

# DECARBONIZATION FOR SUSTAINABLE FUTURE

INTEGRATEDSUSTAINABILITY REPORT
GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED





# DECARBONIZATION FOR SUSTAINABLE FUTURE

Recognizing the impacts of climate change,
. GPSC values technological and innovation development.
In parallel, we will harness internal carbon pricing
and risk management while pursuing new marketing opportunities
to brace for climate change. Armed with the
. "drive for a low-carbon power business
and zero GHG emissions"

concept, we are indeed striving to achieve Carbon Neutrality by 2050 and Net Zero by 2060.

# **Global ESG Assessment**

An international indicatoro of GPSC's commitment to creating long-term, sustainable value for energy innovations

## **Vision**



The global leading innovative and sustainable power company

# **Aspiration**



To be top 3 power company in Southeast Asia with more than half of MW from green portfolio

#### **Mission**



- To be the power and smart energy flagship of PTT Group
- To generate value added for shareholders with steady profit growth
- To deliver reliable power and utilities for customers through operational excellence
- To conduct business by being responsible to community, social, and environment
- To seek innovation in power and utility efficiency management through smart energy solution

# Global ESG Assessment and DJSI\*

"DJSI - An international indicator of GPSC's commitment to creating long-term sustainable value for energy innovations"

\* DJSI: Dow Jones Sustainability Indices



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# **About this Report**

GRI 2-1, 2-2, 2-3, 2-4, 2-5

In Global Power Synergy Plc (GPSC)'s preparation of its annual sustainability report, it strives to disclose performance outcomes in economic, social, and environmental aspects while illustrating its due regard for sustainable development on critical issues for its business as well as for all stakeholders from January 1 to December 31, 2024. The scope of this report ranges from affiliates where GPSC holds 65% equity upward or is a strategic owner\*, located in Thailand, essentially identical to last year's report. GPSC shareholding proportion can be referenced from the 56-1 One Report and GPSC website (https://www.gpscgroup.com/en/about/subsidiaries-associated-companies).

GPSC leverages the Integrated Report (IR) scope of the Value Reporting Foundation in tandem with a selected material assessment to disclose data on its management approach and outcomes in line with the Global Reporting Initiative (GRI) Standards as the core indicator level, together with additional indicators for the Electric Utilities Sector Disclosure. Additionally, this report aligns with the Sustainability Reporting Guidelines for listed companies and the ESG Metrics in Energy & Utilities sector by the Stock Exchange of Thailand. GPSC applied partial disclosure of data under the IFRS S1 guidelines for

disclosing sustainability-related financial data and IFRS S2 guidelines for disclosing data on climate-related risks and opportunities within industry-based metrics.

Besides, GPSC has defined goals and reported on its operations that are consistent with the United Nations Sustainable Development Goals (SDGs) as well as disclosure (Task Force on Climate-related Financial Disclosure) as recommended by TCFD.

Part of the 2024 Integrated Sustainability Report is also disclosed on GPSC's website for further credibility, accuracy, and consistency with the GRI standards. This report has earned limited assurance of its data accuracy by SGS (Thailand) Co., Ltd., for both the report and website contents. Details appear on page 100-103. This is the seventh year of third-party certification, a tradition that GPSC is determined to pursue.

Committed to improving the quality of its sustainability development report, GPSC aspires to elevate the quality of information disclosure. We would appreciate your recommendations to integrate with our operations and advocacy of sustainable development in conjunction with all stakeholders. Below are contact channels.

#### Remarks:

\* For additional details on the scope of our reporting, please see page 100-103 of this report.

#### **Contact Channels**

Website: http://www.gpscgroup.com

Mail: Sustainable Management and Climate Change Section

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Policy



Materiality



Performance Data



Stakeholder Engagement



GRI Content Index



Online Reader Survey



# Message from the President & CEO



#### Dear Shareholders,

The year 2024 marked another year in which the world faced intensifying climate change-related challenges, with record-breaking global temperatures brought on by the rise in greenhouse gas emissions. Many regions around the world were also experiencing natural disasters, such as wildfires, floods, and storms, which are becoming more severe and frequent. These disasters not only damaged the environment but also disrupted economies and livelihoods, underscoring the urgent need to reduce greenhouse gas and transition toward a low-carbon economy. At the same time, the exponential growth of the renewable energy business driven by evolving consumer demand represents a critical turning point in addressing this crisis as it not only contributes to decarbonization but also serves as a foundation for sustainable energy consumption in the future. As an energy company, Global Power Synergy Public Company Limited is positioned to play a vital role in advancing this energy transition.

We recognize the risks and impacts of the situation and are committed to embracing the new normal in our business conduct, which involves promoting the adoption of renewable energy to decarbonize operations, decentralizing our power grid with diverse energy sources, integrating digital platforms to optimize energy management efficiency, as well as improving and maintaining the reliability of our infrastructure to meet energy demand. In tandem, we strive to create new business opportunities through innovations of the future and balance environmental, social, and governance (ESG) considerations under our energy transition strategy and sustainability framework, with a vision to become a global leading innovative and sustainable power company during the energy transition. Our key business objectives are as follows:

- Achieve carbon neutrality by 2050 and net zero emissions by 2060, in alignment with Thailand's Nationally Determined Contributions (NDCs).
- Actively support the Sustainable Development Goals (SDGs).
- Increase renewable energy generation to over 50% of the Company's total electricity capacity by 2030.
- Uphold fundamental human rights in all business operations in adherence to the United Nations Guiding Principles on Business and Human Rights.
- Drive the development of innovative electricity and smart energy solutions in partnership with PTT Group to meet evolving lifestyles and future global energy demands.

In addition, we have been driving our business toward clean energy through the "4S" strategy, which consists of S1: Strengthen and Expand the Core, focusing on enhancing production efficiency for reliability and fuel saving; S2: Scale-up Green Energy, both domestically and internationally; S3: S-Curve business development, with emphasis on energy storage systems and expansion of innovative business ventures; and S4: Shift to Customer-centric Solutions. This four-pronged strategy serves to guide our operations towards our goals. Below are our key achievements in 2024.

We maintained energy security and delivered power with a high reliability to ensure business continuity for our industrial customers. Additionally, we implemented asset management and production process optimization, to maximize benefits, along with various cost reduction measures, successfully raised our gross profit by 6% to THB 20,984 million and increased our net profit 10% to THB 4,062 million compared to the previous year.

- GPSC maintains renewable capacity both domestically and internationally across projects that are currently in operation, under construction, and in the contract signing phase, amounting to a total installed capacity of 9,552 megawatts, or 68% of the Company's total electricity generation capacity.
- We were selected as a member of the Dow Jones Sustainability Indices (DJSI) in the Emerging Markets Index for the electric utilities industry for the third consecutive year.
- We were listed in the SET ESG Ratings from the Stock Exchange of Thailand for the sixth consecutive year, with an assessment rating of AAA for the year 2024.
- We achieved an "Excellent" rating in the Corporate Governance Report (CGR) assessment for the ninth consecutive year.

Finally, as the CEO of GPSC I would like to express my sincerest gratitude to our shareholders, customers, business partners, the general public, and all stakeholders for their continued support and trust in our sustainable business operations over the past 12 years. We remain committed to fulfilling our responsibilities with utmost dedication within our sustainable development framework with due regard for the balance between environmental, social, and governance considerations and are fully prepared to lead the way in sustainable energy and play a pivotal role in reducing greenhouse gas emissions on an international level.

E Frank

Worawat Pitayasiri

President and Chief Executive Officer

# **Business Activities Across the Value Chain**

Sourcing

Production

Business Administration & Support (apart from electricity generation)

Product Development and Marketing and Sales



Generation and distribution of electricity, steam, and industrial water



Renewable energy production and services



Energy storage system (ESS) manufacturing and services

#### Input

#### **Business Activities and Operating Model**

#### 1. Financial Capital

- Operating expense:
   THB 69,746 MM
- Liability: THB 168,994 MM
- Cash flow from operating activities: THB 23,205 MM

#### 2. Human Capital

- Total employees: 1,094
- Employee-related expense: THB 1.962 MM
- Employee training expense: THB 18 MM

#### 3. Manufacturing Capital

- Assets, property, plant, and equipment: THB 92,473
- Maintenance expense

# 4. Social and Relationship Capital

 CSR activity investment budget

#### 5. Intellectual Capital

- Employee innovators
- R&D budget

#### 6. Natural Capital

- Environmental management expense: THB 420 MM
- Environment-related training expense: THB 130 MM
- Water withdrawal: 26.6 Mm3
- Energy intensity:0.89 MWh/Mwh

#### Corporate vision

The global leading innovative and sustainable power company

#### Corporate strategies



Strengthen and Expand the Core



Scale-up Green Energy



S-Curve & Batteries



Shift to Customer-centric Solutions

#### **Net-zero strategies**

- 1. Reduce Fossil Fuel Usage
- 2. Grow Renewables

#### 3. Enhance Infrastructure

4. Trading & Offset

#### **Business Activities**

- 1. GRC, Maintaining Reliability and Availability
- Operation guided by corporate governance principles
- Culture of risk and emergency management
- Strategies for reliable power delivery through production excellence



#### 2. OHS, Employee-focused Organization, Human Rights

- Promotion of health and safety in the work environment
- Capability development, employee care, and continuous training program development
- Emphasis on increasing HCROI
- Succession planning for all positions
- Human rights due diligence

#### 3. Maintaining Reliability and Availability

- Efficient and reliable electricity production
- Investment expansion for energy delivery capability enhancement
- Increasing the value of synergy through M&A



# 4. Customer Relationship Management, Supply Chain Management, Sustainable Community

- Community satisfaction enhancement and survey
- Customer satisfaction enhancement and survey
- Stakeholder participation promotion

#### 16



#### 5. Being an Innovative Leader, Capturing the Future Sustainability Market

- Pilot ESS battery prototyping and installation projects
- Preparation of ESS battery installation contracts and/or MOUs



#### 6. Environmental Management, Clean Energy towards Net Zero

- Resource management (energy, water, air pollution) according to standards
- Reducing GHG emissions through T-VER according to Thailand's standards
- Biodiversity risk management
- Setting net-zero emissions targets





#### Transmission/ Distribution /



Smart energy management services

#### **Output**

- Energy generated: 19,223 GWh; Steam generated: 13,626 Kilotons
- Energy products and services, such as energy storage technology and smart energy management systems
- Providing clean energy to customers to meet their needs towards achieving
- Systematically managed air pollution

#### **Outcomes**

#### **GPSC Stakeholders**

#### 1. Financial Capital

- EBITDA of THB 10,009 MM and net profit of THB 4,062 MM, a 10% YoY increase from 2023
- 2. Human Capital
- Turnover rate: 4.61%
- Employee-to-executive ratio: 3.84%
- 3. Manufacturing Capital
- Total capacity: 7,058 MW (60% fossil fuels and 40% renewable energy)
- 4. Social and Relationship Capital
- Social return on investment (SROI) 2.17 - 14.59
- 5. Intellectual Capital
- Number of customers served in pilot ESS battery prototyping and installation projects
- Revenue from ESS products
- 6. Natural Capital
- Reduced fuel consumption in production
- gy saved: 384,143 MWh
- Corporate renewable energy consumption: 729,256 kWh
- Water recycled and reused: 108.29 M liters
- No fine incurred from environmental impact created

- Total shareholder return: 4.00 %
- Earnings per share
- Dividend payment
- Full tax compliance







- Employee engagement: 60 %
- Average training hours: 34.23 hrs.



- Availability of power distribution systems
- Reduced forced outage time







- Zero cases of human right violation
- Number of local: 278 people
- Revenue generated for communities: THB 2.77 MM
- Community satisfaction rate: 80.18%
- Customer satisfaction rate: 91%

on battery products

Investment in NUOVO PLUS, with annual capacity of 2 GWh























- Zero landfilling of hazardous waste from operations
- GHG emissions reduced under T-VER: 273.545 tCO.
- 10,000 rai of forests restored by 2030
- Net-zero GHG emissions by 2060







# **Business Strategy and Corporate Outlook**

GPSC's strategy in 2024 (for 2024-2030) supports energy transition to an era of clean energy innovation. It is made up of S1: Strengthen and Expand the Core, S2: Scale-up Green Energy, S3: S-Curve & Batteries, and S4: Shift to Customer-Centric Solutions, with business focus on Thailand and target countries, namely India, Vietnam, and Taiwan. To bring this strategy to fruition, the six key enablers are partnership, financial discipline, technology & digitalization, sustainability, agile & resilient organization, and operational excellence. These enablers will enable GPSC to achieve sustainable business growth with due regard for the environment and stakeholders and position GPSC as a leading power generator in Southeast Asia. GPSC seeks to achieve carbon neutrality by 2050 and net-zero GHG emissions by 2060.



#### Vision:

The global leading innovative and sustainable power company



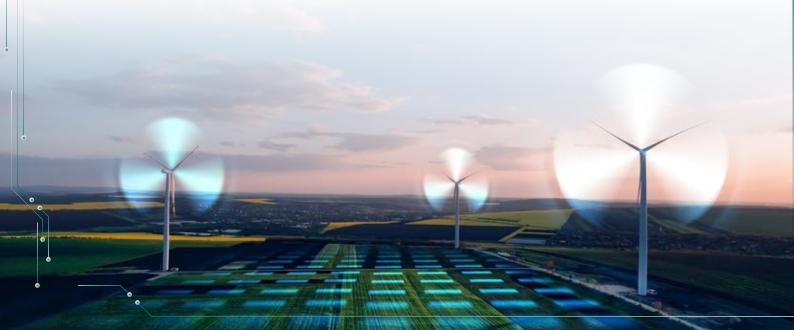
#### **Aspiration:**

To become one of the top three power generation companies in Southeast Asia with more than 50% of power generation from the green portfolio



#### **Missions:**

- To be the power and smart energy flagship of PTT Group
- To generate value added for shareholders with steady profit growth
- To deliver reliable power and utilities for customers through operational excellence
- To conduct business with responsibility towards communities, society, and the environment
- To seek innovation in power and utility efficiency management through smart energy solutions





# **GPSC Net Zero Pathway:**

#### **Decarbonization for Sustainable Future 2024**



#### **GPSC's Decarbonization Target**



Carbon Intensity Reduction 10% by 2025 & 35% by 2030 Carbon Neutrality by 2050

Net Zero GHG Emission by 2060





#### Reduce Fossil Fuel Usage

Outcome: 66,000 tCO<sub>2</sub>eq reduction in greenhouse gas emissions through operational efficiency optimization

#### **Grow Renewables**

Outcome: Over 68% of the total capacity derived from renewables (Committed Capacity)



#### **Enhance Infrastructure**

Outcome: Signing a memorandum of understanding with Doosan Enerbility Co, Ltd. development of ammonia co-firing and CCUS technologies





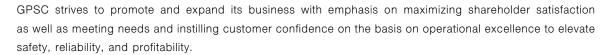
#### **Trading/Offsets**

Outcome: 230 rai of forests restored for carbon sequestration (based on the target of 10,000 rai by 2030)

#### **Business Strategies**

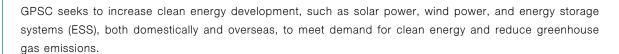
#### **S1**

#### Strengthen and Expand The Core



In addition, GPSC prioritizes the mitigation of environmental impact through effective management while also seeking to drive its operations on the basis of environmental, social, and governance (ESG) principles by consistently developing its personnel and adopting digital technology and international systems for efficiency optimization.

#### **\$2** Scale-up Green Energy



Key strategies include developing business through bidding in government renewable energy procurement programs under the national power development plan (PDP bidding) and direct power purchase agreements (Direct PPA) through third party access (TPA); and making preparations for compliance with the Carbon Border Adjustment Mechanism (CBAM) and Renewable Energy 100 (RE100) standards. In addition, under PTT Group's new strategic plan, GPSC will lead efforts to decarbonize scope 2 emissions for electricity users across PTT Group and outside the organization. Furthermore, GPSC will concentrate its investments on countries with strong economies and continuous clean energy growth, such as India, China, and Taiwan. Guided by strict risk management, these operations will be conducted under close supervision to maintain competitive advantage.

#### \$3 S-Curve & Batteries

GPSC prioritizes investments in New S-Curve innovations to increase revenue and prepare for future changes in the energy business, with feasibility studies conducted for its investments across the renewable value chain.

In addition, GPSC places emphasis on research into clean energy technologies to achieve decarbonized solutions, in line with its mission to lead decarbonization efforts among electricity users across PTT Group, focusing on expanding usage of renewable energy - while addressing its inherent limitations on reliability - through partnerships to develop technologies, such as carbon capture and storage (CCS) technologies, hydrogen solutions, and small modular reactor (SMR) nuclear power plants.

#### \$4 Shift to Customer-centric Solutions

As part of its smart power solution business, GPSC is seeking to focus more on distributed generation, district cooling systems, and energy management services. In addition, greater emphasis will be placed developing on business-to-customer (B2C) models to address the demands of the modern energy landscape and meet diverse customer needs across various sectors, with plans to enhance GPSC's competitive capabilities through collaborations with partners who have specialized expertise.

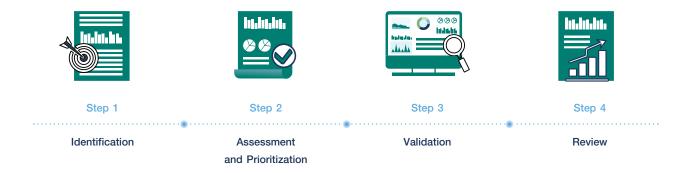
# **Material Issues 2024**

GRI 3-1, 3-2, 3-3

GPSC strives to meet stakeholder expectations across environmental, social, and governance (ESG) dimensions through transparent operations that align with the United Nations Sustainable Development Goals (SDGs). As such, materiality assessment plays a critical role and is conducted annually to identify and prioritize material issues affecting both the organization and all stakeholders. GPSC's process for evaluating and prioritizing sustainability issues references the Global Reporting Initiative (GRI) Standards framework and the International Integrated Reporting Framework, ensuring that the information and approaches presented are transparent, consistent with international standards, and capable of creating long-term value for both the organization and its stakeholders.

#### **Materiality Assessment**

For the identification and prioritization of material issues affecting GPSC's business operations and its eight groups of stakeholders, both internal and external, (namely shareholders, investors, government agencies, employees, suppliers, partners, customers, and communities and society), GPSC has adopted double materiality assessment, which covers both the impacts on society and environment (external) as well as the impacts on the organization itself (both financial and non-financial). Details of the process can be found at https://www.gpscgroup.com/th/sustainability/gpsc-sustainability/materiality-assessment.



In 2024, GPSC continued to conduct reviews and assessments of material issues to ensure that disclosures would accurately reflect matters impacting its business operations and stakeholders.

The assessment revealed that the Company's list of material issues remained the same as the previous year. However, the impact levels for certain issues changed due to internal and external factors affecting GPSC, such as increased regulatory pressure and stricter sustainability requirements, changes in economic, social, and environmental contexts, advancements in green technology and clean energy innovation, as well as shifts in consumer behavior and stakeholder expectations.

