

SUSTAINABLE DEVELOPMENT REPORT 2020


พหุกิจงานยั่งยืน ดันประโยชน์สู่สังคม







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MESSAGE FROM CHAIRMAN OF SOCIAL RESPONSIBILITY COMMITTEE



A handwritten signature in black ink, which appears to read 'Viroj'.

(Mr.Viroj Theeravatvatee)
CHAIRMAN OF SOCIAL
RESPONSIBILITY COMMITTEE

The outbreak of **Coronavirus 2019** or **COVID-19** made the year 2020 a tough year for individual and businesses throughout the world. Sahacogen (Chonburi) Public Company Limited and subsidiaries, as companies in energy industry, had been slightly affected by the situation. Even though the fact that **COVID-19** has no significant negative impact to the group company comparing to other industries, the executives are aware of the business continuity issue and effect to stakeholders. The preventive measures were designed to cover internal process, partners, and communities. The company supported resources by donating both consumable items and public health support. The company also put concerns and care in dealing with each unit in the business value chain; and wished all stakeholders to be safe from the pandemic.

Amid the operational limitation, the group company's executives and employees were still focusing on putting the priority to corporate social responsibility in all dimensions; environment, society and economy. The business target concerning sustainability was adding more clean energy (Green Electron) production. The first example was a project ran by Impact Solar Co., Ltd.; the affiliate company, installing solar cells on rooftop and floating platform in the area of Saha Group industrial park. Moreover, the company started an innovation project producing bamboo pulp using the residual steam from the power generating process. The company also produced charcoal (Biochar) from bamboo nodes which were byproducts from bamboo planting project in Lampang and Nan. The bamboo planting was a coordinative project that government and private sector supported planting activity to fight against deforestation and unemployment problem. The project in Nan has been running for 3 years. By supporting the project, the company indirectly supporting the innovation creation and returning the benefit to society corresponding to the sustainable development goals (SDGs) suggested by the United Nation.

The evidence of the determination of executives and employees together with the co-operative support from business partners in driving business under good corporate governance and sustainability concerns shown in many ways. Firstly, the company was rated as an "Excellent" listed company in terms of corporate governance. Secondly, the annual shareholders' general meeting was rated based on AGM checklist as "**Excellent**" (5 TIA). Third, the company was selected as a sustainable stock in Thailand Sustainability Investment 2020 (THSI) for the third consecutive year. The company got the certificate of recognition in sustainability disclosure 2020 from Thaipat Institute for the second year. The subsidiary companies were marked "Green Industry" by certified as level 2 participants in Green Activity project.

Good corporate governance and social responsibility would be the main functions driving Sahacogen's sustainable development.



SAHACOGEN AND AFFILIATES

Sahacogen & Affiliates, operating energy business.

Since 1999, the first cogeneration combined cycle power plant was established in Saha Group Industrial Park, Sriracha, Chonburi province. The plant had installed capacity of 122 Megawatts of electricity and 40 tons of steam per hour, using natural gas as a main fuel. 90 Megawatts of electricity is distributed to Electricity Generating Authority of Thailand (EGAT) under the Small Power Producers (SPP) program. It also supplies electricity and steam to Saha Pattana Inter-Holding Public Company Limited. Sahacogen registered as a public company on October 4, 2002 and expanded capacity to 174 Megawatts of electricity and 81 tons of steam per hour since 2004.

Due to the growing electricity usage from factories in **Saha Group Industrial Park, Sriracha**, the Company decided to expand of our third phase (III Project) combined-cycle cogeneration power plant. The power plant has the net capacity of 28.7 Megawatts (MW) of electricity and 15 tons of steam per hour. The project is completed and started commercial operation (COD) on November 20, 2018. Consequently, the total cogeneration capacity of the Company is now 214 MW of electricity and 96 tons of steam per hour.

Regarding business expansion, Sahacogen & Affiliates focus on renewable energy coupled with social business enterprise depending upon community, social and environmental responsibility.

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The success of the renewable energy development and fast-growing tree plantations motivated Sahacogen to develop power plant project using eucalyptus bark and branches from the paper pulp production process of paper business of Siam Cement Group and other agro residues. Sahagreen Forest Company Limited was established for developing power plant with installed capacity of 7.5 Megawatts located in Prankrattai district, Kamphaengphet province. The plant has started commercial operation since December 2012 distributing electricity to the PEA VSPP program.

The company has been focusing on moving towards green energy businesses. In 2018, the company had made a jointed-investment in Impact Solar Co., Ltd. which is in solar rooftop business.



OPERATION AND MAJOR CHANGES IN 2020

Sahacogen (Chonburi) Public Company Limited has been expanding capacity to support the industrial growth. In 2020, “Sahacogen co-generation Power Plant Project (Extension Phase 4)” has been implemented as planned. The project’s main fuel is natural gas. The power plant is located in the Sahapat Group Industrial Park - Sriracha, Nong Kham Subdistrict, Sriracha District, Chonburi Province. The main purpose is distributing electricity to the Electricity Generating Authority of Thailand according to the power purchase agreement with small power producers in the category of firm with cogeneration system. The agreement will expire in 2019-2025 (new power plant construction)

This project includes new machine installation with capacity of 78.15 megawatts. After the installation the company will have total production capacity of 292.85 megawatts. The adding capacity will be ready to operate in 2024. The original machines will be spared and used as replacement machines during maintenance. Planning for the spare engines will help reduce the rental cost.



Sahacogen co-generation Power Plant Project (Extension Phase 4)



PROJECT STATUS

The company is now preparing the environmental impact assessment (EIA) report and public participation activities. The activities will take place during June-December 2020 allowing local community to involve and share suggestions to the project. The construction will start after the EIA report is approved from the government. The company has set the standard of operation procedure that includes the concern of safety; and environment effects to local community and stakeholders. The publication of information has been continuously provided to stakeholders.



SAHACOGEN BUSINESS STRUCTURE

THE GROUP'S BUSINESS SAHACOGEN



SAHACOGEN (CHONBURI) PUBLIC COMPANY LIMITED

Location : Chonburi Province
Fuel : Natural gas
Products : Electricity 214 MW Steam 96 TPH
System : Cogeneration Combined Cycle



1996



SAHACOGEN GEEN CO.,LTD.

Location : Lamphun Province
Fuel : Biomass
Products : Electricity 9.6 MW Steam 25 TPH
System : Cogeneration



2006



SAHAGREEN FOREST CO.,LTD.

Location : Kamphaeng Phet Province
Fuel : Biomass
Products : Electricity 7.5 MW
System : Thermal Power Plant



2008



IMPACT SOLAR CO.,LTD.

Location : THAILAND
Fuel : Solar
Products : Electricity > 60 MW
System : Solar Rooftop



2015



Vision



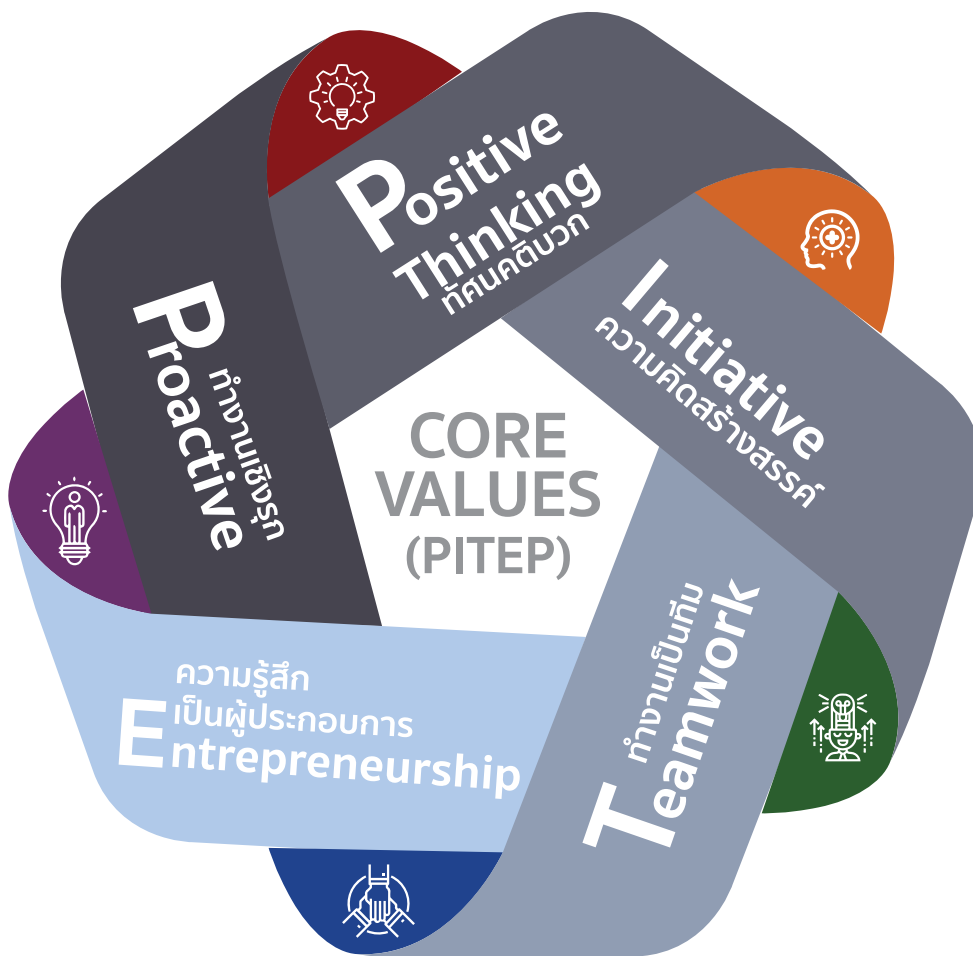
We will be a leading small power producer and relating businesses with the continuous and sustainable developments to maximize the satisfaction of stakeholders.



Mission



1. To produce and distribute high quality and reliable energy to meet the requirements and satisfactions of customers
2. To enhance capability and competence with continuous development
3. To earnestly respond to social, partners and employees by management in compliance with the good governance
4. To efficiently and effectively operate with the awareness to safety, occupational health hazards and environment



ABOUT THIS REPORT

This sustainable development report will be annually published separately from the company annual report. The sustainable development report is made to present the company's operation in the area of social responsibility based on the policy from the Board of Directors. The Corporate Governance Code (CG Code), Risk Management and Corporate Social Responsibility activities in 2018 are also included in the report to comply with Global Reporting Initiatives Version 4 (GRI 4) standard. The content covered was the operation by Sahacogen (Chonburi) PCL and subsidiaries.

In the year 2020, the company has brought the operating results from January 1, to December 31, 2020. The scope of this report shows the operation in the areas of economy and environment issues. The report focuses the actions with stakeholders mainly in the business operation especially CSR-in-process activities. The report also covers the actions based on the policy of collaboration with government sector and local communities. The anti-corruption actions based on the policy of Thailand's Private Sector Collective Action Coalition Against Corruption (CAC) with the clear results are also presented in report.

The Sahacogen Group has identified key issues based on the scope of the report.

By considering the expectations of both internal and external stakeholders. And apply a process for assessing key issues in accordance with the Global Reporting Initiative (GRI) in the process of preparing the sustainability report. To prioritize each issue according to stakeholders' opinions and Sahacogen interests. And in line with the United Nations Sustainable Development Goals (SDGs) these issues will help shape the sustainable business direction of the organization. There are 4 steps to the process of selecting material issues and the extent of impact. With operation details as follows:

STEP

1

Identification

Working Group for Sustainable Development Report Consider selecting sustainability issues related to Sahacogen business operations. Taking into account the issues of Sahacogen's focus on the development of the organization. Which has related impacts both inside and outside the organization in the economic, social and environmental dimensions including taking into account the expectations of the stakeholders on the selected key issues.

STEP

2

Prioritization

The sustainability issues selected will be prioritized. It is based on the Materiality Test, which screened all issues through the criteria for consideration, assessment and decision-making by stakeholders (Influence on Stakeholder Assessments and Decisions) and the level of importance of the group's economic, social and environmental impacts. Sahacogen (Significance of The Organization's Economic, Social and Environmental Impacts) through participation in meetings with senior management to prioritize various issues. Related to business operations.

STEP

3

Validation

Review of important issues by the central agency responsible for the preparation of the Company's report. And present important issues to the top management in consideration and approval. To ensure the identification of issues is complete and that the content disclosed in the report is consistent with the principles outlined in the report.

STEP

4

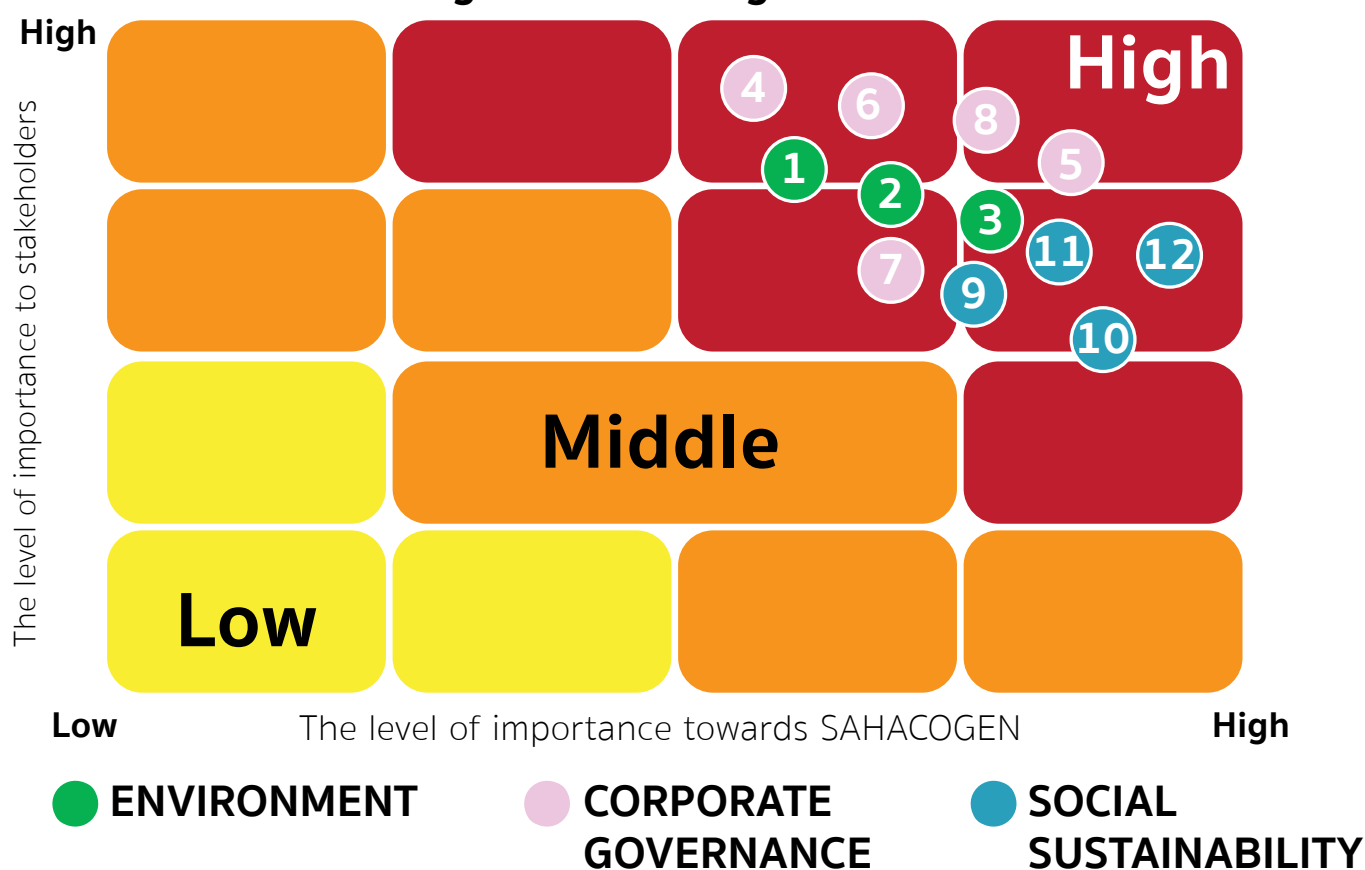
Review

Interviews and solicit opinions from stakeholders directly after publication of the report. To know the level of satisfaction with the sustainability report of the company in various issues covering topics and content, sufficiency of information, reliability of information, presentation method And a copy of the report. As well as suggestions on other sustainability issues that the company should be presented in the next report. The recommendations gained from this process will be developed for the next year's report. In order to meet the needs and expectations of the stakeholders to the maximum.

Sahacogen Group defines 14 key sustainability issues in 2020, divided into three groups according to the Sahacogen Group's Organizational Development Guidelines as follows:

ENVIRONMENT	CORPORATE GOVERNANCE	SOCIAL SUSTAINABILITY
1. Environmental management	4. Good corporate governance.	9. Employees development
2. Climate change and carbon dioxide reduction	5. Risk and Crisis Management	10. Safety and Occupational Health
3. Water management and energy management	6. Anti-Corruption	11. Human rights and care of employees
	7. Supply Chain Management And engagement with stakeholders	12. Participation in community and social development
	8. Economic value creation	

Results of the Key Sustainability Assessment 2020



The report is prepared in printed version and electronic version. The company also publishes this report through website at www.sahacogen.com to provide the accessibility to information for all stakeholders. The company is opened to suggestion and questions. .

