

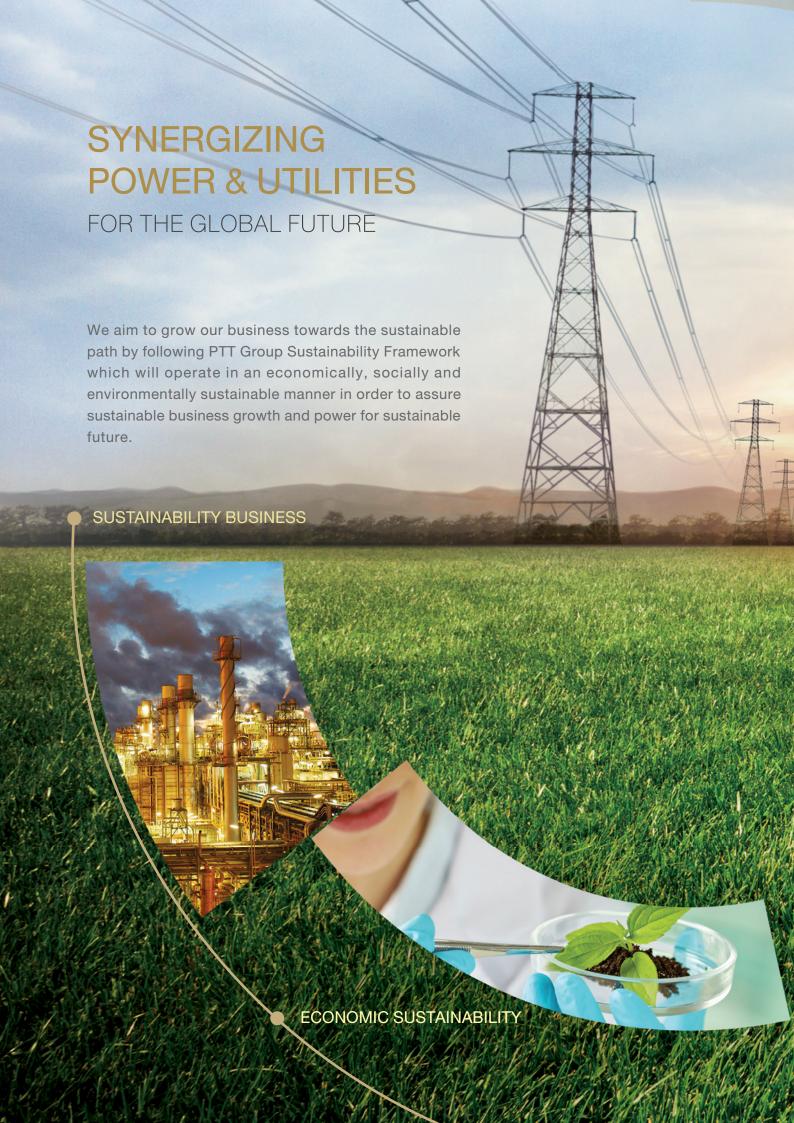
SYNERGIZING
POWER & UTILITIES
FOR THE GLOBAL FUTURE

SUSTAINABILITY REPORT 2015





Global Power Synergy Public Company Limited (GPSC) strives to be the main power and utility of PTT Group and devotes to sustain our growing path by enhancing trust of stakeholders, adhering to the best business practices, committing to good corporate governance, challenging various business opportunities, and being responsible for society and environment.





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## **ABOUT THIS REPORT**

This sustainability report has been created to demonstrate the determination of Global Power Synergy Public Company Limited (GPSC) in sustainably operating their business in accordance with corporate governance from 1 January 2015 to 31 December 2015. This report has been prepared separately from the annual report.

In 2015, GPSC initiated its first sustainability report, and will continue to create this report annually. This report has been prepared in accordance with Global Reporting Initiative (GRI G4) for core level, strongly emphasizing the company's corporate sustainability, and commitment to being coherently involved in explicit and implicit expectations of our stakeholders. The company intends to transparently inform stakeholders about achievements and corporate sustainability.

This report focuses on sustainability toward economic, social and environmental perspectives, as well as value creation for society in compliance with the company's business operations. The material sustainability issues will be reflected to stakeholders, and each material sustainability issue indicator classified into 4 focus areas, sustainability business, economic sustainability, eco-friendly management and corporate citizenship.

GPSC is pleased to receive comments in order to foster sustainable development together with all stakeholders.

#### Contact Channel:

To download this report, go to: http://www.gpscgroup.com/index.aspx#sustainability For further information, please contact OEMS and Sustainability Management Department Global Power Synergy Public Company Limited

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## PRESIDENT STATEMENT

#### Dear Shareholders,

Global Power Synergy Public Company Limited (GPSC) is striving to create trust and respect among stakeholders, to meet their expectations both in Thailand and overseas. Sustainability for the business covers 3 dimensions, consisting of economic strengthening, environmental protection, and integrating with society. GPSC initiates business with friendly environment to be a good model for power and utility business.

GPSC is ready to step forward to the future and face business challenges, including economic uncertainty, crisis in Thailand and around the world, limited natural resources, and natural disasters caused by climate change. The policies, strategies and business directions are aligned with 4 business goals of GPSC. In addition, GPSC also places an importance on building confidence and stability among stakeholders, for example, integrity / business ethic governance with awareness of human rights and transparency, risk management, supply chain management, impact management in society, environment and occupational health, and lastly, safety operation and product responsibility.

GPSC focuses on 3 main aspects that are aligned with dimensions of sustainable business, to motivate all sectors of GPSC to apply them in their operations and work in the same direction, as well as lead GPSC to be an excellent power and utility business. These 3 main aspects are detailed as follows:

#### **Production Reliability**

In order to remain competitive, the company ensures that there is diversity in the fuel mix used, and that there is an appropriate response to the energy demands from customers. To achieve reliable production, GPSC conducts its research independently and also in collaboration with PTT Group to ensure that the latest technology is used at GPSC to ensure high reliability.

#### Climate Change Risk and Adaptation

GPSC is determined to minimize its impact to global climate change. Emission controls, improving efficiency of electricity generation, and assessing the impact on climate change prior to investing in the company projects were applied in GPSC's business operations. In addition, GPSC have adapted to operate business efficiently and to minimize impacts affected to GPSC by collecting data from internal operation and targeting the goals that are coherent to global conditions as well as learning from PTT Group.

#### **Human Capital Development**

Effective development of human capital via skills development learning with GPSC's partners. GPSC human resources will be supported to have high quality and skill in operating business, sustainably and effectively developing projects.

By implementing social and environmental responsibility as one of the core factors of business operation, GPSC has gained trust from all stakeholders. In the past 3 years, GPSC has been growing strongly. There are over 240 employees, and the business has been expanding domestically and internationally. 2015 was a challenging year due to economic recession, but GPSC and all employees have proved that we are ready to stably face and handle the crisis as a proof of 20 % increase of GPSC's business profit. Nevertheless, GPSC is still planning to further improve employees' capability, along with ethic and integrity system, accepted by international standards, in order to drive them to grow together with GPSC.

Global Power Synergy Public Company Limited is confident to fulfill stakeholders' expectation through excellent and transparent operation, with corporate responsibility and strengthening relationship with community to drive all parties to sustainably grow together.

Mr. Toemchai Bunnag

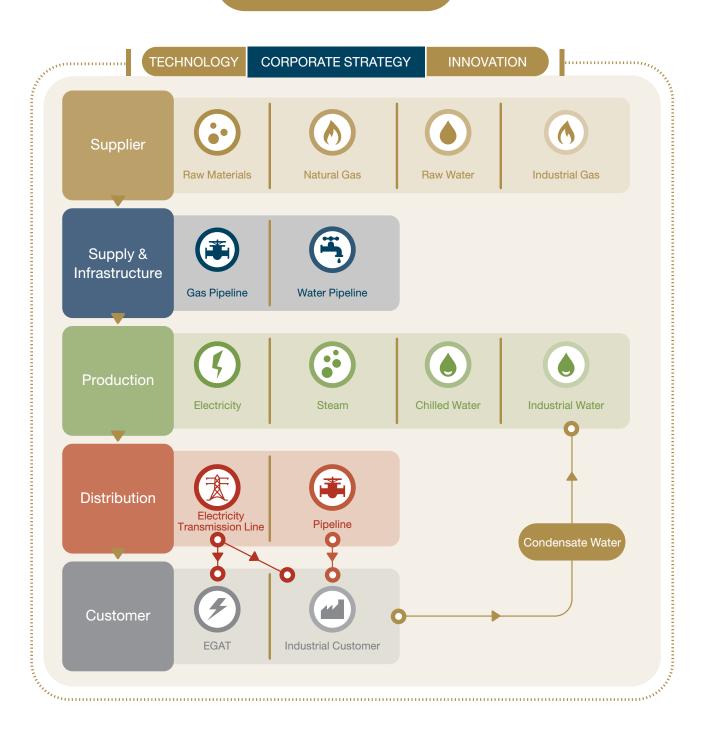
President



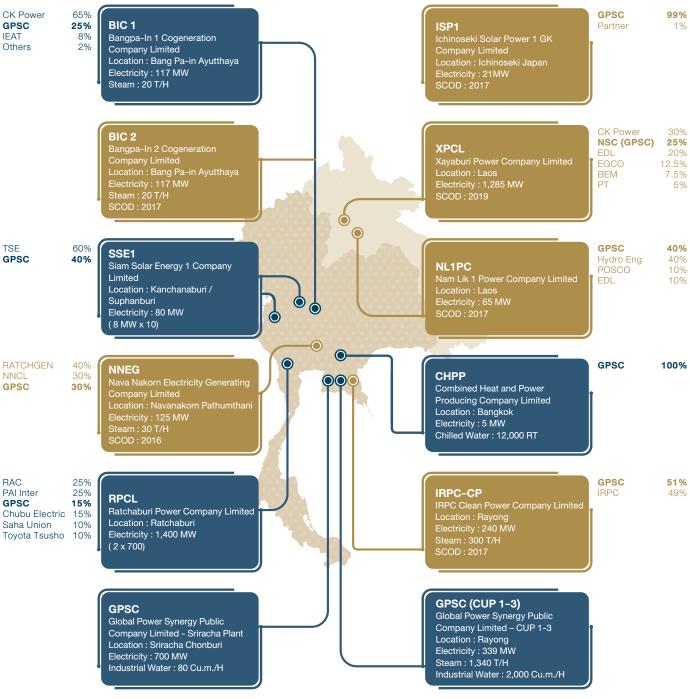


## SUSTAINABILITY BUSINESS

## **GPSC VALUE CHAIN**



# COMPANY OVERVIEW



#### Remark:

BIC 1 mean Bangpa-In Cogeneration Company Limited (Phase 1) BIC 2 mean Bangpa-In Cogeneration Company Limited (Phase 2) mean Siam Solar Energy 1 Company Limited mean Ratchaburi Power Company Limited SSF<sub>1</sub> **NNEG** Nava Nakorn Electricity Generating Company Limited **RPCL** ISP1 mean Ichinoseki Solar Power 1 GK Company Limited GPSC (SRC) mean Global Power Synergy Public Company Limited - Sriracha Plant mean Combined Heat and Power Producing Company Limited mean Xayaburi Power Company Limited **XPCL** mean Nam Lik 1 Power Company Limited CHPP NL1PC IRPC-CPmean IRPC Clean Power Company Limited GPSC (CUP1-3) mean Global Power Synergy Public Company Limited - CUP 1-3 mean Natee Synergy Company Limited







## Mission

Being the Power Flagship of PTT Group to develop, invest and operate in power business domestically and internationally

#### Overview of Business Operation



#### Electricity

GPSC's business involves generating and supplying power from natural gas, solar energy and hydropower. The current commercial domestic operation consists of 1,338 megawatts, and an additional domestic capacity 211 megawatts is under construction, while 368 megawatts is under construction overseas. Once all plants are fully operational, the company will have a total generating capacity of 1,917 megawatts.



#### Steam

The company currently generates and supplies steam of 1,431 tons per hour. Once the power plants that GPSC has invested in are commercialized, the company will be capable of producing 1,582 tons per hour steam.



#### **Chilled Water**

The company's subsidiaries is able to produce 12,000 Refrigerator tons of chilled water for the Government.



#### **Industrial Water**

Industrial water is generated and supplied in a quantity of 2,080 cubic meters per hour domestically.

