Environmental Performance

Waste and Food Waste Management

Target (3-3)

The Company aims to reduce 50 percent of landfill waste by 2027

Business Opportunities and Risks (3-3)

Opportunities

- Gain business opportunities in seeking new environmentally friendly supplies and amenities as well as facilities, so that hotels could differentiate from others and able to deliver new experience to hotel guests.

Challenges and Risks

- Food waste is considered to be a significant global sustainability issue for the hospitality sector as it relates to natural resource consumption and global hunger concern. It is a challenge for the Company to balance resource consumption, demand and satisfaction of customers in serving quality food at the right amount. In addition, it is crucial to consider food loss during preparation and food waste after consumption.

Management Approaches (3-3)

- Sort waste, especially type of waste that are significant to the hospitality sector such as food waste, as well as increase percentage of recyclable waste.
- Promote consumption of recyclable or recycled materials for hotel supplies and amenities.
- Exercise 4Rs principles; Reduce, Reuse, Recycle and Resourcing
- Collaborate with external partners to create sustainable waste journey with optimum utilization of resources.

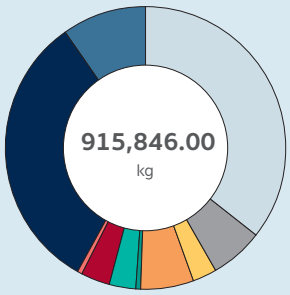
Performances (302-1, 302-4)

5
partnerships on waste management

29.30%
reduction of food waste from 'Zero Food Waste' initiative

457.10 kg.
of plastic waste was properly recycled

2023 Garbage and Waste Management



- Glass **5.98%** 54,753.17 kg
- Metal **0.68%** 6,216.50 kg
- Used oil **2.82%** 25,785.25 kg
- Landfill waste **35.60%** 326,065.40 kg
- Others **3.31%** 30,292.00 kg
- Hazardous waste **0.01%** 111.50 kg
- Donate **0.63%** 5,782.43 kg
- Paper **6.22%** 56,942.15 kg
- Animal food **32.17%** 294,640.94 kg
- Plastic **2.89%** 26,451.86 kg
- Composting **9.70%** 88,804.80 kg

Food Leftover and Food Waste Management

The Company promoted 'Zero Food Waste' campaign in many hotels such as Grand Hyatt Erawan Bangkok where it started the campaign in May 2023 by encouraging their employees with no food leftover on their plate. The hotel could reduce food waste in the employees' canteen by 29.30 percent after the first month of the campaign launched, and 12.44 percent average each month.

Partnerships for Leftover Food and Food Waste Management

- Scholars of Sustenance Foundation (SOS) – a non-profit organization who pass on leftover food for charities and those underprivileged
  Participating hotels
  - Grand Hyatt Erawan Bangok
  - JW Marriot Bangkok
  - Courtyard by Marriot Bangkok
  - Accor Hotels (To join in 2024)

- "Yindii" – a mobile application designed to re-sell bakery and pastries from hotel buffet line at a special prize to reduce foodwaste.
  Participating hotels
  - Grand Hyatt Erawan Bangkok
  - JW Marriot Bangkok

- The PLEDGE on Food Waste – a food waste management program
  Awarded hotel
  - Courtyard by Marriott Bangkok (All-star level)

Total Waste of ERW

Waste Management	2022		2023	
	kg	% of total waste	kg	% of total waste
Landfill waste	187,191.65	27.60%	326,065.40	35.60%
Hazardous waste	4,916.00	0.72%	111.50	0.01%
Volume of waste that is reused and/or recycled				
Paper	25,553.32	3.77%	56,942.15	6.22%
Plastic	15,933.13	2.35%	26,451.86	2.89%
Glass	35,660.90	5.26%	54,753.17	5.98%
Metal	502.95	0.07%	6,216.50	0.68%
Used oil	12,947.32	1.91%	25,785.25	2.82%
Others	94,035.10	13.87%	30,292.00	3.31%
Food waste management				
Donate	5,324.39	0.79%	5,782.43	0.63%
Animal food	294,099.25	43.37%	294,640.94	32.17%
Composting	988.55	0.15%	88,804.80	9.70%
Coffee grounds	1,031.50	0.15%		0.00%
Total	**678,184.06**	**100.00%**	**915,846.00**	**100.00%**

Plastic Waste Management

The Erawan Group and its properties say no to single-use plastic to reduce non-recyclable plastic waste which is now replaced by renewable products taking into consideration customer satisfaction in an attempt to reduce waste at its origin.

