



INTEGRATED SUSTAINABILITY
REPORT 2020

GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED

SMART ENERGY FOR EVOLVING LIFE







CONTENTS

ABOUT THIS REPORT	4
MESSAGE FROM PRESIDENT AND CEO	6
VALUE CREATION THROUGH THE BUSINESS MODEL	8
BUSINESS RESILIENCE AND COVID-19	10
STAKEHOLDER'S VOICE	12
MATERIALITY SUSTAINABILITY ISSUES IN 2020	15
 ECONOMICS	 18
• MAINTAINING AVAILABILITY AND RELIABILITY	20
• EVOLVING THE BUSINESS MODEL	23
• CUSTOMER RELATIONSHIP MANAGEMENT	25
 ENVIRONMENT	 28
• CLEAN ENERGY FUTURE AND CLIMATE RESILIENCE	30
 SOCIETY	 32
• OCCUPATIONAL HEALTH AND SAFETY (OHS)	34
• WORKFORCE DEVELOPMENT AND WELL-BEING	36
DATA COVERAGE	38
ASSURANCE STATEMENT	40

ABOUT THIS REPORT

GRI 102-46, 102-50, 102-51, 102-52, 102-53, 102-54, 102-55, 102-56

Global Power Synergy Public Company Limited (“the Company” or “GPSC”) conducts a sustainability report annually with the objective of disclosing its economic, social and environmental performance, while reflecting upon operations that take into account sustainable development in matters important to business operations, as well as to all stakeholders, which are covered from January 1st to December 31st 2020 by the scope of this report. This report covers companies in the GPSC Group or GPSC Group in which the company holds more than 75% of the shares or for which it has operational control (Strategic Owner). Since 2019, the company has adapted the reporting format to the Integrated Report <IR> by utilizing the International Integrated Reporting Council (IIRC) and international sustainability reporting standards (Global Reporting Initiative: GRI), the GRI Standards edition, at the core level (Core Option), including additional indicators for companies in the electric and utility sector (Electric Utilities Sector Disclosures), which is considered as an internationally recognized guideline. In addition, the company has set goals and reported on operations that are consistent with the United Nations Sustainable Development Goals (SDGs).

For the annual 2020 Integrated Sustainability Report, some of the content has been disclosed on the website of the company, which is to increase the reliability, accuracy, and conformity with GRI standards of the contents of the Integrated Sustainability Report. This edition has been verified for the accuracy of limited reporting data (Limited Assurance) both in the report book and on the website by SGS (Thailand) Company Limited. More details can be found on page 40 - 42, which is now the fourth year of external certification inspections, with the company intending to continue to do so.

The company is committed to improving the quality of reports for sustainable development and expects to improve the level of disclosure of information even further by accepting any suggestions to integrate ideas into operational processes and to promote sustainable development together with stakeholders in all sectors. The channels for contacting the company are as follows:

Contact Channels



<http://www.gpscgroup.com>



M&A Transformation and Sustainability Management Department
Global Power Synergy Public Company Limited 555/2 Energy Complex Building B
5th Floor Vibhavadi-Rangsit Road, Chatuchak, Bangkok 10900



+66 2140 4600



+66 2140 4601



sustainability@gpscgroup.com



Materiality



Management
Approach
(Economics)



Management
Approach
(Environment)



Management
Approach
(Society)



Stakeholder
Engagement



MESSAGE FROM PRESIDENT AND CEO

GRI 102-14, 102-20

Over the past one year, the COVID-19 pandemic and other unfortunate circumstances have had many serious impacts on the lives of many people in every region of the world, including climate change, varying and deteriorating air pollution from dust particles smaller than 2.5 microns (PM 2.5), disasters, trade wars and oil price volatility. All of which have especially had a huge impact on the economy in all parts of the world. They significantly slowed in 2020 and are continuing to do so even during the process of resource allocation of all countries, in order to accelerate the resolution of this severe problem, both in manners that need to expedite solutions and in ways to protect public health in different social dimensions from economic recession as well, including the consideration of indirect impacts that may occur internationally. These have been a test of risk management competence, as well as a myriad of problems and obstacles that every country, Thailand included, has had to face and overcome.

In dealing with the crisis and the impact of various risks that have arisen as mentioned above, Global Power Synergy Public Company Limited together with stakeholders, who have guidelines in preparing for business operations in new ways, have realized the importance of strategic management that will lead the business to create innovation and on ways to tackle both short- and long-term exposure to risks under the Sustainable Development Goals* (SDGs) set by the United Nations. As a result of the implementation of these strategies, the company can continue to maintain business performance according to its target, which has always given strong confidence in investors and stakeholders.

Below are some additional explanations for our sustainability business strategies:

Understanding the **economic dimension**, in order to achieve the vision and mission of the organization, the company has operated under the 3S strategy in which the company has the confidence to operate its business to grow and respond to globalization with dynamic business changes (Business disruption) effectively. The company has continued to operate in accordance with the aforementioned framework since 2019, comprising: 1. value added creation and integrated



asset management within the group of companies (Synergy & Integration) by focusing on improving the stability and efficiency of electricity, steam and other utilities, which are the main sources of business of the company, 2. business expansion and increasing electricity generating capacity both domestically and internationally (Selective growth), focusing on seeking investment opportunities and increasing the proportion of electricity generation from renewable energy by jointly investing with PTT through the Global Renewable Power Company Limited and 3. undertaking innovative investments to generate revenue from new business (S-Curve) by developing innovation in energy storage systems and initiating the construction of energy storage units, with the first semi-solid technology of the country being found in Rayong Province, which resulted in the company being able to work towards achieving the sustainable development goals 7, 8, 9, 12 and 13.

The **social dimension** is also considered crucial, as the company believes that sustainable businesses must operate in tandem with the social sector, which should consist of a healthy, stable and safe environment. The company therefore emphasizes participation in social responsibility in all sectors to strengthen civil society in the short and long-term through the integration of the company's business knowledge into communities and the society, as well as to seek relevant knowledge, in order to support community development and continuous social activities, such as the development of the quality of life of distant communities with access to

clean energy through the solar power generation project, projects to promote integrated waste disposal within the community by sorting waste and creating added value from the sorted waste, etc. In addition, the company believes that high quality personnel will affect the sustainability of the business in the long run. Therefore, establishing relevant social policies as guidelines for personnel of the company was necessary, such as social responsibility and human rights policies, along with organizing training to educate employees, as well as supervising the implementation of various policies through the ethical complaint channel within the organization. These strategies have enabled the company to work towards achieving the sustainable development goals 7, 11, 13 and 16.

With regards to the **environmental dimension**, the company realizes the importance of stepping into a low-carbon society and supports the Paris Agreement. This is a common joint international mission of mitigation strategies for climate change and are included as part of a long-term business strategy to increase the share of electricity generated from renewable energy through setting up a subsidiary, in order to achieve operational efficiency and meet set goals. Additionally, the company has applied the concept of internal carbon valuation in the organization, whereby it is currently in the process of developing a proactive strategy to pursue the Net Zero Emission goal of 2050, which is consistent with the low-carbon society in the future. Through these operations, the company can continue to achieve the sustainable development goals 7, 12 and 13.

As seen from the evidence of the outstanding sustainability strategy performance results in 2020, the company has therefore gained confidence from various agencies both within the country and abroad, such as:

- The company participated in the Dow Jones Sustainability Indices or DJSI, which is the first global sustainability index and has been selected on the list of “Sustainability Yearbook 2021” in the Electric Utilities industry.
- The company participated in the evaluation of the Carbon Disclosure Project (CDP), which is an internationally standardized and credible organization for assessment of climate change management. The company has maintained its carbon footprint at the Management Level B for the second consecutive year.
- The company received the excellent award in the Low Carbon and Sustainable Business Index (LCSI) project

under the Thailand Greenhouse Gas Management Organization project (Public organization).

- The company has been selected in the 2020 sustainable stocks list (Thailand Sustainability Investment: THSI) from the Stock Exchange of Thailand for the third year.

Furthermore, the company was awarded Best Green Bond at The Asset Triple A Country Awards 2020 – Southeast Asia for its green bond offering with a total value of THB 5 billion, which has received much interest and confidence from investors. This has also been considered as a form of success for the company, as a developer of energy innovations for the environment. The company has also received 4 outstanding awards from the 10th Annual Corporate – Institutional Investment Poll, including the Most Organized Investor Relations, Most Consistent Dividend Policy, Best Strategic CSR and Most Improved Investor Relations awards, organized by Alpha Southeast Asia. These awards are based on the voting results of investors on the company, reflecting internationally recognized management potential and the ability of taking care of all stakeholders equally well.

Finally, on behalf of the President and Chief Executive Officer of Global Power Synergy Public Company Limited, we would like to thank our shareholders, customers, business partners, as well as all stakeholders, who have always given great support and confidence in the operations of the company. The company is committed to conducting business to its fullest potential under the sustainable development strategies in all dimensions for long-term business growth, by creating balanced benefits for all groups of stakeholders, while also continuing to be recognized internationally.



Mr. Worawat Pitayasiri

President and Chief Executive Officer



* For more information, please visit www.gpscgroup.com and refer to the “GSPC Sustainability” > “Sustainable Development Goals”

VALUE CREATION THROUGH THE BUSINESS MODEL

Input



Financial Capital

- Cost of Sales TH 56,536 MM
- Liability THB 144,789 MM
- Cash flow from operating activities THB 20,857 MM



Human Capital

- Total has 1,076 employees
- Total employee related expenses THB 1,691.07 MM
- Employee training cost THB 14.93 MM
- Promoting occupational health and safety in workplace
- Employee development and well-being



Manufactured Capital

- Total Equity Capacity 5,055 MW
- Property, plant and equipment THB 99,978 MM
- Total asset THB 256,656 MM



Social and Relationship Capital

- Social responsibility investment THB 28.34 MM
- Due Diligence on human rights annually
- Stakeholder engagement



Intellectual Capital

- Employees in Energy Disruptive Innovation Department 17 persons
- Research and Development (R&D) Budget THB 638 MM



Natural Capital

- Water withdrawal 1,141.51 Mm³
- Total energy consumption 14,701.58 million MWh
- 24 Environmental Management Officers

Business Activity (Value Chain)

3S Strategy



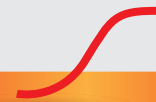
Synergy & Integration

- Synergy Capture
- Customer Centric
- ROE Uplift



Selective Growth

- Thailand Business Development
- International Business Development
- Co-investment with PTT
- New Businesses



S-Curve Business

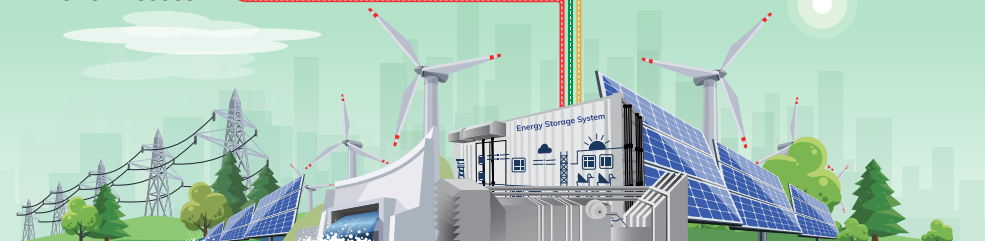
- Battery Manufacturer with Own R&D
- System Integrator
- Digital Energy