#### Sustainability Management Policy

GPSC strives to be the main power and utility company of PTT group. GPSC has a policy to sustain the operations and business performance by enhancing trust of stakeholders, adhering to the best business practices, maintaining transparency in performing business, continuously developing various business domains, and being responsible for society and the environment. To ensure conformance to the framework of the sustainability management policy of the PTT Group and international standards, GPSC has established a framework of sustainability management policy, which is presented on the GPSC website as follows: (http://www.gpscgroup. com/fileupload/Sustainability%20Management%20Policy.pdf)

#### **ECONOMY**

- O Sales Revenue: 22,444 Million Baht
- O Net Profit: 1,906 Million Baht
- O Customer Satisfaction Score: 87%

### **ENVIRONMENT**

- O GHG Reduction: 40,199 Tons
  - of CO<sub>2</sub> equivalent
- O Energy Saving: 1,273 GJ
- O Waste Reduction: 26%

## SOCIETY

- O Number of Business Suppliers: 1,643
- Number of Employees: 240
- Employee Satisfaction Score: 79%
- O Community Satisfaction Score: 84%
- O TRIR (Rate of Total Recordable Injury Rate):
  - case per million man-hours
- O LTIFR (Rate of Lost Time Injury Frequency Rate): 0 case per million man-hours



Performance

#### **Business Goals**

Our business strategy, aiming to increase generation capacity, is employed to accelerate current generation capacity to 600 - 1,000 megawatts by 2019, or an average of 17% of CAGR (Compound Annual Growth Rate). This also applies to the percentage of shareholding, based upon the types of fuel, namely approximately 66% of natural gas, about 10% of renewable energy, about 12% of hydropower and around 12% of clean coal. To achieve results in compliance with business goals, 4 key strategies for the prospective growth are as follows:

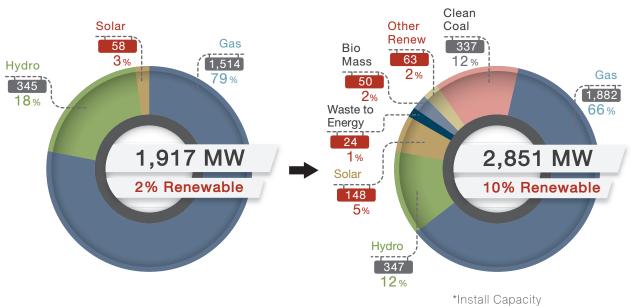
- 1. Growth along with PTT Group
- 2. The Quick Win through short-term construction project, or merger and acquistion of operating/under construction assets
- 3. The Big Win through investment in large-scale power plants, domestically and regionally
- 4. Adjacent & Support Opportunities

#### **Business Growth Goal 2019**



#### GPSC's Portfolio 2015

## GPSC's Expected Portfolio 2019



# STAKEHOLDER ENGAGEMENT

GPSC is enthusiastic in participating with all stakeholders. To meet different kinds of expectations and interests of all stakeholders, different kinds of stakeholders can be grouped, which triggers

effective channels of communication with each stakeholder group.

Our stakeholders are therefore divided into 6 groups as follows:

Stakeholder Group	Engagement Methodology	Stakeholder Expectations
Investors & Shareholders	<ul> <li>Annual Report</li> <li>Annual General Meeting of Shareholders</li> <li>Conducting annual Company's site visit</li> <li>Conducting activities for building relationship and disseminating information at least once a year</li> <li>Inquiring through several channels such as email, phone and letter and other methods</li> <li>Complaining via company's grievance system</li> </ul>	<ul> <li>The fair disclosure of infomation</li> <li>Businesses conducted fairly and transparently</li> <li>Net profit and revenue continuously and sustainably growing</li> <li>Having efficiency corporate governance</li> </ul>
Government Agencies	<ul> <li>Reporting business performance to governmental sectors as required</li> <li>Taking part in governmental activities and projects</li> </ul>	<ul> <li>Abiding by regulations and laws</li> <li>Operating business without corruption and realizing rights of using power for consumers and relevant stakeholders</li> </ul>
Employees	<ul> <li>Conducting employee satisfaction survey every quarter of year</li> <li>Filing complaints to supervisors and through the company's grievance system</li> <li>Meeting with Executives every 6 months</li> <li>Email communication</li> </ul>	<ul> <li>Benefit and welfare</li> <li>Revenue and clearly defined career paths</li> <li>Employee retention</li> <li>Development of employee's capabilities</li> </ul>
Partners Suppliers & Contractors	<ul> <li>Selecting and evaluating suppliers' performance</li> <li>Conducting annual activity for SRM (Supplier Relationship Management)</li> </ul>	<ul> <li>Conducting transparent purchase and hiring that can be monitored</li> <li>Sustainably building good rapport and effective operation for partners, suppliers and contractors</li> </ul>
Customers	<ul> <li>Conducting customer satisfaction survey twice a year</li> <li>Proving monthly, quarterly and annual customer relationship activities</li> </ul>	<ul> <li>Providing high- quality products and effective services</li> <li>Capable of proper and fast solutions to resolve conflict</li> </ul>
Society & Communities	<ul> <li>Surveying and collecting information relating to social responsibilities with PTT Group twice a year</li> <li>Conducting activities for communities and society with government and private sectors at least once a year</li> <li>Conducting field meeting with representatives of communities and those who might have both direct and indirect effects.</li> </ul>	<ul> <li>Sustainably working and living with community</li> <li>Development of society and community</li> <li>Perception of possible effects from business operation</li> </ul>

GPSC strongly believes that respectable relationships, based on trust and comments from stakeholders, are valuable assets of the company. The company, therefore, always realizes the significance of expectations and interests from stakeholders, considering them as factors for developing the business operation.

In 2015, the company conducted interviews, obtaining opinions from stakeholders regarding corporate sustainability. These opinions are carefully considered to prioritize material issues in corporate sustainability as well as all contents within this report.

"Our business strongly focuses on 3 vivid dimensions, namely society, environment and effective business operation. Executives and management department is obliged to ensure that business is effectively operating in compliance with these 3 dimensions. They also have to ensure the current role of GPSC in operating business for value creation and benefits to society and environment.

In addition, executives and employees have to be aware that their actions could have an effect on stakeholders. As a result, stakeholders are invited to monitor business operation of the company, until it is widely accepted by stakeholders.

In regards to the company's growth and sustainable development, the company is relentlessly operating to reach our goals and readily prepare to develop and alter core businesses, from the producer of power to be a potential producer of public utilities. Therefore, it is very important to have strong and creative synergy between board of directors, executives and all employees in order to face new challenges and positive changes. This is the significant force for the company to be well-prepared with changes in core business and usher the company to reach its achievements, stabilities and sustainability."



Mr. Surong Bulakul Chairman





"EGAT has regulations for supplier selection, stating that supplier should be a trustworthy company with outstanding and continual operations. As a customer, EGAT hopes that GPSC has strong corporate sustainability with transparent and fair operations and awareness of stakeholders. In addition, we also hope that the company will take part in developing community, provide information and have integration and social responsibilities, especially responsibility to society and community"

#### Mr. Chaisak Yongbanjerd

Assistant Director, Power Purchase Agreement Division-technical



"Projects that need support from private sectors should be useful to the public. For instance, a waste to energy project collaborated with GPSC, and provincial administration was operated smoothly, once public participation was conducted and people really understood the objectives and benefits of this project"

#### Mr. Piya Pitutecha

Chief Executive of Rayong PAO







#### Materiality Assessment

The company is committed to adopt a Materiality Assessment of GRI to evaluate the company's important aspects of sustainability and its stakeholders. Reporting of management guidelines and performance relating to corporate sustainability places an emphasis on material aspects. This corporate sustainability report has been prepared under the significant processes, as briefly detailed below.

#### Step 1 Identification

Identification of aspects relating to sustainability toward the company and stakeholders is considered by indicators of Global Reporting Initiative (GRI). The issue identification is selected based on alignment with strategic direction, corporate risks and internal and external stakeholders' interests and expectations.

#### Step 2 Prioritization

Prioritization of material aspects are related to sustainability by considering and revising significance of each aspect with evaluation. This evaluation is processed with range of 1 point - 4 points in 2 main dimensions; significance of company's economic, environmental and social aspects, and influence of stakeholders assessments and decisions of GPSC.

Points given in each aspect depend upon risk estimation and business opportunities, as well as impacts on stakeholders. Additionally, opinions of stakeholders are also applied for prioritizing aspects.

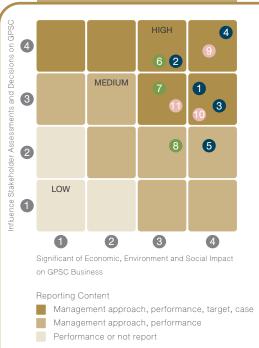
#### Step 3 Validation

Demonstration of the material aspects to responsible sectors is to consider the material aspects, fact-check, and to evaluate important contents as well as prove process of conducting this report. In addition, they have to ensure the report's completeness, balance, comparability, accuracy and coverage.

#### Step 4 Review

Review of the sustainability report should be made to verify material aspect and data accuracy, and revisit policy, objectives and goals of the company. Additionally, the development of stakeholder engagement should be applied and reflect aspects of importance to stakeholders.

#### **Materiality Matrix**



#### **Materiality Aspects**

IMPACT	ITEM	MATERIAL ISSUES	
	1	Integrity / Business Ethic & Governance	
ECONOMIC	2	Customer Satisfaction	
	3	Innovation	
	4	Production Reliability	
	5	Management of Contractors & Suppliers	
ENVIRONMENT	6	Climate Change Risk and Adaptation	
	7	Habitat Protection and Biodiversity	
	8	Operational Eco-Efficiency	
SOCIAL	9	Human Capital Development	
	10	Safe Operations	
	11	Engagement / Community Relation / Creating Shared Value	

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# MATERIAL SUSTAINABILITY ISSUES

	GPSC	:	Key Stakeholde	Key Stakeholder and Impact Boundary
Chapter	Material Aspect	Corresponding GRI Aspects	Within Organization	Outside Organization
Sustainability Business	Integrity / Business Ethic & Governance	Ethics and Integrity (G4-56, G4-57, G4-58) Governance (G4-34) Anti-Corruption (G4-DMA, G4-SO3, G4-SO4, G4-SO5) Grievance Mechanisms for Impacts on Society (G4-DMA, G4-SO11) Environmental Grievance Mechanisms (G4-EN34)	O Employees O Partners Suppliers & Contractors	O Goverment Agencies O Investors & Shareholder O Customers
	Risk Management	Organization Profile (G4-14) Governance (G4-45, G4-46, G4-47)	O Employees O Partners Suppliers & Contractors	O Government Agencies Investors & Shareholder Customers Society & Communities
Economic Sustainability	Production Reliability	Availability and Reliability (G4-DMA, EU10)	O Employees O Partners Suppliers & Contractors	O Customers
	Customer Satisfaction	Product and Service Labeling (G4-DMA, G4-PR5)	• Employees	O Customers
	Innovation	Research and Development (G4-DMA)	O Employees O Partners Suppliers & Contractors	O Customers O Society & Communities
	Management of Contractors & Suppliers	Supplier Environmental Assessment (G4-DMA, G4-EN33) Supplier Assessment for Labor Practice (G4-DMA, G4-LA14, G4-LA15)	O Employees O Partners Suppliers & Contractors	O Customers O Society & Communities
Eco-Friendly Management	Climate Change Risk and Adaptation	Organizational Profile (G4-DMA, EU5) Emissions (G4-DMA, G4-EN15)	O Employees O Partners Suppliers & Contractors	O Society & Communities
	Operational Eco- Efficiency	Water (G4-DMA, G4-EN8) Emission (G4-DMA, G4-EN21) Local Communities (G4-DMA, G4-SO2)	O Employees	O Government Agencies O Society & Communities
	Habitat Protection and Biodiversity	Biodiversity (G4-DMA, G4-EN13)		O Society & Communities
Corporate Citizenship	Human Capital Development	Employment (G4-DMA, G4-LA1-LA2) Labor/Management Relationship(G4-DMA, G4-LA4) Training and Education (G4-DMA, G4-LA9)	O Employees	
	Safe Operations	Occupational Health and Safety (G4-DMA, G4-LA6) Training and Education (G4-DMA, G4-LA10) Disaster/ Emergency Planning and Response (G4-DMA)	O Employees O Partners Suppliers & Contractors	O Goverment Agencies O Society & Communities
	Engagement / Community Relation / Creating Shared Value	Indirect Economic Impacts (G4-DMA, G4-EC7)	O Employees	O Society & Communities



#### INTEGRITY/ BUSINESS ETHICS & GOVERNANCE

#### Corporate Governance Policy

GPSC is committed to operate in accordance with corporate governance. The board of directors are determined to follow the corporate governance for the benefit of GPSC's business operations and the promotion of transparency and effectiveness of the Management that would build confidence of shareholders, investors, and all involved parties. The board of directors, therefore, establishes the corporate governance policy following the Stock Exchange of Thailand's principles, which include 5 sections of principles and practices; namely right of shareholders, the equitable treatment of shareholders, role of stakeholders, disclosure and transparency, board responsibility.

#### Sustainability Management in Corporate Governance

GPSC manages corporate sustainability to build trust of stakeholders and continuously improve all aspects in corporate governance, responsibilities towards society and environment for both Thailand and international operations. GPSC has appointed the Operational Excellence Management System (OEMS) and Sustainability Management Functions to control, assess and monitor performance of its responsibilities in economic, society and environment. GPSC conducted meetings to monitor and assess sustainability performance by the OEMS and Sustainability Management Functions who connect sustainability tasks between different functions and executives. In addition, GPSC also conducts activities that related to 2 issues as follows;

1. Building Confidence of Stakeholders by adhering to Operational

GPSC is aware of its responsibilities in economic, social and environmental aspects as well as stakeholders related to the operations and risk management. The company also commits to reduce negative impacts from business operations on society, environment, occupational health and safety. To ensure the compliance of the company's product stewardship to legal standards, GPSC enhances the effectiveness of the production to ensure that employees, properties and surrounding communities' safety meets the standards and to enhance safety awareness to prevent incidents that may be caused by the operation. Performance indicators are regularly monitored and reported to the Management and Board of Directors. Planning workshops are conducted to raise employees' awareness of quality, security, health and safety, and environment. In addition, unsafe behaviors and workplace with risks in the company are analyzed and preventive mitigations are developed to solve these issues.



Supporting the human rights and labor rights of employees and stakeholders by firmly adhering to human rights and labor laws and standards that are applied to our business in the areas of supply chain management and effective information management in terms of data collection, employee equality, fair compensations, and safe workplace. Furthermore, GPSC responsively operates the business and is aware of the missions towards stakeholders by having in place guidelines for supporting competitiveness, enhancing economic, social, and environmental development for the communities surrounding the power plants of the company.