As a result, the impact level for each relevant issue was adjusted to better align with the evolving context and enable GPSC to formulate appropriate and effective sustainability strategies and management approaches, as detailed below:



#### **Material Issue**

Indicates very high impact (very high level of severity and likelihood).

Clean Energy Towards Net Zero Environmental Management



Indicates high impact (high level of severity and likelihood).

Capturing the Future Sustainability Market

Corporate Governance & Compliance

Employee-focused Organization

Risk & Crisis Management



Indicates moderate impact (moderate level of severity and likelihood).

Corporate Social Responsibility

Maintaining Availability and Reliability

Biodiversity

Occupational Health and Safety



Indicates low impact (low level of severity and likelihood).

Supply Chain Management

Being an Innovative Leader

Customer Relationship Management

Information Security/ Cybersecurity Governance



#### Remarks

- **Key Material Issue** refer to issues that stakeholders (both internal and external to the Company) consider significant in terms of their impact across economic (corporate governance), social, and environmental dimensions. Both positive and negative impacts are scored by their levels of impacts (high to very high impact) based on the criteria of severity and likelihood of impacts on internal and external stakeholders as well as impacts on GPSC's business operations.
  - o Positive Impacts Healthy operating results, business growth, quality of life enhancement, promotion of environmental quality, etc.
  - o **Negative Impacts** Business losses or remediation expenses, violation of relevant laws or regulations, degradation in quality of life, environmental degradation, etc.
  - o M indicates very high impact (very high level of severity and likelihood).
  - o *t* indicates high impact (high level of severity and likelihood).
- Fundamental Material Issue refer to basic requirements for the company in compliance with laws, standards, and general practices, which internal and external stakeholders view as having low to moderate impacts.
  - o indicates moderate impact (moderate level of severity and likelihood).
  - o 🧠 indicates low impact (low level of severity and likelihood).

#### **Materiality Assessment 2024**

Material Issue		Occurrence				Olahal	Sustainable
	Impact (Positive and negative)	Past and present		Timeframe	Stakeholder	Global Reporting Initiative: GRI	Development Goals: SDGs
Key Material Issu	le						
Clean Energy Towards Net Zero	- GPSC being one of the country's leading service providers of clean energy, taking part in driving the attainment of Net Zero and climate change targets - Attracting foreign investors into the energy industry			Short-term, Long-term	Government/ Public, Customers, Suppliers, Investors, Partners	- Management Approach (3-1, 3-2, 3-3) - Energy (302-1, 302-3, 302-4) - Emission (305-1, 305-2, 305-3, 305-4, 305-7)	7 AFFERMALE AND GLAN HEREY  12 RESPINSIBLE CONCENTED AND PRODUCT IN AND PRODUCT I
	<ul> <li>Supporting low-carbon businesses and innovations with promising future growth</li> <li>Encouraging the workforce to recognize the value of actions for Net Zero emissions</li> <li>Potential impact on investor and supplier confidence if there is a lack of clear management plans</li> </ul>		<b>✓</b>	Short-term, Long-term	Shareholders, Investors, Partners, Customers, Employees, Suppliers		
	<ul> <li>Promoting access to clean energy sources among consumers</li> <li>Potential cost and technological challenges in the clean energy transition</li> <li>Potential additional requirements for suppliers in their operations to ensure alignment with GPSC's sustainability goals</li> </ul>				Customers, Society and Communities		

		Occur	Occurrence	Timeframe Stakeholder	Global	Sustainable	
Material Issue	Impact (Positive and negative)	Past and present	Future		Stakeholder	Reporting Initiative: GRI	Development Goals: SDGs
Environmental Management	- Legal requirements that GPSC must follow, with direct impact on the corporate image and operations	<b>✓</b>		Short-term, Long-term	Shareholders, Investors, Government/ Public, Society and Communities, Customers	- Strategy, Policies, and Practice (2-23, 2-24) - Management Approach (3-1, 3-2, 3-3)	6 MAN SAUTATION  12 RESPONSENCE  13 CLAMPIC  13 ACTION
	- Fostering trust between GPSC and communities and promoting quality of life enhancement in communities through good environmental management  - Responding to public policies  - Fostering a positive corporate image and confidence in the organization  - Managing community concerns over particulates emitted by power plants  - Potential cost increase due to more stringent environmental control measures  - Potential impact on business continuity due to lack of clear environmental management plans and enforcement of more stringent laws			Short-term, Long-term	Shareholders, Investors, Government/ Public, Society and Communities, Customers, Communities	- Water (303-1, 303-2, 303-3, 303-4, 303-5) - Emissions (305-7) - Effluents and Waste (306-1, 306-2, 306-3, 306-4, 306-5) - Environmental Compliance (307-1)	

	Impact	Occurrence			Global	Sustainable	
Material Issue	(Positive and negative)	Past and present	Future	Timeframe	Stakeholder	Reporting Initiative: GRI	Development Goals: SDGs
Capturing the Future Sustainability Market	<ul> <li>Accommodating         changing market         trends, consumer         needs, and public         policies</li> <li>Potential challenges         due to increased         competition and more         complex sustainability         requirements</li> </ul>		<b>✓</b>	Long-term	Shareholders, Investors, Government/ Public, Customers, Suppliers	- Management Approach (3-1, 3-2, 3-3) - Indirect Economic Impact (203-1)	9 MODIFICATION  AND INTRACTION  17 PARTITIONS AND SHAPE SHAP
	- Fostering cooperation for product development initiatives that create value and market opportunities for GPSC and its business partners		<b>✓</b>	Long-term	Partners		
Corporate Governance & Compliance	- Fostering confidence in GPSC's business operations among stakeholders - Exchanging knowledge on compliance and business code of conduct - Promotion of continuous and sustainable growth through good corporate governance across all dimensions (ESG)			Short-term, Long-term	Shareholders, Investors, Partners, Customers, Suppliers	- Management Approach (3-1, 3-2, 3-3) - Organization Profile (2-11) - Governance (2-9, 2-10, 2-11, 2-13, 2-15, 2-23, 2-24, 2-25, 2-26, 2-27) - Anti-corruption (205-3)	5 GENER COMMITTY  8 DESENT WINN AND ECONOMIC GENERAL  10 REGINE STORM  17 PARTICISINES  17 PARTICISINES  18 PALE, HISTORE INSTRUMENT IN THE SOLDS  16 PALE, HISTORE INSTRUMENT IN THE SOLDS

	Impact (Positive and negative)	Occurrence					0 -1-11-1	
Material Issue		Past and present	Future	Timeframe	Stakeholder	Global Reporting Initiative: GRI	Sustainable Development Goals: SDGs	
Risk & Crisis Management	- Fostering stakeholder confidence through systematic risk management for the prevention of potential impacts - Potential new risks for operations and impacts on GPSC's operating results and service provision, especially on overseas investment - Impact on confidence in GPSC if there is a lack of proper			Short-term, Long-term	Shareholders, Investors, Customers, Partners	- Management Approach (3-1, 3-2, 3-3) - Governance (2-12, 2-13, 2-16, 2-23, 2-24)	5 GONDER  5 GONDER  8 ECTIVIORIA SOFTI  10 FEDERAL PURSTIPE  17 PARTICIPATION  18 PARTICIPATION  18 PARTICIPATION  18 PARTICIPATION  19 PARTICIPATION  18 PARTICIPATION  19 PARTICIPATION  19 PARTICIPATION  10 PARTICIPATION  10 PARTICIPATION  11 PARTICIPATION  12 PARTICIPATION  13 PARTICIPATION  14 PARTICIPATION  15 PARTICIPATION  16 PARTICIPATION  17 PARTICIPATION  18 PARTICIPATION  18 PARTICIPATION  18 PARTICIPATION  19 PARTICIPATION  19 PARTICIPATION  10 PA	
Employee- focused Organization	management  - The role of employees in driving GPSC towards its targets  - Creating differentiation and competitive advantage		<b>✓</b>	Short-term, Long-term	Shareholders, Investors, Employees	- Management Approach (3-1, 3-2, 3-3) - Collective Bargaining Agreements (2-30) - Training and Education (404-1, 404-2, 404-3) - Diversity and Equal Opportunity (405-1, 405-2) - Freedom of Association and Collective Bargaining (407-1)	Approach (3-1, 3-2, 3-3) - Collective Bargaining	3 GOOD HEATH 3 AND WELFEING 4 CUALITY 5 CAMPE
	<ul> <li>Career advancement, well-being, and good work environments for employees</li> <li>Reducing high turnover rates</li> <li>Potential lack of highly skilled personnel without sufficient human resource development</li> </ul>			Short-term, Long-term	Suppliers, Employees		8 DECENT WORK MADE AND ADDRESS OF THE PROPERTY	

**Remarks:** Further details of materiality assessment and the list of GPCS's material issues can be found on GPSC's website at: https://www.gpscgroup.com/th/sustainability/gpsc-sustainability/materiality-assessment.







# **Environmental and Climate Change Management**















#### Value creation process Critical factors:







Human capital



Manufacturing capital



Social and relationship capital



Intellectua capital



Natural capital

#### Key achievements in 2024



- 384.14 million MWh reduction in energy consumption compared to 2023
- 10% reduction in water consumption compared to 2023
- 47% of the total power generation capacity was accounted for by renewables in 2024.
- Zero fines incurred for environmental impacts in 2024
- 50.4% reduction in waste generation compared to 2023

#### **Business Driver**

The world is facing increasingly severe and frequent natural disasters, including floods, droughts, and continuously rising temperatures, as a result of climate change. As the energy industry is among the most significant contributors of greenhouse gas emissions1,2, GPSC recognizes the importance of managing and monitoring environmental impacts across all dimensions, including water and energy consumption, waste management, and the systematic tracking of greenhouse gas emissions, to the achievement of its environmental goals, net zero emissions targets, as well as the Nationally Determined Contributions (NDCs)3 pledged by various state parties, including Thailand.

In response to the pressure from investors, government agencies, and evolving consumer behavior, GPSC is accelerating its transition towards renewable energy production to reduce GHG emissions while also exploring more opportunities to develop new businesses and products to maintain long-term competitiveness. In tandem, the Company is actively mitigating potential climate change impacts and creating value for all stakeholders, driven by its commitment to becoming Southeast Asia's leader in sustainable renewable energy production and management in line with current global trends.

https://iea.blob.core.windows.net/assets/ed1e4c42-5726-4269-b801-97b3d32e117c/WorldEnergyOutlook2023.pdf https://iea.blob.core.windows.net/assets/140a0470-5b90-4922-a0e9-838b3ac6918c/WorldEnergyOutlook2024.pdf

https://unfccc.int/sites/default/files/NDC/2022-11/Thailand%202nd%20Updated%20NDC.pdf

<sup>1,2</sup> International Energy Agency (IEA)

<sup>3</sup> National Determined Contributions (NDCs)

#### **Risks and Opportunities**

#### A marked increase in renewable energy demand in Thailand, as evident in the policies outlined in the draft Power Development Plan 2024-2037 (PDP 2024), which promotes a higher proportion of renewable energy and encourages adaptation in the business sector, focusing on active GHG emission reduction through a transition towards greater renewable energy use in response to pressure from the government, investors, and society, who expect organizations to drive towards sustainability in the future

#### Mitigation measures

- GPSC has been implementing Strategy S2: Scale-up Green Energy, which focuses on increasing renewable energy capacity from solar, hydro, wind, and waste-to-energy sources and integrating renewable energy with energy storage systems (ESS). As part of this strategy, GPSC develops business through government renewable energy procurement programs under the national Power Development Plan (PPA bidding) and direct PPAs via third-party access (TPA) to serve customers seeking clean energy, thus significantly boosting domestic renewable energy demand.
- GPSC has implemented energy management projects to optimize renewable energy utilization, decarbonize production processes, and enhance energy efficiency in the organization. This includes the Smart Energy Solution Provider project, operated through Combined Heat and Power Producing Company Limited (CHPP), a wholly-owned subsidiary that pioneers innovative energy business models and offers comprehensive energy services from design consultation to energy management, including production, power storage, and efficient electricity demand response to meet diverse customer energy requirements.
- Possible challenges to business operations brought on by the future implementation of carbon pricing in Thailand, particularly regarding production costs and competitiveness
- A need for production efficiency optimization through deployment of advanced technologies in power plants, such as carbon capture, utilization and storage (CCUS) technology
- In preparation, GPSC has adopted internal carbon pricing (ICP) to inform its investment decisions in different projects, such as renewable energy projects and low-carbon innovations.
- GPSC has developed infrastructure to reduce and capture GHG emissions in its operations, including carbon capture, storage, and utilization (CCS/CCUS) technology, in collaboration with external partners, such as the co-development of ammonia co-firing development with Doosan Enerbility Co, Ltd.
- Strategic nature-based solutions and reforestation are implemented for carbon dioxide absorption.

#### **Risks and Opportunities**

#### Mitigation measures

- Changes in environmental and climate change
  regulations, with the Thailand Climate Change Act
  anticipated to take effect in 2027, followed by
  the Emissions Trading System (ETS) two years later
  - GPSC regularly monitors regulatory changes through the GPSC Group Climate Change Strategy Committee (GCSC), responsible for overseeing the Company's climate action and response measures.
- Likelihood of stricter policies from the Pollution Control
   Department in the future
  - Operations are continuously reviewed and improved to comply with the latest regulations.
- Long-term cost reduction through improved resource and environmental management
- management plans and applies technology and innovation for maximum efficiency. This includes adopting low NOx burners, which reduce nitrogen oxide emissions from gas turbine combustion chambers, and pulverized coal-fired boilers; sourcing quality bituminous coal with less than 1% sulfur content; using limestone injection to eliminate sulfur dioxide from coal combustion within circulating fluidized bed (CFB) boilers; installing Seawater flue gas desulfurization systems (FGD) for pulverized coal-fired boilers; and implementing total suspended particles (TSP) capture systems using bag filters, electrostatic precipitation (ESP), and contaminant removal systems for substances like mercury.
- Integration of new business models, such as the circular economy and sustainable supply chains, within the organization
  - GPSC has fostered collaboration with external partners to exchange knowledge and best practices for maximum resource efficiency through various initiatives, such as Ban Phai Waste Management Learning Center and high-calorific waste sorting promotion projects across four community waste banks: Wat Chak Luk Ya Community Recycling Waste Management Center, Khao Phai Community Waste Bank, Noen Phayom Community Environmental Bank, and Ban Phai Community Waste Management Learning Center.

#### **Risks and Opportunities**

# Ongoing development of sustainability-related disclosure standards and frameworks

#### Mitigation measures

In its sustainability strategy development, GPSC takes into account alignment with sustainability reporting frameworks for integrated reports and climate change risk financial reporting frameworks (IFRS S2 and TCFD) to ensure full and complete disclosure.

#### **Environmental Strategy Implementation Plan**

GPSC implements its S4 Strategy and QSHE Strategy, focusing on utilizing the former to enhance core business efficiency and expand its clean energy portfolio across solar and wind power, while also integrating energy storage systems and investing in battery business and related innovations to generate revenue from new business opportunities and fully support the energy transition.

GPSC also actively implements the Quality, Security, Safety, Health, and Environment (QSHE) Strategy, which places emphasis on 3Ps: Strengthening Process (P1), Shaping People (P2), and Enhancing Practice (P3). This strategy encompasses a wide range of initiatives, includes improving the quality and user-friendliness of the QSHE management system, promoting the "WESAFE" culture to raise employee awareness, and optimizing efficiency by integrating artificial intelligence (AI) technology into the QSHE management system, with the ultimate goal of maximizing the sustainability and safety of GPSC's business operations.



#### The Quality, Security, Safety, Health, and Environment 3P (QSHE) Strategy,



# Strengthen Process



- Optimize the QSHE management system by integrating OEMS SSHE principles, continuously maintaining and expanding the coverage of ISO international standards, and ensuring full compliance with QSHE regulations and laws.
- Improve QSHE practices and operational procedures for efficiency and practicability by reducing redundant processes and aligning complex procedures to eliminate unnecessary steps.
- Systematically analyze and evaluate QSHE performance using a data-driven approach as well as elevate environmental measures.



# Shaping People



- Enhance employees' capabilities in QSHE by deepening their understanding of QSHE procedures, strengthening soft skills, and clearly assigning supervisory and control responsibilities.
- Foster a "WESAFE" culture to reinforce SSHE values through active participation from all employees.
- Establish QSHE role models at all levels, further raise awareness on QSHE and the use of the SPEED/AAA framework.



# Enhancing Practice



- Actively initiate QSHE activities for QSHE risk management (ALARP), with proactive measures to prevent, inspect, control hazards, and minimize environmental impacts.
- Study and implement advanced technologies and innovations, such as data digitization and artificial intelligence (AI) for QSHE and environmental innovations.
- Develop efficient communication through training, seminars, and effective communication channels; communicate with transparency and integrity with both internal and external stakeholders; and develop QSHE lessons and knowledge management (KM).

#### Quality, Security, Safety, Health, and Environmental (QSHE) Policy

GPSC recognizes the potential impacts on community health and the environment from its electricity and steam production activities. As such, the Company has established a Quality, Security, Safety, Health, and Environmental (QSHE) Policy that focuses on efficient impact management according to international standards to gain acceptance from all stakeholders and drive the organization toward excellence. Driven by a clear vision to achieve zero incidents that harm its personnel and communities as it strives to foster long-term sustainability in the power and utilities business, GPSC has set QSHE assessment targets in line with PTT Group's security, safety, health, and environmental management standards to achieve a score of no less than 3.3 and maintain its excellent QSHE performance within PTT Group recognized by all stakeholders.