1. Supplier

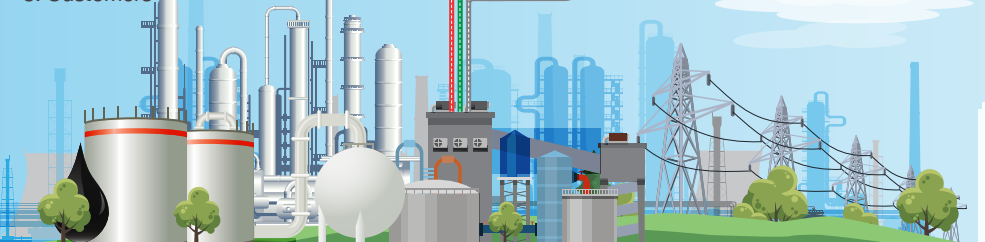


- Electric Transmission line
- Water Pipeline
- Fuel Pipeline
- Steam Pipeline

2. Power Producer



3. Customers



4. End-User



Output

GHG emission scope1
8.16 million tCO₂e


































GHG emission intensity
0.37 tCO₂e/MWh

Net energy generated
22,074.59 MWh

GHG emission scope 2
20,981.57 tCO₂e

Total water discharge
1,117.72 Mm³

Total waste dispose
48,933.55 tonnes

Outcome			Impact on Stakeholder Group	Contribution to SDGs	Material Issues
	For GPSC	For Stakeholders			
	<ul style="list-style-type: none"> Operation revenue THB 71,908 MM Earnings Before Interest/ Tax/ Depreciation (EBITDA) THB 19,559 MM Net profit THB 8,491 MM 	<ul style="list-style-type: none"> Total shareholder return 7.37% Earnings per share THB 2.66 Dividend per share THB 1.50 	 Investors  Shareholders  Partners		<ul style="list-style-type: none"> Governance, Risk and Compliance (GRC)
	<ul style="list-style-type: none"> Turnover rate deceased to 3.08% Key Positions in Succession Planning 100% Zero Lost Time Injury Frequency Rate (LTIFR) 	<ul style="list-style-type: none"> Training hours provided 25.58 hours/person B/C ratio of employee development program on utility business 8.61 	 Employees	 	<ul style="list-style-type: none"> Occupational Health and Safety (OHS), Workforce Development and Well-Being Human Rights
	<ul style="list-style-type: none"> Other non-current asset THB 3,161.46 MM Direct and indirect cost saving THB 633.12 MM 	<ul style="list-style-type: none"> Industrial Customer Availability 99.97% IPP Customer Availability 100% Annual forced outage time 12,427 hours 	 Investors  Partners  Customers	 	<ul style="list-style-type: none"> Maintaining Availability and Reliability
	<ul style="list-style-type: none"> Community satisfaction 74.6% Customer satisfaction 84.29% 6 corporate social responsibility (CSR) projects evaluated by Social Return on Investment (SROI) 	<ul style="list-style-type: none"> No human rights violation complaint Tax paid THB 280.68 MM 100 position employment under "GPSC Ruamjai Ruamthai Chauy Chart" project 76.69% of social investment for community and commercial initiatives Social Return on Investment from "Light for a Better Life" project is equal to THB 6.52 per investment budget of THB 1 	 Investors  Community & Society  Government Agencies & Related Organizations  Partners  Suppliers & Contractors	 	<ul style="list-style-type: none"> Customer Relationship Management, Supply Chain Management Sustainable Community
	<ul style="list-style-type: none"> Revenue from collaborations of Open Innovation THB 10.47 MM Development of energy storage system (ESS) prototype for commercial use Battery pilot plant construction completed 	<ul style="list-style-type: none"> Open Innovation 9 projects Collaboration with Suranaree University of Technology in the research and development of a solar energy system to serve as a learning center on smart energy innovations 	 Investors  Shareholders  Partners  Government Agencies & Related Organizations	 	<ul style="list-style-type: none"> Evolving the Business Model
	<ul style="list-style-type: none"> Fuel saved 3.53 MMBTU Energy saved 1.03 million MWh No fine from environmental violation 	<ul style="list-style-type: none"> GHG emission reduction 581,930 tCO₂e Water withdrawal reduction 10.59% 	 Investors  Community & Society  Government Agencies & Related Organizations	 	<ul style="list-style-type: none"> Environmental Management, A Clean Energy Future and Climate Resilience

BUSINESS RESILIENCE AND COVID-19

Measures for Coping and Adjusting during a Crisis

The situation of the Novel Coronavirus infection (COVID-19) pandemic has affected all sectors, especially the business operations of the private sector due to the declining demand for products and services. Global Power Synergy Public Company Limited (GPSC) therefore has had various preparations and adjustments to the current situation, including established guidelines for changing business models. The company is paying attention to measures and guidelines on infection prevention to ensure the safety of all employees, while also staying committed to generating electricity and utilities, in order to continuously meet customer needs. This is done by business continuity management and communicating with external and internal stakeholders on a regular basis, such as with shareholders, investors, employees, customers, business partners, government agencies and communities, to build confidence among stakeholders.

Employee Protection

The company has monitored and assessed the current situation since the start of the COVID-19 pandemic and has responded in a timely manner to the incidents of the virus by establishing preventive measures and guidelines urgently to ensure the safety of all employees, which include:

- Measures to educate and advice on how to perform certain tasks for employees.
- 24/7 communication and consultation measures.
- Measures for screening prior to entering the company in every area.
- Measures for general cleaning and at-risk areas within the company.
- Measures to refrain from traveling abroad.
- Measures to control access to work in the production areas.
- Measures for organizing activities by avoiding meetings or organizing meet-ups. In case of necessity, all shall use conference call or other online methods.

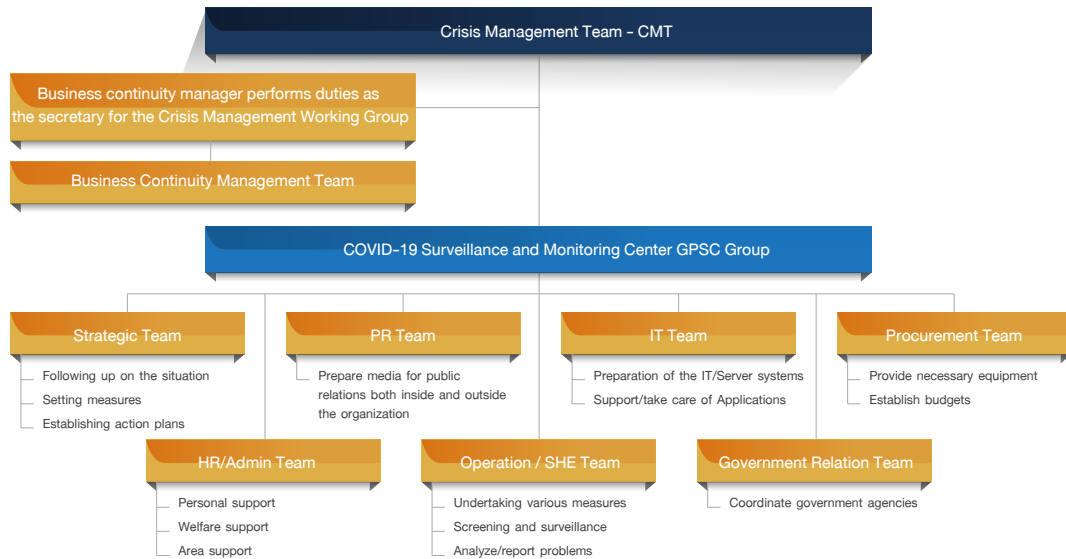
In addition, a surveillance center and monitoring of the COVID-19 pandemic has been set up to examine the current situation and establish preventative measures, as well as various action plans upon the occurrence of an accident. It also provides necessary equipment and items to employees, announcing support function employees to work from home and prepares special controlled areas (Sterile) or “Safe House” for special operational workers to reduce

the chance of infections, due to exposure to outsiders or vulnerable groups. Other measures are to take care of employees, also includes a COVID-19 life insurance policy for all employees, in order to safeguard their medical care and create peace of mind for employees. Adjustments to work guidelines in office spaces have also been carried out, in which the distance between office work spaces are increased, in order to help reduce the risk of COVID-19 infections based on the different levels of risk in each area. In having undertaken such measures, employees in the company have received accurate information and have been able to promptly receive appropriate action and advice to prevent the spread of these viral infections, to the extent that no employee in the company was found to have been infected with the virus

Business Protection

The company has received and established a business continuity management plan in the case of COVID-19 pandemic, in order to be able to operate the business continuously, which includes reducing the impact that will occur to business operations and stakeholders. It also serves as an action plan which will guide the recovery of the core business system in being able to continue to operate normally. A Crisis Management Team has therefore been established under the COVID-19 Surveillance and Transmission Center to monitor internal and external situations in collaboration with the PTT group. The team is responsible for defining measures and preparing plans to prevent disease outbreaks within the company, while also procuring and supporting necessary resources, as well as continually reporting on the performance to the company’s Management Committee (MC). As a result, the company is able to maintain the stability of the production process, and execute production processes according to operational plans efficiently, while not affecting the needs of customers.

Furthermore, due to the impact of COVID-19 affecting industrial customers of the company, there was a need to reduce the production capacity or delay machine testing operations, making it impossible to carry out commercial operations as specified in the utility purchase agreement. However, the company regularly communicates with customers by providing assistance to customers affected by the COVID-19 situation, such as by preparing agreements to



amend contracts to the scheduled Commercial Operation Date (COD), to help and support the business operations of their customers during times of crisis and to strengthen the relationship between the company and new customers.

Supporting and Helping Society

The company is committed to taking care of and supporting communities, as well as the overall society in being a part of helping to alleviate the suffering of individuals affected by the COVID-19 crisis. In the first phase, the company has carried out activities both within and outside of its areas, such as offering support to community enterprises, producing medical and cloth masks, as well as partitions to help prevent the spread of pathogens in hospitals. The company also provides the distribution of subsistence bags for people and creates a model school “The New Normal School” project to provide more knowledge in sanitation and proper conduct. The supports include giving out protective equipment to relevant agencies, such as hand sanitizers, face shield masks, infection prevention equipment and donation of funds to the Vidyasirimedhi Institute of Science and Technology (VISTEC) to develop testing kits for COVID-19, which led to faster results in being obtained from such tests.

Once the situation began to recuperate and had entered a period of restoration, the company therefore initiated a second phase of remedies and assistance to those affected economically from COVID-19 under the project “GPSC Unite Thailand to Help the Nation”. This project is in line with the approach by the government to strengthen the basic economy, including employing 100 new graduates, supporting

local products and services by creating an annual New Year gift 2021 from products within communities in both Rayong and other areas. The project also promotes local domestic tourism to stimulate the economy of major cities and sub-cities through organizing seminars for employees and board of directors using hotel services, small and medium enterprises (SME) that meet the Amazing Thailand Safety and Health Administration (SHA) standards of the Tourism Authority of Thailand (TAT) and finally also provides accommodation for employees in the amount of 2,500 baht per person to help SME hotel groups.

New Way of Life with the Creation of Energy Innovation

In view of the COVID-19 pandemic, the company has identified an opportunity to accelerate the need for organizations to change their digital strategy and investment (Digital Transformation) to keep pace with and maintain their ability to grow, while supporting the business in the future, as well as to improve operational efficiency. The company has planned a digital transformation roadmap, which is in the process of adjusting the business to meet future growth.

Additionally, the company continues to develop its business by adopting innovative and new energy technologies to be used in sustainable management. This is to gain competitive advantage by focusing on increasing the proportion of clean electricity together with the development of energy storage systems to be a part of building energy security for the country in a stable and sustainable manner, while taking into account the creation of value with stakeholders, as well as enhancing the competitiveness of the business in the future (Energy Transformation).

STAKEHOLDER'S VOICE

Shareholders



Mr. Kengkla Ruckphaopunt
President of the Thai Investors
Association

“Entering into a joint venture or acquisition should be thoroughly considered and operated with transparency, accountability and consideration for the interests of shareholders. For a project that GPSC has cooperated with Suranaree University of Technology to conduct research and development of solar power generation systems. It is a good opportunity that allows the student community to learn and develop the human capital of the country. In addition, the company should further study “real-time pricing” and “energy trading” models to accommodate the changing direction of the power business model.”

Investors



Mr. Narin Opamurathawong
Executive Vice President
Bangkok Bank

“Today’s businesses around the world are increasingly focused on ESG (Environmental, Social and Governance). GPSC too has established a clear strategy to focus on all aspects of economic, environmental and social management that are in line with current events and organizational adjustments. For example, the issuance of “Green Bonds” is one of the tools that reflect the leadership of progressive initiatives in leading the organization to sustainable growth.”

