

SUSTAINABILITY REPORTING 2024

Sermsang Power Corporation PLC



A DECADE OF SUCCESS:
A COMMITMENT TO A SUSTAINABLE FUTURE

CONTENTS

01 Sermsang Power: The Past 10 Years

- 10 Years of Sermsang Power 04
- About This Report 05
- Message from the Chief Executive Officer 06
- Vision, Mission, Corporate Culture, and Core Values 07
- Business Overview of Sermsang Power 08
- Summary of Key Operating Results for 2024 13
- Sustainability Achievements 14

02 Sustainability Management

- Business Value Chain 17
- Stakeholder Analysis in the Business Value Chain 18
- Materiality Assessment of Sustainability Issues 19

03 Sustainability Strategy and Goals

- Risk Factors and Risk Management 44
- SSP Group and Sustainability 46
- Strategies Toward Sustainability and the Way Forward 49
- Performance Against Key Sustainability Strategies 52
- Pathway to Net Zero 55

04 Environmental Sustainability

- Environmental Sustainability 57
- Climate Change Mitigation and Resilience & Carbon and Emission Reduction 64
- Environmental Management, Resource Efficiency, and Sustainable Use 69
- Waste Management and Circular Economy 78
- Pollution Control and Environmental Stewardship 82
- Biodiversity and Ecosystem Protection 85

05 Social Sustainability

- Social Sustainability 91
- Access to Sustainable and Reliable Energy 92
- Customer Empowerment and Satisfaction 94
- Empowering Human Capital for Sustainable Growth 96
- Safety, Health, and Well-being 99
- Community Development and Economic Empowerment 104
- Human & Labor Rights and Fair Working Conditions 111

06 Governance Sustainability

- Governance Sustainability 120
- Financial Sustainability and Access to Green Finance 121
- Commitment to Quality and Continuous Improvement 123
- Transparency, Accountability, and Stakeholder Trust 126
- Development of Renewable Energy Technology and Innovation 131
- Sustainable and Responsible Supply Chain 136
- Energy Reliability and Operational Efficiency 143
- Regulatory Compliance, Standards, Ethics, Anti-Corruption, and Financial Stability 145
- Sustainable Growth and Market Expansion 150

07 Operational Performance Details

- Sustainability Performance 154
- GRI Content Index 154
- External Assurance Statement 154



Sersang Power Corporation Public Company Limited and its affiliates are committed to creating a future driven by sustainable renewable energy. Over the past 10 years, the group has focused on developing innovative solutions in solar energy, wind power, biomass energy, and other advanced renewable sources. This growth in the energy sector is rooted in our commitment to transforming the world into a more environmentally friendly and sustainable place, meeting today's energy needs without compromising the health of our planet for future generations.

With expertise in harnessing solar, wind, biomass, and other renewable energy sources, we are pioneers in advancing the transition of communities, businesses, and industries towards green energy. From solar panels that efficiently capture and convert sunlight, to wind turbines that generate power even in low-wind conditions, our renewable energy solutions are designed with a forward-thinking vision.

Each unit of energy we produce strengthens the potential of renewable resources, reduces greenhouse gas emissions, and supports the development of infrastructure needed for a rapidly evolving world. As we work toward our goal of becoming a leader in renewable energy that is stable, reliable, and accessible to all, we continue to integrate innovation with environmental responsibility, creating a lasting positive impact that serves as a legacy for future generations.

An aerial photograph of a vast solar farm. Rows of dark blue solar panels are laid out in a grid pattern across a green field. In the center of the image, two workers wearing hard hats and safety vests are standing and looking at a set of plans or a tablet. The perspective is from a high angle, looking down at the panels and the workers.

A Decade of Success:
A Commitment to a
Sustainable Future

01

SERMSANG POWER: THE PAST 10 YEARS





ABOUT THIS REPORT

Origin of Report

Sermasang Power Corporation Public Company Limited has prepared this Sustainability Development Report to communicate the group of companies' annual sustainability performance for the fourth consecutive year, covering the period from January 1 to December 31, 2024. The group of companies adheres to the Global Reporting Initiative (GRI) Standards for reporting. In addition, the group has integrated the Sustainable Development Goals (SDGs) into its corporate strategy and operations, with a focus on addressing the needs and expectations of various stakeholder groups. This report aims to inform stakeholders about the organization's practices and overall performance across economic, social, environmental, and human rights dimensions, contributing to the creation of a sustainable society. The group believes these aspects are vital and beneficial to all stakeholders.

Scope of Report

This report presents sustainability performance data for the year 2024, covering the economic, social, and environmental

aspects of our operations. It reflects business areas of relevance and the availability of data, encompassing the companies in which Sermasang Power Corporation Public Company Limited holds shares. These companies are engaged in the production and distribution of electricity from renewable energy sources, along with related businesses in Thailand and abroad.

In 2024, the organization underwent a significant change, acquiring shares in Winchai Company Limited. Additional disclosures may be included in future reports, subject to the availability of relevant data.

Report Assurance

The core content of this report has been reviewed by senior executives from each department to ensure its accuracy, completeness, and responsiveness to all stakeholder groups.

Additionally, the report, along with key performance indicators, has been independently verified by a third-party

expert in certification and performance assurance to ensure credibility and transparency. The results of this external certification can be found on page 154 of the report.

The content has also been evaluated for compliance with the GRI Standards, specifically the GRI Content Index, covering disclosures for items 2-1 to 2-5, 3-1, and 3-2. Certification from the Global Reporting Initiative (GRI) confirms adherence to standard criteria. The economic performance data is drawn from the same source as the company's annual report and has been audited by authorized auditors.

Inquiries

For any questions or further suggestions, please contact:

ESG and Corporate Sustainability Department
Sermasang Power Corporation Public Company Limited
E-mail: sustainability_ssp@sermsang.co.th
Telephone: +66 2 628 0991 - 2

Companies within the reporting scope	HO	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV
E- Information on the management of electricity and water resources	✓ ¹	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E- Pollution and waste management information		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E- Climate and greenhouse gas data	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
E- Biodiversity information		✓	✓		✓	✓					
S- Employee information	✓	✓	✓	✓	✓	✓					
S- Social and community information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
S- Customer information	✓	✓	✓	✓	✓	✓					
G- Policy, transparency and governance information	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
G- Supply chain management information		✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
G- Innovation and technology information	✓	✓	✓	✓	✓	✓					

Note: HO means Head office, Bangkok

/1 Head office data disclosure does not cover water usage as it is a rental building.



MESSAGE FROM THE CEO

In 2024, the Group, Sermsang Power Corporation Public Company Limited, experienced another year of solid and stable growth. This marks a decade of progress rooted in sustainability. Sermsang Power's strength lies in its expertise in developing and managing renewable energy power plants. We continue to seek investment opportunities across various types of power plants to maintain balanced cash flow while managing financial risks, foreign exchange fluctuations, interest rate volatility, and ESG-related challenges. This enables us to formulate strategies that are well-aligned with the business direction.

Throughout the past year, we demonstrated the agility and capability to adapt to change across operations, technology, and innovation. These factors have significantly enhanced our competitive advantage. I am pleased to share that we have initiated internal cultural development activities and have received excellent cooperation from our employees. Award-winning innovations will be applied to maximize impact, and we continue to foster and support the development of new innovations.

On the sustainability front, we are proud of the recognition we received, including the "AA" rating in the Resources industry group from the Stock Exchange of Thailand's SET ESG Rating, the Sustainability Disclosure Recognition from Thaipat Institute, and a 5-star "Excellent" rating from the Corporate Governance Report of Thai Listed Companies (CGR). These honors reflect our unwavering commitment to operating a sustainable business across Environmental, Social, and Governance dimensions, while ensuring the engagement of all stakeholders.

Moreover, for the third consecutive year, TRIS Rating has maintained our corporate credit rating at "BBB+" with a "Stable" outlook, reinforcing the Group's strong financial discipline. The Group also secured sustainability-linked loans from the Export-Import Bank of Thailand (EXIM BANK) and the International Finance Corporation (IFC) to support our renewable energy investments both domestically and internationally. These achievements underscore our vision of powering a sustainable future and advancing towards our Net Zero goal by 2050.

Over the past 10 years, Sermsang Power has consistently prioritized social and environmental responsibility, with the aim of building a truly sustainable world. On behalf of the Executive Board, I would like to express my sincere appreciation to all our employees for their ongoing dedication and commitment to development. You are the driving force behind our growth towards long-term sustainability, reflecting our FAIR corporate culture: Flexible, Ambitious, Innovative, and Responsible. These are the principles we have built and embraced together.

Finally, our stakeholders continue to play an instrumental role in driving our shared success, and we are grateful for their trust and support.

Mr. Varut Tummavarankub
Chief Executive Officer



ABOUT SSP

Vision

Sermasang Power Corporation Public Company Limited ("the Company" or "SSP") and its subsidiaries (collectively referred to as "the Group") have a business vision: "The Group strives to be the leading energy company in Asia by becoming a sustainable energy producer and supplier along with fostering and promoting a stable clean environment for the best interests of society."

Mission

The Group is committed to empowering people and business organizations to actively participate in developing a sustainable future. The Group will leverage its expertise to procure appropriate technologies and create dynamic resources that meet energy needs in a sustainable, efficient, and effective manner.

Goals and Strategies for the Group's Operations

The Group aims to be a leader in the production and distribution of electrical power, utilizing international-level technology in project development to promote a clean, sustainable environment and maximize benefits for society. The key strategies to achieve these goals are outlined as follows:

1. The Group is committed to investing in and developing various renewable energy power plant projects, such as solar, wind, biogas, and biomass energy, both domestically and across the Asian region. The goal is to invest in new power plant projects through Greenfield Field Project developments, as well as mergers and acquisitions (M&A) in countries with strong clean energy growth potential.
2. The Group encourages and supports nearby communities to actively participate in its power generation projects.

This starts with building knowledge and understanding of renewable energy projects, and extends to supporting employment opportunities within local communities, from the construction phase to commercial operations. The aim is to promote community well-being through mutual support and assistance, while preventing potential environmental impacts.

3. The Group places significant emphasis on the development of human resources, aiming to enhance knowledge and expertise in the electrical power sector.

Core Values

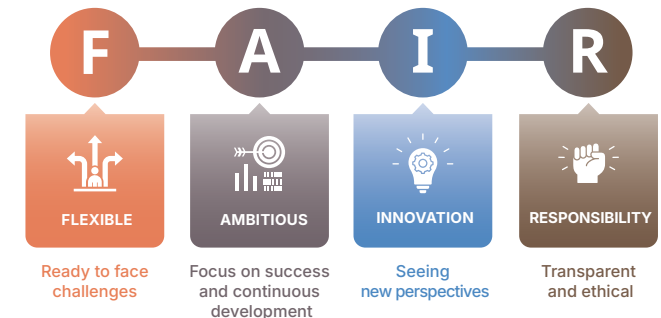
In the past, non-renewable energy was our sole source of energy. However, with the rapid advancement of technology over the past several decades, the world has seen significant development, particularly in the energy sector. While non-renewable energy continues to play a key role in driving the global economy, today, new alternative energy sources are gaining increasing global attention and are becoming ever more essential to sustainable global development.

SSP's mission is not only to adapt to these changes but also to be a forward-thinking company with a far-reaching vision that actively drives the growth of renewable energy businesses and contributes to creating a better environment for the future. We believe that, despite the rapid evolution of the world, we can play an active role in steering the world toward a better direction if we remain committed to continuous development.

Corporate Culture

Corporate culture serves as a compass that guides the organization toward its goals and collective success through four key attributes, represented by the acronym FAIR:

CORE VALUES



1. **FLEXIBLE:** is adaptive, resilience and ready to take on new challenge, have a positive attitude towards change, have an emotional intelligence in teamwork, can communicate effectively and can achieve work-life harmony.
2. **AMBITIOUS:** have a motivation and determination, a clear vision and mission in the same direction as the company that will strengthen the effective work standards.
3. **INNOVATION:** creative thinking, open to new perspectives, and willing to challenge existing ideas. Has a passion for learning and exploring new things, including developing skills to prepare for and mitigate potential future risks.
4. **RESPONSIBILITY:** have a responsibility for both actions and outcomes to reach the expected results with transparency and adherence to ethics and honesty, can work with others effectively, is willing to share knowledges, skills and resources to support each other, possesses the ability to manage time and prioritize tasks to achieve goals and work efficiently.



SERMSANG POWER'S BUSINESS

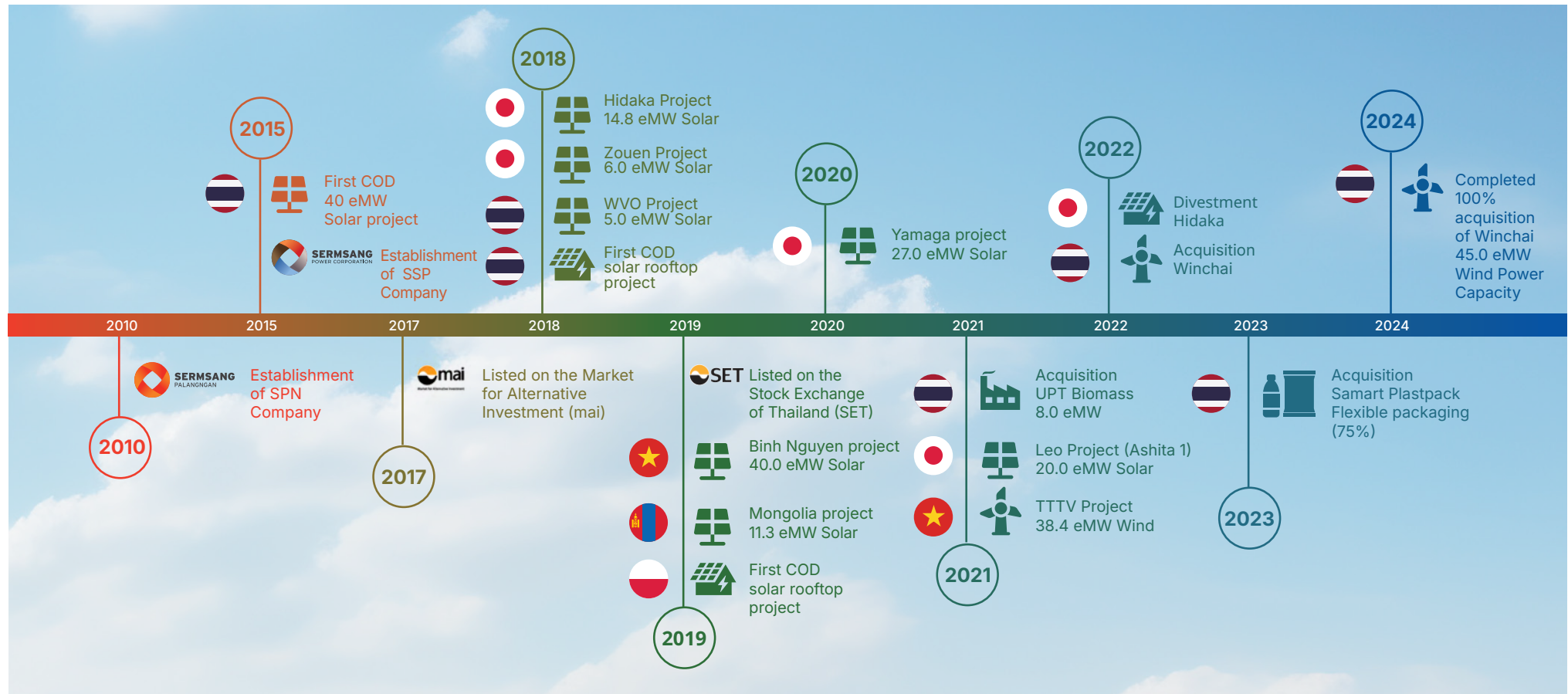
Background and Key Changes

In 2012, the Kraipisitkul family, the primary shareholder group of the Group, identified business opportunities in the renewable energy sector, driven by government policies that supported renewable energy production for Very Small Power Producers (VSPP) and Small Power Producers (SPP). They submitted applications and power sale proposals to the Electricity Generating Authority of Thailand (EGAT) under the

name Sernsang Energy Company Limited (SPN), a subsidiary of SSP. In 2013, the Company received approval to enter into a power purchase agreement (PPA), and the Sernsang Solar project began commercial operation date (COD) in 2015.

Subsequently, the shareholder group registered and established Sernsang Power Corporation Limited (SSP) to restructure the Group, with the aim of positioning SSP as

the holding company for its subsidiaries and future ventures. The Group has since broadened its renewable energy business, initially investing in and developing solar power plants in Thailand, before expanding to other countries across Asia. The Company has also started exploring new business opportunities (New S-Curve) with a strong focus on sustainable growth.





Nature of Business

Sernsang Power Corporation operates as a holding company. The Company's business primarily focuses on the production and distribution of electricity from renewable energy sources, as well as related activities, both domestically and internationally. Its operations are classified into the following segments:

1. Renewable Power Business

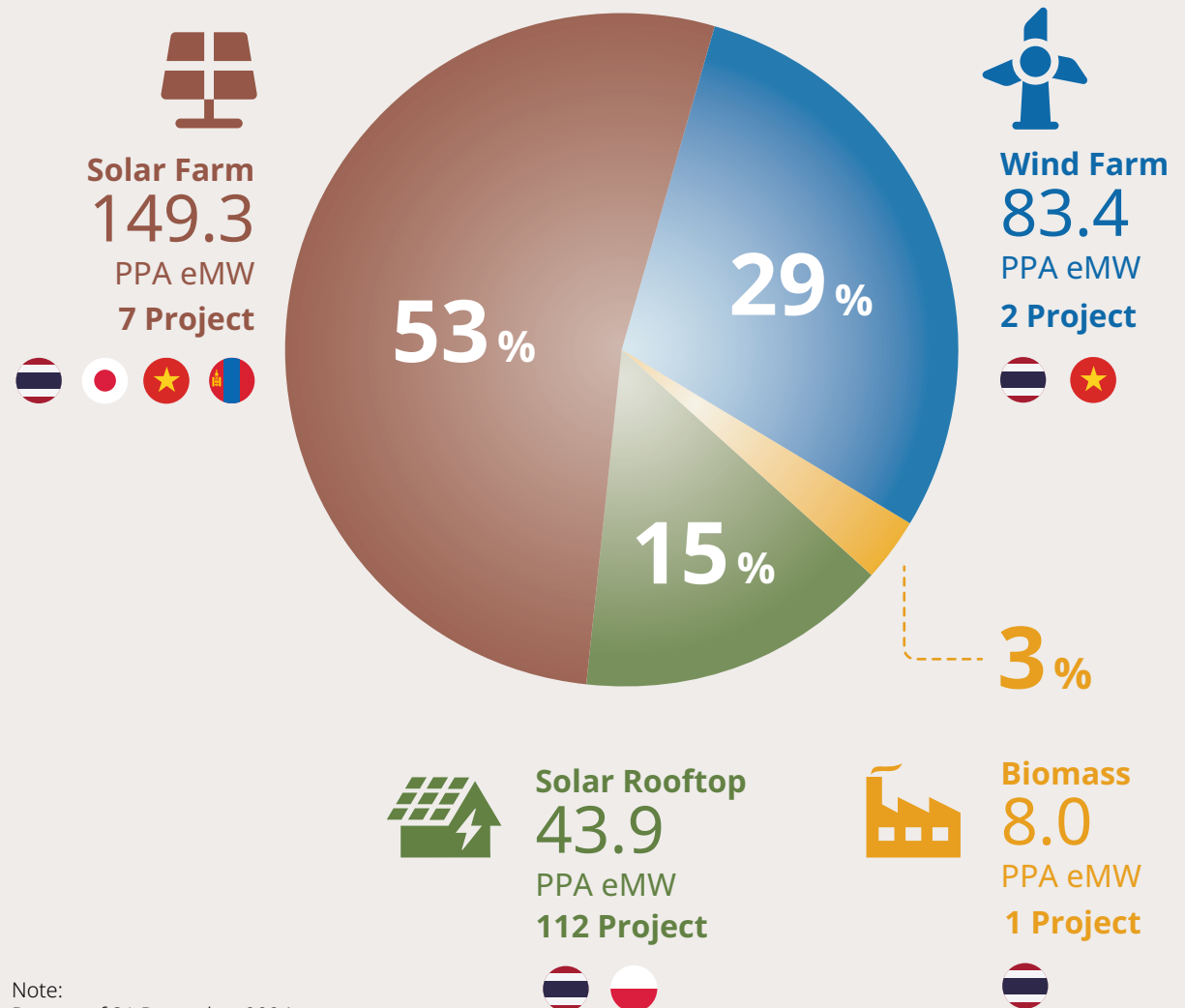
- Solar Power Plants
- Wind Power Plants
- Biomass Power Plants
- Solar Rooftop

2. Solar Rooftop System Installation Service

The Group also enhances energy access for businesses and households with electricity management needs by offering comprehensive services. These include the design, installation, and maintenance of solar rooftop electricity generation systems tailored to customer requirements.

3. Flexible Packaging Business

The Company's total electricity sales capacity under its power purchase agreements reached 285 eMW.



Note:
Data as of 31 December 2024

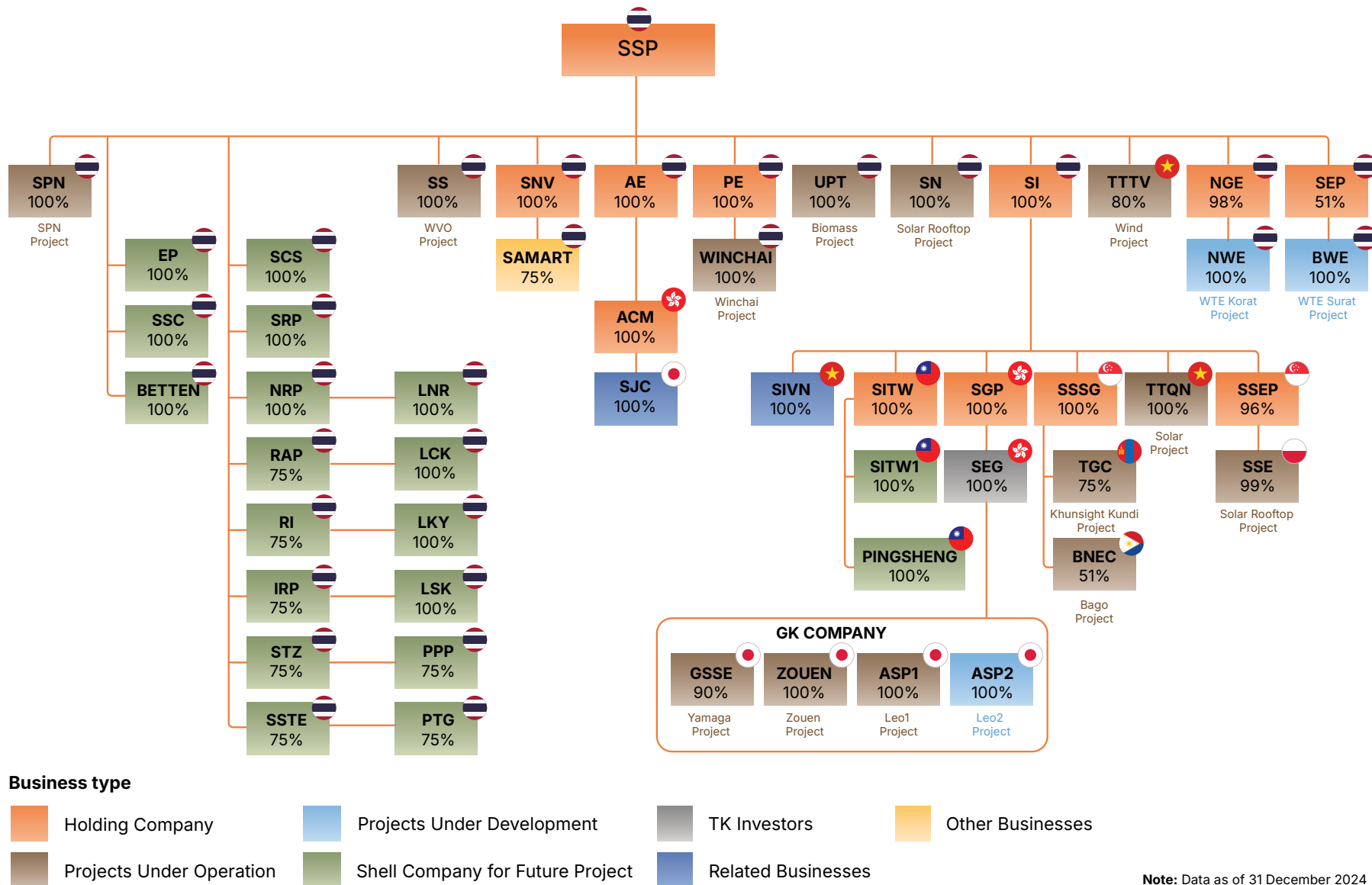


Group Company Structure

The Group and its major shareholders have restructured the group of companies to allow Sermsang Power Corporation (SSP) to hold shares in all subsidiaries. As of December 31,

2024, SSP holds shares in a total of 50 subsidiaries, which are divided into 31 subsidiaries and associated companies in Thailand, and 19 overseas subsidiaries. This structure also includes 4 GK Operator companies under the GK-TK

investment model, where Surge Energy Corporation Limited (SEG), as a TK investor, has entered into TK Agreements.





The Company and its subsidiaries

Projects Under Operation

Thailand

1. SPN: Sermasang Palang Ngan Co., Ltd.
2. SS: Sermasang Solar Co., Ltd.
3. SN: Sermasang Infinite Co., Ltd.
4. UPT: Uni Power Tech Company Limited
5. WINCHAI: Winchai Co., Ltd.

International Operations

6. TGC: Tenunn Gerel Construction LLC
7. TTQN: Truong Thanh Quang Ngai Power and High Technology Joint Stock Company
8. BNEC: Bago Negros Energy Corporation
9. GSSE: GSSE G.K.
10. ZOUEN: Zouen Energy G.K.
11. ASP1: Ashita Power 1 G.K.
12. SSE: PT Sea Sun Energi
13. TTTV: Truong Thanh Tra Vinh Wind Power Joint Stock Company

Holding Company

Thailand

14. AE: Access Energy Co., Ltd.
15. PE: Plus Energy Co., Ltd.
16. SI: Sermasang International Co., Ltd.
17. Sermasang Next Ventures Co., Ltd.
18. Surat Eco Power Co., Ltd.
19. NGE: Nakhon Ratchasima Green Energy Co., Ltd.

International Operations

- 20.SGP: S. Global Power Limited
21. ACM: Access C Management Limited
- 22.SSSG: Sermasang Sustainable Singapore Private Limited
- 23.SSEP: SEA Sun Energy Partners Pte. Ltd.
- 24.SITW: Sermasang International (Taiwan) Co., Ltd.

Shell Company for Future Project

Thailand

- 25.EP: Essential Power Co., Ltd.
- 26.PTG: Prestige Group Co., Ltd.
27. PPP: Triple P Renewable Co., Ltd.
- 28.SCS: Siam Clean Solution Co., Ltd.
- 29.SRP: Siam Renewable Power Co., Ltd.
- 30.SSC: Sermasang Corporation Co., Ltd.
31. NRP: Niche Renewable Power Co., Ltd.
- 32.SSTE: SSTE Sustainable Co., Ltd.
- 33.STZ: STZ Innovation Co., Ltd.
- 34.Renewable Absolute Power Co., Ltd.
- 35.Renewable Infinite Co., Ltd.
- 36.BETTEN: Bettenergy Co., Ltd.
37. LKY: Lom Koh Yai Co., Ltd.
- 38.LCK: Lom Changklang Co., Ltd.
- 39.LNR: Lom Narai Co., Ltd.
- 40.LSK: Lom Singkhon Co., Ltd.
41. IRP: Infinite Renewable Power Co., Ltd.

International Operations

- 42.SITW1: SITW1 COMPANY LIMITED
- 43.PINGSHEN: Pingsheng Energy Co., Ltd

Projects Under Development

Thailand

- 44.BWE: Beisel Waste Energy Co., Ltd.
- 45.NWE: Nakhon Ratchasima Waste To Energy Co., Ltd.

International Operations

- 46.ASP2: Ashita Power 2 G.K.

Related Businesses

International Operations

47. SJC: Seijo Corporation
48. SIVN: Sermasang International Vietnam Co., Ltd.

TK Investors

International Operations

- 49.SEG: Surge Energy Corporation Limited

Other Businesses

Thailand

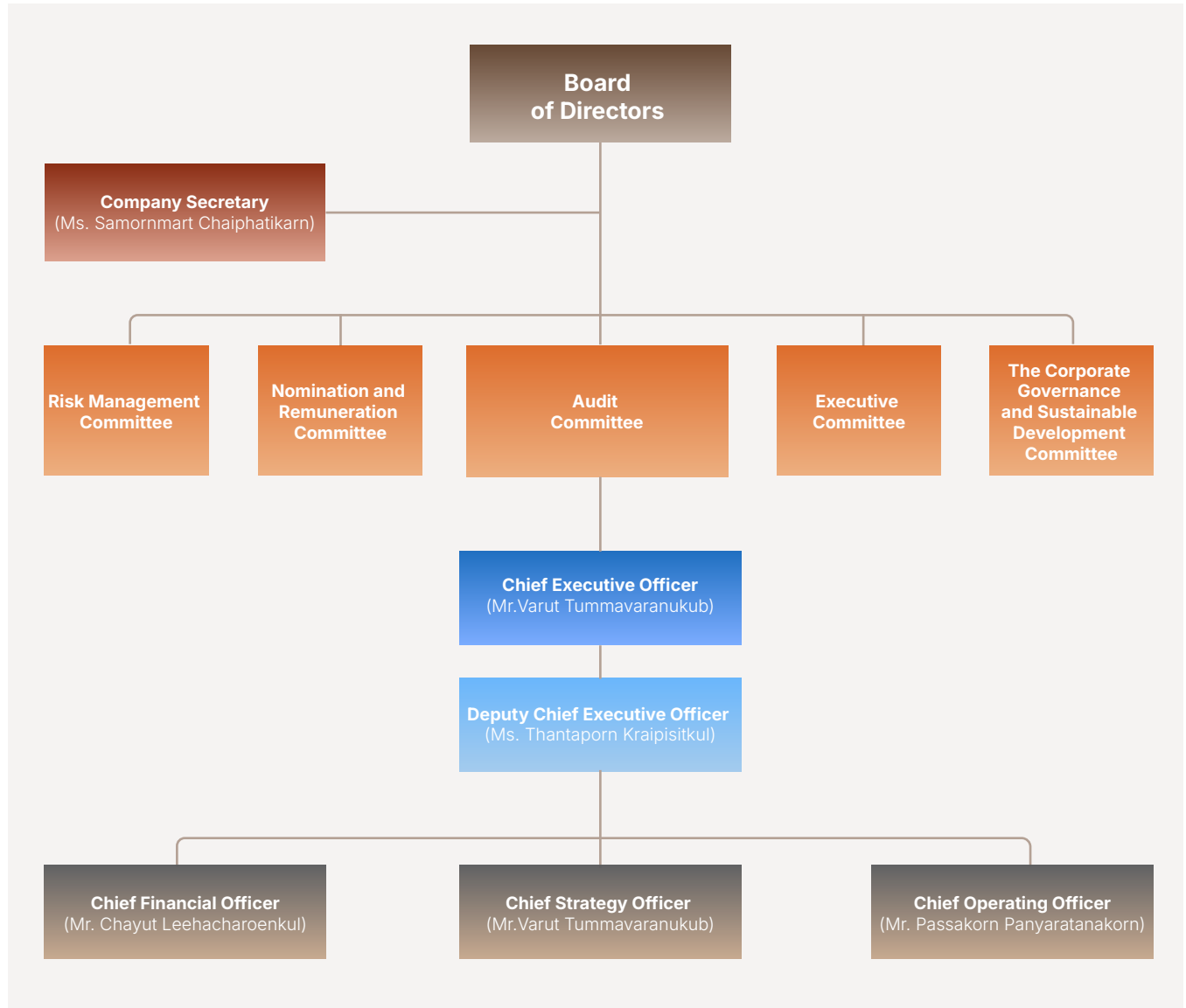
- 50.SAMART: Samart Plastpack Co., Ltd.



Organizational Structure

The Company's administration and management are overseen by a Board of Directors, consisting of 10 members, with Mr. Kamthon Wangudom, serving as Chairman and Independent Director. The Board is supported by 5 sub-committees, each with clearly defined scope, authority, duties, and responsibilities. These sub-committees are:

1. Risk Management Committee – 3 members
2. Nomination and Remuneration Committee – 3 members
3. Audit Committee – 3 members
4. Executive Committee – 3 members
5. The Corporate Governance and Sustainable Development Committee – 3 members





SUMMARY OF KEY OPERATING RESULTS FOR 2024



Economic Dimension*

Net revenue from sales and services:

THB
3,465.5
million



Employee compensation and welfare:

THB
162.6
million

Taxes paid:

THB
79.6
million



Dividend per share:

THB
0.2



EBITDA

THB
2,638.5 million

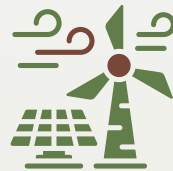
In
2024

0 case

The Company received no complaints or allegations related to involvement in corruption.

The Company had the total electricity sale capacity under power purchase agreements:

285 eMW**



Environmental Dimension

Net energy production in 2024:

674,597 MWh

Greenhouse gas emissions reduction equivalent:

464,025 tCO₂e



Net greenhouse gas emissions:

6,924.5 tCO₂e

(Thailand and international operations)

Scope 1 =

4,515.4
tCO₂e

Scope 2 =

1,768.0
tCO₂e

Scope 3 =

641.1
tCO₂e

Water withdrawal from various sources (surface water, groundwater, and tap water):

318,411.7 m³



Non-hazardous waste:

5,026.2 tons

Hazardous waste:

141.4
tons



Green space expansion through the planting of

40
saplings

(from the biomass power plant project in Nakhon Ratchasima Province)



Number/value of fines for legal violations:

0 case



Social Dimension

Number of occupational accidents:

0 case

Lost Time Injury Frequency Rate (LTIFR):

0 times

Average training hours per year:



Male employees:
22.5 hours



Female employees:
29.8 hours

Performance appraisal coverage:

Male employees:

100%

Female employees:

100%



Employee satisfaction survey result:

84.3%

New hire retention rate:

86%

Number of discrimination-related complaints:

0 case

Number of privacy breach complaints:

0 case

Number of business ethics violations:

0 case

Number/value of fines for legal violations:

0 case

* Economic data is based on the Company's financial statements as of year-end 2024.

** The Company had contracted electricity capacity proportional to shareholding of 458.5 eMW (Data as of December 31, 2024).

** The average availability rate of four power plants in Thailand (SPN, SS, UPT, and Winchai) was 97.1%.



SUSTAINABILITY ACHIEVEMENT AWARDS

**TRIS
RATING**

A Strategic Partner of **S&P Global**

SET **AA**
ESG Ratings 2024



TRIS Rating

Credit rating recognized in the Thai bond market.

SET ESG Ratings

The SET ESG Ratings evaluate listed companies based on their participation in a comprehensive assessment covering Environmental, Social, and Governance (ESG).

Corporate Governance Report of Thai Listed Companies: CGR

In accordance with corporate governance principles and with responsibility towards society and the environment (ESG).

Sustainability Disclosure Awards 2024

Promoting sustainability disclosure practices among listed companies and organizations that are members of the Sustainability Disclosure Community.

Criteria Received	BBB+ (3 Consecutive Years)	AA	Highest Level: 5 Stars "Excellent"	Sustainability Disclosure Recognition
Awarding Organization	TRIS Rating Co., Ltd.	The Stock Exchange of Thailand	Thai Institute of Directors: IOD	Thaipat Institute



Company Overview

• Our Impact • Our Services • Our People



02

SUSTAINABILITY MANAGEMENT





BUSINESS VALUE CHAIN

The Group manages sustainability at every stage of the business value chain to address current and future challenges, starting with:

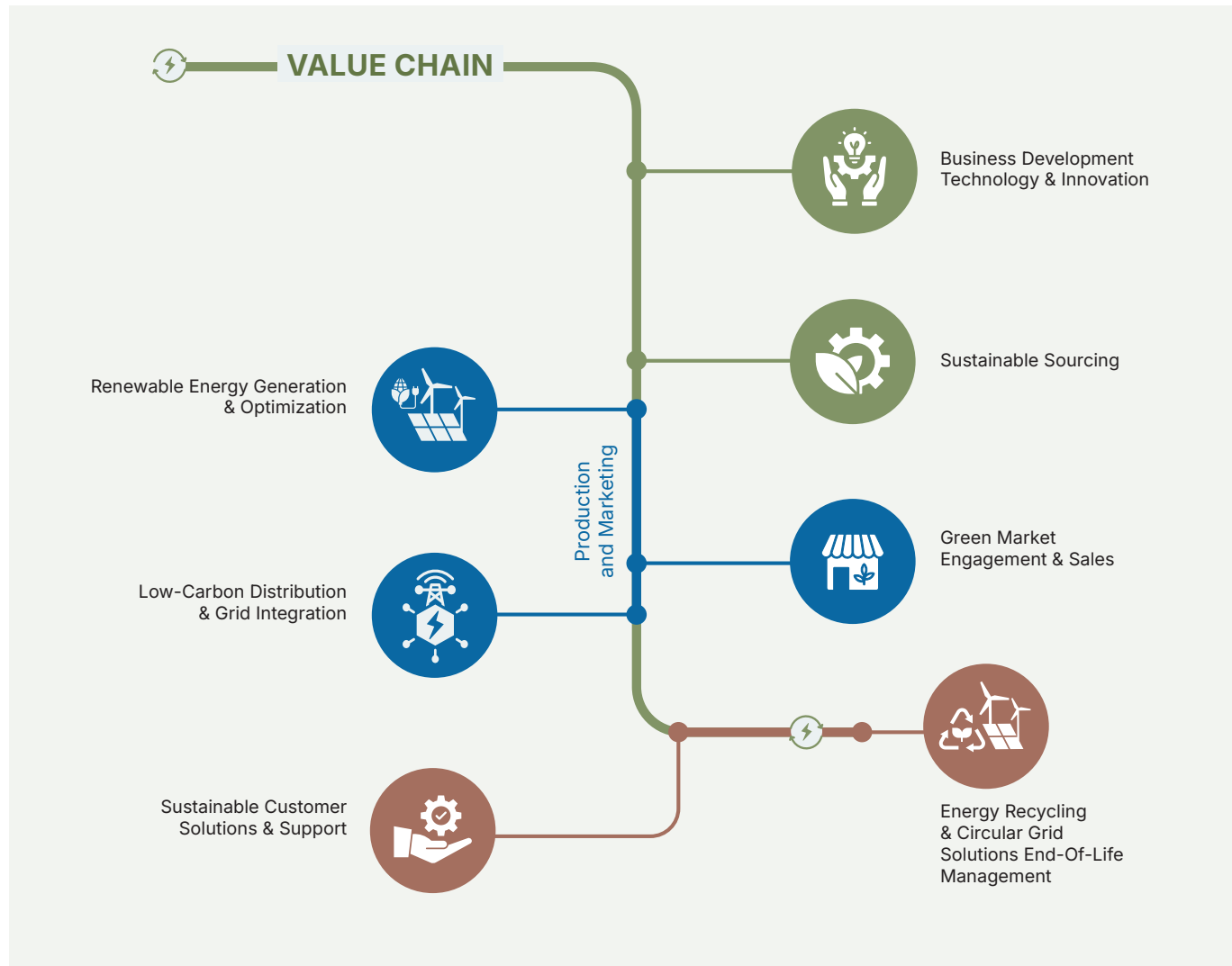
- **Business Development & Energy Innovation** that seeks cutting-edge technology to create business differentiation.
- **Sustainable Energy Resource Acquisition** which focuses on responsible procurement in all processes, operating with care at every step.
- **Renewable Energy Generation & Optimization** prioritizes efficient production while reducing environmental impacts and conserving biodiversity.
- **Green Market Engagement & Sales** helps promote knowledge and the use of renewable energy and the distribution of low-carbon energy.
- **Low-Carbon Distribution & Grid Integration** to ensure energy is delivered efficiently.
- **Sustainable Customer Solutions & Support** by providing continuous service and solutions using modern technology.

However, the company is aware of future impacts from decommissioning and equipment expiration, and its responsibility to ensure no negative impacts on society and the environment.

- **Energy Recycling and Circular Grid Solutions** are essential, as renewable energy materials often have operational lifespans exceeding 10 years. To ensure

responsible recycling and reuse, the Group must proactively develop and implement circular strategies. These initiatives help reduce future environmental

impact, support a circular economy, and promote long-term sustainability.





INTEGRATED BUSINESS VALUE CHAIN

Overview of the Value Chain – This section outlines the impacts and risks related to the Group's key sustainability issues across the integrated business value chain.

01

Business Development & Energy Innovation

Innovation Project
1 project
(Details on page 131)

Value Creation through Innovation
82,800 baht

1 5 2 4
5 6 8 10

02

Sustainable Energy Resource Acquisition

Number of Critical Tier 1 Suppliers:
8 suppliers

Number of Critical Non-Tier 1 Suppliers:
4 suppliers

Number of ESG-Compliant Suppliers:
20 suppliers

1 2 1 3 7 10

03

Renewable Energy Generation & Optimization

Solar Power Generation
300,931 MWh

Wind Power Generation
298,899 MWh

Biomass Power Generation
74,767 MWh

1 2 3 4 5 6 7 8
9 10 1 2 3 4 5 6

04

Green Market Engagement & Sales

Government Agency Customers:
2 customers

International Customers:
6 customers
3 4 8 9 10

Domestic Customers:
58 customers

05

Low-Carbon Distribution & Grid Integration

Net Electricity Production Volume
674,597 MWh

1 2 3 3 4 5
1 2 3 4 5 6
7 8 9 10

07

Energy Recycling & Circular Grid Solutions

Recycling Rate:
97.23%

1 3 4 5 1 2
3 4 5 10

06

Sustainable Customer Solutions & Support

Number of Customers Served:
51 customers
(only in Thailand)

2 3 4 6
7 8 10

Upstream

Midstream

Downstream

Positive Impacts

- 1 Reduction of Greenhouse Gas Emissions
- 2 Economic Development and Community Job Creation
- 3 Energy Access and Safety Enhancement

Negative Impacts

- 4 Natural Resource Utilization and Land Use Change
- 5 Resource Consumption and Waste Generation
- 6 Land Use and Ecosystem Disturbance

Key Risks Impacting Sustainability

- 1 Mitigation of Climate Change Impacts and Greenhouse Gas Emissions (E)
- 2 Financial Sustainability and Access to Green Finance (G)
- 3 Environmental Management, Resource Efficiency, and Sustainable Use (E)
- 4 Commitment to Quality and Continuous Improvement (G)
- 5 Biodiversity and Ecosystem Protection (E)
- 6 Regulatory Challenges, Human Rights, and Compliance with Fair Labor Practices (G)
- 7 Transparency, Accountability, and Stakeholder Trust (G)
- 8 Energy Reliability and Operational Efficiency (G)
- 9 Access to Sustainable and Reliable Energy (S)
- 10 Empowering Human Capital for Sustainable Growth (S)



ANALYSIS OF STAKEHOLDERS IN THE BUSINESS VALUE CHAIN

The Group believes that driving a sustainable future through renewable energy, such as solar, wind, and biomass, requires not only technological innovation but also building meaningful relationships with those involved in or affected by our business operations. Stakeholders are a fundamental part of the Group's growth, playing a key role in defining and inspiring strategies that make renewable energy accessible, impactful, and inclusive for all sectors.