We also collaborate with SCG Chemical Co., Ltd and Corsair International Thailand to separate plastic waste for recycling purpose where 457.10 kilograms of waste were recycled.

Paper Waste Management

The Erawan Group's head office and hotels in Bangkok together with our partner SCG Packaging Public Company Limited (SCGP) collect paper for recycling. We plan routes and collection dates to reduce transport energy.

Landfill Waste Management

The Company collaborated with external partners to effectively sort recycling waste in order to reduce landfill waste. Currently, the Company started collecting data on landfill waste of hotels in Bangkok Metropolitan Area and the Head Office.

Carbon Management

Target (3-3)

- Support the national target of achieving carbon neutrality by the year 2050 in Thailand.
- Ensure that all self-managed hotels (100%) provide services related to energy reduction and carbon offset by the year 2027. Practices for GHG emission reduction.

Business Opportunities and Risks (3-3)

Opportunities

- Our hotel business caters to a diverse customer base both domestically and internationally, who are interested in different approaches to greenhouse gas management. Currently, we have corporate customers from both domestic and international markets who are interested in eco-friendly accommodation and hosting green meetings that can offset carbon emissions. If we focus intensively on this aspect, it can expand its customer base in the future. In addition, the Company would have an opportunity to access green finance.

Challenges and risks

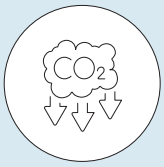
- The hotel business is a service industry that consumes a significant amount of energy, and a large portion of energy usage is driven by the guests themselves. This makes it challenging for hotels to control or manage energy consumption effectively. Therefore, it poses a challenge for the company to achieve its carbon reduction goals. However, the company is making efforts to improve energy efficiency, construction practices, and adopt environmentally friendly energy innovations in its business operations.

  Furthermore, there is an increasing demand for environmentally friendly hotel services from both individual customers and corporate clients. If hotels fail to adapt and meet these growing demands, they may miss out on long-term business opportunities in the future.

Management Approaches (3-3)

- Manage energy consumption in responding to determined target and plan.
- Increase the proportion of environmentally friendly energy on both hotel operations such as installation of solar energy and hotel facilities such as installation of EV charging station for hotel guests.
- Define carbon emission base year, reduction target, action plan, management approaches, in order to monitor, assess, and offset carbon emissions in both short- and long-term.
- Enhance sustainability partnerships within supply chain and external parties
- Provide knowledge of the responsibilities of hospitality service providers towards climate change to executives and employees at all levels.
- Upgrade hotels to meet Green Hotel standards and other environmental standards.

Performances (302-1, 302-4)



ERW Carbon Emission (scope 1 & 2)

20,541 $TonCO_2e$

Remark:
Verified by external assurance

carbon offset

332 $TonCO_2e$

from Stay for Santa

Stay for Santa

Commitment towards Climate Actions

In the tourism and hotel industry, climate change plays a significant role, stemming from tourist travel, energy consumption to serve guests through various facilities, and even renovations and construction projects that must consider local conditions, geography, and climate change impacts.

The Erawan Group recognizes that running a hotel business requires careful consideration of various factors. They are committed to reducing their organizational carbon footprint across all hotels in the group. This commitment aligns with Thailand's Nationally Determined Contributions (NDC) to achieve net-zero carbon emissions by 2065 (B.E. 2608). The company has also outlined a long-term carbon strategy to support this goal.

THE ERAWAN GROUP

Decarbonization Roadmap

Year 2019

Data monitoring and collection on carbon emissions
started collecting data on carbon emission of ERW and its properties

Year 2022

Achieved 1st CFO Verification
Grand Hyatt Erawan Bangkok was the 1st hotel of ERW to be verified by external assurance on carbon emission scope 1, 2, and 3

Year 2023

Carbon emission base year setting
ERW's Carbon Footprint for Organization (CFO) scope 1 and 2 was assured and certified by external verification so that the Company was able to set a base year for future decarbonization action plan.