The contact is Social Responsibility Unit, Sahacogen (Chonburi) PCL.
The address is 636 Moo 11 Sukaphiban 8 Road, Tambol Nongkharm, Amphor Si Racha Chonburi 20230
Telephone number 038-481-555 E-mail: pr-csr@sahacogen.com www.sahacogen.com

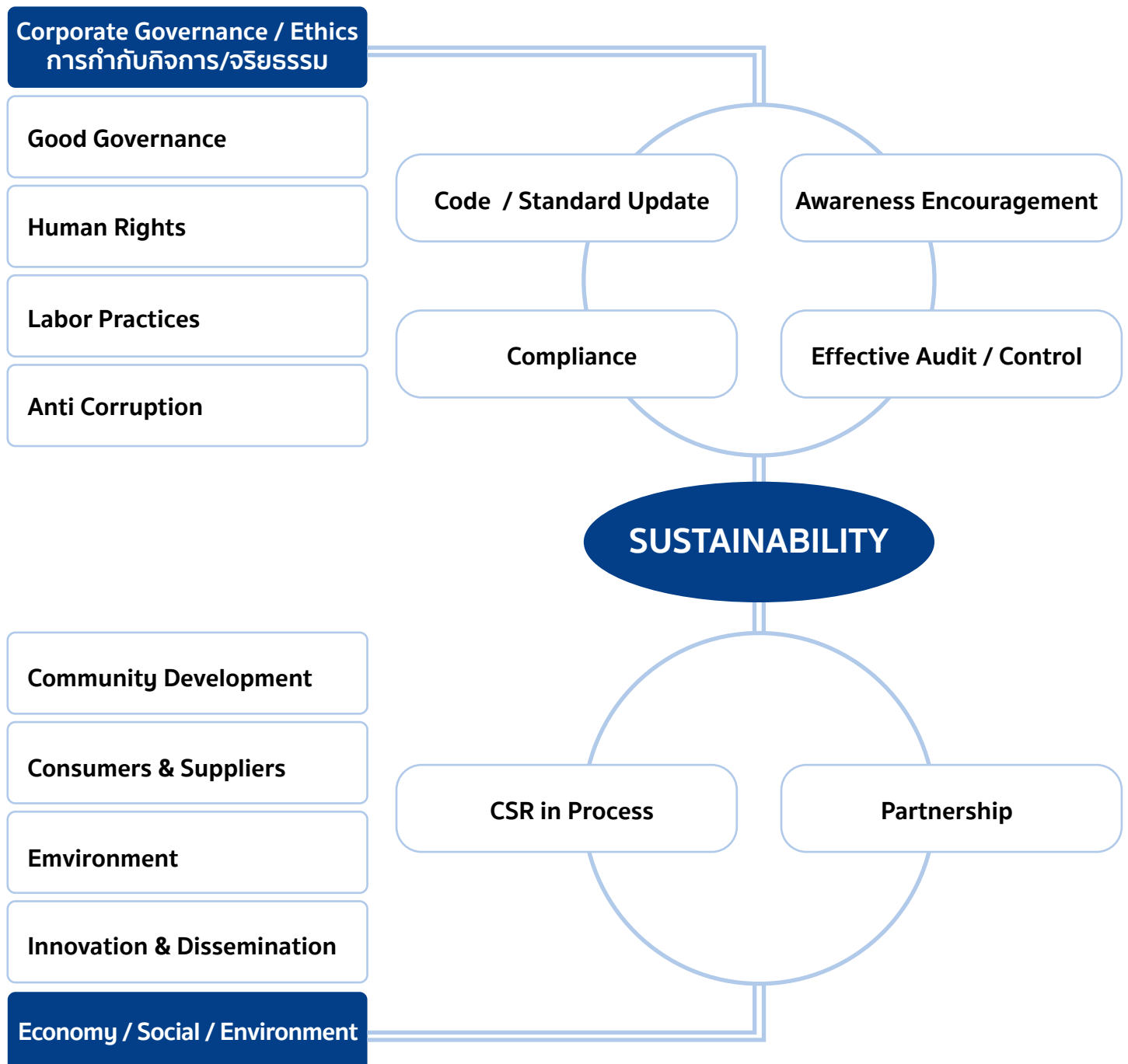
THE SOCIAL RESPONSIBILITY FOR SUSTAINABILITY DEVELOPMENT

The company social responsibility policy has 2 groups of action.

Group 1 : The compliance and business ethics compose of the corporate governance, human rights, laborforce fair treatment, and anti-corruption. The strategies are system development, growth mindset development and monitoring.

Group 2 : The sustainability in economic, social and environmental aspects compose of social development, business ethics, environment and energy saving, innovation dissemination. There are 2 strategies for implementation

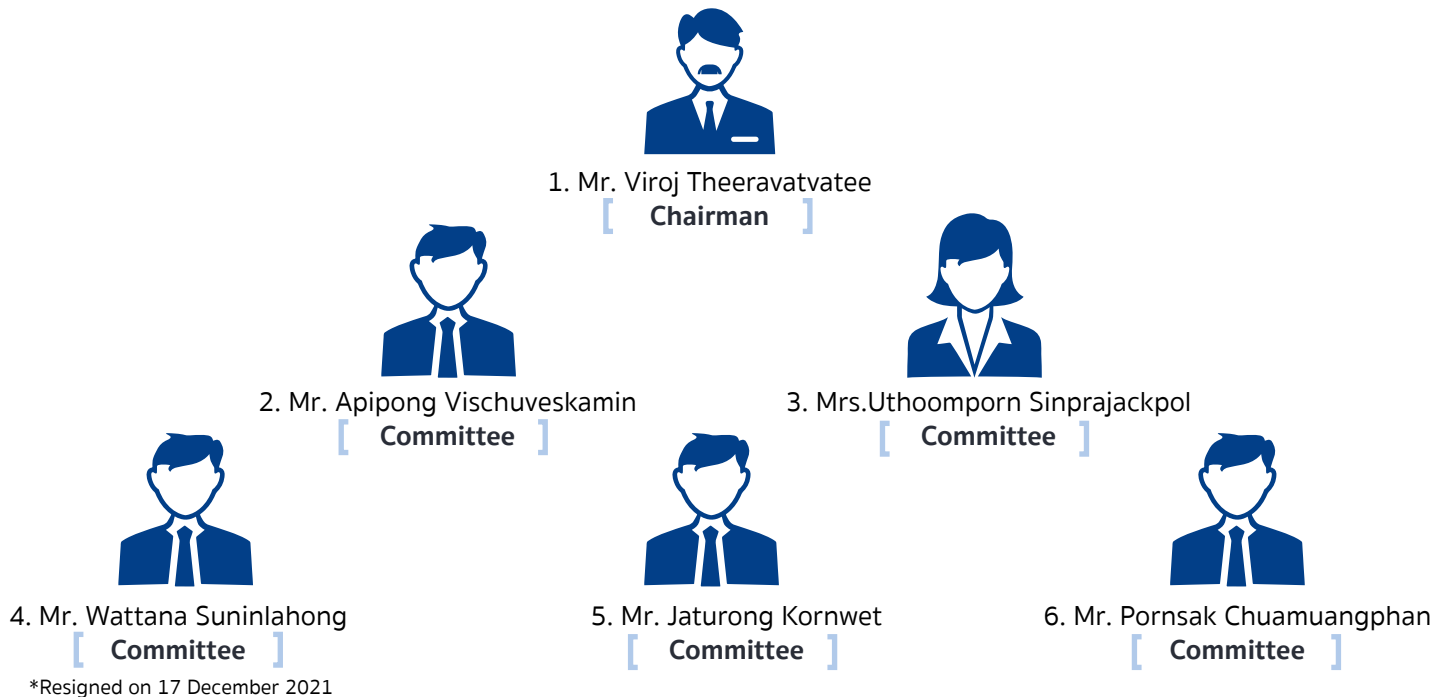
- 1) CSR in process is combining all policy into activities within the business process. The combination of activities is aimed for the continuity of process, monitoring and budget allocation.
- 2) Partnership is the creation of the collaboration among partners.



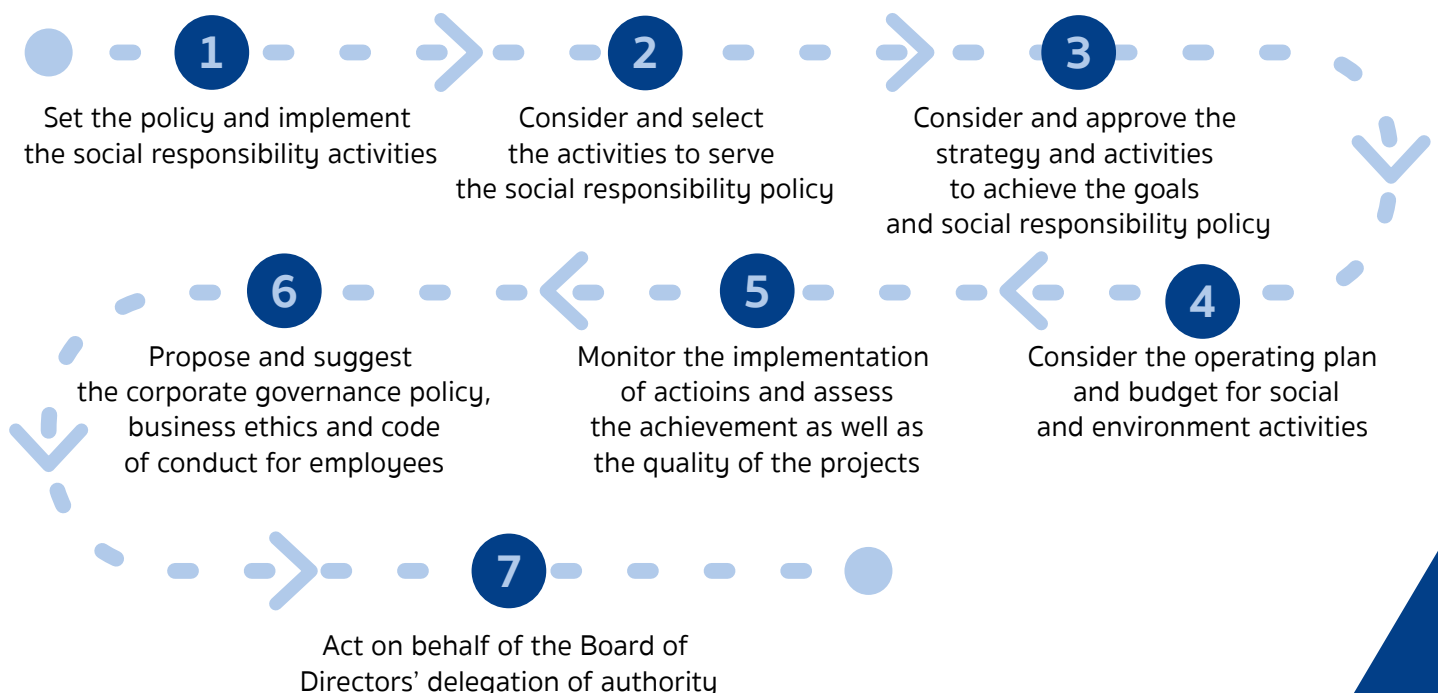
CORPORATE SOCIAL RESPONSIBILITY COMMITTEE

The Corporate Social Responsibility Committee is composed of directors, management or other people with experiences in related fields. The number of the committee is 3 persons with the term of 1 year. The nomination will be annually approved by the Board of Directors after the annual general shareholders meeting.

Members of Corporate Social Responsibility Committee for the year 2020 are;



The responsibilities of the Social Responsibility Committee



CORPORATE SOCIAL RESPONSIBILITY POLICY



1. Good Governance

Sahacogen does business in accordance with the good corporate governance principles, ethics, moral, social benefits and stakeholders' fair treatment. The company also focuses on increasing its values and supporting the company sustainable growth.



2. Anti Corruption

Transparency, integrity and justice are the essence of Sahacogen's business operation. Illegal and immoral practices are not acceptable.



3. Human Rights

Sahacogen supports the human rights protection. All stakeholders and other people will be equally treated regardless of gender, skin color, race, religion, personal belief.



4. Labor Practices

Sahacogen provides fair employee benefits and welfares according to the labor laws and occupational health and safety management principles.



5. Consumers and Suppliers

Sahacogen is continually developing the operational system to efficiently deliver good quality products and services to customers. We treat our suppliers with fair trades. Moreover, we are focusing on building long term relationships with customers and suppliers.



6. Environment

Sahacogen promotes the resources management for sustainability. We ensure the compliance in environmental friendly procedures to reduce the risk and negative effects from our operation. We also help to preserve the local ecology systems and communities environment to be sustainable.



7. Community Involvement and Development

Sahacogen supports the local development in terms of education, economy and living quality. We encourage our staff to regularly participate in public benefit and local traditional activities.



8. Innovation and Dissemination

Sahacogen gives collaborative supports to local communities and local educational institutions to conduct studies in raw material productivity improvement, using by-products in creating new inventions, and also practically promote such ideas and practices to the local communities

United Nations Sustainable Development Goals: UN SDGs

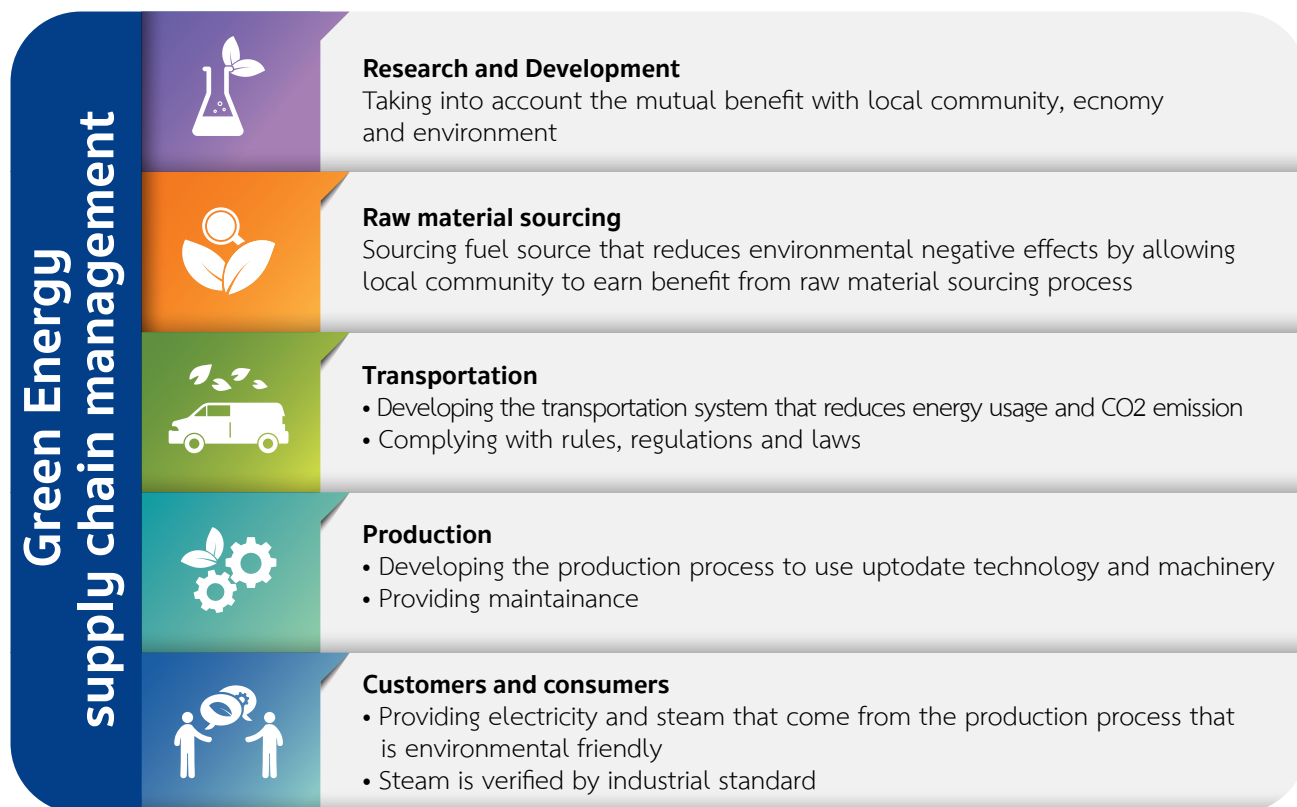


Adherence to the United Nations Global Compact

	The 10 Principles	Sahacogen's Operation
Human Rights	<ol style="list-style-type: none"> 1. Business should support and respect the protection of internationally proclaimed human rights. 2. Business should make sure they are not participating in activities abusing human rights. 	<ul style="list-style-type: none"> • The code of conduct defines "human rights" according to its corporate governance policy. • Equal opportunity employer: avoids discrimination based on gender, skin color, race, religion, personal belief, age, disability, or other characteristics not relevant to the job scope. • Provides communication channels for employees who want to petition claims of inequitable treatment or infringement on human rights. All claims are processed fairly.
Labor	<ol style="list-style-type: none"> 3. Business should uphold the freedom of employees' association and their rights to claim for group negotiation. 4. Business should eliminate all forms of forced and compulsory labor. 5. Business should stop abolition of child labor. 6. Business should stop discrimination in respect of employment and occupation 	<ul style="list-style-type: none"> • Under the legal framework, all employees will be treated with respect, dignity and all basic rights in the workplace. • All employees will be given an equal opportunity for growth and promotion through encouraged training and exchange of knowledge. • Compensation is based on an employee's knowledge, competence, position, responsibility and performance. The performance evaluation will be conducted fairly. • A Welfare Committee will be established to consider welfare benefits for employees at all levels. This includes medical treatment, provident funding, and welfare extending to family members. • All facilities will operate under a safe, hazard-free environment. • Strictly prohibits forced labor, child labor, and illegal labor in all manners of business.
Environment	<ol style="list-style-type: none"> 7. Business should support a precautionary approach to environment challenges. 8. Undertake initiatives to promote greater environmental responsibility. 9. Encourage the development and diffusion of environmentally friendly technologies 	<ul style="list-style-type: none"> • The company defines the organization's vision as "Continuous and Sustainable Organization Development" focusing on business operation in compliance with sustainable growth, responsibility to society and environment. • Setting Company's mission to adhere to good governance with respect to society, counter parties and employees; and also respond to any concerns regarding safety, occupational health hazards and environment concerns. • The CSR Committee, Safety Health Occupation Committee, and the Safety Committee will conduct compliance regularly. • Information will be transparent, accurate, in plain language, and will be disclosed in a timely manner. Feedback and impacts on nearby communities will be handled in a timely manner. • Build and cultivate CSR and environmental awareness to employees at all levels. Resources will be used efficiently and sustainably. • Support the development and the use of environmental friendly technology.
Anti-Corruption	<ol style="list-style-type: none"> 10. Business should work against corruption in all forms, including extortion and bribery. 	<ul style="list-style-type: none"> • Policies are required to comply with the law. Anti-corruption, giving and receiving gifts, entertainment, and support/donations must be in line with policies and disclosed to management. • Promote the organization culture to act with integrity. • Management controls and internal audits will operate efficiently and effectively. • Organization and presentation of financial reports must be accurate and transparent. • Establish communication channels for issues relating to corruption. Ensure safety, anonymity, and protection for anyone who comes forward. Audit Committee will investigate all cases in a transparent and equal manner.

Supply Chain Management

The power and steam production process is managed under “Green Energy” theme. The social responsibility and mutual benefit are the core ideas embedded in all steps along the value chain starting from research and development, production and delivery.



Supply Chain Management Policy

By establishing guidelines for dealing with trading partners that will lead to the development of product / service quality and mutual sustainable relationship management. Which the company believes that it can lead to the development of potential Building a competitive advantage. As well as can be able to manage the risks in the business operation of both the Company and its trading partners for a long term sustainable.

Good practices for trading partners

Business Ethics Policy and Guidelines for Sahacogen Business Partners

1. Operate procurement with transparency. Strictly comply with trade partner selection regulations and treat stakeholders equally on the basis of fair competition, equality and mutual respect. Correct, clear, complete, verifiable in the supply chain where the business is legal Comply with occupational safety and health standards Environment friendly.
2. Do not use confidentiality or information of trading partners for your own benefit. Or the wrong person involved.
3. Build relationships and understanding with each other. Exchange of knowledge for development the products and services for mutual growth.
4. Compliance with trade agreements and providing accurate information, in case that not possible to practice, negotiate with trade partners or work together to come up with a solution and prevent a mistake.
5. Procurement with regard to the quality and safety of products and services which may affect the health of employees, communities, society and environment.
6. Not seeking for benefits, not asking, receiving or agreeing to receive property or any other benefit from procurement. Which is beyond the commercial terms

Moreover, we have developed the good practices for business partners to help manage environmental risks, Social and corporate governance (ESG). As well as increase and develop partners' potential especially to support new government laws that may lack understanding until the procurement is delayed. Therefore, it is important to drive the Sahacogen business to smooth and achieve organizational objectives.