Stakeholder analysis provides valuable insights into understanding needs, expectations, and engaging with

diverse voices and opinions within the ecosystem, whether they come from regulatory bodies, government agencies, local communities, investors, employees, or other groups. By recognizing the various influences, interests, and perspectives, the Group can align its renewable energy approaches with broader social, economic, and environmental objectives. Through the development of the business amidst the complexities of the renewable energy sector, this analysis highlights the power of collaboration. It emphasizes not only the importance of working closely with various groups but also points out how the Group can further

enhance engagement, promote, and foster stronger collaborations with all relevant parties. Building on this foundation, the Group is committed to turning challenges into opportunities and valuing the role of all stakeholders in creating a clean, environmentally friendly, and sustainable future.

The Group applies these insights to strengthen stakeholder relationships and support its mission, collaboratively developing a path to a future powered by renewable energy, driven by collaboration, and inspired by a shared vision for a better world.

Stakeholder analysis process and reference standard

Steps	1	2	3	4	5	6
	Stakeholder identification	Categorization and prioritization	Data collection and stakeholder engagement	Scoring and mapping	Analysis and insight synthesis	Validation and reporting
Process	Identify stakeholders across the value chain	Identify stakeholders based on their level of influence and interest	<ul style="list-style-type: none"> Conduct qualitative interviews, surveys, and workshops with internal teams and external stakeholders 	<ul style="list-style-type: none"> Develop a scoring framework based on: <ul style="list-style-type: none"> - Level of influence - Level of interest Apply a 1-5 scoring scale and generate stakeholder mapping 	Analyze data to identify stakeholder needs, expectations, and risks, and develop engagement strategies	Review and validate for accuracy to ensure transparency and alignment with sustainability goals
Standards	<ul style="list-style-type: none"> ISO 14004 AA1000 Stakeholder Engagement Standard (SES) 	<ul style="list-style-type: none"> ISO 26000 GRI Standards: GRI 102 	<ul style="list-style-type: none"> ISO 31000: Risk management AA1000SES 	ISO 14001: Environmental aspect	<ul style="list-style-type: none"> ISO 9001 GRI 102 	<ul style="list-style-type: none"> ISO 14063 Environmental communication for effective stakeholder reporting GRI Standards

Results of stakeholder analysis across the business value chain



***Existing stakeholders**

Note: Existing stakeholders categorized under "Society" have been consolidated into the "Local communities" group.



MANAGEMENT OF STAKEHOLDERS IN THE BUSINESS VALUE CHAIN

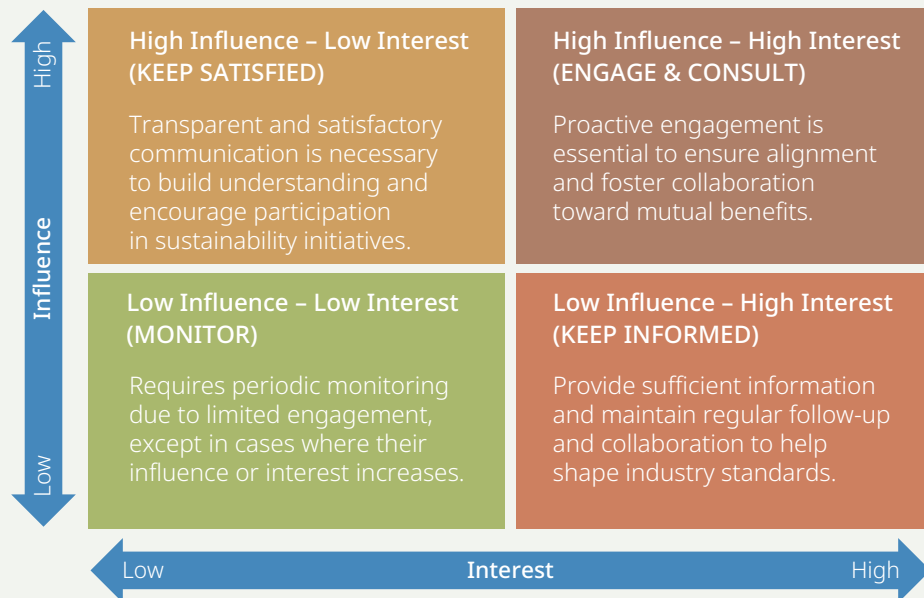
The Group has expanded stakeholder groups from 7 to 12 groups. This analysis covers all operational processes of the Group to gain a deeper understanding of the specific needs and challenges of each stakeholder group. A more detailed identification of stakeholders helps the Group develop customized strategies to effectively manage expectations and address concerns, leading to stronger relationships, enhanced collaboration, trust-building, and greater stakeholder support in driving long-term business success and sustainability.

The Group assesses stakeholders across its renewable energy operations throughout the business value chain, focusing on solar, wind, and biomass energy. By identifying key stakeholders, assessing their influence and interest, and presenting actionable recommendations, the Group strengthens engagement strategies that align with its mission to drive sustainable energy solutions and innovation.

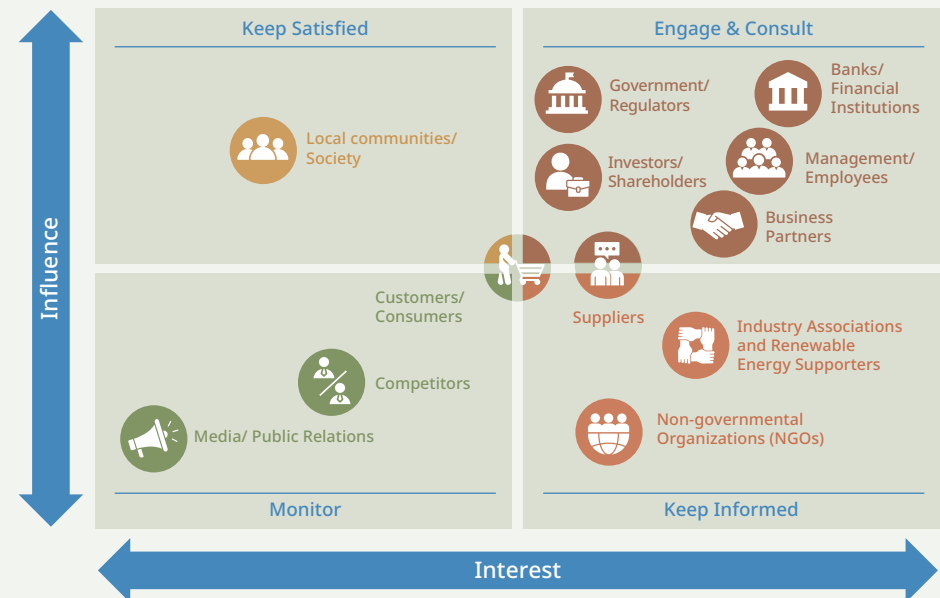
The analysis results highlight the diverse roles and expectations of stakeholders across the Group's value chain,

from business development and resource acquisition to clean energy production and customer support. Government agencies and regulatory organizations are considered high-influence stakeholders due to their important role in policy and compliance, while local communities and environmental non-governmental organizations or NGOs hold significant interest, focusing primarily on social and environmental impacts.

Stakeholder Map Categorized into Four Key Groups




***Reference:** ISO 26000: Guidance on social responsibility, including stakeholder identification and prioritization.



Reference: James B. Gardner et. Al. Handbook of Strategic Planning (1986)



STAKEHOLDER ENGAGEMENT


Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Environment and Ecosystem (PLANET)	<ul style="list-style-type: none"> Reduce greenhouse gas emissions and mitigate the impacts of climate change. Protect and restore biodiversity and ecosystems. Responsible resource procurement and sustainable resource management. Reduce waste and improve recycling efficiency. Develop renewable energy with minimal environmental impact. 	<ul style="list-style-type: none"> Integrate environmental sustainability concepts into every stage of the value chain, from development and innovation to resource procurement, production, energy distribution, and material management after end-of-life. Prioritize renewable energy technologies that reduce greenhouse gas emissions and promote ecosystem health. Apply Circular Economy principles to manage waste and extend the lifespan of materials in the renewable energy system. Collaborate with partners, allies, and communities to ensure all parties adhere to environmental standards and sustainable resource management practices. Continuously improve energy efficiency and invest in technologies that enhance clean energy production. 	<ul style="list-style-type: none"> Annual Sustainability Report – Communicate transparently about environmental performance and progress toward climate goals. Regular Environmental Audits – Ensure compliance with sustainability goals and identify areas for improvement. Community Engagement and Public Meetings – Collaborate with local communities and environmental conservation groups to ensure projects align with ecosystem needs. Partner and Ally Assessments – Continuously evaluate to ensure responsible resource procurement and adherence to environmental standards. Innovation and Research Collaboration – Work with research institutions to drive advancements in renewable energy technologies and recycling solutions. 	170.5 MW	Electricity generation capacity	6,924.50 tCO ₂ e	Net GHG emissions
				293,868 MW-hours	Net electricity per year	4,515.41 tCO ₂ e	Scope 1 GHG emissions
				318,411.74 cubic meter	Water withdrawal from all areas (surface water, groundwater, and third-party water)	1,768.04 tCO ₂ e	Scope 2 GHG emissions
				4 projects	Projects for conservation of wildlife and natural habitats	641.05 tCO ₂ e	Scope 3 GHG emissions
						110.14 Tons	Nitrogen oxides emissions
						87.47%	Scope 3 GHG reductions
						38.41 Tons	Total particulate matter emissions
						Less than 70 decibels A	Control of 24-hour average noise levels (wind turbines)
						813,411.74 cubic meters	Total water use
						99.26%	Water recycling rate
						341.44 hectares	Green area covered by biodiversity restoration projects



Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Bank/ Finance Institutes	<ul style="list-style-type: none"> • Transparency in business operations. • Reliable credit rating. • Credibility, reputation, and corporate governance. • Efficiency and ability to generate revenue and profit. • Investment plans and fundraising strategies of the Group to finance projects. • Ability to manage financial risks. • Business performance and growth. • Ongoing positive business relationships. • Access to green finance sources and sustainable funding. 	<ul style="list-style-type: none"> • All executives/employees refrain from requesting, accepting, or offering any illicit benefits. • Report financial information accurately, comprehensively, on time, and consistently. • Collaborate sincerely in addressing the issue of accepting, giving, or paying illicit benefits. • Communicate clearly and transparently about financial status, project returns, and ESG commitments. • Adhere to sustainable finance principles by incorporating ESG factors into every investment decision and project. • Manage debt and credit responsibly. 	<ul style="list-style-type: none"> • Quarterly financial reports – Provide information on performance and progress in sustainability initiatives. • Annual ESG Disclosure – Focus on green projects and sustainability initiatives. • Annual Green Loan Allocation and Impact Report – Reporting on the use of credit for environmental purposes. • Regular meetings and reviews – Update progress and discuss new investment opportunities. • Investor analyst meetings. 	2,122.81 million baht	Disbursed amount of green loan	674,597 MWh	Net electricity production
						3,465.5 million baht	Net sales and service revenue
						464,025 tCO ₂ e	Reduced greenhouse gas emissions





Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Management/ Employees	<ul style="list-style-type: none"> Working with happiness, understanding goals, and achieving efficiency. Receiving appropriate compensation and benefits compared to others in the same industry. Continuous development of potential and skills, with equality and promotion of job roles. Career advancement opportunities and job stability. Attention to safety, occupational safety, and a suitable working environment. Equal opportunities, diversity, and participation. Job security and transparent communication from management. 	<ul style="list-style-type: none"> Provide fair compensation and benefits that align with leading companies in the same industry. Create transparent career growth paths with involvement from organizational leadership. Establish grievance channels for unfair treatment according to set processes. Build a corporate culture that prioritizes employees' well-being, including environmental management and workplace health according to occupational health standards. Listen to and empower employees to offer suggestions, fostering a culture of innovation within the organization. Develop skills and provide training relevant to the profession, employee interests, and diversity, along with projects focused on health, safety, and promoting work-life balance. 	<ul style="list-style-type: none"> Regular communication between the Group and employees through various channels throughout the year. Provide opportunities for employee involvement. Organize company Town Hall meeting. Employee satisfaction survey – Conducted annually to assess satisfaction and engagement. Training and development programs – Continuous skill development. Discussion forums – Foster relationships between management and employees. Feedback channels – Provide suggestions, complaints, and whistleblowing with follow-up and feedback. 	111 people	Total number of employees including all executives	19.40%	Resignation rate
				50%	Proportion of female managers and middle managers to all managers and middle managers	86%	New hire employee retention rate
				11 people	Talent Management Project	0	Lost Time Injury Frequency Rate (LTIF)
				463,000 baht	Expenditure on employee training and development	25.92 hours/ year	Average training hours per employee
				1.00 : 0.98	Proportion of female employees: male employees	84.3%	Employee satisfaction assessment results
						100%	Employees who received performance appraisals
						12 times	Communicate through internal journals (Winds Whisper)
						1 time	Townhall executive meeting



Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Business Partners	<ul style="list-style-type: none"> Financial stability and a strong reputation of the Group. The capability, performance, and professionalism of the team. The ability to manage operations and corporate governance. Long-term business partnership, transparent and fair agreements. Responsible resource procurement and ethical business practices. Collaboration in innovation and technology. 	<ul style="list-style-type: none"> All executives and employees are committed to honoring long-term agreements and partnerships that benefit both parties and align with the sustainability goals set with partners. Provide business support in a mutually beneficial manner to achieve overall business goals, while considering the best interests of the Group and ensuring fair compensation for both parties. Support joint projects focused on developing new technologies in renewable energy. Clearly establish business ethics standards for partners. 	<ul style="list-style-type: none"> Annual partner meetings – Review strategies and joint goals. Project progress meetings and operational planning – Discuss and resolve issues at the management level. Negotiations for new projects or collaborations in various areas. Audits – Evaluate alignment with sustainability standards. Relationship-building activities. 	1 company	Number of partners that have implemented innovations in their business	1 project	Number of adopted innovations
						82,800 baht	Value creation through innovation
						1 time	Organize knowledge-sharing activities in collaboration with partners from the sustainability and ESMS training courses




Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Government/ Regulators	<ul style="list-style-type: none"> • Creation of economic and social value. • Transparency and ethics in business operations. • Maximizing the use of resources. • Management of the Group's supply chain. • Driving sustainable development goals. • Compliance with environmental, energy, and labor regulations, while responsibly addressing the social/ environmental impacts of the Group's operations. • Adherence to laws and contractual agreements. • Support for renewable energy policies. • Preparation of accurate, complete, and timely reports, with transparent cooperation. 	<ul style="list-style-type: none"> • Comply with all laws, regulations, and policies, as well as the conditions set by key regulatory bodies such as the SEC, the Stock Exchange of Thailand, and other relevant authorities. • Support government operations and adhere to the policies and criteria set by relevant regulatory bodies. • Promote and support collaboration in various government activities to help build stability and growth for the community and society at large. • Support knowledge, technology, and new innovations to collaborate and assist government activities. • Disclose information accurately and transparently in accordance with good corporate governance principles, and publish in public media. 	<ul style="list-style-type: none"> • Government participation – Join meetings and forums on renewable energy. • Participate in various activities. • Prepare annual reports and sustainability development reports. • Publish information on the website. 	1 time	Participated as a private sector representative in providing input on the development of a sustainability manual for SMEs.	79.6 million baht	Tax payment
						1 time	Joint activities with regulatory agencies




Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
Investors/ Shareholders	<ul style="list-style-type: none"> • Transparent management and governance practices by the Board of Directors. • Financial returns and sustainable growth, such as satisfactory dividend payments, made on time as specified in the policy. • Effectiveness in monitoring and preventing fraud, including anti-corruption efforts. • Accurate and complete financial statements submitted on time. • Adherence to ESG principles with comprehensive, timely, and sufficient information for decision-making. • Internationally recognized reputation. • Effective management of opportunities and risks. • Research and development to enhance the Group's competitiveness. • Business continuity and effective strategies. 	<ul style="list-style-type: none"> • Disclose information accurately and transparently in line with corporate governance principles. • Clearly communicate business strategies and performance. • Provide necessary reports for key financial analysis, financial results, and accounting data. • Conduct business with care, integrity, and fairness to all shareholders. • Focus on continuous growth and profit generation to ensure good returns for shareholders. • Respect shareholder rights to access necessary information for evaluating the Group's management and provide equitable information to all shareholders. 	<ul style="list-style-type: none"> • Annual General Meeting (AGM) – Annual meeting. • Quarterly financial performance reports – 4 times a year. • Sustainability Report – Annually • Disclose information through the Stock Exchange of Thailand communication channels – As per regulations. • Prepare annual reports and sustainability development reports • Present investment information (roadshow). • Present information at the Opportunity Day event organized by the Stock Exchange of Thailand. • Establish communication channels to provide information and respond to inquiries from shareholders, investors, securities analysts, and the media. 	Achieved AA level (from the highest-level AAA)	SET ESG Rating for Sustainable Stocks	0.2 baht/ share	Dividend per share
						2,638.5 million baht	EBITDA
						767.6	Total net profit
						0.5816	Earnings per share
						7,061	Market capitalization *As of December 31, 2024
						1 time	Organization of the Annual General Meeting of Shareholders (AGM)
						5 times	Organization of investment information presentations (roadshow, opportunity day and company visit)



Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Suppliers	<ul style="list-style-type: none"> • Transparent procurement and fair compensation. • Financial stability. • Opportunities for future collaboration with the Group, fostering long-term and sustainable partnerships. • Safe working environment. • Reducing energy usage in the production process. • Cyber Security • Timely payment and fair terms. • Transparency in the supply chain and technical specifications. • Collaboration on innovation and reducing environmental impact. 	<ul style="list-style-type: none"> • Provide equal opportunities for suppliers to compete. • Competitive bidding with proper and fair selection. • Implement purchasing and procurement processes with appropriate and internationally recognized evaluation criteria. • Develop and maintain sustainable relationships with suppliers, focusing on quality and service. • Clear and fair payment terms. • Emphasize selecting suppliers aligned with sustainability goals. • Promote collaboration on innovation and the development of environmentally friendly products. • Continuously assess and monitor suppliers based on ESG criteria. 	<ul style="list-style-type: none"> • Meetings between the Group and suppliers. • Site visits/ assessments of suppliers' operations for business development. • ESG assessments and visits to suppliers. • Data protection processes. • Providing grievance channels. 	187 suppliers	Number of suppliers	20 suppliers	Suppliers qualified for ESG assessment
				229,890 hours	Number of hours worked by supplier employees operating at the Group's Sites in Thailand	0 case	Lost Time Injury Frequency Rate (LTIF) Critical Tier 1 supplier assessment
						100%	Critical Tier 1 supplier assessment
						100%	Critical Non-Tier 1 assessment
						0 case	Supplier-related grievances




Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Customers/ Consumers	<ul style="list-style-type: none"> • Product quality and price. • Timeliness of product delivery. • Social and environmental impacts that may arise from the use of the product. • Availability of pre-sale and post-sale services. • Energy-saving performance according to contract. • Access to renewable energy options and carbon footprint reduction. • Stability of equipment, wiring, and production systems with minimal breakdowns. • Data analysis meeting expectations, no data leakage, and consistent operations. 	<ul style="list-style-type: none"> • Commit to producing and delivering quality products and services with responsibility towards customers, aiming to raise standards while focusing on innovations that meet customer needs. • Provide complete and accurate information regarding products and services. • Establish systems and processes for customers to file complaints about products and services and address them as quickly as possible. • Ensure management and employees protect customer confidentiality and do not misuse customer information. • Ensure service reliability with minimal disruptions. • Establish clear communication channels and provide frequently asked questions (FAQs). • Use customer complaints to improve and resolve issues. 	<ul style="list-style-type: none"> • Conduct customer satisfaction surveys. • Provide channels for receiving complaints. • Participate in various annual activities. • Respond to requests promptly. • Implement data protection processes. • Obtain consent for data usage. • Prepare performance reports before project delivery and conduct annual maintenance reports. 	2 customers	Government agency customers	285 eMW	Contracted electricity sales volume
				6 customers	International customers	464,024 tCO ₂ e	Reduction in greenhouse gas emissions from renewable electricity sales
				58 customers	Domestic customers	95%	Customer satisfaction survey results
						0 case	Number of customer complaints



Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Local Communities/ Society	<ul style="list-style-type: none"> • Social and environmental impacts that may arise from the operations of the Group. • Job creation and economic development in local areas. • Environmental responsibility and pollution reduction. • Collaboration in local renewable energy projects. • Promoting the culture of the local society. • Respecting the basic rights of communities. • Improving quality of life and promoting income generation for communities. • Listening to and promptly addressing community-related issues. 	<ul style="list-style-type: none"> • Participate in activities that demonstrate responsibility towards the community/ society and reduce environmental and social impacts. • Develop projects that benefit the community/ society, aligning with the organization's strategy and meeting stakeholder expectations. Participate in community renewable energy projects. • Utilize natural resources while considering alternatives that have minimal impact on communities and society. • Promote the efficient use and conservation of energy for the benefit of future generations. • Encourage inclusive employment and workforce training programs. • Listen to and respect the way of life of the community. • Participate in community activities to enhance quality of life, preserve culture and valuable society. 	<ul style="list-style-type: none"> • Establish an advisory committee with the community. • Engage with the community in monitoring power plant operations and environmental management. • Conduct community opinion surveys by visiting communities. • Initiate activities that encourage community/ society participation. • Provide channels for receiving complaints. • Communicate through community relations units. • Organize community meetings, local festivals, and address CSR/ CSV project needs. • Conduct community project satisfaction surveys. 	3 projects	Number of social and environmental projects	767,402 baht	Community benefits from social projects (e.g., reduced electricity costs through solar power usage)
				1,564,014 baht	Budget for social and environmental projects	97.90%	Satisfaction with community engagement activities
						3 communities	Community benefits from engagement activities





Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Non-governmental Organizations (NGOs)	<ul style="list-style-type: none"> • Adhere to best practices in renewable energy to reduce environmental impacts. • Disclose environmental impact data and renewable energy practices to the public. • Participate in resource recovery, waste reduction, and clean energy recycling processes. • Support environmental, social, and governance (ESG) initiatives. • Provide transparent environmental impact information. • Collaborate on sustainability and climate projects. 	<ul style="list-style-type: none"> • Use advanced technologies in solar, wind, and biomass energy to achieve Net Zero emissions. • Provide accessible and reliable clean energy solutions for underserved areas. • Support sustainability activities and offer technical consulting. • Promote recyclable or reusable components of renewable energy. • Build partnerships to develop joint sustainability strategies. 	<ul style="list-style-type: none"> • Joint projects to support policies and raise awareness of sustainability. • Regular workshops and consultations to foster mutual understanding. • Distribution of Electronic Newsletters for Information Sharing and Solicitation of Feedback 	1 time	Organized stakeholder dialogue activities with the participation of NGOs	0 Case	Grievances related to social and environmental violations



Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Industry Associations and Renewable Energy Supporters	<ul style="list-style-type: none"> • Adhere to regulations, rules, and the best standards in the renewable energy industry. • Develop innovations and share best practices in renewable energy technology. • Jointly support policy changes that promote renewable energy. • Participate in setting standards for the renewable energy sector. • Support the advocacy of policies and legal frameworks that promote renewable energy. 	<ul style="list-style-type: none"> • Comply with international and local standards in renewable energy. • Attend roundtable discussions and meetings organized by associations • Commit to carbon-neutral projects and sustainable energy practices. • Support campaigns and information dissemination projects led by associations. • Support the overall industry's sustainability efforts. 	<ul style="list-style-type: none"> • Participate in and support workshops, trade shows, and seminars organized by associations. • Contribute to policy advisory committees to influence renewable energy regulations. • Partner in campaigns promoting renewable energy and related policies. 	1 membership	Membership in the Thailand Carbon Neutral Network (TCNN)	Net Zero Target	Greenhouse gas management and Net-Zero emissions target setting





Stakeholders	Needs/ Expectations	Response Strategies	Engagement Channels	Value in 2024	Input Factors	Value in 2024	Performance (Outputs)
 Media/ Public Relations	<ul style="list-style-type: none"> • Transparency and disclosure of information. • Compliance with laws and regulations. • Business ethics of the organization. • Creating value for the economy and society. • Social and environmental impacts that may arise from the Group's operations. 	<ul style="list-style-type: none"> • Disclose operational information truthfully, impartially, consistently, accurately, transparently, and in a timely manner. • Build engagement and maintain good relationships with the media. • Operate the business responsibly towards the economy, society, and the environment. • Maintain transparency and regularly issue press releases. • Handle potential crises thoughtfully. 	<ul style="list-style-type: none"> • Respond to information disclosure requests. • Disseminate information in public media. • Prepare fact summaries about the Group. • Conduct media-related activities. 	686,500 baht (Jan-Nov 2024)	Media budget	15 times	Public media disclosure
 Competitors	<ul style="list-style-type: none"> • Fair competition and market growth beneficial to society and the environment. • Supporting the joint growth of the industry. • Comparison of innovation and sustainable practices. • Compliance with international competition rules. • Not defaming or harming the reputation of competitors or seeking trade secrets dishonestly. 	<ul style="list-style-type: none"> • Treat competitors within the framework of international competition rules and promote ethical competition. • Executives and employees must not seek competitors' trade secrets through dishonest methods. • Executives and employees must not make malicious accusations against competitors without information. • Monitor market trends and collaborate on feasible projects. 	<ul style="list-style-type: none"> • Industry meetings and joint projects for sector growth. • Annual industry meetings. • Respect and comply with the terms and conditions set by the agencies managing project bidding. 			0 case	Grievances related to business competition



IDENTIFICATION OF BUSINESS MATERIAL TOPICS (DOUBLE MATERIALITY)

The identification of material topics is a critical element in preparing for sustainability disclosure. Since 2021, the Group has been conducting materiality assessments to pinpoint critical sustainability topics impacting its operations.

In 2024, the Group expanded upon previous methodologies by adopting an enhanced approach for identifying sustainability-related material topics. Historically, the assessment was based on two dimensions: (1) Stakeholder Importance, which captured external impacts on the environment and society, and (2) Strategic Importance, which measured external impacts on the business itself.

This year, the Group refined its assessment process by aligning with internationally recognized standards, namely the Global Reporting Initiative (GRI) and the European Financial Reporting Advisory Group (EFRAG). Enhancements included the adoption of a structured scoring system and prioritization methodology to deepen the analysis.

The Group's approach focuses on evaluating the impact of its operations through a Double Materiality lens, integrating both Financial Materiality and Impact Materiality perspectives. The materiality analysis provides a comprehensive view of the Group's sustainability performance by merging financial and impact considerations. Financial Materiality highlights the risks and opportunities that influence revenues, operational costs, and investor confidence. In contrast, Impact Materiality emphasizes the Group's responsibility to address environmental and social challenges across its value chain.

Integrating both financial and impact dimensions into the materiality assessment is fundamental to the Group's sustainability strategy. This comprehensive approach enables effective risk mitigation, unlocks new opportunities,

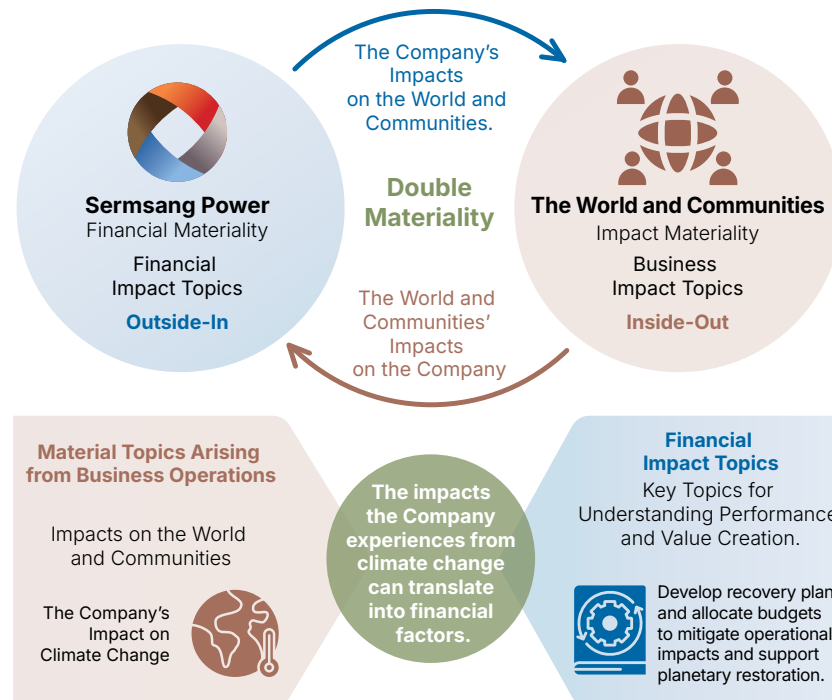
and drives the long-term creation of stakeholder value. Moreover, it reinforces the Group's steadfast commitment to environmental stewardship and social responsibility, positioning the Group for sustainable growth in an evolving global landscape.

Key findings from the analysis identified critical sustainability factors, including financial sustainability, commitment to quality, continuous improvement, climate change mitigation, biodiversity protection, sustainable supply chain management, and respect for human and labor rights, all of which are crucial to the Group's long-term success.

The Group further refined the materiality identification process to ensure that the results reflect a comprehensive stakeholder perspective. The outcomes, presented on page 35, are based on multi-stakeholder engagement and designed to meet the expectations of both internal and external parties.

Through this approach, the Group reinforces its position as a leader in the renewable energy sector, committed to sustainable growth and resilience in an ever-changing global landscape.

Guiding Framework for Material Topic Identification



Further Reading:



Material Topics
Identification
Report

Materiality Matrix
Page 61

Sustainability Topics Across
the Business Value Chain
Page 17

Comprehensive Table of Material
Impacts and Risks for the Group
Page 20-49

Methodology, Assumptions,
and Process Steps
Page 51-60

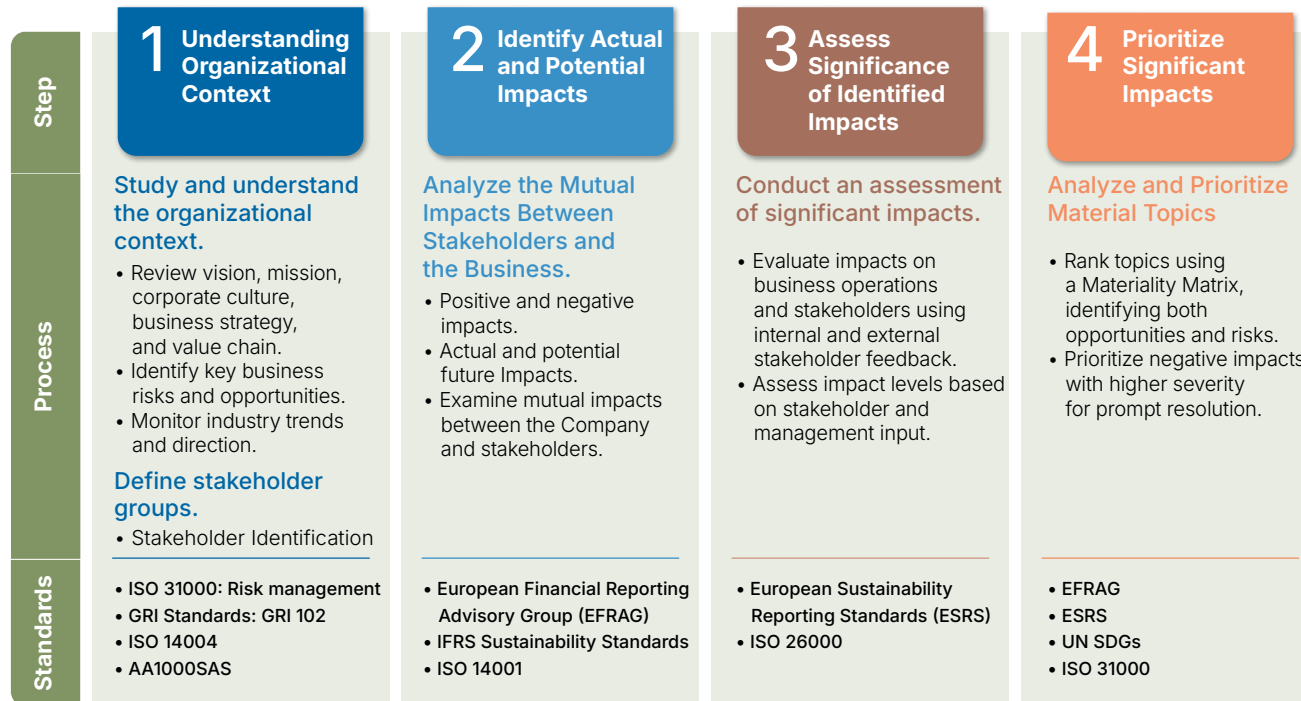
Stakeholders' Interests
and Perspectives
Page 62-66



OBJECTIVES OF THE MATERIALITY ASSESSMENT PROCESS

1. Support the Group in balancing financial performance with sustainability goals by assessing both environmental/social impacts and financial implications.
2. Enable the Group to prioritize and manage material topics effectively, ensuring optimal budget allocation and achieving expected outcomes.
3. Facilitate timely and informed decision-making on issues affecting business continuity.
4. Link sustainability issues with value creation, risk management, and business opportunities, while serving as a foundation for sustainability reporting.
5. Ensure long-term success and generate positive environmental and social outcomes.

Materiality Assessment Process



Stakeholder Engagement Overview




Sample Size:

 **54** stakeholders

Internal stakeholders	External stakeholders
<ul style="list-style-type: none">• Employees• Supervisors• Senior Management	<ul style="list-style-type: none">• Banks/ Financial Institutions• Customers/ Consumers• Government/ Regulators• Suppliers• Business Partners• Local communities

Engagement Methods:

Senior Management	Supervisors
Local communities	Employees
Banks/ Financial Institutions	Customers/ Consumers
Suppliers	Business Partners
Government/ Regulators	

-  One-on-one interviews  Online interviews
-  Questionnaires



DOUBLE MATERIALITY ISSUES FOR BUSINESS YEAR 2024

The Group has conducted an in-depth analysis to identify key business materiality issues and has prioritized them into three levels of importance:

- Focus Area
- Ongoing
- Watch List

This prioritization allows the Group to plan operations effectively and remain responsive to current and emerging situations. The process of determining important issues has been overseen by the Corporate Sustainability Management Working Group, chaired by the Group's top executive, and the Corporate Governance and Sustainable Development Committee. Sustainability goals and key performance indicators have been established to evaluate organizational

outcomes and are linked to performance evaluations for the CEO and relevant employees. This integration of sustainability into performance management ensures greater awareness of the importance of sustainable development and fosters a sustainability culture throughout the organization.

In 2024, several new business materiality issues were introduced, with seven key topics added: Pollution Control and Environmental Stewardship, Access to Sustainable and Reliable Energy, Human & Labor Rights and Fair Working Conditions, Financial Sustainability and Access to Green Finance, Commitment to Quality and Continuous Improvement, Development of Renewable Energy Technology and Innovation, and Energy Reliability and Operational Efficiency. These issues align with the World Economic Forum (WEF) analysis of global sustainability trends, with the Group identifying them as critical priorities given their significant positive and negative impacts on stakeholders.

Summary of the Group's Material Issues by ESG Framework

E

- E1. Climate Change Mitigation and Resilience & Carbon and Emission Reduction**
- E2. Environmental Management, Resource Efficiency, and Sustainable Use**
- E3. Waste Management and Circular Economy
- E4. Pollution Control and Environmental Stewardship
- E5. Biodiversity and Ecosystem Protection**

S

- S1. Access to Sustainable and Reliable Energy**
- S2. Customer Empowerment and Satisfaction
- S3. Empowering Human Capital for Sustainable Growth**
- S4. Safety, Health, and Well-being
- S5. Community Development and Economic Empowerment
- S6. Human & Labor Rights and Fair Working Conditions**

G




- G1. Financial Sustainability and Access to Green Finance**
- G2. Commitment to Quality and Continuous Improvement**
- G3. Transparency, Accountability, and Stakeholder Trust**
- G4. Development of Renewable Energy Technology and Innovation
- G5. Sustainable and Responsible Supply Chain**
- G6. Energy Reliability and Operational Efficiency
- G7. Regulatory Compliance, Standards, Ethics, Anti-Corruption, and Financial Stability
- G8. Sustainable Growth and Market Expansion

● Environmental ● Social ● Corporate Governance and Economics
 ⊕ Issues of special importance ○○○○ The magnitude of the impact is from small to large





IDENTIFICATION OF 10 MAIN FOCUS MATERIAL TOPICS FOR BUSINESS

Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
E1) Climate Change Mitigation and Resilience & Carbon and Emission Reduction	1) Greenhouse Gas Emission Reduction 2) Net Zero 2050 Goal 3) Environmental Protection 4) Enhancing Community Resilience 5) Stakeholder Expectations 6) Supply Chain Impact	1) Compliance Costs 2) ESG Reporting for Access to Green Finance 3) Cost Savings 4) Market Competitiveness 5) Risk Management 6) Revenue Growth	Achieving business sustainability, reducing risks, and accessing green investment opportunities by reducing greenhouse gas emissions, accelerating the development of low-carbon technologies, and improving energy efficiency or market competitiveness.	Impacts of climate change, including extreme weather, global warming, floods and droughts, driven by greenhouse gas emissions, causing health risks and environmental degradation.	
E2) Environmental Management, Resource Efficiency, and Sustainable Use	1) Environmental Impact Reduction 2) Promoting Circular Economy 3) Community Well-being 4) Impact on Partners 5) Climate Resilience	1) Cost Savings 2) Regulatory Compliance 3) Access to Green Finance 4) Operational Resilience 5) Competitive Advantage Revenue Growth	Reducing operational costs, minimizing environmental impact, and enhancing long-term energy security through improved energy and water efficiency.	Water management, especially in water-scarce areas, to ensure an adequate supply of water without negatively impacting the community.	
E5) Biodiversity and Ecosystem Protection	1) Habitat Protection 2) Climate Resilience 3) Resource Conservation 4) Community Income Generation	1) Regulatory Compliance 2) Operational Continuity 3) Access to Green Finance 4) Reputation and Brand Value Avoiding Long-Term Costs	Maintaining environmental balance, complying with regulations, and ensuring sustainable operations by preserving natural habitats and minimizing ecosystem impact.	Biodiversity damage, such as deforestation during construction or pollution emissions during operations.	



Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
S1) Access to Sustainable and Reliable Energy	1) Access to Energy 2) Climate Change 3) Improved Quality of Life 4) Resilient Energy Systems	1) Revenue Growth 2) Government Incentives 3) Cost Optimization 3) Investor Confidence Risk Management	Providing access to electricity for communities, building trust with communities/ society, expanding renewable energy capacity, and improving power grid stability.	Local communities without electricity will miss development opportunities and face lower quality of life. Access to electricity fosters economic growth and accelerates the transition to clean energy.	7 AFFORDABLE AND CLEAN ENERGY
S3) Empowering Human Capital for Sustainable Growth	1) Employee Development 2) Social Well-being 3) Economic Equality 4) Innovation and Knowledge Sharing	1) Increase of Work Efficiency 2) Employee Retention and Attraction 3) Operational Resilience 4) Cost Optimization and Investor Confidence	Driving innovation, improving efficiency, and fostering long-term sustainable growth by investing in employee development and promoting a culture of continuous learning.	If employee development doesn't keep pace with business and economic growth, retaining employees will become increasingly difficult.	8 DECENT WORK AND ECONOMIC GROWTH
S7) Human & Labor Rights and Fair Working Conditions	1) Employee Benefits 2) Social Equality 3) Impact on Communities 4) Industry Standards	1) Regulatory Compliance 2) Reputation and Trust 3) Employee Retention and Attraction 4) Operational Efficiency 5) Access to Green and Social Finance	Conducting business ethically, creating a positive work environment, and adhering to international labor standards by focusing on employee welfare, diversity, and fair practices.	Creating employee well-being and social equality by addressing challenging human rights issues. Increasing diversity or future stakeholder groups may lead to disparities and have negative impacts.	16 PEACE, JUSTICE AND STRONG INSTITUTIONS



Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
G1) Financial Sustainability and Access to Green Finance	1) Reduction of Carbon and Greenhouse Gas Emissions 2) Renewable Energy Production Capacity (Solar, Wind, and Biomass) 3) Renewable Energy Technology Innovation 4) Circular Economy and Efficient Resource Use 5) Community and Stakeholder Engagement (Local Social Projects)	1) Access to Green Finance and Sustainability-Linked Loans 2) Policy and Regulatory Benefits (Subsidies, Carbon Credits) 3) Market Demand for Renewable Energy 4) Infrastructure and Renewable Energy Technology Costs 5) Energy Price Volatility and Long-Term Power Purchase Agreements (PPAs*)	Long-term growth, expansion of renewable energy, and maintaining market competitiveness by accessing low-cost financing and aligning financial strategies. This strengthens business resilience and leadership in sustainability.	Widespread use of renewable energy, with financial support for investors, will lower electricity costs, making it more accessible to communities and society, driving economic development, and improving quality of life.	 8 DECENT WORK AND ECONOMIC GROWTH
G2) Commitment to Quality and Continuous Improvement	1) Customer Satisfaction 2) Employee Engagement 3) Supply Chain Collaboration 4) Community Trust	1) Customer Retention and Loyalty 2) Repeat Purchases and Revenue Growth 3) Cost Optimization 4) Brand Reputation 5) Regulatory Compliance	Enhancing operational efficiency, driving innovation, and creating stakeholder satisfaction by focusing on quality improvement and flexible growth.	Maintaining and enhancing customer satisfaction by delivering products and services that meet expectations for safety, durability, and reliability. durable products and services.	 9 INDUSTRY INNOVATION AND INFRASTRUCTURE
G3) Transparency, Accountability, and Stakeholder Trust	1) Stakeholder Trust 2) Community Engagement 3) Ethical Business Practices 4) Industry Standards	1) Investor Confidence 2) Regulatory Compliance 3) Brand Reputation 4) Cost Efficiency 5) Access to Funding	Conducting business ethically, building investor confidence, and maintaining long-term credibility by adhering to good governance and transparent communication.	Building and maintaining trust, as well as fostering confidence among stakeholders, through good governance and ethical practices.	 16 PEACE, JUSTICE AND STRONG INSTITUTIONS






Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
G6) Energy Reliability and Operational Efficiency	1) Community Benefits 2) Environmental Conservation 3) Stakeholder Confidence 4) Energy Security	1) Revenue Stability 2) Cost Optimization 3) Market Competitiveness 4) Risk Reduction 5) Access to Investment	Creating stability in electricity production, improving resource efficiency, and reducing operational costs by enhancing system and technology performance.	Ensuring reliable power supply, energy security, and access to electricity, which boosts confidence among communities and society.	