#### 2. Business with Transparency

The company transparently operates business and publicly discloses management approach and performance related to the economic, social and environmental aspects that are accurate and verified by the internal and external.

GPSC organized the first "Open House Project, Welcoming the community" activity for the communities in 2014 and continuously conducted in 2015, in order to invite communities to visit the company and power plants and understand how GPSC operates the business and power plants including safety measures, environmental monitoring and assessment and CSR activities. The activity enhances the communities' trust in GPSC.

Moreover, the company also conducts internal and external internal audits to assess the transparency in the business.

#### **Business Ethics**

#### Commitment

Business Ethics is the key issue which GPSC commits to demonstrate responsibilities toward stakeholders, society and environment.

GPSC establishes the corporate governance policy and business ethics as guidance for all employees to practice.

GPSC considers Business Ethics principles in business operation to ensure that the company is fully responsible for the stakeholders, society and environment through the following policies and frameworks:

- Developing corporate governance policy and Business
   Ethics for Board of Directors, the Management and all employees to strictly adhere to.
- Assigning the Board of Directors to govern the company in accordance with good corporate governance and best practice as a listed company in Stock Exchange of Thailand (SET). The Board of Directors' performance is evaluated as least once a year.
- O Disclosing the company's performance and supporting documents which are accurate to stakeholders and public.
- Adhering to integrity and responsibility to deliver high quality products and services to customers at a fair price.
- Enhancing competitiveness in the business together with competitors in the same industrial sector.
- Governing the business of subsidiaries to adhere to the corporate governance policy and business ethics focusing on duty of loyalty, duty of care, accountability and ethics.

#### Anti-corruption

#### Anti-corruption Policy

GPSC is determined for its business operations to be performed with honesty, transparency and fairness, in accordance with the good governance principle. As a result, the Anti-corruption Policy is developed for all GPSC employees to adhere to and use as guidance for practices. GPSC has no tolerance with any kind of corruptions, neither directly or indirectly. GPSC has created internal control system to prevent corruptions in all dimensions such as finance, operation and internal control, human resources management, and business operation with customers and suppliers. The Anti-corruption Policy is documented in annual report and GPSC's website at http://gpsc-th.listedcompany.com/anti\_corruption.html

Under the Anti-corruption Policy, GPSC demonstrates the transparency in business operation by disclosing important financial data and investment budget for each quarter every year, analysis from the Management and other information for shareholders and those who have interest. Furthermore, the company also commits to operate with integrity without corruption. GPSC operates in accordance to the Anti-corruption Policy and Whistleblower Policy and provides channels for internal employees and external to notify cases of corruptions by directly submit the grievance to the CEO, Organizational Excellence Department, Human Resource Department and other functions via system of "Whistleblowing" company's website.



#### Monitoring and Grievance Procedure Management

#### 1. Internal Grievance

GPSC expects that all employees will monitor business operations under good governance and integrity by supporting to question any suspicious operations. Employees can provide grievances on inappropriate behaviors that are against good governance and integrity or inquires any questions to Organizational Excellence Department or any given channels such as the company's website.

To enhance efficiency of investigation, grievant need to show his/ her identity with name and proofs.

The company promises that all grievances will be treated equally and fairly to all relevant parties within suitable time of investigation. The profile information of grievant will be confidential, during investigation and after information disclosing.

#### 2. External Grievance

GPSC follows guidelines in business operation investigation to align with good governance and Anti-corruption Policy. Grievances can be filed via "Whistleblowing" in the company's website.

In addition, the company also emphasizes on the communication with internal and external stakeholders by determining as operation regulation, communication, participation and advice in occupational health and environment. The Company has defined external communication as the way of communication with external personnel like customers, press agencies, communities and governmental agencies and etc. In addition, the company also appoints responsible group and determine how external entity can notify grievances, suggestions and opinions about safety, occupational health and environmental topics. External parties can notify grievances by themselves at the company or other channels such as phones, letters or other kinds of documents or even notify to those who responsible for receiving notification. These people

will further to notify public relations and responsible departments in safety, occupational health and environment. As soon as the grievance is accepted, it will be investigated, analyzed and proper solution will be found out within a week and public relations will inform grievant.

The company sets a goal to develop Whistleblowing system to be more efficient and easy to track and check grievances within a given timeframe and fast and clearly inform those who are involved

in this grievance procedure in details later. There are additional regulations for false notification and protection of information provider, including responsible sectors in different kind of topics such as personnel, state regulations and dishonest actions which are illegal actions such as cheating and corruption. In 2015, however there were no cases relating to corruption.

Indicators	2015 Target	2015 Performance	2016 Target
Investigation and grievances	All grievances are investigated	No grievance found	All grievances are investigated
solving	and solved.		and solved.

Improvement of Corporate Governance and Business Ethics policy, Internal Control Systems and Risk Assessment from Anti-corruption Procedure



GPSC maintains its status as public company limited and A-listed company in SET. Therefore, the Company will review past policy announced in 2014 in order to be recognized at international level and align with continual development of the company in accordance with regulations and standards. The recent policy has been edited (year 2015), reviewed and added as follows,

- 1) Channel of notification if inappropriate and unethical actions are found.
- 2) Increase of the company core values to CG SPIRIT by focusing on the Anti-corruption Policy, under PTT Group Policy and ethics complied with creditors to provide comprehensive care to all stakeholders.
- 3) Improving factors and qualifications of nomination and appointment process which focus on independency of committee and solution of conflict of interest, according to compliance with the laws and the requirements of SET
- 4) Appointing committees in special topics and their responsibilities which consist of Audit Committee, Nomination and Remuneration Committee, Corporate Governance Committee and Risk Management Committee

The latest good governance policy can be downloaded from http://gpsc-th.listedcompany.com/cg\_principle.html

Besides, GPSC manages internal control and evaluation of risk from corruption through the necessity of internal control and chance of corruption used in 2015 to ensure stakeholders that the company's operation is highly transparent and fair in business operating, as well as focus on the highest benefits of all stakeholders.



#### Risk Management Policy

GPSC risk management clearly covers the efficient corporate management in an overview, as well as connects with internal control and monitoring systematically, creating risk management culture in the company, detailed as follows,

- 0 The company has set up risk management system and procedure, complying with its business strategies, goals and frameworks of risk management standards.
- 0 Risk Management and Internal Control Committee (RMCC) has an authority to manage the company's potential risks in an overview, including the development of risk management system throughout the company in alignment with standards, determination of responsible parties and efficient monitoring.
- 0 Executives in every department of the company have responsibilities to manage potential risks in their business units and to report results in compliance with the guidelines determined by RMCC.
- 0 RMCC must summarize results from risk management in different departments and report to Board of Directors.
- 0 Employees must implement their operations in compliance with risk management system determined by the company.

#### Enterprise Risk Management Process (ERM Process)

The company's risk management framework can be divided into 2 levels, comprising corporate level and functional level, considering classified by the severity of risk.

Risks can be divided into 4 main types;

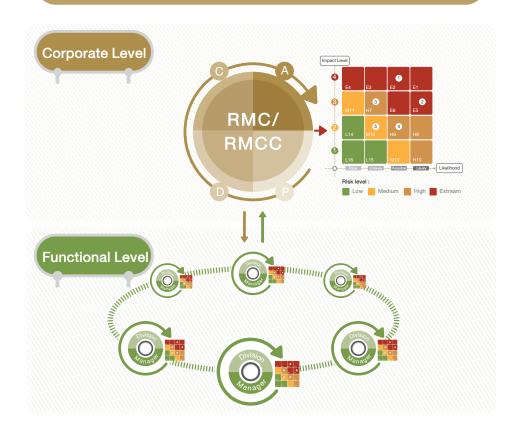
- 0 Risk from inaccurate strategic plan
- 0 Risk from business factors
- 0 Risk from inaccurate operations
- Risk from ineffective financial management

Risks will be evaluated both at management level and operational level. Each year, groups of risks that are assessed to have high impacts on the company will be categorized in the list of corporate risk Profile. The Risk Management and Internal Control Committee (RMCC) at management level will conduct a risk management plan, comprising risk control measures, responsible parties, timeframe and continual risk management monitoring. The corporate risk management plan and result monitoring will be proposed to Risk Management Committee (RMC) and Board of Directors, respectively.

Functional risk profile will be managed under responsibilities of executives in relevant business units. Risk management data will be communicated to all employees via the company's intranet system in order to allow employees at all levels to consider about potential risks toward business operations of the company and internal business units, so employees can provide proactive preparedness and prevent potential risks toward the company.

In order to continually monitor risk management, the company conducts RMCC Meeting on a monthly basis and RMC Meeting every two months at minimum in order to implement operations in compliance with planned objectives and goals. The corporate risk assessment is conducted every year, depending on current situation and potentially changing business plan at the time. Risk factors and details are reported in the company's 2015 annual report.

## **Enterprise Risk Management Process (ERM Process)**









## **ECONOMIC SUSTAINABILITY**



#### PRODUCTION RELIABILITY

#### Commitment

Reliability of the power and steam generation and distribution system is the key of the company's business operation, leading to sustainable business operations, trust in the investment of investors and persons that are interested in the investment and confidence in energy and services handling to clients in continuity. The company considers reliability in national energy to retain reliable status and economic growth, along with the national growth.

The company has managed several power plants to efficiently generate power and increase reliability in supplying utilities from the power plant. Main strategies are provided as follows,

#### 1. Power Plant Construction

The company has a team of technical experts and experienced executives to prepare and develop the power plant project and a team of technical consultants experienced in power plant construction. In addition, the use of selected equipment and technology from expertise and leading producer in terms of technology, quality and lifetime is applied.



For the selection of contractors for the construction, the company will implement through cautious procurement process. The determination and scope of contracting work is considered as the complete contracting type, complying with criteria on reliability, experience, expertise and stable financial status. This is to ensure that contractors have ability to construct, handle work and implement the conditions of construction contract.

The company has assigned experienced and expert personnel in the project management to supervise work in order to secure the delivering of quality work on time.

#### 2. Management and Implementation of Power Plant Operations

The company focuses on the reliability of power and steam generation and distribution system for the benefits of clients. Maintenance plan is conducted and maintenance contract for main engines is made by direct producer, to ensure that the company has readiness in power generation and distribution and the down time is tremendously reduced, meeting the client needs of power and steam demand according to their goals.

#### 3. Initiation of New Power Plant Projects

The company targets to become the leader in power business by expanding the investment and project development at domestic and international level. The company has provided a study to develop power plant or a study to continually invest with other business operators. The company has set up mitigation measures on the selection of investment project and investors. In addition, the sensitivity analysis of changing environmental factors, potentially affect the project, is implemented in order to prepare in risk mitigation measures in advance, confirming that the company will operate business efficiently in a long term.

#### Implementation on the Reliability of Power and Steam Generation and Distribution System

#### Short Term

The company operates business to build up reliability of power and steam generation system. The company has an Operator Training Simulator (OTS) which simulates the situation of gas turbine (GTG) operation in order to train employees to know how

to solve problems and control the gas turbine operation in power and steam production and distribution system.

During the training, case studies will be created by the simulation program, so the automatic test will be selected for employees, reducing human errors. Operators can solve actual problems in the operational area correctly, appropriately and rapidly. The company requires all operators who are in charge of controlling the gas turbine operation to have requisite in passing the training and test with OTS. Trainings will be conducted for employees 4 times per Utility Plant per year. The review of trainings will be conducted annually in alignment with other programs, such as Power Management Controller (PMC) program which responds to the power connection in case of unplanned event and helps preventing errors in the transmission of power between the clients and the company, Total Productive Maintenance (TPM), alongside with other quality management systems, comprising ISO 9001, ISO14001, OHSAS/TIS 18001 and R-100 IMS. All of this programes will drive the machines and equipment to operate with the highest efficiency to ensure that the power will be generated efficiently according to power purchase contract.

In addition, the company has conducted the monitoring of data record system for normal and abnormal operations (tracking record). The results from these programs will be reported to the responsible parties on daily basis and reported to the company's Management Committee on weekly basis. This results in the efficiency of the reliability in the power and steam generation and distribution system that can reduce the numbers of incidents caused by power distribution to clients. Direct damages to clients will be reduced significantly.

GPSC Relation Reliability 5-6 November 2015 For the building up of good relationship with clients and creating better understanding with clients at the operational level, the company has conducted seminars to propose plans on the improvement of power and steam generation and distribution system, emergency management plan and has also exchanged recommendations and opinions with the clients. The knowledge sharing from the seminars will be used in the operational improvement in order to enhance the reliability of power and steam generation and distribution system

#### Long Term

The company is committed to operate business in compliance with the business growth strategy, leading to the total production capacity of 2,800 megawatts within 2019. The implementation of projects in the country and abroad is accounted to the ratio of 70% and 30% respectively for the fuel use in the power generation. Ratio of renewable energy will be increased from 2% to 10% and cleaned coal energy will be increased to 12% in 2019.