Partner capability

Partner capability, capacity, standard system, services, transportation, safety, occupational health Including business partners that are responsive to society and environment By using questionnaires for initial assessment and conducting audits to ensure that the selected partners have sufficient potential and reliable.

Management of partners

By using ethier high value procurement criteria or a significant partner that may have an impact on the manufacturing process or a trading partner with a small number of merchandise and services risk consideration and supplier risk management. Including communication and business visits of business partners in appropriate in order to formulate strategies and development of cooperation for the further.

Assessing partner risks

Purchasing risk analysis based on suppliers with high purchasing value or partners with key production factors which may affect delivery to customers. Therefore need to assess the risk in any situation that can happen and make a plan to support to ensure that the risk can be managed in a level that does not affect customers and businesses.

Making a risk management plan by trading partners. The partners have to assess the risks of their own business operations on topics that have the opportunity to arise and lay out a guideline for response in order to avoid any impact on business operations between each other.

Supplier audit

Establish the partner management measures, including the audits to ensure traders comply with the requirements. According to international standards, capability of the distributor to maintaining quality of products and services such as the environmental, social, and business operations (ESG On-site Audit), Site Visit, in order for suppliers to comply with Code of Business Ethics.

Supplier audit

- Providing customer information such as product expectations, standards, quality criteria.
- Providing knowledge on production processes and technology for joint product development
- Development of business partners to aim for (Green Procurement) that is in line with the needs of customers and consumers in the future.
- Partner development in operating in accordance with business ethics.
- Development of secondary partners for the opportunity to become more important trading partners.

In 2020, We have developed the following standards, regulations and internal processes related to risk management in the supply chain.

- Follow the Sahacogen Supplier Code of Conduct, which will drive Sahacogen's partners to be aware of social and environmental responsibility. Encourage partners to develop operational processes that about the human rights, Fair labor practices not using forced labor, rights of children, Safety and Occupational Health Management.

- Follow the supplier audit manual for environmental, social and good governance. To raise awareness for partners to follow Sustainable practice and reduce the risk of ESG that may occur throughout the supply chain.

- Follow the vendor selection assessment process by using a weighting assessment of quality and price to select trading partners for the quality partners with reasonable prices according to transparent and verifiable procurement procedures.

Green Procurement

Sahacegen has created a green procurement guide to implement in the procurement process. This is part of the supply chain management policy aimed at minimizing the impact on the environment. Focus on the selection of environmentally friendly products and start the green procurement process in 2020

Code of Conduct and Business Ethics

We committed to the code of conduct in conducting business with partners. By complying with Thai labor standards and anti corruption. In this regard, we expanded the network of partners to sign the letter for commitment in business ethics as follows

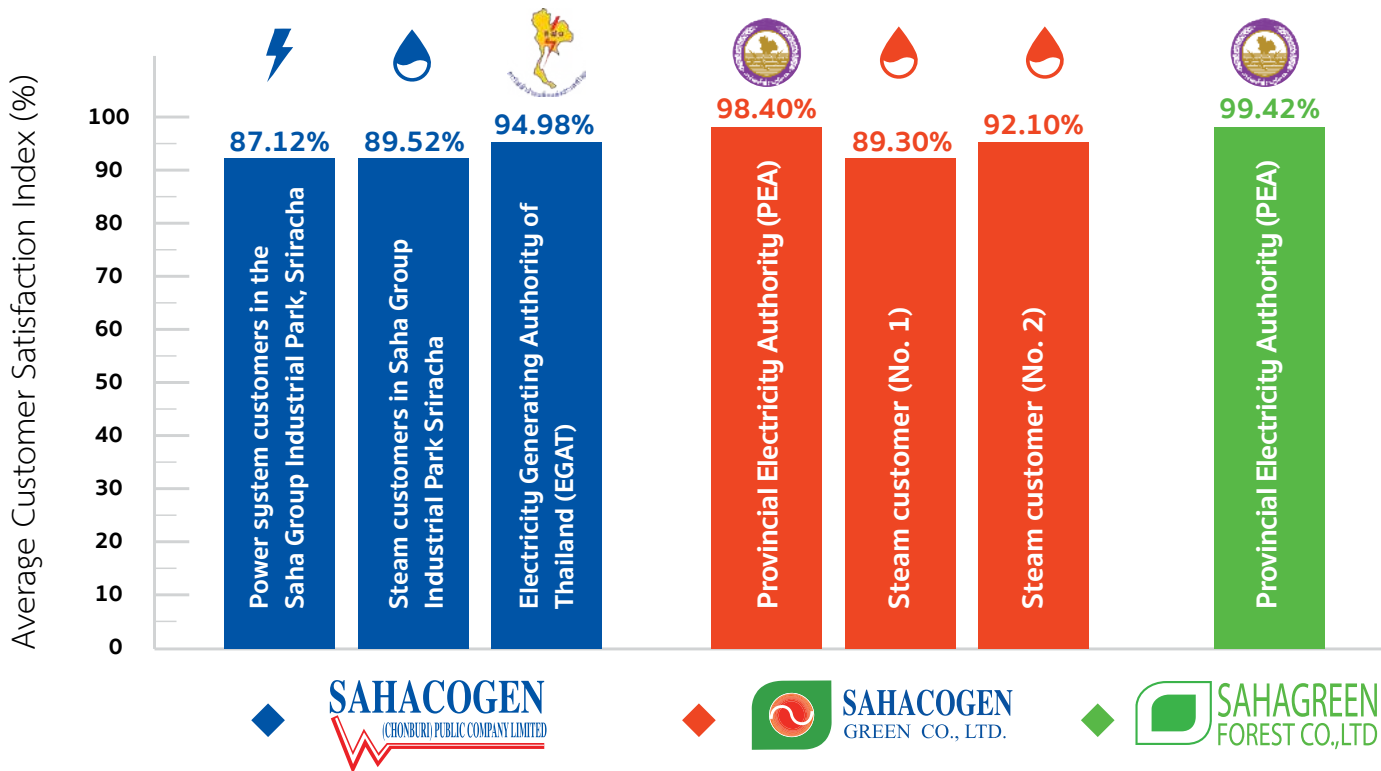


[2020 SUPPLIER SATISFACTION SURVEY]



In 2020 there are no disputes with partners.



2020 CUSTOMER SATISFACTION SURVEY






STAKEHOLDER ENGAGEMENT

SAHACOGEN & AFFILIATES have realized on the accountability and the right of the stakeholders in various groups, both externally and internally, including government sectors, related offices throughout the responsibilities to social, community and environment. The company also concerns on business growth, mutual benefits which lead to sustainable growth. The code of business ethics has been defined to be confident that all stakeholders will be treated equally and fairly. In case of disadvantage, the company and stakeholder parties shall find the solutions appropriately and beneficially to all parties. The company has provided communication channels for stakeholders' mutual publication and communication in order to receive requirements and expectations of the stakeholders and response them immediately, which can be described as follows



Stakeholders	Means of Communication	Expectations	Policies and Actions
 <ul style="list-style-type: none"> - Majority - Minority 	<ul style="list-style-type: none"> - Annual Report - Sustainability Report - Shareholders' Meeting - Company Visit - Opportunity Day - Saha Group meet Analyst and Investor - Telephone / Facsimile - Web Site / E-mail 	<ul style="list-style-type: none"> - Return on Investment - Sustainable Growth - Financial Stability - Transparent Management - Shareholders equally treatment 	<ul style="list-style-type: none"> - The ownership rights of shareholders are equitably and fairly respected. - Operations are undertaken in accordance with the principles of good corporate governance, which will foster the trust and confidence of shareholders and eventually lead to sustainable growth. - The Company's businesses are continually developed to ensure proper returns to shareholders. - The significant information which effected or potentially affected shareholders' interests shall be reported, including any information pursuant to the accounting period or situation reports in compliance with the relevant laws and notifications. However, no action shall be taken to restrict shareholders' access to the Company's information. - A report of the Board of Directors' responsibility for the financial statements in the Annual Report shall be prepared. - Minority shareholders shall be given an opportunity to propose matter for inclusion in the meeting agenda and/or to nominate persons for election as the Directors in the Annual General Meeting of Shareholders. - Shareholders are given an opportunity to submit questions relevant to the meeting prior to the shareholders' meeting. - Shareholders' meeting notices in both Thai and English are published on the Company's website at least 30 days prior to the shareholders' meeting day as information for shareholders to preview information prior to meetings. - Shareholders' meeting shall be facilitated. The date, time, venue, and procedures must not pose an obstacle to the shareholders' attendance of the meeting. Shareholders who are not able to attend in person must have the opportunity to grant a proxy to other persons to attend the meeting and vote on their behalves. - Conflict of interest must be dealt prudently, rationally, and information must be fully disclosed. - The Company's interests and assets shall be safeguarded as a reasonable person would safeguard his/her property. Wrongful interests, whether obtained by direct or indirect means, shall be eliminated.
 <ul style="list-style-type: none"> - Other biomass producers 	<ul style="list-style-type: none"> - Activities with other power producers - Telephone / Facsimile - Web Site / E-mail 	<ul style="list-style-type: none"> - Fair and legitimate competition 	<ul style="list-style-type: none"> - The Company shall conduct its businesses within the rules of fair competition regard to business ethics and trade competition laws of various countries in which the Company operates. - The Company will not damage the reputation of its trade competitors.

ผู้มีส่วนได้เสีย	ช่องทางการสื่อสาร	ความคาดหวัง	นโยบายและ แนวทางการปฏิบัติ
<div data-bbox="92 219 304 338">  Creditors </div> <ul style="list-style-type: none"> - Financial Institutions 	<ul style="list-style-type: none"> - Annual Report - Sustainability Report - Saha Group meet Analyst and Investor - Relevant Meetings - Seminars - Telephone / Facsimile - Web Site / E-mail 	<ul style="list-style-type: none"> - Adhere with terms and conditions of loan agreements 	<ul style="list-style-type: none"> - All creditor groups shall be treated equitably and fairly. - Contracts and terms will be strictly adhered to. - Operations will be administered to ensure the confidence of creditors in the Company's financial status and payment ability. - Financial statements shall be accurately and timely disclosed. - In the event of an inability to comply with a particular term, the creditor will be forthwith notified in advance in order to enable a joint solution for remedy and loss prevention
<div data-bbox="92 631 304 750">  Customers </div> <ul style="list-style-type: none"> - Distributors - End users 	<ul style="list-style-type: none"> - Annual Report - Sustainability Report - Green Energy Magazine - Customer Satisfaction Survey - Customer Seminars - Customer Relations - Satisfaction Survey - Meeting with Customers / services provide - Telephone / Facsimile - Web Site / E-mail 	<ul style="list-style-type: none"> - Continuously supply reliable and high quality products - Adhere to terms and conditions of the trade agreement - Punctual service and fast response - Pay attention to customer complains - Create value-added products 	<ul style="list-style-type: none"> - The Company operates the businesses of distributing electricity and steam which are safe for consumers and environmentally friendly. - The Company has operated with commitment to develop and expand its business to value creation on the biomass and agricultural residues, innovate continually to meet the demands of customers along with the disclosure of necessary information for decision-making without concealment or distortion of facts. - The Company provides communication channels to enable customers to file complaints to the Company - The Company has operated with earnest, honest, fairness, and no action is taken that would violate the rights of customers. The confidentiality of customer are maintained and not exploited for one's or others' benefit illegally - The Company does not demand, receive or consent to the direct or indirect receipt of properties or other dishonest benefits from customers - The Company adheres to trade agreements. In the case where adherence is not possible, the customer would be notified in advance in order to jointly remedy and prevent any loss.
<div data-bbox="92 1482 304 1601">  Business Partners </div> <ul style="list-style-type: none"> - Supplier - Contractors - Joint venture partners 	<ul style="list-style-type: none"> - Annual Report - Sustainability Report - Green Energy Magazine - Seminars - Meetings - Telephone/ Facsimile - Website/E-mail - Communication channel for customers' complaints - Business partners' suggestion - Seminar - Business partnets' satisfaction survey - Relationship enhancement activities for business partners - Customer relations 	<ul style="list-style-type: none"> - Transparent purchasing procedures and fair competition - Trade negotiations based on mutual benefit - Adhering to terms and conditions of the trade agreement - Punctual payment - Treating contractors with respect in human rights and adhering to labor laws 	<ul style="list-style-type: none"> - The Company has a system for screening business partners in the value chain who operate businesses in compliance with the law, safety and occupational hygiene standards, and - Business partners are treated on the basis of fair competition, equality and mutual respect. - The confidentiality or communications of business partners are maintained and not exploited for wrongful gains of oneself or of others. - Relationships and good understandings are fostered. Knowledge is exchanged. Developments and value adding to goods and services are jointly Undertaken to promote mutual growth. - The Company adheres to trade agreements and makes proper data. In the event that an agreement cannot be complied with, the Company will expeditiously engage in early negotiations with business partners in order to reach a mutual remedy and loss prevention solution.

ผู้มีส่วนได้เสีย	ช่องทางการสื่อสาร	ความคาดหวัง	นโยบายและ แนวทางการปฏิบัติ
			<ul style="list-style-type: none"> - The Company does not demand, receive or consent to the receipt of properties or any other benefits outside trade agreements.
 Employees	<ul style="list-style-type: none"> - Sahacogen Newsletter - Welfare Committee - Employee Survey - Family Day - Annual Seminar - Health Activities - Religious Activities - Orientations - Telephone/ Facsimile - Intranet / E-mail - Communication channel for complaints - Suggestion box 	<ul style="list-style-type: none"> - Appropriate compensation and welfare - Career stability and happy workplace - Career path and potential development - Fairness and equality - Safety and Hygiene - Employees' feedback 	<ul style="list-style-type: none"> - Human dignity and fundamental rights of employees are respected at work. Employee data or confidential information is not disclosed or transmitted to third parties or unrelated persons. - Employees are treated in accordance with the provisions of law, regulations and articles governing the Company's operations. - Employment equality is promoted. There is no discrimination on the grounds of gender, skin color, race, religion, age, disability or other status that is not directly related to the works. - Training and knowledge exchange are sponsored and promoted to encourage learning and skill development throughout, strengthen career security and offer opportunities for advancements pursuant to each person's competence. - Employee participation in the determination of the Company's direction and development are promoted. - Fair compensation is given as suitable for the knowledge, skill, duties, responsibilities and performance. - Appropriate welfare and benefits are given to employees, e.g. medical expenses, provident fund, etc. - The communication channels are provided for employees to communicate suggestions and complaints pertaining to work. These suggestions are considered and remedies will be determined in the interest of all parties and in view of the creation of good working relations. - Facilitate necessary for work operations are provided and working conditions are maintained with due regard to safety and occupational health as a means of promoting and raising the quality of lives of employees. - Employees of all levels are encouraged to participate in social responsibility activities. - An organizational culture and consciousness of employees at all levels shall be promoted to encourage cooperation and responsibility for the efficient and sustainable management of the environment and utilization of resources. - Knowledge promotion and environmental training shall be extended to employees. - Environmental management system shall be promoted, from the economical use of resources to the sustainable treatment and rehabilitation, replacement, monitoring and prevention of impact on natural resources.

ผู้มีส่วนได้เสีย	ช่องทางการสื่อสาร	ความคาดหวัง	นโยบายและ แนวทางการปฏิบัติ
<div data-bbox="97 241 308 353">  <p>Community and Society</p> </div> <ul style="list-style-type: none"> - Nearby community / Society - Remote community / 	<ul style="list-style-type: none"> - Green Energy magazines - Participating in traditional community activities - Open-house activities - Community Relation activities and projects - Billboards indicating air quality - Telephone / Facsimile - Website / E-mail - Communication channel for complaints 	<ul style="list-style-type: none"> - Safety and a healthy environment - Participating and being responsible for societies and communities - Supporting community activities - Creating income and enriching the economy of the communities 	<ul style="list-style-type: none"> - A business which could lead to a deterioration of society shall not be undertaken and the rights of others in the community and society shall not be violated. - Consciousness of responsibilities towards the community and society as a whole shall be instilled continuously for the benefit of the Company and all levels of employees. - The guidelines shall be provided for the prevention and remedy of impact on the community and society as a consequence of the Company's operations. - The preservation of local culture and traditions shall be promoted. - Cooperation shall be entered into with various agencies for the development of communities. - Public benefit activities shall be sponsored - Incomes shall be generated and the community economy shall be promoted through employment of community members and the use of community products. - Good relations shall be fostered between the Company and the community and society on the basis of propriety, transparency and fairness
<div data-bbox="97 1070 308 1182">  <p>Government Sector</p> </div> <ul style="list-style-type: none"> - Ministries, Departments and Office - Government provincial/ District Offices - Local Administration Office 	<ul style="list-style-type: none"> - Annual Report- Sustainability Report- Environmental Monitoring Report - Green Energy Magazine - Open-house Activity - Company visit - Report information related to regulations - Relevant meetings - Telephone/Facsimile - Web Site/E-mail 	<ul style="list-style-type: none"> - Adhering to law and regulations - Effective Environmental Management - Community and Social Responsibility - Collaborate to provide Information and support the sectors' activities - Legitimate and timely tax payment 	<ul style="list-style-type: none"> - Knowledge and understanding of the laws governing operations are acquired and no activities are undertaken which would be inconsistent with the law. - Proper action shall be taken when conducting transactions with an official or agency of the State. - Good relations are fostered between the Company and the government sectors within suitable bounds. - Relevant laws and business traditions are observed in each country or locality.

Good Corporate Governance

Sahacogen Group emphasizes the importance of Good Corporate Governance system, runs business with transparency, honesty, responsibility as assigned, capacity of competition and fairness with related parties in order to enhance prosperity, economical values and opulence towards shareholders in accordance with the Good Corporate Governance Principles of the Stock Exchange of Thailand and subject to the basis of sufficiency economy, that is; sufficiency, reasonability and good immunity which requires knowledge, carefulness and discretion for planning and operating. In the same time, the company enhance all executives and employees' the awareness of morality, honest, diligence, impatience, sharing and intelligence to work as well as readiness to the changing economical, political, cultural and social situations for the benefits in a balance and sustainable way. The Board of Directors has approved the good corporate governance principles on February 19, 2003. Moreover, they have been reviewed properly and revised appropriately to the current situation in accordance with the "Principles of Good Corporate Governance for Listed Companies 2012". This harmonizes with the ASEAN Corporate Governance Scorecard (ASEAN CG Scorecard) measuring instruments of indices of the level of corporate governance of ASEAN listed Company. The details are as follows;

1. The Good Corporate Governance Policy
2. The 8 Good Corporate Governance Principles
3. The Business Ethics
4. The Code of Conduct for Directors, Executive Officers, and Employees

Moreover, handbook has been created and communicated to directors, management, and employees, as well as disclosed in the annual registration statement (Form 56-1), and on the Company's website at www.sahacogen.com.

