	kWh	962,252	1,105,724	1,004,991

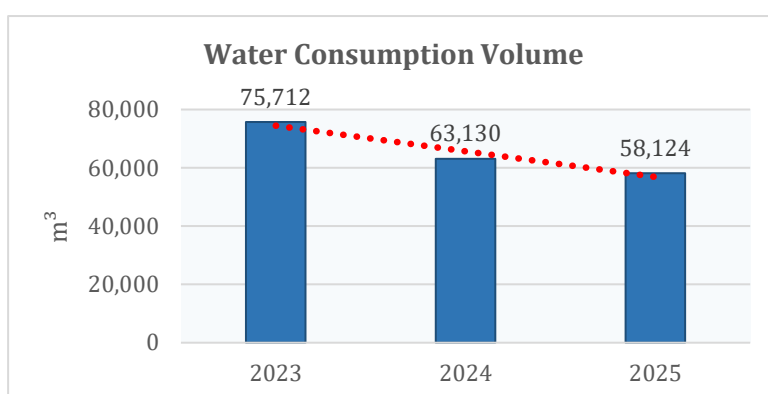
In 2025, the Company targeted a 10% reduction in electricity cost compared to the previous year and achieved an 8% reduction, saving approximately THB 3.32 million. Although slightly below target, it demonstrates the effectiveness of solar cell generation, machine upgrades, and loss reduction. Efficient energy management effectively lowered overall production costs and supported long-term profitability.

Water Quality Management

With a goal to reduce water consumption by 5% annually, the Company achieved a 7.9% reduction in 2025 (5,006 m³), saving approximately THB 85,494.80/year.

The company's water consumption

Indicator	Unit	2023	2024	2025
Water Consumption Volume	m ³	75,712	63,130	58,124
Total Water Expenditure	THB	1,207,388.30	1,078,762.78	993,267.98



Wastewater Management

Wastewater from automotive dipping and spray-painting processes undergoes rigorous treatment via two primary systems under Plant Engineering supervision:

- Degrease System: Chemical coagulants precipitate industrial waste.
- Spray Booth System: Primary chemical coagulation combined with Activated Sludge (AS) biological treatment.

Certified third-party contractors inspect discharge quality weekly prior to external release:

Parameter	Unit	Standard	2023	2024	2025	Status
pH Level	-	5.5 - 9.0	7.9	8.3	8.0	Pass
Temperature	°C	< 40	25.5	25.2	25.0	Pass
BOD (Biochemical Oxygen Demand)	mg/L	< 20	10.8	10.4	11.4	Pass
COD (Chemical Oxygen Demand)	mg/L	< 120	56.5	50.9	52.9	Pass
Suspended Solids (SS)	mg/L	< 50	21.4	26.2	20.5	Pass
Oil & Grease	mg/L	< 5	1.1	1.2	1.0	Pass
Color	ADMI	< 300	63.8	36.9	31.7	Pass

Air Quality Management

Air pollution control employs EDP Coating (Activated Carbon odor absorption) and Spray Painting (water curtain paint mist capture) systems. Certified external testing is conducted 2 times/year on 100% of active plant stacks.

