

ESG Performance

Company Name : TTW PUBLIC COMPANY LIMITED

Symbol : TTW

Market : SET

Industry Group : Resources

Sector : Energy & Utilities

Environmental management

Information on environmental policy and guidelines

Environmental policy and guidelines

Environmental policy and guidelines : Yes

Environmental guidelines : Electricity Management, Fuel Management, Renewable/Clean Energy Management, Water resources and water quality management, Waste Management, Biodiversity Management, Greenhouse Gas and Climate Change Management, Air Quality Management, Noise Pollution Management

The guidelines for environmental practices are as follows:

1. Realize and focus on business operations that do not affect the environment.
2. Conserve energy and combat climate change by taking measures to reduce electricity consumption and greenhouse gas emissions from business processes according to the specified goals.
3. Manage the water resources by raising awareness of the importance of water usage and also setting measures and goals to bring wastewater from the water production process to reuse in water production.
4. Manage waste and residual materials by bringing the sediment to research into products and use it for social benefits including promoting the use of recycled materials to promote the wise use of resources.
5. Manage biodiversity for the benefit and value of the organization by establishing preventive measures for the water supply and wastewater treatment systems that will not have a negative impact on creatures in the ecosystem.
6. Encourage cooperation and participation between the organization and external agencies to conserve natural resources and the environment.
7. Realize and focus on strictly complying with environmental laws by setting up an environmental management system (ISO 14001) that must be inspected and certified by external agencies as planned.

Information on review of environmental policies, guidelines, and/or objectives over the past years

Review of environmental policies, guidelines, and/or goals over the past year

Review of environmental policies, guidelines, and/or goals : No
over the past year

Information on compliance with environmental management principles and standards

Compliance with environmental management principles and standards

Environmental management principles and standards : ISO 14001 - Environmental management systems

Compliance with energy management principles and standards

Compliance with water management principles and standards

Water management principles and standards : 3Rs or 5Rs

Compliance with waste management principles and standards

Waste management principles and standards : 3Rs, 5Rs or 7Rs

Compliance with greenhouse gas or climate change management principles and standards

Information on incidents related to legal violations or negative environmental impacts

Number of cases and incidents of legal violations or negative environmental impacts

	2022	2023	2024
Number of cases or incidents of legal violations or negative environmental impact (cases)	0	0	0

Energy management

Disclosure boundary in energy management in the past years

Boundary type	: Company
Total number of disclosure boundaries	: 3
Actual number of disclosure boundaries	: 3
Data disclosure coverage (%)	: 100.00

Information on energy management

Energy management plan

The company's energy management plan	: Yes
Reference link for company's energy management plan	: https://www.ttwplc.com/storage/sustainable/sustainability-execution/environmental/20240412-ttw-climate-change-and-energy-conservation-en.pdf

Information on setting goals for managing energy

Setting goals for managing electricity and/or oil and fuel

Does the company set goals for electricity and/or fuel management	: Yes
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Details of setting goals for electricity and/or fuel management

Target(s)	Base year(s)	Target year(s)
Reduction of electricity purchased for consumption	2023	2024 : Reduced by 0%

Information on performance and outcomes of energy management

Performance and outcomes of energy management

Performance and outcomes of energy management	: Yes
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Diagram of performance and outcomes in energy management



TTW รับประกาศเกียรติคุณโครงการ สนับสนุนกิจกรรมลดก๊าซเรือนกระจก (LESS)

TTW รับประกาศเกียรติคุณโครงการสนับสนุนกิจกรรมลดก๊าซเรือนกระจก (LESS) จากองค์การบริหารจัดการก๊าซเรือนกระจก (องค์การมหาชน) หรือ อบก. จากกิจกรรมการติดตั้งระบบโซลาร์บนหลังคาถึงน้ำใส (น้ำประปา) ได้รับการประเมินว่าสามารถลดก๊าซเรือนกระจกได้ 2,263.422 ตันคาร์บอนไดออกไซด์เทียบเท่า

Information on electricity management

Company's electricity consumption ^(*)

	2022	2023	2024
Total electricity consumption within the organization (Kilowatt-Hours)	144,407,643.00	172,952,180.00	180,281,945.00
Electricity purchased for consumption from non-renewable energy sources (Kilowatt-Hours)	140,020,000.00	168,360,000.00	175,890,000.00
Electricity purchased or generated for consumption from renewable energy sources (Kilowatt-Hours)	4,387,643.00	4,592,180.00	4,391,945.00
Intensity ratio of total electricity consumption within the organization to total number of employees (Kilowatt-Hours / Person / Year)	447,082.49	537,118.57	561,626.00