The company realizes the importance of reliability in power generation and distribution to clients and involvement in the implementation of the national energy integration plan, focusing on the reliability in energy, economy and environment that meets the needs of energy demand, complying with the country's economic growth rate and appropriate distribution of fuel portfolio. Energy investment cost per unit will be considered carefully, not to affect the country's socio-economic development in a long term and in increase the portion of renewable energy in the country, using advanced technology to reduce impacts on environment and communities. Therefore, the company has allocated various types and portion of fuel variously. For example, expanding portion of fuel in biomass and cleaned coal and increasing portion of fuel in renewable energy, for the company's capacity generation. The business investment is expanded abroad in order to meet the increasing energy needs and strengthen the reliability of the generation system in a long term at domestic and international levels in the future. Additional business opportunities are sought, for example, the company has signed the site preparation contract with the Sumitomo Mitsui Construction Co., Ltd. (SMCC) worth more than 1 billion Yen in order to prepare site for the construction of Ichinoseki Solar Power Plant - 1 Giga Kelvin (GK).

Indicators of Success	2015 Target	2015 Performance	2016 Target
Reliability Indices			
Central Utility Plants 1-3 (Rayong Province)	99.99%	99.99%	99.99%
Sriracha Power Plant	99.14%	99.53%	99.88%



#### Zero Unplanned Shutdown Award



In order to confirm that the company has reached high reliability in power and steam generation and distribution system, the 2015 Zero Unplanned Shutdown Awards have been given to GPSC's Central Utility Plants 1, 2 and 3 by PTT Group. The company has been implementing plans on the improvement of reliability in power and steam generation and distribution system. The Reliability Improvement Team (RIT) has been set up in collaboration with the clients from 2012 to present. The plans on the improvement of reliability in power and steam generation and distribution system cover operations in both short-term and long-term. After the implementation of the plans, the 2015 incident statistics of Central Utility Plants 1, 2 and 3 in Rayong showed that there were 34 incidents occurred, only 3 incidents that slightly affected the clients, resulting in the declining of incident rate. This can be implied that the company has the highest reliability in the operation of power and steam generation and distribution system. Also, the company can build up more trust in services delivered to clients.





#### Ichinoseki Solar Power - 1 GK



GPSC has developed Solar for power plant of Ichinoseki Solar Power- 1 Giga Kelvin, 20.8 megawatts, according to the Ministry of Economy's approval, Trade and Industry (METI) in Iwate Province, Japan. The Japanese Government strongly supports the use of renewable energy for power production. In 2017, it is estimated that the Ichinoseki Solar Power Plant will operate for commercial purpose.



#### **CUSTOMER SATISFACTION**

#### Commitment

To create reliable, sustainable and good relationship with clients, the company manages relationship in terms of communication and operation with clients on a regular basis, aiming to highly satisfy clients in services from the company's business operations.

GPSC highly focuses on the business operation with clients. The company has been conducting client satisfaction surveys 2 times a year since 2011, implemented by third party. Therefore, clients can provide their actual opinions toward the company, resulting in the transparent and impartial outcomes from the client satisfaction survey. Results from the survey will be reported in the Management Committee meeting with CEO presided over the meeting. A report on the materiality required problem solving must be made at each time. Plan on the grievance solving for issues/ recommendations from clients toward the products and services must be proposed to relevant agencies in order to solve problems immediately. Results from the problem solving will be monitored continually in the Management Committee meeting and results from client satisfaction survey will be monitored in the next 6 months. Results from the client satisfaction survey are considered as a part of client relations management planning for the next year.

The company emphasizes on the continual relationship with clients. Therefore, the company has arranged activities in collaboration with all clients and the company's relevant business units, such as the Operational Department and Production Planning Department.

Activities can be divided by timeframe as below.

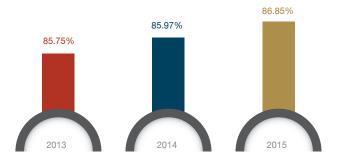
Monthly activities: Meetings are arranged at the clients' business units every last Wednesday of the month in order to conduct selling and production plans according to the client needs in a short term.

- Quarterly activities: The company arrange recreational activities to disseminate knowledge to employees at all levels for client's companies.
- Annual activities: Activities are conducted to focus on a study visit in relevant/continual business units of the company in order to exchange opinions on opportunities in the extension of collaborative business operations.



In additional, a plan of the development of an automatic system to receive grievances from clients is implemented to offer convenience to clients at all times. The system will be used as a channel for the single point service which the company can collect all grievances from clients and solve problems completely. This system is planned to be appeared on the company's website. It can record grievances, allocate grievances to relevant agencies and effectively monitor results from the problem solving.

#### **Customer Satisfaction**



The company also places an importance of collaborative working with clients with efficiency in order to reduce time in the meter record document preparing. Telemetry system which is an online system to collect the data of purchase through GPRS is planned for development. The data of purchase will be transmitted from GPRS to Central Processing Unit and the power purchase volume of each client will be shown in hour, day and month. This creates the utmost benefits for clients and the company. Clients can adjust the plan on power consumption, 24 hours in advance and the company can plan the power generation and distribution for other clients appropriately. This results in the decrease of generation cost and the highest increase of generation capacity. The grievance procedure management system for clients and telemetry are expected to be completed and available for use in 2016.



Indicators of Success	2015 Target	2015 Performance	2016 Target
Annual survey of client	Satisfaction level at	Satisfaction level at Satisfaction level at	
satisfaction	85%	87%	85%



#### Research Development and Technology Policy

Research Development and Technology (RD&T) is the key mechanism in the corporate development based on the knowledge that initiates capability in competition and sustainable growth. GPSC determines the policy on research development and technology by cooperating with PTT Groups in aspects, including appropriate budget allocation, preparation of the company's research development and technology, revision of annual plan, determination of principles and the scope of standardized research development and technology screening, Management of intellectual property, support of research projects and exchange of knowledge and research personnel in collaboration of PTT Groups and support of the research development and technology funding management of PTT Groups with the utmost efficiency and benefits.

The company is committed to develop operations effectively and continually for excellence and sustainability in power and utility business operations by focusing on the development of efficiency in core business operations, including business research and development related to the company's core businesses. This can enhance benefits and allocate risks in the company's investment in activities, such as power and steam generation from alternative or renewable energy which is safe and eco-friendly.

At present, GPSC is implementing research development and technology in the project in order to seek opportunities in the business investment, including the implementation and support in effective research development and technology that can apply knowledge or results in the extension for commercial development.

Currently, the company has invested in the 24 M Technologies Co., Ltd. which is a company that conducts research and development in Lithium-ion battery production, applying newly advanced production technology that consumes less raw materials and time, but increases efficiency and safety of battery use, comparing to general Lithium-ion batteries. If the Lithium-ion battery development becomes successful and can be produced for commercial purpose, the battery will be used in the industrial sector and back-up power storage for the manufacturing process such as the back-up power storage of industrial plant, for instance, of the production process to ensure the continuity of production

in case of loss of main power or storage power from solar power plants and distribute the generated electricity when there is no available sunlight. The product's Lab Scale and Pilot Plant is highly satisfactory.

Furthermore, the company has developed and extended the production technology to enhance the efficiency in operations and stability and reliability in the power and steam generation and distribution system. The company focuses on safety and eco-friendliness. Research and development budget has been being allocated since 2014 (accounting to 1 % of total revenue).

PTT Innovation Award 2014 Bronze Level and PTT Best Practice Sharing Award 2015 Silver Level- Project reduction of using energy with External Fogging System



GPSC is committed and focuses on the core business efficiency development. Innovations are developed through the fuel use reduction project, applying external fogging system of Sriracha Power Plant. The external fogging system can decrease air temperature before plugging into air inlet filter of gas turbine and reduce the use of energy to 7.92 %, compared to generic production. More power will be generated. This company's innovation development was awarded with Innovation Award, bronze level, from PTT Group in 2014.

In 2015, this project was also awarded with Best Practice Sharing Award, silver level from PTT Group. This is the outcome from the exchanging of knowledge, technics and experiences. Knowledge can be extended, be applied for efficiency enhancement, reduce expenses or increase income in the affiliates of PTT Group. Knowledge will be recorded and drive the company to become the "excellent organization"







#### Commitment

GPSC manages contractors and suppliers in compliance with sustainable supply chain management guidelines, comprising ethics in business operations, corporate social responsibility (CSR), safety, environmental management, efficient supplier selection and supplier relations management which help managing and developing relationships with suppliers, enhancing efficiency in the operation of supplier and reducing potential risks on the company's business operations.

#### Supplier Pre-Qualification

Supplier pre-qualification is implemented to ensure the supplier efficiency and capacity in the handling of products and services which meet the company's needs. The scope of supplier assessment covers the quality complying with the company's pre-qualification criteria, which are formed as basis for questions in the questionnaire. This procedure is aimed to select the qualified suppliers that meet the needs of Supplier Selection Committee. GPSC will then record the data obtained from supplier assessment form. When suppliers' names are approved, the procurement personnel in the company will record suppliers' names in the Approval Vendor List (AVL) in the SAP System which is a supplier database management system elected by the company.

AVL procedure is in the progress of development aimed for qualified and standardized AVL system, complying with human rights, transparency in operations and criteria on community and environmental impacts. The AVL is specified in the Term of Reference (TOR) for procurement during collaborative operation between supplier and the company. Supplier must acknowledge on AVL and implement operation according to an agreement and standards. The supplier pre-qualification supports the company to operate business with supplier that has good quality and governance.

In order to assess the performance of supplier, the company has conducted regulations on measuring supplier performance. Results from supplier assessment are used in continual development in aspects, such as product quality, service and cooperation with the company. The assessment will be implemented with suppliers approved in the company's AVL list, These suppliers can deliver products or services to the company within the duration of supplier assessment.

Supplier assessment will be implemented by user or procurement personnel. Assessment will be made in many aspects, such as product handling, product quality, safety, coordination, provision and accuracy. The users and procurement personnel will collaboratively assess in every operation. Assessment results will be reported to suppliers after approval is made by procurement manager and they will be improved and used in the operational development with suppliers. Collaborative operations will be improved to create continual efficiency to prevent potential impacts on the company's operations. In case that the results from the supplier assessment do not comply with the company's criteria, the company will clarify mistakes to supplier and allow the supplier to prepare the improvement plan and submit to the company. In case that supplier has been assessed as low level in the business unit for the second consecutive year, GPSC will remove that supplier from the AVL.

#### **Management of Contractor**

Supplier contract management has objectives to control and manage Supplier contract with efficiency, complying with the company's criteria which covers the procurement of projects and services. Operational procedure can be divided into 3 main steps as below.

 Team Set-Up and Mobilization: This step comprises the setting up of a team who is responsible for contract. The team will identify responsibilities, create goals, outcomes, indicators of main operations, monitor frequency, make risk registration, conduct internal and external meetings, prepare in advance such as site auditing, document verification and work permit.

- Contract Execution: This step is implemented to control and monitor results according to indicators, as well as improve results when they are below indicators. Monitoring will be conducted continually. In this step, things that do not comply with the contract can be managed or changed. The amendment will be specified in the contract on the management of contract violation and grievance management during the project implementation and service receiving of the company.
- 3. Closed Out and Feedback: This is a final step in the summarizing of contractor's operation conducted by the assessment of work efficiency and summarizing learning issues and identifying guidelines on the improvement of the contractor's operational procedure. The company can use results from the efficiency assessment to further improve and manage supplier contract for the procurement of projects and services.

#### Supplier Relationship Management

GPSC has determined regulations on supplier relationship management in order to improve relationship between suppliers and enhance work efficiency of supplier, covering the aspects of equipment and material procurement for work, office material procurement, service, subcontract work, maintenance task, calibration task, analysis including the project procurement and safety equipment & medicine procurement. GPSC has categorized the relationship of suppliers into 3 types as below.

- 0 Strategic Suppliers
- 0 Key suppliers
- O Managed Suppliers

Relationship with supplier is determined to create clear objectives. Supplier relationship can be divided into 2 types, include category management plan procedure and spending analysis by suppliers, comprising 5 dimensions: suppliers, spending value, impact, relationship, and supplier relation identification.

The performance management comprises the determination and management of supplier and measuring supplier performance conducted once a year. It aims for suppliers to propose guidelines, grievances and suggestions to the company and the company will improve the procurement procedure. This leads to smooth operations with suppliers and sustainability in the operations of both parties.

In 2016, GPSC has added the Way of Conduct (WoC) into management frameworks to align with PTT Group in the same direction according to the policy on material procurement: green procurement, material procurement, considering quality, price, number, service and speed. Efficiency and effectiveness are more emphasized along with CSR and environment.

Indicators of Success	2015 Target	2015 Performance	2016 Target		
Results from supplier	80%	94%	85%		
assessment					

#### Supplier Relationship Management (SRM) 2015



The company has been regularly conducting activities and seminars to promote relationship with suppliers on an annual basis in order to develop operations in collaboration, creating reliable and sustainable business outcomes. In 2015, seminar was held on the 2nd July at the Multipurpose Building, The Central Utility Plant 2. GPSC's management level, representatives and suppliers attended in the seminar, accounting to 24 persons in total. The company invited experts to disseminate knowledge and create better understanding in benefits from cooperation between suppliers and the company. Suppliers and the company attended in activities to exchange knowledge and strengthen good relationships.









## **ECO-FRIENDLY MANAGEMENT**



#### **CLIMATE CHANGE RISK AND ADAPTATION**

#### Commitment

GPSC aims to be low-carbon organization by reducing greenhouse gas emissions and climate changes from power generation.

Due to effects from climate changes such as issue from radical weather condition, flood, drought, it directly results in continuity of business operation and stakeholders' confidence to the company's adaptation form climate changing. Therefore, as a generator of energy using main source of natural gas, which is lower released greenhouse gas, compare with other petroleum fuels. Nevertheless, the company strongly aims to be a low-carbon society in the future by decreasing the emission in any carbon dioxide forms and activities in example of using and developing, friendly environment technologies and reduction of energy consumption, along with national policies.