IDENTIFICATION OF 7 ONGOING MATERIAL TOPICS FOR BUSINESS

Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
S5) Community Development and Economic Empowerment	1) Economic Growth 2) Improved Quality of Life 3) Social Equality 4) Community Resilience	1) Brand Reputation and Value 2) Social Operating License 3) Market Opportunity 4) Cost Savings 5) Access to Funding	Creating shared value, supporting employment, and improving the quality of life for society and renewable energy projects, enhancing economic stability, community prosperity, and long-term stakeholder trust.	Supporting community development in project areas, improving quality of life, and fostering strong relationships.	





Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
G5) Sustainable and Responsible Supply Chain	1) Stakeholder Trust 2) Community Engagement 3) Ethical Business Practices 4) Industry Standards	1) Investor Confidence 2) Regulatory Compliance 3) Brand Reputation 4) Cost Efficiency 5) Access to Funding	Improving efficiency, reducing risks, enhancing business resilience, sourcing resources ethically, and complying with environmental regulations by promoting transparency, fair labor practices, and environmentally-friendly procurement.	The lack of long-term business partners and companies in the supply chain creating long-term social and environmental impacts.	
G8) Sustainable Growth and Market Expansion	1) Workforce Development 2) Community Growth 3) Innovation and Knowledge Sharing 4) Social Equality	1) Improving Work Efficiency 2) Employee Retention and Attraction 3) Operational Flexibility 4) Cost Optimization 5) Investor Confidence	Enhancing competitiveness, expanding the use of renewable energy, and creating long-term profitability by investing in clean energy innovation and strategic partnerships.	The growth of the clean energy and renewable energy markets will increase access to electricity, expand coverage areas, and make prices more accessible, leading to improved quality of life.	
E3) Waste Management and Circular Economy	1) Waste Reduction 2) Resource Conservation 3) Climate Change Impacts 4) Community Quality of Life 5) Supply Chain Impacts	1) Cost Reduction 2) Regulatory Compliance 3) Revenue Generation Opportunities 4) Access to Green Finance 5) Operational Efficiency	Reducing environmental impacts, improving resource efficiency, and supporting sustainability goals by promoting recycling, waste reduction, and responsible disposal.	Minimizing health risks to local communities from waste and ensuring the environment remains safe and free from waste.	



Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
G4) Development of Renewable Energy Technology and Innovation	1) Climate Change Mitigation 2) Greenhouse Gas Emissions and Energy Access 3) Economic Growth 4) Promotion of Sustainable Technology Development 5) Industry Collaboration	1) Revenue Growth 2) Cost Efficiency 3) Competitive Advantage 4) Risk Reduction 5) Access to Green Finance	Improving efficiency, reducing costs, and driving sustainable growth through investment in advanced clean energy solutions and digital transition, creating a competitive edge and ensuring long-term energy transition.	Expanding business opportunities in clean energy technology, renewable energy, improving efficiency, and increasing the adoption of renewable energy.	
S4) Safety, Health, and Well-being	1) Employee Well-being 2) Community Health 3) Stakeholder Trust 4) Industry Leadership	1) Cost Reduction 2) Regulatory Compliance 3) Production Efficiency 4) Reputation and Investor Confidence 5) Employee Retention and Attraction	Creating an effective workforce, reducing risks, and promoting a healthy work environment by focusing on workplace safety, health promotion programs, and fostering a strong safety culture to increase employee satisfaction and operational efficiency.	Managing employee health and well-being, particularly for those working in high-risk environments, such as working in dangerous conditions that may lead to health deterioration, injuries, or fatalities due to poor working conditions.	
G7) Regulatory Compliance, Standards, Ethics, Anti-Corruption, and Financial Stability	1) Organizational Integrity 2) Stakeholder Trust 3) Social Equality 4) Industry Leadership	1) Risk Reduction and Regulatory Compliance 2) Investor Confidence 3) Cost Efficiency 4) Market Reputation 5) Access to Capital	Maintaining organizational integrity, investor confidence, and long-term sustainability by promoting transparency, responsibility, and responsible financial management, which can strengthen business resilience and trust from regulatory bodies.	Eliminating corruption issues will build confidence and trust from stakeholders, create a strong ethical culture within the organization, and instill integrity as a core value among employees.	



IDENTIFICATION OF 2 WATCH LIST MATERIAL TOPICS FOR BUSINESS

Main Material Topic	Double Materiality		Importance of the Issue		Supports to the SDGs
	Impact Materiality	Financial Materiality	To the Organization	To the Economy, Society, and Environment	
E4) Pollution Control and Environmental Stewardship	1) Pollution Reduction 2) Ecosystem Conservation 3) Community Health 4) Sustainable Practices through Environmentally Responsible Operations	1) Regulatory Compliance 2) Cost Efficiency 3) Access to Green Financing 4) Brand Value and Reputation 5) Operational Continuity	Reducing environmental impacts, complying with regulations, and promoting sustainability through the use of clean energy technologies and responsible resource management can enhance environmental stewardship and operational efficiency.	Managing air pollution, reducing health risks to local communities, and providing education on prevention, such as wearing masks to protect against PM 2.5 dust.	 11 SUSTAINABLE CITIES AND COMMUNITIES
S2) Customer Empowerment and Satisfaction	1) Energy Access 2) Customer Quality of Life 3) Sustainable Behavior - Empowering customers and promoting efficient energy use 4) Trust and Engagement	1) Revenue Growth 2) Competitive Advantage 3) Cost Efficiency 4) Investor Confidence 5) Innovation and Service Quality	Driving business growth, strengthening brand loyalty, and maintaining a competitive edge by delivering high-quality renewable energy solutions and excellent services. This fosters long-term trust, customer retention, and market leadership.	Delivering the best services and products to customers by prioritizing their needs (Customer-Centric) and building relationships through actively listening to their needs, while intensifying employee development in service improvement.	 9 INDUSTRY, INNOVATION AND INFRASTRUCTURE

03

SUSTAINABILITY STRATEGY AND GOALS





RISK MANAGEMENT

The Group is committed to achieving a balance between business growth and sustainability by prioritizing investment opportunities in all types of renewable energy power plants. This strategy aims to generate stable cash flow and promote long-term growth. To achieve this, the Group has adopted the Enterprise Risk Management (ERM) approach, based on the COSO ERM 2017 framework, which is integrated with the Good Corporate Governance Code for Listed Companies 2017, anti-corruption guidelines, and other management systems such as ISO 9001. This ensures the establishment of a comprehensive and efficient risk management system. Additionally, the COSO ERM-ESG framework is applied to manage environmental, social, and governance (ESG) risks, ensuring that the Group's operations are aligned with sustainable development principles and create positive impacts on society and the environment.

The Group recognizes that risk management is essential to both strategy formulation and operational execution. As such, significant emphasis is placed on comprehensive risk assessments across all dimensions, including strategic, operational, fraud and corruption, financial, environmental, social, and other risk categories. The risk management framework incorporates key components from both the COSO ERM 2017 and COSO ERM-ESG frameworks, as outlined below.

1. Governance and Culture

The Group systematically incorporates ESG requirements into its corporate policies, such as the sustainability development policy and risk management framework. All operations are required to align with international standards and regulatory requirements. The Group has also established a clear risk management structure and defined responsibilities to ensure effective governance. This includes the Risk Management Committee, which oversees ESG risk management policies and strategies, and the Risk Management Working Group,



which continuously supports and monitors the implementation of risk management measures.

The Group emphasizes fostering collaboration between departments and stakeholders, embedding a culture of ESG risk management as a core foundation of the organization. This is achieved through the concept of Risk-based thinking, which is integrated into the practices of both employees and management. Workshops and training programs are organized to ensure that employees at all levels understand and actively engage in risk management. These efforts are implemented through collaborative work, such as the Business Development and Engineering departments conducting joint site assessments with local personnel to potential environmental impacts, and the Engineering department working closely with contractors to ensure business operations do not harm the environment.

In addition, the Group has integrated ESG into the recruitment and employee development processes. For example, new hires are required to demonstrate an understanding of ESG principles or have experience in sustainability and ESG risk management training.

2. Strategy and Objective Setting

The Group recognizes the essential role of ESG in shaping business strategies and organizational objectives. It emphasizes

aligning ESG risk management with value creation processes and business models at all stages. The Group utilizes a Double Materiality analysis, considering both financial and impact materiality, to identify and prioritize sustainability issues that significantly affect current and future performance, as well as those that impact society and the environment.

The Group integrates risk management across its processes to align with its strategy, objectives, and acceptable risk levels. This includes evaluating risks that may affect the strategy or alternative strategies, and regularly reviewing sustainability issues to ensure that the risks remain within acceptable thresholds.

3. Performance Results

The Group identifies sustainability-related risks or ESG, as defined by MSCI and GRI, as part of its risk management process to assess potential impacts from a comprehensive perspective. These risks include climate change, natural resources, pollution and waste, labor management, occupational health, stakeholder engagement, corporate governance, and more. The Group utilizes a risk register as a tool to link strategy, objectives, goals, risk impacts, and responsibilities. This enables the evaluation of risk severity and prioritization based on risk assessment criteria, and the selection of appropriate risk response methods for implementation.



The Group prioritizes key strategic risks as follows:

- Risks associated with investment in renewable energy power plants through project development
- Risks from expanding clean energy production capacity
- Risks related to the efficient and sustainable use of resources Additionally, emerging risks include:
 - Risks related to the use of information technology and cyber threats
 - Geopolitical risks
 - Risks from climate change

4. Review and Improvement

The Risk Management Working Group is responsible for coordinating with the relevant departments to review operations, identify, and assess both internal and external changes that may significantly impact business strategy and objectives. This process aims to identify necessary improvements before analyzing and selecting Key Risk Indicators (KRIs) to monitor risks and to use Key Risk Indicators (KRIs) as early warning signals. The findings are then presented to the Risk Management Committee for review and approval.

The Group continuously provides opportunities to improve the efficiency of risk management at all levels and across all processes. This includes reviewing the acceptable level of risk, seeking new technologies to enhance data collection or reduce costs, and comparing the company's operations with others in the same industry, both domestically and internationally, to create opportunities and mitigate risks.

5. Information, Communication, and Reporting

The Group prioritizes the creation of systems, information, communication channels, and the systematic reporting



of ESG-related risks. This approach supports data-driven decision-making and enhances awareness of the impacts, and risks and opportunities among the Board of Directors, executives, investors, and stakeholders, both inside and outside the organization. Examples are described below.

- Internal Communication: Performance results inform a risk register and ESG data platform, providing analysis for joint decision-making by senior management and the Risk Management Committee during meetings.
- External Stakeholders: Risks are disclosed through the Company's website, annual reports, and sustainability development reports, adhering to international standards to ensure transparency in information disclosure.
- Engagement with Communities and Contractors: The Group conducts meetings with communities and contractors to foster understanding of the potential ESG impacts, risks, and opportunities arising from the Group's operations.

Additionally, to maintain flexibility and respond to changes, the Group continues to monitor and improve its information systems to ensure they are of high quality, up-to-date, and aligned with standards and rankings. This is achieved through engaging in activities such as responding to inquiries and participating in initiatives like GRI, TCFD, TNFD, FTSE Russell, and IFC due diligence processes.

As a result of the risk management activities, the Group found that the risk monitoring and assessment did not reveal any significant issues, and the level of risk remains within the organization's acceptable thresholds. The risk report included in this sustainability report provides a general overview of the Group's ESG risk management approach. For more detailed information on the identification, impact analysis, and management of risks by the Group, please refer to the Annual Report for further details.



SERMSANG POWER CORPORATION GROUP AND SUSTAINABILITY

Driving Business Towards Sustainability

Over the past 10 years, the Group has conducted its business with a focus on environmental, social, and governance (ESG) responsibility, while ensuring accountability to stakeholders throughout the entire value chain. This commitment aims to establish a robust foundation for sustainable and long-term growth. The Group is dedicated to actively contributing to and supporting the United Nations' Sustainable Development Goals (SDGs), responding effectively to the needs and expectations of stakeholders.

Furthermore, the Group is committed to continuously improving its processes and operations by leveraging expertise in solar, wind, and biomass energy, along with related technologies, to develop renewable energy projects. The Group aims to create a balance between economic growth and environmental conservation, driven by a strong commitment to promote renewable energy production, greenhouse gas emissions, and support the principles of a circular economy. This dedication enables the Group to play a key role in shaping a sustainable energy landscape and contributing to the achievement of the Sustainable Development Goals (SDGs) across all dimensions. Additionally, the Group supports global sustainability efforts, ensuring a better future for generations to come.

Sustainability Management Policy and Goals

In 2023, the Group established sustainability policies, plans, and strategic objectives that align with its vision to become a leading energy company in Asia. The Group is committed to producing and supplying sustainable energy while actively supporting and promoting a clean environment for the greater benefit of society. These sustainability goals are framed within

the Environmental, Social, and Governance (ESG) framework and have been approved by the Company's Board of Directors to drive business operations towards sustainability, with regular reporting on the progress of this strategy.

In 2024, the Group conducted a risk assessment and a double materiality assessment, integrating both financial materiality and impact materiality perspectives. This analysis identifies and prioritizes sustainability issues that significantly impact the Group's current and future performance, as well as issues affecting society and the environment. As a result, the Group was able to align its strategic objectives with the ESG reporting framework, ensuring consistency with stakeholder expectations and relevant national and international regulatory frameworks. This approach allows the Company to make well-informed decisions, address issues impacting business operations accurately and promptly, and ensure long-term success with positive environmental and social outcomes.

Review of Sustainable Development Approach

Sustainability is a core strategy that the Group integrates alongside its business strategies. Annual plans are developed in various areas that align with both strategies, including sustainability policies that provide guidelines for operations

in Environmental, Social, and Governance (ESG) aspects. These policies serve as a foundation for sustainable business development and investment planning.

In 2024, the Group focused on strengthening its sustainability mission, reviewing the plans initiated in 2023 to define the key sustainability issues impacting its business operations. The focus was on implementing initiatives between 2024 and 2030, while adjusting sustainability strategies to align with global ESG standards and frameworks, and maintaining the sustainability goals approved by the Board, now framed within the ESG guidelines.

The Group has reassessed and analyzed its stakeholder groups across the business value chain, now encompassing 12 groups. Additionally, the Group conducted a Double Materiality analysis, identifying 19 key sustainability issues. This assessment, based on ESG risk management principles, will guide the prioritization of sustainability issues for the coming year. Furthermore, the Group has systematically incorporated sustainability requirements into its governance documents and procedures, aligned with global development standards, to enhance data quality and enable consistent ESG reporting.





GOVERNANCE AND MANAGEMENT OF SUSTAINABILITY

The Group has aligned its sustainability strategy with the ESG framework, addressing all aspects of environmental, social, and governance issues. The Group has implemented sustainability initiatives at the policy level and assigned the Corporate Governance and Sustainability Development Committee to define the direction, policies, strategies, and business frameworks for sustainable operations, covering economic, social, environmental, and governance areas. This is to establish operational standards for the organization, which executives and employees can follow as guidelines. The approach ensures that the organization operates correctly and in line with its objectives, enabling proactive action and adaptation to change circumstances and emerging risks with preparation. Additionally, this approach builds confidence among all stakeholders and relevant parties, both internal and external. For management purposes, a working team has been designated to oversee the organization's sustainability, with the ESG and Corporate Sustainability Division responsible for implementing the established policies and targets, as well as evaluating and reporting progress.

The Group effectively manages sustainability through the Corporate Governance and Sustainability Development Committee, in collaboration with the Risk Management Committee, which oversees and reviews practices, and assigns sustainability and governance policies. A designated working team is assigned to implement these policies and reports directly to the Corporate Governance and Sustainability Development Committee. The Chief Executive Officer (CEO) chairs the sustainability management working team, which includes executives and employees from various business units and departments as members.

The Corporate Sustainability Management Working Team establishes the goals, direction, policies, and strategies for the Group's sustainability efforts. The team oversees operations, manages sustainability risks and opportunities, offers guidance to promote and cultivate a sustainability-driven corporate culture, encourages stakeholder engagement, and develops corporate governance to enhance the Group's overall sustainability. This is aligned with the SDGs, key issues identified through sustainability assessments, and stakeholder expectations. The working team holds regular meetings every quarterly.

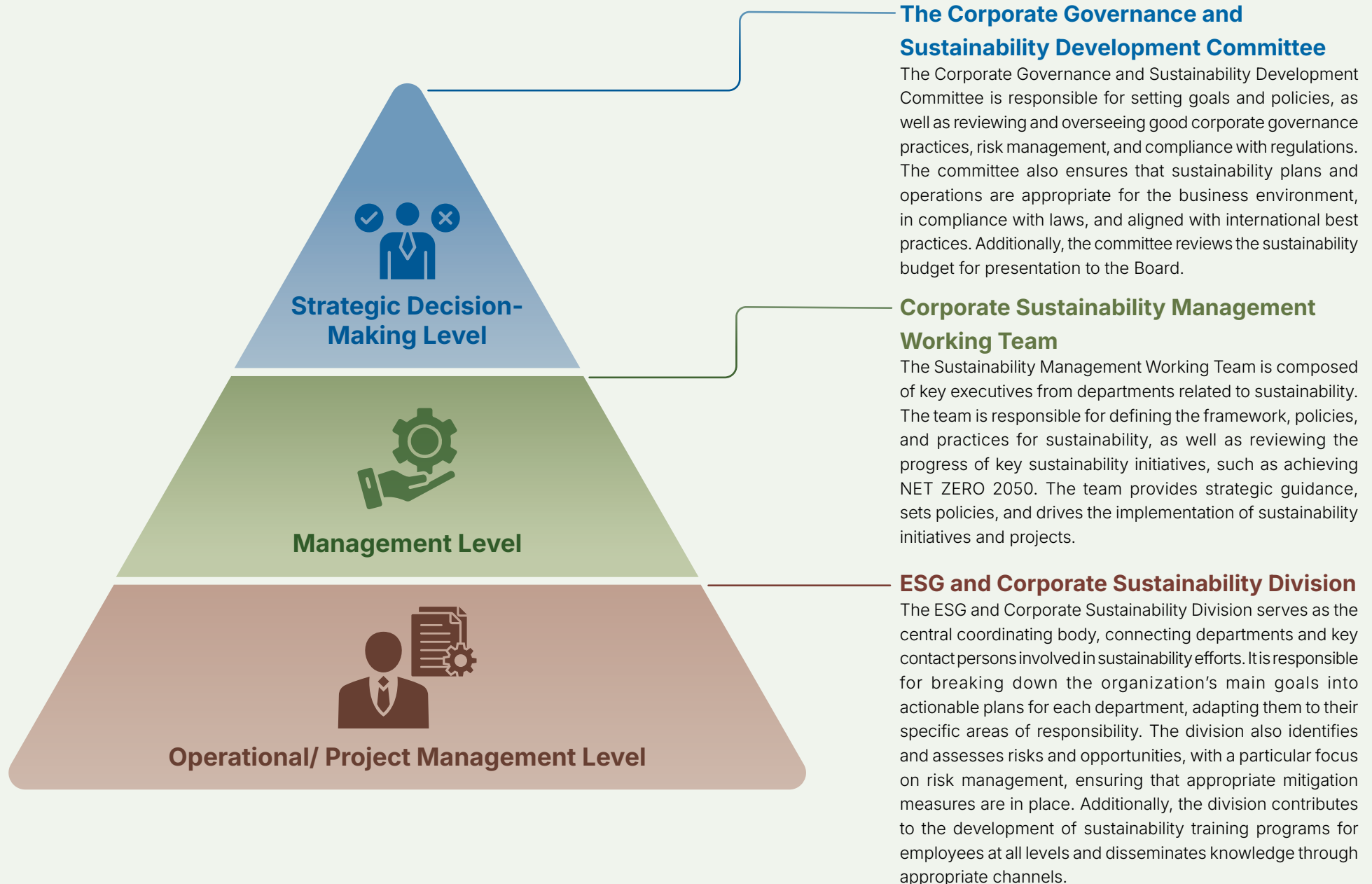
The ESG and Corporate Sustainability Division will act as the central coordinating body to monitor and collect data for evaluating the progress and performance of the policies and goals set by the sustainability management working team. The results will be reported to the Corporate Governance and Sustainability Development Committee at least annually. The Corporate Sustainability Management Working Team has identified a key objective in managing environmental conservation strategies to help the Group achieve its goal of reaching NET ZERO by 2050, which refers to reducing net greenhouse gas emissions to zero. This is a priority issue that the Group places the utmost importance on.

Sustainability Governance and Management Structure



To achieve this goal, the Group adopts a holistic approach to sustainability management by engaging stakeholders at all levels, including employees, communities, business partners, and suppliers. The Group continuously evaluates its processes to ensure alignment with sustainable development principles while fostering a culture of responsibility and innovation.

By adhering to a strong governance framework and prioritizing ethical business practices, the Group is confident that its activities not only meet stakeholder expectations but also create long-term value for all stakeholders. Furthermore, these efforts contribute to building a future that is more environmentally friendly and equitable.





SUSTAINABILITY STRATEGY AND PATH FORWARD

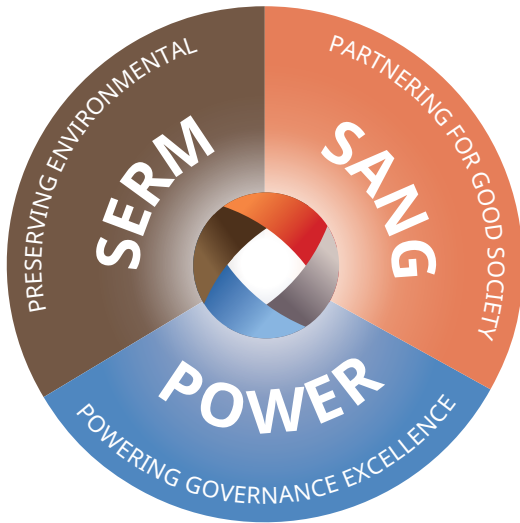
The Group has established a sustainability-driven business approach aligned with its vision of becoming a leading energy company in Asia, committed to producing and supplying sustainable energy while fostering and promoting a cleaner environment for the best interest of society.

This approach is built upon three core strategies aimed at creating sustainable value, supported by the "FAIR" corporate culture that reinforces a strong foundation for sustainability. It comprehensively addresses the Group's material sustainability topics, promotes long-term business growth, and ensures

the delivery of positive value to all stakeholders across the business value chain.

Furthermore, the Group's initiatives contribute to advancing the United Nations Sustainable Development Goals (UN SDGs).





SERM

PRESERVING Environmental: Environmental Conservation Strategy



This strategy reflects the Group's commitment to tackling climate change, promoting resource efficiency, and protecting ecosystems. The Group emphasizes decarbonization and climate resilience through the use of renewable energy technologies such as solar, wind, and biomass, while reducing greenhouse gas emissions across all operations.

The Group also supports waste management initiatives, biodiversity conservation, and protection of natural habitats while mitigating operational impacts. These efforts aim to ensure environmental sustainability and resilience for future generations.

SANG

PARTNERING for Good Society: Inclusive Society Building Strategy



This social strategy is aimed at creating positive social impact by promoting equity, safety, and empowerment. It emphasizes access to reliable and sustainable energy, ensuring energy equity and supporting national energy security.

Customer-centricity lies at the core of operations, focusing on empowering people and increasing customer satisfaction through innovative, sustainable energy solutions tailored to individual needs.

In parallel, the Group invests in human capital development, providing opportunities for learning and skill enhancement, and fostering a safe and healthy working environment to ensure sustainable organizational growth.

POWER

POWERING Governance Excellence: Governance Excellence Strategy



The governance strategy centers on ethical, transparent, and trustworthy business conduct, underpinned by strong governance mechanisms. It aims to position the Group as a leading force in driving sustainability in the energy sector.

Aligned with this commitment, financial sustainability and access to green financing are emphasized to secure renewable energy investment. The Group also prioritizes the advancement in renewable energy technology and innovation through sustained investment in research and development, positioning itself at the forefront of the energy transition.



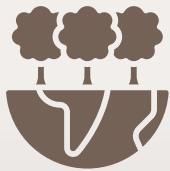
SUSTAINABILITY GOALS

The outcomes of the Group's sustainability goals reflect its commitment to a balanced, forward-looking approach, aligned with its three core strategies. The Group focuses on preserving the environment through responsible

resource management and climate action, partnering for a better society by promoting collaboration, inclusion, and social well-being, and powering governance excellence through transparency, ethical leadership, and innovation.

By integrating these principles throughout its value chain, the Group creates long-term value for stakeholders and actively contributes to building a stronger and more sustainable future.

E



PRESERVING Environmental

- Achieve Net Zero emissions by 2050
- Reduce Scope 1 and 2 absolute GHG emissions by 20% by 2030 (base year: 2024)
- Increase clean energy generation capacity by more than 30% by 2030 (base year: 2023)
- Improve water use efficiency and reduce water consumption by at least 10% by 2030 (base year: 2024)
- Improve electricity use efficiency by at least 10% by 2030 compared to 2024 (measured in MJ/MWh)
- Achieve 80% waste recycling through the 3Rs – Reduce, Reuse, Recycle by 2030

S



PARTNERING for Good Society

- Zero complaints related to human rights violations
- Zero workplace fatalities or lost-time injuries (LTIFR) for employees and contractors
- Achieve employee satisfaction of at least 80% by 2030
- Achieve customer satisfaction of at least 90% by 2030
- Achieve community satisfaction of at least 80% by 2030

G




POWERING Governance Excellence

- Zero complaints related to code of conduct violations
- Zero incidents of corruption or bribery
- Expand business into at least one new country by 2030
- 100% assessment of critical Tier 1 and Non-Tier 1 suppliers by 2024



PERFORMANCE IN ALIGNMENT WITH KEY SUSTAINABILITY STRATEGY OBJECTIVES

Sustainability Strategy	SDGs	Performance			Strategic Operational Targets Long-Term Target
		2022	2023	2024	
Environmental Preservation					
<ul style="list-style-type: none">• Greenhouse Gas Emissions (Unit: Tons of CO₂ Equivalent) ^{/5}<ul style="list-style-type: none">- Scope 1 Net Greenhouse Gas Emissions- Scope 2 Net Greenhouse Gas Emissions- Scope 3 Net Greenhouse Gas Emissions(*Applicable to business operations in Thailand only).		55.50	14.87	4,491.20 ^{/1}	1. Committed to achieving NET ZERO by 2050 2. By 2030, greenhouse gas emissions in Scope 1 and 2 will be reduced by 20% compared to the baseline year of 2024
<ul style="list-style-type: none">• Greenhouse gas emissions per unit of electricity sales (Unit: Tons of CO₂ equivalent per megawatt-hour)		368.61	1,429.46	634.17 ^{/1}	
<ul style="list-style-type: none">• Reduction in greenhouse gas emissions from the sale of renewable energy electricity (Unit: Tons of CO₂ equivalent)		3.21	5,114.92	640	
<ul style="list-style-type: none">• Increase in renewable energy electricity generation capacity<ul style="list-style-type: none">- Solar energy as a percentage of annual electricity generation<ul style="list-style-type: none">- Solar Farm- Solar Rooftop- Wind energy as a percentage of annual electricity generation- Biomass energy as a percentage of annual electricity generation		n/a	325,462 ^{/2}	464,024 ^{/2}	The renewable energy power generation target by 2030 is 712 MW (PPA) or 683 eMW
		0.0019	0.0025	0.0099	
		61%	61%	53%	
		16%	16%	15%	
		21%	20%	29%	
		3%	3%	3%	



Sustainability Strategy	SDGs	Performance			Strategic Operational Targets Long-Term Target
		2022	2023	2024	
Environmental Preservation					
<ul style="list-style-type: none">• Reduce water resource consumption<ul style="list-style-type: none">- Volume of water usage from various sources, including surface water, groundwater, and tap water, etc.- Water usage rate per electricity sales volume (Unit: Cubic meters per megawatt-hour)• Increase energy efficiency (Unit: Megajoules per megawatt-hour)• Increase the recycling rate through reuse and recycling processes of total waste volume		n/a	4,410	318,411.74 ^{/4}	At least 10% by 2030, compared to the year 2023
		n/a	0.008	0.47	
			0.007	0.015	0.015
		n/a	n/a	97.26%	At least 80% by 2030
Partnering for Good Society					
• Human rights violation complaints		0	0	0	0
• Numbers of workplace accidents		0	0	0	0
• Employee satisfaction		n/a	84%	84.3%	At least 80% by 2030
• Customer satisfaction		n/a	88%	95%	At least 90% by 2030



Sustainability Strategy	SDGs	Performance			Strategic Operational Targets Long-Term Target
		2022	2023	2024	
Powering Governance Excellence					
• Complaints regarding ethical violations		0	0	0	0
• Complaints regarding fraud and corruption		0	0	0	0
• Expand business into new countries		n/a	n/a	2 Countries ^{/3}	1 country by 2030
• Evaluate Critical Tier 1 suppliers		n/a	100%	100%	100%

Note :

/1 Greenhouse gas emissions data for domestic operations and the headquarters. The disclosure has been audited for source, recording methods, and calculations by the ISO certification institute, the Industry Development Foundation, and the Ministry of Industry's network institute (MASCI).

/2 Based on the greenhouse gas emission factors for electricity generation from renewable energy (Emission Factor), announced on September 27, 2023, by the Carbon Credit Certification Office, the Greenhouse Gas Management Organization (Public Organization). The increase in emissions each year is due to the Group's expanded reporting scope, including additional subsidiaries.

/3 The Group has expanded its business into two new countries: the Philippines and Taiwan. Power plant projects in both countries are under construction and have not yet started commercial operations (Commercial Operation Date).

/4 The Group will review and consider adjusting its targets in line with the corporate strategy in 2025, as several goals have already been achieved. This will be presented to the Corporate Governance and Sustainable Development Committee for consideration.

/5 Greenhouse gas emissions changed significantly in 2024 due to the inclusion of biomass combustion data from the UPT project and the addition of the Winchai project in the report.



Key Organizational Goals

Initial goals achieved:

Increased wind power generation by 136,327 MWh

Achieved an 87.47% reduction in Scope 3 greenhouse gas (GHG) emissions (compared to 2023 through reduced landfill disposal)

Attained a 97% waste recycling rate based on total waste volume

Priority actions required:

Reduce absolute Scope 1 and Scope 2 GHG emissions by 30% (compared to base year 2024)

Increase clean electricity generation capacity by more than 30%

Improve water use efficiency and reduce water resource consumption by at least 10% (compared to base year 2024)



The Group's long-term commitment:
Achieve Net Zero greenhouse gas emissions across the entire value chain

Innovation required to achieve targets:

Reduce absolute Scope 1 and Scope 2 GHG emissions by 50% (compared to base year 2024)

Strengthen efforts to reduce Scope 3 GHG emissions, with a focus on collaboration with offices and stakeholders

Expand development of electricity generation using innovative technologies and new energy solutions

04

ENVIRONMENTAL SUSTAINABILITY





ENVIRONMENTAL SUSTAINABILITY

The Group operates under a governance framework and adheres to the principles of good corporate governance, aiming to serve as a model for sustainable business, stable growth, and public trust. It places strong emphasis on environmental quality and biodiversity management in compliance with relevant laws, while continuing to invest in and improve environmental practices and promote efficient, appropriate resource use.

The Group implements environmental and biodiversity policies to ensure safety and minimize impacts across all operations. The Plant Manager of Uni Powertech (UPT) oversees environmental performance, coordinates with other facility managers, and reports key results to the Corporate Sustainability Management Working Group.

To support this, the following operational guidelines have been established:

- Conduct joint area surveys with local communities to evaluate potential environmental impacts and prepare Initial Environmental Examination (IEE) reports prior to project construction.
- Develop clear and collaborative operational plans with relevant agencies to mitigate both direct and indirect impacts on the environment and local communities.
- Setting standards for hazardous waste disposal, including expired or damaged solar panels and equipment, through compliant facilities and methods.
- Implement systematic environmental management practices, including regular assessments and performance reviews for continuous improvement.

- Promote environmental awareness and conservation among stakeholders to tackle climate change and extreme weather.

The Group recognizes the significance of evolving energy use and has positioned itself as a pioneer in Thailand's renewable energy sector. It is committed to producing and supplying sustainable energy, promoting efficient resource use, and driving long-term sustainable development. The Group aims to become a leading renewable energy producer and supplier in Asia.

The scope of the sustainability performance report for 2024 in the environmental dimension, which includes energy, greenhouse gas emissions, water resource management, and waste management, covers both domestic and international subsidiaries, as detailed below.

Domestic Group of Companies	International Group of Companies	
Solar Power Plant Projects		
Sermasang Palang Ngan Co., Ltd. (SPN)	Surge Energy Corporation Limited (SEG) *	
Sermasang Solar Co., Ltd. (SS)	Tenunn Gerel Construction LLC (TGC)	
	Truong Thanh Quang Ngai Power and High Technology Joint Stock Company (TTQN)	
Solar Rooftop Power Plant Projects		
Sermasang Infinite Co., Ltd. (SN)	PT Sea Sun Energy (SSE)	
Biomass Power Plant Projects		
Uni Power Tech Company Limited (UPT)		
Wind Power Plant Projects		
Winchai Co., Ltd. (WINCHAI)	Truong Thanh Tra Vinh Wind Power Joint Stock Company (TTTTV)	

Note: *SEG serves as the Group's investment vehicle for power generation projects in Japan.



CLIMATE CHANGE MITIGATION AND RESILIENCE



The significance of climate change mitigation and resilience for the Group is directly linked to the efficiency, stability, and sustainability of its renewable energy operations. As a company focusing on solar, wind, and biomass energy, the Group must manage both transition risks and physical risks. Effectively addressing climate-related risks will enhance business resilience, ensure compliance with regulations, and build stakeholder confidence. The Group recognizes that climate change is not only an environmental and societal challenge but also an urgent business priority. With a strong commitment to sustainable business practices, the Group integrates climate change considerations into its core operations, aligning with global efforts to reduce impacts and transition to a low-carbon future.

The Group's Goal: The Group's approach to climate change mitigation focuses on enhancing climate resilience and striving toward achieving Net-Zero Emissions throughout the entire value chain. This will be accomplished through the following strategies:

1) Enhancing Climate Adaptation Capacity

- Developing infrastructure and risk mitigation strategies to effectively address extreme weather events and long-term climate impacts.

2) Aligning Strategies with Global Climate Goals

- Adopting frameworks such as Science-Based Targets

initiative (SBTi), Task Force on Climate-related Financial Disclosures (TCFD), and Net-Zero Commitments to ensure compliance with regulatory frameworks and meet stakeholder expectations.

3) Fostering Collaboration with Stakeholders

- Partnering with governments, industries, partners, suppliers, and local communities to accelerate the transition to a low-carbon economy and contribute to international climate efforts.

The Group's operational approach focuses on two key areas: managing Transition Risk by adapting to evolving policies, technologies, and market dynamics, and managing Physical Risk through robust infrastructure and environmental strategies under the theme of "Preserving the Environment" to mitigate the impacts of extreme weather events and shifting climate patterns. The Group prioritizes innovation and fosters collaboration with partners, stakeholders, and relevant parties to drive positive change. By delivering renewable energy solutions, the Group is committed to creating a sustainable future for all, through continuous strategic planning and development, with a focus on making a meaningful impact and contributing to the global shift toward sustainability.

Risk Assessment of Climate Change Impact on Business Operations and Risk Mitigation Approaches/ Measures

The Group conducts a comprehensive assessment of climate change risks that may impact business operations by identifying and evaluating both Transition Risks and Physical

Risks. This assessment process is aligned with global climate frameworks such as the Nationally Determined Contributions (NDCs) and the 2°C Scenario (2DS) of the International Energy Agency (IEA), in order to strengthen strategic resilience in addressing climate-related threats.

The key elements of this process involve clearly defining roles and responsibilities within the climate governance structure. The Board of Directors holds ultimate responsibility for overseeing the management of climate-related risks and opportunities, ensuring that these issues are appropriately integrated into the organization's strategic decision-making processes. The Board regularly reviews climate risk reports and sets long-term objectives to support the Group's sustainability mission.

To support the oversight role of the Board of Directors, the Group has established a Risk Management Committee (RMC) comprising senior executives. The committee is responsible for monitoring, evaluating, and managing climate-related risks. This includes evaluating the potential impacts of policy and regulatory changes, market dynamics, technological advancements, and both acute and chronic physical risks affecting the Group's value chain. The RMC integrates these climate-related risks into the Group's Enterprise Risk Management (ERM) framework and submits regular reports to the Board of Directors to ensure that risk responses are aligned with the Group's sustainability goals and climate strategy.





Additionally, senior executives in key departments such as Business Development, Operations, Procurement, and Sustainability play a crucial role in implementing climate risk mitigation strategies and identifying new opportunities related to the energy transition. Each department plays an important role in driving the Group's adaptation strategy, including

investments in climate-resilient infrastructure, low-carbon technologies, and renewable energy innovation.

This integrated approach ensures that climate-related risks and opportunities are not only identified but also effectively managed through leadership accountability, cross-functional

collaboration, and alignment with the Group's long-term sustainability goals. The integration of climate governance at both the Board and Executive levels underscores the Group's commitment to building climate resilience and contributing to the transition toward a sustainable low-carbon future.





Risk Type	Potential Impact	Likelihood	Business Impact	Risk Mitigation Approach/ Measure
Transition Risk				
Policy and Regulatory Risks: Carbon pricing (Carbon Tax) and stricter enforcement of renewable energy standards.	<ul style="list-style-type: none"> The increase in carbon tax raises operational costs. Increased costs for environmental impact assessments and mitigation measures. 	High	High	<ul style="list-style-type: none"> Assess compliance with current renewable energy regulations. Develop climate management plans and strategies focused on improving energy efficiency and accelerating the transition to carbon-neutral technologies. Support the establishment of fair carbon pricing through industry associations.
Market Risks: Fluctuations in consumer demand for renewable energy and increased competition from innovations by competitors.	<ul style="list-style-type: none"> A decrease in biomass demand. Profit pressure due to reduced costs of new technologies, leading to lower market prices. Consumers choosing carbon-neutral or highly sustainable energy options. 	Moderate	Moderate	<ul style="list-style-type: none"> Collaborate with the Group's global partners strategically to stay ahead in the competition. Monitor innovations from competitors and market trends. Develop low-carbon products and Carbon Capture and Storage (CCS) technologies. Engage with key stakeholders, including investors, regulators, and customers, to understand the evolving sustainability trends.
Technology Risks: Rapid technological changes lead to outdated infrastructure and high costs for adaptation or technology upgrades, including cybersecurity and digital risks in smart energy systems.	<ul style="list-style-type: none"> Existing products may become outdated when more efficient and cost-effective technologies emerge. High costs for adapting or upgrading current technologies. Smart grid systems and energy management systems may be vulnerable to cyberattacks, causing operational disruptions. 	Low	Moderate	<ul style="list-style-type: none"> Develop a technology roadmap to track trends and plan for the adoption of new technologies. Invest in systems that are modular and upgradable to reduce the need for complete replacements. Establish financial partnerships with financial institutions to secure funding, such as green bonds, government subsidies, or sustainability funds. Conduct a cyber risk assessment and provide cybersecurity training for employees.



Risk Type	Potential Impact	Likelihood	Business Impact	Risk Mitigation Approach/ Measure
Transition Risk				
<p>Reputation Risks:</p> <p>Pressure from investors and stakeholders to disclose climate-related information and address climate issues across the entire supply chain or with business partners that require effective collaboration.</p>	<ul style="list-style-type: none">• Legal and reputation risks if the information reported is inaccurate or does not comply with regulations.• May face scrutiny from regulatory authorities and pressure to enhance transparency in material sourcing and uphold responsible practices.	Low	High	<ul style="list-style-type: none">• Strengthen ESG communication to build trust with stakeholders.• Disclose ESG information transparently and subject to independent verification.• Develop a clear action plan with specific goals and performance indicators to demonstrate progress in green house gas reduction and promote sustainability.• Clearly communicate goals and plans for Net-Zero through public disclosures, collaborations, and sustainability initiatives.• Implement ESG risk assessment measures in the supply chain to ensure that partners and business allies adhere to sustainability standards.





Risk Type	Potential Impact	Likelihood	Business Impact	Risk Mitigation Approach/ Measure
Physical Risks				
Acute Risks				
Local storms and typhoons	<ul style="list-style-type: none"> The infrastructure of solar power plants, wind power plant, and biomass power plants may suffer severe damage. Operations may be disrupted, leading to increased maintenance costs. The supply chain could be impacted due to damaged infrastructure and logistics. 	High	Moderate	<ul style="list-style-type: none"> Design and construct power stations to withstand strong winds by using structures resistant to the most severe local storms or hurricane levels. Implement early warning systems and emergency plans to prepare for storms. Diversify sourcing locations and logistics routes to mitigate the impacts of storms.
Intense heatwaves	<ul style="list-style-type: none"> The efficiency of solar panels decreases due to excessive heat, leading to reduced power generation. Increased costs for cooling systems in power plants. Increased risk of fire incidents in biomass power plants. 	Low	Moderate	<ul style="list-style-type: none"> Install advanced cooling systems in solar farms power plant to maintain production efficiency. Use heat-resistant materials for solar panels and equipment. Implement automatic fire detection systems and fire prevention measures in biomass power plants.
Heavy rainfall and flooding	<ul style="list-style-type: none"> Equipment and machinery may become submerged, causing damage to the electrical system and halting power production. Soil erosion and damage to infrastructure of wind and solar farms power plants. Increased maintenance and infrastructure restoration costs. Impact on employee health and safety during operations. 	Moderate	Low	<ul style="list-style-type: none"> Elevate the infrastructure of renewable energy power plants located in flood-prone areas. Install advanced drainage systems and flood barriers at power plant locations. Use flood-resistant electrical systems to minimize damage from water accumulation. Prepare flood barriers with sandbags and mobile pumps to reduce water levels in case of flooding.