The company realizes and focuses on the importance of developing Good Corporate Governance consistently in order to become a valuable organization towards society under the balance between performance and responsibility towards stakeholders including society and environment for sustainable growth in a long term.

Additionally, the Executive Committee has set up several sub-committees in order to have employees jointly organize the internal management appropriately, efficiently, and effectively to the Company. Each committee has at least one Executive Director to be a consultant. The established committees at present are as follows:

1. The Committee of Safety, Occupational Health and Working Environment
2. The Committee of Welfare
3. The Committee of Environment, Safety and Energy Conservation
4. The Committee of Managerial Policy
5. The Committee of Business Risk Management
6. The Committee of Anti-Corruption
7. The Committee of Energy Management
8. The Committee of Environment Management
9. The Committee of Information Technology Security
10. The Committee of Business Continuity Management
11. The Committee of Personal Data Protection Act (PDPA)
12. The Committee of Greenhouse Gas Management



The evaluation from a corporate governance survey of listed companies (CGR Project)

Group	2018 (%)	2019 (%)	2020 (%)
1. Rights of Shareholders	92	92	92
2. Equitable Treatment of Shareholders	99	99	99
3. Role of Stakeholders	93	94	94
4. Disclosure and Transparency	95	95	97
5. Board Responsibilities	79	80	84
Average	88	89	91

THE EVALUATION FROM A CORPORATE GOVERNANCE SURVEY OF LISTED COMPANIES (CGR Project)



2018



2019



2020

- The results of the assessment according to the AGM CHECKLIST project In 2018-2020 are classified as "excellent" (5 TIA).

yearly	Number of companies			SAHACOGEN (CHONBURI) PUBLIC COMPANY LIMITED
	Number of companies	Full Score	Average Score	
2018	712	100	93.10	100
2019	672	100	93.70	100
2020	657	100	92.42	100





Risk Management

The Board of Directors of Sahacongen (Chonburi) Public Company Limited realizes the importance of various risk factors which affect the company's business operation. Consequently, the Board assigned the Corporate Governance and Risk Management Committee to be responsible for the supervisory tasks in terms of the organization's Corporate Governance and risk management practices in a systematic manner. The Risk Management Policy is described as below

1. To keep the balance of risk and reward from business operation in order to ensure that the operational goals and stake-holders' expectation are achieved under risk levels accepted by the executives
2. To set strategy in line with risk levels which the Board of Directors considers as acceptable
3. To support the risk management to become a part of organizational cultures, which is necessary to operate it effectively and efficiently by all executives and employee
4. To handle risks impacting on the company's objectives and strategy immediately and continually

Moreover, the company has improved and developed the risk and crisis management system to be more effective, by appointing a working group to manage business continuity plans in 2019 to ensure that the organization has prepared a plan for business continuity and manage the crisis case effectively, having roles, duties and responsibilities as follows:



In addition, the company promote employees to realize the importance of corporate risk management. By preparing public relations media through internal communication channels and organize training to educate employees of all levels.



The Corporate Governance and Risk Management Committee sees the recognition of the fast changing economic,

social and environment situations all the times, Therefore, the risk management team was appointed to be responsible for each business operation in order to evaluate and analyze risks possibly affecting the organization as well as subsidiaries and other projects in both internal and external risk factors, to set priorities for the risk management plan and engage in regular follow-up on the implementation of such plans. At the same time, the Committee presented regular updates to the Board of Directors on the progress and developments regarding said plans continually. The company manages risk factors which are likely to have impacts on the company's operations as follows;



Economic Risk

Risk : Global-scale volatility of oil price has a direct effect on selling electricity and steam, the amount of energy demand, main raw material prices, and exchange rate, as well as, the impact of Government policy changes on business development.

Risk Management:

- Set business strategies and investment plan in alignment with economic conditions
- Identify and analyze risks affecting business goals
- Prepare proactive plans for uncertain and unstable economic / Business environment
- Continuous monitoring of performance



Social Risk

Risk : Energy business, especially electricity generation, gives a great concern to society. Then, it is a tendency to be objected or opposed to operating power plant, which is considered as a serious impact on safety, health, environment, community and society. Being accepted and trusted by the community and society is the key factor for long-term business development.

Risk Management :

- Set guidelines and prepare proactive plans in order to protect and minimize impact on safety, health and environment as well as the quality of life of both employees and nearby communities.
- Strengthen the compliance with Corporate Social Responsibility Policy, and monitor such progress. Besides, carry out the community relations to consistently foster mutual understanding and communication.



Environmental Risk

Risk : Sahacogen and Affiliates give precedence to the compliance with laws and regulations relating to effects on environment and safety standards. We have a certain unit that keeps track to any change in laws, rules and regulations so that the company will have prompt response with such changes and reduce environmental risk.

Risk Management :

- Using environment management system (ISO 14001) and occupational health and safety management system (ISO 45001:2018) to manage health, environment and society operations.
- Comply with the environment, safety and energy conservation policy.
- Comply with the group's manual regarding to environment, safety and health as a working guideline and to monitor the process of implementation. In addition, providing training sessions, practices, creating emergency plan, testing tools and warning system, and strictly comply with the operating manual.
- Duly file performance reports relating to the methods of effect reduction and deliver the results to the Office of Natural Resources and Environmental Policy and Planning, Office of the Energy Regulatory Commission, Department of Industrial Works and Industry Office and other related institutions



Risk of climate change

The climate change may result in a shortage of raw water, an important raw material for electricity and steam generation. Raw water shortages could result in production interruption. The power plants in the Sahacogen group have a policy to manage the supply of raw water to have sufficient quantities as follows:

- 1) Power plant - Sriracha Establish a long-term raw water purchase agreement and provide another source of raw water. Build a pond and a raw water receiving system with a capacity of 2,000 cubic meters inside the power plant and linking it to the power plant's production system.
- 2) Power Plant - Lamphun Establish a long-term raw water purchase agreement throughout the life of the power plant.
- 3) Power Plant - Kamphaeng Phet has built a large raw water pond and received permission to use water from the Kamphaeng Phet Irrigation Project



Emerging Risk

Emerging Risk is something new, it hasn't happened before. Have high instability both the opportunity and the impact are quite difficult to assess. From an organizational risk analysis Economic, social and environmental risks was found that the risk issues that may arise from external factors may affect business operations such as government policies on the development of the smart grid network system of Thailand, energy liberalization (Power Pool) and including changes in energy storage technology. Therefore, the risk management is as follows:

Risk Management :

- Recruit directors with specialized knowledge and expertise in order to formulate and supervise business expansion.
- Joint investment with biomass power plant construction partners and joint investment in solar energy business in the form of Solar Rooftop.
- Extend the knowledge of biomass to other businesses. By promoting bamboo plantation to create bamboo products under the trade name LambooChar.
- Build new power plants and improve the efficiency of the existing power plant
- Collaborate with partners to study the management system of the Micro Smart Grid project.

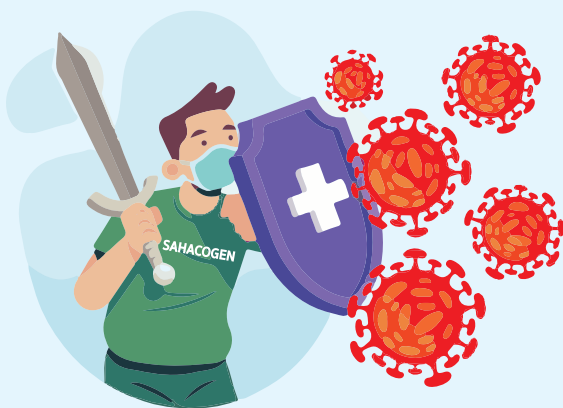
Sahacogen and Covid-19 Crisis Management

In 2020, there was the pandemic of Coronavirus 2019 Disease (COVID-19). The company business operation has been run as usual. There was no operational pause. To cope with the pandemic of COVID-19 that might cause an effect on business processes, the Corporate Governance and Risk Management Committee has setup the business continuity plan and appointed the Committee of Business Continuity Management. The mission of the business continuity committee is managing under the crisis situation to prevent and minimize negative effects from the pandemic among Sahacogen group. The priorities are employees and stakeholders' wellness, business continuity and business recovery in the case of business interruption.

As a result of the business continuity management, there was no incident of the spread of the diseases among the company's employees.

Risk Management :

- The company has set the business continuity plan (BCP) regarding the diseases pandemic and adopted the policy throughout the group company.
- The preventive scheme was adopted to prevent the infection.
- The business operation plan and recovery plan were set in the case that Corona virus (COVID-19) pandemic hit the areas.



COVID-19 Emergency Response

In the early of 2020, during the outbreak of COVID-19, the company appointed the committee to monitor and prevent the infection. The committee's director has been assigned. The missions were monitoring the situation, government announcements and communicate with employees in order to ensure the compliance with regulations in each area. The committee also had role in managing sufficient budget allocating to infection prevention.

The company focused on employees' safety and wellness. The personal items were distributed, i.e. surgical mask and alcohol gel, to employees and family members. The working areas were regularly cleaned with disinfectant. Employees' health conditions were checked via survey. The risk assessment surveys were regularly conducted. The anomalies detected were closely monitored. The committee has been monitoring the situation that might effect employees' health conditions and report to the Committee of Business Continuity Management and top management every week.

COVID-19 Crisis Management

The Committee of Business Continuity Management (BCM) has been working under the supervision of the Corporate Governance and Risk Management Committee. Managers, unit heads and those involved had setup a weekly meeting to follow up and assess the situation. After the situation was more severe, the company announced the policy that required all employees to work from home. The company sufficiently facilitated resources to support the policy such as providing aid on extra internet expense, providing hardware and allowing access to software needed. The company cancelled group gathering activities such as site visit activity. The processes which required meeting in person were conducted with strict social distancing procedure. The procedure also included temperature checking, wearing mask and area setup to create more space between people.

The communication with employees was regularly made to provide information about self-care taking tips and infection prevention. The company also assigned the director of the COVID-19 committee and Corporate Social Responsibility function to monitor news that might have effect on the organization.



COVID-19 Impact Mitigation

The company has been taking good care of all stakeholders.

Employee : Besides providing disease infection preventing items, the company also supported expenses of infection test for suspicious cases. The company also allowed deferred payment of debt upon employee's request. The company reduced employees' contribution to social security fund from 5% to 1% during March-May 2020. The deduction amount contributing to government student loan had been being reduced for 3 months.

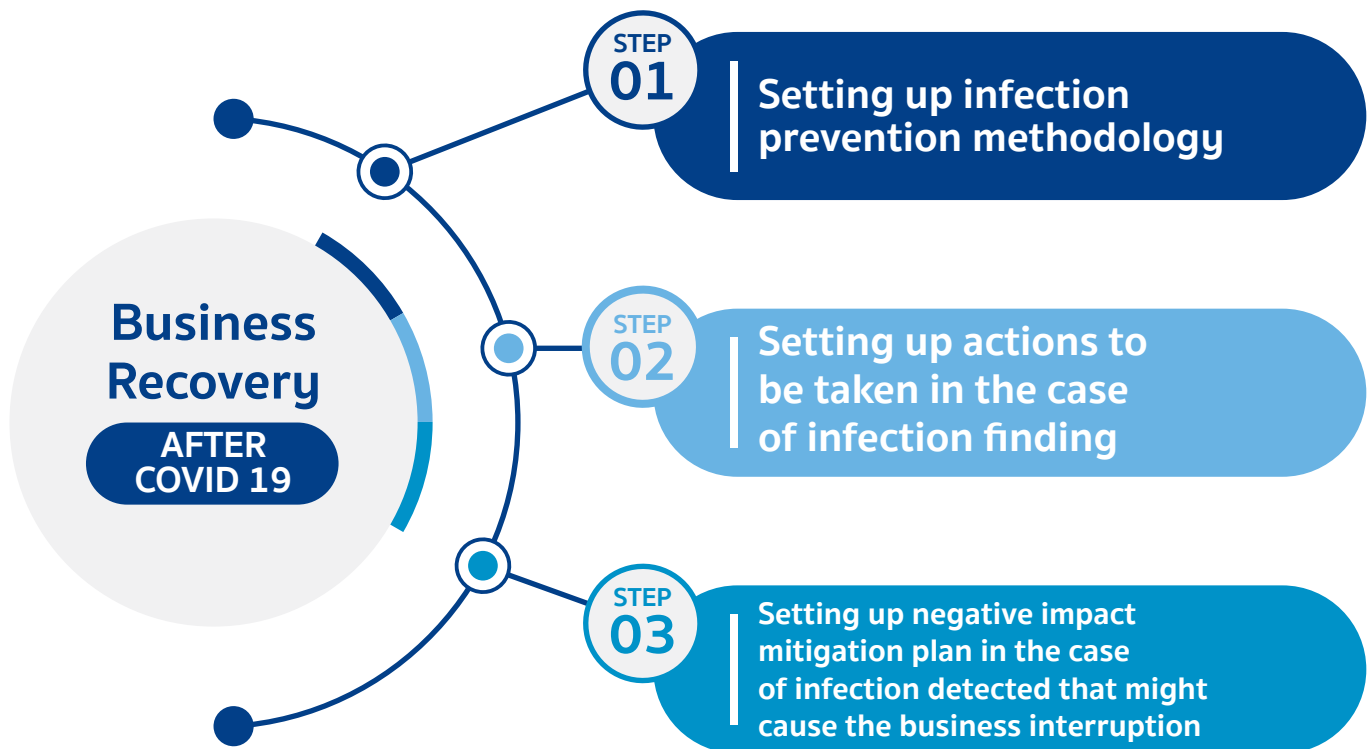
Shareholder : The annual general shareholders' meeting of the year 2020 was arranged by providing extra space between seats. Protective items were provided to all meeting attendees.

Local community and society : The company also supported local communities and healthcare organizations. The protective methods were implemented to areas nearby company's sites. The company donated drinking water, energy drinks, surgical masks, alcohol gel to hospitals and other organization helping in disease screening and preventive activities totaling amount over 500,000 Bath.



BUSINESS RECOVERY

The company has monitored and evaluated the results of issuing orders and announcements in each provincial area for use in planning and setting management guidelines in each area according to the risks of each province. The implementation was covered the area of Kamphaeng Phet, Lamphun, Lampang, Chonburi and Bangkok, respectively. After the situation began to resolve, the company announced two easing and preventive policies. In addition, the business continuity plan in case of COVID-19 was created for support the implementation. The business continuity management consists of 3 steps.



Anti Corruption

Sahacogen & Affiliates have intent to combat all forms of corruption. Consequently, the Anti-Corruption Policy has been established. Awareness of the good corporate governance principles is to be enhanced among directors, executives and employees. The anti-corruption policy is also a part of the risk management plan for risk assessment in every unit. In this regards, the internal audits acts as an assessor. The Company also provides it to new employees, has communication channel for publishing the code of conduct and anti-corruption policy. Guidelines and practices for the operation of Anti-Corruption in the organization as below;





ANTI-CORRUPTION CAMPAIGN IN 2020

01

Sahacogen Green Company Limited and Saha Green Forest Company Limited (a subsidiary) received a certificate of recognition as a member of Thailand's Private Sector Collective Action Coalition Against Corruption. : CAC) is the second certification renewal on 31 December 2020.

02

Sahacogen Group joined the activity "Power of Data" on the Anti-Corruption Day 2020 (September 15) in collaboration with the anti-corruption organization (Thailand), representatives of the government and private sectors through the channel. Via Live on Facebook Anti-Corruption Organization.

03

Training activities to review knowledge and understanding for the board of directors, executives and employees on "Principles of good corporate governance and anti-corruption towards sustainable development." And also testing CAC knowledge and good corporate governance principles via online system in every year. And use the results for further development. By this year, 100% of the employee have passed the training.

04

Organize an exhibition to disseminate knowledge and campaign against corruption.

05

Orientation for new employees which has content about the policy and the Code of Conduct for Anti-Corruption In order to cultivate consciousness from the beginning.



WHISTLEBLOWING

In case that employees and stakeholders have any concern or suspicion in regard to frauds, corruptions, illegal practices, these shall be reported as follow;

1. Verbal complaints or letter submitted to the complaint receiver
2. Suggestion box
3. By postal mail to Sahacogen (Chonburi) Public Company Limited: 636 Moo 11, Sukhaphiban 8 Road, Nongkharm, Chonburi 20230

Agency	Telephone No.	E-mail Address
Board of Directors	038-481555 ต่อ 202	directors@sahacogen.com
Audit Committee	038-481555 ต่อ 203	auditcommittee@sahacogen.com
Corporate Governance and Risk Management Committee	038-481555 ต่อ 260	riskcommittee@sahacogen.com
Corporate Social Responsibility Committee	038-481555 ต่อ 290, 291	pr-csr@sahacogen.com
Managing Director	038-481555 ต่อ 200	vorayos.th@sahacogen.com*
Company secretary	038-481555 ต่อ 200, 282	csecretary@sahacogen.com**
Investor relations	038-481555 ต่อ 200, 282	investorrelation@sahacogen.com
Human Resource Management Section	038-481555 ต่อ 242, 243	hradmin@sahacogen.com

* Start 1 January 2021 ** Start 24 February 2021

The company will keep relevant information secret and take into account the safety of the complainant, except legal requirements of disclosure.



ECONOMIC PERFORMANCE

ECONOMIC PERFORMANCE

In 2020, Sahacogen group operating performance and the revenue distribution to stakeholders can be summarized below.