# QSHE VISION 'Drive to Zero incidents that harm people'



Best SSHE performance score (Top Quartile/ Best in Class)



Maintain DJSI Listed (SSHE Part support)



PTT OEMS SSHE Element Score ≥ 3.3

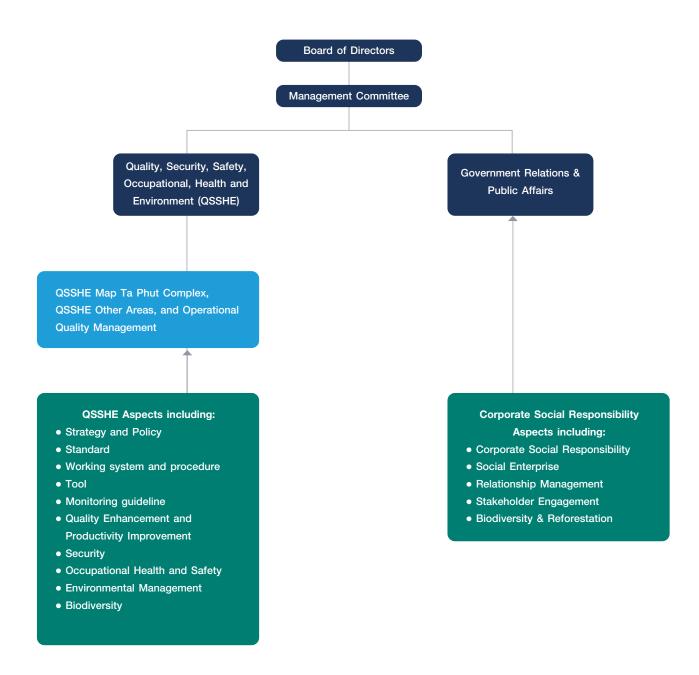
- Zero Injuries 2. Zero Security / Emergency Event 3. Zero ENV Incident 4. Zero Occupational Health Illness
   Zero Emission Growth 6. Zero Legal Non-Compliance 7. Listed DJSI (SSHE) 8. SSHE OEMS Score ≥ 3.3
- (P2) Shaping People (P1) Strengthen Process (P3) Enhancing Practice • P11: Strengthen QSHE • P21: Enhance QSHE Staff • P31: Initiate Proactive QSHE Management system competency **Activity** ☐ Embedded OEMS SSHE □ Deeply understanding QSHE ☐ QSHE Risk management **Procedure** (ALARP) ☐ ISO Maintain & Expand ☐ Core competency (Soft skill) ☐ Hazard Prevention, ☐ 100% QSHE legal ☐ Fully Governor & Supervise Monitoring, Control compliance • P22: Embed "WESAFE" Culture ☐ Protect, prevent, minimize • P12: Simplify and practical QSHE ☐ SSHE Culture Enhancement environmental impacts Content ☐ All Employee contribution ☐ Effective inspection and ☐ Align duplicate / Conflict • P23: Build up QSHE role model audit in all level process and procedure • P32: Study and apply advance ☐ QSHE Ownership ☐ Clear unnecessary process **Technology / Innovation** ☐ QSHE Awareness ☐ QSHE Digitalization and Al and procedure ☐ SPEED Mindset / AAA ☐ Green Innovations ☐ Readiness and completeness • P33: Engage Effective of key activities • P13: QSHE Performance analysis Communication □ Data-Driven organization ☐ Effective training / Workshop ☐ Up-lift initiative project / Channel ☐ Transparency and integrity □ Cover internal and external stakeholders ☐ QSHE Lesson learn & KM

| Management support | Effective Organization | Digitalization Enabler | Effective Communication | QSHE data analytics | People Capability | ISO Maintain & Expand

MEAN

#### **QSHE Governance Structure**

GPSC's environmental management is implemented in accordance with its Quality, Security, Safety, Health, and Environmental (QSHE) policy under the supervision of the Board of Directors and the Management Committee. Operations are carried out by multiple departments working together to ensure efficient implementation throughout GPSC Group. The roles and responsibilities can be summarized as follows:



(Further details can be found at: Environmental Management | Global Power Synergy Public Company Limited (GPSC))

#### **Performance:**

#### Impact to stakeholders and value creation







#### Waste management

GPSC has consistently prioritized the management of waste and residual materials generated in its operations, particularly in electricity and steam production, which are its core activities and can produce various types of waste depending on fuel types and technologies used. Major types of waste from power plants include by-products from combustion in energy production, cooling processes, steam generation, and even from equipment maintenance and pollution control systems. Thanks to efficient waste management throughout 2024, GPSC was able to mitigate environmental risks and advance its corporate sustainability goals.

#### **Waste Reduction Strategies and Approaches**

GPSC is committed to maximizing the reduction of waste from production by strictly adhering to the 3Rs principle (reduce, reuse and recycle), which begins with minimizing waste at the source and, when waste does occur, managing it to maximize reuse and utilization. This approach has enabled GPSC to achieve its waste reduction targets, minimize waste requiring disposal, and maintain its zero waste to landfill performance from 2018 to the present. Currently, GPSC maintains efficient waste management processes that comply with the requirements of the Pollution Control Department and international standards.

Additionally, GPSC has raised environmental impact awareness among contractors, suppliers, and customers by establishing and implementing an industrial waste management process across all power plants. As part of this process, permits are obtained from relevant agencies before any waste and unused materials are transported from operational areas. In addition, all disposal of both hazardous and non-hazardous waste must be assessed and approved before the materials leave the facilities and are transported to waste disposal companies. GPSC's waste management strictly complies with international requirements and standards as well as applicable environmental laws, such as the Factory Act and Hazardous Substance Act, and is monitored, controlled, and evaluated to ensure waste is properly stored, treated, and disposed of safely and efficiently.

#### **Waste Management Process**

GPSC has consistently implemented comprehensive waste management and governance, with third-party verification to regularly identify the quantity and types of waste generated in operations. This process enables GPSC to identify areas where waste is generated and develop efficient disposal approaches appropriate for each waste type, as outlined below.

Input	Activity	Waste Generated	Management Approach
Coal	Combustion processes to produce electricity and steam.	Fly ash, Heavy ash	<ul> <li>Bag Filter, ESP</li> <li>Imported as an alternative raw material for the manufacture of cement</li> <li>Installation of heavy ash reuse systems, which can reduce heavy ash generated in the amount of 120 tons per year and reduce the accumulated sand sludge in the furnace of the CFB1, CFB2 and CFB3 units by up to 15 tons per month</li> </ul>
Lubricant	Machine maintenance process	Used lubricants, such as engine and transmission oils	
Chemicals, such as resins, hypochlorites and others	Machinery maintenance and pollution treatment processes	Used chemicals and wastewater contaminated containers	Establish an agreement with the distribution company to reuse and recycle
Office materials	Office services	Non-hazardous waste	<ul><li>3Rs (Reduce, Reuse, Recycle)</li><li>Waste sorting</li></ul>

(Further details can be found at: Environmental Management | Global Power Synergy Public Company Limited (GPSC)

#### **Featured Waste Management Project for 2024**

GPSC has provided mentorship to the Ban Phai Community (Ban Phai Waste Savings Bank Enterprise) at Moo 1, Nong Taphan Sub-district, Ban Khai District, Rayong, located within a 5-kilometer radius of the Company's Refuse Derived Fuel (RDF) power plant. The Company has been promoting and developing comprehensive waste management processes for the community since 2018. In addition, it has constructed a waste bank building and developed waste management expertise in the community, transforming it into a learning center for visitors interested

in studying waste-derived product development through recycling and upcycling and plastic waste processing machinery development. The performance of the Ban Phai Community (Ban Phai Waste Savings Bank Enterprise) from January to November 2024 can be summarized as follows:

- 1. Community income from waste-derived products: 1,236,815 baht
- Total waste reduction through management: 5,074.25 kilograms

#### Water management

GPSC recognizes that electricity generation, steam production, and district cooling services require substantial and continuous water resources. Therefore, efficient water resource management is essential for reducing costs and enhancing long-term competitiveness, particularly critical given that climate change, brought on by increased greenhouse gases, is intensifying natural disasters and water shortage. As such, GPSC prioritizes comprehensive water management, encompassing efficient water consumption, strict legal compliance, and continuous water resource risk assessment to ensure business continuity, reduce operational costs, build resilience, and prepare for future challenges.

#### **Water Management Strategies and Approaches**

#### • Water efficiency management program

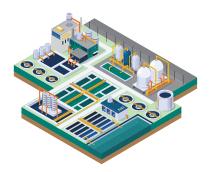
GPSC's water management is carried out through various processes, such as identifying efficiency optimization opportunities, evaluating and reviewing water consumption volumes, measuring and tracking key performance indicators, as well as implementing water consumption reduction and recycling methods throughout operations to maximize water efficiency. In addition, GPSC conducts water efficiency management training for all employees and provides opportunities for external stakeholders to participate to foster awareness of the importance of water resources.

(Further details can be found at: GPSC Water Efficiency Management Programs 2023)

#### Water risk management program

Water-related risk assessment and management is a key priority for GPSC, with water risks fully integrated into its enterprise risk management, enabling the Company to evaluate all risks thoroughly, minimize unintentional regulatory non-compliance, strengthen stakeholder confidence, and enhance corporate reputation. The implementation is collaboratively carried out by multiple internal functions, with measures developed to help GPSC identify, mitigate, and adapt to potential risks. In addition, GPSC's water risk management is continuously monitored and refined to enhance the effectiveness of the risk management framework in response to evolving circumstances.

(Further details can be found at: Environmental Management I Global Power Synergy Public Company Limited (GPSC))



Water management outside GPSC



Water management inside GPSC



Water management to prevent risks in water stressed areas

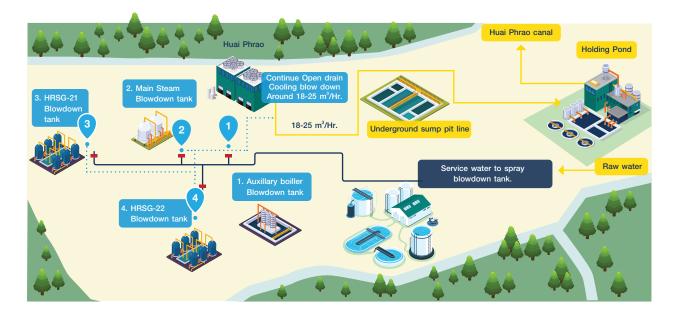
#### **Water Management Governance Structure**

GPSC has established a governance structure and management system extending from the highest-ranking executive to operational personnel, with water strategies, targets, and action plans established to ensure effective water management. In addition, dedicated teams have been appointed with clear reporting lines to continuously monitor and track progress.

#### Featured Water Management Project for 2024

In 2023, GPSC initiated a project to install an additional piping system at Central Utility Plant 2 (CUP2) to sustainably optimize water management. This system allows the water from the cooling process to be reused, replacing the previous practice of discharging it into an underground pit, resulting in a significant reduction in water consumption and significantly enhancing the efficiency of water circulation within the plant's cooling system. The project was awarded first prize in PTT Group's innovation contest. GPSC is seeking to build on this success by scaling up the system to achieve sustained long-term water consumption reductions.

In 2024, this project contributed to a water consumption reduction of 157,680 m³, resulting in cost savings of 3,487,315 baht annually while decreasing greenhouse gas emissions by 1,017 kgCO<sub>3</sub>e per year.



#### Air quality management

GPSC prioritizes air pollution management by investing in technologies that enhance production process efficiency and developing action plans to continuously reduce air pollutant emissions. These efforts have successfully lowered emissions, such as nitrogen oxides (NOx), sulfur oxides (SOx), and total suspended particulates (TSP). In addition, GPSC focuses on controlling, monitoring,

and tracking air pollutant levels from emission sources in strict adherence to measures stipulated in environmental impact assessment (EIA) reports and environmental and health impact assessment (EHIA) reports for projects or activities that could severely impact natural resources, environmental quality, health, hygiene, and the quality of life in local communities.

## Air Pollution Management Strategies and Approaches

As part of its air pollution approach, GPSC employs emission-reducing technologies, such as low NOx burners for gas turbines and boilers, as well as utilizes high-quality bituminous coal in combination with limestone injection technology and seawater flue gas desulfurization (FGD) systems to remove sulfur dioxide during combustion at coal-fired power plants. Additionally, bag filter systems for capturing total suspended particulates (TSP) and systems for removing contaminants like mercury have been installed. For the RDF power plant, Continuous Emission Monitoring Systems (CEMs) and Pollution Outreach Monitoring Systems (POMs) with real-time displays have been implemented. In addition, air quality measurements are conducted every six months as part of its environmental impact prevention and mitigation measures by certified third-party agencies, and green buffer zones have also been established around operational sites to reduce the dispersion of air pollutants to external areas. Beyond complying with laws and regulations specified in EIA and EHIA reports, GPSC has also adopted international standards for its environmental management practices.

(Further details can be found at: Environmental Management I Global Power Synergy Public Company Limited (GPSC)

#### **Energy management**

GPSC prioritizes the use of renewable energy to lower domestic greenhouse gas emissions and respond to changing consumer demands. Energy management measures are considered a core strategy for GPSC to achieve carbon neutrality by 2050 and net zero greenhouse gas emissions by 2060.

GPSC's energy management strategy can be divided into the following four key areas:

- 1. Fleet optimization
- 2. Efficiency improvement
- 3. Loss elimination
- 4. Energy conservation/saving

To ensure effective energy management, GPSC has established a governance structure as well as a management process spanning from executive to operational levels. This process can be broken down into eight steps:

- 1. Establishment of an energy management team
- 2. Initial assessment of the energy management situation
- Establishment of energy conservation/saving directions and policies
- 4. Assessment of energy conservation/saving capabilities
- 5. Setting targets and action plans for energy efficiency enhancement
- 6. Implementation of the energy management plan
- 7. Monitoring and evaluation of energy management progress
- 8. Review, analysis, and correction of issues identified in energy management

(Further details can be found at: Environmental Management | Global Power Synergy Public Company Limited (GPSC))

## Featured Energy Management Project for 2024

GPSC undertook a project to upgrade air filters from type E10 to type E12 to reduce rising fuel consumption costs caused by buildups of fouling, such as scale, gunk, and salt, within the compressor, which impaired its operational efficiency. This filter upgrade has significantly reduced such fouling and led to substantial savings in compressor maintenance expenses. The project is estimated to have cut compressor maintenance costs related to fouling by 28.8 million baht in 2024.)

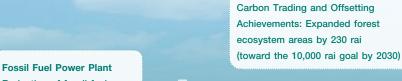
#### **Performance and Targets**

2024 Target	2024 Performance		
Waste Management			
Non-hazardous waste volume: not exceeding 198,096.14 tons	Non-hazardous waste volume: 161,602.01 tons		
	Waste reused/recycled: 254,863 tons		
Zero waste to landfill	Zero waste to landfill		
Water Management			
Water consumption: not exceeding 33.3 million m <sup>3</sup>	Water consumption: 27.6 million m <sup>3</sup>		
	• Water discharge: 1,861.2 million m <sup>3</sup>		
Total net freshwater consumption: not exceeding 37.4 million m <sup>3</sup>	Total net freshwater consumption: 28.7 million m <sup>3</sup>		
Air Quality Management			
Sulfur oxide (SOx) emissions: not exceeding 3,948.13 tons	Sulfur oxide (SOx) emissions: 3,104.80 tons		
Nitrogen oxide (NOx) emissions: not exceeding 10,801.63 tons	Nitrogen oxide (NOx) emissions: 8,905.38 tons		
Energy Management			
Energy consumption: not exceeding 22,623,918.29 MWh	Energy consumption: 23,153,037.69 MWh		

#### **Climate Change Management**

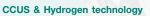
#### **Climate Commitment and Targets**

GPSC recognizes the significance of climate risk management and has announced targets to achieve net zero GHG emissions and carbon neutrality that align with and surpass Thailand's Nationally Determined Contributions (NDCs). Furthermore, GPSC has declared its intent to cease additional investments in fossil fuel businesses and focus instead on expanding renewable energy production to address evolving consumer needs and support the long-term transition towards sustainable energy.



CO2

#### Reduction of fossil fuel usage Achievements: Carbon emission reduction through improved power generation efficiency: 66,000 tCO<sub>2</sub> eq



Development of foundational projects Achievements: Signed MoU with Doosan for hydrogen and CCUS technology Target development and feasibility studies



Increase in renewable energy generation capacity Achievements: 68% of electricity generation capacity from renewable sources (Committed Capacity)



Carbon Intensity Reduction 10% by 2025 & 35% by 2030 Carbon Neutrality by 2050 Net Zero GHG Emission by 2060

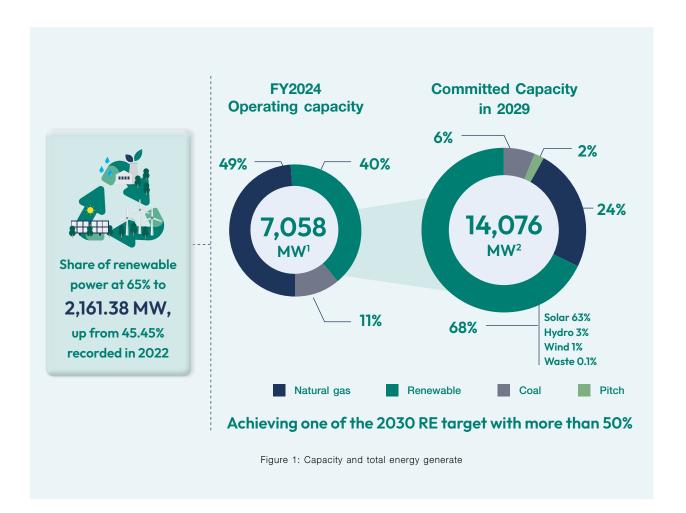
Carbon Credit Trading / Reforestation

Target	Detail
Net zero GHG emissions	2060
Carbon Neutrality	2050
Carbon intensity reduction	• 10% by 2025
	• 35% by 2030
Coal Phase-out	No further investment in Coal businesses

#### **Climate Strategies**

Designed to meet the growing global demand for renewable energy, GPSC's climate strategies focus on transitioning towards a low-carbon electricity business through technological development and the application of internal carbon pricing to manage risks and identify new market opportunities. The strategies are carried out through the following four core action plans:

- Reduce fossil fuel usage: This includes retrofitting existing fossil fuel power plants and substituting fossil fuel energy sources with internally generated renewable energy.
- Grow renewables: This involves increasing investment either by establishing new renewable power plants or via mergers and acquisitions, and switching from fossil sources to renewables, with the goal of increasing renewables to at least 50 percent of its total generation capacity by 2030.
- Enhance infrastructure: This includes applying carbon capture, utilization, and storage (CCUS) technologies to its coal and natural gas power plants, with a target to commence investment in permanent carbon storage projects by 2030.
- 4. Trading & Offset: This encompasses implementing nature-based carbon sequestration projects and studying the use of internal carbon pricing to inform investment decisions in low-carbon technologies, with a target to revitalize 10,000 rai of forests by 2030.



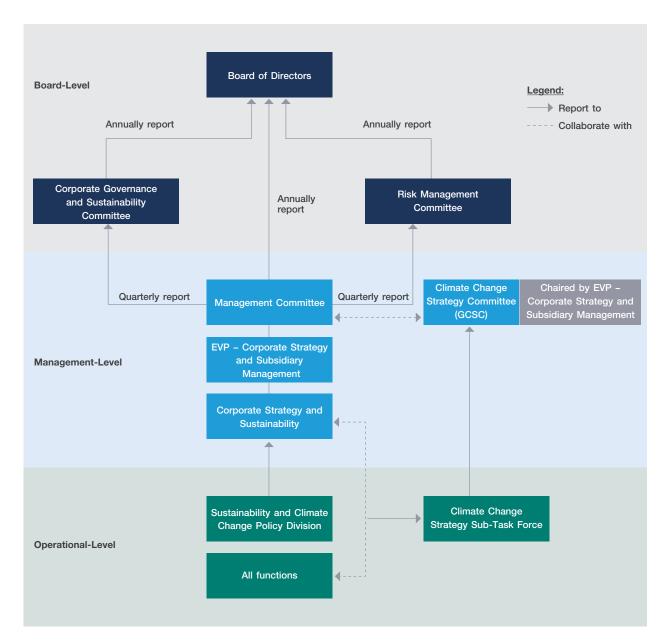
#### **Climate Change Management Structure**

GPSC has established a specific structure for climate change management. The Board of Directors plays a crucial role in approving policies, strategies, and action plans related to climate change, with the Corporate Governance and Sustainability Committee and the Risk Management Committee tasked with monitoring climate-related risks and opportunities and handling key processes, such as formulating relevant risk management policies, developing climate policies and strategies, tracking performance and

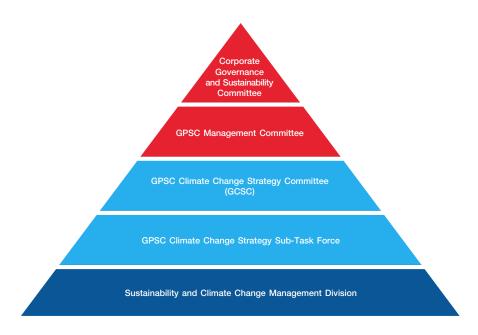
resource management, determining budget plans and capital expenditures, and making decisions regarding investments or acquisitions/divestitures.