- SCG Cleanergy MOU to support consumption of solar energy for properties.
- BanpuNext collaboration to enhance energy efficiency within properties.
- Plantation of 20-rai mangrove to increase carbon absorption area
- EV Charging Station expansion to serve hotel guests with sustainable lifestyle
- "STAY FOR SANTA" initiative in collaboration with the Carbon Market Club to offset personal carbon footprint during Christmas and New Year festival
- ESG & Carbon Knowledge Sharing session for executives and employees

Year 2024

5% carbon reduction target

Year 2026

Announcement of Carbon roadmap
collaborate with external parties to define long-term decarbonization action plan

Year 2030

Achieve 30% carbon reduction target
to support Thailand's 30-40% Nationally Determined Contributions (NDC)

Year 2050

Achieve carbon neutral
to support Thailand's Nationally Determined Contributions (NDC) on carbon neutrality

Year 2065

Achieve Net Zero
to support Thailand's 30-40% Nationally Determined Contributions (NDC) on Net Zero

Remark:
1. Due to the COVID-19 situation, the data collection was incomplete and unable to set an accurate base year in 2019.

ERW Greenhouse Gas Emission

Unit: (tCO_2e)

	Year 2022	**Year 2023**
Scope 1	2,219.00	3,835
Scope 2	14,233.33	16,706
Total of Scope 1 & 2	16,452.33	20,541
Scope 3	26,999.51	27,743
Total of Scope 1, 2 & 3	**43,451.84**	**48,284**
Additional scope	N/A	84
External verification	Yes[1]	Yes[2]
GHG emission intensity		
Scope 1 & 2	16,452.33	20,541
No. of guests (person)	2,956,550.00	4,134,243.00
Carbon per unit (kg./person/yr)	5.56	4.97
Revenue (Million Baht)	4,240.30	6,238.60
Carbon per unit (tCO2e/mb/yr)	3.88	3.29

Remark:
[1] Grand Hyatt Erawan Bangkok only
[2] Scope 1 & 2 of ERW

"STAY FOR SANTA" Initiative

Hotels under The Erawan Group have partnered with the Carbon Markets Club, led by the Bangchak Group, to offset the personal carbon footprints of guests during the Christmas and New Year holidays through the "STAY FOR SANTA" project. This initiative aims to raise awareness among tourists and hotel operators about energy use and its impact. Four hotels under The Erawan Group are participating as pilot hotels:1) Mercure ibis Sukhumvit 24 2) JW Marriott Bangkok 3) Courtyard by Marriott Bangkok and 4) Grand Hyatt Erawan Bangkok

These hotels, offering over 15,000 rooms during the holiday period from December 23, 2023, to January 2, 2024 (10 nights), would offset the carbon footprint of each guest's stay using carbon credits from TVER (Thailand Voluntary Emission Reduction Program), provided by BCPG Public Company Limited, through the Carbon Markets Club. The initiative aimed to contribute to reducing global warming and fostering a sustainable environment.

The Erawan Group was the first hotel business group in Thailand to collaborate with Bangchak Group on personal carbon offsetting, achieving a total offset of 332 tons of CO2 equivalent.

Executive and Employee Training in Carbon and ESG

Organized ESG & Carbon Knowledge Sharing sessions for 22 members of the Management Committee, the Sustainability Development Committee and the hotel's general managers, which amounted to 88 training hours.

Increasing Carbon Absorption Area

Aside from reducing energy consumption, becoming greener, enhancing the efficiency of energy consumption and raising awareness about carbon and corporate carbon management, adding more green areas to store carbon is also crucial. Trees whether in a city or around mangrove areas are a significant carbon storage. They also add aesthetics to surrounding landscape by making it much more liveable.

In 2023, we planted 500 trees at a park close to Khlong Toei MRT Station on the World Environment Day (5 June 2023) thanks to our collaboration with the Khlong Toei District, local volunteers, and other properties under the group. The tree-planting activity was attended by 86 staff.

Besides, we planted 15,000 mangrove trees on a 20-rai land at the community mangrove in Thong Kam Bay, Ban Laem Village, Tha Sala District, Nakhon Si Thammarat Province.