Performance Summary and Financial Highlights

Operating Performance

(Unit : Baht)

Year	2018	2019	2020
Sales	4,198,653,530	4,319,969,429	3,971,035,445
Other Revenues	9,186,869	6,811,681	7,536,002
Other Revenues	4,207,840,399	4,326,781,110	3,978,571,447
Cost of sales	3,656,660,518	3,881,412,648	3,603,699,302
Other expenses	326,288,327	295,480,380	257,665,918
Cost of Sales and Expense	3,982,948,845	4,176,893,028	3,861,365,220
Profit (Loss)	224,891,554	149,888,082	117,206,227

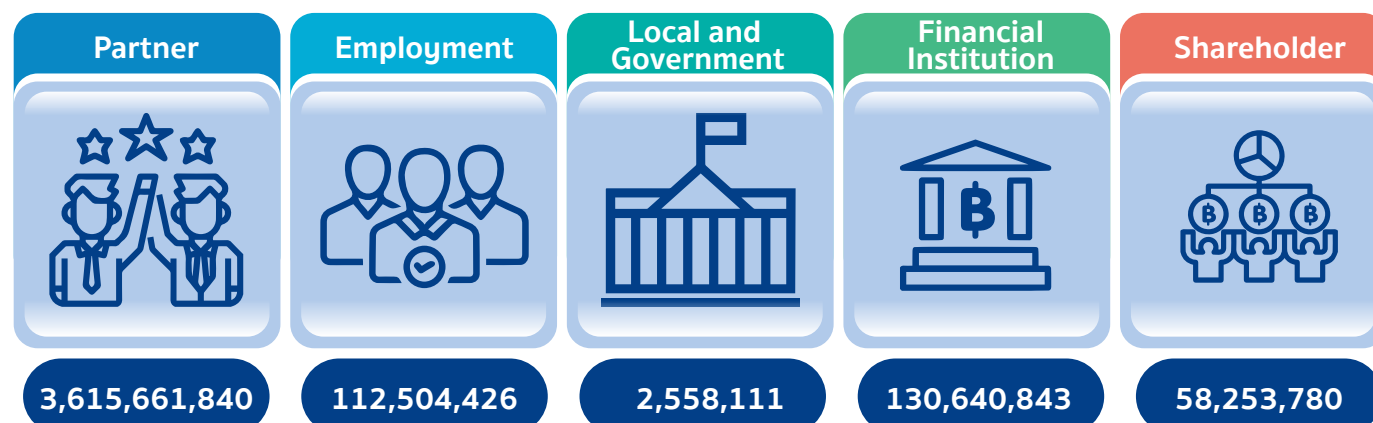
the revenue distribution to stakeholders

(Unit : Baht)

Year	2018	2019	2020
Partner	3,690,592,118	3,894,664,571	3,615,661,840
Employment	112,096,217	117,392,852	112,504,426
Local and Government	10,617,932	21,719,476	2,558,111
Financial Institution	169,832,693	143,116,129	130,640,843
Shareholder	143,250,000	114,599,700	58,253,780

The revenue distribution to stakeholders 2020

(Unit : Baht)





CORPORATE SOCIAL RESPONSIBILITY



LABOR PRACTICES & HUMAN RIGHTS

• EMPLOYMENT

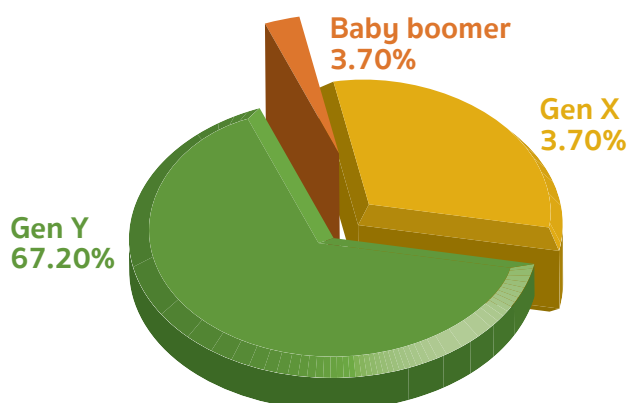
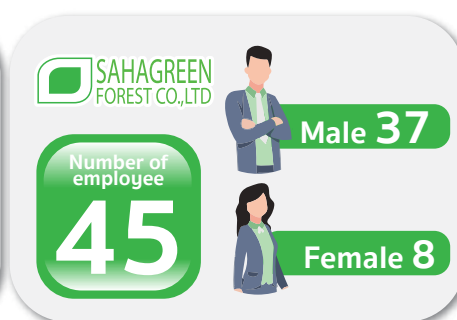
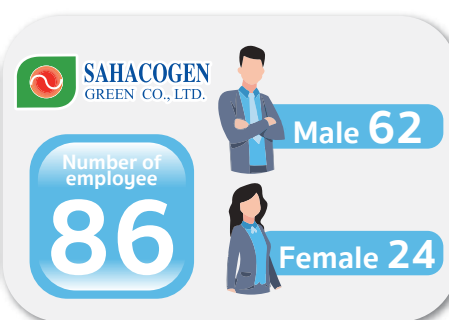
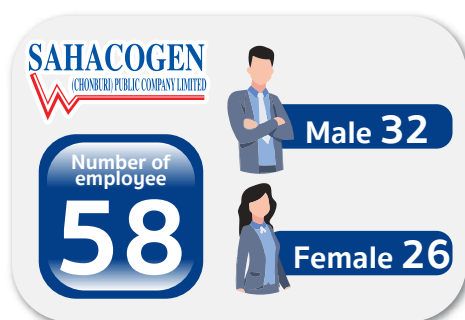
Sahacogen group has a standardized and fair employee selection system. The application process includes a written exam and an interview to evaluate the candidates' competencies and organizational fit. Candidates are also required to take a health examination before starting work. The employee classifications according to company affiliates are as follow

Employment Rate for 2020

Company	Number of Employee	Resign	Percent %	New hire	Percent %
Sahacogen (Chonburi) PCL	58	0	0.00%	3	5.17%
Sahacogen Green Co., Ltd.	86	3	3.49%	5	5.81%
Sahagreen Forest Co., Ltd.	45	2	4.44%	4	8.89%
Total	189	5	2.65%	12	6.35%

Number of employees separated by age

Company	Baby boomer 56-74	Gen X 40-55	Gen Y 20-39	SCU
Sahacogen (Chonburi) PCL	7	25	26	58
Sahacogen Green Co., Ltd.	0	20	66	86
Sahagreen Forest Co., Ltd.	0	10	35	45
Total	7	55	127	189



Number of employees separated by age

• Managing Salaries, Wages, and Benefit

Sahacogen is dedicated to provide salaries and compensation to employees based on principles of justice, corresponding to their job responsibilities and competencies. The opportunity is equivalent for all genders. The compensation are also competitively adjusted in the industry to attract talented individuals to join the firm while motivating current employees to continuously improve their performances. The company also has clear KPIs for evaluating employee performance, creating mutual understanding between supervisors and employees while leading to improvement of work and human resources.

Sahacogen provides benefits for employees and their families beyond the minimum requirements of the law. The benefits are adjusted to best fit with the social, economic, and business landscapes. The adjustment includes the increase of allowances for health insurance for the employees and their families, shift wages, accommodation costs, transportation costs, premium for working at other provinces; and long term service reward for employees work for 10 and 20 years. The adjustment serves to boost employee morale and a strong relationship with the organization.

• Human Rights and Labour Practices

The company respects human rights, the policy and practices are described below;

- o There shall be no activities or support of activities which violate human rights.
- o There are no limitations to independence or differences in ideology, gender, race, religion, politics or other matters.

The expression of opinions which could cause conflicts or divisions should be avoided.

o Channels shall be provided for employees or persons who believe that their personal rights have been violated or that they have been treated unfairly to file a complaint to the company. Such complaints shall be given attention and process fairly.

o The company requires employees and contractors to be not less than 20 years of age. The company does not hire child labor, support forced labor, and practice gender discrimination.

- o Incoming staffs shall undergo trainings, and contractors must attend training sessions prior to the actual works to create awareness, understanding of safety, energy, corporate objectives, and regulations.

The company also requires the establishment of a benefit committee, allowing employees to participate in the creation of regulations, privileges, and benefits beyond the minimum requirements of the law. This reflects the company's dedication to take the best care of its employees.

The company has been complying with labor laws and human rights. During the year 2020, there was no dispute regarding to human capital issue.

- 😊 Local and senior people hiring
- 😊 Legal alien staff hiring
- 😊 Open to difference in gender, nationality, religious, personal believes
- 😊 No child labor
- 😊 Focus on employees safety and hygiene
- 😊 Continuously provide capability development



Human Rights

- ▶ Legitimate
- ▶ No labor dispute




EMPLOYEE BENEFITS AND CARE

EMPLOYEE BENEFITS

The company pays attention to “employee benefits” to ensure employees work happily, create bonds and loyalty to the organization. The company believes happy employees can deliver higher efficiency that will reflect the company’s performance in long term.

In addition, the company established a welfare committee in the workplace. By selecting from every employee's election to be a representative in the consultation regulation and offer opinions on various welfare. Being as a voice for employees to receive benefits and welfare equally and fairly.

The summary of welfare and support allowance provided to employees in 2020

Welfare & Support Allowance							Total
	Number of Employees	Amount (Baht)	Number of Employees	Amount (Baht)	Number of Employees	Amount (Baht)	
Funeral	2	20,000	-	-	1	10,000	30,000
Marriage	1	5,000	1	5,000	-	-	10,000
Maternity	1	5,000	5	25,000	3	15,000	45,000
Ordination	-	-	-	-	-	-	-
Tooth care	16	25,040	12	27,980	5	13,700	66,720
glasses	26	96,990	22	81,450	9	34,640	213,080
Illness	5	5,500	9	6,989.50	5	5,000	17,489.50
Total	51	157,530	49	146,419.50	23	78,340	382,289.50



Employee care and welfare (HAPPY WORK PLACE)

Sahacogen and affiliates have the strong policy in fringe benefits to our managements and employees. If the employees are comfortable, happy and having good health. They will show full potential of work.

Therefore, The Company provides welfare and various activities. To create happiness in the workplace In order to build the good relationships between the company and employees. And also helps to promote good relations between colleagues, supervisors and executives. The Company having guidelines for looking after employees according to the 6 principles of happiness, promote health for all employees to be healthy and use free time for maximum benefit.



- The Best Healthy project, a project that encourages employees to exercise regularly for a good health.
- Hosted The Sports competitions within the group of companies, such as football, badminton as well as various fun sports to promote physical activity. And build good relationships among employees and partners.
- Internal knowledge sharing relating to health care are organized consistently. For example, we provide first aid training and negative effects from drugs seminar. Additionally, medical supplies and medicines are available for employee upon requests.
- We have annual health checkup service. In terms of health welfare, we provide life insurance and health insurance packages for employees and their family members.



- Sahacogen shows our cares and concerns to employees who are sick or during their sick leave. We have our representatives to visit them at their house or hospital.
- Provide welfare in the event of natural disasters for employees such as floods, storms, and fires to alleviate the suffering, etc.
- Encourage employees to know about sharing. By organizing activities to share happiness with fellow employees within the company and help share with external agencies, etc.
- Blood donation project collaborated with the Thai Red Cross Society has been held monthly.



- Sahacogen continuously provides employees trainings and seminars. We have both internal trainings and also sessions with external speakers. We aim to develop our employees' knowledge and competency in all functions.
- Friends Sharing Project By allowing employees to bring their own books to share with their colleagues.
- Knowledge Week Project Is a review of knowledge such as safety CAC corporate values, welfare regulations for employees in the organization.
- Encouraging employees to study at a higher level.



- Provide knowledge to enhance morality and ethics for executives and employees.
- Songkran Festival celebration is normally held by allowing employees to pour water on the Buddha statue, pour water to executives (elder people) for blessing. All this activities are done according to Thai traditions in order to preserve our Thai heritage.
- "Charity for Religion" project is to support the Buddhism and encourage employees to be merciful. We have activity for offering foods for monks and also on Buddhism holy days. We have activities to make merit in temples throughout the year e.g. cleaning temples, offering big candle to be used in the temple during the raining season (lent), and trees planting.



- Sahacogen have made an agreement with Government Housing Bank to offer low interest housing loan for employees. We aim to support our employees of having a house and building up their family.
- Provident fund and social security fund are provided according to laws. We also offer patronizing money for life events e.g. wedding ceremony, ordination ceremony, house warming ceremony and funeral. "Sahacogen Family Day" is held to strengthen the relationship and building up the tighten bonds among employees' family members. Sahacogen believes that good family is the basic factor in creating Quality people. We organize activities on the "Family Day", for example, are Sahocogen kids contest, family portraits contest, sport activities. New Year's Eve party is held for employees and their family every year



- “Sahacogen Anti-Drug” Project is the effort to stimulate employees’ concerns about negative effects from using drugs. The “White Factory” event is held to support this project with various activities such as exhibitions, anti-drugs slogan contest, drug detection testing.
- “Sahacogen Helping Mind for Goodness” Project promotes our organization culture in encouraging employees do good deeds to themselves, their families, organization, and society. The trophies are awarded to employees who are outstanding in doing volunteer activities and to inspire other.
- The company encourages employees to be aware of society such as the Forest Fire Prevention Volunteer Project, Sahacogen Project gives warmth to create smiles etc.

In addition, we also have a project to make the happiness in workplace. Through the project "Employee relations, happiness both physically and mentally" to create happiness in the workplace. To promote good relations between colleagues, supervisors and executives by organizing activities such as



“You’re My Buddy”

project to build good relationships among colleagues, create happiness and smile.

The project "Tired ... take a rest"

is a project for employees to relax from work. By playing games together during the lunch break which helps build good relationships for employees at all levels.



The “Happy Birthday”

project because employees are one part of the organization's growth. Giving happiness to all employees by Blessing in their birthday. One thing that makes employees feel warm like we are family.

“Provide labor clinic”

for answering questions related to hr. Also listening and giving advice Problems in the workplace and personal issues.



“Goodness points collection activity” This activity intended to encourage employees to have participate in public activities for the organization and colleagues, as well as create motivation for doing good thing such as joining as a committee or the company's working group, participating in CSR activities, communicating and helping colleagues alerts for any benefit knowledge, contributing to society etc. The activities engagement was promoted by collecting points to redeem via Loga application. In 2020, 165 employees participated in the activity, representing 87% of the total workforce of 189.



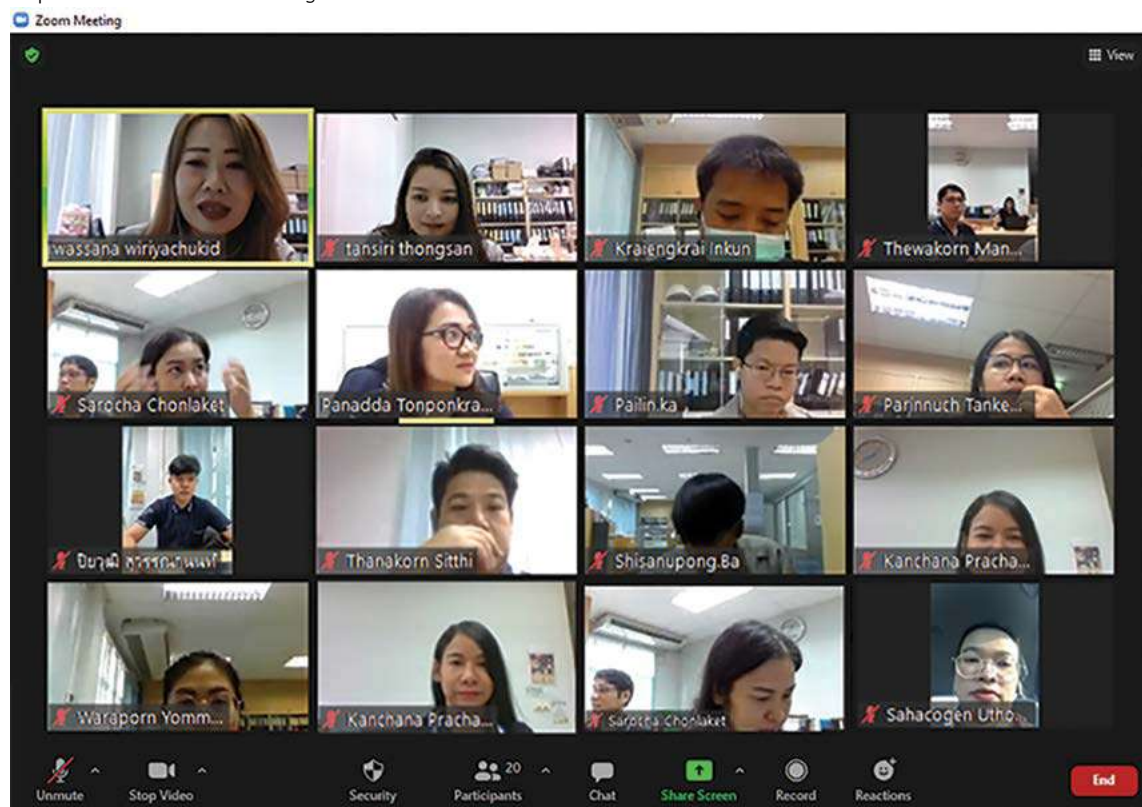
COMMUNICATING WITH EMPLOYEES

- Listen for employees: Sahacogen Group gives employees the opportunity to express their opinions, feedback, complaint and problems through internal communication channels such as opinion boxes, e-mail, intranet, monthly meetings, etc., information will be presented to the executive committee for corrective action. And communicate back to employees without disclosing the information of the whistleblower.

- Free communicate culture: There is clear transparency, able to discuss all matters. The company provides opportunities for all employee to express their opinions within the organization. Help create a good working environment and relationship.

- Bring technology for the better communication: The Company has chosen to adopt modern and useful technology in the communication to facilitate the speed. Save cost and able to communicate thoroughly by taking into account the suitability and in accordance with the situation such as Video Conference VPN, Line, Microsoft Team and Zoom Conference etc.

Moreover, the company has brought a new form of communication by using modern technology as a medium (Zoom Application) to communicate with employees in the form of activities. The conference "Town Hall" was held with the objective of communicating information on policies and business directions from the executives. It's a platform for hearing problems, suggestions and exchange of ideas between executive and employees. In 2020, 159 of 189 employees participated in the activity, representing 84 percent of the entire organization.



zoom

SAHACOGEN AND COVID-19 SITUATION MANAGEMENT

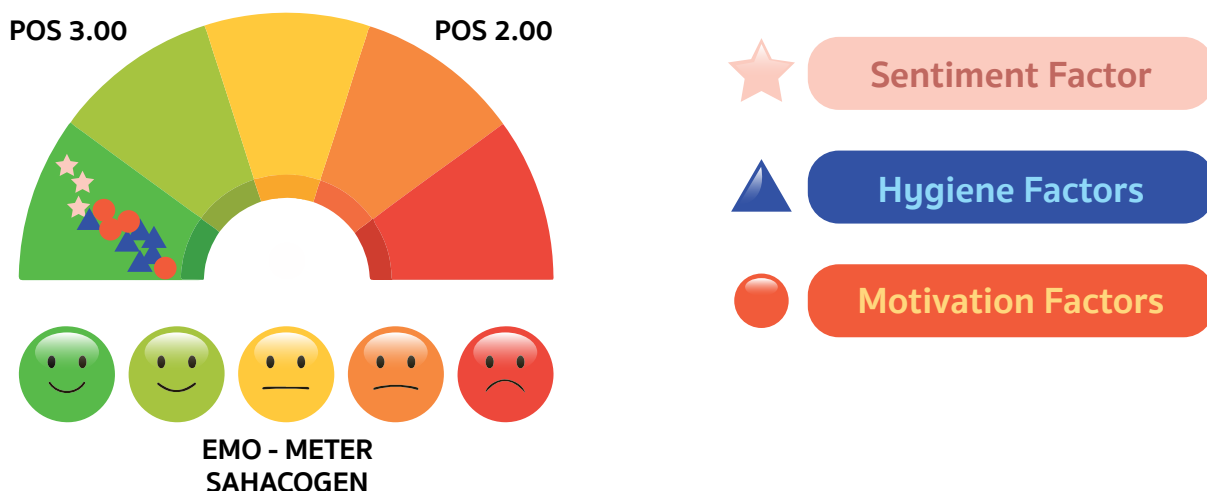
In 2020, The situation of Thailand in contagious diseases caused by the coronavirus 2019 (COVID-19), The Company has made various measures to accommodate the situation increase safety and build confidence among employees and operators of the company as follows:

- The Company focus on the health and safety of all employee by distributing personal protective equipment such as masks, alcohol gel, etc. to all employee and thair family members with sufficiently and thoroughly for use and area cleaning.
- The Company assign some employees to work at home, some to switch teams to work. To support the event of an emergency and the exeutive sent a message instead of concern to employees. With wishes for all employees to take care of themselves to be a strong hygiene and ready to return to work when the situation is clear.
- Provide personal protective equipment such as Alcohol gel masks are distributed to employees thoroughly and sufficiently for use. Cleaning the area by spraying disinfectants, Allocate work areas for employees to have a distance between individuals (Social distancing), Body temperature measurement before entering the area, Set up a gel service point, No visit to the power plant activities to prevent the spread of pathogens, Preparation of BCP (Business Continuity Plan) and having a working group to monitor the situation closely.
- Track employee health inquiries by conducting an ongoing COVID-19 risk survey. In the event that abnormalities are found, employees are closely monitored. Moreover, the company has assessed the situation that may have an impact on the health of employees. And weekly report to the executive.
- Use technology to support efficient work such as video conferencing with VPN system, Microsoft Team and Zoom Conference, where employees can work outside the workplace at all times. And the system is most secure.
- Reduced the sending of social security contributions to employees from 5% to 1% between March-May 2020 and reduced the amount deducted from the Student Loans Fund for 3 months according to government policy.