GPSC has clear policy in managing effects from climate change, initiating from risk management on business operation from climate change and it mitigation measures. In regard of controlling and reducing greenhouse gas, the company will control emission of greenhouse gas not exceed to 0.45 tons carbon dioxide equivalent per megawatt hour.

#### Carbon Intensity (Ton CO<sub>2</sub>e/MWh)



The company also manages electricity generation and other activities aimed to diminish risks from climate change such as improvement of production process, using renewable energy, reduction of energy consumption and machine maintenance etc.

In addition, GPSC also plays an profound role in energy saving by establishing the energy conservation policy in 2015 which all executive and employees must follow and drive it in practice to achieve the objective and target including supporting the Thailand's energy saving policy as well as create highest capability via the company projects and activities arranged by the Energy Management Committee, term of working between 2015 - 2017.

Another proof of company operation that has shown concern in climate change adaptation and being a role model of saving energy organization for sustainable growth is the certification of saving energy building in commercial interior in Platinum level to the company's headquarter in Bangkok in 2014. The company is the first organization in Thailand certified in Platinum level under the standard of LEED (Leadership in Energy and Environmental Design), under consideration of designing building that can save any kinds of energy by not using toxic materials, efficiency of waste management including using the material made from recycle as well as protecting of employees health and safety and eco-friendly green office.

For risk management and climate change adaptation and greenhouse gas emission in the future, the company plan to study carbon footprint and use the outcome of research to implement efficiency of production and reducing greenhouse gas emission from normal operation. In 2016, data from studying carbon footprint will be accumulated and adaptation plan for replacing conventional energy is initiated by using renewable energy in existing operation on power plants such as solar power plant and hydropower plant.



Additionally, the company proactively plays a role as a volunteer in reducing greenhouse gas to atmosphere in Clean Development Mechanism (CDM) to decrease greenhouse gas emission, organized by United Nation Framework Convention on Climate Change (UNFCCC) and taking part in Thailand Voluntary Emission Reduction (T-VER) Program.



#### Thailand Voluntary Emission Reduction Program (T-VER) Thermal Energy and Electrical Power from Cogeneration System Project





The Central Utility Plant 2 (CUP 2) is certified as a place that can reduce greenhouse gas in years 2014-2015 by volunteering to be part of Thailand Voluntary Emission Reduction Program (T-VER) funded by Thailand Greenhouse Gas Management Organization. This is the first project in Thailand that registered in new installation of cogeneration system which certified the capability of reducing greenhouse gas at 40,013 tons carbon dioxide equivalent from year 2014 - 2015 with 5,247 million Baht investment and could get more value added by selling carbon credit and promote activities to offset carbon.



#### Clean Development Mechanism (CDM) Reduction of Greenhouse gas Project from Nam Lik 1 Hydropower Plant



Nam Lik 1 Hydropower Plant is an alternative energy power plant which can reduce greenhouse gas emission to atmosphere about 122,145 tons carbon dioxide equivalent per year. It is nominated in Clean Development Mechanism (CDM) by UNFCCC with investment of about 124 million USD and can generate maximum power of 265 gigawatts hour per year and could get more value added by purchasing and selling carbon credit in the future.



# OPERATION ECO-EFFICIENCY

#### Commitment

Target of operation in eco-efficiency is aligned with other environmental management of the company such as Environmental Impact Assessment report and Environmental Monitoring and Auditing Program Report (EIA and EM&A), ISO 14001, Emission Control and Waste Reduction and Green Factory. This leads to good environmental workplaces to surrounding communities and employees in order to run business operation along with sustainability of environment and society.

The company cares for Sustainable operational Eco-Efficiency in important parts such as water management, air quality management, and waste management.

#### Water Management

Water is the natural resources that could be shared with agriculture, industry and household. Therefore, water management needs to be operated with high efficiency from upstream to downstream. The water management needs to consume water in suitable quantity which reaches the most efficiency that will usher the company and communities to live along with sustainability.

#### Water Management from External Operation

The company intends with the focus on water management closely in the company's main operational area (Rayong and Chonburi Provinces) by being a member of PTT Group Water Management Team to manage water in the overview including solving the problem of water shortage from drought and flooding prevention. The PTT Group Water Management Team has a meeting every 3 months for planning a solution and proactive management.

#### Water Management from Internal Operation

For power and steam generating operation which is closed system that the Sriracha Power Plant can reduces 22 % of water usage, equally to 4,000 cubic meters per day adding in operation system. In addition, the company has raw water storage for emergency cases such as repairing water supply distribution system. This storage can be used 24 hours and help operate continuously during emergency situation to avoid effect on customers. The company also has the regulation for saving water in power and steam generation as follows.

- Recycling condensate water to steam boiler
- Recycling water from water supply system 100%
- Recycling the good quality water from boiler to cooling tower to reduce water resource consumption

From all of water management above, the company can save water in operation by water recycle of 760,000 Baht per year comparing from buying water and reduce wastewater discharging of 38,000 cubic meters per year and Central Utility Plants in Rayong can save water in operating by condensate water recycle that estimated 3.7 million cubic meters per year. In addition, the treated wastewater is recycled and used for gardening and cleaning workplaces of the company.

For sustainable water management, the company plans to study water footprint in order to use result of study for improving efficiency of power and steam generating operation. This study and data collecting will be conducted in 2016.

#### Air Quality Management

The company always places an important on business operation with environmental responsibility. Air quality Management in workplace and surrounding communities is also one of the company's significance. GPSC always conduct and monitor air

quality in air quality measuring stations both in workplace and community areas including points of air checking air and follows up operation outcome complied with standards and regulations. Moreover, the company also plants trees as barriers, prevent air pollution to community in order to build the confidence to governmental agencies and communities toward the environmental management of company's operation.

In air pollution treatment system selection, the company has considered in every step from power plant design selected by their ability to treat air pollutants resulting from production process to meet equal or better to the standards and regulation. In order to show the company's responsibilities and sustainability in environment and society, the company has installed Continuous Emission Monitoring Systems (CEMS) which is able to monitor the concentration of pollutants on real time basis before releasing to outside.

The operation resulting in the past shown that the company has released the concentration of Nitrogen Oxide (NOx) not exceed the criteria addressed in EIA report, which is always below standards any regulation.

#### Waste Management

The company has system of waste management, both in internal disposal and regulating transportation established by Thailand's regulation and government agencies' provision. Moreover, the company also uses 3Rs (Reduce Reuse Recycle) which are reduction of use, reusing and recycling by reducing waste at its origin sources to minimum and reusing and recycling generated waste in maximum the result of these can help to reduce amount of waste to landfill.

In 2015, the company has been generated 772 tons of waste (107 tons of Harzadous water and 665 tons of Non Harzadous water). The Zero waste to landfill resulting after the 3R has been used in the company's operation. This can be proven with 3Rs Award and Zero Waste to Landfill Achievement Award gotten from ministry of Industry in August 2015. This award motivates the company to continue managing waste with better and higher efficiency.

Indicators of Success	2015 Target	2015 Performance	2016 Target
Quantity of reused/recycled water from project water resource reduction by "Fogging Re-use System"	50%	60%	50%
Quantity of waste to landfill	0	0	0



Excellence Award for Working Place that complied with mitigation measures of Environmental Impact Assessment Report and Outstanding Environmental Management 2014.



The Project of Combined-Cycle Power Plant 700 megawatts in Sriracha, Chonburi Province, is regarded as the first Independent Power Producer (IPP) in Thailand, supplying power to Electricity Generating Authority of Thailand (EGAT), according to project of purchasing power from major independent power generators. With strong objective in operating business with sustainability in community and environment, the company will administrates this project with awareness of community and environment responsibility by selecting the efficiency of power generating process, using properly natural resources, choosing the utilities that not impact to the surrounding communities, providing 30 % of green area in surrounding area of power plant and engaging of surrounding communities since the project's initiation.







#### HABITAT PROTECTION AND BIODIVERSITY

#### Commitment

The company intends to maintain natural resources and operates with environment and community responsibilities by protecting the habitat and biodiversity. The company develops the management system and controls the operation to ensure that the impacts on biodiversity will be prevented and minimized throughout design and construction.

GPSC realize to regularly prevent and minimize environmental impacts from business operation and projects both in Thailand and internationally. Every project both of business expansion and new business of the company must be studied in EIA report and approved from the conditions stated which is involved in the biodiversity assessment covering quantity and species in operating area. The biodiversity study shall be completed in forest and wildlife resources, every projects and its involving area need to comply with national law in each country. In Thailand, there are Wildlife Preservation and Protection Act in 1992 and decrees for forbidden wood in 1987 etc. as well as other international regulation such as International Union for Conservation of Nature and Natural Resources (IUCN) etc.

Besides, the company also set the environmental mitigation measures and monitoring programs that the company must be followed strictly and completely. The monitoring report will be submitted to the related government agencies for consideration frequently as stated in EIA report.

Due to the area of operation in Thailand located in industrial development zone, therefore there are not so many impacts on habitat and biodiversity. However the company also set other mitigation measures on such area as water, air and noise etc. The existing of ecology around operation area will not be disturbed indirectly also form those mitigation measures setting.

However, the international projects were featured on habitat protection and biodiversity significantly. Before investing in projects, the company has to study possible impacts on biodiversity of biological resources in operating area to develop mitigation measures, monitoring programs, action plans as well as Environmental Management and Monitoring Plan (EMMP). The consequence of these studies will be used and implemented from design stage throughout construction and operation period both short and long term to ensure that the operation of the projects will not affect or slightly affect to the existing environment and habitat both of plants and animals.



#### Study of Biodiversity in Xayaburi Hydropower Plant



Xayaburi Hydropower Plant is one of hydropower plants invested by the company. The hydropower plant was designed as Run-of-River type, located on Mekong River. At present, it is still under construction and will be finished in 2019, approximately. It is because of location on Mekong river which contain biodiversity, thus, the company is closely taking care of its design and construction.

This project is assessed in biodiversity aspects for 2 years by random and counting methods conducted by an accepted consulting company. The result of study will be used in "Fish Passing Facility" to connect journey of fish upstream and downstream of dam which is not interfering breeding of fish. The company aims to operate this project to be a good example in operation of hydropower plants with international standards used for dam construction as an additional guide rather than enforcing a basic law.









## CORPORATE CITIZENSHIP



#### **Employee Development Policy**

GPSC has been developing to become the company of learning that promotes good culture and pleasant working atmosphere, as well as teamwork. The company prioritizes the development, knowledge dissemination, enhancement of employee capacity, opinion and recommendation listening at each level with equity. GPSC highly considers that all employees are important factor which can lead to success, progress and sustainable growth of the company. Human capital development is under the responsibility of the company, managers and all employees.

- GPSC recruits talented and good personnel that has professional working behavior and able to efficiently develop knowledge and capacity in responsible tasks in continuity.
- Managers must conduct monitoring plan, evaluate performance, provide outputs and support the employee development on equity basis.
- Employees have equal opportunities in skill and capacity development.



#### Commitment

in the development and enhancement of employee value is considered as guideline in the retention of the company's personnel, aiming for collaborative success and sustainable growth of employees and the company."

#### **Human Capital Development**

#### **Employee Recruitment**

GPSC has a transparent and standardized recruitment system of R-100 IMS and selection criteria, focusing on the needs of employees in each GPSC function units in alignment with applicant qualification. Non-discrimination approach is applied. In addition, the company notifies the vacant positions to employees within the company through newsletter in order to increase public relations conducted by GPSC employees to announce the vacant positions to external parties who are interested. In 2015, there were 30 vacant positions available, whereas 25 vacant positions were filled in (83%). The company can recruit employees within 2-3 months at average.

# Number of New Employees (persons) 11 10

2013

# 15

#### Training

GPSC foresees the importance of employee capacity development through trainings that can strengthen human resource to drive the company toward the target, as determined. In 2015, the company has been allocated the central budget to support the trainings for new employees in the amount of 1,000,000 Baht and for management skill training in the amount of 2,000,000 Baht. Furthermore, the budget was allocated for technical training related to the employee's function unit in the amount of 20,000 Baht for each employee. Trainings are conducted to develop employee capacity. The goal of employee training is determined as 48 hours per year.

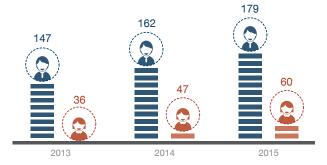
GPSC creates ethical awareness in business operations and corporate culture through the new employee training. In addition, the company conducts technical training and management skill training in compliance with the needs of each business unit. The survey of training needs in the company is conducted by Human Resource Department once a year to get survey results for applying in the use of training course planning for the next year.



# Employees's Average Training Hour 48.9 Hrs 46.3 Hrs Year 2013 2014 2015

The company plans to develop the Performance Management System to develop employee capacity continually and record employee data systematically, leading to the convenient and fast access to employee data. The System aims to record employee data on individual trainings, including previous training courses that employee has achieved and additional training courses, as well as record the data base of annual performance evaluation used for consideration of career promotion. It is estimated that the System will be completed and ready for use in 2016.

#### Number of Employees Passing The Training (persons)



#### **Employee Retention**

To retain employees and attract talented personnel to work with GPSC, the company has provided and allocated competitive benefits and welfare compared to the same industry, covering monthly salary, bonus and remunerations include:

- Provident fund that creates security for employees and their families.
- 0 Medical care coverage for employees and their families (father, mother, spouse and children)
- Life insurance that creates security for employees and their
- 0 Housing benefit for employees operating in external areas as determined by the company's criteria on housing remuneration for employees.
- 0 Educational funding for employees' children and employees, depending on educational level and educational category.
- Other financial supports, such as bereavement support and phone billing payment support.