Government Agencies and Related Organizations



Dr. Pirun Saiaisitpanich
Deputy Secretary-General
Office of Natural Resources and
Environmental Policy and Planning

“I would like to admire GPSC for their contribution to the implementation of the overall national greenhouse gas reduction target by defining a climate change strategy under the PTT Group, such as through renewable energy operations, energy efficiency optimization and battery production for electric vehicles (EV). All of which will reduce the combustion of fuels and greenhouse gas emissions. What the company has to look into in the future is how to be a leader in high efficiency and low emission power generation by focusing on research and development of technologies that will help to support more efficient use of energy and reduce greenhouse gas emissions.”

Employees



Mr. Paroon Keeratitaneskul
Management Trainee Global Power
Synergy Public Company Limited

“GPSC has managed very well during the pandemic of COVID-19, both in terms of taking care of employee safety, as well as the management of impacts on stakeholders of the company. However, if operational methods had been adjusted by having taken advantage of additional technologies or digital tools, many processes would have been able to be conducted more efficiently. In addition, the company should also pay more attention to human potential development, as it is a key factor in driving business strategies of the company.”

Suppliers and Contractors



Mr. Adiwut Saengprateep
Plant Manager
Thai Jurong Engineering Company
Limited

“In the construction of a power plant, building trust and mutual trust between the local community and the company is important. In addition to helping reduce concerns of local communities, it would be an even more desirable outcome for communities to encourage the operations of the company. GPSC has a department to take care of this particular matter and is currently doing well by communicating and creating engagement with communities using clear plans to create an understanding regarding the operations of the company, as well as preventative measures and possible impacts that will lead to sustainable coexistence with communities.”

Customers



Mr. Chaiwat Munkong
Division Manager - Utilities Engineering
PTT Global Public Company Limited

“By developing a joint business with the group as a business partnership, creates trust, good cooperation and further develops potential for sustainable business cooperation as well. In addition, the company group also has personnel with specialized knowledge and experience, which makes it possible for business development in various projects. We believe that in the future, the group should possess its own research and development, as well as innovations, including studying and preparing the Energy Trading Platform. These will only increase opportunities in adding value to the group.”

Partners



Professor Dr. Jumras Limtrakul

President of Vidyasirimedhi Institute of Science and Technology

“The challenge for the future energy business is the application of technology (Embedded Technology) together with the adaptation to changing consumer behavior at the same time as the company has invested in the energy storage technology business. This is a good learning curve and can be applied to a sustainable business model, however, the company needs to have research and development of its own, especially in the area of energy storage technology, which will play an important role and increase the competitiveness in the future of the electric business.”

Community and Society



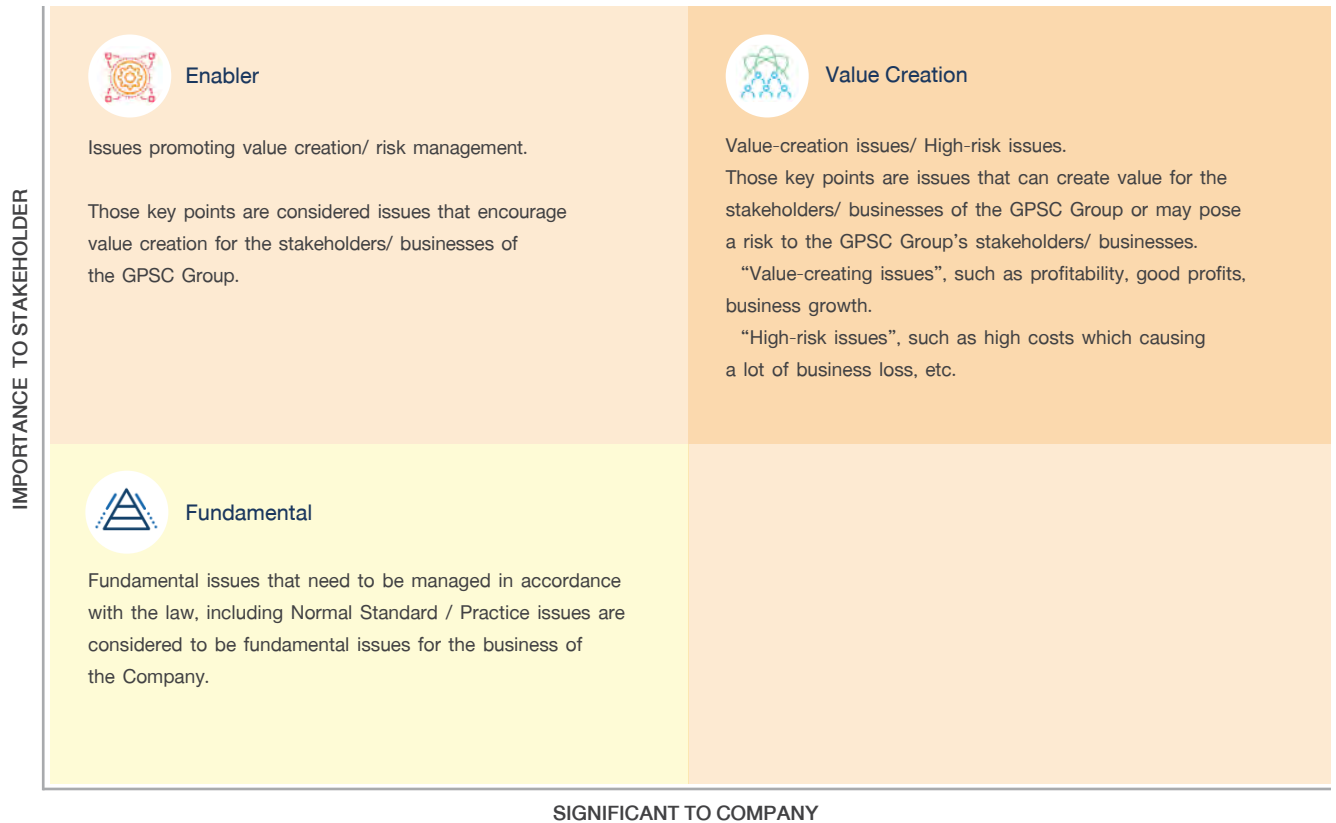
Mr. Pattaraphon Suwannawut

President of the Thai Land Community, Rayong Province

“Social responsibility of entrepreneurs is very important in business operations and the company has performed well in this regard. They have been doing so continuously, especially in terms of educational support for students in their areas. Furthermore, the current electricity business is important and critical to human lives and for the nation, not only for creating light, but also for benefiting medical uses to save lives, which will only show the power business to be in a continuous form of growth. In this regard, the company should thereby.”

MATERIALITY SUSTAINABILITY ISSUES IN 2020

GRI 102-46, 102-47



Value Creation <ul style="list-style-type: none"> • Evolving the Business Model (Innovation Management, Market Opportunities) • A Clean Energy Future and Climate Resilience • Workforce Development and Well-Being 	<ul style="list-style-type: none"> • Maintaining Availability and Reliability • Customer Relationship Management • Occupational Health and Safety (OHS)
Enabler <ul style="list-style-type: none"> • Supply Chain Management • Risk and Crisis Management and Information Security/ Cyber Security & System Availability 	<ul style="list-style-type: none"> • Sustainable Community • Environmental Management (Air pollutant emission, Waste and wastewater management)
Fundamental <ul style="list-style-type: none"> • Business Ethics and Anti-Corruption • Human Rights • Biodiversity 	

MATERIALITY SUSTAINABILITY ISSUES: VALUE CREATION

Scope of ESG Risks and Opportunities	Capital Value	Global Report Initiative: GRI	Related Stakeholder	Consistency with the Sustainable Development Goals (SDGs)
CUSTOMER RELATIONSHIP MANAGEMENT				
<ul style="list-style-type: none"> Customer Satisfaction Customer Relationship Management Customer Data Privacy Protection 	Social and Relationship	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) 	<ul style="list-style-type: none"> Employees Customers 	<div>8 DECENT WORK AND ECONOMIC GROWTH</div> <div>17 PARTNERSHIPS FOR THE GOALS</div>
MAINTAINING AVAILABILITY AND RELIABILITY				
<ul style="list-style-type: none"> Production System Stability and Efficiency Risk Management in Crisis Conditions Personnel Management in the Production Investment in Production Utilities 	Financial, Manufactured	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) System Efficiency (EU-1, EU-2, EU-11) Demand Side Management (EU-10) Availability and Reliability (EU-28, EU-29, EU-30) 	<ul style="list-style-type: none"> Shareholders Investors Partners Employees Customers 	<div>8 DECENT WORK AND ECONOMIC GROWTH</div>
EVOLVING THE BUSINESS MODEL				
<ul style="list-style-type: none"> Research and Innovation Development Distributed Generation Market Opportunities 	Financial, Intellectual	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) 	<ul style="list-style-type: none"> Shareholders Investors Partners Government Agencies and Related Organizations Employees Suppliers and Contractors Customers Community and Society 	<div>9 INDUSTRY, INNOVATION AND INFRASTRUCTURE</div> <div>17 PARTNERSHIPS FOR THE GOALS</div>
CLEAN ENERGY FUTURE AND CLIMATE RESILIENCE				
<ul style="list-style-type: none"> Decarbonization Energy Production from Renewable Energy Reducing Greenhouse Gas Emissions Climate Change Risks and Opportunities Internal Carbon Pricing 	Natural, Manufactured	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) Energy (302-1, 302-2, 302-3, 302-4) Emission (305-1, 305-2, 305-3, 305-4, 305-7) 	<ul style="list-style-type: none"> Shareholders Investors Partners Government Agencies and Related Organizations Employee Suppliers and Contractors Customers Community and Society 	<div>7 AFFORDABLE AND CLEAN ENERGY</div> <div>12 RESPONSIBLE CONSUMPTION AND PRODUCTION</div> <div>13 CLIMATE ACTION</div>

Scope of ESG Risks and Opportunities	Capital Value	Global Report Initiative: GRI	Related Stakeholder	Consistency with the Sustainable Development Goals (SDGs)
OCCUPATIONAL HEALTH AND SAFETY				
<ul style="list-style-type: none"> Occupational Health and Safety Process Safety Assess and Prevent Occupational Health Risks 	Human	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) Occupational Health and Safety (403-1, 403-2, 403-3, 403-4, 403-5, 403-6, 403-7, 403-9, 403-10, EU-25) 	<ul style="list-style-type: none"> Government Agencies and Related Organizations Employees Suppliers and Contractors 	 
WORKFORCE DEVELOPMENT AND WELL-BEING				
<ul style="list-style-type: none"> Capacity Development Career Development and Succession Diversity and Equal Opportunity Employee Well-Being Benefits and Compensation 	Human	<ul style="list-style-type: none"> Management Approach (103-1, 103-2, 103-3) Training and Education (404-1) 	<ul style="list-style-type: none"> Government Agencies and Related Organizations Employees 	   
Communication & Credibility				
Management practices and results of operations of the Company in the GPSC holds more than 75%, and the power of the administration. (Operational Control)	-	<ul style="list-style-type: none"> GRI Standards 	<ul style="list-style-type: none"> Shareholders Investors Partners Government Agencies and Related Organizations Employee Suppliers and Contractors Customers Community and Society 	



Follow the content of the materiality sustainability issues at
<https://www.gpscgroup.com/en/sustainability/gpsc>

ECONOMICS



SAIFI equals
0.26



Industrial
Customer
Availability

99.97%



Bringing the commercial
prototype product to
a trial installation for
customers to use.



Monetization
of new business
models.



Business Drivers



Strategies for Success*



Corporate Success Indicators
(Corporate KPIs)

Maintaining Availability and Reliability

Reliability and availability of an electric power generation and distribution system is the key to any power business, which will help in increasing its competitiveness and strong customer retention. Business risks can also be reduced as a result and these are the main factors that allow for stable and sustainable growth of the organization in the future.