EMPLOYEES' ENGAGEMENT

In 2020, The Company conducted a survey of employee satisfaction in the administrative and information technology support section. To hear comments from employees, bring the results and suggestions from employees to improve the Employees' engagement survey and employees' happiness.

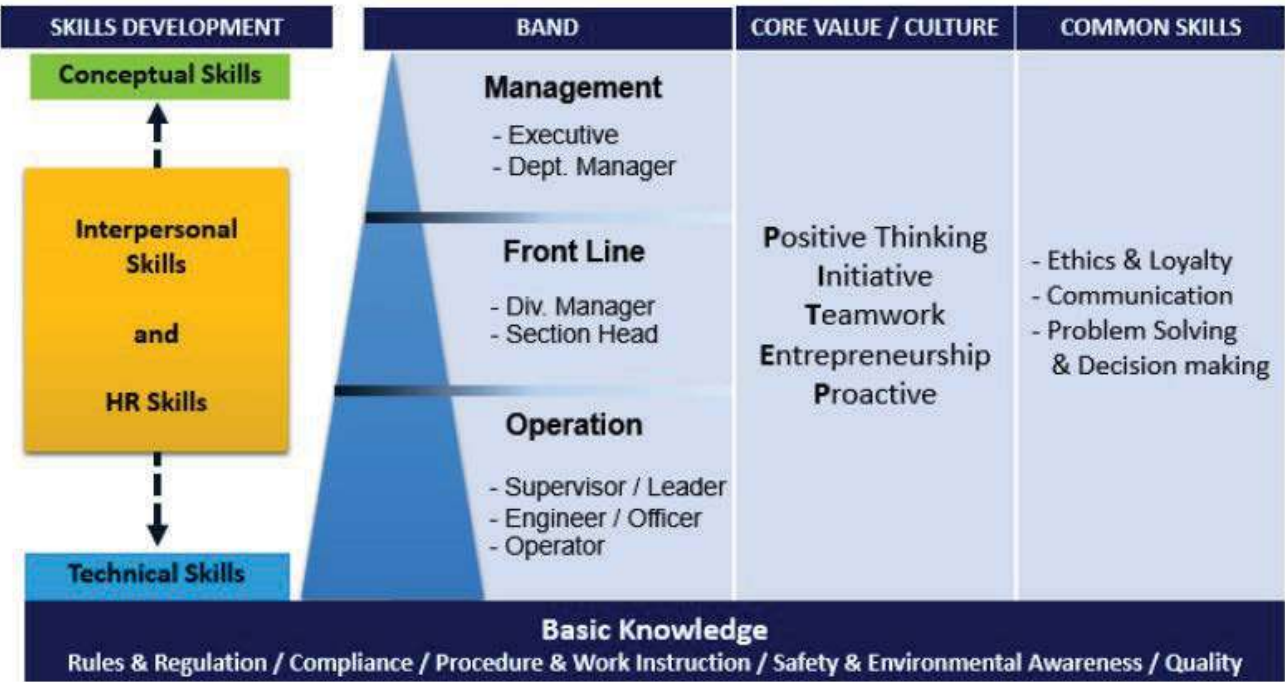


From the survey, there are employees who cooperate to answer the survey. A total of 165 people, representing 90.66% of the total number of employees. The Emo-meter was used to measure the scores in 3 levels: high (green), mean 3.01-4.00, medium (yellow), mean at 2.01-3.00 and low (red) values. Average at 1.00-2.00

The results show that the mean of feeling was 3.50, the significance of external factors had a score of 3.28 and the internal incentive was score of 3.33. With happiness and engagement with the organization.

HUMAN RESOURCE DEVELOPMENT

Sahacogen put the emphasis on human resource as the key driver to success. The staff skills development is the key to develop based on the organization’s goals, direction and policy.



Sahacogen group focuses on enhancing employees’ capabilities at all levels. The development plan can be divided into 4 main groups.

01 : Basic Knowledge Trainings

are courses that focus on providing basic information that is useful for the new employees. The examples are rules, workflow and procedure, quality management, safety standard, occupational health and environment.

02 : Common Skills Trainings

are useful for employees in every function. The training topics will cover ethics, morality, honesty, ability to work as a team, communication skill, and decision making skills.

03 : Core Value Enhancement Courses

are aiming to create corporate culture set the guideline for code of conduct among employees. The example of the topic covered in this group are positive thinking, innovative ideas, working as a team, entrepreneurship and proactive work style.

04 : The knowledge and skills development based on job position

are focus on developing knowledge Capabilities in accordance with the roles and responsibilities of each position which is divided into 3 groups as follows

- **Management** To focus on enhancing the vision, planning view And strategic thinking in conducting business in accordance with the changing situations
- **Front Line** To develop knowledge Administrative skills and resources to achieve goals In accordance with the organization policy and create a good atmosphere for working as a team.
- **Operation** To enhance knowledge Professional expertise and awareness of customer needs, By promoting personnel development in many ways, such as internal and external training, On-site job training by job position Assignment Coaching by supervisor.

HUMAN RESOURCE DEVELOPMENT GUIDELINES

1. Training

Each year, Sahacogen Group will formulate training and development plans for personnel. Classified by area and characteristics of different business groups. By applying the principles of Competency Management and survey the need for training (**Training Road Map: TRM**) which comes from analyzing and determining knowledge and competency as needed for the executives of each department.

[TRM] Training Road Map



STANDARD COURSE

Standard course according to law or regulation. Including courses that promote organizational values, Strengthening of morality, Good ethics for oneself and others. For being good citizens and good employees in the organization



MANAGERIAL COURSE

Courses for Management and Basic Necessary Courses, That's can help the supervisors to have an ability to look after subordinates, Promote leadership And skills needed in management.



SPECIFIC COURSE

Job specific courses, focusing on knowledge and specific skills of each job. For employees to have a proficiency in their roles and responsibilities

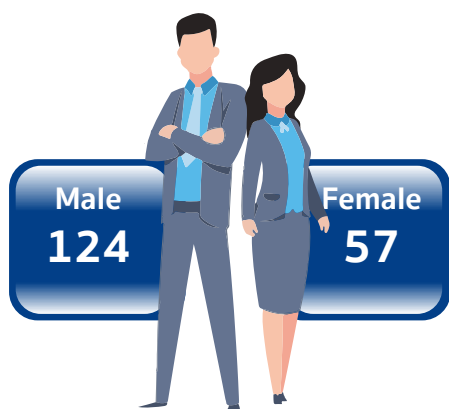
In 2020, The Company has set up training plans training plan which conducted training both inside and outside the organization Total 127 courses, 80% of the target training was set and 109 courses were carried out, 85.83% higher than the target by 0.83%.

Training Summary of Sahacogen Personnel 2020

Topic	SAHACOGEN (CHONBURI PULP COMPANY LIMITED)	SAHACOGEN GREEN CO., LTD.	SAHAGREEN FOREST CO., LTD.	SCU
Training course type				
Δ Standard Training Course	7	8	8	23
Δ Managerial Training Course	1	6	4	11
Δ Specific Training Course	23	23	29	75
Total	31	37	41	109
Number of participants				
Δ Manager level	16	2	1	19
Δ Department head level	14	10	6	30
Δ Supervisor / Engineer level	3	12	7	22
Δ Officer / staff level	18	61	31	110
Total	51	85	45	181
Hours in training				
Δ Total Hours	1,523.60	1,777	1,970	5,270.60
Δ Manager level (per person/per year)	31.88	14.50	76.50	40.96
Δ Department head level (per person/per year)	23.06	15.50	48.45	29.00
Δ Supervisor / Engineer level (per person/per year)	19.33	21.50	46.85	29.23
Δ Officer / staff level (per person/per year)	35.15	21.89	41.12	32.72
Average hour (per person/per year)	29.87	20.91	43.78	31.52



NUMBER OF EMPLOYEES WHO PARTICIPATED IN DEVELOPMENT TRAINING



98.91%



In-house Training course in 2020

Category	Topic / Purpose	Course
1. Standard Training Course	<p>1.1 Safety, Occupational Health and Environment Program For employees to be knowledgeable in using equipment and have skills in performing various tasks for operational safety</p> <p>1.2 Legal courses and act related to provide employees with knowledge to realize, understanding, and complying with the law.</p>	<ul style="list-style-type: none"> - Basic fire fighting - Safety when working with chemicals - Be awareness of fire - Working with cranes - Personal Data Protection Act, ISO 45001 standard - IT Awareness
2. Managerial Training Course	2.1 Course for Work Management for employees to have knowledge and understanding in various management tasks, planning, controlling, and monitoring work to achieve maximum efficiency and effectiveness.	<ul style="list-style-type: none"> - Operational planning and budget preparation and control - Problem solving, make decisions and think critically.
3. Specific Training Course	<p>3.1 Courses for key departments within the organization. For the operations and</p> <p>3.2 maintenance staff can review their knowledge and understanding how to use all device and tools Which is an important part of the operation.</p>	<ul style="list-style-type: none"> - Maintenance Planning and Scheduling - Plant available – reliable & efficiency / Power plant indicator - Maintenance management system / Basic knowledge about bearings - Generator System and Generator Protection and basic Generator Turbine - Efficient Operation and Maintenance of Valve and Steam Traps / Pump Selection Techniques in Industrial and Service Applications - Good coordination / communication In crisis and social techniques Media for public relations and Corporate communication in the era of Thailand 4.0 - IT Audit for Non-IT Auditor Masterclass / Information security - Warehouse management (Disbursement system) And basic accounting principles and analysis Company cost / product cost - Prevention of air pollution control / Water pollution prevention control - Preparation of information for meeting Ordinary shareholders / name list system Directors and Executives of Listed Companies And Securities Issuing Company (SEC)

Public Training

The most of courses that develop the knowledge and skills necessary for a specific career. Focusing on individual development. The Company encourages trained and developed employees to return the knowledge gained for the employees concerned. In order to assess the knowledge and understanding of employees also sharing knowledge within the organization.

Online knowledge development

The company has encouraged employees to develop their knowledge in an online format. Through various channels such as ZOOM Application, Microsoft Team or Facebook, etc. due to the company realizes the importance of safety in the health of employees. Including to develop their knowledge and ability continuously despite in the situation of coronavirus outbreak (COVID-19).

Example of Online training by internal speakers as follows :

- Course for Personal Data Protection Act
- Course for IT Awareness
- Course for using Zoom program

External Trainer

- Course for CGR Workshop: Enhancing Good Corporate Governance based on CGR Scorecard. From the Thai Institute of Directors Association.
- Tips for Success in Customs Procedures for Investment Promotion from the BOI
- Webinar "GURU Talk by PMAT: HR Crisis COVID 19 Series" from the Personnel Management Association of Thailand.
- Basic Knowledge in Exporting Business from the Ministry of Commerce
- Webinar "8 Cyber Threats and Techniques Needed" by Enterprise ITPro.
- Online Course: Attend a lecture and how to participate in Road to Certify 2/2563 from the Thai Institute of Directors Association.
- "Corporate readiness investigation to cope with the Personal Information Act, fully enforced on 28 May 2020" from Dharmniti.
- The New Perspective on BCM from the Lesson 1 of the COVID-19 Epidemic Situation (ONLINE) from Siri Pattana Office.
- ASE2020 Webinar Series#1: Impact of COVID-19 Pandemic on ASEAN Energy Sector from the Ministry of Energy.
- Work ethics to sustained success from Vick Training

2. Core Value

Sahacogen Group has defined the core value by using the definition of "PITEP" as a guideline. Which is considered as the key to creating a corporate culture And indicate the uniqueness and identity of Sahacogen employees.

P

Positive Attitude : Have a positive outlook and thinking. And encouraging those around him to have a positive attitude

I

Initiative : Take the initiative or suggest a new project or activity. Which is beneficial to the organization

T

Teamwork : Encourages teamwork. Look at the goals of achieving floss by working as a team.

E

Entrepreneurial Feel : Have an entrepreneurial consciousness. Always consider the benefits of Dongkorn

P

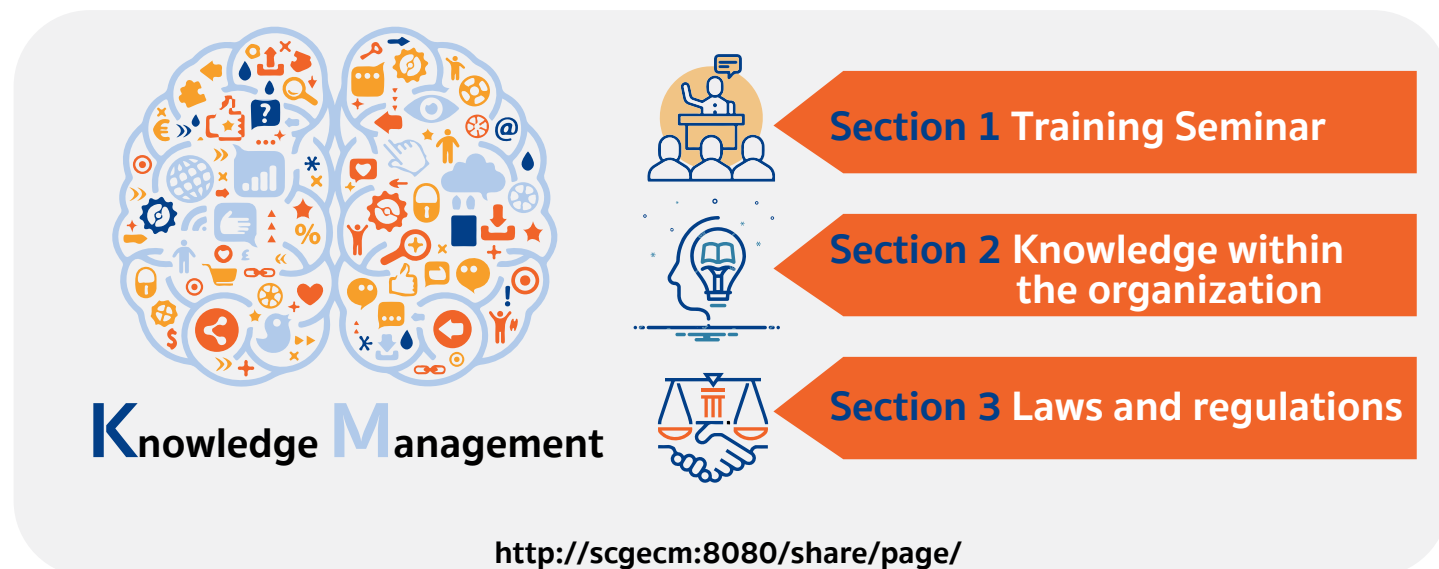
Being proactive : Plan, anticipate carefully. And proceed to achieve FI without hesitation.

In promoting and developing personnel under the common values "PITEP" The Company has a clear idea for employees to set working goals. Bringing the principles of teamwork to achievement of the goals. And able to measure results both at the team and individual.

In 2020, The Company organized an activities to create awareness and encourage employees to understand and access the core values of the organization "PITEP" through the PR board, Intranet system, annual reports Annual registration statement (Form 56-1) through the form of activities for employees to participate, such as

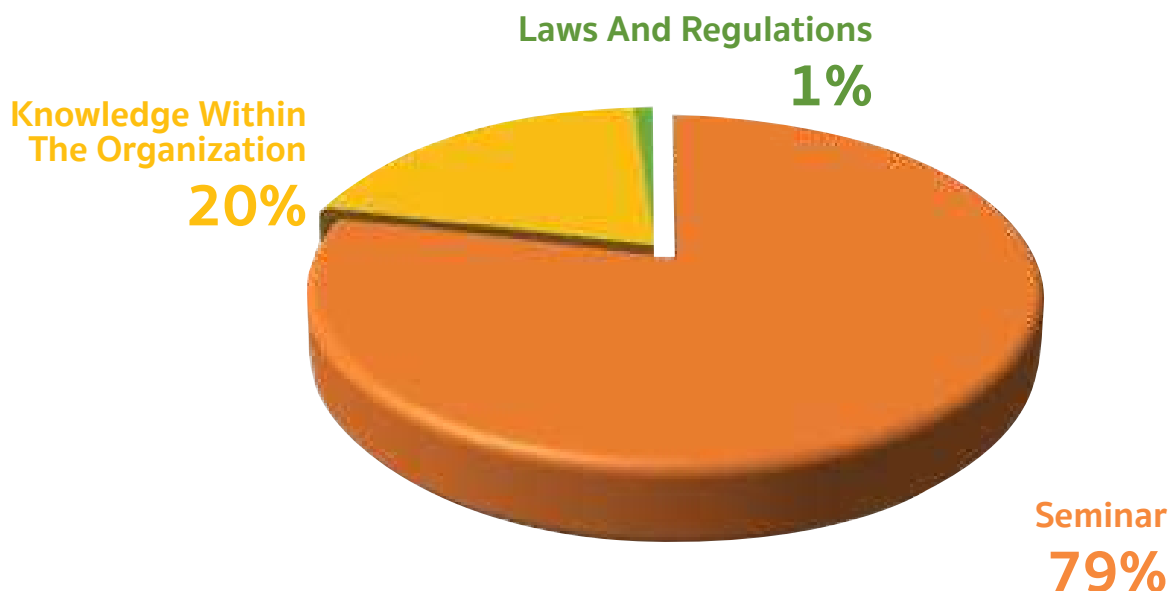
3. Knowledge Management

Long-term personnel development, The Company not just looking at the giving one way by the organization. But the important thing are encouraging employees to have a learning skill by themselves. And extending to the employees to see the importance of self-development, so the Company has bring the information technology system to increase the efficiency in searching and accessing information on knowledge management within the organization by creating a Knowledge Management Sharing for employees in every position.