Risk Type	Potential Impact	Likelihood	Business Impact	Risk Mitigation Approach/ Measure
Physical Risks				
Acute Risks				
Severe drought	<ul style="list-style-type: none"> The amount of water used for cooling systems in biomass power plants and solar power plants decreases. Potential conflicts with local communities regarding water resource allocation. 	Moderate	Low	<ul style="list-style-type: none"> Invest in low-water-use cooling technologies, such as air-cooled systems. Implement rainwater harvesting and water recycling systems to reduce dependency on external water sources. Develop emergency plans for alternative water supply in case of severe drought. Explore options for sourcing alternative water sources, including studying new water production technologies.
Wildfires	<ul style="list-style-type: none"> Solar farms and wind power plant located in high-risk areas may be destroyed by wildfires. Smoke from wildfires may reduce the efficiency of solar panels. Safety risks for employees and surrounding communities. 	Low	High	<ul style="list-style-type: none"> Create buffer zones by clearing areas around power plants of easily combustible materials. Use fire-resistant materials for constructing power stations and equipment. Install wildfire detection systems and emergency plans for wildfire response.
Chronic Risks				
Rising Global Temperatures	<ul style="list-style-type: none"> Efficiency of solar panels decreases due to high heat, resulting in lower energy production. Cooling costs for energy storage systems and electrical equipment increase. Risk of excessive heat and equipment damage in solar farms power plant and electrical grids. 	High	Moderate	<ul style="list-style-type: none"> Collaborate with business partners and suppliers to research solar panel systems that are heat-resistant and have improved efficiency at high temperatures. Implement advanced cooling systems for energy storage equipment and electrical infrastructure, as currently used in the Biomass Project in Nakhon Ratchasima province. Adjust the installation angle of solar panels to suit hot weather conditions to reduce the impact of heat.



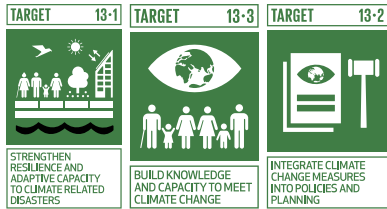
Risk Type	Potential Impact	Likelihood	Business Impact	Risk Mitigation Approach/ Measure
Physical Risks				
Chronic Risks				
Changes in Wind Pattern	<ul style="list-style-type: none"> Reduced wind speeds in certain areas may impact the efficiency of wind turbines. Variable wind conditions may affect the stability of wind energy production systems and energy forecasting. Increased maintenance costs due to the wear and tear of wind turbines caused by irregular winds. 	Moderate	High	<ul style="list-style-type: none"> Conduct long-term wind pattern assessments to plan the optimal placement of wind turbines for maximum efficiency. Invest in adjustable-blade wind turbine technology and higher turbines to enhance electricity generation potential. Use AI and wind energy forecasting systems to manage energy production efficiently.

CLIMATE-RELATED RISKS ACROSS THE ENTIRE BUSINESS VALUE CHAIN

Business Value Chain	Transition Risks			Physical Risks			Index
	Policy/ Regulatory Risks	Market Risks	Technology Risks	Reputation Risks	Acute Risks	Chronic Risks	
Business Development & Energy Innovation	3	1	3	3	1	1	 - 3.00 - 2.75 - 2.50 - 2.25 - 2.00 - 1.75 - 1.50 - 1.25 - 1.00
Sustainable Energy Resource Acquisition	3	2	3	3	3	3	
Renewable Energy Generation & Optimization	1	3	2	1	2	2	
Green Market Engagement & Sales	2	2	1	1	2	2	
Low-Carbon Distribution & Grid Integration	1	1	1	3	3	3	
Sustainable Customer Solutions & Support	2	3	2	2	3	2	
Energy Recycling & Circular Grid Solutions	3	3	1	3	1	3	



CARBON AND EMISSION REDUCTION (GHG REDUCTION ISSUE)



The significance of greenhouse gas emissions reduction: The Group regards greenhouse gas emissions reduction as central to sustainable business operations and future competitiveness. As a company focused on renewable energy, the Group demonstrates environmental responsibility by not only producing clean energy but also operating under approaches that effectively mitigate climate impacts. The reduction of greenhouse gas emissions aligns with international objectives and the Net Zero goals, enabling the Group to comply with increasingly stringent global environmental regulations. Additionally, carbon reduction helps mitigate risks associated with Carbon Taxes and greenhouse gas emission regulations that could affect future business cost structures. A clear greenhouse gas emissions reduction plan, therefore, provides risk mitigation and long-term financial stability.

Moreover, investors and financial institutions prioritize companies committed to greenhouse gas reduction policies and ESG goals, making carbon reduction crucial for accessing green financing sources, such as Green Bonds and Sustainability-Linked Loans, which offer lower interest rates and favorable terms for company growth. Being a low-carbon enterprise enhances investor confidence and international business expansion opportunities. Above all, reducing greenhouse gas emissions strengthens consumer and community confidence, as society increasingly expects

businesses to actively address severe climate change issues. The Group's commitment to environmental responsibility will gain recognition and competitive advantage.

The Group's Goal: The Group is committed to supporting global climate goals through clear greenhouse gas emissions reduction targets, strengthening corporate strategies, and efficiently managing emissions reduction processes through the following approaches:

- 1. Achieve Carbon Neutrality by 2030** – Reduce and offset greenhouse gas emissions by expanding renewable energy, adopting carbon capture technology, and improving energy efficiency.
- 2. Achieve Net Zero Emissions by 2050** – Transition to 100% clean energy, integrate advanced carbon absorption technology, and reduce carbon emissions throughout the supply chain.
- 3. Reduce operational greenhouse gas emissions (Scope 1 & 2) by 50% by 2035** – Decrease emissions from production processes and energy use through renewable energy, smart electricity systems, and energy-saving technologies.
- 4. Reduce indirect greenhouse gas emissions (Scope 3) by 30% by 2040** – Collaborate with suppliers, partners, and customers to reduce carbon footprints in supply chains, materials, and distribution systems.
- 5. Reduce carbon emissions from biomass power plants by 50% by 2035** – Utilize highly efficient biomass combustion technology and carbon capture systems to lower biomass-related emissions.

Operational Approaches: To achieve Net Zero Emissions by 2050 and Carbon Neutrality by 2030, the Group adopts a comprehensive strategy, including renewable

energy expansion, energy efficiency enhancement, carbon offsetting projects, and sustainable operational practices. Key approaches include:

- 1. Reduce operational greenhouse gas emissions (Scope 1 & 2) by 50% by 2035** – Improve energy efficiency by upgrading to high-efficiency machinery, utilizing Carbon Capture and Storage (CCS) technology, studying carbon sequestration in soil, and atmospheric carbon absorption.
- 2. Reduce emissions from supply and value chains (Scope 3) by 30% by 2040** – Collaborate with suppliers and partners to reduce greenhouse gas emissions by encouraging sustainable material usage, low-carbon transportation, renewable energy, optimizing low-carbon transport systems through electric vehicles, hydrogen, biofuels, and applying circular economy principles by recycling solar panels, wind turbine blades, and biomass materials to reduce emissions from materials and waste.
- 3. Reduce greenhouse gas emissions intensity per production volume by 40% by 2035** – Enhance power plant efficiency to increase energy production while emitting fewer greenhouse gases and employ heat recovery technologies, using excess heat from biomass power plants to reduce fuel usage.
- 4. Increase transparency, compliance with standards, and access to green financing** – Adhere to international climate standards including Science-Based Targets (SBTi), TCFD, ISO 14064 (GHG emissions calculations), and transparently disclose information through clear, verifiable GHG and ESG performance reports to build investor confidence.



2024 Performance Results:

Key Outcomes:



Increase of renewable energy
usage compared to 2023

3.09%
totaling
8,645,362
Megawatt-hour



Studied development and
application of

1
technology project
with external agencies



Increase the reduction of
Scope 3 greenhouse gas
emissions compared to 2023

↓ 87.47%
Total Scope 3 greenhouse
gas emissions amounted to
641 tons
of carbon dioxide equivalent



Energy usage in production
processes reduced by

↓ 3.02%
due to renewable electricity
used in projects

(Unit: metric tons of carbon dioxide equivalent (tCO₂e))

Greenhouse gas emissions	HO	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV	Total year 2024
Direct Greenhouse Gas Emissions of the Organization – Scope 1												
Stationary Combustion	0	0	0	2.52	4,449.21	0	0	n/a	0.47	0	n/a	4,452.20
Mobile Combustion	0	0	0	13.02	1.16	0	0	19.18	2.19	0	n/a	35.56
Fugitive (Leakages and Others) • Fire suppressant CO ₂ • Methane emission from septic tank	3.46	5.10	0.93	9.70	5.19	0.93	0	n/a	n/a	0	n/a	25.31
Scope 1 Greenhouse Gas Emissions- Thailand	4,491											
Scope 1 Greenhouse Gas Emissions- Overseas	22											
Total Scope 1 Greenhouse Gas Emissions	4,513 – Compared to 2023, the amount increased due to recalculation verification and the inclusion of biomass fuel reporting under Scope 1.											
Indirect Greenhouse Gas Emissions from Energy Consumption – Scope 2												
Electricity Consumption	10.58	305.50	10.41	0	63.60	244.10	311.96	0	469.43	0	352.47	1,768.04
Scope 2 Greenhouse Gas Emissions - Thailand	634											
Scope 2 Greenhouse Gas Emissions - Overseas	1,134											
Total Scope 2 Greenhouse Gas Emissions	1,768 – Compared to 2023, the amount increased due to recalculation verification and the additional reporting of the wind power generation project, Winchai Project.											

(Unit: metric tons of carbon dioxide equivalent (tCO₂e))

Greenhouse gas emissions	HO	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV	Total year 2024
Other Indirect Greenhouse Gas Emissions – Scope 3												
Energy and fuel consumption by subcontractors for electricity production and maintenance activities	0	35.60	0	0	458.82	0.27	n/a	n/a	n/a	n/a	n/a	494.69
Business air travel	76.54	0	0	0	0	0	n/a	n/a	n/a	n/a	n/a	76.54
Employee commuting using private vehicles	n/a	5.83	4.83	0	4.27	7.22	n/a	n/a	n/a	n/a	n/a	22.15
Municipal water consumption	n/a	0.56	0	0	46.30	0.18	0	0	0	0	0.41	47.45
Paper consumption	n/a	n/a	0.01	0	0.21	n/a	n/a	n/a	n/a	n/a	n/a	0.22
Scope 3 Greenhouse Gas Emissions - Thailand	640.64											
Scope 3 Greenhouse Gas Emissions - Overseas	0.41											
Total Scope 3 Greenhouse Gas Emissions	641.05 – Compared to 2023, the amount decreased due to the UPT Project implementing a program to eliminate the landfilling of biomass ash, which was a significantly large portion of the Group's emissions.											
Total Revenue (million baht)	3,508.06											
Ratio of Greenhouse Gas Emissions Scope 1 & 2 per Unit of Electricity Generation (Unit: tCO₂e per megawatt-hour)	0.0093											
Ratio of Direct and Indirect Greenhouse Gas Emissions (Scope 1 and Scope 2) per Total Revenue of the Group (tCO₂e per million baht)	1.8											

Note: - Biogenic CO₂ emissions from biomass power plants were separately reported at 262,269.30 tCO₂e
- n/a Data is not available.



Project: Excess Heat Recovery (Biomass Power Plant, Nakhon Ratchasima)

Excess heat recovery is key to enhancing energy efficiency by capturing heat that would otherwise be lost during various processes and reusing it beneficially through heat exchange technology. This process reduces primary energy consumption, lowers greenhouse gas emissions, and minimizes environmental impacts.

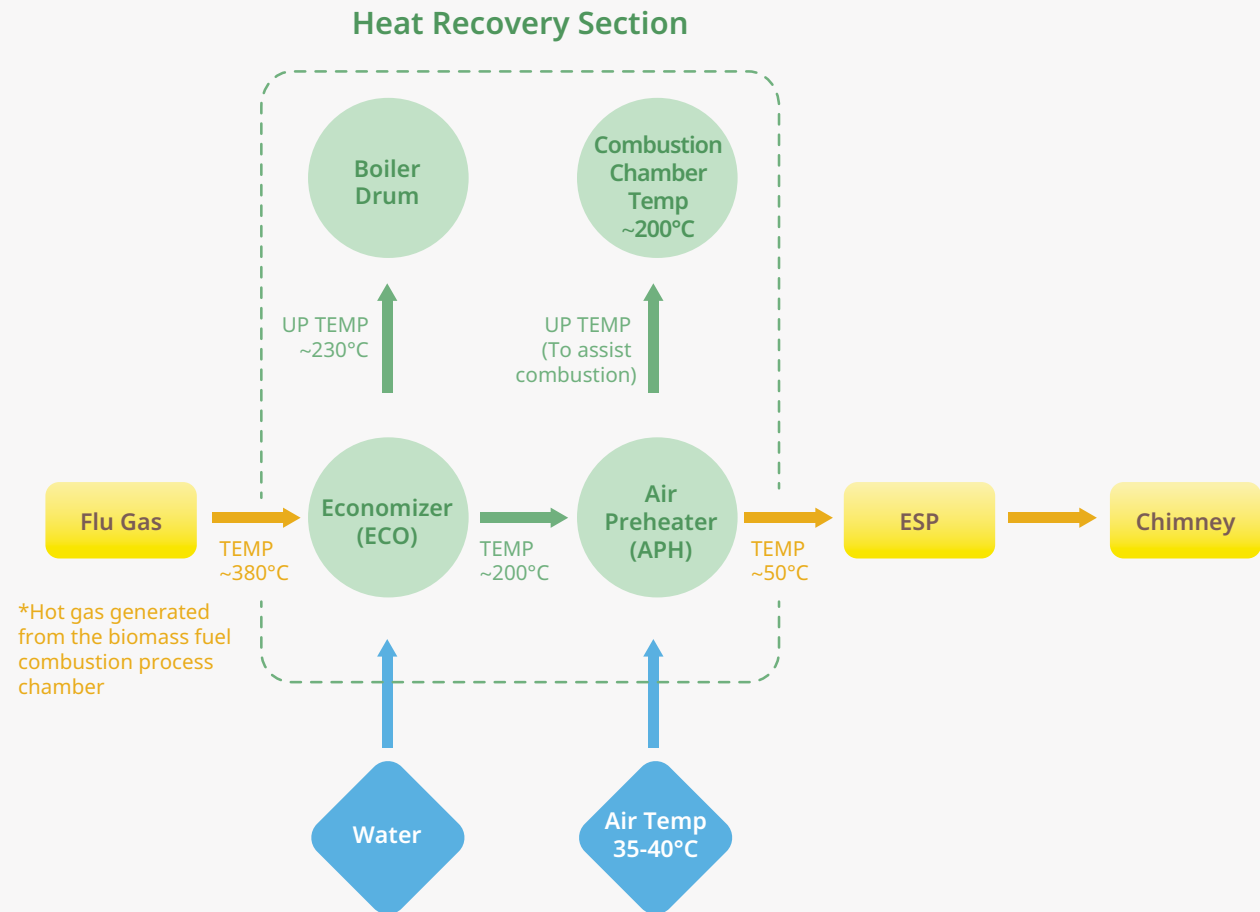
Heat exchangers play a vital role by transferring captured heat from the source to mediums requiring thermal energy, such as air. Recovered heat can be utilized for air preheating, steam production, or central heating systems, effectively integrating energy conservation with sustainable cost reduction. Through this initiative, the Group strengthens operational sustainability while supporting broader climate action efforts.

Project Objectives: To enhance energy efficiency and reduce fuel usage for biomass electricity generation.

Benefits:

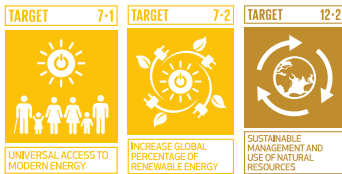
- **Reduced Fuel Consumption:** The efficiency of the heat recovery system is estimated at approximately 5–15%, enabling a reduction in fuel usage by about 10%.
- **Decreased Air Pollution:** Decreased fuel combustion reduces the likelihood of air pollution and lowers greenhouse gas emissions associated with fuel burning.
- **Economic Value:** Reduced fuel consumption leads to significant cost savings.
- **Reduced Environmental Impact:** Supports the Group's sustainability through efficient energy use and lower GHG emissions.

Process Flowchart





ENVIRONMENTAL MANAGEMENT, RESOURCE EFFICIENCY, AND SUSTAINABLE USE



Energy Management

The significance of efficient and sustainable resource use in energy management: Improving energy efficiency is a key factor in ensuring the sustainability, cost-effectiveness, and long-term competitiveness of operations involving solar, wind, and biomass energy. Enhancing energy use efficiency reduces energy losses, lowers greenhouse gas emissions, and maximizes resource utilization—demonstrating the Group's commitment to sustainable business practices. This is especially vital for biomass energy, as energy efficiency plays a critical role in the fuel conversion, combustion, and energy transformation processes. Optimizing these processes reduces energy waste and increases production capacity, helping to reduce dependence on external energy sources, lower production costs, and improve profitability.

From a financial perspective, advancing energy efficiency enables the Group to align with green financing requirements and ESG standards, thereby improving access to low-cost financing and strengthening investor confidence. Additionally, efficient energy use enhances the Group's resilience to climate change by reducing overall energy demand and supporting the transition toward more environmentally friendly energy consumption in the long term.

The Group's Goal: Enhance energy efficiency across the Group's operations by optimizing energy use, increasing clean energy production, and reducing greenhouse gas emissions to support sustainability and long-term cost reduction through the following approaches:

- 1. Increase clean energy generation capacity by over 30% by 2030** – to meet growing renewable energy demand and strengthen the Group's role in the low-carbon economy.
- 2. Reduce greenhouse gas emissions by 30% by 2030** – through energy efficiency improvements, biomass production process optimization, and increased use of solar and wind energy.
- 3. Improve electricity use efficiency in production processes by at least 10% per unit by 2030** – through adoption of energy-saving technologies and process enhancements.
- 4. Reduce the Group's electricity consumption by 10% by 2030** – by implementing energy management measures and promoting conservation awareness among employees.

Operational Approaches: To achieve energy efficiency targets and expand renewable energy use, the Group applies strategic measures focused on improving energy efficiency, integrating renewable energy, and optimizing operations. Key approaches include:

- 1. Increase clean energy generation capacity by over 30% by 2030**
 - Invest in new renewable energy projects: Expand solar, wind, and biomass capacity through project development and technology upgrades.

- Enhance existing asset efficiency: Upgrade solar, wind, and biomass power plants for maximum energy output.
 - Apply smart grid technology: Improve grid systems to reduce transmission losses and enhance delivery efficiency.
- 2. Reduce greenhouse gas emissions by 30% by 2030**
 - Expand use of low-carbon energy: Increase reliance on solar and wind energy and enhance biomass combustion efficiency.
 - Implement carbon capture and offset measures: Develop biomass ash for carbon trading and credit programs.
- 3. Improve electricity use efficiency in production processes by at least 10% per unit by 2030**
 - Use energy-efficient machinery and equipment: Upgrade wind turbines, inverters, and biomass boilers to high-efficiency models.
 - Optimize production processes: Utilize AI systems and energy management tools to monitor and manage energy use.
- 4. Reduce the Group's electricity consumption by 10% by 2030**
 - Promote energy-saving culture: Raise awareness and motivate employees to participate in conservation initiatives.
 - Conduct campaigns and outreach: Projects such as "Powering a Greener Workplace" and the "4P" campaign (Switch Off, Adjust, Unplug, Change) encourage resource-saving behaviors.



2024 Performance Results

Energy Type	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV	Total 2024
	Solar Farm	Solar Farm	Solar Rooftop	Biomass	Wind Farm	Solar Farm	Solar Farm	Solar Farm	Solar Rooftop	Wind Farm	
Fuel and Energy Consumption within the Organization (Unit: Megajoules)											
• Non-renewable energy	2,199,960	74,952	181,235	473,353	1,757,905	2,382,120	254,940	1,865,809	0	1,373,389	10,563,663
• Renewable energy	0	465,624	0	146,447,166	0	0	1,426,320	0	0	0	148,339,110
Electricity Consumption (Unit: MWh - Megawatt-hours)											
• Purchased electricity	611.10	20.82	0	127.20	488.31	611.70	0	508.09	0	381.50	2,799
• Renewable electricity generated	69,829	7,602	11,808	74,767	136,327	80,110	26,852	64,926	39,805	162,572	674,597
Energy Consumption Rate per Unit of Production											
• Energy use per unit of production	0.009	0.003	0	0.002	0.004	0.008	0	0.008	0	0.002	0.04
• Avoided Emissions for Allocation and Impact Report (tCO ₂ e)	36,667	3,992	6,200	39,260	71,586	37,768	23,738	59,985	34,630	150,200	464,025





1. Electricity Reduction Initiatives

The “Powering a Greener Workplace” campaign, now in its second year, is based on the 4P concept (Switch Off, Adjust, Unplug, Change). It reduced headquarters electricity use per employee by 6.98% compared to 2023.



Switch off lights when unnecessary



Turn off air conditioning for one hour during lunch



Turn off water taps after use



Adjust air conditioning to 26°C



Unplug devices when not in use



Change from paper to digital files



2. Group Energy Efficiency Program: “Empower to Preserve: Smart Grid & Green Operations for Energy Reduction” Project Objectives:

- Reduce overall energy use across Group operations, covering production (clean energy generation and efficiency improvements) and distribution (low-carbon distribution and grid integration).
- Improve operational efficiency using smart technologies and data analytics.
- Support the Group's ESG goals under the “Preserving” framework within the environmental dimension, reinforcing its commitment to resource conservation and the achievement of net-zero emissions.

Project Implementation:

1. Install smart grid technologies to enhance energy management, reduce transmission losses, and improve load management, with 5% integration efficiency gains and a target of 10% within 3 years.
2. Apply AI-based energy management systems, real-time sensors, and predictive maintenance tools to improve energy use in solar and wind power plants.
3. Upgrade inverters and optimize wind turbine efficiency through advanced data analytics; reduce standby energy use during low-demand periods by enhancing energy conversion and minimizing operational energy consumption.
4. Implement circular energy recovery systems by reusing heat from production and excess biomass energy to reduce external energy dependence and promote circular economy practices, saving an estimated 5–15% energy.



5. Promotes employee engagement and training by conducting workshops on energy conservation, efficient energy use, and sustainability leadership. These initiatives aim to foster a conservation-minded culture across the organization and encourage employees to adopt energy-efficient behaviors.

Various initiatives have been established to align with the Group's strategic framework:

Serm (Preserving):

Focus on conserving energy resources for future generations.

Sang (Partnering):

Co-create sustainable energy management innovations.

Power (Powering):

Strengthen the Group's global leadership in renewable energy operations.



ENVIRONMENTAL MANAGEMENT, RESOURCE EFFICIENCY, AND SUSTAINABLE USE



Water Management

The significance of efficient and sustainable resource use in water management: Efficient and sustainable water management is a crucial factor in long-term sustainability, operational efficiency, and environmental responsibility. Although solar and wind power require minimal water for electricity generation, water is still needed for cleaning and maintenance processes. Biomass energy, however, requires significant water usage for cooling systems and steam generation, making responsible water management essential to minimize environmental impact.

Water scarcity and climate change have intensified the need for efficient water use. By reducing water consumption, reusing water, and optimizing cooling and cleaning processes, the Group can lower operational costs, ensure compliance with environmental regulations, and mitigate water scarcity risks.

Moreover, responsible water management strengthens the Group's ESG performance by supporting sustainable resource use and minimizing impacts on ecosystems, while enhancing business resilience. Prioritizing water efficiency and conservation enables the Group to align with global sustainability frameworks and ensures long-term operational security.

The Group's Goal: Improve water management efficiency and optimize water usage in all operations by reducing consumption, promoting reuse, and encouraging responsible usage for long-term sustainability and resilience to water scarcity, through the following approaches:

- 1. Reduce water use in production processes by 10% by 2030** – improve water efficiency in cooling, steam generation, and cleaning systems.
- 2. Encourage employee participation to reduce water use by 30% by 2030** – promote behavior change and workplace conservation campaigns.
- 3. Achieve 100% water reuse by 2030** – install treatment and recycling systems to reuse process water at the UPT plant.
- 4. Efficiently manage water and wastewater from all sources** – optimize production water use and implement standardized wastewater treatment at all plants, with quality checks before release or reuse.

Operational Approaches: Implement proactive measures focused on reducing water usage, increasing water reuse, and improving wastewater management efficiency through the following key approaches:

- 1. Reduce water use in production by 10% by 2030**
 - Enhance water-intensive processes: optimize cooling systems, steam generation, and cleaning efficiency.
 - Apply water-saving technologies: e.g., reuse RO reject water for biomass ash capture and apply nano-coating on solar panels to reduce cleaning water use.

- 2. Promote employee engagement to reduce water use by 30% by 2030**

- Build awareness and drive behavior change: organize training, campaigns, and incentives for responsible water use.
- Set departmental water reduction targets: encourage all units to eliminate unnecessary water use.

- 3. Achieve 100% water reuse by 2030**

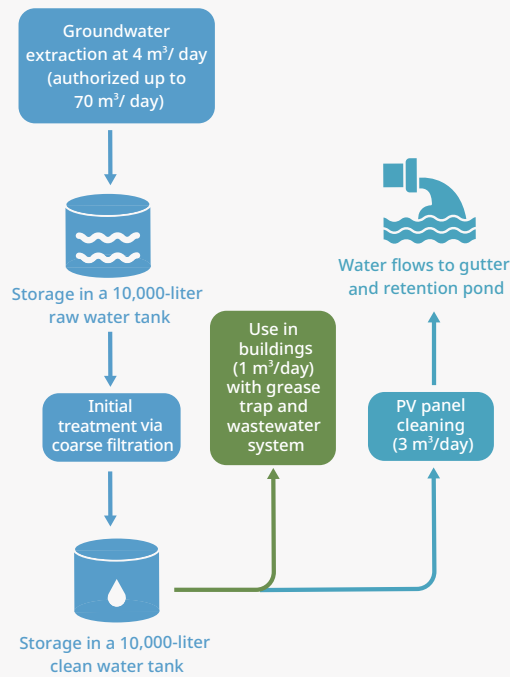
- Collect and reuse process water: reclaim water from cooling, steam generation, cleaning, and rainwater.
- Implement closed-loop systems: design systems for continuous recycled water use to reduce fresh water intake.

- 4. Efficient management of water and wastewater from all sources**

- Comply with quality standards before environmental discharge: treat wastewater to national/international standards.
- Develop water risk management plans: assess local risks and develop mitigation strategies for water shortages.



Raw Water Management for Production Process



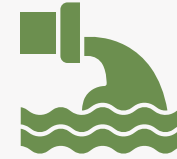
The project involves the use of groundwater as a raw water source for production processes, with an average extraction rate of 4 cubic meters per day. The Group has obtained a permit allowing groundwater usage of up to 70 cubic meters per day. Water extraction occurs for an average of approximately six months per year.



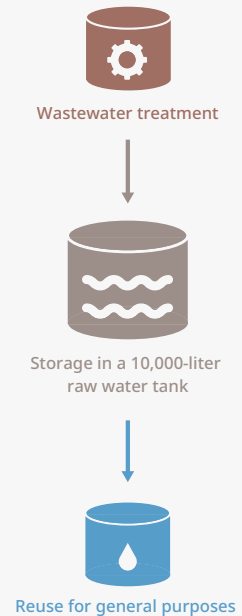
Rainwater Management



The project's rainwater system features a reservoir with a maximum storage capacity of 4,035 m³. The system is closely monitored and managed to ensure its effective and safe operation in supporting rainwater management.



Wastewater Treatment and Disposal



Most domestic wastewater from employees is collected in underground septic tanks with no external discharge prior to treatment.



2024 Water Resource Performance

Water Resources	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV	Total 2024
Water consumption by source type (unit: cubic meters)											
• Surface Water	0	0	0	255,963	0	0	0	0	0	0	255,963
• Ground Water	0	682	0	1	0	0	157	1,950	0	0	2,790
• Municipal supply	704	2.03	0	58,201	232	0	0	0	0	520	59,660
• Total water withdrawal	704	684	0	314,165	232	0	157	1,950	0	520	318,412
Water consumption rate per unit of Production (unit: cubic meters per megawatt-hour)											
• Water use per MWh	0.010	0.090	0	4.202	0.002	0	0.006	0.030	0	0.003	0.472
• Water reduction from based year 2023 (%)	▼ 0.27%	▼ 27.95%	0	▲ 1.13%	N/A	0	▲ 24.61%	▲ 10.80%	0	▼ 25.26%	▼ 13.6%
Water discharge volume (unit: cubic meters)											
• Water discharge Volume	0	0	0	0	185.6	0	125.6	1,560	0	416	2,287
• Water discharge reduction from based year 2023 (%)	0	0	0	0	N/A	0	▲ 17.16	▲ 12.52	0	▼ 32.29	▼ 0.3
Recycled water volume (unit: cubic meters)											
• Recycled Water	704	684	0	314,165	0	0	0	0	0	0	315,553
• Increase in Recycled Water from based year 2023 (%)	100%	100%	0	100%	0	0	0	0	0	0	99.1%

Note: N/A indicates that Winchai began data collection in 2024, so no prior-year comparison is available.



Water Reduction Projects

1. Reusing Discharge Water in Biomass Ash Capture Systems

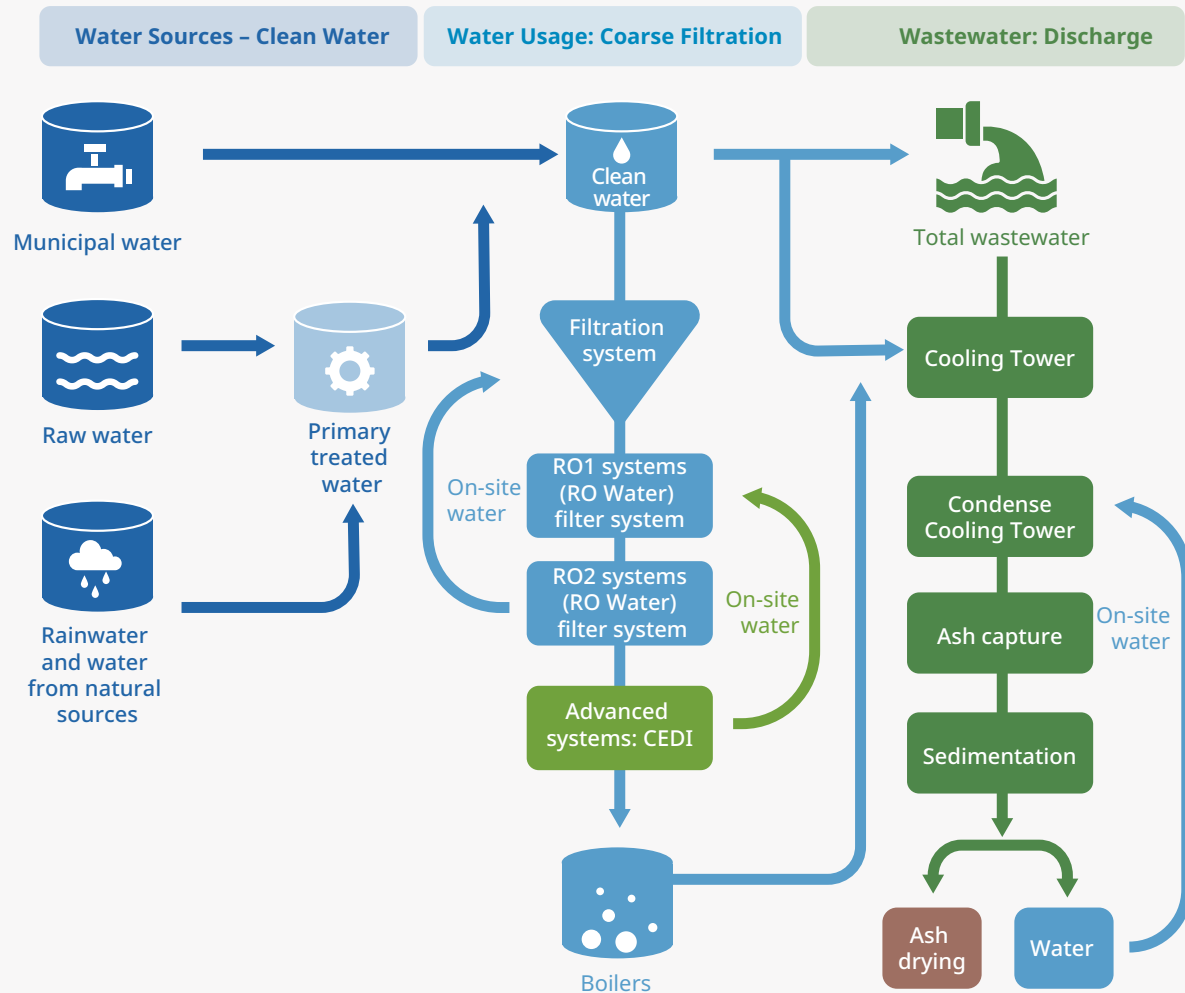
In biomass power generation, waste such as ash and discharge water must be efficiently managed to minimize environmental impact and maximize resource use. The Group launched a project to improve water use efficiency by reusing discharged water from cooling, RO, and CEDI systems in biomass ash capture to enhance air pollution control and water utilization.

Project Objective: Improve water efficiency and reduce discharge by reusing reject water to manage fly ash in biomass plants.

Benefits:

- Water conservation: Reuse of rejected water reduces surface water intake by 99%.
- Pollution control: Enhances biomass ash management and reduces dust emissions.
- Economic value: Cuts wastewater treatment and clean water production costs.
- Environmental benefit: Supports the Group's sustainability goals via circular resource use.

Process Flow Diagram





2. Water Pollution Reduction Program

2.1) Wastewater reduction projects:

- **Zero Liquid Discharge (ZLD):** Treat and reuse all water internally with no external discharge.
- **Constructed Wetlands:** Use natural processes and aquatic plants to treat and safely reuse or discharge water.

2.2) Enhancing water use efficiency:

- **Closed-Loop Cooling Systems:** Reduce new water intake and prevent thermal pollution.
- **Rainwater Harvesting:** Install rainwater collection systems to reduce reliance on groundwater.



3. Innovative Project: Nano-Coated Solar Panels to Reduce Water Usage for Panel Cleaning in Solar Farm Projects

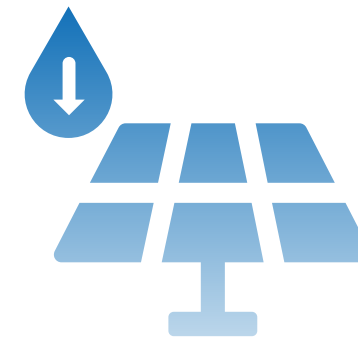
The Group has collaborated with Nano Coating Tech Co., Ltd., a deep-tech startup under the NSTDA Startup Program, to develop a specialized synthetic nano-silica coating for solar panel surfaces.

This innovative coating significantly reduces dust accumulation on solar panels, thereby improving solar energy generation efficiency, reducing the frequency of panel cleaning, and lowering maintenance costs. The nano-silica coating features high transparency, strong adhesion to solar panel surfaces, and resistance to Thailand's climatic conditions.



It effectively minimizes dust adherence, one of the main causes of reduced solar panel performance.

Furthermore, the coating is free from harmful chemicals, ensuring the safety of solar equipment, coating personnel, and the surrounding environment. This innovation supports



Achieved up to an
80%
reduction in
water usage
for cleaning.

sustainable operations by enhancing energy efficiency and promoting environmentally responsible practices.



WASTE MANAGEMENT AND CIRCULAR ECONOMY



The significance of Waste Management and the Circular Economy to the Group. Waste management and the circular economy are at the core of the Group's mission to maximize resource efficiency, minimize waste, and promote material reuse wherever possible. The Group focuses on the principles of reducing consumption, reusing, and recycling (Reduce, Reuse, Recycle) to extend the lifespan of materials and reduce environmental impact. In the case of biomass energy, we actively promote the beneficial use of by-products, such as converting biomass ash into soil conditioners to improve acidity levels, with approval from the Agricultural Research and Development Division, Department of Agriculture. This practice reduces the volume of waste that needs to be disposed of.

Through innovative waste management strategies, responsible sourcing of raw materials, and strong recycling initiatives, we are committed to closing the resource loop in our operations. This approach not only supports global sustainability goals but also improves resource efficiency, reduces costs, and strengthens our environmental responsibility, ensuring the long-term sustainability of our renewable energy for future generations.

The Group's Goals: The Group is committed to enhancing waste management efficiency and integrating circular economy principles into its renewable energy operations.

This includes reducing waste generation, increasing resource recovery, and promoting sustainable recycling practices to minimize environmental impact. The Group's approach to achieving these objectives includes the following targets and actions:

- 1. Increase recycling rates through the 3R process (Reduce, Reuse, Recycle) to at least 80% of total waste by 2030.**
- 2. Reduce general waste within the organization by 10% by 2030** – through awareness campaigns, improved segregation practices, and increased use of recycled paper.
- 3. Achieve zero hazardous waste sent to landfills by 2030** – by ensuring safe disposal through BOI-compliant methods and targeted employee training.

The Group's operational approach to waste management is carried out effectively and aligned with the principles of a circular economy, focusing on reducing waste at the source (Reduce), reusing (Reuse), and recycling (Recycle) to optimize resource utilization. Strict control measures are enforced throughout every process, from the proper sorting and storage of waste, to reusing by-products, utilizing modern recycling technologies, and managing biomass waste by converting it into energy or valuable products. The Group aims to minimize waste disposal through incineration or landfilling. For hazardous waste, the Group contracts specialized and registered entities that are authorized to dispose of waste correctly, such as solar panel waste.

In addition, the Group continuously monitors and tracks waste quantities, ensuring compliance with international environmental standards and relevant regulations.



This approach helps guarantee that operations do not negatively impact the environment or local communities, while steering the organization toward a sustainable circular economy.



2024 Performance

Waste	Unit	SPN	WVO	SN	UPT	WINCHAI ^{/1}	TGC	TTQN	SSE ^{/1}	TTTV	SEG ^{/1}	Total
Performance Results from Organizational Goals												
• Achieve a 10% reduction in non-hazardous waste within the organization by 2030.	%	▼100	▲79.5	n/a	▼22.03	n/a	n/a	▼62.06	n/a	▼2.87	n/a	▼22.05
• Achieve zero disposal of hazardous waste by landfills by 2030.	%	98.95	0	n/a	0.20	n/a	100	100	n/a	100	n/a	2.76
• Achieve a recycling rate of at least 80% of total waste through the 3Rs (Reduce, Reuse, and Recycle) by 2030.	%	1.05	72.90	n/a	99.80	n/a	0	0	n/a	0	n/a	97.23
Waste Generated from all Operations												
• Non-hazardous waste ^{/2}	Ton	0	0.35	0	5,024.24	0	0.15	0.10	0	1.32	0	5,026.16
• Hazardous Waste	Ton	132.80	0.13	0	8.41	0	0	0	0	0.04	0	141.38
Non-hazardous Waste Management												
• Reuse	Ton	0	0	0	0	0	0	0	0	0	0	0
• Recycle	Ton	0	0.35	0	5,022.82	0	0	0	0	0	0	5,023.17
• Landfills	Ton	0	0	0	1.42	0	0.15	0.10	0	1.32	0	2.99
• Others	Ton	0	0	0	0	0	0	0	0	0	0	0
Hazardous Waste Management												
• Recycle	Ton	1.40	0	0	0	0	0	0	0	0	0	1.40
• Landfills	Ton	131.40	0	0	8.41	0	0	0	0	0.04	0	139.85
• Others	Ton	0	0.13	0	0	0	0	0	0	0	0	0.13

Notes: Disposal of hazardous waste, such as damaged, defective, or degraded solar panels, is carried out by licensed and registered waste management companies.

^{/1} For the Winchai, SSE, and SEG projects, all waste generated from production and maintenance processes is handled by the O&M contractors; therefore, this data is excluded to avoid double-counting.

^{/2} For non-hazardous waste in 2024, projects in Thailand including SPN, WVO, SN, and Winchai are reported. However, municipal solid waste (waste from domestic consumption) is not included due to the lack of recorded data.



Key Projects Undertaken

1. Zero Waste Day Project: Promoting Eco-friendly Practices within the Organization

Sernsang Power is committed to emphasizing the importance of efficient resource management and reducing environmental impact. To support this initiative, the Company organized the "Zero Waste Bingo" activity to raise employee awareness of their impact on waste reduction and resource conservation. The activity was designed to be an engaging, interactive event that promotes eco-friendly behavior in the workplace.

Activity Approach:

- Employees can participate by completing environmental conservation tasks in their daily lives, such as:

- Efficient Resource Use: Turn off water when not in use, use ECO Font to save ink, and opt for digital documentation to reduce printing.
- Reducing Packaging Waste: Use reusable containers to limit single-use plastics.
- Proper Waste Management: Sort waste properly and avoid non-biodegradable items.
- Energy Conservation: Switch off lights and A/C when not needed.
- When employees complete the tasks and achieve "Bingo," they will receive a reusable cloth bag as a reward to encourage long-term eco-friendly behavior.

Results and Impacts on the Organization:

- Increased employee participation in reducing waste and using resources efficiently.
- Strengthened the organizational culture of sustainability by encouraging behavioral changes in the workplace.
- Supported the organization's environmental goals by reducing waste generation and promoting resource circularity.
- The "Zero Waste Bingo" activity has effectively contributed to driving the goal of "Powering A Greener Workplace" and creating a tangible positive impact on the environment.





2. Think Before Print Project: Transforming Printing Behavior for a Sustainable Future



Sermasang Power is committed to resource efficiency and minimizing environmental impact. The “Think Before Print” project was launched to encourage mindful printing behavior and reduce resource usage. The project encouraged employees to rethink their printing habits by adopting efficient font choices that reduce ink consumption. “Think Before Print” aligns with our broader sustainability goals and empowers employees to play an active role in minimizing environmental impact across the organization.