- Establish a “Synergy & Integration” strategy for integrating production networks and utilities⁽¹⁾
- Deploy the Operational Excellence Management System (OEMS)⁽¹⁾
- Integrate technology and digital applications into production systems⁽¹⁾
- Implement an internal management system to monitor operations in both normal and crisis conditions
- Increase production potential by expanding both domestic and foreign investments
- Manage knowledge and experience through the KM Portal

- System Average Interruption Frequency Index (SAIFI)⁽²⁾
- Realized Synergy Value

Evolution of the Energy Business of the Future

The energy transition era (Energy Disruption) is an important opportunity to enhance products and transform the service model of the company into a fully integrated smart energy provider. By possessing a strong foundation and innovative capacity, it will be able to respond to changing applications and demand, while continuing to grow its business into the future.

- 3S strategy (S-Curve)
- Research and development of innovative batteries
- Research and development of energy storage systems (Energy Storage System)
- Study, research and invest in the business of being a fully integrated smart energy provider (Smart Energy Management & Solution Provider)
- Invest and build partnerships with external agencies to enhance the potential for technology research
- Support research staff with external agencies and share their experiences in the organization

- Production of the first battery cell (First Cell) in Thailand from a prototype factory

Customer Relationship Management

Amidst high competition in the power business and changing market trends, as well as current customer demands, customer relationship management is a key factor in any business success. GPSC Group is therefore committed to improve product quality, production and distribution systems, along with maintenance services, while also continuously building good relationships with customers as a base for retaining customers and increasing income.

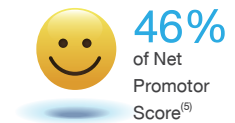
- Code of Conduct for Confidentiality, Safeguarding and Use of Inside Information
- Increasing customer communication channels
- Organizing customer relations activities with relevant departments of the company
- The organization of customer satisfaction surveys by an external agency, which provides a solution to respond to the needs, retaining and building of relationships with customers

- Customer Satisfaction⁽¹⁾

⁽¹⁾ As part of the 2020 Corporate Key Performance Indicator,

⁽²⁾ System Average Interruption Frequency Index (SAIFI) is the average number of power outages or interruptions that would impact to each industrial customer in major area over a year,

⁽³⁾ Industrial customer availability is calculated from total availability-based contracts of the industrial customers only in Map Ta Phut Industrial Estate, Rayong Industrial Land (RIL), Asia Industrial Estate and Siam Eastern Industrial Park area,



Performance and Value Creation	2021 Targets	Long-term Targets
<ul style="list-style-type: none"> • SAIFI equals 0.26 • 99.97% of industrial customer availability⁽³⁾ • 100% of IPP customer availability⁽⁴⁾ • No unplanned shutdown • No income loss from unplanned shutdown • Generate additional co-value of THB 701 million from integrated asset management 	<ul style="list-style-type: none"> • SAIFI will not exceed 0.25 • 99.97% of industrial customer availability • 100% of IPP customer availability • No unplanned shutdown • No income loss from unplanned shutdown • Generate additional co-value of THB 814.06 million from integrated asset management 	<ul style="list-style-type: none"> • 100% of industrial customer availability • 100% of IPP customer availability • No unplanned shutdown • No income loss from unplanned shutdown • Generate additional co-value of THB 1.6 billion from the integrated value strategy within 2024
<ul style="list-style-type: none"> • Construction of a battery factory as planned and successfully produce (First cell) batteries. • Development of a prototype project and attempting to install a battery energy storage system for 4 customers. • Prepare a contract and/or a memorandum of understanding for the installation of battery energy storage systems, totaling 5 customers. 	<ul style="list-style-type: none"> • Build knowledge and understanding of battery products for customers and partners. • Developing energy storage technology prototypes to be installed for customers in more available configurations, such as in telecommunication and electric vehicles. • Prepare a contract and/or a memorandum of understanding for the installation of battery energy storage systems, totaling 3 MWh. • Possess more support products in the electric vehicle market in 2021. 	<ul style="list-style-type: none"> • New products of high quality and reasonable prices can be integrated into energy storage operations to gain competitive advantage in the power business market (Year 2022). • To be the leader in energy storage systems in the industrial sector of Thailand (Year 2022). • Create a new business model to support the power business in the future (Year 2022). • Expand the storage facility to Giga-scale for commercial production (Year 2025).
<ul style="list-style-type: none"> • 84.29% of customer satisfaction • 46% of net promoter score⁽⁵⁾ 	<ul style="list-style-type: none"> • At least 85% customer satisfaction 	<ul style="list-style-type: none"> • At least 85% customer satisfaction

⁽⁴⁾ Independent Power Producer (IPP) customer availability for Electricity Generating Authority of Thailand (EGAT) is calculated from Sriracha Power Plant and Glow IPP Power Plant.

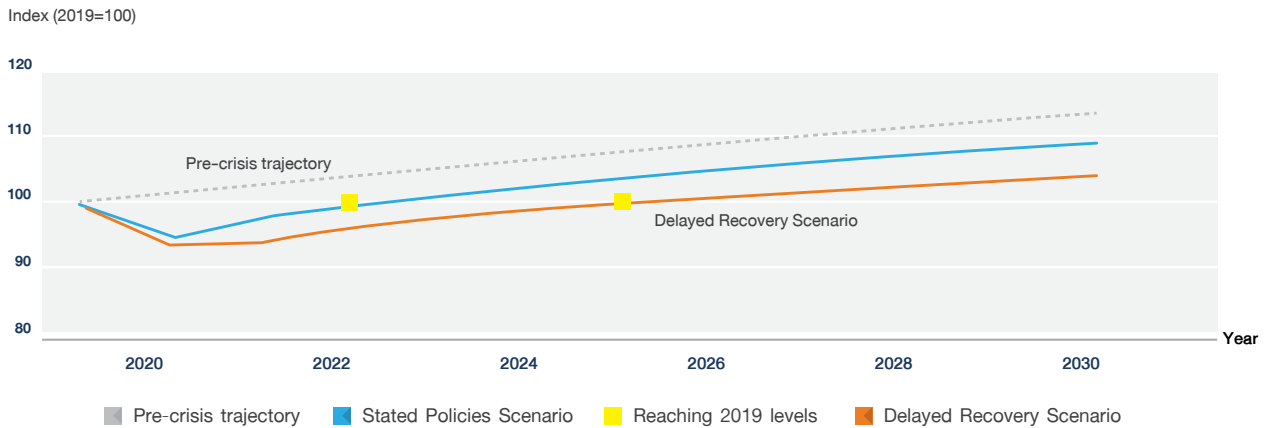
⁽⁵⁾ The comparison between GPSC's net promoter score (NPS) and the NPS of 13 global leader companies in utilities sector shown that 46% of GPSC's NPS was 100 percentiles. However, the lowest and highest NPS of those companies were 5% and 41%, respectively.

MAINTAINING AVAILABILITY AND RELIABILITY

Consistency Growth of Reliable Energy Supply

Although in 2020, the impact of the novel corona virus (COVID-19) pandemic has resulted in a roughly 5-7% drop in demand for energy worldwide, the demand for energy will return to normal within 2022 - 2025 compared to in 2019. Moreover, in the future, Thailand is expected to increase energy demand by more than 80%, compared to the level of demand in 2017.

Global primary energy demand growth by scenario, 2019-2030



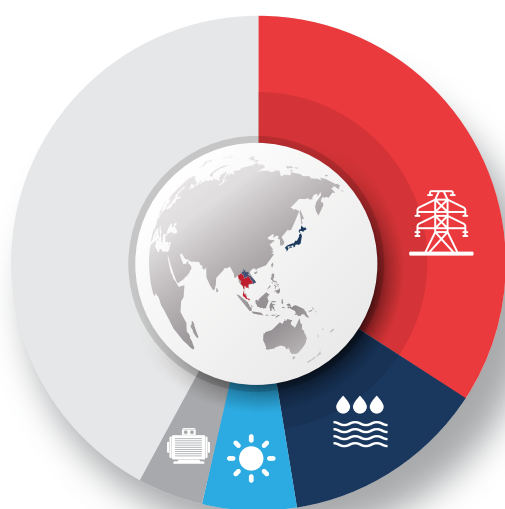
From: IEA (2020), World Energy Outlook 2020, IEA, Paris <https://www.iea.org/reports/world-energy-outlook-2020>

Therefore, as this company is the mainstay in the electrical power business of the PTT group, as well as being the fourth largest private company in Thailand, it will continue to focus on producing and delivering electric power and steam to growing customers, while also supporting new customers in the future. Currently, the company possesses a total power generating capacity of more than 5,055 megawatts, most of which is generated from cogeneration power plants (Cogeneration and Combined Cycle) using natural gas as the primary fuel. Other fuel power plants and renewable energy of various types are also included, with the capacity of these being as follows:



For more information, please visit www.gpscgroup.com and refer to the "Sustainability" heading and "Economic" > "Maintaining Availability and Reliability" sub-heading

Various Types of Fuels and Productions



Total Equity Capacity

Electricity	Steam
5,055 MW	2,946 T/H
Chilled Water	Industrial Water
15,400 RT	7,372 Cu.m./H



Combined Cycle | Cogeneration | Thermal

Electricity	Steam
4,467 MW	2,946 T/H
Chilled Water	Industrial Water
15,400 RT	7,372 Cu.m./H



Hydroelectric

Electricity
449 MW



Renewable Energy

Electricity
139 MW



Other Businesses

The company has established a value integration strategy, or “Synergy Integration”, which refers to one of the corporate strategies in enhancing production capacity and delivering valuable energy to all stakeholders. The company has adopted a model for efficient and responsive operations through digital applications that are designed to suit different lines of work, as well as allowing for the ability to work in parallel, while also communicating with one another quickly and efficiently.

The company has also set a goal of generating additional co-value from the synergy and the implementation of the aforementioned strategy of more than THB 1.6 billion per year by 2024. At present, the company has created a value of over THB 701 million as a result of various operational activities including Operations & Maintenance, Procurement and Corporate Function & IT. The activities relate to the availability and reliability of production are as follows:

Value Creation from Process, Plant and Equipment Optimization	Value Creation from Asset Integration	>200 Knowledge Development Activities
<ul style="list-style-type: none"> Reduction of energy and fuel consumption in production processes Machine efficiency improvement Reducing emissions to the environment Usage of digital applications in the production process to monitor production status 24 hours a day 	<ul style="list-style-type: none"> Interconnection of the grid system, the transmission system and the steam pipeline system (Power and Steam Network Interconnecting) within the group of companies Management of electricity and steam demand for both existing and emerging contracts within the group of companies (Demand & Supply Optimization) Performance Management and Procurement Bundling Long Term Service Agreement and Spare Part Pooling Over Investment Saving Warehouse management to reduce inventory and extend equipment lifetime 	<ul style="list-style-type: none"> Training, coaching, brainstorming workshop for internal personnel Developing the KM Portal system for efficient knowledge management Creating excellence in competition through the application of good practices (Best Practice)



In addition, the company places great emphasis on the availability and reliability of energy supply to customers. In 2020, the exist 4 power plants which include Glow Energy Phase 5, CFB 3, Glow SPP 3 and GHECO-One have been continually optimized to improve their operations and enhanced efficiency. Furthermore, the average availability of the power distribution system of the company is in line with those of the international level.