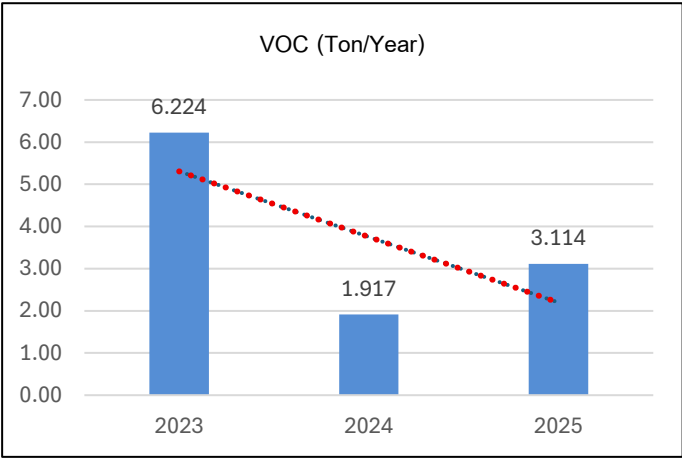
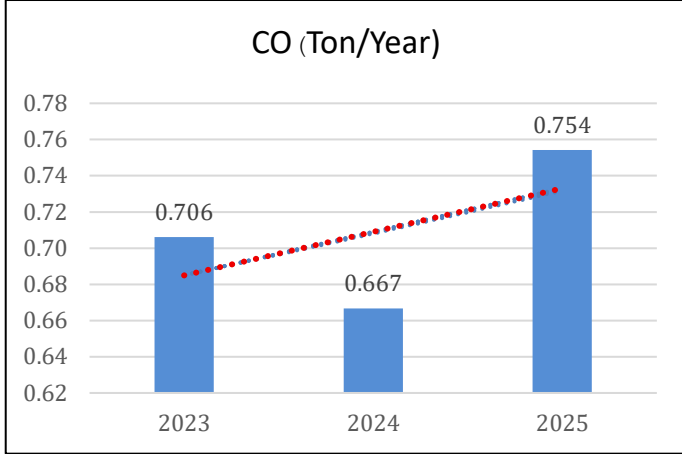
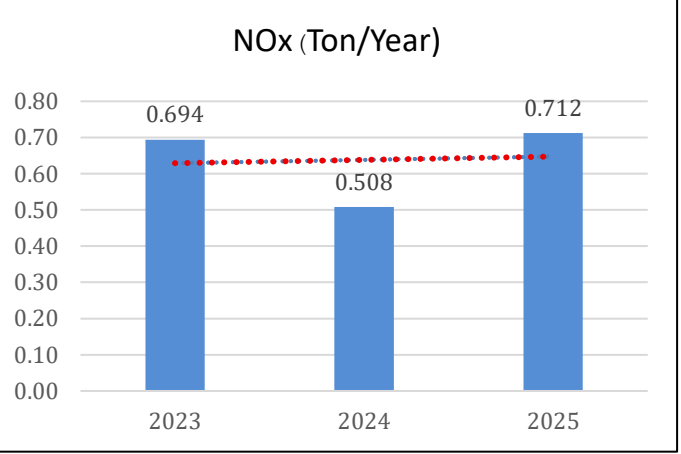
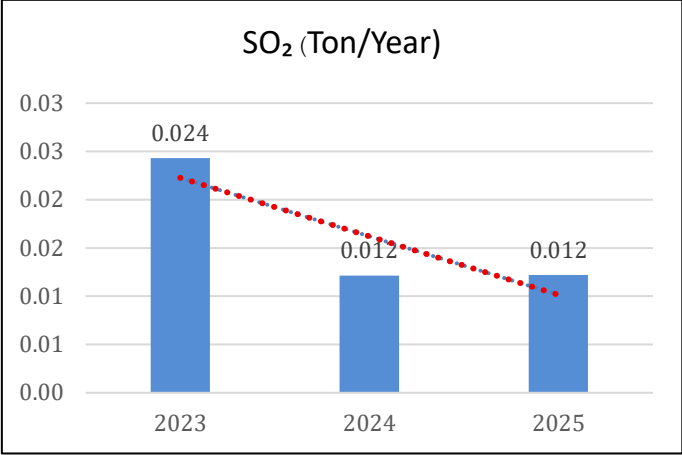
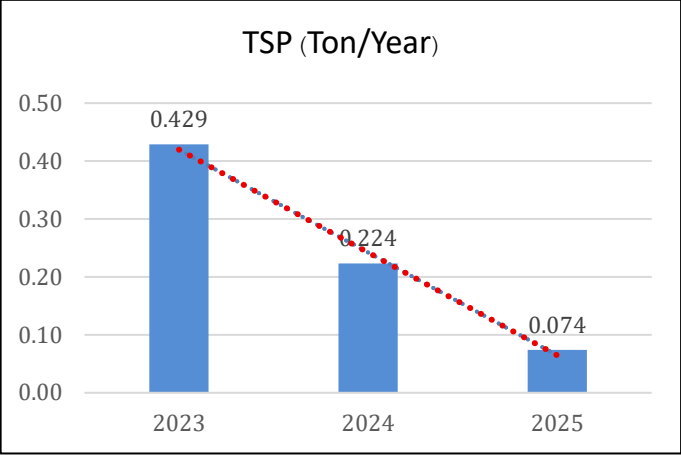
Stack Air Quality Test Results

Parameter	Standard	Unit	1/2023	2/2023	1/2024	2/2024	1/2025	2/2025
Total Suspended Particulates (TSP)	< 320	mg/m ³	1.12	1.28	1.13	0.41	0.16	0.40
Sulfur Dioxide (SO ₂)	< 60	ppm	<1	1	1	1	<1	<1
Xylene	< 200	ppm	0.92	0.16	0.26	0.15	0.09	0.90
Carbon Monoxide (CO)	< 690	ppm	16.17	13.86	26.25	27.25	18.50	21.17
Nitrogen Oxides (NO _x)	< 200	ppm	8.45	7.53	13.12	12.42	25.94	20.22
TVOC (Total Volatile Organics)	-	mg/m ³	-	-	7.43	3.03	1.74	13.83
Toluene	-	ppm	-	-	0.20	0.37	0.13	2.07

**Covers 100% of the company's active ventilation flue measurements

Annual Stack Emissions Volume

Pollutant Type	Unit	2023	2024	2025
Total Suspended Particulates (TSP)	Ton/Year	0.43	0.22	0.07
Nitrogen Oxides (NO _x)	Ton/Year	0.69	0.51	0.71
Sulfur Dioxide (SO ₂)	Ton/Year	0.02	0.01	0.01
Carbon Monoxide (CO)	Ton/Year	0.71	0.67	0.75
Total Volatile Organic Compounds (TVOC)	Ton/Year	6.22	1.92	3.11



Waste Management

Aiming for a 10% annual waste reduction via 3Rs, material yield enhancement, oil recycling, and plastic/foam reduction. PST Environmental Technology Co., Ltd. transports hazardous waste, while Better World Green PLC handles legal, compliant disposal.

