

# Climate Change and Energy Conservation

## Key changes and developments regarding the review of policies, practices, and climate change and energy conservation through the past year

In 2024, the Company has established an energy management project to underscore its dedication to energy conservation. Within this initiative, the Company outlined goals and implemented measures to effectively monitor and regulate energy consumption.

### Electrical Energy Goals for the year 2024

**Shall not exceed 0.74 kWh/m<sup>3</sup> (distributed tap water)**

Control electricity consumption ratio

### GHG Emissions Goals for the year 2024

**Not less than 0.03% (compared to the previous year)**

Reduce the amount of GHG emissions per product unit in Scope 1 ,2 and 3)

### Air Pollution Goals for the year 2024

**100%**

Inspection of air pollution according to standards set by law

## GHG emissions

In 2023, the Company initiated a project for the third consecutive year to evaluate greenhouse gas (GHG) emissions from its business operations, encompassing all three scopes of GHG emissions: direct (**Scope 1**), energy-related indirect (**Scope 2**), and other indirect emissions (**Scope 3**). This assessment entailed a 12-month data collection period spanning from October 1, 2023, to September 30, 2024. Subsequently, the Company's GHG emissions were verified and certified by the **Greenhouse Gas Management Organization (Public Organization) (TGO)** as a Carbon Footprint for Organization (CFO).

When comparing the amount of GHG emissions in 2024 with the previous year (2023), it appears that the amount of GHG Scope 1+2+3 emissions in 2024 is equal to tonCO<sub>2</sub>e increased from 2023 by 8,817 tonCO<sub>2</sub>e (increase 9.5%) Due to the include of tap water distribution volume and wastewater treatment volume (Include Tap water treatment plant and wastewater treatment plant in Bang Pa-in Industrial Estate project)

## Energy Conservation

Energy is essential cost in the business and manufacturing processes of various industries; energy use creates the climate change impact of global GHG emissions by focusing on the Sustainable Development Goals regarding Affordable and clean energy: SDG7 and Climate Action: SDG13 to reduce the impact of energy use and GHG emissions.

The Company realizes the importance of energy conservation which is essential for activities or operations. Therefore, the Company has formulated energy conservation guidelines for employees within the organization to participate in energy conservation operations and act in the same direction towards sustainable development; reduce the Company expenses energy-saving according to government policies.

Energy Conservation Policy	
✓	The Company has developed an appropriate energy management system by requiring energy conservation to be a part of its operations in accordance with applicable laws and other requirements.
✓	The Company continually improves the efficiency of the organization's energy resource utilization and is well suited to its business, technology used and good practice.
✓	The Company establishes energy conservation plans and goals each year with appropriate energy reduction and communicates them to all employees to understand and act correctly.

## Energy Conservation Policy

✓	The Company regards energy conservation as the responsibility of the owners, executives and employees at all levels who cooperate in complying with the established standards, monitor and report to the Energy Management Working Group.
✓	The Company will provide the necessary support, including human resources, budget, working hours, training, and participation in providing ideas to improve energy work.
✓	The Executives and Energy Management Working Groups have annually reviewed and updated energy policies, goals, and plans.

In 2024, the Company implemented measures to regulate the utilization of electrical energy, aimed at mitigating the release of greenhouse gases as follows :

- Split air conditioner maintenance project
- Replace fluorescent lamps with LED light bulbs.
- Project to procure electric vehicles (EV) to replace central cars
- Install additional Solar Cell System

The measures are continually monitored to ensure that the energy consumption and GHG emission rates, can be effectively controlled.

### Solar Cell System

The Company has implemented a Solar Cell System with the objective of reducing electricity consumption and GHG emissions from business operations. Financial data includes investment costs, the amount of electricity generated from the Solar Cell System, the resulting financial savings, and the reduction of GHG emissions.

#### 1. Floating Solar Cell Project

At the Bangpa-in Industrial Estate, the Company installed a floating solar power system on a wastewater retention pond. The Floating Solar Cell system has a capacity of 80 kilowatts (kW) and was installed to reduce electricity costs related to the wastewater treatment system. Preliminary assessments indicate that the system can reduce energy consumption by over 10%, equivalent to 115,200 kilowatt-hours per year (kWh/year), resulting in an annual financial saving of THB 587,520 (based on a rate of THB 5.10/kWh).

#### 2. Rooftop Solar Cell Project

Also located at the Bangpa-in Industrial Estate, the Company installed a rooftop solar power system on the roof of a clear water storage tank. The Rooftop Solar Cell system has a capacity of 150 kilowatts (kW) and aims to reduce electricity costs associated with the water production system. According to the assessment, the system can reduce electricity consumption by an average of 12.70% per day, equivalent to 248,832 kilowatt-hours per year (kWh/year), resulting in an annual financial saving of 1,045,094 Baht (based on a rate of THB 4.20/kWh).

## Financial Opportunities Arising from Climate Change

Detail	Unit	Rooftop Solar Cell BLN-KTB	Floating Solar Cell BIE	Rooftop Solar Cell BIE
Size	kw	3,471	80	150
Production capacity	kWh/year	4,236,395	115,200	248,832
Investment value	Bath	187,882,433	3,500,000	4,967,425
Benefits	Bath/year	17,893,565	587,520	1,045,094
Payback period	year	10.50	5.96	5.00
Project expenses	Bath/year	12,912,566	-	-

## TTW Joins Thailand Carbon Neutral Network (TCNN)

TTW Public Company Limited became a member of the **Thailand Carbon Neutral Network (TCNN)** under the Thailand Greenhouse Gas Management Organization (TGO). This membership reflects commitment to supporting and promoting GHG reduction initiatives and achieving net-zero GHG emissions in Thailand by 2050. TTW has been recognized as Climate Action Initiator. Currently, there are more than 600 organizations in Thailand, including TTW, that are members of TCNN.

Types of membership in the Thailand Carbon Neutral Network (TCNN) are categorized into three levels :

1. Climate Action Initiator These organizations demonstrate a commitment to contributing towards achieving carbon neutrality or net-zero GHG emissions.
2. Climate Action Leading Organization These organizations are committed to reducing their GHG emissions to achieve carbon neutrality at the organizational level. They have clear targets and action plans aligned with Science-Based Targets and are certified for their organizational carbon footprint or equivalent international standards.
3. Climate Action Innovator These organizations actively drive the reduction of GHG emissions through innovative projects, such as reducing emissions, increasing carbon sinks, or implementing carbon capture technologies.

In 2024 The Company holds the status of Climate Action Initiator. As a member of the Thailand Carbon Neutral Network (TCNN), the Company receives several benefits, including updates on various greenhouse gas-related activities, access to academic information, training sessions, and seminars. Can Use the logo “CALO” and the logo “Climate Neutral Now”

## Air Pollution

The Company is aware of the role and responsibility of air quality control even though its business processes have a slight impact on air pollution. However, the Company has established various measures to assess the air quality effectively by controlling the quality of air vented to the outside according to the law and with the least impact on the environment, society, and community.

In 2024, the Company has an audit of air pollution caused using generators which has been certified by an external agency, Health & Envitech Co., Ltd.,