Additional explanation : ^(*) Exclude electricity consumption outside of the Company

Electricity Consumption Intensity

	2022	2023	2024
Intensity of total electricity consumption within the organization (Kilowatt-Hours / Cubic meter of product)	0.50700000	0.60500000	0.58400000

Information on fuel management

Company's fuel consumption

	2022	2023	2024
Jet fuel (Litres)	0.00	0.00	0.00
Diesel (Litres)	72,694.14	70,706.34	67,113.74
Gasoline (Litres)	59,596.10	62,081.07	75,969.07
Fuel oil (Litres)	0.00	0.00	0.00
Crude oil (Barrels)	0.00	0.00	0.00
Natural gas (Standard Cubic Feet)	0.00	0.00	0.00
LPG (Kilograms)	0.00	0.00	30.00
Steam (Metric tonnes)	0.00	0.00	0.00
Coal (Metric tonnes)	0.00	0.00	0.00

Additional explanation : Not include external fuel consumption

Information on total energy management (electricity + fuel)

Energy Consumption

	2022	2023	2024
Total energy consumption within the organization (Megawatt-Hours)	N/A	0.00	0.00

Energy Consumption Intensity

	2022	2023	2024
Intensity ratio of total energy consumption within the organization to total revenues (Megawatt-Hours / Thousand Baht of total revenues) ^(*)	N/A	0.00000000	0.00000000

Additional explanation : ^(*) Total revenues and expenses from consolidated financial statement

Water management

Disclosure boundary in water management over the past years

Boundary type	:	Company
Total number of disclosure boundaries	:	3
Actual number of disclosure boundaries	:	3
Data disclosure coverage (%)	:	100.00

Information on water management plan

Water management plan

The Company's water management plan : Yes

Water Resource Management

TTW is aware of the risks associated with water resources that may affect future business operations since water resources are the main raw materials for tap water production. The Company determines to be a part of the conservation of water resources and to drive operations toward the Sustainable Development Goals (SDGs) No. 6 on "Ensure Availability and Sustainable Management of Water and Sanitation for All.

The Company has designed the tap water production system to bring water back into the production process with maximum efficiency based on the principle of Water Discharge Minimization, including measures to control water loss in the production system (Production Loss), and has designed the tap water distribution system (Transmission Loss) to be appropriate, which will not release any water loss, whether it is the water separated from the sludge removal system or the water that has gone through the backwash process of a sand filter. The system is designed to collect sludge from the water production process to separate water from sludge, which is then returned to the water production system again. Water is essential to our livelihood and is used in the production of tap water to prevent the activities of the Company's business processes from polluting or affecting the quality of water resources, the Company strictly complies with the requirements of relevant laws, categorizing the Company's wastewater into two types include wastewater from water use within the office and from other activities within the water treatment plant by establishing a wastewater quality inspection plan before draining to the outside once a year.

Reference link for company's water management plan : <https://www.ttwplc.com/storage/sustainable/sustainability-execution/environmental/20240412-ttw-water-management-en.pdf>

Information on setting goals for water management

Setting goals for water management

Does the company set goals for water management : No

Information on performance and outcomes of water management

Performance and outcomes of water management

Performance and outcomes of water management : Yes

In 2024, the results of inspection and analysis of wastewater quality of every water treatment plant were qualified according to the notification of the Ministry of Industry regarding the determination of the standard for controlling the wastewater from the plants, by virtue of Article 14 of the Ministerial Regulation, No. 2 B.E.2535 (1992) issued under the Factory Act, B.E.2535 (1992)

Additionally, the company monitors and protects water sources in collaboration with relevant external organizations. This includes promoting activities to maintain water sources and improve water quality in the Tha Chin River and its tributaries. As part of these efforts, the company implemented the Bang Sue Canal Water Quality Restoration Project to help conserve the Tha Chin River. The project was successfully handed over to Rai Khing Municipality after the installation of water quality improvement equipment.

Following the installation: The Dissolved Oxygen (DO) level in the Bang Sue Canal increased by 61%, before installation (June 2022 – June 2023): The average DO level was 1.40 mg/L. After installation (July 2023 – June 2024): The average DO level rose to 2.26 mg/L., community satisfaction with the project reached 90%, meeting the project's key performance

indicators and achieving its objectives.