Furthermore, GPSC have regularly scheduled meeting for executives to meet employees. Through regular contact, executives can have opportunities to communicate and acknowledge employees about the company's policies, performances, knowledge and opportunities for employee engagement in discussion, direct attitude and opinion sharing with executives. Therefore, employee engagement and unity are created within the company.

To retain employees within the company in a long term and create engagement toward the company, GPSC has offered the company's IPO share for every employee to hold for more than 9.3 million shares, accounting to 0.62% of all shares after IPO. The company has been registered in the Stock Exchange of Thailand (SET) on the 18<sup>th</sup> May 2015.

#### Career Development

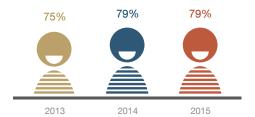
All employees' performances will be evaluated at least once a year. The line manager will take responsibility to consider the Key Performance Indicator (KPI) set up by employee as an individual at the beginning of the fiscal year. The evaluation of KPI is comprised of 2 aspects, behavioral evaluation and performance evaluation. The KPI helps to understand the needs in employee knowledge and capacity development according to determined career path. Outcomes from the employee performance evaluation lead to the leverage of remuneration and promotion for higher position. Also, the performance outcomes must comply with KPI at organization level.

#### Labor Compliance and Labor Rights

GPSC respects in labor rights and strictly implements relevant labor laws. The company conveys messages on employee rights and practices through employee handbook and code of conduct. In addition, the company supports employees to use their rights and report grievances through the GPSC Welfares Committee which is comprised of 7 members. Members of the GPSC Welfares Committee are recruited from the company's internal business units by election every two years. The GPSC Welfares Committee meeting in collaboration with human resource department is conducted every two months in order to discuss about employee's relevant issues, including employee's welfare, benefits and supports in case of incidents.

GPSC implements a survey on the employee satisfaction level every year by employing external party to conduct a survey and gain data based on reality. According to the outcomes from 2013-2015 surveys, it was found that employees tended to have more relationship and satisfaction level. GPSC will apply the survey results in the consideration for the increase of employee's satisfaction in order to retain employees and attract external personnel to work with the company in a long term.

### Employee's Relationship and Satisfaction toward GPSC



Indicators of Success	2015 Target	2015 Performance	2016 Target
Employee's relationship and	80%	79%	80%
satisfaction toward GPSC			

#### Health Promotion Project for Employees



The health promotion project for employees has been conducted to create good physical and mental health which is ready to create performance, creative thinking to drive the company to excellence and efficiency in work. Therefore, the company emphasizes on the importance of the employee's good physical and mental health and conduct activities, such as constructing of exercising rooms at each GPSC's business unit, providing membership of external fitness for employees to benefit their health and setting up music club for employees to get relaxed, relieve exhausts and manage stresses from work.

At present, employees have a better health resulting from the aforementioned project. This can be evaluated from average individual medical fees of 2015, accounting to 80,191 Baht (reduced from 2014). The amount of average individual medical fees of 2014 is accounted to 83,806 Baht.





#### **SAFE OPERATIONS**



#### Quality, Security, Safety, Occupational Health and Environment (QSHE) Vision

Drives to zero incidents that harm people



#### Quality, Security, Safety, Occupational Health and Environment (QSHE) Missions

- 1. Quality and reliabilities are meet the customer needs.
- 2. Standardize and drive QSHE, process safety management and sustain "we SAFE" QSHE culture to embed safety awareness into GPSC DNA.
- 3. Hazards are all identified and controlled As Low As Reasonable Practice (ALARP).
- 4. Enhance QSHE in 3E, Engineering, Education and Encouragement to staff and contractors.



#### Core Values

To maintain the corporate's safety culture, GPSC has determined the core values in terms of safety awareness creation for employees and contractors operating during working hours and activity implementation apart from working hours, covering inside and outside the workplaces.



"Working safely is a must, everyone who is a member of our family cares and helps each other, Stop if any unsafe conditions, Aware of QSHE, Focus on QSHE management and encouragement colleagues to be responsible in accordance with QSHE standards."

#### Quality, Security, Safety, Occupational Health and Environment (QSHE) Policy

Quality, Security, Safety, Occupational Health and Environment are key components in business operations. GPSC is committed to continual improvement of effective and better operations, focusing on excellence. Good corporate governance is implemented in order to be acceptable for stakeholders and to create sustainability in the business operations of electricity and facilities. Executives at all levels and all employees have responsibilities to align business performance in the same direction with the corporate's intention to apply Quality, Security, Safety, Occupational Health and Environment (QSHE) policy in continual practice, starting from planning, designing, implementing and completing of implementation.

To prevent the corporate's internal and external impacts on image, properties and lives that may directly affect stakeholders' feeling and environment in vicinity, GPSC has been strictly implementing business to comply with its vision, mission, core values and QSHE policy in order to build up trust toward business operations and reduce concerns toward relevant stakeholders. This results in smooth business operations, without grievances from internal and external. Objective of the company's operational excellence in safety is to prevent injuries, mortalities and damages in properties due to the operations. GPSC's operations are managed by QSHE Management Committee at policy level and QSHE Committee at operational level in aspects as follows.

# Quality, Security, Safety, Occupational Health and Environment (QSHE) Management

Goals of the GPSC's QSHE management need to be comply with aspects as below.

- Operations must comply with laws and regulations of government agencies.
- O ISO 9001, ISO 14001, OSHAS/TIS18001 and R-100 IMS
- Loss prevention management
- Safety management
- Emergency management
- Standards of Security, Safety, Health and Environment Management System (SSHE MS) and Operational Excellence Management System (OEMS)
- O Business Continuity Management (BCM)

GPSC considers about safety in lives of all employees. Therefore, the company has conducted training on safety, occupational health and working environment aimed for employees at all levels to

disseminate knowledge on personal protection and incidents from assigned work. Training courses attended by all employees are recorded as personal training data and filed at the Organizational excellence department of the company and relevant internal units on a regular basis.

In the aspect of collaboration with contractors, GPSC has determined to attach the company's relevant policy and practice contents in the final part of procurement contract to ensure that contractors will operate works in compliance with QSHE policy and safety practices. In addition, contractors will be trained on safety, occupational health, and environment to be able to apply regulations in practice for operational safety in every project of the company.

#### Personal Safety

GPSC has conducted training for employees on the topics of personal safety, health preparation before working, safe operational clothes, appropriate use of Personal Protective Equipment (PPE) depending on activities or assigned works, safe environment, hazards at work, first aid, laws and regulations on safety, occupational health and environment.

#### Safety of Operational Procedure

To prevent accidents and incidents by working according to operational procedure related to safety, occupational health and environment, GPSC has arranged the specific safety training i.e. confined space, boiler controller, natural gas area, industrial gas controller, hazardous substance storage, fire prevention and responsibility in term of basic fire extinguishing, techniques and commanding of fire extinguishing in alignment with trust building in surrounding communities.

Apart from training, GPSC operates business in compliance with management standards, for example, the regularly inspection of equipment and machines to maintain their conditions and capabilities. Also, potential problems during the operation of machines are foreseen to prevent. In case that incident inducing loss in live and properties and near-miss occur, a report, investigation of root causes and guideline on recurrence prevention, shall be made. The company has prepared a guideline to develop a program to collect data of accidents, incidents, unsafe working conditions and unsafe operations. A specific computer program for document control is being developed as a channel for data collection, revision and verification. The program can report data to relevant agencies, record the employee training and can be accessed via intranet. It is estimated that the program will be completed and available for use in 2016.

#### **Emergency Prevention and Control Plan**

GPSC has prepared systematic mitigation measures for emergency prevention and control and emergency control drill arranged in collaboration with local agencies at municipal and provincial levels, emergency operational team and support team from PTT Group and neighboring private companies. GPSC's internal unit (Security, Safety, Occupational Health and Environment Department) takes main responsibilities in the emergency drill, conducted every year.

#### Occupational Health Management

Occupational health management of the company focuses on the compliance in aspects, such as health risk assessment, industrial hygiene, annual health check-up program, ergonomic program and white factory.

Health and occupational health of GPSC employees are prioritized. Health check-up before work commitment, annual health check-up and health check-up according to risk factors at work are conducted. For contractors working in collaboration with the company, GPSC has the specific conditions attached with contract or procurement memorandum stated that the contractor health must be checked before working and checked annually in order to work safely.



Indicators of Success	2015 Target	2015 Performance	2016 Target
Total Recordable Injuries Rate (TRIR) (case per million man-hours)	0	0	0
Lost Time Injuries Frequency Rate (LTIFR) (case per million man-hours)	0	0	0

#### White Factory Project



GPSC strives to prevent problems on drugs and alcohol intake during the operation. The company cares about valuable life and health of employees, complying with the determined policy on drugs and alcohol intake. The policy has driven all GPSC business units to become drugs and alcohol-free areas. None of employees and contractors use drugs and consume alcohols during the operations. In addition, Department of Labor Protection and Welfare has also supported the company to implement the anti-drugs project inside the plants by arranging a talk on dangers from drugs, anti-drugs support activities and addictive substance check-ups for employees and contractors. Success of drugs-free business units has been confirmed, as evidenced in the continual receiving of "White Factory" Award given by Department of Labor Protection, Ministry of Labor, since 2013. The Award is valid until the 16th September 2016.







#### ENGAGEMENT/ COMMUNITY RELATION/ CREATING SHARED VALUE

#### Commitment

GPSC considers the importance of CSR activities and communities. The company intends to create good relationships with communities, promote and strengthen shared values. Cooperation for development is considered as key component to allow the company and communities to live together with sustainability.

Activities of community engagement, community relations and shared value creation between communities and GPSC have been implemented as CSR activities following the images of PTT Group and GPSC under the strategic frameworks of 4 aspects comprising education, quality of life, environment and community relations.

Apart from missions determined by affiliates, CSR activities under the affiliates of PTT Group are conducted to drive CSR strategy forward. PTT Corporate Governance Committee for CSR activities in Rayong Province has been setting up frameworks for policy and practice since 2009.

In 2015, the company has allocated budget according to asset portion, which is more than 2 million Baht per year, for CSR activities within PTT Group and for educational funding aimed for foreign students who are interested in further studying at PTT Group educational institutes. Also, the budget has been spent on expenses and support of established PTT Group educational institutes.

Besides from activity implementation within PTT Group, the company has been implementing CSR activities in alignment with the corporate images. Previous key CSR activities have been implemented, for example, MOU among the company, Rayong Government Agency and Rayong Provincial Administration Organization is signed to initiate small waste-to-energy plant for producing electricity at the previous landfill area in order to reduce accumulated waste in Rayong Province. In the past, waste was disposed at the landfill area, and then the increasing waste exceeded the capacity of landfill area. The waste-to-energy plant creates income for the company and reduces waste generated from communities in Rayong Province. Furthermore, it can meet the needs of electricity usage and create shared value for the society.

Other main CSR activities under the strategic framework on CSR created in compliance with the corporate images have been implemented in 2015 in 4 areas, comprising educational funding project, elderly care project in Muslim communities, natural resource conservation project to return abundance of marine resources and community relations project.

The company has surveyed satisfaction level of communities to evaluate results from CSR activities conducted on an annual basis. Results will be used as a part to determine the direction of the project implementation in the next year, aiming to meet the community expectations toward the company.

As for the CSR activity implementation plan of 2016-2017, GPSC is focusing to support government agencies that have capacity to manage and create a balance in nature, including forests and plant species, in order to maintain Thailand's natural resources in a good condition. The company is still implementing activities to support the developing waste-to-energy plant at present. Such activities comprise the planning of waste segregation project in prototype communities and training of the community trainers to disseminate knowledge in surrounding communities.

#### Education



#### Educational Scholarship and Capacity Building for Teachers and Students Project

GPSC foresees the importance of human resource development through study and knowledge dissemination, thus the company has been working in collaboration with affiliates in PTT Group to support educational scholarship for students at all levels in 20 schools since 2010 until present. In 2014, capacity building project has been initiated for lower secondary school students. These students had opportunities to participate in Sciences, Mathematics and English tutoring classes. In 2015, capacity building project for Sciences and Mathematics teachers in primary school level has been initiated to enhance creative thinking in teaching, positive attitude and inspiration in teaching. These 2 aforementioned projects are linked together which are trained and lectured by external experts.



#### Quality of Life



#### Elderly Care Project for Muslim Communities

GPSC has been continually arranging activities for the seventh consecutive year. The company foresees the importance of community health in neighboring communities and also obtains support from Health Promotion Division of Map Ta Phut Municipality and HRH Princess Maha Chakri Sindhorn Chalermprakiat Hospital in Rayong in terms of health check-up and health knowledge dissemination for the elderly in Muslim communities and awareness of seasonal diseases. There were approximately 80 attendees engaged in the project activities which were held at Yameeultmubtadee Mosque, Map Ta Phut Sub-district, Muang District, Rayong. Activities are held every Wednesday of the second week of each month.



#### **Environment**



#### Natural Resource Conservation Project to Return Abundance of Marine Resources

This project is one of the company's volunteering projects held every year. In 2015, more than 130 GPSC volunteering employees have engaged in natural resource conservation project to return abundance of marine resources at Patrol Battalion, Marine Division, Sattahip District, Chonburi Province. At the project event, species of blue swimming crabs and sand sharks were released to the sea and mangrove forests were restored and rehabilitated in order to return abundance to the sea and create public awareness among employees. Social, communities and environment will be taken care of with sustainability.