Both committees report to the Board of Directors with climate-related updates at least annually. Meetings are convened to report climate change management progress to the Corporate Governance and Sustainability Committee on a quarterly basis, and to the Risk Management Committee at an appropriate timeframe or whenever significant issues emerge.

#### **Climate Change Governance Structure**



#### **Climate Change Working Group Organizational Chart**



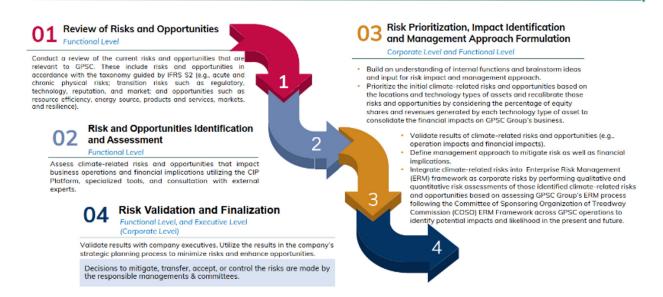
Additionally, the GPSC Management Committee has appointed the GPSC Climate Change Strategy Committee (GCSC), which holds direct responsibility for managing the Group's climate change policy and has in turn established the GPSC Group Climate Change Strategy Sub-Task Force to implement climate change-related projects and support the committee's action plans.

Furthermore, GPSC has established climate-related key performance indicators (KPIs) for these working groups, as detailed below.



(Further details can be found at: Clean Energy Towards Net Zero | Global Power Synergy Public Company Limited (GPSC))

#### **Climate Change Risk and Opportunity Assessment**



GPSC assesses climate-related risks and opportunities using a specialized platform capable of consolidating data from diverse sources, including scientific articles, regulations, news updates, and global climate change risk trends. The Company also consults external climate experts regarding its assessment methodology. The process for managing climate-related risks and opportunities consists of the following steps:

- Reviewing current risks and opportunities relevant to GPSC, including those recommended by IFRS S2, such as acute and chronic physical risks; transition risks such as regulatory, technological, reputational, market risks; and opportunities such as resource efficiency, energy sources, products/services, and markets.
- Identifying and assessing climate-related risks and opportunities impacting GPSC's business operations and financial performance, utilizing the CIP platform, other specialized tools, and consultation with external experts.
- 3. Prioritizing and assessing impacts:
- Building understanding across relevant departments regarding roles and responsibilities and establishing a shared approach for the risk impact assessment process and methodology.

- Prioritizing climate-related risks and opportunities based on asset location and technology type; and refining such risks and opportunities in relation to the proportion of capital shares and revenue generated by each technology type to determine the total financial impact on GPSC Group's overall business.
- Validating the impacts of climate-related risks and opportunities (such as operational and financial impacts).
- Defining management strategies to mitigate identified risks and their associated financial impacts.
- Integrating climate-related risks into the corporate Enterprise Risk Management (ERM) framework as enterprise-level risks; and conducting both qualitative and quantitative assessments of the identified climate risks and opportunities, with the Group's ERM process evaluated against the COSO ERM framework across all operations to determine current and future impacts and likelihood.
- 4. Reviewing the assessment results with executives and incorporating these findings into GPSC's strategic planning to mitigate risks and capitalize on opportunities, with decisions regarding risk mitigation, transfer, acceptance, or control made by executives and the responsible committees.

(Further details can be found at: Environmental Management | Global Power Synergy Public Company Limited (GPSC) , IFRS S2 2024)

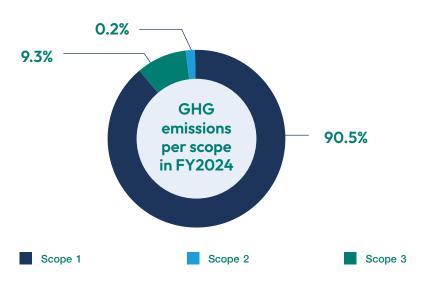
#### Featured GHG Management Project for 2024

GPSC remains committed to fostering collaborations with partners to apply innovative decarbonization technology to its business operations. Examples include:

- Collaboration with Seaborg Technologies ApS (Denmark), a developer of small modular reactors (SMR).
- Collaboration with Doosan Enerbility Co, Ltd. (Republic of Korea), a specialist in industrial energy and water, to study and develop fuel shifts and hybridization; carbon capture, utilization & storage (CCUS) technology; and other carbon-free energy solutions, with the goal of decarbonizing the electricity and steam generation processes across various power plant types a core commitment and mission of GPSC, in line with its key strategy of developing energy innovation and businesses of the future to achieve its net zero emission goal by 2060.

#### **Performance and Targets**

#### Proportion of Greenhouse Gas Emissions in Scopes 1, 2, and 3



#### **Performance and Targets**

2024 Target	2024 Performance
Direct and indirect GHG emissions (Scopes 1 and 2): not exceeding 11,099,049.51 tCO <sub>2</sub> e	• Direct and indirect GHG emissions (Scopes 1 and 2): 11,680,213.14 $\mathrm{tCO_2e}$
	<ul> <li>Direct and indirect GHG emission intensity (Scopes 1 and 2): 0.411 tCO<sub>2</sub>e /MWh</li> </ul>
Other indirect GHG emissions (Scope 3): not exceeding 1,474,526.87 tCO <sub>2</sub> e	Other indirect GHG emissions (Scope 3): 1,200,053.14 tCO <sub>2</sub> e

2024 Target	2024 Performance
Adding four new categories for Scope 3 GHG emissions data collection	Scope 3 data collection was expanded to include four new categories:
	1. Fuel- and energy-related activities (not included in Scopes 1 or 2)
	2. Waste generated in operations
	3. Business travel
	4. Employee commuting
GHG reduction across GPSC's eight ongoing Thailand Voluntary Emission Reduction Program (T-VER) projects: 4,075,050 tCO <sub>2</sub> e	GHG reduction across GPSC's eight ongoing Thailand Voluntary Emission Reduction Program (T-VER) projects: 579,141 tCO <sub>2</sub> e
Continuous GHG reduction from Low Emission Support Scheme (LESS) projects every year	294,016 tCO <sub>2</sub> e GHG reduction across 28 ongoing Low Emission Support Scheme (LESS) projects

#### Performance data

(Further details can be found at: Sustainability performance data 2024 | Global Power Synergy Public Company Limited (GPSC) )

## Outlook for environmental and climate change management

To ensure its ability to respond to challenging targets and policies established at both national and international levels, GPSC is committed to continuous research of new technologies to reduce the environmental and climate impacts arising from its operations while maintaining its competitiveness in the market.





# Governance, Risk Management, and Compliance (GRC)

#### **Value creation process Critical factors:**







Financial capital

Human capital

Intellectual capital

#### Key achievements in 2024



- Received an "Excellent" rating for the 9th consecutive year in the 2024 Corporate Governance Report (CGR) of Thai Listed Companies survey, conducted by the Thai Institute of Directors (IOD).
- Recertified as a member of the Thai Private Sector Collective Action Against Corruption (CAC) for the second consecutive time.
- Zero fraud or corruption complaints in 2024

#### **Business Drivers**

Given the rapidly changing business environment currently faced by the power generation, distribution, and utilities sector, GPSC must ensure its preparedness to respond to and manage challenges effectively, support its effort to seek new opportunities, and update its business strategies and risk management in line with current conditions. This is achieved through the Governance, Risk Management, and Compliance (GRC) Framework, a key tool employed by GPSC to drive integrated business operations to generate returns and added value for

the organization and create social value for all stakeholders. The framework also serves as the foundation for sustainable and efficient organizational growth and the achievement of the Company's business objectives. The framework is implemented through strong governance, sound risk management, as well as monitoring and enforcement of strict compliance with company regulations and relevant laws throughout the organization, from the Board of Directors and management to all employees. By adhering to GRC practices, GPSC can respond to risks in a timely manner.

#### **Aspiration and Main Challenges**

GPSC is committed to conducting business in adherence to robust corporate governance principles and in strict compliance with laws and regulations, with an effective risk management system in place. As such, various measures have been established to mitigate potential risks, thus reinforcing GPSC's position as a leading world-class company that operates with transparency.

#### **Risks and Opportunities**

#### **Mitigation Measures**

#### **Risks**

- Meeting stakeholder expectations regarding the appointment of directors from a diverse gender, race, religion, and age background; and elevating board capabilities and expertise in areas such as renewable energy management, cybersecurity, sustainability, and climate change.
- Potential errors in risk assessment that may not be resolved or prevented within the established timeframe, potentially causing extensive impacts on GPSC, external stakeholders, the environment, society, and economy.
- The risk of non-compliance by employees, executives, or the Board and its ensuing impacts on external stakeholders, the environment, society, economy, and the Company's credibility.

- Consider director nomination strategies that prioritize diversity with regards to gender, race, nationality, religion, age, cultural background, and other differences.
- Evaluate director and executive performance; establish
  development plans to enhance their knowledge
  and expertise in line with evolving societal trends, such
  as by providing training related to the power industry,
  renewable energy, sustainability, and climate change.
- Monitor emerging risks identified by credible international organizations, such as the Global Risk Report by the World Economic Forum (WEF).
- Regularly monitor regulations and laws relevant to the organization to ensure compliance.

#### **Opportunities**

- Transparent and fair governance, guided by strict regulatory compliance, coupled with a capable and diverse Board and management team, provides a foundation for GPSC to formulate business strategies for sustainable growth.
- Regularly assessment of emerging risks and monitoring of the impact levels of the existing risks enables GPSC to prepare effective management and prevention of potential negative effects.

#### **GRC Framework Implementation Plan**

GPSC prioritizes management based on the Governance, Risk Management, and Compliance (GRC) Framework to support sustainable operations. In addition, the Company has established relevant short-, medium-, and long-term GRC strategic action plans, which include regularly reviewing and updating relevant policies; acknowledging and adhering to the Corporate Governance Manual and Code of Conduct; providing training on compliance procedures for relevant laws and regulations; and prescribing annual conflict of interest reporting via an online system, for which 100% completion is required for directors, executives, and employees. Furthermore, appropriate channels and processes have been put in place for handling complaints related to fraud to ensure operational transparency.

#### **Policy and Commitment**

GPSC has established various policies in alignment with the Governance, Risk Management, and Compliance (GRC) Framework to enhance efficiency and transparency for its sustainable business operations. These include several key policies, such as the Corporate Governance Manual and Code of Conduct, which provides guidelines for transparent operations and good governance in compliance with international standards; the Anti-Fraud and Corruption Policy, which focuses on preventing and mitigating fraud-related risks and establishes stringent guidelines for business conduct; and the Risk Management Policy, which supports the establishment of an effective risk management system and culture that enable the business to respond to a changing environment, thereby supporting GPSC's pursuit of its sustainability goals across economic, social, and environmental dimensions. In addition, GPSC has clearly defined the roles and responsibilities of the relevant units and personnel responsible for each policy. These policies have been communicated to executives and employees across the organization as well as to all relevant stakeholders to ensure proper and effective implementation. As for legal and regulatory compliance, GPSC has established an operational structure, clearly defined roles and responsibilities, and processes for the regular monitoring and review of compliance activities.

Further details on relevant policies can be found on GPSC's website.

#### **Management Approach**

GPSC has integrated the GRC Framework into its governance practices, which encompass risk management and strict regulatory compliance. The management approach is as outlined below.

- Strengthen governance and compliance and uphold fairness and transparency in adherence to the Company's Code of Conduct as well as relevant rules, regulations, and requirements.
- Rigorously assess risks and monitor the implementation of management plans using efficient and cost-effective measures in handling factors that could impact GPSC in accordance with the risk management framework.

## Governance Structure under the GRC Framework

GPSC has clearly defined the roles and responsibilities of functions and personnel involved in corporate governance, risk management, and compliance, encompassing all organizational levels from the Board of Directors and executives to employees and contractors to ensure that operations adhere to good governance principles, remain efficient, and align with GPSC's sustainability goals in accordance with the GPSC Group Way of Conduct, which consists of five governance principles, as outlined below.

- Key Strategic Positions: As a practice, GPSC assigns its executives and employees to work in key strategic positions within companies in which GPSC holds an investment in accordance with mutually agreed terms or business conditions. Additionally, GPSC has established criteria for selecting executives to serve as directors in these invested companies.
- 2) Rules and Regulations: GPSC has established rules, regulations, requirements, policies, and directives that are linked to governance according to group policies. GPSC representatives assigned to roles such as directors, chief executive officers, executives or employees in companies where GPSC holds shares must adhere to such rules and regulations and promote consistent compliance across GPSC Group.

- 3) Reporting Line and Performance Management: GPSC has stipulated the reporting of operating results and performance related to group management activities to GPSC's management and/or Board of Directors.
- 4) Multi-level Governance: To ensure a unified, clear-defined, and interconnected management system, a multi-level governance approach has been adopted, in which the GPSC Group Way of Conduct is transferred from GPSC to its first-tier subsidiaries, with oversight
- exercised through GPSC executives serving as the chief executive officers of these subsidiaries.
- 5) Management Committees: GPSC has appointed various Management Committees corresponding to different policy areas to systematically define key guidelines, practices, and work processes to relevant standards in order to serve as models for group companies to implement and adapt according to their business operations.

GPSC has also stipulated rigorous monitoring of compliance with policies and good corporate governance practices, such as the prevention of conflicts of interest and oversight of the use of inside information for personal gain.

Examples of relevant personnel required to understand and comply with the GPSC Group Way of Conduct

#### **Relevant Personnel**

#### **Board of Directors**



#### **Roles and Responsibilities**

- Regularly oversee and monitor management's implementation of plans in accordance with the organization's direction and strategies.
- Establish a corporate governance policy and the code of conduct as guidelines for executives and employees, encompassing anti-fraud and corruption; policies related to sustainable development goals; and the corporate risk management framework policy.
- Oversee and consider potential risk factors and establish risk management guidelines covering all dimensions, including ESG risks.
- Ensure adequate and effective internal controls, and review related party transactions
  or transactions potentially involving conflicts of interest or fraud that could impact
  the Company.
- Oversee the performance of directors and management to ensure adherence to corporate governance principles.
- Promote the cultivation and dissemination of a robust corporate governance culture.
- Review related party transactions or transactions potentially involving conflicts of interest or fraud that could impact the Company.

#### **Chief Executive Officer**

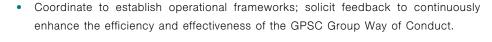


- Manage GPSC as delegated by the Board, strictly adhering to Board-approved plans and budgets with integrity and prudence to best safeguard the interests of the Company and its shareholders.
- Connect GPSC Group's strategies and policies with those of the Company in a systematic and concrete manner.
- Perform their duties with due responsibility and care (duty of care), honesty and loyalty
  to the organization (duty of loyalty), adherence to laws, objectives, regulations, Board
  resolutions, and shareholder meeting resolutions (duty of obedience), and ensure
  accurate, complete, transparent, and timely disclosure of information (duty of disclosure).
- Carry out governance, risk management, and compliance (GRC) activities and cooperate with internal audit functions.

#### **Relevant Personnel**

#### **Roles and Responsibilities**

## Units Overseeing Group Companies





- · Oversee the overall business operations of companies within GPSC Group.
- Coordinate and provide guidance and assistance to achieve the objectives of the implementation of the GPSC Group Way of Conduct.

Further details regarding the roles and responsibilities of the Board of Directors and the charters of the sub-committees can be found in Form 56-1 One Report under the section "Corporate Governance Structure and Key Information on the Board of Directors, Sub-committees, and Management" and in the GPSC Group Way of Conduct Manual, available at: https://www.gpscgroup.com/storage/download/cg/way-of-conduct-2020-th/#p=19.

#### **Board Composition and Structure**

GPSC places great emphasis on an effective, transparent governance structure that aligns with corporate governance principles. The composition and structure of the Board of Directors are determined by GPSC's Articles of Association and international standards, which stipulate that the Board must consist of no fewer than five and no more than 15 members. As of December 31, 2024, GPSC had a total of 14 directors. Of this, six were independent directors, representing 42.86% of the total Board members, which complies with the established criteria and qualifications for independent directors. Further details regarding the qualifications of independent directors can be found in the Annual Registration Statement / Annual Report 2024 (Form 56-1 One Report).

## **Director Nomination Policy and Board Diversity**

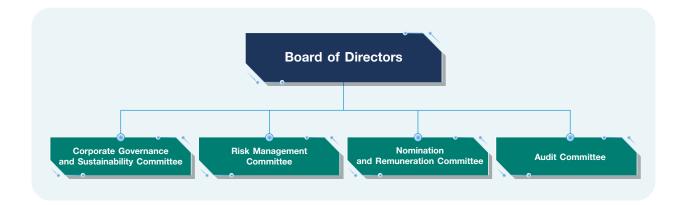
GPSC prioritizes a transparent, fair, and governance-focused director nomination process. The Nomination and Remuneration Committee, which is responsible for director nomination, has established clear criteria for director selection, which take into account appropriate qualifications, including independence, knowledge, capabilities, skills, experience, and expertise aligned with the organization's strategic direction. Furthermore,

Board diversity is also valued and has been integrated into director nomination and selection to foster well-rounded perspectives and enhance the Board's capacity for effective corporate oversight. Various dimensions of diversity are taken into consideration, such as gender, race, nationality, religion, age, cultural background, and other relevant factors, reflecting the principles of inclusion, equality, and non-discrimination, which are core values that GPSC upholds in its sustainable business operations.

Additionally, the Nomination and Remuneration Committee has established a Board Skill Matrix outlining the necessary knowledge and expertise to ensure the Board possesses the appropriate skills and experience for effective oversight of GPSC. The Board Skill Matrix defines 12 key skills and expertise areas, divided into two groups:

- Core skills/experience essential for performing director duties: Policy development, business decision-making, corporate strategy planning, human resource management and organizational development, accounting and finance, internal audit, risk management and internal control, and corporate governance and social responsibility.
- 2. Specific skills/experience essential for business operations: Expertise in the power industry, international business, and innovation management.

#### Structure of Sub-committees



#### **Board Skill Matrix**

The Board Skill Matrix has been utilized to assess both the core skills/experience and specific skills/experience of the Board of Directors. Details are disclosed in the Annual Registration Statement / Annual Report 2024 (Form 56-1 One Report).