Activity Approach:

- Reduce unnecessary printing – Encourage employees to evaluate the necessity of printing before proceeding and promote the use of digital files instead of printed documents whenever possible.
- Use ink-efficient fonts – Advocate for the adoption of TH Sarabun PSK Ecofont version 1.0, a font designed by researchers from Walailak University. Its structure can reduce ink consumption by up to 30%, while still ensuring clear readability. More information is available at https://engineer.wu.ac.th/?page_id=16278

- Increase employee awareness – through internal communication campaigns.

Progress as of the end of 2024

- 50 employees, representing 53.8% of the total workforce, have accessed and are now using the eco-friendly font in organizational documents.
- There is a noticeable positive trend in reducing paper and ink consumption.

3. Waste and Soil Pollution Management Program through Biomass Ash Utilization: Applying Circular Economy Principles for Sustainability

Nakhon Ratchasima province is a key agricultural area in Thailand. However, farmers in the region face challenges due to soil conditions that are not ideal for cultivation. The soil is primarily sandy loam with low fertility, and it is highly acidic to neutral (pH 5.5-7.0) in the upper layers, while it becomes very acidic (pH 4.5-5.0) in the lower layers. These conditions affect agricultural productivity and the sustainability of the ecosystem.

Uni Power Tech Company Limited (“the Company”), which operates a biomass power plant in Nakhon Ratchasima province, has acknowledged the challenges faced by local farmers and developed a solution to help them. The Company plans to utilize biomass ash, a byproduct of the electricity production process, to improve soil acidity. Biomass ash is a waste material from production that can be repurposed (Waste-to-Resource), in line with the principles of the circular economy, which focus on reducing resource waste and creating value from waste.

Before proceeding, the Group conducted a detailed study on biomass ash quality and submitted the results to the Department of Agriculture for approval. The findings confirmed that the



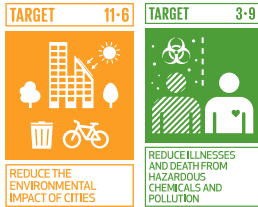
ash is effective in improving soil acidity and can be applied 20–30 days before planting to raise soil pH and enhance structure, making it more suitable for agriculture. To promote circularity and cost savings for farmers, the Group launched a project to distribute the biomass ash to local farmers at no cost. Farmers can collect the ash directly from the Company’s power plant, helping to reduce production costs while enhancing waste reuse and sustainable resource use.

In 2024, the Company distributed 5,023 tons of biomass ash for soil improvement, achieving a 99.94% recycling rate from biomass power generation waste. This reflects its commitment to circular economy practices and sustainable community and environmental development.

The commercial value of the soil amendment material is approximately 4.00 THB per kilogram. Therefore, the total value of the biomass ash used for soil quality improvement is estimated at 20,000 THB per year. **This project has successfully diverted 100% of non-hazardous waste from landfills, transforming it into a valuable resource for local agriculture.**



POLLUTION CONTROL AND ENVIRONMENTAL STEWARDSHIP



The Significance of Pollution Control and Environmental Stewardship: The Group recognizes the critical importance of air pollution control in our renewable energy operations. While solar and wind power do not emit direct pollutants, their production and installation processes can impact air quality. Biomass energy requires effective management of greenhouse gas emissions and other pollutants. The Group is committed to using strict pollution control technologies and measures to minimize emissions and particulate matter that may affect health and the environment. We adhere to international environmental standards and operate with a focus on air quality, community health, and ecosystem sustainability. Our clean energy solutions are designed to enhance quality of life and reduce environmental impact.

The Group's Goals: Minimize air pollution from renewable energy operations to preserve air quality, protect ecosystems, and support global climate goals through strict compliance with environmental regulations and sustainability standards.

1. Reduce air pollutant emissions to near zero – apply best available technologies and practices to reduce PM and NO_x from biomass energy operations by at least 80% by 2030.

2. Achieve 100% compliance with air quality standards – ensure all operations meet national and international air pollution regulations.
3. Reduce GHG emissions – target a 30% reduction in CO₂ emissions from biomass energy by improving efficiency and sustainable sourcing.
4. Foster stakeholder and community collaboration – work with government agencies, local communities, and environmental organizations to enhance transparency and raise awareness of clean energy benefits.
5. Maintain wind turbine noise levels within legal limits – comply with Thailand's Environmental Quality Promotion and Preservation Act, B.E. 2535 (1992), which sets noise limits at 115 dBA (max) and 70 dBA (24-hour average).

Operational Approaches: To ensure effective air pollution control in alignment with international environmental standards, the Group has established the following key operational approaches:

1. **Pollution Control Technologies:** Install air filtration and pollutant capture systems such as Electrostatic Precipitators (ESPs) at biomass power plants (e.g., UPT) to reduce airborne toxins and particulates.

2. **Compliance with Environmental Standards:** Follow national and international air pollution standards (e.g., WHO air quality standards, ISO 14001). Conduct regular emission reporting and implement mitigation to maintain emission levels below regulatory thresholds. Control combustion temperature and select low-emission feedstock materials.
3. **Continuous Air Quality Monitoring:** Implement Continuous Emission Monitoring Systems (CEMS) to track emissions in real-time, enabling prompt corrective action. Monitor ambient air quality near power plants and communities to ensure no harmful impact.
4. **Stakeholder Engagement:** Collaborate with government, environmental agencies, and communities to propose pollution reduction solutions and promote clean energy. Educate staff and the public on air pollution prevention and impact mitigation.
5. **Wind Turbine Noise Control:** Ensure wind turbine noise levels remain under 70 dBA in accordance with WHO guidelines. Turbines are installed at least 300 meters from residential areas, resulting in noise levels around 43 dBA, which is safe for human hearing.



Wind Turbine Noise Data – Winchai Project, Mukdahan Province

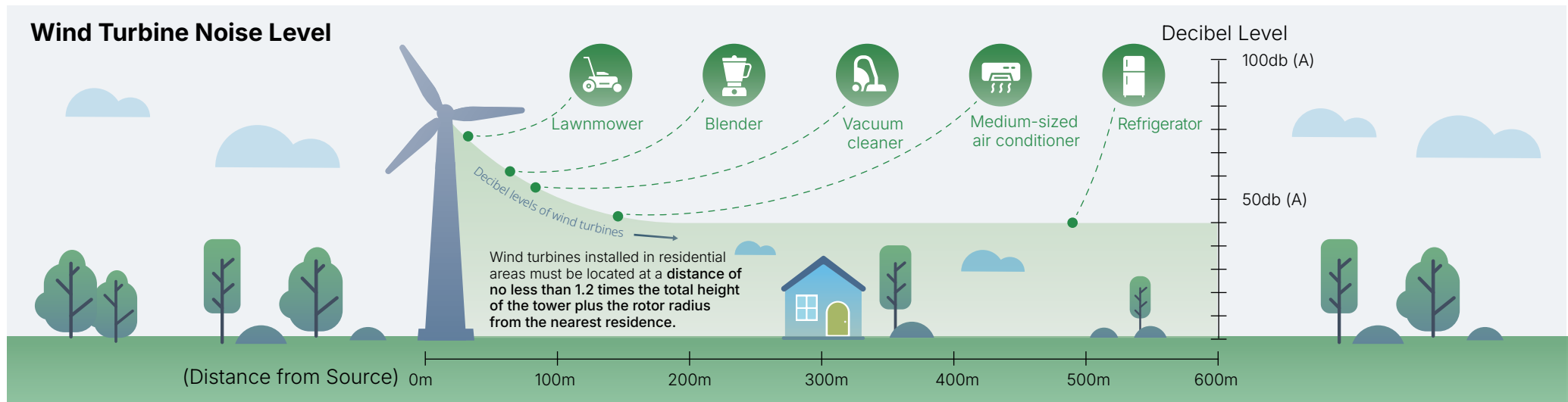
Noise measurements were conducted on December 20–21, 2024 at four stations: Ban Romklao (N1), Ban Nong Nok Khian (N2), Ban Luppung (N3), and Wat Phu Yang Diao (N4).

Noise Measurement Results (dB(A)): The noise monitoring results are presented across four key sound level indicators:

- Leq 24 hr: Average sound level over a 24-hour period
- Lmax: Maximum recorded sound level
- Ldn: Day-Night Average Sound Level
- L90: Background noise level

Station	Noise Measurement Results (dBA)			
	Leq 24 hr	Lmax	Ldn	L90
1. Ban Romklao (N1)	47.2-50.5	79.0-89.9	50.1-53.2	43.7-46.5
2. Ban Nong Nok Khian (N2)	48.6-50.9	82.2-95.6	51.3-55.0	45.5-48.3
3. Ban Luppung(N3)	49.4-52.6	80.3-86.6	54.8-58.7	45.8-49.7
4. Wat Phu Yang Diao (N4)	50.8-53.1	71.5-87.2	57.6-59.8	48.0-49
Standard*	70	115	-	-

* Standard based on National Environmental Board Notification No. 15 (B.E. 2540): Leq 24 hr ≤ 70 dBA, Lmax ≤ 115 dBA



Source: www.gereports.com/how-loud-is-a-wind-turbine.



Pollutant Emissions Data (NO_x, PM) for 2024

Site	SPN	SS	SN	UPT	WINCHAI	SEG	TGC	TTQN	SSE	TTTV
SO ₂ emission volume (tons)	0	0	0	0	0	0	0	0	0	0
SO ₂ Intensity (kg/ MWh)	0	0	0	0	0	0	0	0	0	0
NO ₂ emission volume (tons)	0	0	0	110.14	0	0	0	0	0	0
NO ₂ Intensity (kg/ MWh)	0	0	0	1.47	0	0	0	0	0	0
PM emission volume (tons)	0	0	0	38.41	0	0	0	0	0	0
PM Intensity (kg/ MWh)	0	0	0	0.51	0	0	0	0	0	0

SSP Green Future Project – Biomass Power Plant Pollution Reduction



Objective: To reduce air, water, and soil pollution at the Group's biomass power plants effectively, while enhancing energy efficiency and environmental sustainability.

Implementation:

1.1 Pollution Control Technologies:

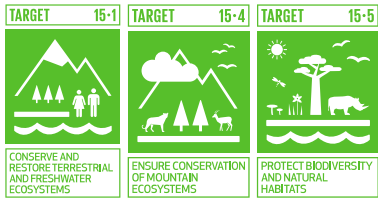
- Install Electrostatic Precipitators (ESPs) to capture fine particulate matter from biomass combustion exhaust. The system achieves a removal efficiency of over 99% for fine dust particles.

1.2 Combustion Efficiency Enhancements (Real-time combustion monitoring):

- Use sensors and automated control systems to optimize air-to-fuel ratios.
- Biomass fuel preparation: Standardize fuel moisture content and particle size to improve combustion efficiency.



BIODIVERSITY AND ECOSYSTEM PROTECTION



The Significance of biodiversity and ecosystem protection: The Group minimizes regulatory risks and secures natural resources as a renewable energy producer with operations closely linked to natural landscapes, wildlife habitats, and natural resource areas. Biodiversity-conscious operations help the Group reduce environmental impacts, preserve long-term resources, and comply with increasingly stringent environmental regulations. Healthy ecosystems also help sequester carbon through natural carbon sinks such as forests and wetlands, which support the Group's Carbon Neutrality and Net Zero goals. Effective biodiversity management also mitigates environmental and social risks, such as soil degradation, water scarcity, and community conflict.

From a financial perspective, investors and stakeholders value companies with clear sustainability and ESG policies. Biodiversity conservation attracts green finance and builds confidence with the business and social sectors. Thus, protecting ecosystems and biodiversity is more than an environmental duty. It is a core factor in driving sustainable business, preserving natural resources, and improving environmental management performance.

The Group's Goals: The Group's renewable energy projects aim to reduce environmental impact, promote biodiversity conservation, and strengthen ecosystem resilience while complying with sustainability standards and regulations. Key approaches include:

- 1. Conduct Initial Environmental Examination (IEE) Reports before project development** – ensure all projects undergo thorough environmental impact assessment to prevent ecosystem degradation.
- 2. Ensure No Net Loss of Biodiversity for all new projects** – implement biodiversity offsetting through restoration, enhancement, or compensation of impacted ecosystems.
- 3. Increase green space by 10% by 2030** – expand reforestation and greening programs around project sites to enhance local biodiversity.
- 4. Apply 100% sustainable land and water use practices at operational sites** – ensure all projects integrate soil conservation, water management, and habitat protection.
- 5. Promote community-led conservation projects** – collaborate with local communities, NGOs, and environmental agencies on ecosystem restoration and biodiversity awareness programs.

Operational Approach: To effectively protect biodiversity and ecosystems, the Group implements an Environmental and Biodiversity Policy to guide environmental actions, biodiversity preservation, sustainable land use, and resource management. The Group follows global standards such as GRI and TNFD using the Mitigation Hierarchy: Avoid, Minimize, Restore, and Offset.

Avoid: Prioritize avoidance of biodiversity impacts. Conduct detailed IEE Reports before starting any project to assess

legal conservation areas, wildlife habitats, and water sources. In some cases, the Group refrains from development in high-risk areas, choosing less sensitive locations like abandoned farmland.

Reduction or Minimize use: Design wind turbines to reduce avian impacts, optimize biomass machinery to limit pollution, and construct projects to minimize community disruption.

Restore & Offset: Restore affected areas by reforestation, enhancing water bodies, and increasing ecological corridors with native tree planting and natural buffers. Invest in carbon sequestration projects to offset land use impacts.

Sustainable Land and Habitat Use: Design solar and wind projects to avoid disrupting bird migration paths and deforestation. Apply sustainable forestry and agricultural practices for biomass sourcing aligned with sustainable forest standards. Continuously raise environmental awareness among employees through internal communication and joint activities with nearby communities.



2024 Performance

1. Quarterly ecosystem and biodiversity monitoring across all project sites achieved 100%.
2. Survey Results of plants and animals in the Project.

Animal surveys of the ecosystem	SPN	SS	UPT	WINCHAI
Project area (hectares)	142.24	8.16	41.12	309.00
Province of location	Lopburi	Ratchaburi	Nakhon Ratchasima	Mukdahan
• Number of birds in the project in 2024 (birds)	335-470	-	-	-
• Change in number of birds compared to the baseline year 2023	▲ 21%	-	-	-

*The Group has recently initiated this effort, starting with bird counts in project areas, as birds have the most significant impact on current operations. The initiative will be expanded to other facilities in the future.

There are 2 key projects:

1. SSP GREEN HAVEN: Protecting Life, Preserving Nature" operated by Sermang Power Corporation (SPN), Lopburi, Thailand.

Goal: Ensure energy projects coexist with ecosystems, protect wildlife, conserve biodiversity, and restore natural habitats.

Strategy: "POWERING A GREENER FOR BIODIVERSITY"

1. Habitat Conservation and Green Area Expansion – Preserve and expand green zones around power plants to serve as habitats for birds and wildlife. Support reforestation and restoration of native plant species to enhance biodiversity, protect, and improve natural

habitats, thereby minimizing the impact of project development.

2. Protection of Native Wildlife and Biodiversity Monitoring – Conduct biodiversity assessments before and during project development to minimize environmental impact. Establish wildlife monitoring programs in project areas, focusing on species such as Baya Weavers, cormorants, and wild fowls. Ensure compliance with wildlife protection laws and safeguard nesting and breeding areas from disturbance or destruction.
3. Development of Environmentally Friendly Energy Projects – Strictly follow Environmental Impact Assessment (EIA) and Initial Environmental Examination (IEE) guidelines,

and design projects to align with wildlife migration routes and nesting areas. Apply sustainable land use practices to minimize deforestation and soil degradation impacts.

4. Community Engagement and Conservation Awareness – Strengthen collaboration with local communities and support community-led conservation projects to raise environmental awareness. Initiatives include wildlife protection programs, anti-poaching efforts in conservation zones, and community-level reforestation activities. Encourage participation from employees and stakeholders in green initiatives through volunteer tree-planting events, wildlife conservation projects, and sustainable land management practices.



Results:

1. The biodiversity conservation project “SSP GREEN HAVEN: Protecting Life, Preserving Nature”

The biodiversity conservation project “SSP GREEN HAVEN: Protecting Life, Preserving Nature” has successfully created a thriving natural environment within and around the power plant, supporting both local wildlife and migratory birds. This has been achieved through green area expansion, strict compliance with wildlife protection laws, and ecological impact assessments. The Group has demonstrated its role as a responsible renewable energy producer by prioritizing biodiversity conservation. This commitment underscores the Group's ambition to be a nature-friendly renewable energy company where sustainability and biodiversity conservation go hand in hand with clean energy development.

1. Expansion of Green Areas Around Power Plants

– The Group has effectively preserved and expanded green spaces surrounding its power plants, creating environments suitable for wildlife. These green areas serve as safe havens for migratory birds and local animals, contributing to the enhancement of local biodiversity.

2. Protection of Baya Weavers and Other Wildlife

– Over 200–300 Baya Weavers have been observed nesting around the project area, reflecting positive conservation outcomes. Their original nests are preserved even after migration seasons to ensure their habitats remain undisturbed. Other species such as cormorants (50–100) and wild fowls (5–10) have also been spotted in the area, indicating a thriving ecosystem.








3. **Compliance with Wildlife Protection Laws** – As the Baya Weaver is a protected species under Thailand's Wildlife Preservation and Protection Act B.E. 2535 (1992), the Group strictly adheres to legal requirements. Measures are taken to prevent nest destruction, prohibit disturbance, and safeguard habitats, ensuring operations align with conservation ethics and legislation.

4. **Biodiversity Impact Assessments in Japan** – The Group conducts ecosystem surveys before project development in Japan to assess species type and density each quarter. If rare or endangered species are found, the Group implements habitat relocation or impact mitigation

measures. If relocation isn't feasible, the project will not proceed in the area, thereby demonstrating strong environmental responsibility.

5. **Long-Term Commitment to Ecosystem and Biodiversity Conservation** – The Group is dedicated to maintaining and expanding forest areas around its power plants to enhance ecosystem diversity and provide wildlife habitats. Migration and breeding behaviors of wildlife are monitored seasonally to refine conservation strategies. Future plans include additional tree planting, forest restoration, and community partnerships for environmental campaigns.



Bird Species	 Baya Weaver	 Cormorant	 Wild Fowl	 Red-wattled Lapwing	 Crow	 Pond Heron	 Asian Openbill
2024	200-300	30	20	50-80	5-10	10	20
2023	200-300	50-100	5-10	-	-	-	-



*See more details in the Biodiversity Report 2024.



2. Project: "SSP Green Space Restoration and Enrichment Project"

Goal: To promote, develop, and expand green spaces within the Group towards "sustainable and environmentally friendly growth".

Strategy: "POWERING A GREENER SSP FORESTRY"

1. Expansion of Green Areas and Carbon Sequestration

- Increase tree planting around the plant premises.
- Explore opportunities for generating carbon credits through reforestation projects.

2. Biodiversity Conservation and Ecosystem Restoration

- Promote planting of native tree species to support local ecosystems, selecting species based on recommendations from provincial tree nurseries under the Ministry of Agriculture to ensure suitability, benefits, and alignment with local conditions and to avoiding the introduction of invasive species.
- Monitor wildlife populations to maintain ecological balance.

3. Sustainable Land Use and Responsible Forest Management

- Apply land management practices that prevent deforestation.
- Restore soil and conserve water sources through reforestation projects.
- Use environmentally friendly materials in company construction projects.

4. Community Engagement and Environmental Education

- Collaborate with schools, community groups, and business partners to organize tree-planting activities.
- Provide training for employees and communities on sustainable forest conservation practices, raising awareness on the importance of trees and forests in mitigating climate change.
- Launch the "Green Ambassador" program to promote environmental awareness.

Results:

1. Planted 40 trees in the project area, using a mix of native species and other suitable varieties.
2. Organized on-site tree-planting activities with participation from executives, employees, key partners, and local communities.
3. Developed, enhanced, and expanded green areas to support biodiversity through tree planting within the Group's project sites.

Green Areas in the Project

Site	SPN	SS	UPT	WINCHAI
• Total Area (square meters/ hectares)	1,422,400 sq.m. (142.24 ha)	81,600 sq.m. (8.16 ha)	411,200 sq.m. (41.12 ha)	3,090,000 sq.m. (309 ha)
• Existing Green Area (square meters/ hectares)	426,720 sq.m. (42.67 ha)	1,600 sq.m. (0.16 ha)	40,000 sq.m. (4 ha)	2,953,920sq.m. (29.39 ha)
• Tree Count	600 sq.m. (16 ha)		240 sq.m. (6.40 ha)	
Green Area Ratio (%)	30.04%	1.96%	9.79%	95.60%

***Note:** The average planting space for one Makha or Payung tree is 2.0 x 3.0 meters = 6.00 square meters, based on guidelines from the Department of Agricultural Extension.
: 1 hectare (ha) = 10,000 square meters.





Biodiversity Challenges and Operational Approaches of the Group

1. Impact of Energy Infrastructure on Wildlife and Habitats

Challenges:

- Biomass power plants, solar panels, and wind turbines may alter the habitats of wildlife in surrounding areas.
- Wind turbines can pose a collision risk to birds and bats flying through the area.
- If poorly managed, biomass power plants may negatively impact forest ecosystems due to unsustainable biomass sourcing.

Operational Approaches:

- Conduct biodiversity impact assessments prior to project expansion to better understand ecosystem risks.
- Implement wildlife-friendly technologies, such as radar systems on wind turbines, to minimize bird collisions.

2. Water Resource Management and Wetland Conservation

Challenges:

- Biomass power plants may use significant amounts of water in production processes, potentially impacting wetlands that serve as habitats for aquatic species and migratory birds.
- Wetlands surrounding the Sernsang Power plant are home to migratory birds and wildlife that require ongoing protection.

Operational Approaches:

- Develop water recycling projects, such as reusing wastewater from RO systems to capture biomass ash, reducing waste, and improving water efficiency.
- Implement wetland conservation measures by creating natural buffer zones or artificial water bodies to support ecosystems. Restoration or creation of forested areas using native plant species around the plant may help support local wildlife such as Gallus gallus.
- Improve wetland areas around the Sernsang Power plant by enhancing water quality and increasing plant diversity to support waterfowl species like cormorants (Phalacrocorax spp.) and white-breasted waterhens (Amaurornis phoenicurus).

3. Climate Change and Its Impact on Ecosystems

Challenges

- Changes in temperature and rainfall patterns may affect the migration behavior of wildlife.
- Solar panels may contribute to the heat island effect, potentially impacting local flora and fauna.
- Climate change may alter bird migration timing, which could lead to mismatches with food availability during key seasons.

Operational Approaches

- Implement climate adaptation strategies by planting native vegetation around energy project sites to reduce environmental impact.

- Conduct regular bird surveys, potentially increasing monitoring frequency to a monthly basis and covering diverse habitats (wetlands, forests, agricultural areas, and open spaces) to track seasonal changes—especially during migration periods (October–February and May–November).
- Conduct targeted species monitoring, focusing on protected birds such as the Red-wattled Lapwing (Vanellus indicus), Common Kingfisher (Alcedo atthis), and Eurasian Sparrowhawk (Accipiter nisus) to ensure their populations are not adversely affected.
- Expand biodiversity monitoring programs.
- Build partnerships with local communities to monitor biodiversity impacts and develop mitigation strategies. Encourage community members and employees to participate in birdwatching activities to raise awareness and collect additional data.
- Promote community engagement and environmental education by organizing biodiversity training sessions for employees and local communities to support sustainable practices.

05

SOCIAL SUSTAINABILITY





SOCIAL SUSTAINABILITY

The Group conducts its business under a robust corporate governance framework, committed to transparency and accountability in order to operate ethically. The focus is on responsible and inclusive business practices across all sectors to create long-term sustainable value for society. The Group recognizes the importance of social responsibility and places emphasis on respecting human rights, labor standards, diversity, and stakeholder inclusion. It also prioritizes the health, safety, and quality of life of employees, communities, and all stakeholders. To achieve tangible outcomes, the Group promotes social development, empowers people, and engages with communities to create a positive and sustainable impact.

The Group implements a corporate social responsibility (CSR) policy to promote social equity, foster strong stakeholder relationships, and support sustainable social development, through the following key areas:

- **Employee Development and Quality of Life:** The Group initiates programs that support continuous learning, career advancement, and overall employee well-being by fostering a safe, inclusive, and empowering work environment.
- **Community Engagement and Social Development:** The Group collaborates with communities to identify and respond to community needs while supporting social projects that promote education, healthcare, and economic empowerment.
- **Human Rights and Labor Standards:** The Group adheres to international human rights and labor standards, promotes equality, fair treatment, and prevents discrimination and exploitation.
- **Health and Safety Standards:** The Group upholds high safety standards across all processes to prevent

workplace accidents and ensure a safe and healthy work environment for employees, contractors, and stakeholders.

- **Stakeholder Collaboration and Transparency:** The Group builds trust through transparent communication and collaborates with stakeholders to foster inclusive, sustainable growth and build mutual trust. As a leader in the renewable energy sector, the Group integrates social sustainability principles into its organizational strategy to drive growth, promote equal opportunities, and enhance the quality of life for all stakeholders.

The scope of the Group's 2024 sustainability performance report in the social dimension, which includes employee welfare, gender pay ratio (female to male), employee development, health and safety, human rights, and community involvement, covers the Group's subsidiaries in Thailand as follows:

Domestic Group of Companies	International Group of Companies	
Solar Power Plant Projects		
Sermasang Palang Ngan Co., Ltd. (SPN)	Surge Energy Corporation Limited (SEG)*	
Sermasang Solar Co., Ltd. (SS)	Tenunn Gerel Construction LLC (TGC)	
	Truong Thanh Quang Ngai Power and High Technology Joint Stock Company (TTQN)	
Solar Rooftop Power Plant Projects		
Sermasang Infinite Co., Ltd. (SN)	PT Sea Sun Energy (SSE)	
Biomass Power Plant Projects		
Uni Power Tech Company Limited (UPT)		
Wind Power Plant Projects		
Winchai Co., Ltd. (WINCHAI)	Truong Thanh Tra Vinh Wind Power Joint Stock Company (TTTTV)	

Note: *SEG serves as the Group's investment vehicle for power generation projects in Japan.



ACCESS TO SUSTAINABLE AND RELIABLE ENERGY



The significance of access to sustainable and reliable energy to the Group: Beyond being a diverse and experienced leader in the renewable energy sector, the Group is committed to delivering clean, affordable, and consistently available energy for all, including industries, businesses, households, and especially underserved or remote areas.

As part of its sustainable development strategy, the Group has set a target to increase renewable energy generation capacity by over 30% by 2030 through solar, wind, and biomass. This initiative aims to reduce energy inequality and includes providing off-grid solutions tailored to the needs of communities beyond conventional energy infrastructure.

It also supports the United Nations Sustainable Development Goals, specifically ensuring access to clean energy (SDG 7) and fostering sustainable cities and communities (SDG 11).

The goal of increasing clean energy power generation capacity highlights the Group’s sustainable growth and

progress in innovation. It involves integrating advanced energy storage technologies to ensure continuous and reliable power delivery with high efficiency. Additionally, the development of innovative clean energy solutions that are renewable, low-emission, and sustainable, will further strengthen the Group’s position and capabilities.

The Group’s Goal: Increase renewable energy generation capacity by over 30% by 2030.

Installed Capacity (Units: Megawatts)

Electricity Generation by Source for conciseness	2023	2024	2025	2030
Solar Farm	191.5	191.5	213.5	420.8
Solar rooftop	43	45.6	45.6	45.6
Wind Farm	93	93	93	297
Biomass	9.9	9.9	9.9	9.9
Waste to Energy	0	0	0	19.8
Total	337.4	340.0	362.0	793.1





Operational Approach

- Conduct feasibility studies for renewable energy projects in both domestic and international markets.
- Expand investments and increase the number of renewable energy power plants globally.
- Collaborate with stakeholders and secure funding to support energy project development.
- Enhance generation efficiency through innovation and continuous improvement.

Performance Results

1. Renewable Energy Project Development — In February 2024, the Board of Directors approved the following strategic initiatives:

1.1) Investment in two community waste-to-energy projects.

- Community Waste-to-Energy Power Plant Project, Muang Khong Subdistrict Municipality, Nakhon Ratchasima: with an installed capacity of 9.9 MW and an investment value of 2,289.6 million baht, the Company invested at least 80% of the total project value.
- Community Waste-to-Energy Power Plant Project, Ban Song Subdistrict Municipality, Surat Thani: with an installed capacity of 9.9 MW and an investment value of 2,283.4 million baht, the company invested 51% of the total project value.

1.2) A feasibility study was conducted for a 38 MW wind power project in Pingtung County, Taiwan, aimed at expanding investments and increasing the number of power plants.

1.3) The investment in the Winchai Wind Power Plant project was increased to over 4,000 million baht, bringing the company's stake to 100%.

1.4) Construction of the LEO 2 solar farm project in Japan.

1.5) A solar power plant project in Tainan, Taiwan, with an installed capacity of 17 MW and a total investment of up to 1,220 million baht.

1.6) A wind power project in Bago, The Philippines, with an installed capacity of 150 MW and an investment value exceeding 8,000 million baht, with expectations for commercial operations to begin by the end of 2026.

2. Partnering with Stakeholders and Securing Green Financing

In addition to conducting feasibility studies for investments, the Group actively seeks partners with a shared commitment to green energy. This collaboration aims to strengthen efforts in expanding renewable energy power plants, both domestically and internationally. Such international partnerships contribute to the faster achievement of global and national goals. Furthermore, they support mutual growth within the business sector.



2.1) The Company signed a Memorandum of Understanding (MOU) with J&V Technology, Taiwan, to form a partnership for collaboration and investment in a wind energy project.

2.2 The Export-Import Bank of Thailand (EXIM Bank) was another financial institution that signed a loan agreement linked to sustainability operations (Sustainability Linked Loan: SLL) for 2,000 million baht, which the Group used to invest in renewable energy power plant projects both domestically and internationally.



2.3) At the regional level, the Group received approval for a Green Loan from the International Finance Corporation (IFC) for 64 million USD (approximately 2.4 billion baht), to be used for the development of renewable energy power plant projects in Thailand, Vietnam, and Indonesia.





3. Improving Electricity Generation Efficiency

The materials and equipment used in renewable energy electricity generation are classified as advanced technologies that are consistently being developed to improve efficiency. Like other production tools and machinery, each model has a specific lifespan. Therefore, after a period of use, even with proper maintenance, the business may consider replacing or upgrading to newer, improved models, or replacing outdated equipment that has reached the end of its useful life.

The Group's solar farm project in Lopburi began installing solar panels in 2015 and has been continuously maintained, including cleaning the panels at least four times a year. This ongoing maintenance has allowed the farm to meet the electricity delivery requirements as per the contract. However, the Group continues to explore new technologies from solar panel manufacturers and has planned repowering upgrades at the Lopburi solar farm in 2025. Once completed, the efficiency of electricity generation is expected to increase by approximately 15–20% upon completion.

Challenges and Future Plans

Ensuring compliance with Power Purchase Agreements (PPAs) and uninterrupted electricity delivery remains a top priority for renewable energy operations. Any disruption could negatively affect customers, such as halting production or, in the case of medical facilities, interfering with patient care. Therefore, maintaining continuous operations requires high generation efficiency and the use of intelligent technologies to monitor and optimize energy performance.

Another key challenge is setting competitive renewable energy prices to boost demand and accessibility amidst increasing market competition from both new and traditional energy producers. Furthermore, expanding capacity in high-potential areas requires meticulous planning due to potential environmental, biodiversity, and community impacts, often necessitating substantial investment and financial

support. Ultimately, building community trust and securing stakeholder approval through transparent communication is

crucial for demonstrating the long-term sustainable benefits and ensuring project success.

CUSTOMER EMPOWERMENT AND SATISFACTION



The significance of customer empowerment and satisfaction to the Group lies in the recognition that customers are crucial stakeholders who actively drive the widespread transition towards renewable energy. At the same time, reducing greenhouse gas emissions remains a key priority for many customer groups, particularly in the manufacturing, transportation, and energy sectors.

Therefore, customer retention is not only about delivering energy efficiently and continuously. Customers also expect technical support during energy usage, such as maintenance services and performance inspections. The Group provides accurate knowledge about renewable energy even before project commencement. This includes explaining both the quantitative and qualitative benefits to the customer's organization and society at large. Such an approach aligns with the customers' own sustainability agendas and supports high levels of satisfaction.

Even though energy delivery is governed by strict contracts and power purchase agreements, the Group goes beyond meeting efficiency standards. We are also committed to

offering innovative solutions, sharing new knowledge, and presenting new renewable energy projects that provide customers with greater access and benefits. These actions show our commitment to fulfilling diverse energy needs in line with our business goals, vision, and mission.

The Group's Goals:

The Group has established a key objective of maintaining strong relationships with customers to ensure the long-term delivery of clean energy, by striving to achieve the highest level of customer satisfaction.

Topic	2023	2024	2030
Customer satisfaction score	80%	80%	90%
Number of customer complaints	0	0	0

Operational Approaches:

1. The Group is committed to delivering the highest levels of customer satisfaction and creating positive experiences across all customer segments. This is driven by a Customer-Centric strategy that leverages a digital approach aligned with customers' communication technology usage. Through this, the Group enhances customer engagement, delivering value and benefits beyond pricing considerations, while supporting the global mission to reduce greenhouse gas emissions and advance sustainability through the adoption of renewable energy.



- Installation and delivery are conducted in strict compliance with contractual agreements, specific technical requirements, and applicable legal permissions. This operational framework ensures accuracy and accountability for both customers and the Group itself. It facilitates timely project progress and ensures that customers receive the intended benefits in accordance with their operational needs.
- The Group places great importance on collaborating with and participating in customer-led activities, such as fire and evacuation drills, health-promoting sports and charity events. Furthermore, the Group is also developing plans for future initiatives aimed at supporting customers' operations or enhancing value through energy use. These may include hands-on training workshops, exhibitions of new renewable energy technologies, and supporting customer-driven innovation in renewable energy applications.
- To ensure effective management of customer complaints, the Group mandates a review of its customer complaint handling procedures at least once a year.

Performance Results

In 2024, the Group conducted a customer satisfaction survey covering all business segments in Thailand, including solar power plants, rooftop solar systems, wind power plants, and biomass power plants. The survey included 64 customers, representing 100% of the Group's customer base in 2024. The results indicated high satisfaction and a positive customer experience.

Topic	2023	2024
Customer satisfaction score	88%	95%
Number of complaints (cases)	1	0
Review of complaint handling procedures	100%	100%

The Company takes into account customer satisfaction survey results, feedback, and suggestions, as well as customer expectations regarding product usage understanding. These insights are used to enhance operational processes to ensure greater efficiency and deliver value to customers throughout the entire service lifecycle, including initial sales, documentation, permitting, installation, and activation. The Group also organizes training programs that cover fundamental knowledge, through to system inspection and usage control, enabling customers to feel confident in the operation and management of their systems.

In addition, safety remains a top priority for customers, as unexpected accidents can occur at any time. When incidents do arise, it is critical to have clear procedures in place to ensure the safety of both lives and property. This requires responsible personnel within relevant departments, well-defined protocols, and regular drills to ensure preparedness and practical implementation. Thus, the Group collaborates with customers to conduct annual fire and evacuation drills.

The Group also places strong emphasis on building long-term relationships with both existing and potential customers. One key initiative is strengthening brand recognition under the name "Sermuang Power" through active participation in renewable energy forums and exhibitions. In 2024, the Group took part in Future Energy Asia and Future Mobility Asia, this international event showcased renewable energy innovations from over 70 countries. At the event, the Group hosted a booth to present rooftop solar technology and the benefits of its installation, which attracted significant interest from both customers and visitors.

Customer training program on the usage and maintenance of rooftop solar systems



Exhibition introducing the rooftop solar business at Future Energy Asia and Future Mobility Asia 2024



Participated in a fire drill and evacuation exercise organized by the Provincial Electricity Authority (customer) in collaboration with Mukdahan Municipality (local community)





Challenges and Future Plans

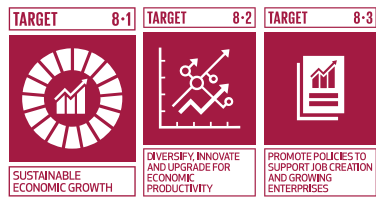
The renewable energy sector in Thailand and across Asia continues to grow, driven by the global momentum toward clean energy adoption and the pursuit of the United Nations Sustainable Development Goals (UN SDGs). This growth has also led to increased competition in the industry. In response to these challenges, the Group is committed to achieving the

following goals:

- Become a leading renewable energy company in Asia.
- Become the preferred renewable energy provider for customers.
- Expand utilization among existing customers.
- Increase the number and segments of new customers.

To achieve these goals successfully, the Group recognizes the importance of developing a highly skilled workforce that can adapt to advancements in renewable energy technologies and the rapid growth of the sector. The Group must also be prepared to respond to changes in regulations or government policies that may be adjusted to better support investment and prioritize public benefit.

EMPOWERING HUMAN CAPITAL FOR SUSTAINABLE GROWTH



The significance of empowering human capital for sustainable growth to the Group: With the rapid expansion of the renewable energy sector, attracting, retaining, and developing talent has become a critical challenge for the Group, which has experienced significant growth in recent years. Human capital is a vital resource in this evolving environment. To address this, the Group has designed its recruitment processes to be diverse, equitable, and inclusive, aligning with international human rights principles, while offering competitive benefits and remuneration packages to attract and retain top talent. At the same time, expanding internal training programs and continuously developing leadership capabilities remain core objectives in building a future-ready workforce. These efforts ensure that employees are equipped for future changes and create pathways for them to grow alongside the business in a sustainable manner.

The Group's Goals:

1. Employee retention rate of more than 90%

2. 100% of employees receive performance evaluations
3. An average of 12 training hours per employee per year
4. 100% of employees complete ESG training accredited by the Stock Exchange of Thailand
5. 100% completion of the training roadmap reviews for all job positions

Operational Approaches:

The Group, through the Human Resources Department, has implemented a comprehensive training plan to ensure all personnel are equipped with the necessary skills and knowledge to perform effectively and adapt to future challenges. The Training Roadmap covers both soft skills and technical skills relevant across all organizational levels and reflects changes in renewable energy, marketing, environment, accounting, and sustainability fields. Training also includes on-the-job learning to ensure correct execution, safe practices, and reduce workplace accidents. Each training program is designed with specific success indicators.

Additionally, the Group has implemented a Talent Management Program to prepare for succession planning and support the long-term career growth of employees, with greater visibility.

Performance Outcomes:

Aligning training plans with individual development plans (IDPs) has led to improved employee performance and clearly visible results. These outcomes serve as indicators for performance appraisals, guiding decisions on compensation adjustments, promotions, and career advancement. This approach motivates employees by showing them tangible career progression within the Group and aligns with the goal of retaining high-potential employees and enabling them to grow professionally alongside the business in a sustainable manner.

In 2024, the Group conducted annual performance evaluations for employees based on criteria and performance indicators jointly set between supervisors and employees as outlined in the annual work plan.

Annual Performance Evaluation: All employees received annual evaluations.

Evaluation	2023	2024
Female	89%	100%
Male	86%	100%

* Appraisal conducted once per year

New Hire Retention Rate

Evaluation	2023	2024
Retention Rate	88%	86%



Employee Training Hours

Training Year	2021	2022	2023	2024
• Avg. training hours/ employee	1.52	10.45	24.00	25.92
Training and employee development budget (unit: baht)				
• Training and seminar expenses	9,685	221,409	194,622	460,000

In addition, the Group recognizes the importance of a sustainable development approach and aims to ensure that all personnel have a unified understanding. Therefore, the "ESG in DNA" program was initiated with the goal that 100%

of employees must complete the online training courses provided by the Stock Exchange of Thailand (ESG 101 and P01).

To Infinity and Beyond: Unleashing Limitless Innovation

The Group views innovation as a strategic capability, driven by the knowledge, creativity, and dedication of its people. Recognizing employees as the foundation of innovation, the Group is committed to strengthening innovation capacity by fostering a workplace culture that actively encourages participation, idea generation, and continuous development. Key initiatives include:

- "Unlocking Innovation Potential for Future Energy Leaders" Training Program: This course aims to enhance employees' understanding of the importance of innovation within the energy industry while building practical skills in using tools such as the Business Model Canvas (BMC) for strategic planning and creating professional pitch decks for presenting innovative ideas.



"DNA" – A knowledge framework on sustainability for all levels of personnel within the organization



Sermang Power Corporation PLC.

ESG Course
Completion

67 employees
(representing **100%** of the employees registered).

The ESG 101 course

67 employees
(**100%** of registered employees).

The P01 course

67 employees
(**100%** of registered employees).

Note: Number of employees reported at the time of registration with SET: 67 persons.
Total training hours on sustainable development (from the 2 courses by SET): 123 hours.





- **Internal Innovation Competition:** This program offers employees the opportunity to apply their knowledge and skills to develop innovative projects. Participants receive guidance from experts at the National Innovation Agency (NIA) to strengthen their proposals and prepare them for real-world application.
- **Innovation Day 2024:** A platform for employees to showcase their innovations under the theme “To Infinity and Beyond.” Winning projects receive support from the Group to further develop and implement their solutions for maximum impact.

These initiatives reflect the Group’s unwavering commitment to cultivating a culture of innovation by empowering employees to contribute meaningfully to sustainable organizational success.

Talent Retention within the Organization

High-potential and top-performing employees often seek career advancement and view growth opportunities within the organization as a priority. The Group is committed to retaining employees at all levels, with the aim of providing everyone with opportunities for promotion and career progression. To support this, the Group has launched the Talent Management Program, which includes clear development plans tailored to each business line and job position. Employees selected for the talent pool benefit from specialized training and development beyond standard programs, focusing on

advanced capabilities aligned with their career trajectory. Talent identification is based on criteria jointly established by the Human Resources Department and departmental supervisors or executives of each department. The Group believes that this program is a key strategy for long-term talent retention, while also serving as a source of motivation for employees to remain and grow with the organization.

Number of employees developed in the Talent Management program

Talent Development	2023	2024
• Total talent employees	2	11
• Female	1	5
• Male	1	6

Spreading Knowledge to Society

As the renewable energy sector continues to grow and represents a sustainable business model, the Group recognizes the importance of developing a workforce that is well-prepared and aligned with the industry’s needs. In response, the Group has initiated partnerships with academic institutions to establish memorandum of understanding (MOU) focused on skill-building and enhancing understanding of renewable energy operations. These collaborations include internship opportunities for students to gain hands-on experience and practical insights through real operational processes.



The initiative is scheduled to launch in 2025 and will be continuously reviewed and improved to ensure the development of a qualified workforce that supports the long-term growth of the renewable energy sector.