In 2020, The Company has distributed information through the knowledge management system within the organization. For encourage employees to improve themselves And bringing knowledge information into the System for 90 topics are as follows

Topic	SAHACOGEN KEMIRAU PULAK COMPANY LIMITED	SAHACOGEN GREEN CO., LTD.	SAHAGREEN FOREST CO., LTD.	Total
Knowledge Management Sharing				
Δ Seminar	20	9	42	71
Δ Knowledge Within The Organization	10	8	0	18
Δ Laws And Regulations	0	1	0	1
Total	30	18	42	90



4. Develop management capabilities and leadership

Management level and supervisors are the most important mechanism of Policy Implementation Process. Both care and being a role model for employees. Therefore, Sahacogen Group aims to develop supervisors to be aware of have expertise in human resource management within their own departments. Including assignment, coaching, management, performance evaluation, and training road map In order to be able to support all types of challenging missions in the future.

5. Create personnel ready to accept change

The world economy changes in current situation both an opportunity and an obstacle to the company's sustainable growth. Sahacogen Group emphasizes that employees are ready to adapt with the changes. Flexible and ready to work in all areas and situations. Dare to express the correct opinions, create respect for professionalism. Including strict compliance with the Sahacogen Business Code of Conduct. To be a good employee and good citizen of the community, society, country, and the world.

6. Create motivation and inspiration for employees.

The Company focus on creating motivation or inspiration. In order to create better work results for employees. Not only aside from the self-motivation of the employees, the motivation that comes from the leadership of senior executives also a good example. It is another inspiration to create work of employees. The company has executives who have worked with the company for over ten years or more. There are key persons to creating growth and success for the company. By Stimulation, Inspire and be a mentor for staff of the lower level Including being a role model in creating work standards for future generations of employees.

To ensure that the various human resource development processes described above are truly effective and effective. Therefore the company has established a model for measurement and evaluation. Including assigning supervisors to participate in the promotion and monitoring in potential of personnel under supervision. Divided into 3 main parts as follows



01

Knowledge : is a measure of learning in the classroom.

To compare before and after the training. This section is run by the HR department to ensure that staff are knowledgeable and understanding of the topics that can be utilized.

By evaluating from

- Pre-test / Post-test
- Question-answering and interviewing staff



02

Skill : is a measure of performance. To ensure that employees have sufficient skills and are able to perform duties under their responsibilities. This part is run by the supervisor.

By evaluating from

- Monitoring closely by the instructor or supervisor
- Testing by assigning for practice

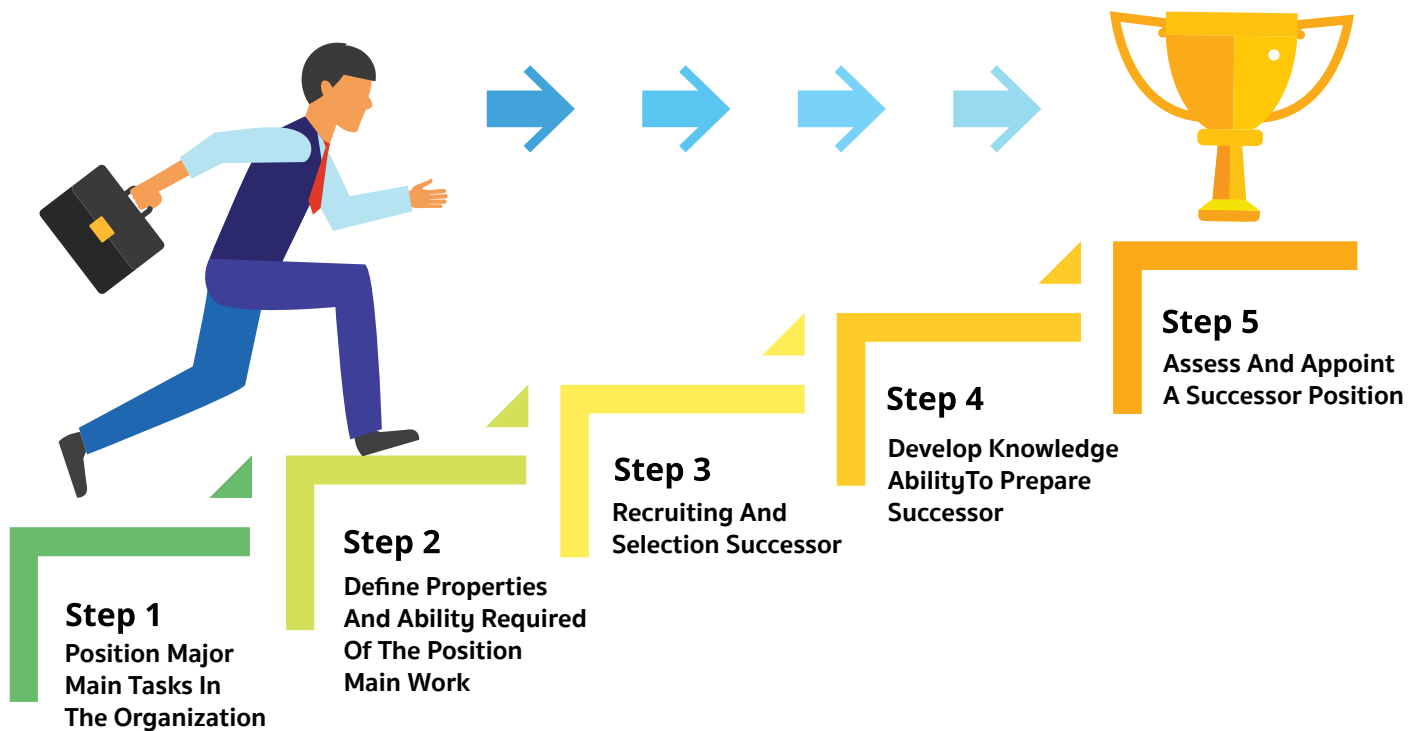


03

Behavior : is a measure of expression behavior. In which the company has specified competency as well as writing definitions to explain the expected behavior and *set to be the grade Measured by* direct evaluation from supervisors.

SUCCESSION PLANNING POLICY

It's a proactive plan and preparation for the recruitment and selection process. To replace the position "position important work" immediately, with predictions and estimates in advance caused by retirement or the uncontrolled situation. The personnel selected to prepare to be "Successors" will focus on the search "Talented and good people" within the organization (Build) with knowledge, ability and appropriate qualifications before recruiting from outside. The company has established the process of creating a succession plan as follows:



Moreover, the management team realized that the importance of creating executives in order to inherit the highest management position with the following principles

1. Set up the descriptions Chief Executive Relevance and organization strategy including specifying qualifications, knowledge, skills required.
2. Select the secondary level executives with potential and ability
3. Analyze qualifications individually to find strengths for further development.
4. Set up the individualized development plans for promote the development and capabilities
5. Providing secondary level executives have a chance to be close, working with senior executives - department level, both at the line level and skipping work.
6. Define potential secondary level executives as successors
7. Prepare for high-level executives to be ready to accept work of other fields if necessary.
8. Prepare personnel with specific talents to have more comprehensive management capabilities. To receive senior management jobs
9. Provide middle level management with more opportunities to manage work, both at work level and skipping work
10. Organize training for high and middle level executives to have a sense of responsibility and loyalty to the organization to get more vision.
11. Arrange training for executives in each department to have more potential Practice planning in advance and promote systematic thinking for secondary level executives
12. Provide systematic writing plan for secondary level executives.
13. Provide a replacement for executives at some level to increase the efficiency of business management




SAFETY COMMITMENT

Quality, Safety, Hygiene, and the Environment (QSHEE)


Sahacogen sees the importance of safety, hygiene, and the working environment. The company is therefore dedicated to create a safe working environment for staffs, employees, and other personnel while preserving the natural environment and being responsible for the safety of surrounding communities. The company's security and hygiene management strictly adheres to the law and regulations, organizing a safe environment for work while encouraging employees to see the importance of safety.

Communicate, foster, and support employees to enhance their skills with the awareness of quality, safety, harmless actions to the environment, as well as energy conservation. Protect stakeholders from danger, injuries, or illness from work. Reduce risks from the moderate level onwards that may negatively affect stakeholders and corporate assets.

Safety and Hygiene Practices: 2020

 The Safety, Health, and Environment working team has been appointed to be the representative of the employees. The working team can suggest practices to promote working safety environment. The team shall monitor and evaluate the implementation of safety practice within work place. The committee is composed of the chosen employees with the term of 2 years.



 Sahacogen (Chonburi) PLC., has received the Awarded as a role model organization with 100% personnel wearing helmets and seat belts. Fasten can reduced accidents. In the "Knowledge Exchange for Building Energy and Road Safety Organization Measures" organized by the Thai Health Promotion Fund

🛡️ The company has regularly publicized information on safety, hygiene and environment to employees and workers via monthly magazine, intranet system, notice boards, email and sound public address system.

🛡️ **Safety Talk** : An activity where employees care for one another by exchanging ideas and recommendations on safety in the workplace and daily life, warning each other of behaviors that may lead to danger.



▲ 🛡️ **Safety Day & Safety Week** : An annual activity for safety and environmental preservation, equipping employees of knowledge and encouraging organizational participation for fostering safety.

🛡️ **Big Cleaning Day** and 5s Action Plan is stipulated to carry out once a week in order to instill the eco-conscious and safety mindset and behaviors in the workplace among employees themselves

🛡️ **Organize safety training sessions such as First Aid & CPR**, crane operations, and education on occupational hazard by medical personnel, Basic Fire Fighting Training, Safety in working with Chemicals, Emergency Response, Safety for working in the confined space, etc.

▶ 🛡️ The company held activities to promote the safety awareness among employees and contractors.

The example are picture contest of risky work spots, promoting the engagement and contribution in setting a safety working guideline, alcohol check, training session before allowing the contractors to access the working site.

- Providing health checkups for employees based on their level of risk exposure, both before commencing work and during the annual checkup.

- Organizing emergency drills such as fire drills twice a year
- Chemical leak-age drills and waste leak once a year

- The company has installed receptors to monitor the environment quality within workplace and nearby communities.

The results were sent to the related unit twice a year.



SAFETY



The company sets Zero Accident Program to prevent accidents in the workplace and to reduce and minimize the statistics of accidents to zero by systematically planning and managing the quality, security, hygiene and environment practices.

ZERO ACCIDENT

Workplace Safety Statistics 2017-2020



SAFETY REGULATIONS



+ 1. Orientation for operators and contractors

All operators and contractors have to be informed of the Safety Orientation such as Work safety regulations, Operational risk, Risk control measures for each job, Security standards And choosing the right PPE equipment for work.

+ 2. Safety preparation and safety action plans

All operators and contractors must be informed of the action plan. Risk control measures and must be strictly including areas preparation to be safe and ready for operation.

+ 3. Requesting permission to work

The work process begins with a request to work. Risk analysis, Defining preventive control measures, Identification of the type of license (Work Permit), Inspection of the implementation of specified measures With a work permit include General work permit, Welding work permit And the work that produces sparks, Work permit in confined spaces, Work permit for high altitude or scaffolding, Work permit in relation to chemicals etc.

+ 4. Inspecting work areas after work

Operators and shift supervisors must inspect the work area every day. If it is not in the normal condition, it must be improved to be ready for use and safe for operators.

+ 5. Accident Report

If an accident occurs or encounter unsafe conditions. Supervisors have to stop working orders. Then report to senior management for make an investigation by the investigation committee.

+ 6. Safety Performance Report

Meeting and monitoring of the operational area by the Safety Committee.

Organizing safety training for workers in the year 2020

No.	Issues / Training Topics	Issues / Training Topics	Number of participants
1	Orientation for new employees (safety, occupational health and working environment)	Sahacogen (Chonburi) PLC., Sahacogen Green Company Limited Saha Green Forest Company Limited	12
2	First aid	Sahacogen (Chonburi) PLC., Sahacogen Green Company Limited	29
3	Fire extinguishing	Sahacogen (Chonburi) PLC., Sahacogen Green Company Limited Saha Green Forest Company Limited	69
4	Chemicals Safety for work	Sahacogen Green Company Limited Saha Green Forest Company Limited	66
5	Confined Space Technique	Sahacogen Green Company Limited Sahacogen (Chonburi) PLC.,	
6	Review of work on cranes	Sahacogen Green Company Limited	3
7	The Occupational Safety, Health and Environment Committee	Saha Green Forest Company Limited	2
8	Course 1. The crane operator Course 2. Material gripper Course 3. Crane Operator Control Course 4. Signal Provider to the Crane Operator	Saha Green Forest Company Limited	1
9	Forklift Safety Drive Training	Saha Green Forest Company Limited	18
10	Fire awareness	Saha Green Forest Company Limited	15
11	Safety Supervisor	Saha Green Forest Company Limited	26
12	Radiator Control	Sahacogen Green Company Limited	1
13	Water pollution prevention	Saha Green Forest Company Limited Sahacogen Green Company Limited	1
14	Air pollution prevention	Saha Green Forest Company Limited	4



COMMUNITY INVOLVEMENT AND DEVELOPMENT

Sahacogen focuses on community and social development. With an emphasis on participation aiming to improve the quality of life of the people in the community under the traditional way of life Ready to operate a business based on responsibility and contributing to social sustainability.

In 2020, the Covid-19 epidemic, the operation of social engagement and development has changed the format to suit and comply with the policy of the company. Focus on a local development, awareness of prevention and problem solving. Along with building safety and helping communities based on social responsibility. With the results of operations as follows :

Return to society

Details	Amount of Contribution Activities	Budget (Baht)
Education	17	316,998
Sport	20	65,764
Quality of life	36	910,856
Environment	12	1,199,786
Religion, Culture and Tradition	54	139,068
Public Interest	50	184,404
Power Development Fund	4	12,793,439
Total	193	15,610,315

EDUCATION

Education is the foundation to the development. Sahacogen has been supporting kids in communities by spending budgets in many projects. The example of the projects are educational budget patronization, knowledge sharing to youths, drawing and painting competition, children day, Lunch for Children, vegetable planting activity, item give away for kids, calendar donation for the blinds, Sharing for Children Project, etc.



• Young dream project with sustainable energy conservation.

Sahacogen Group realizes the importance of educational development. As well as promoting the knowledge and ability of youth living in the local area. Therefore organized the Young dream project with sustainable energy conservation, on the topic "Thai children care about energy conservation fight against COVID-19" the painting competition to win a scholarship from Sahacogen. Which has continued for over 10 years. This is to support children's education and competence in accordance with the company's corporate social responsibility policy. That focus on participation between companies, communities and local agencies.

In 2019, Sahacogen supported educational projects or community activities,

17 Projects = With a total budget worth more than **316,998** Baht

SPORT



To foster a positive relationship between Sahacogen group and the community, government offices, local authorities, customers and partners while supporting the effective use of time, Sahacogen organized sports activities every month. These include football matches for the youth and community members residing near the power plants, Sahagreen Forest Cup for traditional sports, and sports for building lasting relationships with customers. The company also donated sports equipment to nearby communities while supporting sports competitions to protect the community members from turning to the use of narcotics since 2012-present.

In 2020, Sahacogen supported sport activities which many agencies had participated

20 Times = The total contributions were more than **65,764** Baht

ENHANCING QUALITY OF LIFE



• Village Health Volunteer Development Project (VHV)

Sahacogen has been collaborating with local hospitals and local administrative offices to educate the youths about basic health concerns, first aids and basic medical sciences in “Village Health youth Volunteer or VHV” project. In 2020, there were trainings in many topics provided for the youth volunteers such as “Youth volunteers and the local community development” and “First aids in emergency situations”. The project has been conducting for 10 years.

In 2020, Sahacogen supports Village Health Volunteer Development Project (VHV)

There are around **30** Youth volunteers joined the project per year. | Currently there are **10** Classes of members | around **200** People

• Good Health to Community Project

It has been 10 years, Sahacogen and Affiliates supports the health care activities with collaboration from the Provincial Public Health Offices. We offer free of charge health check-up services on the mobile buses to the villages.

In 2020, Sahacogen supports Good Health to Community Project

36 Quality of life development Projects = **Totaling 910,856 Baht**



• Power Development Fund

The Power Development Fund has been established by the resolution of the Energy Regulatory Commission Committee, Ministry of Energy. This fund is to develop the quality of life and localities around power plants. Sahacogen & Affiliates gives contribution to the Power Development Fund based on the power capacity and type of power generation. In addition, Sahacogen Green has set up the development fund for communities around the biomass procurement center in Lamphun, which is the source of fuel generating power for the biomass power plant. The contribution of the fund is 100,000 per year. This will help develop communities and quality of life.

The example of projects community shop (beautiful canal clear water without water hyacinth project. Donation of medical equipment for hospitals to promote health in the community. Voice improvement project along the village line Projects. Project to support an exercise equipment in the community, etc. The employees also participate in meetings to suggest ideas in running projects.

**In 2020, Sahacogen and affiliates donates money
for local communities**

Amounting **12,793,439 Baht**

Power Development Fund	Total
Chonburi Power Development Fund 1	11,447,423
Power Development Fund, Saha Green Forest Company Limited	564,854
Power Development Fund, Sahacogen Green Company Limited	681,162
Biomass Buying and Processing Center Development Fund (Lamphun), Sahacogen Green Company Limited	100,000



• The Sharing Love to upstream community Project

In 2020, The Company by Sahagreen Forest together with Volunteer network in Kamphaeng Phet province hosted the first project of “The Sharing Love to upstream community” The 2nd time at Loh Ko Village, Kosamphi Subdistrict, Samphi Nakhon District, Kamphaeng Phet Province. (Mountain Water Supply) to follow up on the improvement project. The objective of this project is to develop basic public utility systems. Raising awareness on the conservation of upstream forest areas for communities Including promoting participation in water source development Conservation and rehabilitation of forest resources

The Company emphasizes the importance of water resources management. As an important factor of the main raw material for electricity generation. Also giving importance to the upstream community who responsible for maintaining the upstream forest In order to have an abundance of natural resource. To live with the forests in sustainably.

• Planting bamboo return to the forest

Since 2018, Sahacogen Public Company Limited (Chon Buri) implemented projects in the area of Chae Daeng District, Lampang Province. Together with Forest Resource Management office 3 (Lampang) gave 20,000 bamboo seedlings to Pha Chor villagers and Ban Huai Wad, Thung Phueng Subdistrict, Chae Hom District, Lampang Province for replacement in the degraded forest area of 1,000 rai. With the goal of restoring forest resources Including building careers and food sources from harvesting bamboo shoots and bamboo products for the community

• Giving bamboo trees to the forest

The Company together with Forest Resource Management office 3 (Lampang) hosted The Giving bamboo trees to the forest. By organize activities to give bamboo seedlings to villagers in the area of Chae Hom District and Wang Nuea District, Lampang Province. In order to plant and restore forests as well as creating a career in the community by extending the use of the planted trees. Project results in 2019, The Company donated 40,000 bamboo seedlings. For 150 households to replace plants in degraded forest areas, It covers an area of approximately 225 rai, with a total value of over 100,000 baht.