#### **Performance Assessment**

In 2024, GPSC conducted performance assessments of its Board of Directors using three assessment formats:

- 1. Assessment of the Board as a whole comprised seven topics: 1) board structure and qualifications, 2) oversight of company strategy and performance, 3) performance and succession planning for senior executives, 4) oversight of risk management, 5) environment, social, and governance (ESG), 6) Board meetings, 7) director self-development. The overall assessment result was "Excellent" (96.70%).
- Individual Director Assessment (self-assessment and cross assessment) comprised five topics:

   accountability for decisions and actions and ability to explain decisions,
   responsibility to perform duties to the full extent of capability and efficiency,
   adherence to ethics and business code of conduct,
   vision for long-term value creation for the business,
   knowledge and capability. The self-assessment result was "Excellent" (99.00%), and the cross assessment result was "Excellent" (99.23%).

- Assessment of the four sub-committees comprised five topics: 1) sub-committee composition,
   sub-committee meetings, 3) satisfaction with the efficiency of sub-committee performance,
   sub-committee roles, duties, and responsibilities,
   relations with internal auditors, external auditors, and management (for the Audit Committee only).
   The assessment results were as follows:
  - Assessment result for the Audit Committee: "Excellent" (96.29%).
  - Assessment result for the Nomination and Remuneration Committee: "Excellent" (100.00%).
  - Assessment result for the Corporate Governance and Sustainability Committee: "Excellent" (99.03%).
  - Assessment result for the Risk Management Committee: "Excellent" (99.69%).

#### Management-level Performance Assessment

Additionally, in 2024, GPSC assessed the performance of its management. The evaluation criteria were based on their performance against the key performance indicators (KPIs) jointly established by the Board of Directors, the President and Chief Executive Officer, and senior management. These KPIs incorporated financial, stakeholder, internal work process, and organizational and employee learning and growth perspectives. The assessment covered both annual performance

(short-term) as well as potential and leadership, thus ensuring that management could guide the organization toward achieving its long-term strategic goals. The KPIs of each management position were specifically aligned with its roles and responsibilities.

Further details regarding the governance structure and key information about the Board of Directors, sub-committees, and management can be found in Form 56-1 One Report under the section "Corporate Governance and Key Information on the Board of Directors, Sub-committees, and Management."

#### **Key Projects in 2024**



#### **Governance Effectiveness Enhancement in 2024**

In 2024, the Board of Directors contributed to the enhancement of corporate governance practices and systems through the following activities.

- Reviewing and updating the Corporate Governance Manual and Code of Conduct: The board meeting quorum, guidelines for giving and receiving gifts and entertainment under the Anti-Corruption Policy, and the use of inside information and the Disclosure Policy to prevent insider trading were updated to ensure alignment with current conditions.
- Implementation of the GPSC Group Way of Conduct as a practical guideline and a corporate governance mechanism for companies where GPSC holds shares: This was communicated via GPSC representatives assigned as directors or executives in these companies, those designated to oversee them, and the internal units within such companies.

#### Stakeholder Communication on Corporate Governance





On November 6, 2024, GPSC communicated the importance of corporate governance to stakeholders at PTT Group CG Day 2024, a hybrid event it co-hosted with other PTT Group companies in the theme "CG Citizen Sustainability Connect: Open, Connected, Transparent."

The event demonstrated PTT Group's shared commitment to good governance and opposition to all forms of fraud and corruption and featured exhibitions and awareness-raising activities on corporate governance for directors, executives, employees, suppliers, customers, guests from various organizations, and the media.

The event drew a total of 1,357 participants, consisting of directors, executives, employees, customers, suppliers, media representatives, and external organizations, (both online and onsite). The initiative successfully raised stakeholder awareness of the significance of an efficiently implemented corporate governance system in advancing GPSC's adherence to corporate governance principles in its business operations.

#### **Risk and Crisis Management**

GPSC has applied its risk management tools and approaches in accordance with the GRC Framework and the internationally recognized principles of the Committee of Sponsoring Organizations of the Treadway Commission (COSO ERM 2017). Additionally, the Company has adopted best practices in risk and crisis management from international sustainability assessment indices, such as the Dow Jones Sustainability Index (DJSI), to foster business sustainability.

In addition, GPSC has established a risk management governance structure in line with the Three Lines of Defense model, which comprises three levels:

First Line (Risk Owners/Functions): Operations
personnel who handle and manage risks arising during
operations, such as plant operation units at specific sites

- Second Line (Risk Management and Compliance Oversight): Units monitoring risk management implementation, such as legal/regulatory compliance units, risk management units, and internal control units
- Third Line (Independent Audit Unit): The Independent Audit Unit under the Audit Committee, responsible for reviewing the adequacy and appropriateness of the Company's current risk management processes

GPSC's risk management is structured into two levels:

- Corporate level risk management: This is overseen by the Risk Management Committee (RMC), appointed and assigned by the Board of Directors to define the corporate risk management policy and framework, provide oversight, and offer recommendations on managing corporate risks in line with changing conditions in order to inform management's consideration and subsequent action.
- Management level risk management: This is driven by
  the Risk Management and Internal Control Committee
  (RMCC), responsible for implementing the risk
  management policy, assessing and monitoring risk
  management across various dimensions, and ensuring
  tangible and timely responses to emerging risks.

The risk management structure, roles, and responsibilities are illustrated in the following diagram:

#### Role & Responsibilities of GPSC Risk Management Drivers



#### **Board of Directors**

 Consider potential risk factors which may impact to company and define risk mitigation as well as governing the oversight of risk management efficiency and potential risk from seeking new business opportunities

#### **Key Action:**

- Approval of Corporate Risk Profile
- Onsider potential risk issues impacted to companies
- Give recommendation/acknowledgement of GPSC Risk Mgnt. result at year end



#### Risk Management Committee (RMC)

- Define GPSC ERM policy and risk appetite
- Govern and promote ERM to be in accordance company strategy, goal, and environmental changes
- Give recommendation of RM to RMCC
- Evaluate ERM progression and report to BoD

#### **Key Action:**

- Approval of ERM Policy and risk appetite
- Consider and give recommendation of corporate risk result quarterly
- Consider potential and significant risk issues impacted to company and new investment project



### Risk Management and Internal Control Committee (RMCC)

- Push forward risk management in both corporate and functional level
- Generate corporate risk profile and define risk mitigation as well as risk owner and responsible person
- Review corporate risk progression and report to RMC Promote GPSC RM process according to ERM policy

#### **Key Action:**

- Define corporate risk profile
- Consider and give recommendation of corporate risk result
- Consider potential and significant risk issues impacted to company or any uncertainties emerged



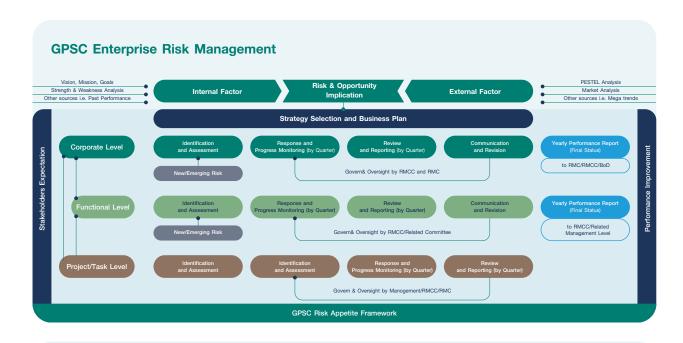
#### Functions (Risk Owner & Responsible Person)

- Anticipate and identify the potential risk impact to business target/performance or reflecting to
- Manage the risk response/loss into acceptable level
- Carry out the day-to-day tasks to manage performance and risks taken to achieve strategy and business objectives

#### **Key Action:**

- ✓ Anticipate for potential issues/risk & opportunities emerged
- Identify potential risk impacted to performance, target, day to day operation
- Seek for mitigations from related parties
- Perform PDCA in risk mgnt. according to related standard/process

GPSC's enterprise risk management process, encompassing oversight, monitoring, and reporting of risk issues, is shown in the diagram below:



# How GPSC deliver Risk & Opportunities - Positive Awareness Culture into Action Core Value & Goals, Strategy, and Policy driven into Implementation 1 GPSC ERM Policy 2 BoD's Charter of Risk Management 3 RMC Charter of Risk Management 4 RMCC Order of Risk Management & Internal Control 5 GPSC Risk Management Process Implementation over the company Engagement through Top-down to Bottom-up Level 6 Risk Management Knowledge Transfer & Communication 7 Acceptance and Usage of GPSC Risk Language/Tools/Methododologies

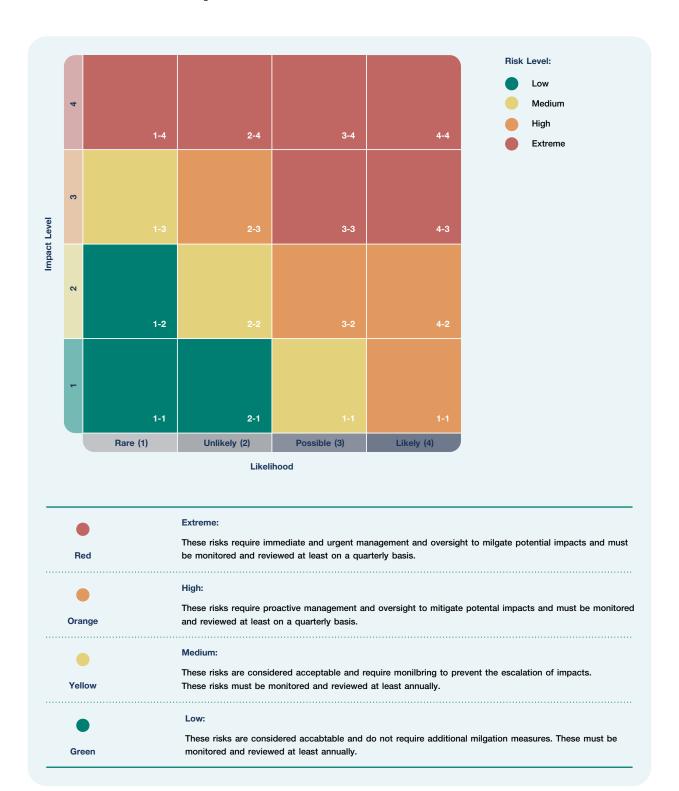
In addition, the Risk Management Policy has been established to serve as a framework for overseeing and promoting the efficiency of risk management operations. This policy integrates risk management at all levels throughout the organization and extends to the group level, ensuring alignment with GPSC's business strategy, objectives, and changing conditions. It encompasses all dimensions of risk, including strategic and investment, financial, business, technology and operations, legal and regulatory, personnel and organizational structure, as well as environmental, social, and governance (ESG), fraud and corruption, and emerging risks,

and is regularly reviewed. Additionally, GPSC has assigned oversight regarding the adequacy of the risk management system to the Audit Committee (AC) and the Corporate Governance and Sustainability Committee (CGSC) and has entrusted the Board of Directors with the task of reviewing risk management effectiveness to ensure that risk management has been utilized to support business operations and demonstrably enhance performance.

Further details on emerging risks and the Risk Management Policy can be found on GPSC's website.

#### **Enterprise Risk Management Process**

As part of its risk management, GPSC has established a process for assessing the likelihood and impact level of its risk issues based on the following risk level criteria:



To ensure that all risk factors are appropriately considered and managed and remain within the Company's acceptable level, GPSC has defined its Risk Appetite levels and timeframes for implementing risk management actions to reduce the likelihood of risk events occurring and their impact on the Company. Examples of two key enterprise risk issues, along with their risk appetite levels, potential impacts, and mitigation measures, are given below.

Risk Area	Description	Risk appetite level	Likelihood	Impact Level	Mitigating Action
Power/Steam Production and Synchronization Management	Uncertainty in production capacity management, operations, and product distribution due to limitations in connecting to the EGAT grid during EGAT's system upgrades, expected to be completed in 2028	GPSC does not accept any risks in relation to the reliability and availability of its power plants that could impact customers.      GPSC refuses to deliver products or services that do not meet quality specifications.			Manage fuel procurement and inventory levels to ensure alignment with production plans and fuel prices.      Manage production, operations, and maintenance shutdowns to minimize impacts on fuel supply and ensure sufficient products for distribution.      Manage overall production under the GPSC Group Optimization & Demand & Supply Capacity Management framework.      Monitor the progress of EGAT's grid upgrades to identify approaches for connecting to new non-contracted generation units and managing backup power sources.
Human Capital Management and Competency Enhancement	Mismatch between employee capability enhancement activities and the organization's transformation plan.	GPSC strives     to maintain and     enhance employee     satisfaction towards     the organization.      GPSC will invest in     developing employee     capabilities in line     with the Company's     strategy and business     growth.      GPSC seeks to     develop organizational     capabilities to effectively     accommodate     change and maintain     competitiveness.			<ul> <li>Analyze and develop action plans in line with GPSC's strategies as well as human capital action plans, focusing on both capability building and talent retention across different groups to support short-term business operations and long-term business transition.</li> <li>Monitor performance in people development and organization readiness against both short-term and long-term plans.</li> <li>Monitor assessment results regarding maintaining the engagement of high-potential personnel towards GPSC.</li> </ul>

Further details on all risks can be found on GPSC's website.

#### Key Project in 2024

## Risk Management Performance: Rigorous Internal Audits and Alignment with International Standards





In 2024, GPSC pursued certifications for several international management system standards, including ISO 9001, ISO 14001, ISO 45001, ISO 22301, and IMS, covered the production areas of GPSC Public Company Limited and Glow Energy Public Company Limited.

Among the factors assessed during these audits was corporate risk management, which was reviewed at different scopes, from management structure, policies, alignment with business strategy, risk management approaches, all the way to responses to both current and emerging risks.

The audits revealed no major deficiencies or significant observations, and all audit objectives were met. As such, GPSC successfully obtained all targeted ISO certifications.

GPSC places significant importance on fostering a strong risk management culture across the organization. As such, development plans and operational guidelines for both the short and long term are established across various dimensions, such as management systems, work processes, and personnel management, as part of the corporate risk management framework. Further information can be found on GPSC's website: https://www.gpscgroup.com/en/sustainability/economic/governance-risk-and-compliance/risk-crisis-management

#### **Compliance**

GPSC has charged the Corporate and Legal Compliance Unit, operating under the Company Secretary and Corporate Governance Department, with the key responsibility of overseeing operations related to applicable laws and regulations. The unit compiles and keeps track of laws relevant to GPSC's operations to ensure all personnel strictly comply with applicable laws and regulations. The unit also conducts annual reviews of legal and regulatory compliance and, upon identifying any non-compliance, reports its findings to the relevant unit's management to determine appropriate corrective actions and timeframes suitable for the risk level.

Compliance regulations and procedures apply to all personnel across GPSC. Any non-compliance or ensuing damage will result in disciplinary action in accordance with GPSC group's regulations to prevent misconduct that could harm the organization and maintain transparency in business operations.

## Code of Conduct and Compliance Management Approach

GPSC has established a management approach to the code of conduct, incorporated in its Corporate Governance Manual and Code of Conduct. This document prescribes that all relevant GPSC personnel from the Board of Directors and executives to employees strictly adhere to the code of conduct in their engagement with external stakeholders to uphold fairness, transparency, and regulatory compliance in business operations. The manual also places emphasis on anti-fraud and corruption and provides clear practical guidelines, such as guidelines under the Anti-Fraud and Corruption Policy concerning the acceptance and provision of gifts or other benefits; interest disclosure forms and criteria for directors, executives, and related persons; and conflict of interest reporting requirements for directors, executives, and employees. Details of these guidelines and policies can be found on GPSC's website.

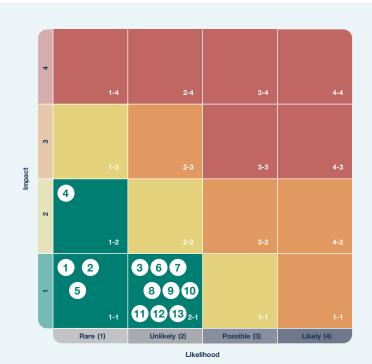
#### Whistleblowing and Complaints Handling

To ensure that the operation of GPSC as well as its subsidiaries and associates is efficient, compliant with laws, regulations, requirements, the corporate governance policy, and the code of conduct, and is guided by transparency, fairness, and accountability, GPSC has issued a Whistleblowing and Complaints Handling Policy, which details the process for receiving complaints and protecting whistleblowers and relevant parties as well as mechanisms for monitoring and investigation to prevent risks and potential damage to all stakeholders and protect whistleblowers submitting reports in good faith. (https://www.gpscgroup.com/th/cg/whistle-blowing-measures)



#### **Key Projects in 2024**

#### **Corruption Risk Assessment**



<b>Business Activity</b>	Risk
Tax dispute management	1 Solicitation of bribes in exchange for waiving additional taxes and penalties
Corporate income tax and VAT refund claims	2 Demand for monetary compensation or hospitality in exchange for expediting tax refund approvals or for overlooking additional discrepancies during refund verification
Personnel recruitment	3 Placing closely associated individuals into employment in exchange for business favors
Goods importation	4 Offering arrangements to have penalties assessed below their actual value (in cases where submitted tariff information is found to be inconsistent with the purpose of the imported goods).
Procurement of (high-value) fuels	5 Continuous procurement of fuel (coal) from a single soured (supplier) in exchange for kickbacks
Feedstock procurement	6 Solicitation of benefits from suppliers in exchange for information that gives them an unfair competitive advantage.
Procurement of equipment/ spare parts	7 Submitting purchase requisitions for spare parts/ equipment/ maintenance tools that do not align with actual needs or constitute inappropriate procurement for personal gain
Procurement of system/ data service providers	8 Tailoring terms of reference (TOR) or tender specifications to unduly favor a specific supplier
Procurement of system/ data service providers	9 Selecting suppliers who are on the Company's blacklist for procurement
Construction	10 Solicitation of benefits in exchange for reducing penalties for late project delivery
Interaction with government agencies	11 Solicitation of benefits in exchange for expediting inspection processes or the issuance of permits and licenses
Project development	12 Demand for donations/ contributions in exchange for business advantages, such as access to information/ selection criteria for project bidding
Donations/ contributions	13 Demand for contributions to political parties, politicians, or politically exposed persons in exchange for business advantages

GPSC places great importance on fraud and corruption risk management, in line with its Anti-Fraud and Corruption Policy, corporate governance principles, and the code of conduct, as well as its commitment as a member of the Thai Private Sector Collective Action Against Corruption (CAC). Management assesses these risks and reports to the Risk Management Committee and the Board of Directors annually.

In 2024, GPSC conducted a review of its fraud and corruption risks, encompassing key business activities potentially exposed to such risks. The assessment found that the overall residual risk level for fraud and corruption was low. Nevertheless, the Company maintained its rigorous annual monitoring and auditing measures.

#### GPSC's Second CAC Re-certification: Reflecting an Effective Anti-Corruption Policy



On July 12, 2024, Mr. Sirimet Leepagorn, Chief Operating Officer of GPSC Public Company Limited, PTT Group's innovative power flagship, accepted the certificate recognizing GPSC's second renewal of its membership of the Thai Private Sector Collective Action Against Corruption (CAC) for Q3 and Q4 of 2023. The certificate was presented by Mr. Anuwat Jongyindee, Director of CAC, during the CAC Certification Ceremony 2024, themed "Business Beyond CAC: Spotlight on Supply Chain." This achievement reaffirms GPSC's ongoing commitment

to its Anti-Fraud and Corruption Policy. The ceremony was held at the Fuji Grand Ballroom, Hotel Nikko Bangkok, in Bangkok.