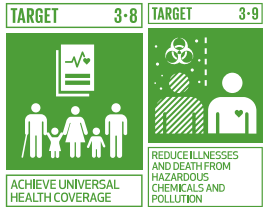
Challenges and Future Plans

To align workforce development with both short-term and long-term business growth, the Group must consider each employee’s readiness for career progression. This involves fostering organizational engagement and helping employees see their potential for advancement. Therefore, the formulation of Individual Development Plans (IDPs) based on a systematic assessment of training needs is a key initiative of the Group. This approach not only helps retain high-potential employees but also ensures readiness for future succession planning.

As the Group advances its ESG-driven direction, embedding a strong understanding of sustainability into day-to-day operations has become increasingly important. Establishing a well-rooted ESG culture within the organization is both a current challenge and a long-term necessity. Deepening employee understanding of ESG principles will enhance accountability and drive purposeful action. Moreover, a well-structured development and training plan helps attract talent aligned with these values and with the future direction of the renewable energy industry.



SAFETY, HEALTH, AND WELL-BEING



The significance of safety, health, and well-being to the Group: The production of renewable energy, whether through solar, wind, or biomass power generation, involves the use of various machinery, equipment, and technologies. Therefore, effective inspection and management of occupational safety risks are of the utmost priority. The Group recognizes that risk governance is not only a fundamental responsibility, but also a continuous opportunity to enhance health and safety practices. These improvements support greater operational efficiency and effectiveness while also demonstrating a strong respect for human rights, particularly in relation to employees who are key stakeholders.

Moreover, safety and health are also critical concerns for all stakeholders across the Group's value chain, including customers, business partners, and local communities. Accordingly, the Group is committed to building a strong safety culture and managing risks proactively, as a foundation for long-term performance improvements. This commitment contributes to better health, quality of life, and overall well-being for both within the workplace and in society at large. It also reinforces the Group's journey toward safety excellence, highlighting the integral connection between a strong safety culture and sustainable business success.

The Group's Goals:

- Zero Work-Related Fatalities maintained consistently
- Maintaining a Zero Lost Time Injury Frequency Rate (LTIFR)
- Operational risk assessments reviewed at least once per year
- Employee health check-up results indicated no recordable work-related ill health
- Maintain certification of Occupational Health and Safety Management System (ISO 45001)

Operational Approaches:

The Group operates in strict compliance with legal requirements related to safety, occupational health, and the working environment through a systematic approach, including the implementation of the Occupational Health and Safety Management System (ISO 45001). This covers the safety of personnel, nearby communities, and all stakeholders, as it pertains to the fundamental human right to safety and health. In addition, the Group places strong emphasis on safety management across all phases of each project, from pre-construction and construction to operation and decommissioning. This comprehensive approach ensures effective delivery of occupational health and safety performance in line with the highest standards.

Occupational Health and Safety Training for Employees

Providing occupational health and safety training for employees and workers is a crucial part of creating a safe and efficient work environment. Such training significantly

reduces the likelihood of accidents and injuries in the workplace and ensures that employees and workers understand work processes correctly, thereby minimizing the risk of errors. The Group organizes health and safety training programs tailored to the nature of the work, as follows:

- Solar Rooftop Design and Installation
- Electrical Installation Standards for Thailand
- Safety Training for Work at Heights
- Basic First Aid Training, including Venomous Snake Bite Management (for Emergency Response Teams)
- Emergency Evacuation Procedures
- Firefighting and Fire Evacuation Drills

Job Safety Risk Assessment

The Group has implemented a rigorous system of documentation and inspection to ensure safety throughout all operational stages. Every activity within the power plant undergoes a comprehensive Job Safety Analysis (JSA), supported by established risk prevention measures. Before any task commences, all personnel including employees, contractors, and partners must secure a work permit. This permit process meticulously verifies individual preparedness and the correct utilization of Personal Protective Equipment (PPE). Such stringent protocols are designed to significantly reduce accidents and mitigate operational risks. Additionally, the Group meticulously records activities posing potential occupational health risks, detailing their respective preventive and corrective measures, as outlined in the table below.



Risk Activity	Preventive and Corrective Measures
<ul style="list-style-type: none"> • Working at Heights 	<ul style="list-style-type: none"> • Establish High Work Management procedures for analyzing hazardous tasks, to be used as a guideline for preventing accidents and emergencies. • Review and understand job safety analysis data to ensure safe operations when working at heights. • Inspect equipment, tools, machinery, and the surrounding environment to ensure safety before performing tasks and using any equipment.
<ul style="list-style-type: none"> • Hot work and chemical use in production 	<ul style="list-style-type: none"> • Inspect the readiness and usability of equipment and tools. • Develop a monthly equipment safety inspection plan and maintain inspection log records. • Conduct emergency drills in case of fire or chemical spills.
<ul style="list-style-type: none"> • Working in confined spaces 	<ul style="list-style-type: none"> • Analyze work for safety. • Apply for permission to work in confined spaces. • Monitor air quality and toxic gas levels. • Prepare and practice using equipment for working in confined spaces.
<ul style="list-style-type: none"> • Working with machinery 	<ul style="list-style-type: none"> • Provide On-the-Job Training (OJT) and awareness for new employees or those changing job functions, with post-training evaluation by department supervisors. • Inspect the operational readiness of machinery. • Report accidents and implement preventive measures. • Install safety guards on hazardous machinery parts.



In addition to accident prevention, the health and well-being of employees remain a key focus for the Group. The Group is committed to maintaining high standards of workplace health and wellness, not only to meet occupational safety requirements, but also to promote hygiene and well-being across office environments and project sites. A range of employee welfare and recreational programs are in place, including annual health check-ups, vaccination campaigns, fitness promotion, and health education through various internal communication channels. The Group also implements

proactive measures to prevent seasonal and emergency disease outbreaks. Further initiatives include leisure and company outings, as well as participation in sports and wellness activities with customers, partners, and stakeholders.

Performance Results

1. Percentage of workforce covered under the Occupational Health and Safety Management System
 - Employees: 6.7%
 - Workers/ Contractors: 27.8%



2. Workplace injury or accident statistics for employees, contractors, and suppliers

From work-related injuries or accidents	2022	2023	2024
Work-related injury for employees			
• Number of lost-time injuries for employees (cases)	0	0	0
• Number of employees incurring work-related lost time injuries resulting in leave exceeding one day (persons)	0	0	0
• Number of work-related fatalities for employees (persons)	0	0	0
Work-related illness for employees			
• Number of lost time illness for employees (cases)	0	0	0
• Number of employee fatalities due to work-related illness (persons)	0	0	0
Work-related injury or accident involving contractors/ suppliers			
• Number of lost-time injuries for contractors/ suppliers cases)	0	0	0
• Number of contractors/ partners incurring work-related lost time injuries resulting in leave exceeding one day (persons)	0	0	0
• Number of work-related fatalities for contractors/ suppliers (persons)	0	0	0
Work-related illness resulting in leave for contractors/ suppliers			
• Number of lost time illness for contractors/ suppliers (cases)	0	0	0
• Number of contractor/ supplier fatalities due to work-related illness (persons)	0	0	0
Annual Health Risk Screening Results (persons)			
• Hearing abnormalities	0	0	0
• Heat stroke	0	0	0
• Chemicals in blood	0	0	0



In addition to regular health check-ups and maintaining hygienic working conditions, the Group also monitors information related to major epidemics, such as the coronavirus outbreak, to implement preventive measures against the spread of disease among employees and their families. In preparation for potential outbreaks, the Group will implement preventive protocols aligned with Ministry of Public Health policies, such as vaccination programs.

In 2024, Uni Powertech Co., Ltd., a subsidiary of the Group operating a biomass power plant, successfully passed the audit to maintain its ISO 45001 certification for occupational health and safety. The audit was conducted by the Thailand Institute of Scientific and Technological Research (TISTR). This certification strengthens confidence among employees, surrounding communities, and stakeholders that the biomass power plant operates in compliance with recognized safety standards.

3. Occupational Health and Safety Training for Employees

Providing knowledge on occupational health and safety is essential for creating a safe and efficient work environment. This training helps employees and workers understand proper work processes and the correct use of protective equipment, which reduces risks, errors, and workplace accidents. The Group organizes annual occupational health and safety training programs, including:

- Firefighting and Evacuation Training
- Safety in Solar Rooftop Power Generation System Design and Installation
- Electrical Installation Standards for Thailand
- Safety Training for Work at Heights
- Basic First Aid Training

- Emergency Response and Evacuation Team Training

Raising Occupational Health and Safety Awareness Among Employees and Workers in the Group

Training Hour	2023	2024
Occupational Health and Safety Training for Employees and Workers	84 Hours	108 Hours

4. Tree planting project to enhance green spaces, biomass power plant, Nakhon Ratchasima Province

To promote employee well-being and create a healthier working environment, the Group has launched a green space initiative. This program aims to reduce pollution and increase greenery, particularly around power plant sites. These areas, which are designed to be open and exposed to maximize solar energy absorption, also offer potential for environmentally conscious landscaping. Trees are carefully positioned in areas that do not impede power generation, such as alongside access roads or surrounding office buildings, providing both natural shade and aesthetic appeal, and occasionally allowing for the cultivation of edible plants. The selected species, including Phayung, Maka Mong, yellow elder, and Bengal Currant, are resilient, low-maintenance, and well-suited to local climates. This initiative will be implemented across all project locations, both domestic and international, with the number of trees adjusted based on land size to support nature-based well-being for employees.

Location/ Number of trees	2023	2024
• Solar Power Plant, Lopburi Province	100	-
• Biomass Power Plant, Nakhon Ratchasima Province	-	40



5. Firefighting and Evacuation Drills (2024)

The Group of Companies also gives importance to and cooperates in occupational health training with other stakeholders, such as customers and business partners, to create understanding and practice correctly in the same direction, without any obstacles in coordination and cooperation in an emergency.

- Fire safety training and evacuation drill conducted at the biomass power plant in Nakhon Ratchasima Province.



2024 Firefighting and Evacuation Drills



Challenges and Future Plans

As with other areas of the Group's operations, establishing a strong safety culture within the organization leads to improved health, enhanced well-being, and increased operational efficiency and effectiveness. The Safety Committee serves

as the foundation for building this culture, overseeing key activities such as risk assessment, safety education, and compliance monitoring across both operational sites and administrative offices.

Consistent data recording, reporting, communication of performance results, and sharing of improvement plans across the entire organization are also critical priorities that must be carried out regularly.



COMMUNITY DEVELOPMENT AND ECONOMIC EMPOWERMENT



The significance of promoting economic and community development to the Group: The sustainability of communities is a key indicator of the successful transition to renewable energy. It also represents a step forward in the Group's commitment to social responsibility, which is a fundamental element of its sustainability strategy. This commitment entails minimizing negative operational impacts on communities, while also striving to create positive impacts for all stakeholders, with particular emphasis on communities located in the areas where the Group operates. The aim is to foster coexistence that is based on mutual support and shared benefit.

Proactive community engagement to communicate accurate information about the Group's renewable energy business and operations is a fundamental responsibility of all Group personnel. Beyond building community trust and credibility, the Group demonstrates its commitment to local development through support for community projects and local employment initiatives that stimulate economic growth. These efforts not only contribute to community and social progress by leveraging the Group's knowledge and expertise, but also instill a spirit of volunteerism among employees, encouraging them to contribute to the public good.

The Group's Goals:

1. Zero community complaints/ zero incidents causing negative impact to the community.

2. Develop, promote, and enhance the quality of life through community committees that listen to and analyze public opinions.
3. Support projects focused on education and skill development to ensure long-term community well-being in line with the Group's growth.
4. Procurement of local raw materials.

Operational Approaches:

1. Community Empowerment

The Group places strong emphasis on building good relationships with local communities to mitigate potential negative operational impacts and associated complaints, while fostering trust and understanding regarding project operations in their areas. Communities are also encouraged to participate in supporting project implementation, such as by providing input on safety issues or reporting incidents that may pose risks. Communicating project information clearly and accessibly, including details about various forms of renewable energy, helps strengthen meaningful community engagement.

Channels for submitting complaints or reporting negative impact incidents:

- Suggestion box located at the project site entrance
- Community committee meetings
- Postal mail: To Audit Committee or Company Secretary Sermasang Power Corporation Public Company Limited 325/14 Lan Luang Road, Si Yaek Mahanak Subdistrict, Dusit District, Bangkok 10300, Thailand
- Telephone: +662 628 0991 – 2
- Website: www.sermasang.com
- E-mail: info@sermsang.co.th

2. Community Survey and Feedback

The Group conducts surveys and collects feedback from residents living near project sites prior to construction. This feedback is compiled into formal reports with

corresponding responses to ensure project development aligns with local needs and community satisfaction. The Group complies with the reporting requirements, including at least one annual report, and promotes community participation through committees that serve as channels for communication and conflict resolution. Additionally, the Group supports various social activities, such as education, cultural and religious traditions, and public service. These are coordinated regularly with relevant local agencies.

To ensure a clear and structured approach to community care, the Group communicates its mitigation measures openly within both the project site and surrounding communities.

3. Compliance and Measurement of Environmental Impact Mitigation Measures on Communities.

3.1 Air Quality Standards

The Group installs plastic panels, fences, or tarpaulins and sprays water in areas where activities may generate dust, including access roads to the project site. This is done at least twice a day (morning and afternoon) or adjusted as appropriate based on weather conditions. All trucks transporting loose materials from demolition sites are covered during transport. Vehicles must be cleaned thoroughly before exiting the project site, with particular attention given to the wheels and undercarriages, in order to prevent dirt, mud, or gravel from causing road hazards and pollution.

3.2 Noise Control Standards

The Group informs communities of potentially noisy demolition activities at least two weeks in advance. Such activities are limited to daytime hours unless continuous work is required. In such cases, community leaders must be notified at least seven days prior. Solid fences or barriers taller than eye level are installed along demolition areas adjacent to sensitive areas. If noise barriers are used, they should be placed as close as possible to the source. Workers are provided with hearing protection, and noise levels are kept within regulatory



limits. Dropping materials from heights is avoided; however, if necessary, the impact noise is reduced using soft materials such as rubber sheets or carpets.

3.3 Water Quality Standards

The Group establishes temporary field offices and worker accommodations equipped with hygienic toilets located at least 30 meters from natural water sources. Prefabricated wastewater treatment units are installed to treat sewage before discharge, in accordance with legal standards. Untreated waste is prohibited from entering water bodies. Wastewater is disposed of or treated in accordance with regulations. If groundwater is used during demolition, appropriate permits must be obtained from the responsible authority.

3.4 Transportation and Traffic Standards

The Group installs clearly visible signage and warning signals for both day and night at least 100 meters before demolition areas. All drivers involved in construction projects are trained and instructed to strictly follow traffic regulations. If any traffic signs or road surfaces are damaged due to construction activities, immediate repairs must be taken.

3.5 Waste and Solid Waste Management Standards

The Group provides waste containers for garbage and disposal equipment in sufficient quantities at worksites and worker accommodations. Coordination is carried out with local authorities to ensure proper and lawful waste management.

3.6 Economic, Social, and Communities Participation Standards

The Group communicates and publicizes information regarding the demolition of equipment, machinery, or buildings at power plants by placing announcements at the project site or through other appropriate formats. The aim is

to ensure that the public and stakeholders are informed at least seven days before demolition begins. Project personnel are also deployed regularly during the demolition period to gather feedback and understand environmental concerns from nearby communities. A coordination center is established to receive suggestions and complaints regarding any issues caused by the demolition.

3.7 Site Restoration Standards

Upon completion of all demolition work, the Group will proceed to rehabilitate the project area to ensure it is suitable for future land development. The goal is to align with the current environmental conditions as closely as possible, without causing obstacles to safety or the environment.

4. Economic Promotion and Development

4.1 The Group prioritizes local employment whenever there is a need for manpower and when qualified individuals from the community meet the Group's requirements. This approach not only helps reduce recruitment costs but also benefits the community by creating job opportunities close to home.

4.2 The Group supports the local economy by purchasing agricultural raw materials for use in biomass power plants. This includes buying agricultural by-products that are not suitable for primary use, such as rice straw, corn cobs, wood scraps, sugarcane stalks and leaves. This supports local farmers and strengthens the community economy.

5. Quality of Life

To foster sustainable development alongside the community, the Group has launched the "Light for Life" project as a flagship initiative to enhance community well-being. Initiated in late 2023, this project leverages the Group's technical expertise

(CSR in Process) to provide benefits to public institutions such as schools, temples, and community spaces by installing rooftop solar power systems. These installations help reduce electricity costs, and the Group collects data for impact measurement and comparison. Additionally, systems are monitored through internet-connected sensors where signals are available, and staff are assigned to provide ongoing maintenance.

Performance Results

1. Community Impact Assessment

In 2024, the Group conducted a community impact assessment and satisfaction survey among 4 local communities near its project sites, with a total of 48 respondents.

**Results of the Community Impact Assessment Survey:**

Survey/ Evaluation	unit	2022	2023	2024
• Number of communities assessed for social and environmental impact	communities	1	1	4
• Total number of surrounding communities	communities	1	1	4
• Local community complaints	cases	0	0	1

2. Community Relations Management

In 2024, the Group initiated a survey to evaluate satisfaction with its community relations management. The survey covered four communities located near its project sites,

with 48 participants in total. These included the solar power project in Lopburi, the wind power project in Mukdahan, and the biomass power project in Nakhon Ratchasima. Respondents included local residents as well as executives

and staff from local government agencies, such as Subdistrict Administrative Organizations. The overall average satisfaction rate was 92.4 percent

Satisfaction Survey	Solar Farm Project Lopburi/ Thailand	Solar Farm Project Ratchaburi/ Thailand	Wind Farm Project Mukdahan/ Thailand	Biomass Project Nakhon Ratchasima/ Thailand
Community satisfaction	90.5	89.1	88.9	97.9

3. Complaint Management

In 2024, one complaint was received from a nearby community regarding the biomass power plant in Nakhon Ratchasima. The issue involved smoke emissions from the plant. The Group immediately investigated the cause and found that the abnormal smoke was due to high moisture content in the fuel, which led to incomplete combustion. While the smoke volume was higher than normal, it was not hazardous to air quality. A satisfaction survey conducted among the community that filed the complaint revealed that 95% of respondents felt inadequately informed. As a result, the Group reviewed the issue, and the board approved a budget to improve community communication and ensure more comprehensive information outreach.

To expand communication efforts regarding pollution control, the Group plans to install a real-time emissions display

board in front of the power plant. This will operate similarly to the online emission monitoring system currently used to transmit data to the Pollution Monitoring and Warning System (POMS) under the Department of Industrial Works. Installation is expected to be completed by June 2025.

Response to Complaints/ Impact Events**Case Study: Biomass Power Plant Smoke Complaint**

On 16 May 2024, the Company received a written complaint from the community concerning smoke emissions from the biomass power plant in Sikhio District, Nakhon Ratchasima. The Company proceeded with the following actions:

- May 16, 2024: The Company invited local authorities to visit the power plant and brief about its operations. Participants included the President of the Subdistrict

Administrative Organization (SAO), the Deputy Chief Executive, the legal officer, the public health officer, and local residents.

- May 17, 2024: The Company submitted an explanatory document and the ash testing report to the SAO.
- May 31, 2024: The Company submitted a report to the Provincial Industry Office, outlining its pollution prevention, monitoring, and control measures.
- June 12, 2024: The Provincial Industry Office visited the biomass power plant and issued a signed confirmation that emission levels from the plant's air treatment system complied with legal standards and did not pose a health risk to the community.



- June 27, 2024: The Provincial Industry Office issued a formal notice instructing the Company to strengthen pollution control and monitoring.

After inspections were completed and findings confirmed that emissions were within standard limits and posed no health risks, the SAO communicated the results to the community that filed the complaint.

4. Procurement of Agricultural Produce as Raw Materials

The biomass power plant in Nakhon Ratchasima Province is located near agricultural zones where various cash crops such as sugarcane and corn are cultivated. After harvest, a significant number of agricultural residues remains, including dried corn cobs, sugarcane stalks and leaves, and other plant-based waste that cannot be used further in the production process.

The Group recognizes the opportunity to create value from these agricultural residues by turning them into raw materials for biomass energy production. This initiative not only generates additional income for local farmers and strengthens the local economy but also contributes to society through the generation of renewable electricity. These benefits were key drivers for the Group's investment in biomass power plants in this region.

Purchase of agricultural products as raw materials (for biomass power plants)

Purchase of agricultural products as raw materials	2023	2024
• Quantity of products purchased (tons)	147,193.0	151,494.2
• Proportion of purchase of local raw materials (from cost of sales and services)	7.8%	7.1%

5. Light for Life Project

In 2024, the Group continued to monitor the performance of the solar rooftop power generation system installed at the Ban Wang Khon Khwang Child Development Center in Lopburi, which was implemented in 2023. The equipment is inspected twice a year, and the resulting electricity cost savings are reviewed to ensure that the system continues to operate efficiently.

Additionally, the Group expanded the Light for Life project to two new sites in Sakon Nakhon Province: Nakhawittaya School and Tha Samran Temple. These installations aim to enhance energy access and promote equitable availability of clean energy in public institutions.

Results of the installation of solar rooftop power generation

Site	Installation area size (m ²)	Production capacity	Electricity produced 2024 (kWh)	Value of electricity produced 2024 (Baht)	Average monthly electricity cost savings (Baht)	Greenhouse gas emissions reduced (kg CO ₂ equivalent per year)
• Nakha Witthaya School, Sakon Nakhon Province	19	4.3 kW	1,504	7,540	2,863	752
• Tha Samran Temple, Sakon Nakhon Province	14	3.1 kW	1,034	5,116	2,020	517
• Wang Khon Khwang Child Development Center, Lopburi Province (Installed in November 2023, ongoing in 2024)	62	13.3 kW	23,303	119,940	9,995	11,649

Installed a solar rooftop power generation system at Nakha Witthaya School, Sakon Nakhon Province





Installed a solar rooftop power generation system at Tha Samran Temple, Sakon Nakhon Province



6. "Weed for Feed" Project

In 2024, the Group launched the "Weed for Feed" project, which distributes weeds removed from solar power plant sites to local farmers for use as animal feed. The initiative transforms unwanted plant matter into something useful and valuable, following the concept of "Waste to Value." Regular weed removal is necessary, typically twice a year, and in

some project sites, up to five times annually. This is done to maintain site safety and prevent hazards caused by venomous animals such as snakes.

Due to the large volume of weeds generated, burning them could lead to environmental pollution and pose health risks to

The amount of weeds delivered to farmers

Site	Grass cutting area size (m ²)	Number of times cut per year	Amount of grass cut per year (tons)	Annual Grass Value (Baht)
• Solar Farm Project Lopburi	560,000.0	2	560	560,000.0
• Solar Farm Project Ratchaburi	29,842.6	5	74.6	74,606.0

*The price of fresh grass is 1 baht per kilogram (Reference: Animal Feed Development Division, Department of Livestock Development, Ministry of Agriculture and Cooperatives). On average, 1 square meter of land yields 0.5 kilograms of grass when cut.



nearby communities. The Group views this distribution effort as a way to build mutual support with local communities. It also enhances public understanding of the Group's clean energy operations and reinforces trust. As a result, the project has become part of the Group's ongoing action plan and will be expanded to other sites in the future.

7. Empowering Vulnerable Groups in the Community

Local communities consist of both long-established residents and migrants who have relocated for work, resulting in increased population diversity and rising demand for public infrastructure, healthcare, transportation, and essential services. While all groups strive for physical and mental well-being, access to services and employment opportunities may not be equal for everyone. This disparity can limit quality of life for vulnerable populations and highlights the need for inclusive support.

The Group places importance on supporting vulnerable community groups by promoting equitable access. This approach aligns with the Group's sustainability strategy, particularly its focus on expanding energy access. It also supports Sustainable Development Goal 10: Reduced Inequalities. One such initiative involves support for a mushroom cultivation house project for psychiatric patients residing in the Self-Help Settlement near the Rom Klao Wind Farm in Mukdahan Province. The project enables participants to grow mushrooms for daily consumption and also provides therapeutic activities that support mental health.



8. Support for Social Activities

Budget to support social activities.

(Unit: Baht)

Social Activities	2023	2024
• Education and Sports	170,523	276,312
• Traditions, culture, and religion	253,000	205,744
• Environmental	0	559,286
• Public Interest and Community Services	435,500	370,208
• Promote safety	11,864	58,274
• Others	0	94,190
Total budget for Social Activities	870,887	1,564,014

Note: Includes contributions from all domestic and international subsidiaries.

Project: Sikhio Run 2024
Activity: Support public welfare
Given to: Sikhio Hospital
Amount: 23,600 Baht
Operated by Biomass Power Plant,
Nakhon Ratchasima Province



Project: Giving gifts and participating
in Children's Day activities
Activity: Supporting traditions
Given to: Ban Thanon Khot School
Amount: 4,600 Baht
Operated by Biomass Power Plant,
Nakhon Ratchasima Province



Project: Build a mushroom house
and support equipment
Activity: Support public welfare
Given to: Vulnerable groups in Self-Help Settlements
Amount: 32,816 Baht
Operated by Romklao Wind Farm,
Mukdahan Province





Project: Support public service for safety tents, during the 7 dangerous days of Songkran Festival

Activity: Promote safety

Given to: Sikhio Community Checkpoint

Amount: 2,594 Baht

Operated by Biomass Power Plant, Nakhon Ratchasima Province



Project: Donate 50 fire extinguishers

Activity: Promote safety

Given to: Households in Nguyen Binh district

Amount: 15,649 Baht

Operated by Truong Thanh Quang Ngai Power and High Technology Joint Stock Company



Project: Give away 20 gift sets

Activity: Support public welfare

Given to: Disadvantaged families and students who participated in the Green Summer Volunteer Campaign, Tra Vinh Province

Amount: 8,087 Baht

Operated by Truong Thanh Tra Vinh Wind Power Joint Stock Company



Challenges and Future Plans

Local employment remains a key focus in promoting community economic development and expanding livelihood opportunities for residents. At present, the Group hires local workers on a non-permanent basis for non-technical tasks such as solar panel cleaning. Operational and technical roles continue to be fulfilled by service providers under contractual agreements. However, there are local vocational graduates whose skills may align with the Group's long-term workforce needs. The Group may consider hiring these individuals as permanent employees once vendor contracts conclude, to build in-house expertise, strengthen workforce capabilities, and improve operational efficiency through direct control. This also helps reduce risks associated with contractor non-compliance. In parallel, the Group may explore partnerships with local educational institutions to provide internships for students whose fields of study match the

Group's manpower needs. This offers an opportunity to support future workforce development while also promoting access to education for youth.

The continuation and expansion of the Light for Life project in local areas is another priority. The Group may allocate a dedicated annual budget to enable planning and implementation beyond sites located near power plants, schools, or temples, allowing a broader range of beneficiaries to access the Group's expertise in renewable energy.

Effective engagement requires consistent and ongoing communication channels. These mechanisms support inclusivity and encourage constructive exchange of views to build trust with key stakeholders. Engagement processes should be managed as a cyclical system, with continuous development and refinement to ensure meaningful participation and

efficient outcomes. Expected benefits include:

1. Building trust.
2. Identifying creative solutions that align with social and environmental contexts.
3. Reducing the risk of conflict and confrontation.
4. Establishing open and transparent communication channels among all involved parties to maintain trust, identify stakeholder concerns, and minimize conflict.
5. Enhancing stakeholder knowledge, understanding, and acceptance, especially among local communities, regarding the importance of renewable energy and its role in supporting community development.



HUMAN & LABOR RIGHTS AND FAIR WORKING CONDITIONS



The significance of human rights and fair working conditions to the Group: The Group is committed to sustainable work opportunities through the projects, ensuring alignment with labor standards, legal wage agreements, and providing living wages. The Group recognizes the right to association and collective bargaining, respecting and supporting human rights protection both domestically and internationally. Given our predominantly local hires and the inherent labor risks in our projects, we actively address modern slavery to prevent forced labor and human trafficking within the renewable energy sector and its supply chain. This demonstrates our commitment to ethical and honest operations in all business dealings.

Our practices are guided by global frameworks, notably the U.N. Guiding Principles on Business and Human Rights (UNGPs). While considered soft law, these principles are increasingly foundational for domestic regulations. Additionally, jurisdictions where our projects are located may have direct, binding laws that require strict compliance. Human rights risks in renewable energy projects are escalating, often intertwined with climate change concerns. Even though international climate agreements may not directly bind private entities, governments are increasingly holding companies accountable for reducing greenhouse gas emissions, making human rights and climate action mutually reinforcing priorities.

Renewable energy development can significantly impact local communities, particularly concerning land acquisition and labor rights. For instance, investments in wind or solar projects might affect indigenous peoples' rights, necessitating compliance with national and international obligations. Comprehensive Human Rights Due Diligence (HRDD) is crucial; it not only mitigates these risks but also provides a platform for continuous stakeholder engagement, ultimately contributing to a long-term social license to operate.

Human rights considerations are also critical in the sourcing of raw materials. Energy storage technologies, such as batteries, rely on minerals like lithium, nickel, and zinc. Their extraction processes are closely scrutinized due to potential impacts on labor rights and indigenous communities. Similarly, during solar panel production, workers might be exposed to hazardous chemicals like cadmium. Therefore, renewable energy businesses must carefully consider material origins, especially from regions with trade control risks or human rights controversies. HRDD must extend to the downstream value chain, including the responsible disposal of technologies at their end-of-life. We also remain vigilant about new partnerships introducing additional human rights risks.

To address these challenges holistically, the Group emphasizes fair labor practices through its recruitment policies and procedures. These promote equitable treatment for employees, partners, and contractors, including monitoring working conditions with a focus on occupational safety, and encouraging fair compensation for improved quality of life. A responsible supply chain is a core pillar of our sustainability strategy, supported by a Partner Code of Conduct that guides

all parties in upholding human rights and labor standards throughout the value chain.

The Group's Goals:

1. Review human rights risk assessments to ensure comprehensive coverage of all stakeholder groups.
2. All employees must receive human rights training by 2030.
3. Promote human rights practices and eliminate forced labor within the supply chain.
4. Achieve employee satisfaction and engagement rate of no less than 80 %.

Operational approaches:

The Group regularly reviews its human rights policies and operational procedures, ensuring they remain aligned with legal requirements, regulations, and evolving social contexts. These updates are communicated organization-wide and to external stakeholders. The Group also revisits its human rights risk assessments to ensure all stakeholder groups are included, with a commitment to avoiding any activities that may constitute human rights violations or legal infractions.

The Group supports and adheres to the Universal Declaration of Human Rights (UDHR), the United Nations Global Compact (UNGC), and the core labor standards of the International Labour Organization (ILO).



Performance Results

In 2024, the Group conducted a review of human rights risk assessments across four key stakeholder groups, as follows:

Human Rights Risk Assessment of the Group’s Stakeholders

Employees	Communities	Suppliers/ Contractors	Customers/ Consumers
Working conditions	Standard of living	Working conditions	Health and Safety
Health and Safety	Health and Safety	Health and safety	Personal data protection
<ul style="list-style-type: none">• Freedom of association• Right to organize• Right to collective bargaining	<ul style="list-style-type: none">• Land Acquisition• Resettlement	Discrimination against business partners/ contractors during procurement and when working on site	
<ul style="list-style-type: none">• Discrimination• Human rights violations		Personal data protection	
Use of illegal labor		Use of illegal labor	
Personal data protection			



The Group promotes acceptance of diversity and equal coexistence. All stakeholder groups can be confident that there is no discrimination in recruitment, human resource management, training, or employee development. The Group ensures fairness regardless of age, disability, gender, marital status, pregnancy and maternity leave, political opinion, race or ethnicity, religion or belief, sexual orientation, socioeconomic background, trade union membership or activity, work arrangements, family status, or any

other factor unrelated to job performance. As of 2024, all Group employees were of Thai nationality.

The Group has established a code of conduct and clearly communicated disciplinary rules to all employees. Violations may result in verbal warnings or, in more serious cases, disciplinary action. The severity of the penalty depends on the nature of the offense.



Human Rights of Employees

1. Employee Human Rights

Number of employees	2022	2023	2024
Number of employees classified by gender (unit: people)			
• All employees	42	68	111
• Male employees	21	34	59
• Female Employees	21	34	52
Number of Male employees classified by position (unit: people)			
• Senior Executive	3	3	3
• Manager/ Assistant Manager	8	10	13
• Staff	10	21	43
Number of Female employees classified by position (unit: people)			
• Senior Executive	1	1	1
• Manager/ Assistant Manager	8	12	4
• Staff	12	21	47
Number of employees who are disabled or disadvantaged (unit: people)			
• Number of employees with disabilities or from disadvantaged groups	0	0	0

Note: The Group is not subject to the legal requirement to employ persons with disabilities or other disadvantaged individuals.



2. Voluntary Employee Resignations

Number of Voluntary Resignations	2022	2023	2024
Number of employees who voluntarily resigned, classified by gender (unit: people)			
• Total voluntary resignations	11	8	18
• Male Employees	4	2	11
• Female Employees	7	6	7
• Major labor disputes	None	None	None

3. Parental Leave

The Group places great importance on providing appropriate welfare and parental leave to support women's human rights as mothers and to promote fair employment

practices in accordance with labor law. A supportive environment for both physical and mental well-being helps reduce stress and anxiety during pregnancy and after childbirth. Therefore, the Group provides parental leave

benefits to support employees during this important stage of family life. This aligns with the principle of children's rights, particularly the right to receive proper care and breastfeeding during infancy.

Number of employees who took parental leave	2022	2023	2024
• Total number of employees entitled to parental leave	21	34	52
• Number of employees who took parental leave	0	0	0
• Number of employees who returned to work after parental leave and remained employed for at least 12 months	0	0	0

4. Employee Compensation

The Group conducts labor market surveys in the renewable energy industry and related sectors to benchmark and

determine appropriate compensation levels. This data is used to set salary offers for new hires and guide annual salary adjustments for current employees based on performance

evaluations. These efforts help motivate employees, ensure competitiveness in the labor market, and reduce turnover rates.

Employee compensation	unit	2022	2023	2024
• Total compensation of all employees	Baht	30,351,934	42,232,162	65,960,000
• Compensation ratio between female and male employees	%	0.52	0.88	1.15

* Excluding executive compensation



5. Provident fund

Employees who are members of the provident fund	unit	2022	2023	2024
• Total number of employees participating in the provident fund	Persons	29	28	78
• Percentage of employees participating in the provident fund relative to total employees	%	69.05%	66.67%	70.27%
• Amount of money that the Group contributes to the provident fund	Million baht	2.61	2.22	3.82
• Employer contributions to the provident fund as a percentage of total employee compensation	%	5%	5%	5%

6. Incidents of Discrimination and Remedial Actions

Discrimination	unit	2022	2023	2024
• Number of discrimination incidents reported	Cases	0	0	0
• Number of incidents confirmed by internal or external investigations	Situation	0	0	0
• Number of incidents currently under remediation process	Situation	0	0	0

7. Employee Satisfaction and Engagement

The Group conducts annual employee satisfaction

surveys at all project sites in Thailand. In 2024, the Group implemented several initiatives based on the findings and

suggestions from the 2023 survey, aiming to improve working conditions and operational efficiency.

Survey Result	unit	2023	2024
• Employee satisfaction and organizational engagement score	%	84	84.3



8. Initiatives Developed from the 2023 Employee Satisfaction Survey and Recommendations

8.1 Healthy Employees, Healthy Organization" Welfare Enhancement Program

Based on feedback from the 2023 employee satisfaction survey, especially regarding health benefits, the Group has recognized the importance of employee well-being. In 2024, the Group enhanced and expanded its healthcare welfare offerings to be more comprehensive and supportive. The details are as follows:

1. Annual Health Check-up Program: Continued implementation to help employees monitor their health status and seek timely treatment when abnormalities are detected.
2. Increased Outpatient (OPD) Medical Allowance: To ensure employees receive adequate medical treatment.
3. Increased Accident Medical Allowance: To help cover expenses arising from unexpected accidents.
4. Increased Room and Meal Allowance: To ensure employees can recover comfortably during hospital stays.

The Group believes that employee health is a fundamental pillar of a strong organization. These welfare enhancements reflect the Company's commitment to providing the best care for its people, enabling them to maintain physical and mental well-being and to be a driving force behind the Company's sustainable growth.

8.2 Driving Operational Excellence with ERP and Digital Transformation

Based on employee feedback collected during the 2023 satisfaction survey, the Group received suggestions

to implement tools that support work efficiency, including ERP systems. As a result, the Group has invested in implementing Microsoft Dynamics ERP, a modern enterprise resource planning solution. This system integrates real-time data processing across functions to accelerate workflows, reduce errors, and eliminate redundancy in multiple systems, such as sales and accounts receivable.

In the current digital era, business systems and server infrastructure are often cloud-based and available via monthly subscriptions, eliminating the need for heavy upfront investment. The Group has taken these suggestions seriously and is implementing Microsoft Dynamics ERP with input from cross-functional teams. The aim is to tailor the system to align with existing operations and business context. The Group expects this system to enhance efficiency and drive operational excellence, with go-live targeted for 2026.

Human Rights of Local Communities

With respect to communities, the Group has established a clear policy to conduct business in ways that benefit both the economy and society. It is committed to being a responsible corporate citizen, fully complying with all applicable laws and regulations. The Group continuously works to improve quality of life in the communities where its projects are located and places importance on the well-being of all stakeholders involved.

Plans are in place to prevent negative environmental impacts on the community, such as avoiding competition for water resources, preventing pollution, and minimizing traffic disruptions. Community committees are also established to collect and analyze community feedback through periodic meetings. Relevant project information and developments are reported back to local stakeholders.

Human Rights of Contractors/ Suppliers

The promotion of human rights and prevention of forced labor are fundamental to responsible supply chains. The Group

is aware of potential risks of human rights violations in the renewable energy supply chain, particularly when working with new contractors or partners. To mitigate this, the Group avoids direct procurement from high-risk areas and enforces strict supplier screening processes. Contractors and suppliers are required to have human rights policies that comply with both national and international labor standards.

To support the Group's human rights commitments, the following ethical sourcing practices have been established and embedded in company policy:

- All contracts must include terms consistent with the Sustainable Code of Conduct for Suppliers, covering both forced labor and human rights for primary and subcontracted suppliers.
- The Group has implemented a supply chain management framework with traceability to ensure accountability and transparency in product sourcing.

Human Rights of Customer

The Group recognizes that equitable access to affordable clean energy is a fundamental right, particularly for customers from communities and vulnerable groups. While most current customers are from the energy and industrial sectors, the Group places importance on expanding accessibility for underserved populations.

Consumer protection and transparency are also key priorities. The Group ensures that all information related to pricing, contractual terms, and claims regarding renewable energy is accurate and clearly communicated. This helps prevent misleading advertisements and ensures that customers are well-informed when making decisions.

As digital technologies become increasingly embedded in both daily life and business operations, the importance of personal data protection continues to grow. The Group



acknowledges the risks that accompany digital reliance, including cyberattacks, data breaches, theft, and loss. To address these challenges, the Group has implemented a robust privacy policy that aligns with the Personal Data

Protection Act B.E. 2562 (PDPA). This ensures that all personal data collected is processed legally, securely, and solely for its intended purposes.

Complaints that have been investigated and confirmed

Issues of complaint	unit	2022	2023	2024
Complaints regarding personal data breaches				
• Complaints from external parties	Cases	0	0	0
• Complaints from regulatory agencies	Cases	0	0	0
• Number of customer data records leaked, stolen, or lost	Cases	0	0	0
Complaints regarding human rights violations				
• Complaints of human rights violations	Cases	0	0	1*Community

***Note:** Explained in the section on Community Development and Economic Empowerment.

Channels to file complaints.

1. By mail: To Audit Committee or Company Secretary
Sermasang Power Corporation Public Company Limited
325/14 Lan Luang Road, Si Yaek Mahanak Subdistrict,
Dusit District, Bangkok 10300, Thailand
2. By telephone: +66 2 628 0991 - 2
3. Website: www.sermasang.com
4. E-mail: info@sermsang.co.th

Challenges and Future Plans

As the renewable energy business continues to grow, key human rights risks must be addressed through prevention and mitigation. A strong human rights policy serves as the foundation for developing and implementing renewable energy projects in ways that are widely accepted by stakeholders.

A 2024 assessment conducted by the Business & Human Rights Resource Centre*, focusing on companies operating or developing wind and solar projects in four key Southeast Asian countries (Vietnam, Thailand, Malaysia, and the Philippines), highlighted concerns over existing gaps in human rights and environmental policies. These shortcomings

have the potential to cause adverse impacts on local communities. The study identified several essential components of effective human rights implementation, including:

- A clear public commitment to respecting internationally recognized human rights across all business operations.
- Specific declarations to uphold indigenous rights, along with explanations of how these rights are protected.
- The establishment of regular engagement with legitimate community representatives to assess human rights risks associated with business activities.



- The development of initiatives that enable communities to benefit from access to renewable energy in the regions where companies operate.
- A failure to incorporate these components can result in community conflict, project delays or suspensions, and increased operational costs. Business models must therefore evolve to support a just energy transition

that delivers benefits to companies, investors, and communities alike. This transition should be guided by three core principles: shared prosperity, respect for human rights and social protection, and fair and inclusive negotiation processes. These principles are essential to building public trust and achieving long-term positive impact for communities, workers, and the businesses themselves.

- Ongoing monitoring of emerging human rights issues, combined with a comprehensive and regularly updated due diligence process, will continue to strengthen the Group's credibility and contribute to its long-term success in managing human rights risks.

Source: *Human rights in Southeast Asia's renewable energy transition: Analyzing company policies, Business & Human Rights Resource Centre



06

GOVERNANCE SUSTAINABILITY





SUSTAINABILITY IN CORPORATE GOVERNANCE

The Group is committed to upholding the principles of corporate governance and good business practices, placing a strong emphasis on transparency, responsibility, and business ethics. Additionally, the Group aims to build trust with its stakeholders and reduce risks that may impact business operations. The Group is dedicated to complying with all relevant laws and regulations while continuously developing and refining governance policies to align with international best practices.

The Group's governance policies emphasize ethical leadership, responsible decision-making, and transparent operations through the following key approaches:

- **Transparency and Responsibility:** Ensure timely and accurate disclosure of material information to

stakeholders to support transparent, fair, and effective management.

- **Risk Management and Legal Compliance:** Establish an efficient risk management framework to identify, assess, and mitigate risks related to operations, finance, and sustainability, while adhering strictly to all applicable laws and regulations.
- **Anti-Corruption and Business Ethics:** Commit to a strict anti-corruption policy and prohibit unethical behavior, with a clear code of conduct, promote whistleblowing mechanisms, and foster an ethical organizational culture.
- **Stakeholder Engagement and Social Responsibility:** Cultivate strong relationships with shareholders, employees, customers, and other stakeholders to ensure that business practices align with societal expectations.