Production Network Integration Success

In the past year, the company has successfully connected the steam network system of Central Utility Plant 3 and Glow SPP 3 to increase the production potential for maximum efficiency. This is the first project to have a steam network connection, which has benefited the entire organization and has been able to increase the credibility of the company to its customers, while also having simultaneously generated a revenue from the integration of the steam network production of THB 5.16 million.**

** Income for the period from July to December 2020

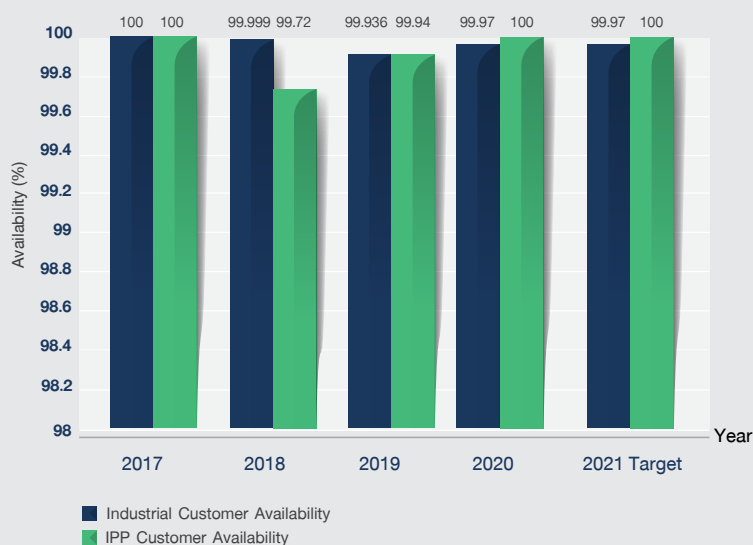


“

“One of the cornerstones of electrical business operations is to ensure energy security with the highest availability and reliability of production, as well as delivery, in order to build confidence and trust among customers. Therefore, the company will not cease to develop operational efficiency by incessantly developing personnel and enhancing network integration through innovation and new knowledge.”

”

Mr. Pajongwit Pongsivapai
Chief Operating Officer



Remark: 2020 is the first year of GLOW availability data collection and the company was under the process of corporate restructuring and synergy value capturing from the integration of GPSC and GLOW, therefore no target was set.

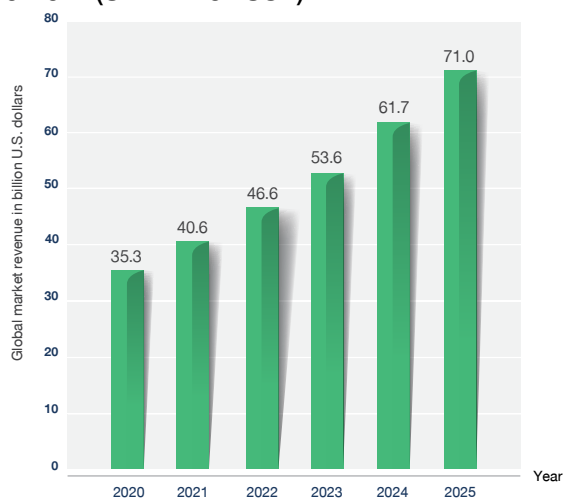
EVOLVING THE BUSINESS MODEL

Battery Innovation for Smart Energy Use

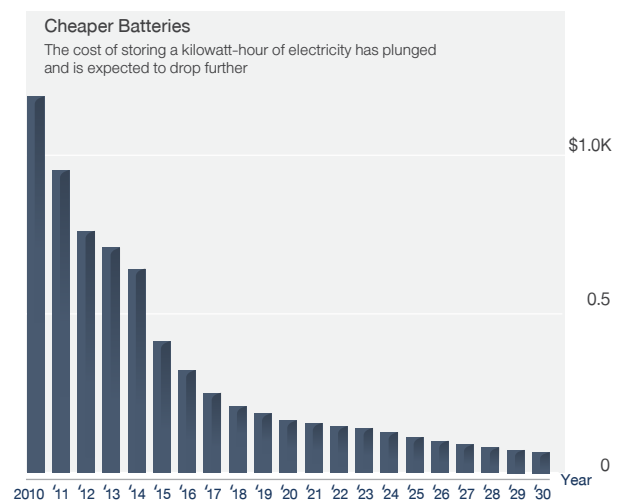
Battery : “The Next Big Thing”

Nowadays, clean energy produced from renewable energy sources is becoming increasingly important and commonplace. However, different forms of renewable energy such as solar, wind and hydropower still present with production stability constraints that fluctuate. Therefore, the implementation of Battery Energy Storage System (BESS) is an important component of the complete and stable renewable energy production process, with the lithium-ion battery technology being the core technology of energy storage systems. According to predictions, the lithium-ion battery market value will be more than double by 2025 due to the demand for large stationary energy storage systems and mobility batteries from electric batteries.

Global Lithium-ion Battery Market Forecast from 2020-2025 (Unit: Billion USD)

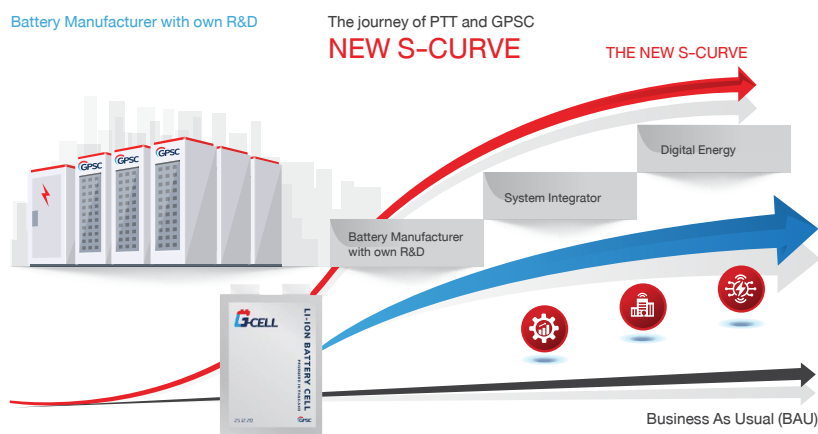


Forecasting Battery Cost Trends in 2030



Reference: <https://www.statista.com/statistics/1011187/projected-global-lithium-ion-battery-market-size> <https://www.bloomberg.com/quicktake/batteries>

GPSC Evolving The Business



Therefore, the company has established a strategy to focus on the development of batteries and energy storage systems for both stationary and mobility type applications as one of the three “S-Curve”. The strategy aims to drive the business towards becoming a leader in energy innovation that can be applied to a wide variety of technology equipment and to meet the energy model of the future that will allow the company to rapidly grow.

Variety in Battery Applications



● Stationary Application ● Mobility Application



For more information, please visit www.gpscgroup.com and refer to the "Sustainability" heading and "Economic" > "Evolving the business model" sub-heading



Energy storage unit manufacturing plant, Map Ta Phut Industrial Estate, Rayong Province

able to produce a prototype battery (First Cell) successfully at the end of last year, with plans to also expand its production capacity. This is to support commercial products and markets with long-term growth, in order to meet the trend of switching to clean energy, electric vehicles, smart network systems (Smart Grid), smart cities, as well as the overall growing energy demand in the industrial sector, especially in the Eastern Economic Corridor (EEC), which will continuously help to increase the competitiveness and new business opportunities for batteries and energy storage systems.

The Missing Link...

Thailand still has to import batteries worth over 100 million USD and does not yet manufacture batteries domestically. In addition, Thailand also has the highest import tax rate of over 23%, resulting in the production of renewable energy being constrained by the use of high-cost energy storage systems, which are unlikely to be an attractive investment. Therefore, the company realizes the importance of batteries and energy storage systems in being the "The new S – curve" that will fill in the missing aspects of the energy system in the future. Therefore, the construction of the first semi-solid energy storage unit in Thailand with a capacity of 30 MWh per year was commenced in order to produce batteries co-invented with 24M Technologies Inc. from the United States. The factory construction was completed and was



G-CELL Semi Solid Battery Unique Design



Shorter Process



Remove **40%** Inactive Material



No binder Needed



Low Risk of Contamination



“

"Batteries are an important part of future energy use. They play a role in renewable energy storage systems as an intermediary between energy generation and supply chains. The construction of the first energy storage facility of the company marks the beginning of a new wave of pathways to provide smart energy services and to become the market leader in the future."

Mr. Punnavich Pianpucktr
Project Director of Flash

”

CUSTOMER RELATIONSHIP MANAGEMENT

Customer Management Strategies and Practices under the GPSC Group

Customer relationship management is at the heart of any business operation, especially in power and utility businesses, where industrial customers have a high demand for electricity and steam supply with high availability and reliability. Retaining a current customer is therefore very important in the face of intensifying price competition in the power business segment. Additionally, research from the Harvard Business School shown that managing good relationships with customers leads to a 5% increase in customer retention rates and at least a 25% increase in business profits. For these reasons, the company focuses on product quality improvement, production process management and product distribution to be available and reliable, as well as increasing the efficiency and capacity from connecting the power grid and steam pipeline between GPSC and GLOW, in order to deliver quality products, comply with agreements and prevent any negative impacts that may occur to customers. Doing so will create satisfaction and customer loyalty with the company, including creating opportunities to attract new customers, bringing stable long-term income, as well as creating sustainable growth for the company.

After the integration between GPSC and GLOW, the company has implemented strategies and practices of customer relationship management of both companies under GPSC Group, in order to build and retain a stronger relationship between customers and the group. The customer relationship management strategies and practices include the Code of Conduct for Confidentiality, Safeguarding and Use of Inside Information to maintain and build good relationships with customers, annual customer satisfaction and engagement surveys, as well as to increase communication channels with customers.

Reference: *Harvard Business Review

Responding to Energy Management Needs of Customers (Customer Solution Provider)

In the first quarter of 2020, the company, together with its customers of PTT Global Chemical Public Company Limited or GC, launched a Smart Energy Storage System (ESS) of 1.5 MWh. This is the largest industrial power reserve system in Thailand, where the ESS system is used in this project to store the residual energy from the gas engine generator for use in office buildings. Stored electricity in the ESS can act as a backup power source for emergency use during power failure and to supply power to other buildings during peak times of power demand. The cost of external energy purchases is expected to be reduced by THB 1.6 million per year, which is a further milestone for the company to develop technology and innovation in energy storage, in order to meet the needs of industrial customers in energy management, efficient fuel and energy consumption, including supporting production with stability and hence overall stability to customers as well.



Increasing Customers Communication Channels

In addition, the company has increased its online service capability and customer reach to keep pace with technological advancements and changing customer behavior by developing an operating system called the EnergyLens Application. This refers to a digital technology system, where customers are efficiently able to check data regarding electricity and steam consumption and find out their usage results in real time, including also the viewing history and other information, such as monthly expense reports, manual for communicating with the company. All of which can be accessed through websites and applications on mobile devices.

This digital technology system is an effective customer relationship management tool for analyzing and collecting the company's vital information, in order to manage and plan the development of services or to increase the production capacity, which can meet the increasing demands of customers for electric power, including the ability of the customer, to manage the service use that suit their needs.



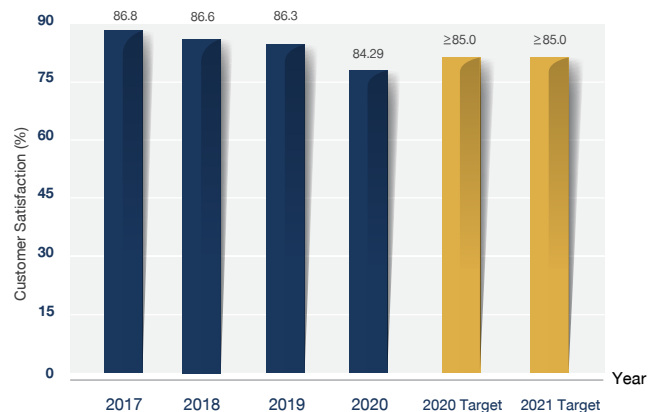
2020 Customer Satisfaction and Engagement Survey

GPSC group conducts an annual customer satisfaction and engagement survey through a program termed the GPSC Group Customer Engagement and Survey to determine the level of customer satisfaction and engagement with GPSC Group. The survey will be used to analyze the factors that affect the level of customer satisfaction, as well as engagement and compares the position of the company (Benchmarking) with leading organizations within the same industry in both the national, regional and global level. The guidelines for the survey was to answer the questionnaire, which was divided into 6 main groups: Pre-sales & Sales

Stage, Quality of Products & Reliability of Distribution Network, Billing and Invoicing, Maintenance and Planned Service Outage, Request and Complaint Management and Customer Engagement after Service Set-up. The results of the analysis from the 2020 satisfaction and engagement survey show the following:

- 84.29% of customer satisfaction
- 46% of net promoter score*

The results from the survey will be used to determine the product and service strategies of GPSC Group, as well as act as plans to improve and develop the level of satisfaction and engagement of customers, in order to further enhance this quality.