Information on water management

Water withdrawal by source

	2022	2023	2024
Total water withdrawal (Cubic meters)	285,240,309.00	284,350,141.00	308,860,079.00
Water withdrawal by third-party water (cubic meters)	309.00	141.00	79.00
Water withdrawal by surface water (cubic meters)	285,240,000.00	284,350,000.00	308,860,000.00
Water withdrawal by groundwater (cubic meters)	0.00	0.00	0.00
Water withdrawal by seawater (cubic meters)	0.00	0.00	0.00
Water withdrawal by produced water (cubic meters)	0.00	0.00	0.00
Intensity ratio of total water withdrawal to total number of employees (Cubic meters / Person / Year)	883,096.93	883,074.97	962,180.93
Intensity ratio of total water withdrawal to total revenues (Cubic meters / Thousand Baht of total revenues) ^(*)	50.00	48.53	59.95

Additional explanation : ^(*) Total revenues and expenses from consolidated financial statement

Water discharge by destinations

	2022	2023	2024
Total wastewater discharge (cubic meters)	0.00	0.00	0.00

Water consumption

	2022	2023	2024
Total water consumption (Cubic meters)	285,240,309.00	284,350,141.00	308,860,079.00

Recycled water consumption

	2022	2023	2024
Total recycled water for consumption (Cubic meters)	6,663,459.00	7,456,617.00	6,866,685.00

Water Consumption Intensity

	2022	2023	2024
Intensity ratio of total water consumption to total revenues (Cubic meters / Thousand Baht of total revenues)^(*)	49.99952882	48.53369811	59.94710600

	2022	2023	2024
Intensity of total water consumption (Cubic meters / m ²)	1.06000000	1.05000000	1.02600000

Additional explanation : ^(*) Total revenues and expenses from consolidated financial statement

Water withdrawal expenses

	2022	2023	2024
Total water withdrawal expense (Baht)	0.00	0.00	0.00
Percentage of total water withdrawal expense to total expenses (%) ^(*)	0.00	0.00	0.00
Percentage of total water withdrawal expense to total revenues (%) ^(*)	0.00	0.00	0.00
Intensity ratio of total water withdrawal expense to total number of employees (Baht / Person / Year)	0.00	0.00	0.00

Additional explanation : ^(*) Total revenues and expenses from consolidated financial statement

Waste management

Disclosure boundary in waste management over the past years

Boundary type	:	Company
Total number of disclosure boundaries	:	3
Actual number of disclosure boundaries	:	3
Data disclosure coverage (%)	:	100.00

Information on waste management plan

Waste management plan

The company's waste management plan : Yes

Waste Management

The Company recognizes the environmental and safety implications for stakeholders arising from waste generation in its business operations across the supply chain, encompassing raw material transportation, production, and product/service delivery. Prioritizing adherence to laws and recommendations from regulatory agencies, to minimizing environmental impacts associated with waste disposal. This involves a concerted effort to reduce the quantity of waste sent for disposal to the lowest feasible levels. Furthermore, the Company actively seeks opportunities to reuse waste, aligning with the principles of the Circular Economy, to maximize benefits and contribute to sustainable practices.

The company manages waste and unused materials in accordance with ISO 14001:2015 environmental management standards. A Waste and Unused Material Management Manual has been developed to serve as a guideline for managing waste and unused materials in compliance with legal requirements and to prevent potential environmental impacts.

Reference link for company's waste management plan : <https://www.ttwplc.com/storage/sustainable/sustainability-execution/environmental/20240412-ttw-waste-and-unused-materials-management-en.pdf>

Information on setting goals for waste management

Setting goals for waste management

Does the company set goals for waste management : No

Information on performance and outcomes of waste management

Performance and outcomes of waste management

The company's performance and outcomes of waste management : No

Information on waste management

Waste Generation^(*)

	2022	2023	2024
Total waste generated (Kilograms)	57,074.00	52,920.00	0.00
Total non-hazardous waste (kilograms)	52,491.00	45,140.00	0.00
Total hazardous waste (kilograms)	4,583.00	7,780.00	0.00
Intensity ratio of total waste generated to total revenues (Kilograms / Thousand Baht of total revenues) ^(**)	0.01	0.01	0.00