- **Innovation and Sustainable Growth:** Integrate sustainability into strategic planning, drive innovation, and create long-term shared value for both the Company and society.

As a leader in the renewable energy sector, the Group is committed to raising corporate governance standards as a model of excellence, driving sustainable growth, and building trust with investors to ensure long-term sustainability for the organization.

The scope of sustainability performance report for 2024 in the area of corporate governance includes transparency and ethical management, anti-corruption practices, product and service quality development, expansion and growth of the renewable energy market, financial sustainability, supply chain management, and promoting innovation. This report covers both domestic and international subsidiaries of the Group as follows:

Domestic Group of Companies	International Group of Companies	
Solar Power Plant Projects		
Sermasang Palang Ngan Co., Ltd. (SPN)	Surge Energy Corporation Limited (SEG)*	
Sermasang Solar Co., Ltd. (SS)	Tenunn Gerel Construction LLC (TGC)	
	Truong Thanh Quang Ngai Power and High Technology Joint Stock Company (TTQN)	
Solar Rooftop Power Plant Projects		
Sermasang Infinite Co., Ltd. (SN)	PT Sea Sun Energy (SSE)	
Biomass Power Plant Projects		
Uni Power Tech Company Limited (UPT)		
Wind Power Plant Projects		
Winchai Co., Ltd. (WINCHAI)	Truong Thanh Tra Vinh Wind Power Joint Stock Company (TTTTV)	

Note: *SEG serves as the Group's investment vehicle for power generation projects in Japan.



FINANCIAL SUSTAINABILITY AND ACCESS TO GREEN FINANCE



The significance of financial sustainability and access to green finance to the Group: Maintaining financial sustainability and access to green financing sources is a critical factor in the Group's business growth, operational stability, and long-term competitiveness. In the renewable energy industry, securing capital to initiate energy projects is both important and necessary. Strong financial health enables the Group to continuously expand its clean energy portfolio while managing financial risks effectively. This foundation is crucial for ensuring steady development and resilience in a dynamic market environment.

As demand for renewable energy continues to grow, green financing mechanisms such as Green Loans, Sustainability-

Linked Loans, and Climate Bonds offer significant opportunities. These instruments allow the Group to access low-interest loans and favorable financial terms, which help reduce overall financial costs, improve cash flow management, and increase available capital for future investments. Moreover, aligning with international sustainable finance frameworks enhances the Group's credibility among investors, financial institutions, and other stakeholders. Reliable access to funding is critical to expanding renewable energy projects in a capital-intensive industry. Financial stability remains a key enabler for delivering clean energy sustainably, while maintaining profitability and financial flexibility in an increasingly competitive market.

The Group's Goals: To establish long-term financial stability and enhance access to green financing sources by optimizing the capital structure, reducing financial costs, and aligning with sustainable investment frameworks. These efforts support the expansion of renewable energy businesses through the following approaches:

1. Access low-interest green financing – Apply for Green Loans or Green Bonds with favorable financial terms to reduce financial costs and enhance capital efficiency.
2. Maintain strong financial standing – Strengthen business performance and improve risk management to enhance the Group's creditworthiness and increase access to better financial opportunities.

The Operational Approach: To efficiently access low-cost financing, strengthen financial stability, and accelerate the transition toward a fully sustainable renewable energy portfolio. At the same time, the Group aims to maintain profitability and long-term competitiveness through the following actions:

1. **Comply with sustainable finance standards** – Align financial practices with the Thailand Taxonomy and ESG investment criteria to attract investors who focus on sustainability-oriented companies.





2. Enhance transparency and build investor confidence –
Integrate ESG into business strategy, addressing environmental, social, and governance issues throughout all processes. This includes the development of ESG reports, disclosure of financial and impact-related information, and performance evaluation to increase

the confidence of investors and stakeholders who prioritize sustainability.

access financial resources that are well-suited for renewable energy projects.

3. Build partnerships with financial institutions –
Develop collaborations with Green Banks, ESG-focused development finance institutions, and impact investors to

Performance Results

1. As of December 31, 2024, the Group had a Green Loan credit facility totaling 2,123 million baht, intended for investment in green power plants across Asia. The full amount

of 2,123 million baht has been utilized (this excludes the EXIM Sustainability-Linked Loan [SLL], which is aimed at incentivizing businesses to shift toward more sustainable practices).



2. The Green Loan totaling 2,123 million baht has been allocated to the following projects:

Project	Unit	Projects that have already been launched						Projects under construction			Total
		SPN	LEO1	Yamaga	Zouen	WINCHAI	WVO	NKH1	SKN3	RCB1	
Distribution proportion	%	22.09%	16.16%	10.18%	4.90%	32.21%	2.73%	2.59%	5.09%	4.05%	100%
Green Loan	Million baht	469	343	216	104	683.81	58	55	108	86	2,123
Location/ Country	-	Lopburi/ Thailand	Shizuoka/ Japan	Kumamoto/ Japan	Kumamoto/ Japan	Mukdahan/ Thailand	Ratchaburi/ Thailand	Nongkhai/ Thailand	Sakonnakhon/ Thailand	Ratchaburi/ Thailand	
Production capacity	Megawatts	52.0	26.0	34.5	8.0	45.0	5.0	N/A	N/A	N/A	170.5
Net electricity production per year	Megawatts-Hour	69,829	33,871	38,466	7,773	136,327	7,602	N/A	N/A	N/A	293,868
Greenhouse gas reduction	tCO ₂ e	36,667 ^[1]	15,968 ^[2]	18,135 ^[2]	3,664 ^[2]	71,585 ^[1]	3,992 ^[1]	N/A	N/A	N/A	150,011

Note: [1] The calculation of greenhouse gas (GHG) emission reductions for projects in Thailand is based on the 2021 Emission Factor, officially announced on September 27, 2023, by the Thailand Greenhouse Gas Management Organization (Public Organization) – TGO Carbon Credit Certification Body.

[2] The calculation of GHG emission reductions for projects in Japan is based on the Emission Factor from the Harmonized IFI Default Grid Factors 2021 v3.2 for Japan.



3. The proportion of outstanding green debt to the Group's total debt has remained at a consistently healthy level.

Year	Ratio of Outstanding Green Debt to Total Liabilities
2022	0%
2023	9%
2024	34%

4. The Group has received collaboration from four financial institutions: IFC, SCB, UOB, and EXIM.

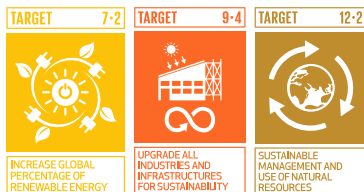
Challenges in achieving financial sustainability and access to green finance for the Group

1. Strict eligibility criteria for green financing – Accessing green finance requires strict compliance with ESG standards, third-party certifications, and alignment with international frameworks (such as the Thailand Taxonomy or TCFD Reporting). Meeting these requirements may demand additional resources and costs.

2. Uncertainty in accessing green finance – Access to green financing depends on market trends, government policies, and investor interest in renewable energy, all of which may fluctuate due to economic conditions, regulatory changes, or shifting investment trends.

3. Stakeholder and ESG investor expectations – Investors and financial institutions expect companies to provide clear ESG disclosures, demonstrate carbon emissions reduction, and implement transparent impact assessments. This drives the Group to strengthen its sustainability reporting systems and corporate governance frameworks to remain attractive to investors.

COMMITMENT TO QUALITY AND CONTINUOUS IMPROVEMENT



The significance of commitment to quality and continuous improvement to the Group: In an era where renewable energy plays a pivotal role in driving the economy and sustainability, the Group is well aware that the quality of its products and services, as well as its ability to meet customer needs and continuously improve, are critical factors that provide a competitive advantage. These efforts also help strengthen trust among stakeholders, including customers, investors, government entities, and the communities in which the Group operates.

Focusing on quality and continuous development not only

enables the delivery of high-performance products and services but also serves as a crucial tool for reducing costs, improving operational efficiency, and minimizing environmental impact. This commitment aligns with good corporate governance principles and helps the Group maintain long-term business sustainability.

Moreover, the commitment to quality and continuous development plays a vital role in driving global sustainable development. A focus on quality and excellence in operations will generate positive impacts on society, the environment, and the economy, allowing the Group to grow steadily while contributing to the achievement of the United Nations Sustainable Development Goals.

The Group's Goal: The Group is committed to delivering the highest quality renewable energy, focusing on customer satisfaction and continuous improvement through innovation and cutting-edge technology. This ensures that the Group's

products and services effectively meet customer needs in an efficient, cost-effective, and sustainable manner.

- Enhance the quality of electricity generation from renewable energy to meet international standards.
- Increase customer satisfaction through ongoing development of products and services.
- Foster an innovation-driven culture that is led by customer needs.

Operational Approach: The Group places strong emphasis on end-to-end quality management across the entire value chain. This begins with the selection of equipment and manufacturers that meet international standards, followed by the design and construction of power plants by skilled engineering teams. It extends to efficient operations and maintenance processes. The goal is to ensure the consistent



reliability and performance in electricity generation by implementing real-time monitoring and control systems (SCADA) and integrating modern digital technologies.

Additionally, the Group promotes a culture of innovation and continuous development by supporting technology-driven innovation initiatives, with a strong focus on AI and Machine Learning to improve electricity generation efficiency. Employee development is another crucial factor, with the Group providing ongoing training and skill development for its teams. The Group also encourages collaboration with business partners to exchange knowledge and experiences in advancing clean energy technologies. All these efforts are guided by a quality management system that meets international standards and undergoes regular review and improvement through the Plan-Do-Check-Act (PDCA) cycle. This approach ensures the maintenance and enhancement of product and service quality standards, increases the efficiency of the Group's renewable energy systems, and strengthens operational performance and timely delivery, ultimately improving customer satisfaction and enhancing the customer experience through the following operations:

1. Comprehensive Quality Management

- Adopt ISO 9001, ISO 45001, and ISO 14001 standards in operations of solar, wind, and biomass power plants.
- Select high-quality partners, technologies, and equipment to mitigate quality-related risks.
- Utilize Supervisory Control and Data Acquisition (SCADA) systems for real-time monitoring and control.

2. Customer-Centric Responsiveness

- Deploy engineering support to offer a tailored solar panel system design.
- Establish responsive customer support systems.

- Conduct regular customer satisfaction surveys and integrate insights into service improvements.

3. Innovation & Continuous Improvement

- Leverage AI, Machine Learning, and Predictive Analytics to optimize performance.
- Invest in Research & Development (R&D) and emerging renewable technologies.
- Foster a culture of innovation internally.
- Collaborate with business partners to accelerate clean energy technology development.

Performance Results:

Innovation to Enhance Operational Efficiency

Committed to cultivating innovation, the Group aims to ignite creativity and ensure the continuous improvement of its work processes. By deeply embedding innovation into its organizational culture, the Group significantly enhances operational efficiency across all facets of its business. This includes critical areas such as power plant management, production, and maintenance, alongside sales, customer service, and various support functions. The overarching objective is to elevate operational performance and guarantee punctual delivery.

In 2024, the Group developed innovation skills and capabilities among employees through the "Innovation to Infinity and Beyond 2024" workshop. The program focused on fostering creative thinking and the application of practical tools, which allowed participants to gain new perspectives by applying systems thinking and strategic creativity. It encouraged the exchange of ideas and experiences across departments, while also promoting strategic thinking and out-of-the-box approaches. In addition to lectures, participants

were allowed to apply their learning by designing innovations to improve and enhance their work performance. As a result, 10 innovation project proposals were generated. An internal innovation competition was held, the winning team, "Wind Energy Forecasting" from Business Development, developed a machine learning model that improved wind prediction accuracy. This achievement strengthened confidence and improved budget management efficiency for operations.

Additionally, the Group has invested in new technologies and implemented software systems to develop and improve operations. For example, in the comprehensive design and installation service of rooftop solar systems, these new technologies and innovations not only make the team's work more efficient and faster but also enhance communication and coordination. Modern digital systems enable efficient scheduling and coordination among all parties, ensuring timely project delivery. This, in turn, leads to improved customer satisfaction and leaves a positive impression on all customer groups.

Energy Efficiency Certification

Energy efficiency certification represents a key pillar in the Group's strategy for continuous improvement, particularly in enhancing the efficiency of renewable energy systems and ensuring compliance with environmental standards. The focus is on improving operational efficiency and Asset Management to ensure that projects are executed according to the business plan, along with Maintenance to guarantee the reliability of the projects. Both areas aim to ensure that production meets the business plan and remains sustainable in the long term.

1. Performance and Production: Achieving production targets as outlined in the business plan.
2. Sustainability: Ensuring that operations are conducted in a way that does not cause any disruptions or stoppages in electricity generation.



Data collection and advanced analytics are critical to enhancing operational outcomes. The Group has implemented IoT (Internet of Things) technology to collect data, along with AI systems to assist in in-depth analysis. Systematic analysis and planning will help ensure more efficient and sustainable operations, reduce work-related risks, and enhance overall operational performance.



Modern Design Engineer

Amid the growing demand for clean energy and the increasing emphasis on sustainability, the Group's engineering team is fully committed to delivering innovative solutions. These engineering solutions go beyond traditional rooftop solar installations. They leverage cutting-edge technology and a deep understanding of engineering principles to address all of our customers' needs. Whether it's enhancing sustainability, improving electricity generation efficiency, or maximizing investment value, our team is dedicated to providing comprehensive and tailored solutions.



The Group's engineering team has in-depth knowledge in system design and precise cost estimation. They are well-versed in the standards and regulations set by regulatory authorities. The team is committed to continuously updating their knowledge and skills to ensure the systems they design remain modern, particularly with regard to evolving technologies, standards, and regulations from various authorities.

In the process of designing and installing solar panels, the engineers thoroughly understand the customer's requirements, including historical electricity usage, site conditions such as building structure limitations, the suitability of the installation area, and the optimal orientation for maximum sunlight exposure. They also assess the power generation capacity to ensure it aligns with the customer's actual usage. Designing an efficient system that meets the necessary requirements without oversizing systems, thereby reducing unnecessary investment costs.

Collaborative Development with Business Partners

The selection of high-standard, internationally recognized partners who focus on innovation, advanced technology, and sustainable management (ESG) ensures high-quality



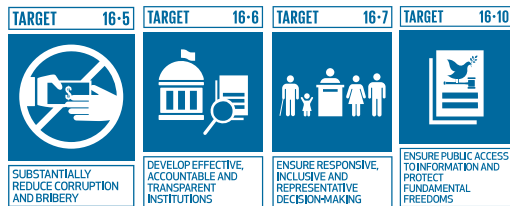
standards across products and services and promotes sustainability throughout the supply chain. It also promotes sustainability across the supply chain by minimizing negative impacts on the environment, society, and human rights. It also fosters deep collaboration, knowledge sharing, and continuous advancement of clean energy technologies.

This commitment supports the Group's broader strategy of "Powering people and society through continuous learning and development," driving innovation and quality to meet global sustainability expectations.





TRANSPARENCY, ACCOUNTABILITY, AND STAKEHOLDER TRUST



The significance of transparency, accountability, and stakeholder trust for the Group: Business operations in the modern era face increasing complexity and competition, along with rising economic, social, and environmental challenges. Transparency, accountability, and trust among stakeholders have become fundamental to achieving long-term sustainability. In the renewable energy sector, where operations depend on natural resources and stakeholder engagement, these principles are particularly vital. Sermasang Power Corporation Public Company Limited is committed to good corporate governance, ethical conduct, responsible management, and transparent reporting. These practices help deliver value to stakeholders, enhance the Group's credibility, attract investment, and facilitate access to sustainability-linked financing. They also support effective risk management and fraud prevention through strong compliance with legal and international standards.

The Group's commitment to ethical and accountable governance reinforces stakeholder trust, safeguards its competitive edge, and supports long-term business resilience. This approach is also aligned with the United Nations Sustainable Development Goal (SDG 16), which promotes peaceful and inclusive societies, ensures access to justice for all, and supports the development of effective, accountable, and inclusive institutions at all levels.

The Group's Goals: To ensure transparency in operations, the Group is committed to disclosing information through the Annual Report (Form 56-1 One Report) and the Sustainability Report, which are published annually and made available on the company's website.

Corporate Governance Principles and Policy

The Board of Directors places great importance on adhering to good corporate governance principles, in accordance with the Corporate Governance Code for Listed Companies 2017, which consists of the following 8 key principles:

- **Principle 1:** Establish Clear Leadership Role and Responsibilities of the Board – Recognize the board's role and responsibility as organizational leaders in delivering sustainable value to the business.
- **Principle 2:** Define Objectives that Promote Sustainable Value Creation – Set business objectives and goals that align with long-term sustainability.
- **Principle 3:** Strengthen Board Effectiveness – Enhance the board's performance and overall effectiveness.
- **Principle 4:** Ensure Effective CEO and People Management – Appoint and develop top executives and ensure effective human resource management.
- **Principle 5:** Nurture Innovation and Responsible Business – Encourage innovation while operating with responsibility and accountability.
- **Principle 6:** Strengthen Effective Risk Management and Internal Control – Ensure that appropriate risk management systems and internal controls are in place.

- **Principle 7:** Ensure Disclosure and Financial Integrity – Maintain transparency and accuracy in financial reporting and disclosure.
- **Principle 8:** Ensure Engagement and Communication with Shareholders – Promote active participation and open communication with shareholders.

Transparent Board Composition

Board Structure

In 2024, the Board of Directors of the Company consisted of a total of 10 members, of whom 3 were executive directors and 7 were non-executive directors, accounting for 70% of the board.

There were 5 independent directors, representing 50% of the total board members.

The board included 7 male directors and 3 female directors, with a gender ratio of 3:7 (female to male).

The Chairman of the Board is an independent director and does not serve as an executive director or Chief Executive Officer (CEO).

All board members were appointed through a formal nomination process based on legal qualifications and the criteria established by the Securities and Exchange Commission (SEC) of Thailand. The Nomination and Remuneration Committee has set specific guidelines and procedures to ensure the appointment of an effective board composed of individuals with the necessary qualifications, knowledge, skills, and diverse experience, as defined in the Skill Matrix, to carry out their governance duties



effectively and deliver maximum value to the organization and all stakeholders.

The Company's board comprises highly qualified professionals from various industries that are relevant to

and supportive of the Group's business. There are also five sub-committees, as follows:

- Audit Committee
- Risk Management Committee

- Nomination and Remuneration Committee
- Executive Committee
- Corporate Governance and Sustainable Development Committee

Board Skill Matrix (Table of Directors' Expertise and Competencies)

List of directors	Diversity		Independent Director	Area of Expertise								
	Gender	Age		Industrial Management	Marketing	Accounting and Finance	Management	Law	Corporate Governance	Risk Management	Human Resource Management	Audition
1. Mr. Kamthon Wangudom	M	78	✓	✓	✓		✓		✓			✓
2. Emeritus Prof. Samrieng Mekriengkrai	M	70	✓	✓			✓	✓	✓			✓
3. Mr. Dhana Bubphavanich	M	57	✓	✓		✓	✓		✓	✓	✓	✓
4. Ms. Thantaporn Kraipisitkul	F	44		✓		✓	✓		✓	✓		
5. Mr. Tanawat Kraipisitkul	M	40		✓			✓	✓	✓			
6. Mr. Varut Tummavarasukub	M	42		✓	✓	✓	✓		✓	✓		
7. Mrs. Thanyanee Kraipisitkul	F	68		✓	✓	✓	✓		✓			
8. General Phairat Phoubon	M	68	✓	✓			✓		✓	✓		
9. Mr. Monchai Phongsathabodee	M	58	✓	✓	✓		✓		✓	✓		
10. Ms. Lanlalit Maitreevithyanont	F	38		✓	✓	✓	✓		✓		✓	
Total			5	10	5	5	10	2	10	5	2	3



Board Performance

The Board of Directors convened meetings to monitor the Group's performance and deliberate on key matters related to the Group's direction, strategy, and business plans. The Board also reviewed corporate governance policies and ensured compliance with various internal policies, including the Code of Business Conduct, to ensure proper implementation.

Furthermore, the Board established policies to prevent conflicts of interest and conducted regular reviews of the internal control system to ensure its adequacy. This oversight encompasses appropriate risk management practices and includes monitoring management's performance to ensure alignment with Board-approved policies.

In 2024, the Board of Directors approved revisions to a total of 29 policies, including the Code of Business Conduct, Corporate Governance Policy, Corporate Sustainability Development Policy, Risk Management Policy, and other relevant social and environmental policies.

Review of the Group's policies for the year 2025

No.	Section	Record revision history
1	Charter of the Audit Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
2	Scope of Authority, Duties, and Responsibilities of the Managing Director	Revised in 2025 (3rd Revision, Agenda no. 9)
3	Scope of Authority, Duties, and Responsibilities of the Audit Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
4	Scope of Authority, Duties, and Responsibilities of the Board of Directors	Revised in 2025 (3rd Revision, Agenda no. 9)
5	Scope of Authority, Duties, and Responsibilities of the Board of Subsidiaries and/ or Joint Ventures	Revised in 2025 (3rd Revision, Agenda no. 9)
6	Scope of Authority, Duties, and Responsibilities of the Executive Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
7	Scope of Authority, Duties, and Responsibilities of the Risk Management Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
8	Scope of Authority, Duties, and Responsibilities of the Chief Executive Officer	Revised in 2025 (3rd Revision, Agenda no. 9)
9	Scope of Authority, Duties, and Responsibilities of the Nomination and Remuneration Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
10	Scope of Authority, Duties, and Responsibilities of the Corporate Governance and Sustainability Development Committee	Revised in 2025 (3rd Revision, Agenda no. 9)
11	Scope of Authority, Duties, and Responsibilities of the Company Secretary	Revised in 2025 (3rd Revision, Agenda no. 9)
12	Code of Conduct	Revised in 2025 (3rd Revision, Agenda no. 9)
13	Approval of Authority Table	Revised in 2025 (3rd Revision, Agenda no. 9)
14	Related Party Transaction Policy	Revised in 2025 (3rd Revision, Agenda no. 9)



Review of the Group's policies for the year 2025

No.	Section	Record revision history
15	Dividend Policy of the Company and Subsidiaries	Revised in 2025 (3rd Revision, Agenda no. 9)
16	Insider Trading Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
17	Risk Management Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
18	Investment, Oversight, and Management Policy for Subsidiaries and Joint Ventures	Revised in 2025 (3rd Revision, Agenda no. 9)
19	Corporate Governance Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
20	Anti-Corruption Policy and Practices	Revised in 2025 (3rd Revision, Agenda no. 9)
21	Human Resources Management Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
22	Corporate Sustainability Development Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
23	Principles on Commercial Agreements with General Trading Terms in Transactions Between the Company and Its Subsidiaries	Revised in 2025 (3rd Revision, Agenda no. 9)
24	Composition and Appointment of the Board and Sub-Committees	Revised in 2025 (3rd Revision, Agenda no. 9)
25	Personal Data Protection Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
26	Human Rights Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
27	Tax Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
28	Board Remuneration Policy	Revised in 2025 (3rd Revision, Agenda no. 9)
29	Business Continuity Management Policy	Revised in 2025 (3rd Revision, Agenda no. 9)



Board and Sub-Committee Self-Assessment for the Year 2024

To ensure that the Board of Directors maintains effective corporate governance in accordance with the Corporate Governance Code, the Board has implemented an annual self-assessment process. This is conducted using a Self-Assessment Form and includes evaluations at both the group level and individual level, as follows:

- Collective self-assessment of the Board and individual director assessment (peer assessment format)
- Collective self-assessment of each subcommittee and individual member assessment (peer assessment format)

The Board of Directors conducted performance evaluations for all five sub-committees, namely: the Executive Committee,

the Audit Committee, the Nomination and Remuneration Committee, the Risk Management Committee, and the Corporate Governance and Sustainability Development Committee. The purpose of these evaluations is to use the results to improve and enhance the effectiveness of each committee's performance. The assessment covers three key areas: the structure and qualifications of the committee, the quality and effectiveness of meetings, and the roles, duties, and responsibilities of the committee.

Summary of the performance results and self-evaluation results of the committee

Board Meetings	Board of Directors	Executive Committee	Audit Committee	Risk Management Committee	Nomination and Remuneration Committee	Corporate Governance and Sustainability Development Committee
Number of Meetings in 2024	7	1	4	2	2	1
Meeting Attendance Rate	100%*	100%	100%	100%	100%	100%
Performance Evaluation Score (Percentage)	As a whole 94% Individual level 95%	As a whole 91% Individual level 90%	As a whole 97% Individual level 98%	As a whole 90% Individual level 86%	As a whole 97% Individual level 98%	As a whole 86% Individual level 88%

*Mr. Viwat Kraipisitkul served in the position until March 2024. Ms. Lanlalit Maitreevithyanont assumed the position in March 2024.

- Details of the Board's performance and self-assessment results are presented in the 2024 Annual Registration Statement/ Annual Report (Form 56-1 One Report) under the section titled "Report of Corporate Governance".

Training and Development of Directors

The Group is committed to enhancing the capacity of the Board of Directors, recognizing that this is a key factor in driving the organization toward progress and sustainability. The Company continuously encourages directors to participate in relevant training and seminars to further develop their knowledge and skills for effective governance.

For newly appointed directors, the Group provides comprehensive onboarding support, including essential documents, an introduction to the business overview, and the operational approach of the Group, enabling new directors

to gain a clear understanding of the business fundamentals and corporate vision.

In addition, the Group promotes a culture of organizational learning and knowledge-sharing, encouraging employees at all levels to participate in knowledge exchange to foster a sustainable learning environment. In 2024, directors who participated in training and seminars include:

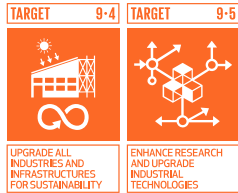
- 1) Mr. Varut Tummavarankub
 - Enrolled in the Executive Program, Capital Market Academy (Class 34) Organizer: Capital Market

Academy Training period: July – December 2024

- 2) Ms. Lanlalit Maitreevithyanont
 - Completed the Director Accreditation Program (DAP), Class 218/2024 Organizer: Thai Institute of Directors Association (IOD) Date: 8 May 2024
- 3) Mr. Dhana Bubphavanich
 - Completed the e-Learning CFO's Orientation for New IPOs (Thai), 2024 Organizer: The Stock Exchange of Thailand Duration: 12 hours



DEVELOPMENT OF RENEWABLE ENERGY TECHNOLOGY AND INNOVATION



The significance of developing renewable energy technology and innovation: The Group prioritizes addressing the rapid changes and intense competition in the business world by focusing on enhancing efficiency, sustainability, and competitiveness in the global clean energy transition. Innovation is therefore a key strategy for continuous and sustainable growth. The Group leverages advanced technologies to enhance energy production efficiency, reduce operational costs, and support national and international goals of carbon neutrality by 2035 and net-zero emissions by 2050. Clean energy is central to achieving these critical objectives.

Innovation Strategy: The Core of Driving Progress

The Group aims to be a leader in renewable energy in Asia, focusing on eco-friendly technology and innovation to ensure business and societal sustainability. We prioritize digital transformation, integrating digital technology across all business functions, including operations, customer service, and business model development. This boosts productivity, creates value, and meets evolving customer demands. By analyzing market insights and understanding customer needs in renewable energy, both domestically and internationally, we systematically collect and analyze data to drive innovation. We also foster an innovation culture by developing our employees' creative and innovative skills, empowering them to be adaptable and resilient, ensuring the organization's sustainable and efficient performance.

The Group's Goal: To embed innovation as a core capability throughout the organization to continuously advance renewable energy technologies, improve operational efficiency, and sustain competitive strength. Innovation will be integrated as a core capability at every level of the organization through the following strategies:

- 1. Fostering Innovation as a Core Organizational Culture** – Establish internal innovation development programs to encourage employees to actively participate in creating and testing new ideas. This will include an ongoing annual innovation competition to motivate employees to solve problems and improve work processes. By 2026, ensure that 100% of employees receive training on innovation and technology, with continuous knowledge-sharing opportunities.
- 2. Foster Collaboration and an Open Innovation Ecosystem** – Build strategic partnerships with external organizations like the National Innovation Agency (NIA) to access knowledge, accelerate innovation processes, and expand our innovation network. We'll also collaborate with university students to broaden understanding of renewable energy and embrace new perspectives from the younger generation by 2026.
- 3. Align innovation Key Performance Indicators (KPIs) with ESG goals, ensuring measurable impact on carbon reduction, energy efficiency, and sustainable growth** – Set a goal that at least 50% of the Group's new projects incorporate advanced energy technologies by 2035. Target a 15% reduction in energy production costs through innovation and process improvements. Also, adjust innovation KPIs to align with ESG performance, ensuring that every new project contributes to reducing greenhouse gas emissions, improving efficiency, and supporting sustainability objectives.

Operational Approach: To embed innovation as a core component of the organization's DNA, the Group must implement a systematic strategy that fosters a culture of creativity and integrates advanced technology across all operations. The Group will implement the following strategic initiatives:

- 1. Cultivate an Innovation Culture and Empower Employee Engagement** – Held annual employee-driven innovation project competitions to spark creativity, encourage expression, and offer career advancement opportunities for participants, incentivizing new ideas. We also commit to providing 100% of employees with annual training in AI, IoT, and digital transformation to enhance their technological and innovation skills.
- 2. Strengthen Innovation Ecosystem and Industry Collaboration** – Cultivate partnerships with external organizations to accelerate innovation, such as collaborating with the National Innovation Agency (NIA), universities, and technology institutes for access to new technologies. Organize innovation seminars and knowledge-sharing events to enhance the Group's image as a leader in driving innovation in renewable energy technologies.
- 3. Measure and Expand the Impact of Innovation on Business and Sustainability** – Track innovation's impact on business growth, targeting at least 50% of new Group projects to utilize advanced energy technologies by 2035 to enhance cost efficiency through innovation. We aim to reduce energy production costs by 15% through operational improvements and new technologies, while aligning innovation goals with ESG and Net Zero objectives by leveraging technology to cut greenhouse gas emissions, boost energy efficiency, and support organizational sustainability targets.



Performance Results

Driving Innovation within the Organization

1. Developing Innovation Skills and Capabilities for Employees - The Group has actively fostered innovation within its workforce through the workshop “Innovation to Infinity and Beyond 2024.” Experts in innovation development from the National Innovation Agency (Public Organization) were invited to share insights on the concept of innovation, the innovation development process, business model development, and prototype creation. In addition to the lectures, all employees participated in

hands-on activities, resulting in the creation of 10 innovation project proposals. This workshop helped employees understand the importance of innovation and learn how to practically implement it.

2. Building an Innovation Network - The Group has adopted an Open Innovation strategy, welcoming ideas, technologies, and resources from outside the organization to co-develop innovations with internal resources.

- The Group collaborated with Nano Coating Tech Company Limited, a deep-tech startup under the NSTDA

startup program, originating from the Nano Innovation Research Team at the National Nanotechnology Center. This collaboration focused on researching and developing applications for the Solar Rooftop business.

- The Group also engaged in networking activities with the National Innovation Agency (Public Organization) to advance innovation within the organization and foster connections with startups through the Climate Acceleration Program 2024.

3. Internal Innovation Contest: Criteria for Participation

Criteria	Scoring Weight
1. Presentation of Solutions to Address Pain Points of Stakeholders (e.g., customers, employees, partners, communities). <ul style="list-style-type: none">• Present technologies/ innovations that address and meet the needs of the target stakeholders.	30%
2. Technological Potential and Innovation Application to Meet the Needs <ul style="list-style-type: none">• Technological and innovation capabilities.• Unique features that create value for target stakeholders.• Competitive advantage over other players/ ownership of intellectual property.	25%
3. Market Potential or the Scalability of the Innovation <ul style="list-style-type: none">• Clear market opportunities and target groups.• Potential for further development and scalability.• Growth potential for both domestic and international markets.	20%
4. Readiness of Personnel <ul style="list-style-type: none">• The team's ability to independently develop the innovation project.• The team's attitude and commitment to implementing the innovation project.• The team includes experts in the proposed innovation.	15%
5. Communication and Presentation Skills <ul style="list-style-type: none">• Clarity of the content presented in the pitch deck.• Ability to communicate effectively.• Ability to answer questions competently.	10%
Total	100%

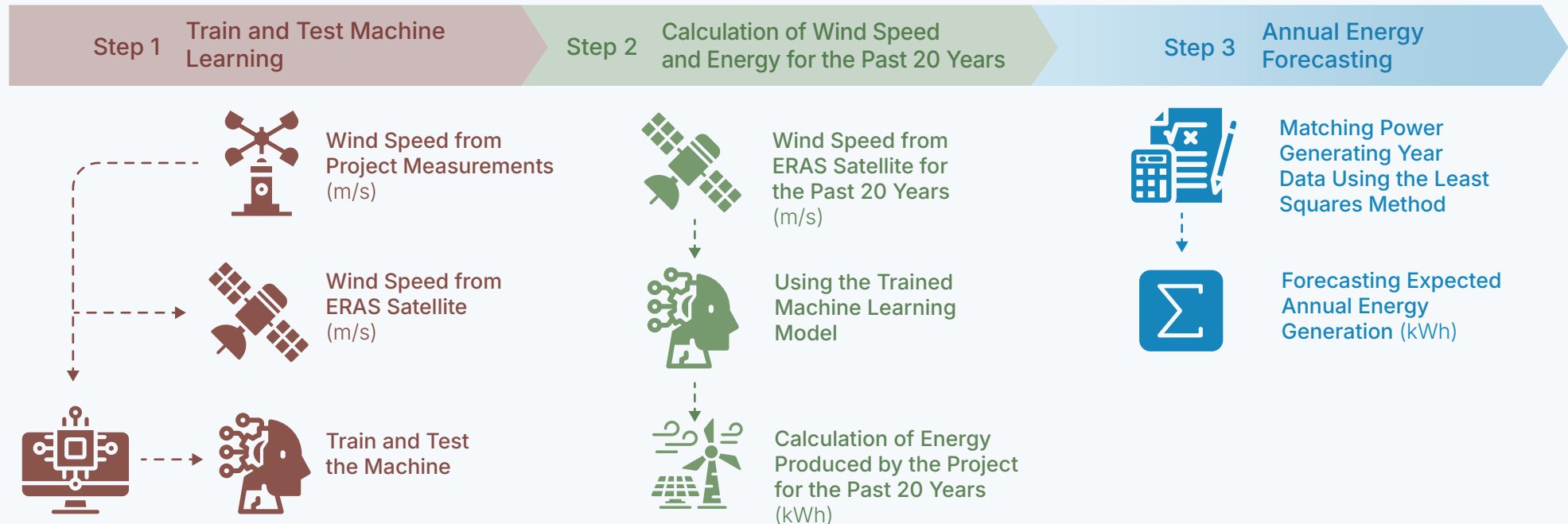


Innovation Contest Results: The winning project of the innovation contest is the **"Wind Energy Yield Forecasting Project"**. This project forecasts wind energy production by analyzing weather conditions and electricity generation data. It utilizes a Machine Learning-based Random Forest Regression model to predict wind speed and energy output. The project was developed and presented by Mr. Rittichai Liemthong, a Business Development Engineer from the Business Development department.

Benefits from the Project

- Increased Accuracy: The project enhances the accuracy of wind energy production forecasting.
- Budget Planning: It aids in more effective budget planning.
- Improved Efficiency: It improves energy management efficiency.
- Risk Reduction: It helps reduce the risk of forecasting errors.
- Error Reduction: The forecasting error decreased from 10.66% to 1.36% in June 2023 and 3.06% in September 2023.
- Time Savings: It reduces the time needed for evaluation.
- Cost Savings: Previously, the group had to hire external companies for calculations and evaluations.
- Investment Opportunities: The system facilitates quicker assessment of the feasibility of future wind power plant investments.
- Innovation Implementation Date: January 2023

Methodology for Analyzing Data Related to the Proposed Innovation





Development of Innovation for Society and the Environment

Project: Nano-Coated Solar Panels to Prevent Dirt, Extend Cleaning Intervals, and Enhance Energy Production Efficiency

The nano-coated solar panels, designed to prevent dirt accumulation, help extend cleaning intervals and improve energy production efficiency. This innovation applies nanoparticle coating technology, and the Group has actively sought partnerships with several companies, including Nano Coating Tech Company Limited, to develop a process that optimizes the application of nanoparticle coatings on solar panels. The result is a nano-coated solar panel product with water and dust-repellent properties. This coating does not affect the surface of the panels and maintains the light refraction index of the solar panels, which is comparable to that of glass, ensuring that the energy production efficiency is not compromised. The nano-coated solar panels can increase electricity generation by 2.3% (with an average expected increase of 3-5% after one year of use) compared to conventional panels. Additionally, cleaning intervals have been reduced from six times every two years to just once every two years, leading to a decrease in water usage for cleaning. This also minimizes the risks associated with cleaning solar panels, especially those installed on high rooftops. Furthermore, the nano coating is environmentally friendly and non-toxic. The development of the nano-coated solar panels, which extend cleaning intervals and enhance energy production efficiency, was initiated and developed within the Group through an open innovation strategy through the process of fostering innovation skills and capabilities among employees. The innovation was first implemented in June 2024.

Impact of Innovation Development

Environmental Impact

- **Water Conservation:** By reducing the frequency of solar panel cleaning, water usage for cleaning can



be decreased by up to 80% compared to traditional cleaning methods. This significant reduction in water consumption is particularly important in water-scarce regions and contributes to the sustainable management of water resources.

- **Improved Efficiency and Reduced Green House Gas Emissions:** The enhanced efficiency in electricity generation enables the production of more clean energy and contributes to a direct reduction of greenhouse gas emissions. Based on a 703.1 kWp solar power plant, the improvement can reduce emissions by 12,072 kg CO₂e



per year, supporting efforts to mitigate the impacts of climate change.

- **Reduced Chemical Use:** The coating minimizes the need for harsh cleaning chemicals, reducing the risk of soil and water contamination.
- **Prolonged Solar Panel Lifespan:** By reducing the wear and tear caused by frequent cleaning, the lifespan of solar panels is extended, leading to less electronic waste and a reduction in the environmental impact of solar panel production and disposal.



Social Impact

- **Increased Workplace Safety:** By reducing the frequency of solar panel cleaning from six times every two years to just once every two years, the risk of work-related accidents, particularly on rooftop installations where the risk of falling is high, is minimized. This also promotes better safety standards for maintenance personnel.
- **Enhanced Energy Security for Communities:** Improving energy production efficiency and reducing downtime for maintenance enables a more stable and continuous supply of clean energy for both residential and commercial users.
- **Raising Awareness of Sustainable Practices:** The successful implementation of this environmentally

friendly technology helps raise public awareness of sustainable energy practices and encourages the broader adoption of eco-friendly solutions.

- **Promoting the Use of Domestic Technology and Innovation:** Supporting the use of domestically developed technologies and innovations boosts the growth of Thai startups and strengthens the country's competitive edge.

Impact on the Group

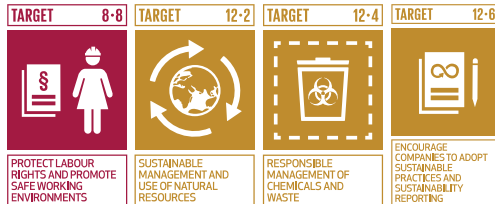
- **Cost Reduction:** It is anticipated that cleaning costs will be reduced by 27% for commercial and industrial rooftop solar power projects and by 56% for residential projects.

- **Efficiency Improvement:** The electricity generation efficiency is expected to increase by 2.3% annually, or 32.71 kWh/kWp/year (with the expected average increase ranging from 3-5% after one year of implementation) for a 703.1 kWp solar power plant.
- **Return on Investment:** The expected return is 82,800 THB per year for each 703.1 kWp solar power project, based on the increased electricity generation of the 703.1 kWp solar power plant.





SUSTAINABLE AND RESPONSIBLE SUPPLY CHAIN



The significance of a sustainable and responsible supply chain to the Group: As the Group operates within the renewable energy business, managing a sustainable and responsible supply chain is a key issue that impacts the success of the organization and all stakeholders. This is because the renewable energy business requires collaboration with partners, suppliers, and stakeholders across the entire value chain. This includes sourcing equipment and technology for solar power plants, wind energy, and biomass, as well as maintenance and the management of expired materials.

In an era where the world is facing environmental and social challenges, such as climate change, the depletion of natural resources, and human rights risks in supply chains, including forced labor and unsafe working conditions, conducting business responsibly with regard to the supply chain is a critical factor in reducing negative impacts, enhancing competitiveness, and ensuring sustainability in the renewable energy industry.

The Group is aware of and places significant importance on this issue, especially in terms of responsible sourcing, procurement, and contracting that considers both environmental and social impacts. The Group carries out its procurement activities in a structured, transparent, and accountable manner aligned with ESG and procurement best practices. This approach results in positive outcomes for the organization and throughout the entire supply chain.

The Group's Goal:

- Communicate the Supplier Code of Conduct to partners for sustainable business development by providing all suppliers with purchase orders with the relevant documentation.
- 100% of new suppliers with purchase orders exceeding 500,000 baht, evaluated by using ESG selection criteria.
- 100% of current critical suppliers (Critical Tier-1 Suppliers) and critical suppliers who do not conduct business directly with the company (Critical Non-Tier-1 Suppliers), evaluated by using ESG criteria.

Operational Approach:

The Group applies risk-based and resilience-focused supply chain management to uphold sustainability objectives and business continuity. The management approach is based on risk management and resilience principles to ensure that operations align with sustainability goals, while also fostering strong relationships with partners for business continuity.

In its operations, the Group places significant importance on managing risks and impacts across all dimensions, including economic, environmental, social, and human rights, throughout the entire supply chain. The Group selects partners who are committed to responsible production and service practices, comply with laws and regulations, and operate in alignment with the Group's policies and ethical standards. Social and environmental criteria are used in the selection of new partners and for procurement from current critical suppliers (Critical Tier-1 Suppliers). Additionally, the Group aims to enhance the ESG capabilities of its partners, improve operational quality, and drive mutual growth, leading to the long-term sustainability of the supply chain and fostering confidence among stakeholders. The Board of Directors oversees this process, while the procurement department

is responsible for implementing the Group's sustainable procurement policy as follows:

1. **Sustainability:** Committed to integrating ESG principles into the procurement process, considering the environmental, social, and governance impacts throughout the supply chain.
2. **Transparency and Accountability:** The procurement process must be transparent, fair, and auditable, with relevant information disclosed to stakeholders.
3. **Compliance with Laws:** The Company and its partners must strictly comply with laws, regulations, and rules related to procurement.
4. **Human Rights:** Respect for internationally recognized human rights, including non-discrimination and freedom of association.
5. **Labor Standards:** The Company and its partners must adhere to labor standards, including fair wages, working hours, health and safety protection, and prohibiting child labor and forced labor.
6. **Environmental Protection:** The Company and its partners must operate with consideration for environmental conservation, sustainable resource use, biodiversity protection, reducing environmental impacts, controlling pollution, particularly reducing greenhouse gas emissions, and efficient waste management.
7. **Anti-Corruption:** Implement and enforce anti-bribery and anti-corruption policies.
8. **Social Responsibility:** The Company and its partners must actively contribute to the development of society and communities.