Remark: ** The company has implemented the strategies and practices of customer relationship management of both companies under GPSC Group in 2020.



For more information, please visit www.gpscgroup.com and refer to the "Sustainability" heading and "Economic" > "Customer Relationship Management" sub-heading



“

“Reliability is highly sought for and great importance to customers. In the past year, GPSC Group has made great progress in managing and improving the reliability system, which was met with high levels of satisfaction. There are also recommendations for increasing the speed of reporting information and guidelines for post-incident improvement, as well as considering the strengths of the customer relationship management practices of GPSC and GLOW under GPSC Group.”

”

Mr. Chaiwat Munkong
Division Manager – Utilities Engineering
PTT Global Chemical Public Company Limited

* The comparison between GPSC's net promoter score (NPS) and the NPS of 13 global leader companies in utilities sector shown that 46% of GPSC's NPS was 100 percentiles. However, the lowest and highest NPS of those companies were 5% and 41%, respectively.



ENVIRONMENT



Total reduction of greenhouse gas emissions: **

581,930 tCO₂e*



11%
of renewable energy



Business Driving
Factors



Strategies for
Success



Corporate Success
Indicators (Corporate KPIs)

Clean Energy for the Future and Tackling Climate Change

The increasing demand for clean energy in today's world is a key driver of the company. It encourages new business opportunities to produce and deliver energy that is consistent with customer demands to generate increased revenues in the future and also to enable the company to cope with the severity and increasing frequency of disasters effectively.

- Increase the share of renewable energy in electricity generation under the "Selective Growth" strategy.
- Study and research energy storage technologies and energy management to increase efficiency and support the use of renewable energy.*
- Assess risks and opportunities to analyze ways to tackle the impacts of climate change.
- Reduce greenhouse gas emissions and energy consumption in the organization.
- Integrate Internal Carbon Pricing (ICP) into investment considerations and decisions.

- Greenhouse gas emissions reduction (GHG Intensity)

* Supporting Corporate KPI 2020, ** Calculated from the amount of greenhouse gas expected to be reduced from the Thailand Voluntary Emission Reduction Program (T-VER) in 2020.



Awarded a low-carbon business
assessment and rating program and
Excellent sustainability



Studying of Internal
Carbon Pricing



Operational Performance
and Value Creation



2021 Targets



Long-term Targets

- | | | |
|---|---|--|
| <ul style="list-style-type: none"> • Total reduction of greenhouse gas emission: 581,930 tCO₂e** • Reduced energy consumption by 1.03 million MWh • 11% of total electricity generation supplied by renewable energy and hydroelectricity. • Awarded the Excellent Low-Carbon and Sustainable Business Rating Program (Low Carbon and Sustainable Business Index: LCSi) • Studying of Internal Carbon Pricing: ICP in the organization. • Supporting Thailand's Nationally Determined Contribution (NDCs) through corporate greenhouse gas reduction. • GHG Intensity 0.44 kgCO₂e/kWh*** | <ul style="list-style-type: none"> • Joint venture with PTT to invest in increasing the proportion of renewable overseas energy production. • GHG emission will not exceed 0.49 kgCO₂e/kWh | <ul style="list-style-type: none"> • Increasing the proportion of production capacity from renewable energy and hydropower to 30% within 2025 • Joint venture with PTT to increase the investment of the PTT Group in renewable energy to 8,000 MW within 2030 • 10% GHG emission reduction (GHG intensity) within 2030 |
|---|---|--|

*** The intensity of GHG emission covers the result of assessment by external verifier and GHECO-One plant only. The company's goal, however, covers the performance according to the proportion of company share.

A CLEAN ENERGY FUTURE AND CLIMATE RESILIENCE

Decarbonization of Energy towards Clean Society

It is currently known that the causes of the worsening and increasing of frequency of climate change effects in today's world are largely attributable to human greenhouse gas emissions over the past 100 years. Human activities require electricity account for one-fourth of the world's greenhouse gas emissions, making these the dominant sources of energy consumption. The company therefore realizes the importance of this issue and is determined to reduce such impacts by seeking opportunities for innovation and development to support the production of clean energy and to work towards a low carbon society through better production and delivery methods, which produce no carbon dioxide (Decarbonization) to customers, as well as communities, in order to cope with and adapt to climate change according to various guidelines. This is to control greenhouse gas emissions and the global average temperature to well below 2 degrees celsius by 2100, including Thailand which has announced its intention to set a target to reduce greenhouse gas emissions for 20-25% by 2030, via increasing production from renewable energy, such as from solar, hydro and wind. These are all able to reduce the direct impact of climate change by reducing greenhouse gas emissions through replacing fossil fuel-powered electricity generation, which is a major contribution to climate change.

Moreover, technological developments, widespread use and market forces with large renewable energy producers have resulted in significant reductions in production costs, such as lower-costs associated with solar energy, with 80% lower costs over the last 10 years and a further projected 59% decline in the next 5 years. As a result, renewable energy production plays an important role in energy consumption in the Thai society and around the world.

At present, the private power generating companies in Thailand have a share of renewable energy production capacity similar to the entire production capacity of the country^{***}. However, as a result of the investment in clean energy, companies with a clean energy business plan are likely to grow and become more attractive to investors in the future. The company has formulated a "Selective Growth" strategy as a guideline for expanding renewable energy production capacity, in support of low-carbon operations, along with the country's greenhouse gas reduction targets to increase competitiveness and grow along with the PTT Group. The company aims to increase the proportion of renewable energy production to 30% by 2030 and continuously expand its investments to foreign countries, especially in the investment target countries, such as Taiwan, Vietnam and Myanmar.



"Being a part of the production and delivery of clean energy is a key mission of the company to help drive and raise awareness in addressing climate change, both within and outside the organization, as well as advocating for a change towards a low-carbon society, which if managed well, can reduce the impact on the environment and promote sustainable development in the long-term."

Mr. Sirimet Leepagorn
Executive Vice President Corporate Strategy and Subsidiary Management

* Refer to United States Environmental Protection Agency, ** Refer to Institute of Energy for South-East Europe,

*** Based on the 2019 annual report and the third quarter of 2020 performance for each company

Proportion of renewable energy production capacity among private power generating companies in Thailand at present time and target by 2030



The company established a subsidiary (Global Renewable Power Company Limited or GRP) mainly to engage in the business of investing in renewable energy power plants, along with a joint venture with PTT Public Company Limited, which is considered the majority shareholder of the company. GRP possesses a strategic plan to mold the PTT Group to become a leader in the renewable energy business, with the goal to increase renewable energy investment of the PTT Group to 8,000 MW by 2030. This will contribute to the large number of renewable energy consumers in pursuit of a low-carbon society by reducing greenhouse gas emissions from the replacement of fossil fuels by over 400 gCO₂e for every kWh of electricity produced. This will also allow the company in being able to expand their new customer base to new consumers. In 2020, GRP has acquired shares in 9 solar power plants located in Phichit, Supanburi, Lopburi and Khon Kaen provinces, while having also entered into a share purchase agreement for a solar power plant project

in Taiwan, totaling over 95 megawatts of renewable energy generating capacity (in proportion to GRP's shareholding), which has been able to reduce greenhouse gas emissions by more than 59,000 tCO₂e.

In addition, to support the operation in terms of tackling climate change, the company has studied Internal Carbon Pricing (ICP) within the organization. This allows for a value to be set in terms of the greenhouse gas emissions of an organization in a monetary format, which can be applied to drive climate change actions in the organization, whether in regards to preparing for climate change risks and impacts, or for setting targets to reduce greenhouse gas emissions overall. It can also be used as a basis for investing in new projects in the future as a driving mechanism for the continuation in the pursuit of low-carbon operations, as well as in raising awareness of employees in the long-run.



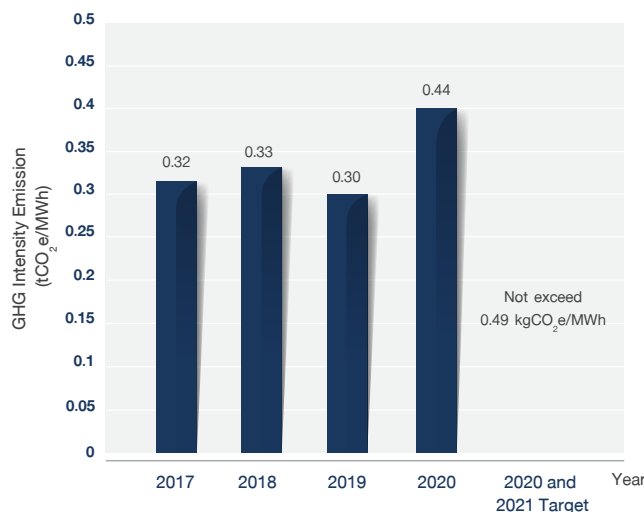
“

“Introducing the carbon pricing mechanism in-house not only helps us to better understand and formulate greenhouse gas emission mitigation strategies, it would also help various departments within the organization to have a better understanding of climate change, while also encouraging the participation of all departments in reaching a common goal. This will also help the company in formulating greenhouse gas emission strategies to be used as guidelines for optimizing resource utilization and waste reduction at various stages of the production process.”

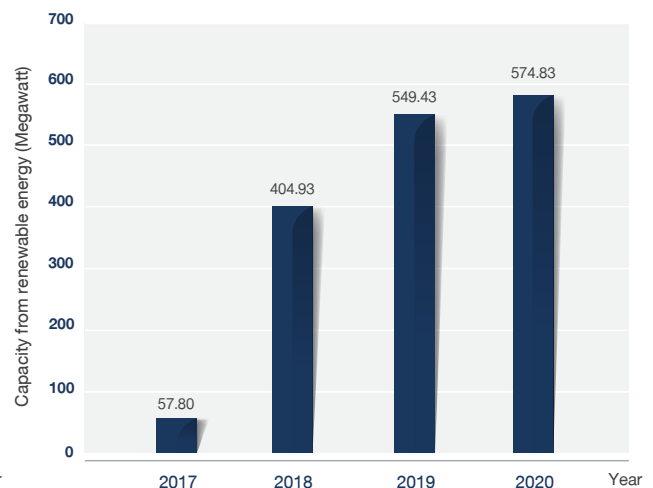
”

Mr. Jaruwat Singsoomdee

Senior Vice President, Transformation and Sustainability Management



Remark : In 2020, the scope of data collection has been expanded after the mergers.



For more information, please visit www.gpscgroup.com and refer to the “Sustainability” heading and “Environment” > “Clean Energy in the Future and Climate Change” sub-heading.

SOCIETY



Lost Time Accident: LTA =
0



Lost Time Injury Frequency Rate: LTIFR =
0



Fatality rate =
0



Business Drivers



Strategies for Success



Corporate Success Indicators
(Corporate KPIs)

Occupational Health and Safety (OHS)

Health and safety in the work environment is a key issue in business operations that may have a significant impact on the company. The impact can be financial risks arising from reduced productivity due to lack of work or reputation risks from serious injury, if a safe work environment is not available. On the other hand, if safety measures and good working environment are implemented and promoted, employees and contractors will be able to work most effectively. It also encourages employees to be able to support operations of the organization in the long-term.

- Quality, Security, Safety, Health and Environmental Policy.
- Occupational safety and health supervision.
- Implementation of an occupational management system (ISO 45001 : 2018, TIS/OHSAS 18001).
- Using Operational Excellence Management System in Security, Safety, Health and Environment (OEMS SSHE Element)*, which include Process Safety, Personal Safety, Security Management, Office Safety Management, Emergency Management, Contractor Safety Management, Health Risk Assessment, Industrial Hygiene and the Annual Checkup Program.
- Building a culture of safety.