#### **Anti-Corruption Day**

Recognizing the importance of operational transparency, GPSC participated in the Anti-Corruption Day event, held on September 6, 2024 at the Stock Exchange of Thailand. This participation demonstrated GPSC's commitment to anti-fraud and corruption and served to raise employee awareness regarding the importance of adhering to ethical standards and anti-corruption principles in their work to reinforce GPSC's dedication to transparency and integrity in its business operations.



#### **GRC Culture**

GPSC actively promotes its GRC culture as a foundation of the organization and has integrated GRC concepts into the modus operandi of personnel at all levels to ensure that GRC practices are ingrained into the corporate culture. To this end, the Company has promoted and undertaken internal communication through various activities, including training, seminars, and ethics reinforcement programs to raise employee awareness and understanding of their roles within the GRC framework, thus contributing to transparent, efficient business operations and appropriate risk management. Key GRC culture promotion activities carried out in 2024 are as follows:

## 1. Governance Effectiveness Enhancement Training for the Board of Directors:

The Board of Directors participated in various courses related to director duties organized by the Thai Institute of Directors (IOD, namely the Director Certification Program (DCP), attended by 12 Board members, and the Director Accreditation Program (DAP), attended by 2 Board members, representing a total of 14 Board members, or 100% of the Board, completing at least one of these core IOD programs. Additionally, in 2024, directors attended 22 other courses to consistently develop their knowledge relevant to directorial responsibilities.

#### 2. Risk Management Effectiveness Enhancement Training:

In 2024, GPSC conducted training sessions on the topics of emerging risks due to global trends, risks and opportunities related to sustainability issues, climate change, and operational guidelines and practices for risk management. These training sessions targeted directors, personnel in risk management and internal audit functions, and operations personnel in sustainability-related functions.



In 2024, the Risk Management Division developed over 10 applied risk management courses and functional risk workshops for employees across the organization, integrating content from international risk management frameworks like the COSO ERM Integrated Framework as well as PTT Group's Operational Excellence Management System (OEMS) and GPSC's own corporate risk framework. GPSC believes these training courses will enhance future corporate risk management capabilities and help to enhance relevant practices in the future.

#### 3. Compliance Effectiveness Enhancement Training:

In 2024, GPSC organized e-learning training on compliance for personnel at all levels, including directors, executives, and employees, to ensure strict adherence to requirements. Furthermore, policies and guidelines concerning anti-fraud and corruption were communicated through electronic channels and internal company communication platforms.



## 4. Communications on Internal Controls, Conflict of Interest Reporting, and Code of Conduct on Confidentiality, Data Protection, Insider Information

GPSC issued communications to employees at all levels to raise awareness about the importance of adhering to the business code of conduct, ensure their understanding of internal control processes, and bolster the commitment to transparent business operations. Also aimed at educating employees on conflict of interest reporting and the code of conduct regarding confidentiality, data protection, and insider information, these communications were delivered to primarily via email to prevent internal fraud. Resources and further details on relevant regulations and guidelines are accessible through online channels as well as GPSC's website and internal learning system, where employees can study further.



#### **GRC Performance and Targets**

With GRC principles integrated into its corporate governance structure, GPSC has set targets and monitored performance to ensure efficient and transparent governance, as detailed below:

2024 Target	2024 Performance
Zero cases of non-compliance reported	Zero cases of non-compliance reported
<ul> <li>Zero confirmed incidents with potential impact on GPSC when contracts with business partners are terminated or not renewed due to violations related to corruption.</li> </ul>	Zero complaints regarding fraud or corruption in 2024
<ul> <li>The Anti-Fraud and Corruption Policy is communicated to 100% of the Board of Directors.</li> </ul>	In 2024, tThe Anti-Fraud and Corruption Policy was communicated to 100% of the Board of Directors.
The Anti-Fraud and Corruption Policy is communicated to 100% of the employees.	In 2024, the Anti-Fraud and Corruption Policy was communicated to 100% of the employees.

#### **Performance Data**

From January 1, 2024, to December 31, 2024, GPSC received zero complaints regarding fraud or corruption and zero complaints concerning any violations of human right issues or non-compliance with human rights laws.

Further details and data on governance, risk management, and compliance performance can be found in the Sustainability Performance Data 2024 Report, available on GPSC's website.

#### **Outlook for GRC**

GPSC is committed to efficient, transparent, and accountable business conduct and strives for excellence in order to instill confidence among all stakeholders as a leading public company on the Stock Exchange of Thailand that achieves sustainable GSC-driven business growth through robust governance systems and corporate governance; effective risk management; the regular monitoring of adverse conditions and uncertainties anticipated to impact the Company; the preparation of incident response strategies to mitigate impacts; and the close monitoring of strict adherence to regulations among all personnel.



## Capturing the Future Sustainability Market





#### Value creation process Critical factors:









Financial capital

Human capital

Manufacturing capital

Intellectual capital

#### Key achievements in 2024



- Research and development of the use of renewable energy in combination with energy storage system (ESS) technologies to advance clean energy adoption
- Establishment of an end-to-end energy-as-a-service business and strategic partnerships for the development of decarbonization technologies (CCUS, Hydrogen, and SMR)
- Zero new investment in coal-related businesses

#### **Business Driver**

In response to the steady growth of the renewable energy market resulting from economic expansion, stricter environmental regulations, and increasing consumer focus on clean energy, GPSC has placed greater emphasis on renewable energy in its business approach to reduce greenhouse gas emissions (decarbonization), promote small-scale distributed power generation systems (decentralization), and implement digital platforms for efficient energy management (digitalization). Key factors that will enable GPSC to capture new opportunities and address future energy market models while also sustainably enhancing long-term competitiveness are as follows:

#### **Renewable Energy Market Trends**

Thailand's electricity consumption is expected to continue growing in line with economic expansion, while the proportion of off-grid power generation, particularly self-generation and consumption of renewable energy, will steadily increase. This aligns with the draft Thailand Power Development Plan 2024-2037 (PDP2024), which sets targets to increase the production of renewable energy, especially solar and wind, to over 51% by 2037, while simultaneously reducing the proportion of fossil fuel power generation. This trend is also consistent with the significant growth observed in the global renewable energy market in support of the energy transition in the future.





Source: Energy Policy and Planning Office (EPPO), Ministry of Energy

## Energy Innovation: A Key Driver for the Future Sustainability Market

As clean energy innovations and energy storage systems (ESS) are critical drivers for the future sustainability market, GPSC actively seeks to research, develop, and advance high-efficiency energy solutions that are eco-friendly and safe for users. This commitment to innovation will enable GPSC to maintain its competitiveness, expand into new markets, and establish leadership in championing the clean energy transition at both national and global levels.

#### **Aspiration and Main Challenges**

GPSC has defined its aspiration and main challenges, focusing on developing and offering smart energy products and services across the entire value chain of energy consumption to meet evolving consumer needs in the future while enhancing the energy usage experience for greater convenience, safety, and eco-friendliness. Another major goal of GPSC is to expand and promote universal access to clean energy by developing highly efficient energy management systems at reasonable prices to ensure equitable and sustainable access to clean energy for all sectors.

#### **Risks and Opportunities** Mitigation measures The challenge of fostering customer confidence Focus on creating a competitive advantage in key and acceptance due to expansion into increasingly businesses, including distributed generation, district diverse energy service markets cooling, and energy management services, which operate on a business-to-business (B2B) basis. Expand and extend business strategies to the businessto-customer (B2C) market by introducing energy innovations directly to consumers to create opportunities for future business growth, with plans to develop competitive capabilities through partnerships with specialized experts. Financial preparedness for investment expansion Establish appropriate investment screening criteria and processes that align with GPSC's short-term and long-term strategies and goals, along with investment oversight and monitoring of performance and returns on approved investment projects; and ensure financial preparedness in accordance with upcoming investment plans, such as through securing new funding, asset management to increase investment returns, and appropriate working capital management for the nature of investment. Forging partnerships with other organizations to Collaborate with external organizations to design, develop batteries for electric vehicles and other develop, and test energy innovations for effective realtelecommunications industries world expansion and application according to future market demands. Promote exchange of energy innovation knowledge and skills through collaboration with external organizations to enhance personnel capabilities to accommodate changes and drive sustainable energy businesses in

- Focus on creating new business models aligned with future energy market directions and simultaneously expand cooperation and investment in start-up businesses to promote and build upon energy technology and innovation development, while also creating opportunities in high-potential businesses in the future
- Strategy S4: Shift to Customer-Centric Solutions, focusing on services that meet customer needs, encompassing energy usage through technology and innovation, such as energy efficiency enhancement for customers through Energy Lens (application).

the long term.

#### **Risks and Opportunities**

#### Mitigation measures

- Changes in innovation and technology
- Develop integrated energy management systems (EMS) for energy efficiency management in both micro grids/ smart grids that can be integrated with GPSC's current businesses.
- Plan adaptations to accommodate new forms of energy trade that will impact GPSC's current and future electricity production and distribution.
- Study and develop carbon capture utilization and storage (CCUS) technologies as well as new energy businesses, such as hydrogen, to create new business opportunities for GPSC.

## **Strategy for Driving Toward the Future Sustainability Market**

GPSC has developed its strategy based on the 4D1E framework, which addresses key trends in the energy industry and consists of decentralization, decarbonization, digitalization, deregulation, and electrification. As these trends might impact centralized power businesses and accelerate the transition from centralized power systems to more decentralized power systems in the future, GPSC has developed action plans under Strategy S4: Shifting to Customer-Centric Solutions, which focuses on providing comprehensive energy services, including distributed power generation, district cooling systems, and integrated energy management services. In tandem, the Company has established clear short- term, mediumterm, and long-term action plans that prioritize operational stability and continuity to deliver maximum reliability and efficiency to customers. In addition, emphasis is placed on spurring development through investment in various New S-curves innovations to increase revenue streams and prepare for new trends in the energy and power sectors. To this end, GPSC is seeking to collaborate with partners to study base load power generation systems essential for maintaining power and steam production reliability, such as carbon capture, utilization, and storage (CCUS) technology, hydrogen, and small modular reactor (SMR) nuclear power plants.

#### Policy and commitment

GPSC strives to develop business under its Strategy S4: Shifting to Customer-Centric Solutions, focusing on introducing innovative, high-efficiency, and ecofriendly energy solutions, while continuously creating value for customers through a comprehensive range of energy products and services that meet their needs and maximize long-term satisfaction. Additionally, GPSC has demonstrated its commitment to addressing climate change challenges by pledging not to make new investments in coal businesses and focusing on environmentally responsible initiatives that support sustainable growth instead, with emphasis on research into clean energy technologies to reduce carbon dioxide emissions and advance renewable energy applications to accommodate future changes in the energy and power sectors.

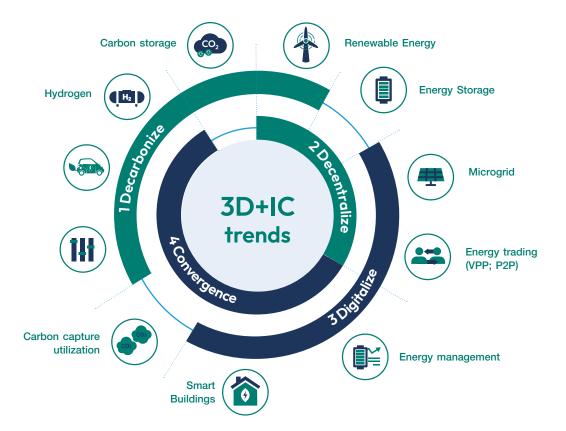
#### Management approach and governance

GPSC has established a management and governance approach for capturing the future sustainability market. As part of this approach, Guidelines for Technology Research and Development Management have been formulated to promote energy innovation development and advancement to achieve tangible results and maximum efficiency. In addition, departments have been assigned responsibility for implementing this strategy, with the objective of continuously enhancing competitive capabilities and advancing the business toward the future sustainability market.

(Further details can be found at: Guidelines for Technology Research and Development Management)

#### **Management Process**

GPSC has developed a clear management approach to address trends in technology and energy transition that directly influence its ability to capture the future sustainability market. Under this approach, GPSC has integrated the Sustainability Management Framework and the 3D1C Principles of Energy Transition (decentralization, decarbonization, digitization, and convergence) as the foundation for developing its business strategy and direction to delivery high-efficiency, eco-friendly energy products and services and driving the Company towards success in the future sustainability market with stability.



## **Key Projects in 2024**

GPSC has studied and developed new business ventures through innovation projects and collaborations in support of its goals of creating new business opportunities and reducing greenhouse gas emissions, while simultaneously responding to evolving energy usage trends and future customer demands. The Company has identified opportunities to develop products and services through its strategy of creating solution services and energy innovations, or S4: Shift to Customer-Centric Solutions, which centers both power generation and the provision of smart energy services around customers.

## **Energy-as-a-Service Business Development Through Smart Innovations**

Recognizing the opportunity to develop new business ventures while also expanding markets both domestically and internationally to build upon its S4: Shifting to Customer-Centric Solutions strategy, GPSC has collaborated with the Infrastructure Division of Keppel Ltd., a leading Singaporean company in the renewable energy, environmental solutions, and energy technology business that has developed their innovations into business tools and solutions. For this collaboration, the two parties have signed a business collaboration agreement and a joint venture agreement to develop an end-to-end energy-as-a-service business and expand the cooling-as-a-service market in Thailand to cater to the growing demand among commercial and industrial customers. The three components of the co-development are as follows:



Cooling-as-a-service (CaaS) business in Thailand and India



Renewable energy projects in Southeast Asia



EV charging platform integration between Thailand and Singapore

This business collaboration marks a significant step in GPSC's effort to expand the district cooling service business, for which its expertise, resources, knowledge, and networks are leveraged to support the joint venture's business opportunities in broadening the customer base within PTT Group and other industrial sectors. For this collaboration, Keppel's advanced Smart Al system has been integrated to enhance project management efficiency and competitiveness, increase the capabilities for developing renewable energy under the ASEAN power grid, and upgrade energy solution offerings tailored to customer needs, particularly district cooling and retail cooling provided via the cooling-as-a-service model, which helps customers effectively decarbonize their businesses.



## Collaboration for Clean Energy Technology Development

Clean energy technology is considered the key to decarbonization in the energy sector, an industry that plays a vital role in the pursuit of net zero emission goals at the corporate, national, and global levels. As such, GPSC has been actively studying and developing technologies to help reduce greenhouse gas emissions and increase the use of clean energy. In 2024, as part of a project to explore opportunities for clean energy development using small modular reactor (SMR) technology, GPSC signed a collaboration agreement with Seaborg Technologies ApS, a Danish developer of SMR technology, to enhance its capabilities for reliable and safe clean energy production and meet the steadily rising demand for sustainable energy across every region. As SMR power plants, which are designed as small modular units, are highly safe and do not emit greenhouse gases, they are a key alternative for clean energy production that complements domestic renewable sources and aligns with the trend of ecofriendly power generation. The study is expected to span approximately four years (2024-2027).



As part of this collaboration, a joint feasibility study will be conducted on the technology, encompassing various aspects such as theoretical data, safety, environmental impact, legal frameworks, risk factors, marketing, and business development. It will also explore infrastructure development approaches and potential locations for power generation units of approximately 200-800 MW, in conjunction with technological knowledge exchange. This SMR feasibility study represents another crucial step in GPSC's preparation for the future market in line with its core mission to mitigate climate change impacts and capture the future sustainability market.

# Participation in Global COP29 Panel Discussion

GPSC participated in a panel discussion titled "Powering the Future: Hydrogen Energy and Thailand's Energy Transition," where experts from Thailand's research, innovation, and energy sectors discussed the role of innovations and technologies and highlighted the importance of developing capabilities for sourcing, producing, and utilizing renewable energy, particularly hydrogen and ammonia. The session took place at the 29<sup>th</sup> Conference of the Parties to the United Nations Framework Convention on Climate Change (UNFCCC COP29), held in Baku, Republic of Azerbaijan.



## **Performance and Targets**

## 2024 Targets 2024 Performance

## Sustainable Energy Production

Over 50% of the portfolio derived from renewables by 2030

- Over 40% of the portfolio derived from renewables
- Developed renewable energy projects integrated with energy storage systems (ESS)
- Selected by the Energy Regulatory Commission (ERC) to develop four ground-mounted solar power projects under the Feed-in Tariff (FiT) scheme, totaling over 193 MW capacity (commercial operation dates scheduled between 2026-2030).

## Innovation Development and New Business Opportunities

Develop investments in New S-Curve innovations

- Explored and developed decarbonization technology.
- Collaborated with partners to study baseload power generation systems essential for maintaining the reliability of electricity and steam production.
- Collaborated with Doosan Enerbility Co., Ltd. to study and develop ammonia co-firing and carbon capture, utilization, and storage (CCUS) technology for decarbonization.

Operate businesses involving distributed generation, district cooling systems, and energy management services under the banner of energy innovation for business

Jointly established and registered CoolConnext Company
Limited in Thailand to explore feasibility and support
business expansion plans for district cooling services
and renewable energy projects in Southeast Asia; and
collaborated on developing innovations and operations
in renewable energy, environmental solutions, and
new energy forms to enhance and develop integrated
energy-as-a-service businesses, including opportunities
for cooling as a service (CaaS) businesses.

## Performance data

Further details on performance data for the topic "Capturing the Future Sustainability Market" can be found in the Sustainability Performance Data 2024, available on the Company's website.

# Outlook for Capturing the Future Sustainability Market

To align its operations with national goals and policies, GPSC has established guidelines for the next 3-5 years to foster new business opportunities and maintain competitiveness in the energy market, with particular focus on the following key development areas:

# Clean energy technology research and development

GPSC seeks to forge additional partnerships with leading companies with regards to clean energy technology, especially technologies for zero-GHG power generation, and further enhance the efficiency of fossil fuel-based energy production, such as renewable power generation projects from solar and wind energy and the integration of renewables with energy storage systems (ESS). Emphasis is placed on investments both in Thailand and internationally. In Thailand, business development

will be carried out through government renewable energy procurement programs under the national Power Development Plan (PDP bidding) and direct power purchase agreements (PPAs) via third party access (TPA) to serve customer groups with demand for clean energy. This aligns with relevant national targets, directions, and policies, such as the 20-Year National Strategy (2018-2037), the 13th National Economic and Social Development Plan (2023-2027), and the draft Thailand Power Development Plan 2024-2037 (PDP 2024), which indicates a trend towards increasing the proportion of renewable energy compared to the 2018-2037 version (PDP 2018 Rev.1).

## Seeking new business opportunities

- Focus is placed on developing end-to-end energy services, particularly integrated energy management system services through energy platforms.
- Smart systems are incorporated as a vital driver in business development.
- GPSC studies baseload power generation systems, which are necessary for maintaining the reliability of electricity and steam production, such as carbon capture and storage (CCS) technology, hydrogen, and small modular reactor (SMR) nuclear power plants.