The Group's Approach to Managing a Sustainable Supply Chain:



The Group communicates the SSP Supplier Code of Conduct to partners for sustainable business development, in line with the sustainability management approach within the supply chain. This aims to raise awareness among partners about its importance and provides a guide for conducting business that aligns with the Group's practices, which prioritize social and environmental responsibility, as well as transparency in operations. The Group also encourages partners to adopt policies and practices for sustainable procurement and to implement the principles outlined in this Supplier Code of Conduct for sustainable business development with their own suppliers and contractors. The implementation is divided into six areas, as follows:

1. **Business Ethics:** Comply with laws and regulations, operate within a fair competition framework, disclose information transparently and in an auditable manner, respect intellectual property, avoid conflicts of interest, and fight against corruption.
2. **Labor and Human Rights:** Ensure lawful employment practices in accordance with labor laws, treat all employees equally, and prohibit all forms of child labor and forced labor.
3. **Occupational Health and Safety:** Comply with occupational health and safety laws, provide appropriate and adequate protective equipment, prepare for emergency situations, and ensure clear communication and adherence to safety protocols.
4. **Environment and Climate Change Impact Reduction:** Comply with environmental laws and regulations, manage pollution and waste according to legal requirements, use resources efficiently, cooperate in monitoring, improving, and disclosing greenhouse gas emissions, and promote the use of environmentally friendly products and services.
5. **Community Engagement and Social Development:** Conduct business with due consideration of its potential impacts on local communities and society. Proactively contribute to enhancing the quality of life within these communities and society at large, as opportunities arise.
6. **Collaboration in Innovation Development:** Propose innovative products and practices that achieve positive social and environmental impacts. Encourage partners and contractors to adhere to the principles outlined in this Code of Conduct.

In 2024, the Company communicated the Supplier Code of Conduct for Sustainable Business Development to all direct business partners in 2024, as well as to all (100%) new suppliers ensuring they were fully aware.

Selection of New Suppliers

The Group has established criteria for selecting new suppliers to ensure that they can deliver products/ services that meet the organization's standards or requirements, through an evaluation process that covers the following aspects:

- Quality Products/ Services with Environmental Friendliness (e.g., recyclable materials, non-toxic ingredients), certified by relevant industry standards or other trusted certifications.
- Reasonable and Competitive Pricing for products/ services.
- The supplier conducts business in accordance with environmental standards, whether international or legal, such as having a systematic approach to waste disposal and avoiding activities that cause pollution.
- The supplier conducts business with respect for social issues, ensuring no discrimination, compliance with labor laws, corporate social responsibility, and respect for human rights.

The Group had a total of 82 new suppliers, 12 of whom had purchase orders exceeding 500,000 baht and are therefore required to undergo evaluation based on environmental and social criteria.



For the Group's biomass power plant business, operated by Uni Power Tech Company Limited (UPT), the fuel used for production consists of agricultural waste or by-products, such as wood chips, bark, and other forms of biomass fuel. When selecting suppliers of fuel for production, the source of the fuel is carefully considered to ensure that it is sourced legally and does not negatively impact the environment. Suppliers providing wood chips and bark must be certified

by FSC (Forest Stewardship Council), ensuring that the wood is sourced from sustainably managed forests or plantations, in line with internationally recognized standards, promoting environmental protection and reforestation.

In addition to the requirement for suppliers to hold FSC Certification for the fuel source used in production, biomass power plants also face potential environmental impacts on

surrounding communities. Therefore, UPT's supplier selection process is stringent and includes the requirement that suppliers be certified with ISO 9001 for quality management systems and ISO 45001 for occupational health and safety management systems as part of the evaluation criteria.

In 2024, 100% of new suppliers with purchase orders exceeding 500,000 baht, evaluated by using ESG selection criteria.

New Suppliers Screened Using Environmental/ Social Criteria	2023	2024
Number of New Suppliers Requiring Environmental/ Social Evaluation*	3	12
New Suppliers Approved Based on Environmental and Social Criteria	3	12

*For the selection of suppliers (vendors/ contractors) with initial orders exceeding 500,000 baht, an evaluation of environmental and social criteria is mandatory. Suppliers must meet these established criteria in order to proceed with any order or contract. After the process is completed, a re-evaluation will be conducted. If the supplier does not meet the criteria, they will be removed from the approved vendor list.



Risk Evaluation and Identification of Critical Suppliers

The Group has reviewed the data of direct business partners (Tier-1 Suppliers) and those who do not directly engage with the Company (Non-Tier 1 Suppliers). An analysis was then conducted to identify critical suppliers. This process helps manage environmental, social, and governance (ESG) risks associated with suppliers, allowing the Company to plan its business operations in alignment with these risks more effectively and with greater flexibility. The following factors are used as criteria for consideration:

Critical Tier 1 Suppliers refer to business partners who produce and supply products and services essential to the Group's operations. These suppliers are considered based on the following criteria:

- High Volume: Business partners with high purchase volumes (greater than 10 million Baht), and/ or

- Critical Component: Business partners that supply products critical to the production process or business operations, and/ or
- Non-Substitutable/ Oligopoly/ OEM: Business partners that provide products or services in limited supply or that cannot be substituted.

Critical Non-Tier 1 Suppliers: These are business partners who do not directly produce or supply goods to the Group, but are involved in the buying and selling of products and services essential to the operations of the Group's significant business partners. These suppliers are assessed based on the following criteria:

- Critical Component: Business partners who supply products critical to the production process or business operations for the Group's Critical Tier 1 Suppliers, and/ or

- Non-Substitutable/ Oligopoly/ OEM: Business partners who supply products or services in limited supply or that cannot be substituted for the Group's Critical Tier 1 Suppliers.

In 2024, the Group had a total of 183 suppliers and contractors in its supply chain who conduct direct business with the Company (Tier-1 Suppliers) on an ongoing basis. The analysis showed that 8 suppliers and contractors were classified as Critical Tier-1 Suppliers, while 4 suppliers were identified as Critical Non-Tier 1 Suppliers, who do not directly conduct business with the Company.

Risk Assessment in the Supply Chain and Operational Approach

Supplier Type	Number of Suppliers	Operational Approach	Percentage of Suppliers Assessed for ESG Risk	Number of Suppliers with High ESG Risk
Critical Tier-1 Supplier	8	<ul style="list-style-type: none"> • Supplier evaluation forms • Onsite audit • Interviews with supplier Employees • Annual ESG assessment of suppliers 	100%	0
Tier 1 Supplier	175	Supplier evaluation forms	n/a	n/a
Critical Non-Tier 1	4	Annual ESG assessment of Suppliers	100%	0



Risk Issues	Risk Management Approaches
Suppliers unable to deliver products according to standards or deadlines	<ul style="list-style-type: none"> • Create an evaluation form for purchasing and procurement and store data on suppliers who meet the company's criteria in the vendor list. • Request product warranty period.
Suppliers providing technical services lack expertise	Verify certificates and licenses related to technical expertise standards.
Failure to comply with environmental and labor standards	<p>Monitor ESG evaluations and communicate the importance of ESG.</p> <p>ESG evaluation is one of the criteria for selecting new suppliers.</p>

In 2024, 100% of the current critical business partners (Critical Tier 1 Suppliers) were evaluated using ESG criteria.

Following the ESG risk assessment of 8 critical business partners (Critical Tier 1 Suppliers) conducted through onsite audits and employee interviews, it was found that all Critical Tier 1 suppliers prioritize environmental, social, and governance (ESG) issues. They have established ESG policies and prepare annual sustainability reports. As a result, none of the suppliers were identified as having a high ESG risk level.

The Group has a strategy to manage the ESG risks of Critical Non-Tier 1 Suppliers (those not directly doing business with the Company) by conducting risk assessments and analyses throughout the supply chain. This process is carried out in collaboration with Critical Tier 1 Suppliers to identify risks that may impact operations and to develop appropriate mitigation strategies. Based on the 2024 assessment, no Critical Non-Tier 1 Suppliers were identified with high ESG risks.

Evaluation of Current Suppliers

The Group has a policy for evaluating current suppliers who are continuously doing business. The evaluation is conducted annually for product suppliers, and for contractors/ service providers, the evaluation is done after the completion of each project. The evaluation criteria include the following aspects:

- Product and service quality
- Operational performance, encompassing timely delivery of goods and services
- Responsiveness in communication, issue resolution, and prompt notification of any modifications
- Environmental management practices
- Adherence to company regulations and established terms

- Occupational health and safety protocols during operations

After conducting business transactions involving goods and services, the Group evaluates the operational capabilities of its suppliers and service providers in various areas, including product quality, environmentally friendly characteristics (recycled materials, non-toxic ingredients), on-time delivery of goods/services, warranties, after-sales service, responsiveness, problem-solving, compliance with regulations and requirements, occupational health and safety during operations, and environmental management, including waste disposal that does not cause pollution or negatively impact society and the environment. If any supplier or service provider fails to meet the evaluation criteria, they will be removed from the Approved Vendor List.



Currently, the Group has 183 active business partners. After evaluating their performance, 100% of the partners successfully passed the assessment.

The Group conducted an assessment of the potential negative impacts across the supply chain, evaluating both

actual and anticipated environmental and social impacts that could be of significant concern. This assessment was carried out for Critical Tier 1 Suppliers and new suppliers, totaling 20 suppliers. No significant negative impacts on the environment or society were identified from these suppliers.

Negative Impacts Across the Entire Supply Chain	2023	2024
Number of Suppliers Assessed for Environmental Impact	3	20
Number of Suppliers Found to Contribute to Significant Actual and Potential Negative Environmental Impacts	0	0
Number of Suppliers Assessed for Social Impact	3	20
Number of Suppliers Found to Contribute to Significant Actual and Potential Negative Social Impacts	0	0

Supplier Development

The Group prioritizes the development of suppliers and contractors within its supply chain, particularly key partners in the renewable energy sector, such as solar, wind, and biomass power plants. This effort aims to reduce social and environmental risks, as well as mitigate the risk of non-compliance with relevant laws and regulations. Additionally, the Group supports improving the operational efficiency of its suppliers and contractors to ensure alignment with its standards. For example, the Group encourages suppliers and contractors who provide core products and services to implement business process improvements and achieve certification for management systems in accordance with international standards, such as ISO 9001, ISO 14001, and ISO 45001.

In 2024, the Group implemented a supplier development program focused on environmental, social, and safety aspects. This program involved training and capacity-building



for the employees of suppliers and contractors to ensure they have the necessary knowledge, understanding, and skills to comply with the standards set out in the Environmental and Social Management System Manual. The training covered various topics, including environmental and social policies,

risk identification and assessment, environmental and social management, occupational health and safety at work, stakeholder management, complaint handling, and compliance with relevant laws and regulations.

The activity was held on August 28, 2024, organized by Serm Sang Palang Ngan Company Limited in collaboration with Sharp Solar Solutions Asia Company Limited, and the contractors of its suppliers. A total of 53 employees from the suppliers and their contractors participated in the event.

The Group believes that this investment will not only enhance the knowledge and capabilities of its suppliers but will also cultivate positive values and attitudes toward sustainability. This will lead to behavioral changes and active participation in driving sustainability efforts together.



Payment to Suppliers

The Group has established payment terms for suppliers based on fairness and appropriateness to create opportunities and business cooperation, which is a key factor for sustainable business growth. Our standard payment term is within 60 days. However, payment periods may vary depending on the specific circumstances of each business and other factors

to consider, such as the type of products and services, the contractual terms with suppliers, and the quality and standards of goods and services.

In 2024, the Group undertook new construction and project development activities, with debt repayment schedules tied to project milestones. Delays in construction caused by external

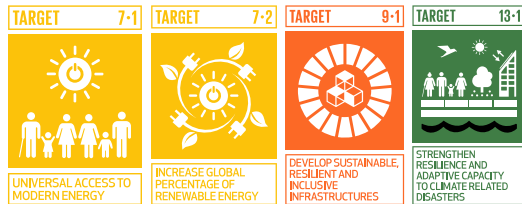
environmental factors may affect the timing of payments. Therefore, the average vendor payment period has been calculated excluding construction and project development creditors. It was found that the Company's average payment period for such creditors is in line with the standard practice of settling debts within 60 days.

Payment to Suppliers	2023	2024
Average Payment Period to Suppliers (Days)	65.49	93.25
Average payment period excluding construction and project development creditors (Days)	54.69	54.91





ENERGY RELIABILITY AND OPERATIONAL EFFICIENCY



The significance of energy reliability and operational efficiency to the Group: the Group recognizes that energy stability and continuity are critical expectations from customers, investors, and stakeholders—especially in an era where renewable energy plays an increasingly significant role in both national and global energy structures. Organizations that can deliver stable, high-quality energy services while operating with cost efficiency are best positioned to earn customer trust and create long-term value for stakeholders.

For customers, energy reliability means having a continuous and stable supply of electricity, which directly impacts their business operations and quality of life. Any energy disruption can affect production, service delivery, and increase operational costs. Therefore, the Group is committed to developing a stable energy infrastructure while integrating smart technologies to optimize energy management, reduce risks, and improve customer energy efficiency. For investors and business partners, the Group's operational efficiency reflects its ability to manage costs and generate sustainable returns. Meanwhile, communities and society benefit from an energy system that is clean, efficient, and helps to minimize environmental impacts.

The Group's Goals:

1. Enhance the reliability of the renewable energy system: Strengthen the stability of energy supply and improve the ability to meet customer demand.

2. Improve operational efficiency: Reduce operating costs, increase electricity generation efficiency, and minimize energy losses in the production and distribution processes.

Operational Approach: The Group is committed to being the most reliable producer of renewable energy, including solar, wind, and biomass, by integrating digital technologies and management systems into power plant operations. This enhances operational efficiency and minimizes negative impacts on society and the environment. The approach includes:

1. Development of Technical Management Systems

- Implementation of predictive maintenance systems by installing sensors and real-time performance monitoring technology. These tools enable data analysis to plan timely maintenance, helping to reduce operating and maintenance costs (O&M).

2. Enhancing Energy Reliability and Grid Stability

- Utilize AI and Machine Learning to improve forecasting and reduce the variability of wind and solar energy.
- Work closely with operation and maintenance (O&M) service providers to ensure that the supplied energy meets required quality and regulatory standards.

3. Improving Biomass Power Plant Efficiency

- Reduce carbon dioxide emissions, which impact the environment and the quality of life of surrounding communities.
- Apply Circular Economy principles by reusing biomass waste materials in the production cycle.

Through its focus on predictive maintenance systems, modern technology, and strict compliance with power plant standards, the Group ensures efficient operations and a stable and continuous electricity supply, thereby building customer confidence and satisfaction.

In addition, the Group operates a solar rooftop business through its subsidiary, Sermasang Infinite Co., Ltd., which provides comprehensive solar energy solutions for industrial sectors, commercial buildings, government agencies, and local communities.

Sermasang Infinite's operations enhance the Group's ability to deliver highly reliable and efficient energy, offering customized installation options such as Power Purchase Agreements (PPA) or Engineering, Procurement, and Construction (EPC). Customers also receive operation and maintenance services as specified in their contracts. Key customer benefits include:

1. Consistent energy production – A reliable energy system that consistently delivers expected power levels enhances operational performance, minimizes energy loss, and reduces the need for frequent maintenance and repairs.
2. Continuous maintenance and monitoring – Regular maintenance and online monitoring systems allow for prompt issue detection and resolution, thereby improving energy reliability, reducing system downtime, and optimizing performance.
3. Long-term warranty and after-sales service – Extended warranties and ongoing service support ensure the system maintains reliability and performance throughout its lifecycle, providing peace of mind and minimizing operational disruptions.



The Group's commitment to reliable and efficient renewable energy services through expert energy management, system design and construction that align with customer needs, the use of high-quality technologies and materials, and comprehensive long-term maintenance. These efforts ensure customers receive stable electricity, high system performance, and long-term value. This also supports the use of clean energy, helping to reduce environmental and societal impacts.

Performance Results:

- The Group set a customer satisfaction target of no less than 80% and conducts annual satisfaction surveys. In 2024, responses were received from all 63 customers

in Thailand, representing a 100% response rate. The overall satisfaction level reached 95%.

- In the solar rooftop segment, Sernsang Infinite Co., Ltd. has continued the installation of solar rooftop systems across both residential and commercial sectors. As of now, the company has completed installations totaling 10 MW across 31 projects in 15 provinces nationwide.

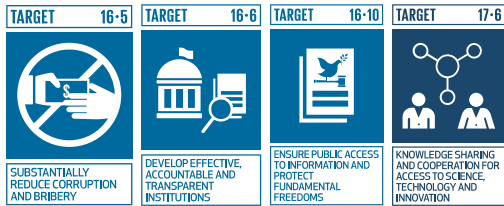
Challenges:

The variability of renewable energy and technical limitations present significant challenges due to the unpredictability of energy sources. For instance, solar irradiance may decrease during certain seasons, and wind speeds can be inconsis-

tent. These issues are further compounded by constraints in existing grid infrastructure and limitations in energy storage technology. To overcome these challenges, it may be necessary to invest in technology development and expand the diversity of renewable energy sources to ensure a more stable and efficient energy supply.



REGULATORY COMPLIANCE, STANDARDS, ETHICS, ANTI-CORRUPTION, AND FINANCIAL STABILITY



The significance of regulatory compliance, standards, ethics, anti-corruption, and financial stability to the Group: The current operation of renewable energy businesses must not only deliver economic returns and expand clean energy capacity, but should be conducted within the framework of regulatory compliance, international standards, and business ethics. These elements are fundamental to building stakeholder trust across all groups, including investors, financial institutions, business partners, customers, regulators, and local communities. Adherence to laws and regulations at both local and international levels, the commitment to anti-corruption, and the maintenance of financial stability are not only indicators of corporate responsibility but are also critical to gaining stakeholder confidence. Having effective governance and audit systems in place, along with clear whistleblowing mechanisms, helps prevent corruption and abuse of power, which are essential foundations for long-term business sustainability.

Operating with integrity and transparency also enhances credibility in the capital market, allowing the Group to access low-cost funding and maintain long-term financial stability—key factors for expanding investment and achieving stable growth. Furthermore, this approach supports the United Nations Sustainable Development Goal (SDG) 16 by

promoting transparent business operations, sound governance, and anti-corruption policies. These actions help strengthen corporate governance and reduce business risks, contributing to the development of a stable society. It also supports SDG 17 by encouraging collaboration with regulators, financial institutions, and business partners to advance sustainable practices and create positive impacts across the economic, social, and environmental dimensions.

The Group's Goals:

1. Zero complaints related to corruption
2. Zero violations of the Code of Business Conduct
3. Zero fines for legal violations
4. Zero complaints regarding personal data breaches

Operational Approach:

The Group is committed to conducting business in strict compliance with both local and international laws and regulations, including adherence to ethical standards and environmental and energy-related legislation. Emphasizing the implementation of strong corporate governance practices and maintaining financial stability, the Group aims to build stakeholder trust, reduce risk, and support long-term sustainable growth. The Company upholds high standards of ethics and integrity among its directors, executives, and employees to ensure that all operations align with principles of corporate governance, human rights, and legal compliance. To support this, the Group has established robust governance and audit systems to prevent the misuse of power and corruption. Clear mechanisms have also been put in place for whistleblowing and stakeholder complaint resolution to ensure fairness and effectiveness.

The Group's commitment to compliance spans across national and international standards in various business areas, including labor, safety, environmental protection, taxation, data privacy, and contractual obligations. These efforts ensure responsible operations, consistent excellence, and the sustained trust of stakeholders.

The Group has developed a Code of Conduct, along with relevant policies and operational guidelines tailored to the nature of its business, requiring strict adherence by all directors, executives, and employees. Ethical conduct and business integrity are instilled through training programs for new employees and ongoing internal communications, including email notifications, bulletin board, and publication on the Group's website. These efforts aim to equip all employees with the knowledge and guidance to carry out their duties in a transparent, ethical, and responsible manner, fostering a values-based organizational culture that takes stakeholder impacts into account. The following policies related to the Group's Code of Conduct have already been adopted:

- Code of Conduct
- Corporate Governance Policy
- Anti-Corruption Policy and Practices
- Human Rights Policy and Human Rights Due Diligence Process
- Tax Policy
- Information Technology Security Policy
- Code of Conduct for Employee Relations, covering safety, occupational health, and work environment for executives, employees, partners, and contractors



- Conflict of Interest
- Supplier Code of Conduct for Sustainable Business Development
- Sustainable Procurement Policy

*All of the Group's policies and practices are published on the Company's website at www.serm sang.com to ensure transparency and accessibility for executives, employees, and external stakeholders.

Ethics and Business Conduct Performance in 2024

- Number of complaints related to corruption: 0
- Number of legal violation penalties: 0
- Number of personal data breach complaints: 0
- 100% of new employees received business ethics training
- 100% of all employees completed business ethics training
- Number of ethical violations or breaches of the Code of Business Conduct: 0
- The Group communicated its "No Gift Policy" regarding the giving and receiving of gifts during holidays and other occasions via the Group's official website, ensuring that executives, employees, subsidiaries, and external stakeholders are all aware of and adhere to the policy. This aims to prevent conflicts of interest and establish a strong standard of transparent business practices.

- The Group renewed its certification as a member of the Thai Private Sector Collective Action Coalition Against Corruption (CAC), with the certification valid until 30 June 2027.

Internal Control and Audit System

The Group recognizes the importance of having an effective internal management, governance, and control system to prevent and eliminate the misuse of power and corruption for personal gain, which may harm others or the public. The Board of Directors has assigned the Audit Committee to review the internal control system of the Group and its subsidiaries to ensure that it is adequate. This review covers five key areas: Organizational structure and environment, Risk management, Operational control of management, Information and Communication and Monitoring systems. These assessments are reported directly to the Board of Directors.

In 2024, the Audit Committee held a total of four meetings, during which it reviewed financial reports to ensure accuracy and reliability. It also oversaw internal audit operations to ensure the presence of a suitable and effective audit system. The committee ensured that related-party transactions followed the prescribed process, monitored compliance with securities and exchange laws and related regulations, and made recommendations on the appointment and remuneration of external auditors.

Internal Audit

The Group engaged Dharmniti Auditing Co., Ltd as an independent internal audit unit. The Head of Internal Audit oversees the audit process and reports directly to the Audit Committee. Their responsibilities include examining and assessing the adequacy and effectiveness of internal controls across the Group and its subsidiaries, in line with the annual audit plan approved by the Audit Committee. Reports are



submitted to the committee quarterly to support ongoing improvements in operational efficiency and effectiveness. The appointment, dismissal, and transfer of the Head of Internal Audit must be approved by the Audit Committee.

Internal Control and Audit Performance Results

- Number of internal and external audits conducted in 2024 to ensure compliance with governance and operational standards: 3 times.
- Proportion of audit recommendations addressed: In 2024, a total of 5 recommendations were issued—2 were implemented, and 3 are in progress.
- No governance violations or non-compliance incidents were reported.



Whistleblowing and Complaint Handling Measures

The Group has established clear procedures for whistleblowing, complaint submission, investigation, and disciplinary action, applicable to both internal employees and external individuals wishing to report misconduct. Protective measures are also in place for whistleblowers, complainants, and related parties to ensure that those acting in good faith are safeguarded. The Group guarantees confidentiality, restricting access to whistleblower information to authorized personnel only or as required by law. Protection is provided to prevent any form of retaliation, harm, or unfair treatment resulting from the act of whistleblowing, filing a complaint, testifying, or providing information.

Scope of Whistleblowing and Complaints

1. Acts of fraud or corruption directly or indirectly involving the organization, such as witnessing someone offering or accepting bribes from public or private sector officials.
2. Violations of the Group's regulations or internal control systems that raise suspicions of potential misconduct or corruption.
3. Acts that result in damage to the Group's interests or reputation.
4. Illegal, immoral, or unethical conduct that violates the Company's Code of Conduct.

Whistleblowing and Complaint Submission Channels

The Board of Directors has delegated the responsibility of receiving whistleblowing reports and complaints, including those involving suspected fraud or corruption, to the Audit Committee, through the following designated channels:

1. By Mail: Audit Committee or Company Secretary
Sermasang Power Corporation Public
Company Limited

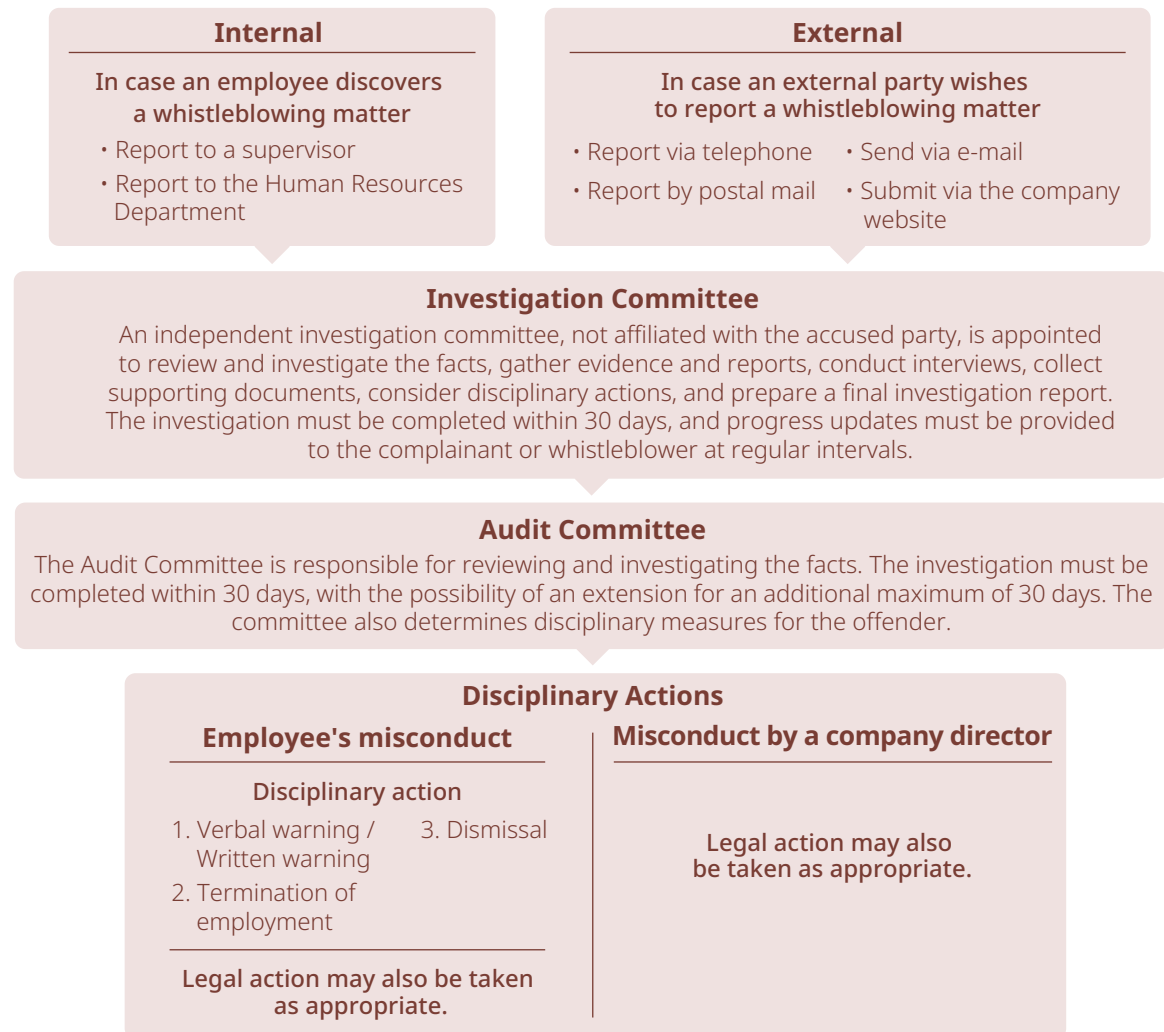
325/14 Lan Luang Road, Si Yaek Mahanak
Subdistrict Dusit District, Bangkok 10300,
Thailand

2. E-mail: info@sermsang.co.th

3. Telephone: +66 2 628 0991-2

4. Website: www.sermsang.com/home#whistle_blowing

Whistleblowing (process chart)





Performance Results: The Group had no complaints filed during the years 2022 to 2024.

Review of Business Ethics and Anti-Corruption Policies and Practices:

Although there have been no complaints or violations reported related to business ethics or corruption, the Group continues to place strong emphasis on regularly reviewing the adequacy and appropriateness of its monitoring systems. The operational approach includes:

1. The Board of Directors announced and enforced an updated Anti-Corruption Policy and Practices on February 1, 2024, aligned with international standards and current legal frameworks.
2. The Company conducted corruption risk assessments across various stages of its renewable energy business operations, such as: Construction permit applications, Power production and regulatory approvals, Grid connection permits, Factory operation licenses, Various required permits from government agencies.
3. Emphasis is placed on working with ethical and credible partners who comply with international standards. Due diligence and transparent supplier vetting are carried out, alongside communication of the Supplier Code of Conduct for Sustainable Business Development.
4. Awareness is promoted through the implementation of anti-corruption practices such as: following the approval authority matrix, practicing self-assessment when facing uncertain situations, guided by the rule: "If in doubt, don't proceed", establishing whistleblowing mechanisms

and protective measures for complainants and involved parties.

5. Internal audit and performance assessment systems are in place to monitor compliance with policies and mitigate risks.
6. The Company has defined procedures and responsibilities for personnel interacting with government agencies, including the preparation and timely submission of required documentation. Policies are also communicated via the company website, email, and onboarding training for new employees.

Information Security and Personal Data Protection

With the rapid advancement of information technology and its increasing importance in business operations, as well as the growing risk of cyber threats, the Group prioritizes IT system security and personal data protection. Policies on personal data protection and information security have been implemented in line with Thailand's Personal Data Protection Act (PDPA), B.E. 2562. The Company has defined technical and administrative safeguards, and outlined related regulations and procedures for data protection. Risk assessments and impact analyses related to data protection are conducted regularly. A Data Controller has been appointed to oversee the management and protection of personal data related to the Company's business activities.

To address the rise in cyber threats, the Group provides alerts and updates via its website at www.sermasang.com, and designates reporting channels for cyber-related concerns through email at info@sermsang.co.th and phone at +66 2 628 0991-2.

Tax Management

The Group places great importance on tax management as a key enabler of business success. This includes tax planning, analysis, and management to ensure strict compliance with

tax laws and regulations while improving tax efficiency to reduce costs. These efforts contribute to financial stability, support strategic business growth, and reflect the Company's role as a responsible member of society.

Sustainable Tax Management

Taxes are a vital resource for national administration and development, contributing to sustainable growth and social well-being. The Group emphasizes tax management as a tool for maximizing value for stakeholders and supporting sustainable development by ensuring full and proper tax compliance. The Company is committed to playing an active role in the social, environmental, and economic development of the communities in which it operates.

Tax Policy and Responsible Tax Practices

The Group has established a comprehensive tax policy and practices that cover all aspects of tax planning and execution. These include the ongoing study, monitoring, and analysis of tax regulations and regular tax audits. The Company also makes use of available tax incentives to maximize efficiency within legal frameworks. This ensures that its tax practices remain up-to-date, fair, and aligned with sustainability goals. The Company also actively manages direct and indirect tax-related risks, protecting stakeholder interests by integrating sustainability into its tax strategy. This demonstrates its commitment to ethical business practices and the creation of long-term value for all stakeholders.

Tax Operational Guidelines

To ensure that tax practices are accurate, consistent, and in compliance with standards, the Group has developed a set of operational guidelines aligned with its tax policy. These serve as a framework to uphold the integrity and reliability of its tax management practices and promote transparency and consistency across all operations. The key practices include:

1. Compliance and Accuracy – Assessing tax risks across the value chain, including subsidiaries and new business units.



This includes keeping up to date with new or amended laws and ensuring correct compliance.

2. Tax Incentive Planning – Evaluating and applying for tax incentives in alignment with the Company's strategic direction. This includes assessing eligibility for tax

benefits from investment projects or new transactions, in full compliance with legal requirements.

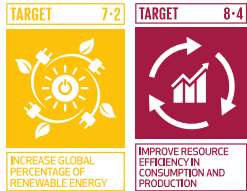
3. Tax Knowledge and Training – Ensuring that personnel responsible for tax matters receive proper training and knowledge updates related to taxation and applicable laws.

This enhances their competence and enables them to deliver maximum value to the Group.





SUSTAINABLE GROWTH AND MARKET EXPANSION



The significance of Sustainable Growth and Market Expansion to the Group: Market expansion and sustainable growth are critical for the Group and its stakeholders. The growth of the renewable energy business is not only an economic opportunity but also a vital driver for transitioning to an environmentally friendly energy system. Sustainable and balanced growth helps the Group maintain long-term competitiveness, enhance financial stability, and diversify business risks. At the same time, it addresses the expectations of stakeholders such as investors, partners, customers, regulators, and communities, who prioritize business practices that consider environmental, social, and governance (ESG) impacts.

Additionally, expanding into new regions and developing clean energy innovations creates economic opportunities, boosts employment, supports access to clean energy in underserved areas, and contributes to reducing greenhouse gas (GHG) emissions. These factors are essential in driving the Green Economy and achieving global sustainability targets.

Through the Group's strategy of market expansion and sustainable growth, we not only foster business growth but also play a crucial role in advancing the green economy, supporting global sustainable development goals, and generating long-term positive impacts on both the environment and society.

The Group's Goal: Sustainable growth is a key strategy that allows businesses to create continuous value while meeting the needs of the market and stakeholders. Therefore, the Group has set a goal to expand the market and achieve sustainable growth through a balanced approach that integrates financial flexibility, market expansion, and sustainability into its operational strategies as follows:

- **Market Expansion:** Expanding into new high-potential markets, both domestically and internationally, to increase competitiveness and diversify risks from energy market volatility. The goal is to enter at least one new country by 2030.
- **Financial Resilience:** Building and maintaining a strong financial structure to support investments in high-potential renewable energy projects and ensure sustainable growth in the future.
- **Developing New Revenue Streams:** Creating products and services that meet customer demands through strategic partnerships, boosting the organization's capabilities and market offerings.
- **Sustainability Integration:** Focusing on Environmental, Social, and Governance (ESG) factors to ensure business expansion aligns with sustainable development and long-term value creation.

Operational Approach:

The Group has a market expansion plan that continuously seeks investment opportunities both domestically and internationally. The focus is on investing in a variety of power plant projects to ensure a diversified and balanced portfolio, while also effectively distributing risks. The strategy includes

expanding growth alongside preparing adequate investment capital and managing risks related to interest rates and exchange rates.

The Group places great emphasis on market expansion and sustainable growth, focusing on integrating Environmental, Social, and Governance (ESG) principles into its operational strategy to ensure that the Group's business growth aligns with sustainable development. The approach is as follows:

- **Project and Target Country Selection:** The Group considers investing in projects that reduce greenhouse gas (GHG) emissions and support the energy sector's Net Zero goals. The focus is on investing in countries that promote renewable energy and have transparent regulatory frameworks.
- **Environmental Management:** The Group prioritizes the use of environmentally friendly technologies, such as solar panels, wind turbines, and high-efficiency energy storage systems. Additionally, it manages end-of-life products through appropriate disposal or recycling methods.
- **Social Development and Value Creation with Local Communities:** The Group assesses the impact on local communities and collaborates to support local development, such as creating local job opportunities, developing renewable energy skills, and advancing clean energy projects for communities.
- **Governance and Business Transparency:** The Group adheres to Good Corporate Governance principles, emphasizing transparency in investment processes. It also implements an ESG risk management system and



focuses on developing a sustainable supply chain by selecting and collaborating with partners and business allies who follow the same ESG practices.

- Access to ESG Funding and Green Finance: The Group expands its fundraising efforts by utilizing financial instruments that support ESG initiatives, such as Green Bonds and Sustainability-linked Loans, to ensure business growth aligns with sustainable financial practices.

Commercially operational power plant projects in Thailand:

- Solar Power Plant Projects:

- Serm Sang Palang Ngan Solar Power Plant, Lopburi Province
- Solar Power Plant Project in partnership with the Veterans Affairs Organization (VOT), Ratchaburi Province
- Solar Rooftop Projects – 15 projects

- Biomass Power Project:

- UPT Project, Nakhon Ratchasima

- Wind Power Plant Project:

- Rom Klao Wind Farm Project, Mukdahan Province

- Solar rooftop installation services were delivered for 31 projects across 15 provinces nationwide.

Overseas Power Plant Projects: In addition to solar, biomass, and wind power plants in Thailand, the Group has expanded its investments internationally, with the following commercially operational projects:

- Japan – Investment through the GK-TK structure:

- Solar Power Plant Projects:
 - Zouen Project and Yamaga Project in Kumamoto
 - Leo 1 Project in Shizuoka

- Vietnam

- Binh Nguyen Solar Power Plant (TTQN) in Quan Ngai City
- TTTV (Truong Thanh Tra Vinh) Wind Power Plant in Tra Vinh City

- **Mongolia** - Khunshight Kundi Solar Power Plant (approximately 40 km south of Ulaanbaatar)

- **Indonesia** - Delivered 97 Solar Rooftop Power Plant Projects For more detailed information on all projects, please refer to the 56-1 report for the year 2024.

The Group's strategy for competitiveness and expansion in the renewable energy generation and related businesses includes:

1. Enhancing the Efficiency of Existing Projects to achieve the highest possible return on investment by:

- Selecting high-quality technology and equipment from world-leading manufacturers known for their expertise and reliability
- Choosing project locations by considering appropriate factors such as solar radiation intensity, topography, natural disaster risks, climate conditions, and proximity to areas with no limitations on grid connectivity, ensuring cost-effective project development and optimal returns.

- Selecting reputable turnkey contractors and operation and maintenance service providers with proven experience, reliability, financial stability, and competitive pricing to ensure that power plants meet electricity production goals and deliver the expected returns on investment.

2. Growing Through the Self-Development of New Renewable Energy Power Projects:

- Domestic Projects: The Group is focused on preparing its workforce and securing funding to invest in new domestic projects whenever business opportunities arise. This includes closely monitoring government policies related to the development of renewable energy power projects.
- International Projects: The Business Development team, with extensive experience and expertise in the renewable energy sector, conducts comprehensive feasibility studies and analysis to identify investment opportunities in renewable energy projects abroad. These projects are typically supported by government policies in countries such as Japan, Vietnam, Mongolia, and other Southeast Asian nations.

3. Growing Through Acquisitions/Consolidations, Both Domestically and Internationally: The Group may explore acquiring all or part of renewable energy power projects, whether they are in development, under construction, or already in commercial operation. This approach allows for rapid growth in the business, depending on the suitability and opportunities available. The focus is always on ensuring maximum benefits for the Group and its shareholders.

Future Expansion of Renewable Energy Power Projects: In the future, the Group will focus on securing medium- to long-term contracts with reliable and financially stable power off-takers, such as government agencies, industrial electricity users, or



private companies with government concessions in countries where the Group operates. This strategy will ensure stable, long-term revenue while minimizing associated risks.

Performance Results

In 2024, the Board of Directors approved investments in two onshore wind power projects abroad, as follows:

1. Taiwan: Onshore Wind Power Plant Project with an installed capacity of 38 megawatts, located in Pingtung City, Taiwan. The project has a long-term power purchase agreement (PPA) with Taiwan Power Company (Taipower) for 20 years at a fixed electricity tariff, or alternatively, electricity generated from the solar power can be sold to private companies in Taiwan via Taipower's transmission system for 20 years. The project is expected to be completed and begin commercial operations by 2028.
2. The Philippines: Onshore Wind Power Plant Project with an installed capacity of 150 megawatts, located in Bago City, the Philippines. The project has a long-term power purchase agreement (PPA) with National Transmission

Corporation (Transco) at a fixed electricity tariff. The construction is expected to be completed, and commercial operations are anticipated to begin by 2026.

In Thailand, the Group is currently working on the repowering project of the solar power plant project in Lopburi Province, which is expected to increase production efficiency by 15-20% upon completion.

Regarding investments, in 2024, the Group has earned the trust and confidence of financial institutions in supporting its funding as follows:

- The Export-Import Bank of Thailand (EXIM Bank) has provided a Sustainability Linked Loan (SLL) to support investments in renewable energy projects both in Thailand and overseas. This loan aims to promote clean, environmentally friendly energy and strengthen energy security within the ASEAN region.
- The International Finance Corporation (IFC) and Siam Commercial Bank (SCB) have extended their support

through a Green Loan Facility. This funding will enable the Group to develop renewable energy projects in Thailand, Indonesia, and Vietnam, supporting the Group's goal of enhancing energy security and driving a sustainable future through renewable energy investments across Asia.

The Challenges

Managing market expansion and achieving sustainable growth presents several significant challenges. These include addressing financial and investment matters, accessing green financing, navigating energy regulations and policies in target countries, adopting appropriate technologies, staying competitive, and obtaining ESG certifications along with robust sustainability reporting. Addressing these challenges requires comprehensive risk management and strategic planning. These efforts are essential for building confidence and attracting the attention of investors, customers, and business partners.



07

OPERATIONAL PERFORMANCE DETAILS





SUSTAINABILITY
PERFORMANCE

Please scan the QR Code for detailed information regarding our sustainability performance.



<https://sustainability.sermsang.com/u/en/esg-performance-data>

GRI CONTENT
INDEX

Please scan the QR Code for detailed information regarding the GRI Content Index.



<https://sustainability.sermsang.com/u/en/gri-standards-index>

EXTERNAL ASSURANCE
STATEMENT

Please scan the QR Code for detailed information regarding the results of external assurance.



<https://sustainability.sermsang.com/u/en/assurance-statement>



SERMSANG POWER CORPORATION PLC. SUSTAINABILITY REPORT 2024

Your participation in this survey is highly appreciated.
Please scan the QR Code to access the survey.



**"We sincerely thank you for
your valuable cooperation."**

The feedback collected through this Sustainability Report survey will be instrumental in our efforts to continuously refine and develop the Group's sustainability reporting moving forward.





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