Category	Unit	2023	2024	2025
Total Waste and Refuse Volume	kg	4,180,225	3,939,198	3,089,401
Total Non-Hazardous Waste	kg	4,059,450	3,786,833	2,973,466
Total Hazardous Waste	kg	120,775	152,365	115,935
Waste Recycled / Reused	kg	-	3,644,033	2,912,637
Waste Not Reused (Disposed)	kg	-	295,165	176,764

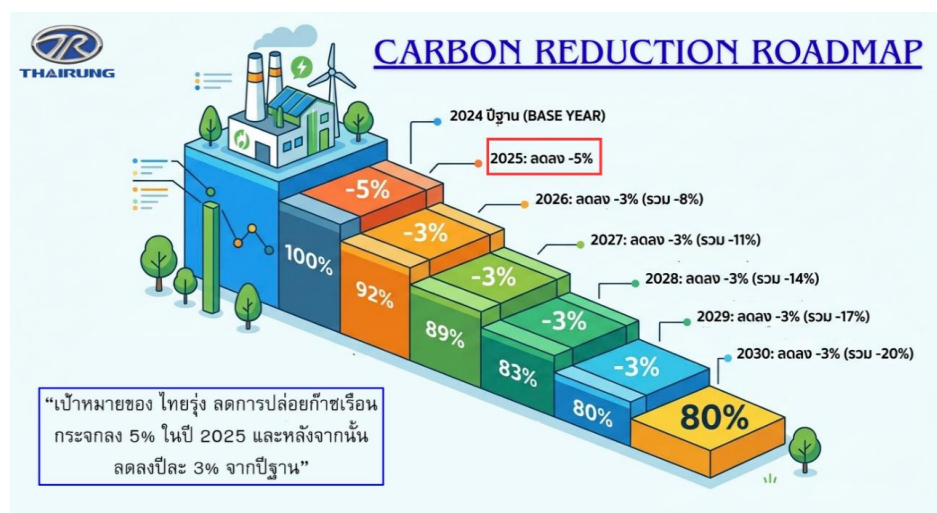
*Covers the company's area. Thai Rung Union Car and Company Thai Rung Tools & Dies Co., Ltd

Greenhouse Gas (GHG) Management

Aligned with the Paris Agreement (1.5°C goal), the Company conducts annual GHG assessments (certified TGO auditor Mr. Sirasit Meesiri). The roadmap targets a 5% reduction in 2025 and 20% by 2030 against base year 2024.

Carbon Reduction Roadmap

Year	Reduction Target	Cumulative Target
2024	-	Base Year
2025	5%	5%
2026	3%	8%
2027	3%	11%
2028	3%	14%
2029	3%	17%
2030	3%	20%



Greenhouse Gas Assessment Results

Emission Source	Unit	2024	2025	Change (%)
Scope 1 (Direct Emissions)	Ton CO2eq	1,941	2,241	+15.45%
Scope 2 (Indirect Emissions - Electricity)	Ton CO2eq	3,820	3,274	-14.29%
Scope 3 (Other Indirect - Fuel & Energy)	Ton CO2eq	1,249	1,044	-16.41%
Total Scope 1 + Scope 2	Ton CO2eq	5,761	5,515	-4.27%
Total Scope 1 + Scope 2 + Scope 3	Ton CO2eq	7,010	6,559	-6.43%

*Scope 3 is calculated only for Category 3 Fuel and Energy related activities.

**Evaluation results for TRU and its 2 subsidiaries

Scope 3 Emissions Breakdown by Category (2025)

No.	Category Description	Emissions (ton CO2eq)	Share (%)
1	Purchased goods and services	26,865.80	83.75%
2	Capital goods	0.00	0.00%
3	Fuel- and energy-related activities	1,043.49	3.25%
4	Upstream transportation and distribution	54.92	0.17%
5	Waste generated in operations	527.11	1.64%
6	Business travel	4.65	0.01%
7	Employee commuting	814.50	2.54%
8	Upstream leased assets	0.00	0.00%
9	Downstream transportation and distribution	0.92	0.00%
10	Processing of sold products	0.00	0.00%
11	Use of sold products	2,467.89	7.69%
12	End-of-life treatment of sold products	288.86	0.90%
13	Downstream leased assets	8.76	0.03%
14	Franchises	0.00	0.00%
15	Investments	0.00	0.00%

In 2025, total corporate methane emissions were 25.09 Ton CO2eq and ozone-depleting substance emissions were 31.3 kg (0.0017215 ton CFC-11eq).

Environmental Fines and Legal Penalties

In 2025, the Company incurred zero expenses or fines related to non-compliance with environmental laws and regulations.

Category	Unit	2023	2024	2025
Environmental Fines and Legal Penalties	THB	0	0	0