## **Employee-focused Organization**









## Value creation process Critical factor:



Human capital

## Key achievements in 2024:



- 100% of the employees received training.
- 4.61% turnover rate
  (a 1.28% year-over-year decrease)
- 100% succession planning for key positions

## **Business Driver**

Employees are the heart of GPSC's success and play a crucial role in driving business growth and achieving organizational goals. Driven by its strategic commitment to human resource management for mutual success and sustainable growth both internally and externally, GPSC places great emphasis on developing employee capabilities through training and promoting learning opportunities throughout their career path. Additionally, the Company fosters a work environment conducive to teamwork and work-life balance to keep its personnel engaged and enable them to drive the business forward with stability.

In addition, GPSC is committed to a culture that promotes openness, inclusion, and participation at all levels. The Company believes that by providing opportunities for employees to take part in decision-making and determining organizational direction, it can instill a sense of pride among its personnel and enable them to achieve sustainable growth alongside GPSC.

## **Aspiration and Main Challenges**

The Company recognizes that maintaining an employee-focused approach comes with challenges, such as turnover rates, competition in attracting and retaining talents, adapting to rapidly evolving work trends, and the necessity of implementing technology and digital systems to enhance work processes. Given these factors, it is essential to implement strategic human resource management in order to balance personnel management and development with maintaining investor confidence.

#### **Risks and Opportunities**

## Diversity, Equity, and Inclusion (DEI): Fostering a more open and inclusive organizational culture to meet global expectations and strengthen the organization.

- Fostering an agile organizational culture: Establishing an agile culture to ensure adaptability to rapidly changing global trends and support the Company's strategic plan.
- Enhancing personnel capabilities: Developing employee knowledge and skills in alignment with future global directions, such as renewable power plants and other alternative energy sources, battery factories, and the development of energy storage systems and batteries.
- Leadership development: Enhancing capabilities and leadership qualities among employees to prepare them for executive roles in support of the Company's strategy and continuous growth.
- Retention and development of talent: Focusing on creating positive work experience aligned with global conditions throughout the employee journey, from onboarding to departure, with emphasis on employee engagement and career growth opportunities while developing and enhancing skills in response to changing needs, thus sustainably retaining talent.
- Leveraging digital transformation: Implementing and optimizing digital systems to support hybrid work and flexible working hours and promote efficiency and collaboration in a work-from-anywhere environment.

#### Mitigation Measures

- Diversity, Equity, and Inclusion (DEI): GPSC adheres
  to its Human Resource Management Policy and Human
  Rights Policy on the basis of non-discrimination to
  create an open and inclusive culture. The Company
  also supports fair employment and programs that ensure
  equal opportunities for all employees.
- ACT SPIRIT: Promoting corporate culture and ACT SPIRIT values among employees across all work processes as part of GPSC's way of work and driving adaptation, collaboration, and preparedness for global changes.
- GPSC Academy: Developing personnel capabilities to support business growth and promote the Company's new business development plans in alignment with the future energy industry, both domestically and internationally.
- Succession Plan: Preparing succession plans for executive roles, focusing on smooth leadership transitions in alignment with the organization's strategy and continuous growth.
- SPARK Accelerator: Preparing talent by enhancing strategic and management skills in anticipation of business expansion and industry shifts.
- Leveraging digital transformation: The Company procures and develops digital tools for communication and secure data access, enabling employees to collaborate efficiently whether at the office or remotely. It also provides training and support to ensure personnel can use these technologies appropriately to increase productivity and agility.

## **Strategies and Action Plans**

GPSC strives to develop its personnel as a key driving force in the transition toward renewable energy for decarbonization. To this end, it actively cultivates an organizational culture that is open to learning and promotes creativity as well as encourages employee participation at all levels through key programs, such as enhancing green technology skills, developing sustainability-focused leaders, and promoting a culture of transparency at work.

Furthermore, ACT SPIRIT activities are carried out with the goal of promoting GPSC's corporate culture and integrating sustainability concepts and greenhouse gas reduction to ensure all employees understand and recognize their role in advancing clean energy goals and a sustainable future with solidarity under unified operational guidelines. The ACT SPIRIT consists of Ambition (learn and adapt with agility), Commitment (work towards goals to achieve sustainability), and Trust (unite as one, trust each other, and respect differences). GPSC believes that by strengthening organizational culture through the ACT SPIRIT, it can foster an essential foundation for driving the organization toward sustainability goals and creating positive long-term environmental, social, and economic impacts.



#### **Short-term**

Enhance employee retention through activities that strengthen employee engagement and reduce employee turnover rates.



#### **Medium-term**

Develop succession plans for key positions by building necessary skills and preparing talent for future leadership roles within the Company.



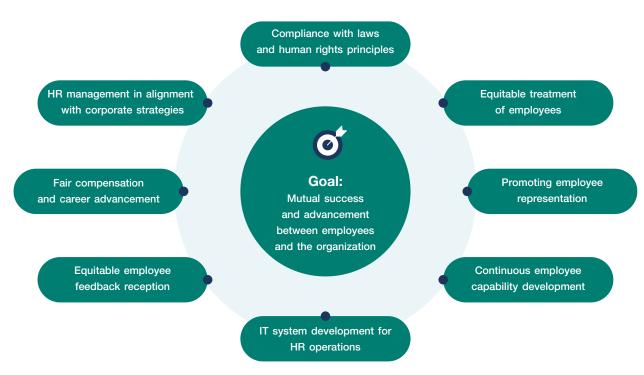
#### Long-term

Encourage employees
to develop technology
and AI knowledge
and skills to enhance their
work efficiency.

## **Policy and Commitment**

GPSC implements its Human Resource Policy in compliance with laws and the principles of human rights, equitable treatment of employees, fair compensation, career development support, and continuous skill development. In addition, GPSC considers diversity, equality, and inclusion (DEI) its fundamental principles

for driving not only its operations but also social advancement as it seeks to develop the organization with social responsibility. Additional details about the Human Resource Management Policy can be found at https://www.gpscgroup.com/storage/download/sustainability/policy/human-resource-management-policy-en.pdf



## **Management Approach**

Human resource management plays a crucial role in supporting GPSC's growth in accordance with its 4S Strategy through the development and improvement of work processes and the cultivation of organizational values and culture that promote the achievement of the established business goals. The management approach can be divided into four main components.



Human capital development



Leadership Development



Cultivation of corporate culture and employee engagement



HR operation optimization

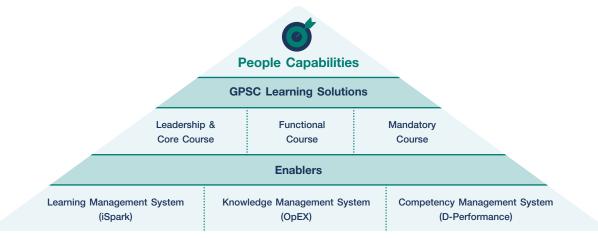
To operate in alignment with the 4S Strategy, GPSC has implemented the following operational approaches.

## **Human Capital Development**

Placing emphasis on systematic human capital development to enhance employee capabilities and enable them to effectively respond to business and technological changes, GPSC strives to foster learning and develop its personnel through two main groups of programs:

- Core Programs: These programs focus on developing fundamental capabilities and strengthening essential skills and leadership for employees at all levels and consist of the Core Competency and Leadership Programs.
- Functional Programs: These programs focus on developing in-depth skills and creating specialized career paths and consist of the Technical and Functional Competency Development programs.

All programs are hosted on iSPARK, GPSC's learning platform, which helps strengthen organizational culture and professionalism among employees. The Company believes that investing in personnel development is a key driver of organizational success and sustainability.



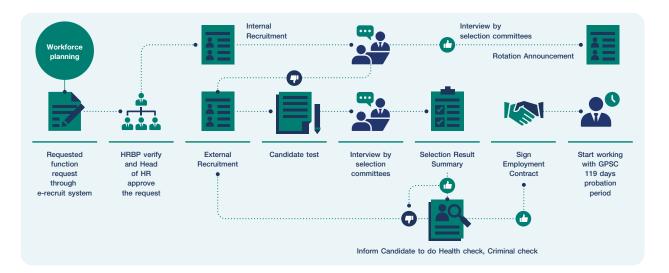
### **Talent Attraction and Retention**

GPSC recognizes the importance of attracting and retaining talented personnel to enhance organizational competitiveness and sustainable growth. As such, it actively develops comprehensive human resource strategies across all dimensions, from recruitment and candidate selection to benefits and employee support programs, systematic performance evaluation, and employee engagement improvement.

## Recruiting and Hiring

When vacancies occur, GPSC recruits employees from both internal and external sources and verifies qualitative information of the applicants by examining the alignment between their work experience and educational background with the positions opened. For external applicants, preliminary assessments, consisting of aptitude tests, personality tests, and additional tests on language skills, are conducted

before moving on to structured interviews with relevant departments, which are based on job analysis results to ensure the selection of competent employees who are compatible with the Company's practices. All information and procedures related to the recruitment and selection process are incorporated in the Company's e-Recruit system for transparency and accountability.



## • Employee Support Programs

The Company supports and cares for its personnel through various programs and policies to enhance their quality of life and work-life balance, such as:

• Workplace stress management through counseling and mental health workshops



Sports and health programs, such as health check analysis for proper health management; sports clubs and exercises;
 as well as the Happy Body Happy Thai Massage activity, where neck, shoulder, and back massage services are provided by visually impaired individuals as part of an effort to promote equal employment

## GPSC Club 2024

Club Category	Club Name								
Sports and Exercise	ชมรมปาเป้า								
	GPSC Bowling Club BKK								
	ชมรมโบว์ลิ่งตะวันออก								
94	เดินเพื่อสุขภาพ								
	GPSC Football club RYC								
	Badminton BKK								
	GPSC Badminton (ระยอง)								
	GPSC Football Club (BKK)								
	GPSC Basketball Club RYC								
	GPSC Snooker Club RYC								
	ยิงปืน GPSC								
	GPSC Group Golf Club								

#### GPSC Club 2024

Club Category	Club Name
Recreational Activities and Lifestyle	สายเต็นท์ไม่เน้นแบรนด์
	GPSC Camping
	ท่องเที่ยวเชิงอนุรักษ์
	ชมรมดนตรี (Music Club)
	GPSC Fantasy Premier League
	GPSC Tamiya Club
Animal Care and Rescue	"เพื่อสัตว์สี่เท้า" (Care for Animals)







- Work from Anywhere Policy to promote work flexibility
- Family benefits, such as paid parental leave a nd spousal childbirth leave

### • Performance Management

GPSC uses a Performance Management System (PMS) to evaluate employee performance and drive the achievement of organizational goals and continuous development. Performance evaluation consists of assessment of behaviors and achievements based on indicators that every employee must establish in alignment with organizational strategies and goals. Evaluation results are used in the planning of both short and long-term career development for employees and as criteria for considering remuneration adjustments and promotions in line with organizational performance.



## Employee Engagement

The Company is committed to cultivating employee engagement as it is a key factor in driving the organization toward its goals and enhancing GPSC's corporate image. Employee engagement surveys are conducted annually by external agencies, with results used to develop programs to maintain and strengthen employee engagement.

## Diversity, Equity, and Inclusion

GPSC actively promotes open and non-discriminatory employment and embraces individual diversity across all facets, including race, gender, religion, socioeconomic status, age, place of origin, education backgrounds, and physical ability. The Company believes these differences are key factors that foster an organizational culture receptive to new ideas and create innovations that effectively respond to stakeholder needs and business changes.

To promote diversity and equality within the organization, GPSC Group has established human resource management guidelines that ensure equal opportunities for all, from recruitment processes and career development to professional advancement, with emphasis on cultivating an open and friendly work environment where employees can show their full potential.

Additionally, GPSC's Human Rights Policy addresses the prevention of and opposition to all forms of discrimination and harassment. To ensure all employees are respected and treated fairly, GPSC requires all personnel to attend training on workplace discrimination and harassment to foster awareness and understanding about GPSC's prevention and management approach in relation to such incidents. Further details about the Human Rights Policy can be found at https://www.gpscgroup.com/storage/download/sustainability/social/human-rights/20210506-gpsc-human-rights-policy-en.pdf

## 2024 Flagship Projects

## **Human Capital Development**

Course	Objective	Percentage of employees trained in 2024
Core Program	Designed specifically for employees at each job level, these special programs include the Intensive Development Program, which focuses on enhancing personal skills and capabilities with regard to knowledge, strategic thinking, and time management; the Team Management Program, aimed at enabling employees to manage teams effectively through communication, teamwork, and collaborative problem-solving; and the Leadership Development Program, designed to strengthen leadership skills, such as decision-making, motivating people, and change management. These programs ensure employees can develop appropriate capabilities for each job level and grow steadily in their careers.	<ul> <li>247 employees     participated</li> <li>Satisfaction survey     result: 96%</li> </ul>
Future Energy Program	Aimed at developing personnel in line with GPSC's strategic focus on renewable energy businesses as part of achieving sustainable development goals, this program enhances knowledge of eco-friendly technologies and practices and develops essential skills for adapting to the modern energy industry. The program also fosters employee awareness about decarbonization in the energy industry through workshops, industry case studies, and idea exchanges, thus enabling employees to apply these concepts to their work effectively.	35 employees     participated
GPSC Leadership Mastery Program	This program seeks to enhance knowledge, understanding, and awareness of regulatory compliance to strengthen good corporate governance as well as the authority set forth in the Table of Authority (TOA) for executives and VP/DM-level employees. Through workshops, case study analysis, and in-depth exchanges with experts, participants learn about their roles in preventing, detecting, examining, and responding to misconduct or fraud risks. The program also focuses on enabling participants to effectively apply this knowledge to their subordinates to promote an organizational culture of transparency and good corporate governance and reduce ethical risks in operational processes.	<ul> <li>107 employees participated</li> <li>Satisfaction survey result: 91%</li> </ul>

#### Course **Objective** Percentage of employees trained in 2024 **GPSC Data Revolution** This bootcamp was designed to strengthen foundational 30 employees

**Bootcamp** 

skills for accurate data analysis through in-depth learning and hands-on practices under close supervision by experts. The intensive 3-month program covered six main topics, including Essential Data Analytics, Visual Data Analytics, and Storytelling with Data.

The program also featured clinic sessions, where participants were given an opportunity to gain real-world experience, develop data presentation skills with personalized feedback, create frameworks for precise business problem analysis, and practice using dashboards and efficient data visualization techniques that they would be able to confidently apply to their work.

participated

Satisfaction survey result: 96%



## **Talent Attraction and Retention**

Project Objective

## **GPSC Career Facebook Page**

The GPSC Career Facebook Page communicates the organization's stories and values to foster understanding of GPSC's work culture and human resource management approach. Other than showcasing the ACT SPIRIT values and the organization's unique approach to work, the Facebook page also provides information about employee benefits and development initiatives, such as GPSC Academy and HR Supporter Team. The page also serves as an additional channel for attracting talent to join the organization and promotes GPSC's corporate image as an employer that prioritizes personnel development through content in an accessible, modern format that resonates with younger generations. As for the outcome, the number of followers has increased to over 7,000, demonstrating high target audience engagement. Additionally, the number of applicants to GPSC through various channels increased by 200% compared to 2023, clearly reflecting the Company's success in attracting more talent to the organization.



#### Joiner Journey Energy Program

Joiner Journey involves a discussion with new employees who have joined GPSC for 60 days, conducted in a casual atmosphere to provide them with opportunities to share their experiences, exchange perspectives, and reflect on their work experience at the Company, thus creating a space to listen to and understand the feelings and experiences of new employees, ultimately leading to in-depth data analysis and identification of workplace problems or obstacles. In addition, GPSC has also developed employee experience solutions that improve work experience, support new employee adaptation, and promote an organizational culture centered around employee participation and well-being. This activity has reduced the turnover rate among employees with less than 6 months of service by 14% compared to 2023. The number of participants in the first year (2024) was 14. This activity serves as an important mechanism for promoting adaptability and positive experiences among new employees.



## Diversity, Equality, and Inclusion

## Project Objective

## Unbiased Hiring Practice

GPSC's unbiased hiring practice is underpinned by the ACT SPIRIT values and involves the implementation of a fair recruitment policy for both internal and external candidates. Job announcements, for instance, do not specify any requirements regarding gender, age, or characteristics that might lead to discrimination, thus ensuring equal consideration for all applicants. This aligns with the T - Trust in the ACT SPIRIT, which focuses on trust and respect for differences to help all employees feel included as part of the organization and able to work together effectively to create positive outcomes.

The success of GPSC's commitment to building a culture of trust and equality is reflected in the ACT SPIRIT Commitment Survey results for the Trust category in 2024, which remained stable at 73% from 2023 and increased 2% from 2022, demonstrating the continuity and stability of an organizational culture that promotes trust and fair opportunities for everyone.



## ACT SPIRIT Idol

The ACT SPIRIT Idol Activity promotes organizational culture by allowing employees to express appreciation and gratitude to their co-workers who exemplify behaviors aligned with GPSC's core value ACT SPIRIT, regardless of gender, age, or position level. The purpose is to create role models and encourage positive behaviors within the organization through recognition of employees who help strengthen this corporate culture. Employees can freely send messages of appreciation to their co-workers, which are delivered to recipients via weekly emails to inspire and encourage all employees to continuously demonstrate positive behaviors. This activity has been well received by employees, with 233 messages of appreciation and gratitude sent, reflecting the participation and collaboration within the organization in creating a work environment full of positive energy and inspiration.



## **Performance and Targets**

2024 target	2024 performance							
Human capital	I development							
of the employees receive training.	100% of the employees received training.							
Talent attraction	n and retention							
irnover rate is lower than the industry average.	The turnover rate was 4.61%, slightly above the industry							
	average of 4.4%.							
mployee engagement level among talent	The overall employee engagement level was 60%, with the leve							
ses by 3% or more compared to 2023.	among talent increasing by 1% from 2023							
Diversity, equality	, and inclusion							
ender pay ratio remains stable at or close to 1:1.	The gender pay ratio was 1:1.							
mployee engagement level among talent ses by 3% or more compared to 2023.  Diversity, equality	The overall employee engagement level was 60%, with among talent increasing by 1% from 2023 , and inclusion							

#### **Outlook Plan**

GPSC has established operational guidelines for the next 3-5 years to ensure alignment with its long-term goals and prepare for future business changes, focusing on equipping employees for new challenges and enhancing business opportunities while also maintaining competitiveness in the energy market. The main approaches are outlines below.

#### • Human Capital Development

Prioritizing the continuous development of employee skills, GPSC carries out reskilling and upskilling programs designed to enhance knowledge and capabilities crucial for adapting to future changes, especially with regard to digital transformation, which impacts the energy industry. To this end, GPSC has put in place plans to design modern learning programs in keeping with industry advances, encompassing areas such as data analytics, AI, automation, and renewable energy management, to enable employees to adapt and utilize new technologies effectively.

Emphasis is also placed on developing leadership skills among leaders to prepare for future organizational management. In addition, GPSC has developed up-to-date training programs aligned with labor market trends and a mentorship program that enables employees to learn directly from senior executives.