Energy Management

Target (3-3)

- Effective energy management with 2 percent decrease of energy intensity per year in order to reduce energy cost and align with the Company's GHG emission target
- Increase percentage of renewable energy with coverage more than 10 percent of total properties by 2027
- All self-managed properties (100 percent) provide services that relate to the reduction of energy and carbon emissions

Business Opportunities and Risks (3-3)

Opportunities

- Reduction of long-term costs from energy consumption
- Competitive advantages on cost for budget hotels
- Attraction for tourists with environmentally friendly conscious and promote their sustainable lifestyle
- Opportunities to access green finance

Challenges and Risks

- Insufficient energy supply during high season
- Balance between energy reductions and customer satisfaction
- Electricity, fuel, natural gas, etc. are significant to business operations, however, these resources are also significant to carbon emissions

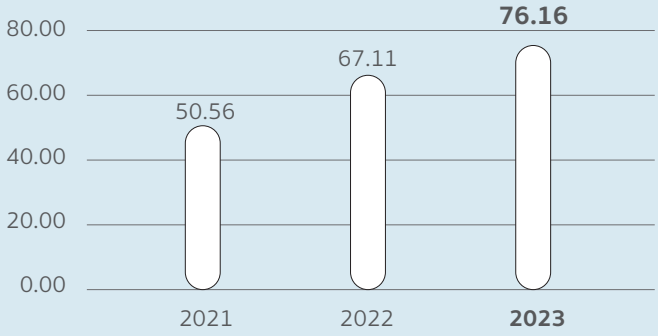
Management Approaches (3-3)

- Set goals, targets, management approaches, and monitor performances
- Increase energy efficiency in the properties' common areas and guest room through maintenance and new technology
- Increase proportion of energy mix between traditional and renewable energy
- Promote sustainable lifestyle of customers
- Collaborate with sustainability partners

Performances (302-1, 302-4)

Energy Consumption of The Erawan Group

Total energy consumption (GWh)



Remark:
1. 2022-2023 was a recovery period for tourism industry in Thailand, resulted in an increase in number of tourists
2. 2023 excluded data of Erawan Bangkok as the property was in the process of renovation, and excluded data of Foodcourt of Ploenchit center building as it was energy consumption of tenants

Fuel consumption

Type of fuels	Unit	2021	2022	**2023**
Diesel	ML	74.71	73.08	**52.27**
Gasoline	ML	24.78	16.46	**10.52**
LPG	Tonne	881.49	1,227.09	**1,399.40**

Remark:
1. Fuel consumption could be partially collected

Energy intensity (kwh/room)

Hotel segment	2021	2022	**2023**	% change from previous year
Budget	17.61	13.07	**13.36**	2.24%
Economy	65.06	32.16	**22.19**	-31.01%
Midscale	116.46	49.87	**40.78**	-18.24%
Luxury	592.95	165.99	**155.64**	-6.24%
Grand Total	**76.87**	**41.88**	**37.20**	**-11.17%**

Remark:
1. Calculated from total of electricity, fuel and LPG consumption

Average energy intensity (per room) **reduced for**
11.17%

33,914 kwh
solar energy, equivalent to 5%
5% of HOP INN Thailand's total electricity consumption

Installation of solar rooftop,
10.45 kilowatt, in 3 HOP INN Thailand, totaling
31.35 kilowatt

The service business is an energy-intensive business resulting from direct consumption of energy by hotels themselves and by their guests, a situation that makes the reduction of energy consumption challenging. The Erawan Group tries to improve our energy consumption, reduce waste and seek a variety of technology and partner to help us maintain service excellence while still being able to consume energy efficiently. Consumption of energy remains a crucial factor determining the level of carbon emission by the company itself and by hotels within our group.

In 2023, through our collaboration with partners for better energy management, we supported the consumption of various types of energy. With our business expansion, we commit to efficient and effective energy management as follows.

Energy Partnership with BanpuNext

The Company collaborated with Banpu NEXT Co., Ltd. to improve energy efficiency in guest rooms by installing Double Motion Sensors to reduce unnecessary energy consumption at Holiday Inn Pattaya. At JW Marriott Bangkok, they have upgraded the chiller plant system and increased the use of clean energy by installing a solar rooftop system at JW Marriott Bangkok, Courtyard by Marriott Bangkok, and The Naka Island, a Luxury Collection Resort & Spa, Phuket. These installations are expected to be completed by March 2024.