#### **Community Relations**



#### Kiang Bha Kiang Lai (Shoulder to Shoulder) Project

The Kiang Bha Kiang Lai Project held by GPSC aims to acknowledge the communities about the company and operations. In addition, GPSC is dedicated to build trust with communities, connect relations between employees and communities, listen to opinions and clarify questions obtained from communities and support the company's expansion in the future. During the project activities, mitigation measures on safety and environment and electricity system control in households were explained by the company's personnel. At present, the community relations project are held continually, covering 7 communities. The next year plan aims to cover all communities located within 3 km from the company's business units in 4 municipalities, comprising Muang Map Ta Phut Municipality, Muang Baan Chang Municipality, Baan Chang Sub-district Municipality and Map Kha Pattana Sub-district Municipality in Rayong Province.







Indicators of Success	2015 Target	2015 Performance	2016 Target
Satisfaction level of	Satisfaction level at	84%	Satisfaction level at
communities	80%	04%	80%

#### Creating shared value between communities and the company



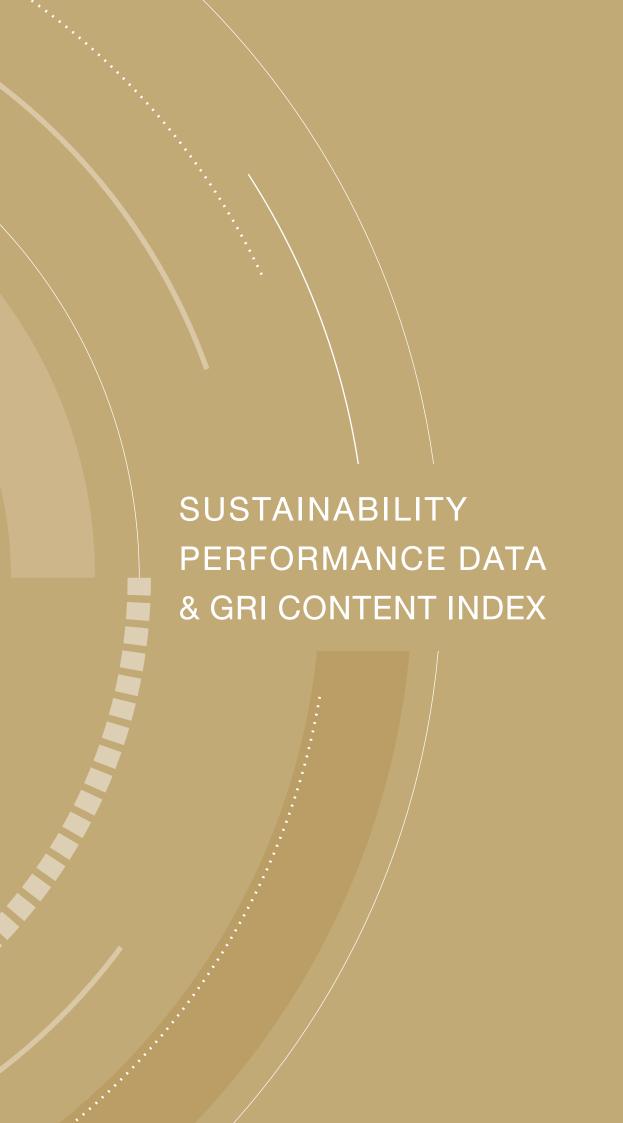
In business operations, GPSC does not focuses only on economic benefits. The company follows business operation philosophy as well to maintain balance in business, community, social and environment for growth with balance and sustainability.

The one stop service waste management project in Rayong Province was initiated by the cooperation between Rayong Province, Rayong Provincial Administrative Organization and the Company in order to solve problems on waste in Rayong Province sustainably and reduce potential impacts on environment and public health due to current waste storage, landfill and disposal. Waste can be value-added by transforming waste to energy electricity and then sold into the power connection system of Provincial Electricity Authority (PEA). This creates energy stability in the area and complies with the national policy on renewable energy.

The waste-to-energy project helps to dispose community waste in the amount of 500 tons per day at minimum, accounted to half of waste quantity in Rayong. Advanced technology in waste segregation and power generation procedure is applied, aligning with excellent odour and pollution management system to reduce potential impacts on communities. GHG emissions can be reduced in the amount of 220,000 tons carbon dioxide equivalence per year at landfill facilities. Electricity is generated at 8 megawatts from waste and then sent into the PEA power connection system, supporting the electricity demands in 700 households in communities (at 300 units per month). Organic waste can also be segregated and transferred to Rayong Provincial Administrative Organization for use in the production of soil improvement substances applied in agricultural communities.

Due to the cooperation for the project development, financial budget for local waste management can be reduced for more than 1,000 million Baht throughout the project implementation, resulting in an opportunity in employment and circulation of cash flow, more than 600 million Baht throughout the project implementation. Direct benefits toward the project worth for investment, equivalent to the current power plant that the company has invested in. In-direct benefits from the project implementation are also worth for investment since the project meets the needs of waste problem solving. Shared value created in communities promotes the corporate's image and main businesses which have production based in Rayong Province.





# **2015 SUSTAINABILITY** PERFORMANCE DATA

The GPSC boundary of performance data reporting of each category is considered and conducted from GPSC and GPSC's subsidiaries gathering. The details of performance data boundary are as following:

	Performance Data Boundary		
Performance Categories	GPSC	GPSC's Subsidiaries	
Corporate Governance	•	-	
Economics	•	•	
Product Responsibility	•	-	
Environment	•	-	
Labor Practice	•	-	
Health and Safety	•	-	
Corporate Social Responsibility	•	-	

Remark: GPSC means CUP 1-3 Power Plants (Rayong Province) and Sriracha Power Plant (Chonburi Province). GPSC's Subsidiaries means All companies that GPSC is a part of shareholder.

means The report of performance data refers to all operations of performance data boundary. lacktrianglemeans The report of performance data refers to some operations of performance data boundary.

#### **CORPORATE GOVERNANCE**

GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD		
			2013	2014	2015
Anti-corrup	tion				
G4-SO4	Governance body members that the organization's	Persons	10	10	10
	anti-corruption policies and procedures have been communicated to	%	100	100	100
	Percentage of employees that anti-corruption policies and procedures have been communicated to	%	100	100	100
G4-S05	Confirmed incidents of corruption and actions taken	Cases	0	0	0

#### CORPORATE GOVERNANCE

	REQUIRED DATA	ATA UNIT	DATA COLLECTION PERIOD		
GRI	HEGOINED DATA		2013	2014	2015
Anti-corrup	tion				
G4-S07	Total number of legal actions for anti-competitive behaviour, anti-trust, and monopoly practices and their outcomes	Cases	0	0	0
G4-SO8	Total monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	Million Baht	0	0	0
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulators	Million Baht	0	0	0
Grievance					
G4-EN34	Number of grievance about environmental impacts through formal grievance process	Cases	0	0	0
G4-HR12	Number of grievance about <u>human rights</u> through formal grievance process	Cases	0	0	0
G4-LA16	Number of grievance about <u>labor practices</u> through formal grievance process	Cases	0	0	0
G4-SO11	Number of grievance about impacts on society through formal grievance process	Cases	0	0	0

#### **ECONOMICS**

GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD		
			2013	2014	2015
G4-EC1	Sale revenues	Million Baht	26,221	23,654	22,444
	Operating cost	Million Baht	24,525	21,981	20,847
	Employee wages and benefits	Million Baht	357	300	448
	Dividend payments for the performance	Million Baht	0	112	1,120
	Payments to government	Million Baht	430	422	552

#### PRODUCT RESPONSIBILITY

GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD		
	HEQUINED DATA	ONT	2013	2014	2015
G4-PR5	Customer satisfaction survey	% of total clients	85.75	85.98	86.85
	Customer satisfaction target	% of total clients	85.00	85.00	85.00
G4-EU27	Total number of residential disconnections for non- payment, broken down by duration of disconnection and by regulatory regime	Cases	-	-	-
G4-EU28	Power outage frequency	(SAIFI)	0.56	0.03	0.63
G4-EU29	Average power outage duration	(SAIDI)	0.88	0.04	0.70
G4-EU30	Average plant availability factor by energy source and by regulatory regime	%	99.9995	99.9900	99.9837

#### ENVIRONMENT

	REQUIRED DATA		DATA COLLECTION PERIOD		
GRI		UNIT	2013	2014	2015
Production					
G4-EU1	Primary Source				
	Natural gas	%	99.99	99.97	99.99
	Oil	%	0.01	0.03	0.01
	Installed capacity	MW	1,052	1,052	1,052
G4-EU2	Net energy generated	GJ	45,208,873	38,175,268	37,516,853
	Natural gas	%	98.68	99.99	99.99
	Oil	%	1.32	0.01	0.01
G4-EU12	Transmission and distribution losses as a percentage of total energy	%	0	0	0
Energy Co	nsumption				
G4-EN3	Total energy consumption	GJ	NA	NA	56,102,211.61
	Total direct energy consumption	GJ	NA	NA	56,033,630.68
	Total indirect energy consumption by primary energy source	GJ	NA	NA	68,580.93

#### **ENVIRONMENT**

GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD				
			2013	2014	2015		
Energy Co	nsumption						
G4-EN3	Total Energy Sold	GJ	NA	NA	24,956,508.02		
	Electricity	GJ	NA	NA	17,431,618.79		
	Steam	GJ	NA	NA	7,524,889.24		
G4-EN5	Total energy intensity	GJ/MWh	NA	NA	5.60		
Water With	ndrawn						
G4-EN8	Total Water Withdrawal	m <sup>3</sup>	NA	NA	13,121,370.81		
	Surface Water	m <sup>3</sup>	NA	NA	11,141,837.78		
	Municipal Water	m <sup>3</sup>	NA	NA	1,979,533.03		
Water Disc	Charge						
G4-EN22	Total water discharge to surface water	m <sup>3</sup>	NA	NA	1,459,286.68		
Greenhous	se Gas Emission (GHGs)						
G4-EN15	Direct total GHGs	Tonnes CO₂e	NA	NA	3,076,991.31		
G4-EN16	Indirect total GHGs	Tonnes CO <sub>2</sub> equivalent	NA	NA	1,889.04		
G4-EN18	GHG intensity	Tonnes CO <sub>2</sub> /MWh	NA	NA	0.29		
G4-EN19	Reduction of Greenhouse Gas (GHG) emissions	Tonnes CO <sub>2</sub> e/GHG	NA	NA	40,199.00		
Emissions							
G4-EN21	Nitrogen oxides (NOx)	Tonnes NO <sub>2</sub>	NA	NA	985.08		
	SF6	Kg	NA	NA	5.00		
	Report Net generation from all generating capacity	MWh	NA	NA	9,876,082.24		
	Report Net generation from all combustion power plants	MWh	NA	NA	9,431,108.55		
Waste Dis	posal						
G4-EN23	Total Hazardous waste as defined by National Legislation	Tonnes	NA	NA	107.35		
	Recycle	Tonnes	NA	NA	44.11		
	Recovery	Tonnes	NA	NA	23.88		

#### **ENVIRONMENT**

GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD						
		ONT	2013	2014	2015				
Waste Disposal									
G4-EN23	Incineration	Tonnes	NA	NA	39.31				
	on-site storage	Tonnes	NA	NA	0.05				
	Total Non Hazardous waste as defined by National Legislation	Tonnes	NA	NA	665.39				
	Recycle	Tonnes	NA	NA	162.39				
	Recovery	Tonnes	NA	NA	34.25				
	Composting	Tonnes	NA	NA	189.12				
	Incineration	Tonnes	NA	NA	34.36				
	Other Management Method (Central wastewater treatment plant & Land reclamation)	Tonnes	NA	NA	245.27				

Remark: NA means data is not available.