- Lost Time Accident (LTA)
- Lost Time Injury Frequency Rate (LTIFR) **
- Fatality rate

Workforce Development and Well-Being

Employees are the most valuable resource of the company. Therefore, the organization is committed to human resource management, which is a key mechanism in driving business for sustainable growth. The organizational challenge is to prepare and develop the potential of employees in accordance with corporate strategies under the ever-changing global, economic, social and environmental dynamics, along with employee organizational engagement.

- Succession Plan, a plan at the managerial level for business continuity.
- Spark Accelerator is to prepare potential employees to support business growth.
- Corporate engagement and inclusion of the GPSC group through ACT SPIRIT activities.
- Employer Branding, to promote the corporate image to be better known to outside individuals.

- Establishment of a succession plan.
- Comparison of the turnover rate to Thailand utilities sector average.*
- Comparison of the engagement level of the organization to Thailand utilities sector average.*

Remark: * As part of the index measuring the success of the organization

** Per 1,000,000 hours worked



Establishing a
100%
succession plan



The turnover rate was
3.08% lower than
Thailand utilities sector average



Performance and Value Creation



2021 Targets



Long-term Targets

- Lost Time Accident (LTA) = 0
- Lost Time Injury Frequency Rate (LTIFR)** = 0
- Fatality rate = 0

- Lost Time Accident (LTA)
- Lost Time Injury Frequency Rate (LTIFR)** = 0
- Fatality rate = 0

- Lost Time Accident (LTA)
- Lost Time Injury Frequency Rate (LTIFR)** = 0
- Fatality rate = 0

- For critical positions, 100% succession plans were established.
- The turnover rate was 3.08% (Thailand utilities sector average of 6.7%)
- Engagement level to the organization was 62% (Thailand utilities sector average of 59%).

- Establishing a 100% succession plan.
- Turnover rate lower than Thailand utilities sector average.
- Engagement level with the organization not lower than Thailand utilities sector average.

- Establishing a 100% succession plan.
- Turnover rate lower than Thailand utilities sector average.
- Engagement level with the organization not lower than Thailand utilities sector average
- Establish the Power Academy learning center to disseminate knowledge to employees and outsiders.

Occupational Health and Safety (OHS)

Building a Culture of Safety

Fostering a strong and sustainable safety culture throughout the organization will be a factor that will lead to the goal of becoming an accident-free organization and promoting the performance excellence of the organization. The company believes that robust safety can be achieved not only by the health and safety policies of the organization, but also through collaboration across the organization, especially by executives who will act as role models, in order to lead the organization with zero accidents. Therefore, the company gives importance to and continually operates projects to promote a culture of safety for employees. In the year 2020, the company has organized activities to strengthen the safety culture by preparing a contest to design the corporate safety culture emblem, “WE SAFE”, which has the following meaning:

- W = Working safely is a must
- E = Everyone is a family to care and help each other
- S = Stop if unsafe
- A = Aware QSHE and think before acting
- F = Focus on effective QSHE management to meet the expectations of customers and stakeholders
- E = Encourage colleagues to uphold QSHE standards



This is to be a medium to create awareness and publicize corporate safety culture together, while providing opportunities for all employees to participate in creative design and to be proud of the safety culture “WE SAFE” of the company. It will be conducted through a number of employee-focused logos, where the award-winning entries will be communicated throughout the organization to raise awareness and emphasize safety.

“



“The design conveys an awareness of a culture of safety, occupational health and the environment. When GPSC employees see this symbol, it reminds us each time to not neglect the culture and it is important to keep it in mind which will help and allow “all of us to be safe”.

”

Ms. Titapone Saengnak

Secretary to Senior Vice President M&A Transformation and Sustainability Management
Logo Design Contest Winner

In addition to previous safety culture activities, several others are also promoted, such as:

- Operational Managerial Safety Visit, which was undertaken for executives at all levels and is a safety inspection walk in work areas to demonstrate the importance of safety, occupational health and working environment of executives. It also shows concern for the operational activities of workers and this activity also includes an area audit to monitor the management of occupational health and safety risks in the work area, as well as a collective discussion on risk control measures, such as in the operating areas of the power plant, laboratories and offices, which are a part of the mission of all levels of executives, with these being as follows:
 - Ensuring a safe and healthy work environment.
 - Showing commitment in conducting field trips and meeting with workers.
 - Ensuring operators understand operating procedures.
- Continually encouraging employees to improve their operations.
- GPSC QSHE Day
- Creating awareness and educating workers through various channels, such as SSHE e-newsletter WE SAFE care & share spread through e-mail, notices in the form of news, knowledge and warning signs.
- Conducting meetings and inspection of work areas through the Occupational Safety, Health and Environment Committee.
- Campaigning for all employees to drive safely.
- Fostering the introduction of knowledge, lessons, learned matters and improvements to prevent the recurrence of incidences, by providing a Lesson Learned Sharing document system implemented via intranet.
- Establishing a Web Accident Program as a way for employees to easily report “Near Miss” accidents and to be able to offer advice in an easy manner for improvements in safety.



Mr. Pajongwit Pongsivapai (Chief Operating Officer) and Plant Operations team visited GSPP2&3 on 3 Sep 2020



For more information, please visit www.gpscgroup.com and refer to the "Sustainability" heading and "Society" > "Occupational Health and Safety (OHS)" sub-heading

In addition, the company received the 2020 Environment and Safety Governance Awards under the Public Participation Project, in the annual audit and control of the environment and safety. The categories were Environment and Safety Governance Award (White Flag – Green Star) and the Environment and Safety Governance Award (White Flag – Gold Star) for the 13th consecutive year on September 25, 2020 given by Khun Somjin Phileuk, Governor of the Industrial Estate Authority of Thailand (IEAT). The company has therefore received a total of 6 awards for 6 power plants.

As a result of the business operations of the company over the years, employees have realized and placed great importance on operating safely under the safety culture "WE SAFE" or "Work safely, pay attention to everyone, think before act and stop if unsafe". This allows the company to achieve their safety goal of 10 million accumulated working hours without any accidents, which lead to absent work days from January 2013 – May 2020. The award ceremony were held and diplomas given to executives of each department on July 17, 2020, for their commitment, dedication and continuous excellent safety performance, which is considered to be a sense of pride for all employees. The company is also committed to the achievement of its next goal of attaining 20 million cumulative working hours without accidents, reaching the end of 2022.



“

"The company focuses on driving quality, security, safety, occupational health and environment policies, in order to achieve concrete practical results, along with the goal that each and every one can work with safety, sanitation and work environment conditions, which are always in good order. This encourages the maintenance of a sustainable "WE SAFE" culture, starting with executives and supervisors who must be role models and support all fellow employees, including contractors working in the same areas, with all recognizing and participating in the prevention and participation of safety to hamper and reduce the occurrence of accidents and deter risky behaviors that may cause harm to both oneself and others."

”

Mr. Saochai Sookkasem
Designation Senior Vice President - SSHE

Lost Time Accident: LTA ¹	0	0	0	0	0	0
Fatality Rate ¹	0	0	0	0	0	0
Lost Time Injury Frequency Rate: LTIFR ¹ (Per 1,000,000 hours worked) ¹	0	0	0	0	0	0
Total Recordable Occupational Illness Rate: TROIR ²	0	0	0	0	0	0
	2017	2018	2019	2020	2020 target	2021 target

Note: ¹ Performance and goals cover employees and contractors
² Performance and goals cover employees

WORKFORCE DEVELOPMENT AND WELL-BEING

SPARK Accelerator Management Trainee Program

The company has established one crucial strategy, namely creating a New S-Curve Business. Therefore, the creation and development of future skilled leaders is of great importance to the company. At the beginning of 2020, the company initiated the “SPARK ACCELERATOR MANAGEMENT TRAINEE PROGRAM Project for the Future Position Leadership Development Project, of GPSC group, PTT Group’s Leader of Power Business Innovation”. This project is designed to prepare potential individuals to become future leaders of the company through various learning mechanisms, which are diverse and challenging both at home and abroad. The project is also open to employees and outside personnel,

with the participants of the project having the opportunity to rotate through 3 major areas of work of the company over a 3 year period, such as corporate strategy and affiliate management, business development, commerce, financial management, operations, etc.

The SPARK Accelerator Management Trainee Program is also a project in which the company is committed to retaining employees of high potential with the organization and to play an important role in driving key strategies of the company that are in accordance with its business growth plans.



“

“After having entered the project, I was impressed with all fellow colleagues and friends of GPSC in that they were able to support me in the work that was assigned. The experience I gained is opening up new business knowledge, as well as a better understanding of the organizational structure and the projects that I am involved.”

”

Mr. Narongchai Kueyen
Management Trainee

Succession Plan

The succession plan is conducted to support the rapid growth of the company and to prepare for the business challenges that the company will face over the next 3-5 years. The company therefore has prepared the “Succession Plan Project” in 2020, whereby the company established a succession management strategy, which is a succession plan for critical positions and has prepared potential executives for development to inherit the positions from current executives who are vacant from retirement or those who take new positions that arise according to the business expansion plan, while systematically formulating a succession plan. The actions taken under the key succession plan are detailed below.

1. Preparation of Success Profiles of critical positions.
2. Grouping of potential executives in key management positions.

3. Assessment of the competency of the executive group through the Assessment Center that covers competencies of leadership, interpersonal, business/ management and personal attributes.
4. Using the evaluation results obtained in determining the Individual Development Plan (IDP)

Moreover, in order to ensure that the company has prepared the leaders of the organization at different levels to support the growth of the company. For these reasons, the Success Profiles and a succession plan for middle executives, as well as designing and developing career paths for employees at all levels of the company have been set up by the company to aid all employees to participate in setting their own career progression goals. These also act to create shared success and sustainable progress between employees and the organization.



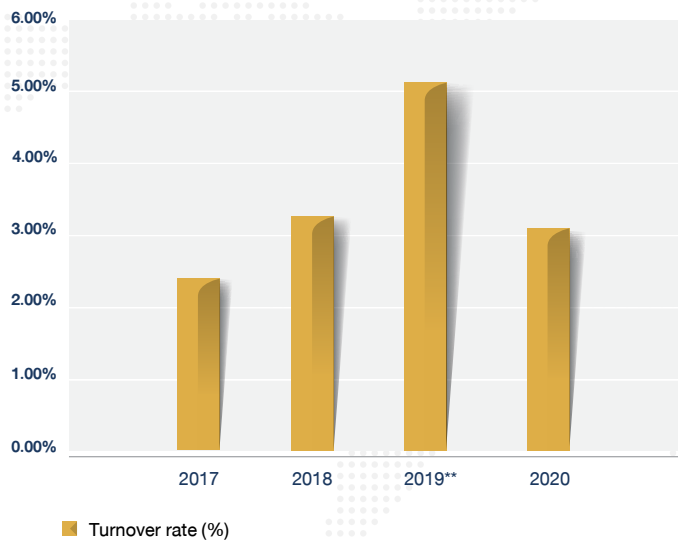
“

“Succession Plan refers to the planning and preparation of personnel. This is to ensure that the company will carry out its mission continuously and smoothly under the circumstances of rapid change in support of the future growth of the GPSC group business.”