Solar Rooftops for HOP INN Thailand

In 2023, HOP INN Thailand installed solar rooftops at three hotels: HOP INN Kanchanaburi 1 and 2, and HOP INN Chonburi, with a total capacity of 31.35 kW. This accounts for approximately 5% of their energy usage coming from solar power. Previously, in 2022, the company installed a 2.70 kW solar rooftop at HOP INN Krabi to support electricity usage in the hotel's lobby area, which increased solar energy usage in that area by as much as 41.11%.

MOU with SCG Cleanergy for Smart Clean Energy Solutions

A memorandum of understanding was signed with SCG Cleanergy Co., Ltd. to introduce Smart Energy technology for The Erawan Group's hotels and resorts. This partnership aims to enhance the use of environmentally friendly renewable energy in the tourism and hotel industry. Together, they will explore and plan the use of solar energy through Smart Grid technology, managed by the SCG Cleanergy Platform, for properties under The Erawan Group. The goal is to increase the proportion of renewable energy usage in the future.

Replacing Light Bulbs and Maintaining Electrical Equipment

Energy-saving electrical appliances are being replaced as they reach the end of their lifecycle, such as replacing regular light bulbs with LED bulbs. This process has been ongoing since 2019, and more than 80% of the change has been completed, with a goal of 100% across all hotels by 2025.

Increasing EV Charging Stations

To promote eco-friendly lifestyles for customers, the Company is planning to install and expand EV Charging Stations at its hotels. This year, additional stations were installed at four HOP INN Thailand: HOP INN Kanchanaburi, HOP INN Chonburi, HOP INN Hua Hin, and HOP INN Chiang Mai. Currently, 10 hotels under The Erawan Group provide EV Charging Stations available for customers.

Water Efficiency

Target (3-3)

- 1 percent reduction in water withdrawal per year
- 5 percent reduction in water consumption per room per year

Business Opportunities and Risks (3-3)

Opportunities

- Reduce operating cost from lower cost from water consumption
- Efficient water management allows the hotel to operate at full capacity year-round

Challenges and Risks

- Distance hotels or on islands might face water shortages, especially during the high tourism season when water demand is high and during droughts when natural water sources are insufficient, potentially disrupting services.

Management Approaches (3-3)

- Regularly monitor water demand, assess wastewater quality, and check the hotel's wastewater treatment in all seasons
- Maintain equipment to ensure it remains efficient and functional. Use water-saving fixtures and low-water-consuming appliances
- Engage guests in water-saving campaigns

Performances (302-1, 302-4)

The Company is committed to sustainable water management, which includes sourcing water, recycling, and reusing it through water management policies and strategies. The Company complies with environmental laws, ISO 14001 standards, and other environmental regulations, focusing on improving efficiency and reducing water usage sustainably. In addition to using water-saving products, campaigns are held to encourage customers and employees to conserve water and choose environmentally friendly chemical products.

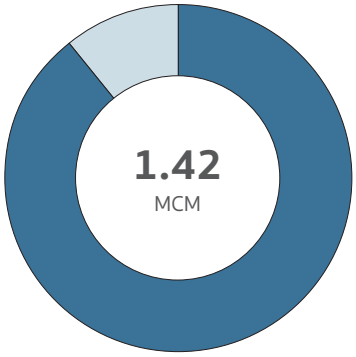
Beyond energy consumption, water is another heavily consumed resource in the hotel industry. The Erawan Group has guidelines to raise awareness and reduce water usage, including:

- Encouraging guests to reduce towel changes to lower water usage from laundering.
- Raising awareness among staff about the importance of using water resources efficiently.
- Installing aerators to reduce water flow from taps and choosing water-saving fixtures.
- Inspecting equipment, piping systems, and water meters to monitor, record, and continuously repair to prevent leaks.
- Creating rainwater storage in suitable areas.
- Implementing wastewater treatment systems and regularly checking the quality of water used by the hotel.

Water withdrawal

Water source	Unit	2021	2022	**2023**
Water supply	Cubic meters	684,776.81	1,047,587.00	1,269,078.96
Surface water	Cubic meters	-	-	-
Groundwater	Cubic meters	10,013.00	145,096.00	146,815.00
Seawater	Cubic meters	-	-	-
Total	Cubic meters	**694,789.81**	**1,192,683.00**	**1,415,893.96**

2023 Water Withdrawal



Water supply
0.15
MCM
10%

Groundwater
1.27
MCM
90%