LABOR PRACTICE								
GRI	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD					
			2013		2014		2015	
			Male	Female	Male	Female	Male	Female
Workforce								
G4-10,	Total Workforce	Persons	199		209		240	
G4-LA12		Persons	157	42	160	49	177	63
	Workforce by area							
	Rayong	Persons	109	22	108	24	112	24
	Chonburi-Sriracha	Persons	35	6	35	6	36	5
	Bangkok	Persons	13	14	17	19	29	34
	Others	Persons	-	-	-	-	-	-
	Workforce by age							
	<30 years	Persons	19	3	20	8	32	16
	30 - 50 years	Persons	131	38	133	41	137	47
	>50 years	Persons	7	1	7	-	8	0
	Workforce by employee type							

### LABOR PRACTICE

			DATA COLLECTION PERIOD					
GRI	REQUIRED DATA	UNIT	2013		2014		20	15
			Male	Female	Male	Female	Male	Femal
G4-LA12	Permanent contract	Persons	157	42	160	49	177	63
	Full-time	Persons	157	42	160	49	177	63
	Part-time	Persons	-	-	-	-	-	-
	Temporary contract	Persons	-	-	-	-	-	-
	Workforce by employee category							
	Executive	Persons	2	-	2	-	2	-
	Middle Management	Persons	16	3	16	4	19	5
	Senior	Persons	24	1	26	1	24	1
	Employee	Persons	115	38	116	44	132	57
New Empl	oyee							
G4-LA10	New Employee	Persons	6		21		32	
		Persons	6	0	11	10	17	15
	New Hire rate	% of total employees	3.02	0.00	5.26	4.78	7.08	6.25
	New Employee by area							
	Rayong	Persons	6	0	6	3	5	0
		% of total employees	3.02	0.00	2.87	1.44	2.08	0.00
	Chonburi-Sriracha	Persons	0	0	0	0	1	0
		% of total employees	0.00	0.00	0.00	0.00	0.42	0.00
	Bangkok	Persons	0	0	5	7	11	15
		% of total employees	0.00	0.00	2.39	3.35	4.58	6.25
	Others	Persons	-	-	-	-	-	-
		% of total employees	-	-	-	-	-	-
	New Employee by age							
	<30 years	Persons	3	0	3	6	13	10
		% of total employees	1.51	0.00	1.44	2.87	5.42	4.17
	30 - 50 years	Persons	3	0	8	4	4	5
		% of total employees	1.51	0.00	3.83	1.91	1.67	2.08
	>50 years	Persons	0	0	0	0	0	0
		% of total employees	0.00	0.00	0.00	0.00	0.00	0.00

### LABOR PRACTICE

			DATA COLLECTION PERIOD							
GRI	REQUIRED DATA	UNIT	2013		2014		2015			
			Male	Female	Male	Female	Male	Female		
Turnover										
G4-LA1	Total employee turnover rate	Persons	5	2	5	1	4	3		
		% of total employees	2.51	1.01	2.39	0.48	1.67	1.25		
	Voluntary employee turnover rate	Persons	5	2	5	1	4	3		
		% of total employees	2.51	1.01	2.39	0.48	1.67	1.25		
	Turnover rate by age group									
	<30 years	Persons	4	0	0	1	2	2		
		% of total employees	2.01	0.00	0.00	0.48	0.83	0.83		
	30 - 50 years	Persons	1	2	5	0	2	1		
		% of total employees	0.50	1.01	2.39	0.00	0.83	0.42		
	>50 years	Persons	0	0	0	0	0	0		
		% of total employees	0.00	0.00	0.00	0.00	0.00	0.00		
	Turnover by area									
	Rayong	Persons	4	0	4	0	2	0		
		% of total employees	2.01	0.00	1.91	0.00	0.83	0.00		
	Chonburi-Sriracha	Persons	1	2	0	0	0	0		
		% of total employees	0.50	1.01	0.00	0.00	0.00	0.00		
	Bangkok	Persons	0	0	1	1	2	3		
		% of total employees	0.00	0.00	0.48	0.48	0.83	1.25		
	Others	Persons	-	-	-	-	-	-		
		% of total employees	-	-	-	-	-	-		
Employees	s eligible to retire in the next 5 and 10 years by area	1								
G4-EU15	Rayong	Persons	5	0	5	0	5	0		
	Chonburi-Sriracha	Persons	0	1	0	0	0	0		
	Bangkok	Persons	2	0	2	0	3	0		
	Others	Persons	-	-	-	-	-	-		

### LABOR PRACTICE

			DATA COLLECTION PERIOD					
GRI	REQUIRED DATA	UNIT	2013		2014		2015	
			Male	Female	Male	Female	Male	Female
G4-EU15	Employees eligible to retire in the next 5 and 10 years	ears by category						
	Executive	Persons	1	0	1	0	1	0
	Middle Management	Persons	6	1	6	0	7	0
	Senior	Persons	0	0	0	0	0	0
	Employee	Persons	0	0	0	0	0	0
Employee	Receiving Regular Performance and Career Develo	oment Reviews						
G4-LA11	Executive	Persons	2	-	2	-	2	-
		%	100.00	0.00	100.00	0.00	100.00	0.00
	Middle Management	Persons	16	3	16	4	19	5
		%	84.21	15.79	80.00	20.00	79.17	20.83
	Senior	Persons	24	1	26	1	24	1
		%	96.00	4.00	96.30	3.70	96.00	4.00
	Employee	Persons	115	38	116	44	132	57
		%	75.16	24.84	72.50	27.50	69.84	30.16

### HEALTH AND SAFETY

0.51	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD				
GRI	TIEQUITED DATA	ONT	2013	2014	2015		
Fatalities							
G4-LA6	Total Workforce	Cases	0	0	0		
	Supervised worker	Cases		0	0		
	Total Recordable Injuries Case						
	Total Workforce	Cases	0	0	0		
	Supervised worker	Cases	0	0	0		

### HEALTH AND SAFETY

	REQUIRED DATA	UNIT	DATA COLLECTION PERIOD						
GRI	TIEQUITED DATA OINT		2013	2014	2015				
Fatalities									
G4-LA6	Injuries Rate (IR)								
	Total Workforce	Cases/1 million  Manhours	0	0	0				
	Supervised worker	Cases/1 million  Manhours	0	0	0				
	Lost-Time Injury Frequency Rate (LTIFR)								
	Total Workforce	Cases/1 million  Manhours	0	0	0				
	Supervised worker	Cases/1 million 0  Manhours		0	0				
	Occupational Diseases Rate (ODR)								
	Total Workforce	Cases/1 million  Manhours	0	0	0				
	Supervised worker	Cases/1 million  Manhours	0	0	0				
	Lost Workday Case (LWC)								
	Total Workforce	Cases	0	0	0				
	Supervised worker	Cases	0	0	0				
	Lost Day Rate (LDR)								
	Total Workforce	Day/1 million Manhours	0	0	0				
	Supervised worker	Day/1 million Manhours	0	0	0				
Days work	ed by contractor and subcontractor employees on e	electric utility systems (ge	neration, distrib	ution, transmissi	on)				
G4-EU17	Construction activities	Day	365	365	365				
	Operation activities	Day	365	365	365				
	Maintenance activities	Day	365	365	365				
Customer	Health and Safety								
G4-EU25	Number of <u>injuries</u> to the public involving company assets, including legal judgment, settlements and pending legal cases of diseases	Cases	0	0	0				

### HEALTH AND SAFETY

	DECLUDED DATA	UNIT	DATA COLLECTION PERIOD				
GRI REQUIRED DATA		ONTI	2013	2014	2015		
Customer	Health and Safety						
G4-EU25	Number of fatalities to the public involving	Cases	0	0	0		
	company assets, including legal judgment,						
	settlements and pending legal cases of diseases						
	Contractor and subcontractor working on electric	%	0	0	0		
	utility systems employees that have undergone						
	relevant health and safety training in comparison						
	to total contractor and sub-contractor						

## CORPORATE SOCIAL RESPONSIBILITY

			DATA COLLECTION PERIOD				
GRI	REQUIRED DATA	UNIT	2013	2014	2015		
Philanthrop	pic Activities						
G4-EC1	Total contribution	Baht	2,375,523	1,809,365	36,450,515		
	Charitable donations	Baht	0	0	5,325,420		
	- Cash contribution	Baht	2,375,523	1,809,365	5,184,075		
	- Products or services donations	Baht	0	0	141,345		
	Community investments	Baht	0	0	31,125,095		
	Commercial initiatives	Baht	0	0	0		
G4-EU22	Number of people physically or economically displaced	Persons	0	0	0		
	and compensation						
G4-EU26	Population unserved in licensed distribution or service areas	%	0	0	0		

# **GRI CONTENT INDEX**

GENERAL STANDARD DISCLOSURES	PAGE/LINK	REMARKS
STRATEGY AND ANALYSIS		
G4-1	9	
ORGANIZATIONAL PROFILE		
G4-3	GPSC Annual Report 2015, 18-36	
G4-4	14	
G4-5	7	
G4-6	13	
G4-7	13	
G4-8	14-15	
G4-9	15	
G4-10	70-73	
G4-11	Not Applicable	GPSC does not have the official trade union. However, there is "GPSC Welfares Committee" which its members are as the representatives from operation units, in order to support the labor's right, welfare and benefit.
G4-12	12	
G4-13	Not Applicable	There was no structural change during the report period.
G4-14	26-27	
G4-15	43-44, 47, 59	
G4-16	43-44, 47, 59	
IDENTIFY MATERIAL ASPEC	TS AND BOUNDARIES	
G4-17	21, 66	
G4-18	7, 20	
G4-19	20	
G4-20	21	
G4-21	21	
G4-22	Not Applicable	This is the first sustainability report developed by GPSC.
G4-23	Not Applicable	This is the first sustainability report developed by GPSC.

#### **GENERAL STANDARD DISCLOSURES**

SENERAL STANDARD DISCLO	OUTLE						
GENERAL STANDARD DISCLOSURES	PAGE/LINK	REMARKS					
STAKEHOLDER ENGAGEMENT							
G4-24	17-19						
G4-25	17-19						
G4-26	17-19						
G4-27	17-19						
REPORT PROFILE							
G4-28	7						
G4-29	Not Applicable	This is the first sustainability report developed by GPSC.					
G4-30	7						
G4-31	7						
G4-32	76-79						
G4-33	Not Applicable						
GOVERNANCE							
G4-34	GPSC Annual Report 2015, 14, 18-36						
ETHICS AND INTEGRITY							
G4-56	22-23						

### SPECIFIC STANDARD DISCLOSURES

MATERIAL ASPECTS	DMA AND INDICATORS	PAGE/LINK	OMISSIONS/ REMARKS
CATEGORY: ECONOMIC			
Indirect Economic Impact	G4-DMA	18	
	G4-EC7	63	
Availability and Reliability	G4-DMA (EUSD)	30-33	
	EU10	16, 32	
Research and Development	G4-DMA (EUSD)	35-36	

### SPECIFIC STANDARD DISCLOSURES

MATERIAL ASPECTS	DMA AND INDICATORS	PAGE/LINK	OMISSIONS/ REMARKS
CATEGORY: ENVIRONMENTA	AL		
Water	G4-DMA	45	
	G4-EN8 (EUSD)	45, 69	
Biodiversity	G4-DMA	48	
	G4-EN13	48-49	
Emissions	G4-DMA	46	
	G4-EN15	43	
	G4-EN21	46, 69	
Supplier Environmental	G4-DMA	37	
Assessment	G4-EN33	38	
Environmental Grievance	G4-DMA	24-25	
Mechanisms	G4-EN34	25	
CATEGORY: SOCIAL			
SUB-CATEGORY: LABOR PRA	CTICES AND DECENT	WORK	
Employment	G4-DMA (EUSD)	52	
	G4-LA1 (EUSD)	53	
	G4-LA2	54	
Labor/Management Practice	G4-DMA	18	
	G4-LA4	54-55	
Occupational Health and	G4-DMA	31, 57	
Safety	G4-LA6 (EUSD)	58	
Training and Education	G4-DMA	53-54, 57	
	G4-LA9	53-54	
	G4-LA10	53, 57-58	
Supplier Assessment for	G4-DMA	37	
Labor Practice	G4-LA15	31, 37-39	

### SPECIFIC STANDARD DISCLOSURES

MATERIAL ASPECTS	DMA AND INDICATORS	PAGE/LINK	OMISSIONS/ REMARKS					
CATEGORY: SOCIAL								
SUB-CATEGORY: SOCIETY								
Local Communities	G4-DMA (EUSD)	25, 45						
	G4-SO2	45-46						
Anti-Corruption	G4-DMA	25						
	G4-SO3	25-26						
	G4-SO4	25, 53, 66-67						
	G4-S05	66-67						
Grievance Mechanisms for	G4-DMA	24-25						
Impacts on Society	G4-SO11	25						
Disaster/Emergency Planning and Response	G4-DMA (EUSD)	58						
SUB-CATEGORY: PRODUCT R	ESPONSIBILITY							
Product and Service Labeling	G4-DMA	34						
	G4-PR5	34-35						

Remark: EUSD – Electric Utilities Sector Disclosures



## **SURVEY OF READERS' OPINIONS**

Your views and suggestions after reading the Sustainability Report 2015 will be incorporated to improve our business performances and future Sustainability Report Global Power Synergy Public Company Limited (GPSC) appreciates your valuable feedbacks.

1. Please fill in the basic informa	tion			
Gender Pemale		O Male	O No need to specify	
2. Which of the following stakeho	older groups applied to	o you?		
Financial Institutions, Investors & Shareholders		Government Agencies Employees		S
Partners Suppliers & Contractors		Customers	OSociety & Communities	
Other (Please describe		)		
3. How did you find out about Gl	PSC's Sustainability R	eport?		
GPSC' S Website Seminar/Lectur		re/Exhibition	GPSC's Employees	
Other Websites Newspaper/Ma		agazine	Other (Please describe)	
4. What is the reason for your int	terest in GPSC's Susta	ainability Report?		
O To obtain investment information		In purpose of research and education		
O To understand GPSC		To obtain specific information (Please describe)		
O To prepare your company sustainability report O Other (Please describe)				
(or Corporate Social Resp	onsibility Report)			
5.Please rate your satisfaction in the presentation of GPSC's Sustainability Report				
Completeness of the report	High	) Medium	Low	Dissatisfied
Relevance of issues presented	d in the report 🔘 High	) Medium	Low	Dissatisfied
Interesting content	High	Medium	Low	Dissatisfied
Easy to understand	O High	Medium	Low	Dissatisfied
Report design	High	) Medium	Low	Dissatisfied
Overall satisfaction of the repo	ort O High	) Medium	Low	Dissatisfied
6. Which chapter of the sustaina	bility report 2015 do y	ou find most interesting? (Plea	ase describe)	
7. Which chapter of the sustaina	bility report 2015 do y	ou find least interesting? (Plea	se describe)	
8. Does this report include all material issues for the sustainability of GPSC?				
Yes, it does No, it does not				
If not, please specify which iss	sues should be added	to		
9. After reading this report, do you recognize the commitment of GPSC in sustainability? (Please describe)				
10. Additional suggestions for the future sustainability report.				
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Global Power Synergy Public Company Limited				
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