	2022	2023	2024
Intensity ratio of total non-hazardous waste to total revenues (Kilograms / Thousand Baht of total revenues) ^(**)	0.01	0.01	0.00
Intensity ratio of total hazardous waste to total revenues (Kilograms / Thousand Baht of total revenues) ^(**)	0.00	0.00	0.00

Additional explanation : ^(*) Exclude the total weight of waste generated outside of the Company, which is not responsible for the waste disposal or treatment cost

^(**) Total revenues and expenses from consolidated financial statement

Waste reuse and recycling

	2022	2023	2024
Total reused/recycled waste (Kilograms)	7,022.00	8,370.00	0.00
Reused/Recycled non-hazardous waste (Kilograms)	7,022.00	8,370.00	0.00
Reused/Recycled hazardous waste (Kilograms)	0.00	0.00	0.00
Percentage of total reused/recycled waste to total waste generated (%)	12.30	15.82	N/A
Percentage of reused/recycled non-hazardous waste to non-hazardous waste (%)	13.38	18.54	N/A
Percentage of reused/recycled hazardous waste to hazardous waste (%)	0.00	0.00	N/A

Additional explanation : Exclude the total weight of reused/recycled waste outside of the Company, which is not responsible for the waste disposal or treatment cost

Greenhouse gas management

Disclosure boundary in greenhouse gas management over the past years

Boundary type	: Company
Total number of disclosure boundaries	: 3
Actual number of disclosure boundaries	: 3
Data disclosure coverage (%)	: 100.00

Information on greenhouse gas management plan

Greenhouse gas management plan

The company's greenhouse gas management plan	: Yes
Reference link for company's greenhouse gas management plan	: https://www.ttwplc.com/storage/sustainable/sustainability-execution/environmental/20240412-ttw-climate-change-and-energy-conservation-en.pdf

Information on setting greenhouse gas emission goals

Setting greenhouse gas emission goals

Does the company set greenhouse gas management goals	: No
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Information on performance and outcomes of greenhouse gas management

Performance and outcomes of greenhouse gas management	: Yes
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Diagram of performance and outcomes in greenhouse gas management



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Information on greenhouse gas management

The company's greenhouse gas emissions

	2022	2023	2024
Total GHG emissions (Metrics tonne of carbon dioxide equivalents)	83,064.00	92,785.00	101,602.00

	2022	2023	2024
Total greenhouse gas emissions - Scope 1 (Metric tonnes of carbon dioxide equivalent)	419.00	420.00	406.00
Total greenhouse gas emissions - Scope 2 (Metric tonnes of carbon dioxide equivalent)	69,019.00	77,135.00	84,510.00
Total greenhouse gas emissions - Scope 3 (Metric tonnes of carbon dioxide equivalent)	13,626.00	15,230.00	16,686.00

Greenhouse Gas Emissions Intensity

	2022	2023	2024
Intensity ratio of total GHG emissions to total revenues (Metric tonnes of carbon dioxide equivalent / Thousand Baht of total revenues) ^(*)	0.014560	0.015837	0.019720
Intensity ratio of total GHG emissions to total number of employees (Metric tonnes of carbon dioxide equivalent / Person)	257.16	288.15	316.52
Intensity of GHG emissions (Metric tonnes of carbon dioxide equivalent / Cubic meter of product)	0.00030000	0.00030000	0.00033000

Additional explanation : ^(*) Total revenues and expenses from consolidated financial statement

Information on verification of the company's greenhouse gas emissions over the past year

Verification of the company's greenhouse gas emissions over the past year

Verification of the company's greenhouse gas emissions : Yes

List of greenhouse gas verifier entity : Greenhouse Gas Management Certification Unit, School of Energy and Environment University of Phayao

Information on reduction and absorption of greenhouse gas

Reduction of Greenhouse Gas

	2022	2023	2024
Total reduced GHG (Metric kilograms of carbon dioxide equivalent)	489.51	505.83	0.00
Care the Bear Project (Metric kilograms of carbon dioxide equivalent)	489.51	505.83	0.00
Care the Whale Project (Metric kilograms of carbon dioxide equivalent)	0.00	0.00	0.00

Absorption and removal of Greenhouse Gas

	2022	2023	2024
Total absorbed and removal of GHG (Metric kilograms of carbon dioxide equivalent)	0.00	0.00	0.00
Care the Wild Project (Metric kilograms of carbon dioxide equivalent)	0.00	0.00	0.00

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