## Talent attraction and Retention

As part of its active effort to improve and update its recruitment process for greater efficiency, AI and data analytics have been introduced to GPSC's talent acquisition both internally and externally to assist in selecting the most suitable candidates, reduce timeto-hire, and enhance the overall candidate experience. In addition, GPSC is enhancing its employer branding

through digital platforms, including its Facebook page and Career websites, to connect with a broader pool of high-potential candidates.

To effectively retain talent, GPSC also prioritizes work-life balance by improving its employee benefits, such as flexible working hours, a hybrid work model, and comprehensive well-being programs, enabling employees to work efficiently while maintaining satisfaction in their professional lives.

#### Diversity, Equity, and Inclusion

GPSC considers equitable employment a priority and actively creates opportunities for disadvantaged groups to work at the organization. This includes supporting the employment of visually impaired individuals through initiatives such as neck, shoulder, and back massage services for employees by visually impaired massage therapists. These activities not only offer relaxation to the staff while at work but also create career opportunities and income sources for the disadvantaged group.

GPSC believes that by executing the human resource management plan informed by the approach outlined above, the Company will be able to both achieve sustainable development and foster a work environment conducive to the professional growth and overall well-being of every employee.



## **Voices of Stakeholders**

66

## **Shareholders**

GPSC must operate **ethically**, prioritize its personnel, set an example through leadership, especially in terms of integrity, and be able to deliver returns to shareholders while also maintaining good corporate governance and continuously developing innovation.



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## **Investors**

The pursuit of carbon neutrality
is essential in today's environment.

However, GPSC should conduct thorough
risk assessments and implement appropriate
management systems to ensure stable
operating results and maintain competitive
advantage in the future.



# **Government Agencies and Relevant Organizations**

GPSC conducts environmentally responsible operations and prioritizes organizational safety. In addition, it strictly complies with all applicable factory regulations and actively conducts CSR initiatives in surrounding communities, thus contributing to the Sustainable Development Goals (SDGs).

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<u>GG</u>

## **Partners**

With GPSC, we feel that trust has been established by a very open and honest dialogue.

We don't feel we need to keep things from GPSC because when we bring things up,

GPSC listens, and are open to having a discussion about solving problems in a very open way.

In addition, GPSC's strong procedures around safety helped inform

how we should manage safety on the project.





## **Customers**

GPSC is a power producer with exceptional standards that has consistently fostered customer confidence and trust. The company is also an innovation leader with the capacity to advance the country towards its decarbonization targets.





## **Communities and Society**

GPSC operates with environmental stewardship and community care while actively advancing clean energy initiatives. We hope the company will continue these initiatives and expand waste-to-energy power plant development.

GPSC's community and social engagement has earned it public trust. The company has consistently supported community enterprises and raised clean energy awareness through various activities, thus promoting sustainable and harmonious co-existence with communities and collaboratively fostering a better quality of life in the future.

99



## **Employees**

GPSC has always prioritized sustainability and reliable power generation to meet customer demands. The company has also set ambitious ESG targets in order to become a world-class power company.



## **Suppliers and Contractors**

Conducting business amid today's challenges, such as energy transition and greenhouse gas reduction targets, requires collaborative partnerships to develop innovative solutions that sustainably address challenges across the value chain.

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# **Data Coverage**

Country	Subsidiaries & Associated Companies	Abv.	Association	Share holding	Operational Control		E
						Governance, Risk Management and Compliance (GRC)	Customer Relationship Management
_	Global Power Synergy Public Company Limited (GPSC)	GPSC	GPSC	100.00%	<b>~</b>	•	
	GPSC Holding (Thailand) Company Limited	GHT	GPSC	100.00%			-
	Glow Energy Public Company Limited	GEN	GPSC	99.83%	<u> </u>	•	•
	Glow SPP2 Company Limited	GSPP2	Glow	100.00%			
	Glow SPP3 Company Limited	GSPP3	Glow	100.00%	<u> </u>		
	Glow SPP11 Company Limited	GSPP11	Glow	100.00%	<u> </u>		•
	Glow Company Limited	GCO	Glow	100.00%			-
	Glow IPP Company Limited	GIPP	Glow	95.00%			
	Houay Ho Thai Company Limited	HHTC	Glow	49.00%			-
	Glow IPP2 Holding Company Limited	GIPP2	Glow	100.00%		•	-
	GHECO-One Company Limited	GHECO-One	Glow	65.00%	<b>~</b>	_	-
	Glow IPP3 Company Limited	GIPP3	Glow	100.00%		0	-
	Eastern Seaboard Clean Energy Company Limited	ESCE	Glow	33.33%			-
	Chonburi Clean Energy Company Limited	CCE	Glow	33.33%		0	-
	Eastern Fluid Transport Company Limited	EFT	Glow	15.00%		-	-
	Combined Heat and Power Producing Company Limited	CHPP	GPSC	100.00%	<u> </u>		-
	CoolConnext Company Limited	CoolConnext	t GPSC	51.00%		-	-
	Energy Recovery Unit Company Limited	ERU	GPSC	100.00%		0	-
	GPSC Treasury Center Company Limited	GPSCTC	GPSC	100.00%		-	-
	IRPC Clean Power Company Limited	IRPCCP	GPSC	51.00%			-
	Global Renewable Synergy Company Limited	GRSC	GPSC	100.00%		<u> </u>	-
	Natee Synergy Company Limited	NSC	GPSC	100.00%			-
Thailand	WindPower Development Company Limited	WPD	GPSC	51.00%	-		-
Hanana	EurusPlus Company Limited	EurusPlus	GPSC	51.00%	-		-
	BoreePlus Company Limited	BoreePlus	GPSC	51.00%		<u> </u>	-
	Helios 1 Company Limited	Helios1	GPSC	50.00%			-
	Helios 2 Company Limited	Helios2	GPSC	50.00%			-
	Helios 3 Company Limited	Helios3	GPSC	50.00%			-
	Helios 4 Company Limited	Helios4	GPSC	50.00%			-
	Thai Solar Renewable Company Limited	TSR	GPSC	40.00%			-
	Siam Solar Energy 1 Company Limited	SSE1	GPSC	40.00%			-
	Nava Nakorn Electricity Generating Company Limited	NNEG	GPSC	30.00%			_
	Bangpa-In Cogeneration Company Limited	BIC	GPSC	25.00%			-
		GRP	GPSC				-
	Global Renewable Power Company Limited			100.00%			-
	Global Renewable Power Operating Company Limited	GRPO	GPSC	100.00%			-
	World X Change Asia Company Limited	WXA	GPSC	100.00%			
	P.P. Solar Company Limited	PPS	GPSC	100.00%			-
	N.P.S. Star Group Company Limited	NPS	GPSC	100.00%			-
	Global Renewable Power One Company Limited	GRP1	GPSC	100.00%			-
	Nuovo Plus Company Limited	Nuovo+	GPSC	49.00%			-
	NV Gotion Company Limited	NV Gotion	GPSC	24.99%			-
	Ratchaburi Power Company Limited	RPCL	GPSC	15.00%			-
	Business Services Alliance Company Limited	BSA	GPSC	25.00%			-
	Sport Services Alliance Company Limited	SSA	GPSC	25.00%		_	-
	Sarn Palung Social Enterprise Company Limited	SPSE	GPSC	10.00%		-	-

onomic / Gove	ernance							Environmental													Social		
	Maintaining Affordability and Reliability			nt	der				E	nviror	nmenta	al Mar	nageme	nt			Clea		rgy To -Zero	owards	Safety	Organization	
	Installed Capacity	Net Energy Generated	Other KPIs	Supply Chain Management	Being an Innovative Leader	Capturing the Future Sustainability Market	Energy Consumption	Water Consumption	Waste Disposal	No Emission	So <sub>x</sub> Emission	Ash & Gypsum Waste	Direct Mercury Emission	Dust Emission	Hazardous Waste	SF6	GHG Scope 1	GHG Scope 2	GHG Scope 3	GHG Intensity (Scope1 and 2)	Occupational Health and (OHS)	Employee-focused	Sustainable Community
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Country	Subsidiaries & Associated Companies	Abv.	Association	Share holding	Operational Control			ı
						Governance, Risk Management and Compliance (GRC)	Customer Relationship Management	
	Houay Ho Power Company Limited	HHPC	Glow	67.25%	No	•	-	
Laos	Xayaburi Power Company Limited	XPCL	GPSC	25.00%	No	0	-	
	Nam Lik 1 Power Company Limited	NL1PC	GPSC	40.00%	No	_	-	
Myanmar	Glow Energy Myanmar Company Limited	GE Myanmar	Glow	100.00%	No	•	-	
Singapore	GPSC Singapore Pte. Ltd.	GPSC SG	GPSC	49.00%	No	•	-	
USA	24M Technologies, Inc.	24M	GPSC	13.65%	No	•	-	
India	Avaada Energy Private Limited	AEPL	GPSC	42.93%	No	•	-	
	Global Renewable Synergy Taiwan Company Limited	GRSC TW	GPSC	100.00%	No	•	-	
Taiwan	CI Changfang Limited	Changfang	GPSC	25.00%	No	•	0	
	CI Xidao Limited	Xidao	GPSC	25.00%	No	•	0	
	Sheng Yang Energy Company Limited	SYE	GPSC	90.00%	No	•	-	
China	Global Renewable Power China (Shanghai) Company Limited	GRP China	GPSC	100.00%	No	_	_	
Olinia	Anhui Axxiva New Energy Technology Company Limited	AXXIVA	GPSC	4.44%	No	•	-	

#### Remarks

- The company applies relevant policy, guideline where sustainability performance data cover full scope
- The company partially applies relevant policy, guideline where sustainability performance data partially cover scope
- O Not relevant to the company
- The company does not apply relevant policy, guideline where sustainability performance data does not cover in the reporting scope

Economic / G	overnance												Enviror	nment	al						S	ocial	
	Aff	Maintaining Affordability and Reliability			der				Envi	ronme	ental N	/lanag	ement				Clea		rgy To -Zero	wards	Safety	Organization	
	Installed Capacity	Net Energy Generated	Other KPIs	Supply Chain Management	Being an Innovative Leader	Capturing the Future Sustainability Market	Energy Consumption	Water Consumption	Waste Disposal	No <sub>x</sub> Emission	So Emission	Ash & Gypsum Waste	Direct Mercury Emission	Dust Emission	Hazardous Waste	SF6	GHG Scope 1	GHG Scope 2	GHG Scope 3	GHG Intensity (Scope1 and 2)	Occupational Health and (OHS)	Employee-focused Organ	Sustainable Community
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## **ASSURANCE STATEMENT**

## SGS (THAILAND) LIMITED'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED FOR 2024

#### NATURE OF THE ASSURANCE/VERIFICATION

SGS (THAILAND) LIMITED (hereinafter referred to as SGS) was commissioned by Global Power Synergy Public Company Limited (hereinafter referred to as GPSC) to conduct an independent assurance of the GPSC Sustainability Report (hereinafter referred to as the Sustainability Report). The reporting period of the Report is 1 January 2024 to 31 December 2024. The scope of assurance is based on the SGS Sustainability Report Assurance methodology and AA1000 Assurance Standard v3 Type 2 Moderate level to assess whether the text and data in accompanying tables contained in the report and complies with the GRI Standards and AA1000 Accountability Principles (2018).

SGS reserves the right to update the assurance statement from time to time depending on the level of report content discrepancy of the published version from the agreed standards requirements.

#### INTENDED USERS OF THIS ASSURANCE STATEMENT

This Assurance Statement is provided with the intention of informing all GPSC's Stakeholders/specified stakeholders.

#### **RESPONSIBILITIES**

The sustainability information in the Report and its presentation are the responsibility of the directors or governing body (as applicable) and the management of GPSC. SGS has not been involved in the preparation of any of the material included in the Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of assurance based upon sufficient and appropriate objective evidence.

## ASSURANCE STANDARDS, TYPE AND LEVEL OF ASSURANCE

The assurance of this report has been conducted according to the AA1000 Assurance Standard (AA1000AS v3), a standard used globally to provide assurance on sustainability-related information across organizations of all types, including the evaluation of the nature and extent to which an organization adheres to the AccountAbility Principles (AA1000AP, 2018). Assurance has been conducted at a moderate (limited) level of scrutiny.

## SCOPE OF ASSURANCE

The scope of the assurance included evaluation of quality, accuracy and reliability of specified performance information as detailed below and evaluation of adherence to the following reporting criteria:

## **Reporting Criteria Options**

- 1 GRI Standards 2021
- 2 AA1000 Accountability Principles Standard (2018)
- evaluation of content veracity of the sustainability performance information in relation to the
  determined material topics at a high level of scrutiny for GPSC and applicable aspect boundaries
  outside of the organization covered by this report;
- AA1000 Assurance Standard v3 Type 2 evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018); and
- evaluation of the report against the requirements of GRI Standards claimed in the GRI content index as material and in accordance with and GRI Standards listed in the GRI content index where the organization has referenced for the preparation of the reported information.

## SPECIFIED PERFORMANCE INFORMATION AND DISCLOSURES INCLUDED IN SCOPE

GPSC's the Report and the Website content are adequately in line with GRI Standard to fulfills all the required content and quality criteria for the identified aspects data expressed numerically or in descriptive text form 1 January 2024 to 31 December 2024 listed as below;

ESG Dimension	Торіс	The boundary
GRI 2: General Disclosure	GRI 2-6 Active, value chain and other business relationships (2021)	- GPSC Head Office (ENCO Building)
GRI 3: Material	GRI 3-1 Process to determine material topics (2021)	- GPSC Warehouse - Central Utility Plant 1: CUP-1
Topics	GRI 3-2 List of material topics (2021)	- Central Utility Plant 2: CUP-2
	GRI 3-3 Management of material topics (2021)	- Central Utility Plant 3: CUP-3 - Central Utility Plant 4: CUP-4
Environmental dimension	GRI 302-1 Energy consumption within organization (2016)	- Sriracha Power Plant - Glow IPP Plant
differision	GRI 303-3 Water withdrawal (2018)	- Glow Energy Phase 1 Plant
	GRI 303-4 Water discharge (2018)	- Glow Energy Phase 2 Plant - Glow Energy Phase 4 Plant
	GRI 303-5 Water consumption (2018)	- Glow Energy Phase 5 Plant
	GRI 304-1 Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas (2016) GRI 304-2 Significant impact of activities, products and	- Glow Energy CFB 3 Plant - Glow Energy Solar Plant - Glow SPP 2/Glow SPP 3 Plant (Phase 3)
	services on biodiversity (2016)	- Glow SPP 2 Replacement
	GRI 304-3 Habitats protected or restored (2016)	- Glow SPP 11 Project 1 Plant - Glow SPP 11 Project 2 Plant
	GRI 305-1 Direct (Scope 1) GHG emissions (2016)	- Glow SPP 11 Project 3 Plant - GHECO-One Power Plant
	GRI 305-2 Energy indirect (Scope 2) GHG emissions (2016) GRI 305-3 Other indirect (Scope 3) GHG emissions (2016)	- Combined Heat and Power Producing Company Limited
	The reported Scope 3 GHG emissions include the following categories:  Category 3: Fuel- and energy-related activities not included in Scope 1 or 2 Category 5: Waste generated in operations Category 6: Business travel Category 7: Employee commuting	(CHPP) - Glow Energy Solar Plant - Solar Private PPA – GPSC & Glow - Refuse Derived Fuel (RDF) Power Plant
	GRI 305-4 GHG emission intensity (2016)	
	GRI 305-7 Nitrogen oxides (NOx), Sulfur oxides (SOx), and other significant air emissions including NOx, SOx, VOCs and Methane) (2016)	
	GRI 306-3 Waste generated (2020)	
	GRI 306-4 Waste diverted from disposal (2020)	
	GRI 306-5 Waste directed to disposal (2020)	
	GRI 308-2 Negative environmental impacts in the supply chain and actions taken (2016)	
Social	GRI 403-9 Work-related injuries (2018)	
dimension	GRI 403-10 Work-related ill health (2018)	
	GRI 405-2 Ratio of basis salary and remuneration of women to men (2016)	
	GRI 413-1 Operations with local community engagement, impact assessments, and development programs (2016)	
	GRI 413-2 Operations with significant actual and potential negative impacts on local communities (2016)	
	GRI 414-2 Negative social impacts in the supply chain and actions taken (2016)	
Sector Specific	EUSD – EU11 Average generation efficiency of thermal plants by energy source and by regulatory regime	
Indicators	EUSD – EU30 Average plant availability factor by energy source and by regulatory regime	

#### ASSURANCE METHODOLOGY

The assurance comprised a combination of pre-assurance research, interviews with the sustainable development team with responsibility for performance in the areas within scope, data owners & managers responsible for internal data collection and reporting databases, on-site visits (GHECO-One Power Plant, Central Utility Plant 1 (GPSC CUP-1) and Central Utility Plant 2 (GPSC CUP-2)); Review of the concept for data collection and estimation (application of appropriate methods), for analysis and consolidation of the sustainability data to be assured under the present assignment. Verification and confirmation of vouchers, review of related materials and records, and analytical procedures.

#### **LIMITATIONS**

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process. Note here any other specific limitations for the assurance engagement and actions taken to mitigate those limitation. Some statements and data within the scope were not assured due to lack of accessible records during the timescale allowed for assurance, and these are clearly marked throughout the Report.

#### INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS affirm our independence from GPSC, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors and sustainability professionals specializing in the Environmental, Social and Governance (ESG) and carbon fields.

#### FINDINGS AND CONCLUSIONS

## **ASSURANCE OPINION**

On the basis of the methodology described and the assurance work performed, we are satisfied that the specified performance information included in the scope of assurance is accurate, reliable, has been fairly stated and has been prepared, in all material respects, in accordance with the GRI Standards 2021 (In accordance with) and AA1000 AccountAbility Principles (2018).

We believe that the organization has chosen an appropriate level of assurance for this stage in their reporting.

## ADHERENCE TO AA1000 ACCOUNTABILITY PRINCIPLES (2018)

### INCLUSIVITY

GPSC has demonstrated a good commitment to stakeholder inclusivity and stakeholder engagement. A variety of engagement efforts such as survey and communication to employees, customers, investors, suppliers, sustainability experts, and other stakeholders are implemented to underpin the organization's understanding of stakeholder concerns.

#### **MATERIALITY**

GPSC has established effective processes for determining issues that are material to the business. Formal review has identified stakeholders and those issues that are material to each group and the report addresses these at an appropriate level to reflect their importance and priority to these stakeholders.

#### **RESPONSIVENESS**

The report includes coverage given to stakeholder engagement and channels for stakeholder feedback.

#### **IMPACT**

GPSC has demonstrated a process on identify and fairly represented impacts that encompass a range of environmental, social and governance topics from wide range of sources, such as activities, policies, programs, decisions and products and services, as well as any related performance. Measurement and evaluation of its impacts related to material topic were in place at target setting with combination of qualitative and quantitative measurements.

### Signed:

For and on behalf of SGS (Thailand) Limited

Montree Tangtermsirikul General Manager

Mortre T.

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