”

Mr. Narisa Tumma-upakorn
Senior Vice President - Organization Effectiveness

Turnover rate (%)



Less than
Thailand
utilities sector
average*

Less than
Thailand
utilities sector
average

2020 Target

2021 Target

Remarks : * As part of the index measuring the success of the organization

** In 2019, the company is in the process of merging GPSC and GLOW.



For more information, please visit www.gpscgroup.com and refer to the “Sustainability” heading and “Society” > “Our Employees” sub-heading

Sustainability Performance Data Coverage

Material issues			
Country	Subsidiaries & Associated Companies	Shareholding	Strategic Owner
Thailand	Global Power Synergy Public Company Limited	100%	Yes
	Combined Heat and Power Producing Company Limited	100%	Yes
	Ratchaburi Power Company Limited	15%	No
	Thai Solar Renewable Company Limited	40%	No
	Siam Solar Energy 1 Company Limited	40%	No
	Nava Nakorn Electricity Generating Company Limited	30%	No
	IRPC Clean Power Company Limited	51%	No
	Bangpa-In Cogeneration Company Limited	25%	No
	Business Services Alliance Company Limited	25%	No
	Energy Recovery Unit Company Limited	100%	Yes
	Global Renewable Company Limited	50%	No
	N.P.S Star Group Co., Ltd.	50%	No
	World X Change Asia Co., Ltd.	50%	No
	P.P. Solar Co.,Ltd.	50%	No
	Global Renewable Power Operating Co., Ltd.	50%	No
	GPSC Treasury Center Co., Ltd	100%	Yes
	Natee Synergy Company Limited	100%	Yes
Laos	Xayaburi Power Co., Ltd.	25%	No
	Nam Lik 1 Power Company Limited	40%	No
Japan	Ichinoseki Solar Power 1 GK Company	99%	Yes
USA	24M Technologies, Inc.	30%	No
Hong Kong	GPSC International Holdings Limited	100%	Yes
Thailand	Glow Energy Public Company Limited	100%	Yes
	Glow Company Limited	100%	Yes
	Glow IPP Company Limited	95%	Yes
	Glow SPP 2 Company Limited	100%	Yes
	Glow SPP 3 Company Limited	100%	Yes
	Glow IPP 2 Holding Company Limited	100%	Yes
	GHECO-One Company Limited	65%	No
	Glow SPP 11 Company Limited	100%	Yes
	Glow IPP 3 Company Limited	100%	Yes
	Eastern Seaboard Clean Energy Company Limited	33%	No
	Chonburi Clean Energy Company Limited	33%	No
	Houay Ho Thai Company Limited	49%	No
Laos	Houay Ho Power Company Limited	67%	No
Myanmar	Glow Energy Myanmar Company Limited	100%	Yes

Remark: The company is under the process of expansion on data collection at Combined Heat and Power Producing Company Limited (CHPP) in 2021

Economics / Governance					Environment		Society		
Governance, Risk Management and Compliance (GRC)	Customer Relationship Management	Maintaining Affordability/Reliability	Supply Chain Management	Evolving the Business Model	Environmental Management	A Clean Energy Future and Climate Resilience	Occupational Health and Safety (OHS)	Workforce Development and Well-Being	Sustainable Community
●	●	●	●	●	●	●	●	●	●
●	-	-	-	●	-	-	-	●	-
●	-	-	-	○	-	-	-	-	-
●	○	○	○	○	○	○	○	-	○
●	-	-	-	○	-	-	-	-	-
●	-	-	-	○	-	-	-	-	-
●	-	-	-	○	-	-	-	-	-
●	-	-	-	○	-	-	-	-	-
●	○	○	○	○	○	○	○	○	○
●	-	-	-	○	-	-	-	●	-
●	○	○	○	○	○	○	○	●	○
●	-	-	-	○	-	-	-	●	-
●	-	-	-	○	-	-	-	●	-
●	-	-	-	○	-	-	-	●	-
●	○	○	○	○	○	○	○	●	○
●	○	○	○	○	○	○	○	●	○
●	-	-	-	○	-	-	-	-	-
●	-	-	-	○	-	-	-	-	-
●	○	○	○	●	○	○	○	○	○
●	○	○	○	○	○	○	○	○	○
●	●	●	●	●	●	●	●	●	●
●	●	●	●	●	●	●	●	●	●
●	●	●	●	○	●	●	●	●	●
●	●	●	●	○	●	●	●	●	●
●	●	●	●	○	●	●	●	●	●
●	○	○	○	○	○	○	○	○	○
●	-	●	●	○	-	-	-	●	●
●	●	●	●	○	●	●	●	●	●
●	○	○	○	○	○	○	○	○	○
●	○	○	○	○	○	○	○	○	○
●	-	-	-	○	-	-	-	-	-
●	○	○	○	○	○	○	○	○	○
●	-	-	-	○	-	-	-	-	-
●	○	○	○	○	○	○	○	○	○

Remark:

- Cover **Full** Scope
- Cover **Partially** of the Scope
- **Not Applicable** / Not Relevant
- **Not cover** the scope of collection / Not report



ASSURANCE STATEMENT

SGS (THAILAND) LIMITED'S REPORT ON SUSTAINABILITY ACTIVITIES IN THE GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED'S INTEGRATED SUSTAINABILITY REPORT FOR 2020

NATURE AND SCOPE OF THE ASSURANCE/VERIFICATION

SGS (Thailand) Limited was commissioned by Global Power Synergy Public Company Limited (hereinafter referenced to as GPSC Group) to conduct an independent assurance of the Integrated Sustainability Report 2020 and the Sustainability Report webpage (hereinafter referred to as Integrated Sustainability Report). The scope of the assurance, based on the SGS Sustainability Report Assurance methodology, included the sampled text, and data in accompanying tables, contained in this report.

The information in the Integrated Sustainability Report of GPSC Group and its presentation are the responsibility of the directors or governing body and the management of GPSC Group. SGS (Thailand) Limited has not been involved in the preparation of any of the material included in the Integrated Sustainability Report.

Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification with the intention to inform all GPSC Group's stakeholders.

The SGS protocols are based upon internationally recognized guidance, including the Principles contained within the Global Reporting Initiative (GRI) Sustainability Reporting Guidelines (2016 and 2018) for accuracy and reliability and the guidance on levels of assurance contained within the AA1000 series of standards and guidance for Assurance Providers.

This report has been assured at a moderate level of scrutiny using our protocols for:

- Evaluation of content veracity;
- AA1000 Assurance Standard (v3) Moderate evaluation of the report content and supporting management systems against the AA1000 Accountability Principles (2018) and;
- Evaluation of the report against the Global Reporting Initiative (GRI) Sustainability Reporting Standards (2016 and 2018) and Electric Utilities Sector Disclosures (EUSD) in this report and on website content.

The assurance comprised a combination of pre-assurance research, interviews with relevant employees and review documentation and record were conducted at Glow SPP 2/ SPP 3 (Phase 3), Glow Energy Phase 4, Glow Energy Phase 5 and Glow Energy CFB3, in Rayong province. Validation with external bodies and/or stakeholders where relevant and interview the person in charge of producing the report were carried out remotely by connecting via the internet to prevent the spread of COVID-19 infections. Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group 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 (Thailand) Limited affirm our independence from GPSC Group, being free from bias and conflicts of interest with the organization, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors experienced in one or more of the following standards; AA1000, GRI, QMS, EMS, SMS, EnMS, Carbon-Water Footprint, GHG Validation & Verification, Lead auditors and experience on the SRA Assurance service provisions.

VERIFICATION/ ASSURANCE OPINION

On the basis of the methodology described and the verification work performed, we are satisfied that the information and data contained within Integrated Sustainability Report verified is accurate, reliable and provides a fair and balanced representation of GPSC Group sustainability activities from 1st January 2020 to 31st December 2020.

The assurance team is on the opinion that the Integrated Sustainability Report can be used by the Reporting Organization's Stakeholders. We believe that the organization has chosen an appropriate level of assurance for this stage in their reporting. In our opinion, the content and reported data of the report meet the requirement of GRI (2016 and 2018) in accordance with Core option and AA1000 Assurance Standard (2018), moderate level assurance.

AA1000 ACCOUNTABILITY PRINCIPLES (2018) CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

Inclusivity

GPSC Group has demonstrated a good commitment to assess stakeholder inclusivity and stakeholder engagement in various ways in the respective divisions and sites. The communication with stakeholders is continuously implemented in the divisions and sites including the headquarters. GPSC Group assesses the relevance of the mission the business activities to issues from stakeholder engagement, practices sustainability management by reflecting the results in the business strategy.

Materiality

GPSC Group considered the outcomes of communications with internal and external stakeholders, social trends, the United Nations Sustainable Development Goals (SDGs). The identified material issues and SDGs have been finalized and reflected in long term management plan and addressed as business activities. Targets and strategies to be achieved in the responsible divisions where possible have been set.

Responsiveness

GPSC Group addresses the identified issues in the relevant divisions through the business activities. Series of process to identify the issues and corresponding status to identified material issues and SDGs have been disclosed on website.

Impact

Performance results related to key issued are reported in the Integrated Sustainability Report. Sustainability performances identified have been disclosed changes in data over time. Measurement and evaluation of impacts related to material topics were in place at target setting with combinations of qualitative and quantitative measurements.

GLOBAL REPORTING INITIATIVE REPORTING GUIDELINES CONCLUSIONS, FINDINGS AND RECOMMENDATIONS

GPSC Group's Integrated Sustainability Report is adequately in line with the core option for GRI Standard and fulfills all the required content and quality criteria for the identified aspects listed as below;

GRI 302 – Energy 2016;

GRI 303 – Water 2018;

GRI 305 – Emissions 2016;

GRI 306 – Effluents and Waste 2016;

GRI 403 – Occupational Health and Safety 2018;

GRI Sector Disclosures "The Electric Utilities Sector Disclosures" (EUSD), Sector Specific Indicators;

- EU11 Average generation efficiency of thermal plants by energy source and by regulatory regime
- EU30 Average plant availability factor by energy source and by regulatory regime

The material topics and their boundaries within and outside of the organization are properly defined in accordance with GRI's Reporting Principles for Defining Report Content. Disclosures of identified material topics, boundaries and stakeholder engagement, GRI 102-40 to GRI 102-47, are correctly located in context report. For future reporting, more descriptions of GPSC Group and subsidiaries' involvement with impact for each key issues and mitigation efforts should be disclosed. The mechanism for internal audit on the data gathering process should be established to maintain the system in place.

Signed:

For and on behalf of SGS (Thailand) Limited



Amnat Pisutsin, General Manager

Bangkok THAILAND

26th February 2021

www.SGS.com



AA1000

Licensed Assurance Provider

000-8

The details of the scope of assurance

Scope		Boundary
<u>GRI 300 : Environmental Data</u>		
302-1	Energy consumption within the organization	
303-3	Water withdrawal	Head office
303-4	Water discharge	Warehouse
303-5	Water consumption	Central Utility Plant 1 : CUP-1
305-1	Direct (Scope 1) GHG emissions	Central Utility Plant 2 : CUP-2
305-2	Energy indirect (Scope 2) GHG emissions	Central Utility Plant 3 : CUP-3
305-3	Other indirect (Scope 3) GHG emissions (Upstream categories)	Central Utility Plant 4 : CUP-4
	- Category 3 : Fuel and energy related activities	Sriracha Power Plant
	- Category 4 : Upstream transportation and distribution	Glow IPP plant
	- Category 5 : Waste generated in operations	Glow Energy Phase 1 plant
305-4	GHG emissions intensity	Glow Energy Phase 2 plant
305-7	Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and other significant air emissions (Including direct Mercury emission, dust emission, SF6 emission)	Glow Energy Phase 4 plant
306-2	Waste by type and disposal method (Including other relevant waste e.g. ash and gypsum waste and hazardous waste)	Glow Energy Phase 5 plant
		Glow Energy CFB 3 plant
<u>GRI 400 : Social Data</u>		Glow Energy Solar plant
403-9	Work-related injuries	Glow SPP 2/Glow SPP 3 plant (Phase 3)
403-10	Work-related ill health	Glow SPP 11 Phase 1 plant
		Glow SPP 11 Phase 2 plant
		Glow SPP 11 Phase 3 plant

INTEGRATED SUSTAINABILITY REPORT 2020

SURVEY OF READER OPINIONS:

Readers may scan the QR codes to suggest feedbacks to Integrated Sustainability Report 2020 for further improvement in next year.



This report is printed on Green Ocean paper.
Using environmental-friendly production process.
Soy ink is used for printing, to reduce CO2 emissions,
equivalent to planting 5 Ironwood trees for 1 year.





GLOBAL POWER SYNERGY PUBLIC COMPANY LIMITED

555/2 Energy Complex Building B, 5th Floor, Vibhavadi-Rangsit Road,
Kwaeng Chatuchak, Khet Chatuchak, Bangkok 10900

Tel: 0 2140 4600

Fax: 0 2140 4601

www.gpscgroup.com