Performance in the year 2020 The Company organizes training courses "Propagating bamboo, creating forests, generating income, creating occupations" for networks and project members in Lampang Province, totaling 50 people. That's all to expand and develop knowledge about bamboo plantation and propagation Lead to career building and self-reliance Help build additional career and increase income for the family in another way. The budget for project implementation from 2018-2020, total value more than 1,000,000 baht

Such as The Sharing Love to Upstream community project, the planting bamboo return to the forest project, and the giving bamboo trees to the forest project Etc.

In 2020, Sahacogen supported Environmental activities, for increase engagement with communities and local government agencies.

12 Project = Totaling **1,199,786** Baht

RELIGION, CULTURE, AND LOCAL TRADITIONS



Religion, culture and local traditions heritage fundamentally helps in strengthen the relationship among people in communities. To preserve and maintain various specific cultures as a traditional heritage for next generation, Sahacogen & Affiliates promotes activities in communities nearby the power plants in collaboration with all sectors. Throughout the year 2015, the organization of religious activities were “Buddhist Lent Day”, “End of Buddhist Lent Day”, and traditional activities in Chonburi were “Songkran Festival”, “Loy Krathong”, “Buffalo Racing”, “Seafood Festival”, “Ritual of Rice Goddess Worship, Mae Phosop”, and “Rice Harvest Tradition”. Moreover, the traditional activities in Lamphun and Kamphaengphet also proceeded. The former were “Bathing Relic”, “Poi Luang Ceremony”, and “Water Angel Worship”. The latter were “Religious Festival: Ngan Bun Klang Ban” and “Nop Phra Len Phleng Festival”

In 2020, Sahacogen Group supports religious, cultural and local activities.

54 times = **Totaling 139,068 Baht**

SOCIAL BENEFIT AND CHARITABLE ACTIVITIES

• Protect religious sites volunteers project

In 2020, the company together with the Kamphaeng Phet Provincial Industrial Office hosted the Protect religious sites volunteers’ project. By Inspect the equipment and electrical systems in buildings and construction of the temple, amount 10 places. In the area of Khu Ban Oong, Wang Tabaeak, and Khlong Phikrai Subdistrict, Phran Kratai District, Kamphaeng Phet Province. For repair the damaged electrical equipment, improve the efficiency of electrical equipment, reduce fire risks and increase safety for temples and communities in the area around the power plant.



• Sahacogen Project gives warmth to create smiles for the 6th year.

This project has been held for the sixth consecutive year. In objective to support activities of sharing and caring for people in society by encouraging employees to take part in helping and developing society. 2020 Sahacogen, in cooperation with Lion (Thailand) Co., Ltd., organized an activity “Sharing smiles to create happiness for the elderly” under the project “Sahacogen Unite to Give Warmth to Make Smiles” the sixth year. For the Social Welfare Development Center, Bang Lamung District, Chonburi Province. The activities are include giving life essentials to the elderly and having lunch. To promote the care of the physical and mental health of the elderly Support activities of the elderly club network Including to make the participants realize the importance of sharing and contributing to society.



• Community drinking water project.

Sahacogen provides clean drinking water to government agencies and communities in the surrounding area. To create participation and support activities of the organization and community. And also helps families, flood victims, the needy, or agencies lacking funds to provide drinking water. In 2020, the company has delivered drinking water through the community drinking water project of 200,000 cups and 10,000 bottles, totaling 130 organizations and 125 communities, totaling more than 200,000 baht.

In 2020, Sahacogen supports projects in the area of public benefit and charity to create participation and help to support and related agencies.

The examples Protect religious sites volunteers' project are; providing drinking water for local communities; Smiling Together projects, etc.

50 Projects = More than 184,404 Baht



Situation of the COVID-19 epidemic in early 2020

The Company helps communities and external agencies that perform public health and surveillance work in all work areas adjacent to the Company's establishment. Drinking water, energy drinks, protective equipment, face masks and alcohol gels are given to hospitals and various agencies that help filter and prevent the spread of COVID-19.

In 2020, the Covid-19 epidemic.

More than 500,000 Baht



ENVIRONMENTAL MANAGEMENT



ENVIRONMENTAL MANAGEMENT

Environmental Management

Sahacogen & Affiliates have defined environmental objectives committed to continual develop the environmental management system to ensure the effectiveness and meet the international standard, as well as running business with environmental and social responsibility. Establishing policies for quality, environment, safety and energy conservation to strive for providing stable and high quality power it is also responsible for environmental protection, pollution prevention, occupational health and safety. Energy conservation and management including management to reduce greenhouse gas problems the guidelines are as follows.

1. Communicate, foster, and support employees to enhance their skills with the awareness of quality, safety, harmless actions to the environment, as well as energy conservation.
2. Monitor and oversee the QSHEE practices, energy conservation and management in compliance with laws and related regulations.
3. Support appropriate and sufficient resources to meet the operational objectives of QSHEE policy, as well as promote the reasonably effective energy and resource consumption on a regular basis.
4. Protect stakeholders from danger, injuries, or illness from work. Reduce risks from the moderate level onwards that may negatively affect stakeholders and corporate assets.
5. Improve and develop the QSHEE system consistently.

Adhering to Environmental Regulations and Laws

Sahacogen ensures that its business practices adhere to all related laws and regulations. Especially, Sahacogen operates its power plants in compliance with the environmental measures as specified in the Environmental Impact Assessment (EIA) for the power plant of Sahacogen (Chonburi) PCL and the Initial Environment Examination (IEE) for the biomass power plants of Sahacogen Green and Sahagreen Forest. This requires the environmental quality measurements and reports in every six months. Sahacogen and affiliates has set its business operation policy adhering environmental-friendly business practices (Green Business Practices), as well as related laws and regulations.

Environmental Management Related to the Power Generation Process

Water Management

Sahacogen places the importance of the effective water management throughout all production processes, from the source of water for production input until the preservation of the environment after production process. The company therefore strictly adheres to regulations of water management and considers the impacts of water consumption to the nearby communities. On the other hand, Sahacogen also plans to prevent the risk of water shortage which may interrupt the power plant operations. The water management practices of Sahacogen are as followings::

Sahacogen (Chonburi) PCL and Sahacogen Green biomass power plant

1. The power plant of Sahacogen (Chonburi) PCL and the biomass power plant of Sahacogen Green are located in industrial area, using raw water from sources designated for industrial use without affecting the water supply of the nearby communities. Waste water from production process is sent to the neutralization basis for quality improvement before recycling to water the green area of power plant. While the remaining water is discharged to the waste water treatment facilities of Saha Group Industrial Park under the controlled quality which the discharged temperature is not greater than 40 Degree Celsius according to the regulations.
2. Check the water content to assess the sufficiency of raw water used in the production process every 6 months according to the plan. And check the amount of water weekly during the dry season In January - June of every year.
3. Sahacogen also implemented the RO Rejected Water Recycle Project to recycle the rejected water for reusing in production process. This help to save water supply and reduce the waste water's expenses

RO Rejected Water Recycle in 2018-2020

Key Performance	2018	2019	2020
The reduction of water consumption in production process (m ³ /year)	98,906	105,013	123,819

“Sahacogen” The prototype factory under the Water Manage & Development System Project to increase the efficiency of industrial use in the Eastern Economic Corridor Area (EEC)




Sahacogen (Chonburi) PLC. has joined as a prototype factory by publishing guidelines for the smart application of the water management system and the economic instruments for industrial water management in the academic seminar at the Bangkok International Trade and Exhibition Center On Friday 25 September 2020



The biomass power plant of Sahagreen Forest

created a reservoir on a 40 Rai plot of land, capable of holding approximately 370,000 m3 of water. This volume is sufficient for the entire-year consumption for electricity generation. The reservoir consists of an incoming pond for sediment and a main pond for use. This ensures that the water has low levels of suspension and a stable quality, reducing the chemicals usage and the volume of waste water from the production process. Sahagreen Forest also planted trees around the reservoir as a green belt for protecting the wind, lowering the amount of water loss and supporting the use of waste water without affecting the water used for agricultural and consumption purposes of the surrounding communities. Waste water from production is released into the sewage water holding pond for keeping temperature and quality according to the regulations before recycling to water the green area of power plant without discharging to external area or “Zero Discharge”.

The company also assesses the water quality and temperature strictly according to the regulations. This ensures that the water quality meets the standards, protecting and minimizing environmental impacts. Saha green also consistently examines the ecosystem around its power plant.

Company Name	Water Management	Water used for Production Year (m ³)		
		2018	2019	2020
 SAHACOGEN (CHONBURI PUBLIC COMPANY LIMITED)	<ul style="list-style-type: none"> Waste water treatment facilities of the industrial park Green Area RO Rejected Water Recycle 	1,787,015	1,797,901	1,641,225
 SAHACOGEN GREEN CO., LTD.	<ul style="list-style-type: none"> Waste water treatment facilities of the industrial park Green Area 	251,064	328,503	407,212
 SAHAGREEN FOREST CO., LTD	<ul style="list-style-type: none"> Zero Discharge Green Area 	98,906	342,444	337,557















Air Emission Management

Strictly implement air pollution management measures as follows :

- The emission monitoring system is installed at the stacks of the power plant for measuring the amount of TSP, SO₂, and NO₂ emitted to the atmosphere. The results indicated that the amounts of those pollutants are within the legal limits.
- Installed the emission monitoring system in the communities' area nearby the power plant, composing environmental monitoring reports in every 6 months for the related sectors and public to ensure that the air qualities are according to the standards and regulations.
- The Electrostatic Precipitators (ESP) with 99.5% of particulate-collecting efficiency was installed at the biomass power plant of Sahacogen Green and Sahagreen Forest to prevent the dust pollutions. This makes the quality of the air emitted from the power plant's stacks will be according to the standards and regulations, as well as safety and environmental friendly.



Air Quality Measuring at Power Plants of Sahacogen and Affiliates in 2018-2020

Power Plants	Average Results (Min-Max)			Legal Standards
	2018	2019	2020	
				
 Total Suspended Particulate (TSP)	0.02-4.39	1.14-2.65	1.38-5.60	≤ 60
 Sulfur Dioxide (SO ₂)	0.04-0.29	0.1-0.47	0.02-0.97	≤ 18
 Nitrogen Oxide (NO ₂)	7.29-92.70	12.79- 86.77	18.84-79.72	≤ 110
				
 Total Suspended Particulate (TSP)	15.5 - 37.1	41.5-89.8	9.8-18	≤ 120
 Sulfur Dioxide (SO ₂)	<1.3	<1.3	<1.3	≤ 60
 Nitrogen Oxide (NO ₂)	65.2 - 96.1	116.5-139.6	63.5-92.5	≤ 200
				
 Total Suspended Particulate (TSP)	109.0 - 52.5	79.5 - 13.3	7.2 - 7.6	≤ 120
 Sulfur Dioxide (SO ₂)	<1.3	<1.3	<1.3	≤ 60
 Nitrogen Oxide (NO ₂)	19.4 - 52.5	16.4 - 55.5	23.4 - 56.1	≤ 200

(((o))) Noise Pollution Management







- Appropriate design and install the machines and equipment that may cause the noise pollution including e planning inspection and preventive maintenance. Plant bushy trees surrounding the power plant as green belt for buffering sound and wind that help to control noise level within the standards and regulations.

- Designate 3 check-points for measuring the noise level; the sources of noise in the power plant, the control room of the power plant and the boundaries of the power plant. The noises are controlled within the standards and regulations, with routine measuring the noise level in every 3 months.

- Provide ear muffs for employees to wear when working in areas with noise level exceeding 80 Decibels. Employees are required to wear the ear muffs when working in that areas which warning signs were installed to remind them of this regulation.



The results of noise measurement in power plants of Sahacogen & Affiliates in 2018 - 2020

Power Plants	Average Results (Min-Max)			Legal Standards
	2018	2019	2020	
  The results of noise measurement in general (Leq 24 hr)				
Power plant's fence line on the side	58.0 - 59.3	59.4 - 65.1	57.6 - 65.1	70 dBA
Ban Rai Nueng	56.0 - 59.0	55.8 - 60.2	55.1 - 64.9	70 dBA
The results of noise measurement in workplace- Personal noise dosimeter (Leq 12 hr)	72.4 - 81.9	73.0 - 82.8	76.5 - 81.2	83 dBA
  The results of noise measurement in general (Leq 24 hr)				
Nong Pla Kho Temple	50.9 - 58.5	51.3 - 52.3	49.9 - 63.0	70 dBA
San Luang Temple	47.1 - 59.7	44.4 - 51.2	48.3 - 63.3	70 dBA
The results of noise measurement in workplace- Personal noise dosimeter (Leq 12 hr)	77.0 - 82.7	74.7 - 82.4	79.5 - 86.3	83 dBA
  The results of noise measurement in general (Leq 24 hr)				
Baan Huay Nam Sai School	52.1 - 55.8	47.6 - 55.5	48.0 - 52.5	70 dBA
Si Chum Phorn Wachirawat Temple	49.8 - 61.8	51.6 - 55.3	49.6 - 60.4	70 dBA
The results of noise measurement in workplace- Personal noise dosimeter (Leq 12 hr)	81.0 - 82.0	81.7 - 82.3	77.7 - 82.4	83 dBA



Waste Management

Sahacogen is dedicated to manage wastes according to the legal standards and the policies of each power plant. Wastes are divided into two categories: hazardous waste and non-hazardous waste. The company's waste management practices are as followings:

1. Hazardous wastes are those that can be harmful to an environment, such as transformer oil, lubricants and chemical containers. These wastes are disposed according to the approved procedures to the agencies authorized by the Department of Industrial Works

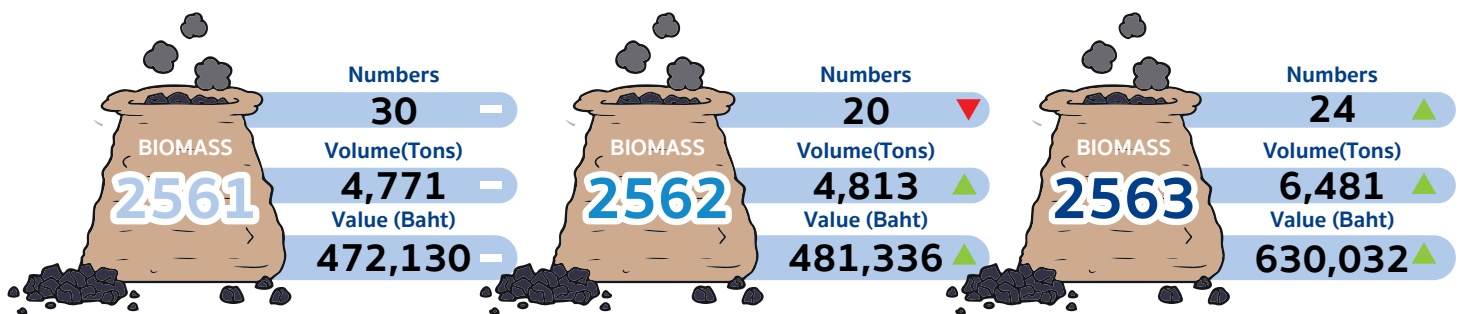
2. Non-hazardous wastes are general wastes such as leftovers, wood, paper, wires, plastic bags, and construction materials. These wastes are classified before disposing to bury according to the standards and regulations or appropriately recycling. The waste bank project was established to purchase recyclable wastes from employees in order to foster employees to utilize resources effectively.

Moreover, biomass ashes from combustion process of the biomass power plant of Sahacogen Green and Sahagreen Forest are utilized for agricultural benefits and brick production. These resources are distributed to communities as part of the company's CSR campaign, adding value to non-hazardous wastes for optimal utilization.

• “Biomass Ashes” arise from the power generating process of biomass power plant.

Biomass ashes are alkaline conditions and contain essential nutrients for plants, suitable for agriculture as soil improvement materials. This interests many people in using biomass ashes to increase their own production output such as groups of bamboo -growing, rice-farming, longan-planting, and planting-soil development. Moreover, these ashes are suitable for constructing material components such as light-weight bricks. In association with educational institutes in local areas, the company develops the biomass ashes usage, creates employment to produce those bricks, which has been conducting since 2013 to the present

The company bring the research to develop the knowledge about utilization of biomass ash. For farmers and interested parties in the form of community enterprise to site visit and training such as Production of brick blocks from biomass ash, Soil development and improvement from biomass ash, The public-private coalition project teaching how to plant home-grown vegetables etc.



Sahacogen Group by Saha Green Forest Company Limited in collaboration with Naresuan University And local authorities such as Kamphaeng Phet Land Development Station And the Prankratai District Agricultural Office Local farmer organizations Community leaders Local government organization Private organization And the Phrankratai agricultural cooperatives Has implemented a project "Increasing the utilization value of biomass ash for increase productivity and reduce costs of sugar cane and cassava production" In the area of sugarcane farmers and cassava growers in Kamphaeng Phet Province for investigate the feasibility of using biomass ash to improve quality and increase soil fertility. The results found that the biomass ash from the power plant can improve soil for increasing the quantity and quality of sugarcane and cassava yield. This led to the development of soil amendments suitable for sugarcane and cassava cultivation in the study area.

In 2020, the company has promoted and supported the use of biomass ash for the community to improve soil quality in the sugarcane and cassava plantations, more than 2,000 rai, which not only benefits the environment but also helps reduce farmers' expenses for purchasing chemical fertilizers, another option.

• Value-Added Biomass Project

Reduce burning, reduce smog problems

Sahacogen & Affiliates have intent to develop integrated alternative energy business using biomass for power generation. This fosters the participation and benefits to society with income distribution towards communities by purchasing agro residues from them. With the awareness of social responsibility and sustainability, this also helps to reduce air pollution problem occurring from crop residue burning without control and greenhouse gas emissions.



The procurement and processing biomass center has been established in 2010 to purchase biomass and agro residues in order to add biomass value and achieve the distributive policy for community benefits.

The value-added biomass project is generating financial, social and environmental impact. The project promotes revenue distribution to local communities, creating occupation, decrease the burning activities, reducing smog and CO₂ emission.

Biomass type	Weight (ton)	Value (Baht)
Wood chips	69,457	75,276,350
Chopped wood	87,003	58,114,617
Rice husk	25,934	34,454,083
Corncoobs	31,138	23,394,910
Other biomass	37,488	35,742,916
Total	251,021	226,982,875

In 2020, the company bought the residual parts of the agricultural products.



The agricultural products

251,021 Ton

With a total value of

226,982,875 Baht

From

2,000 small-scale farmers.

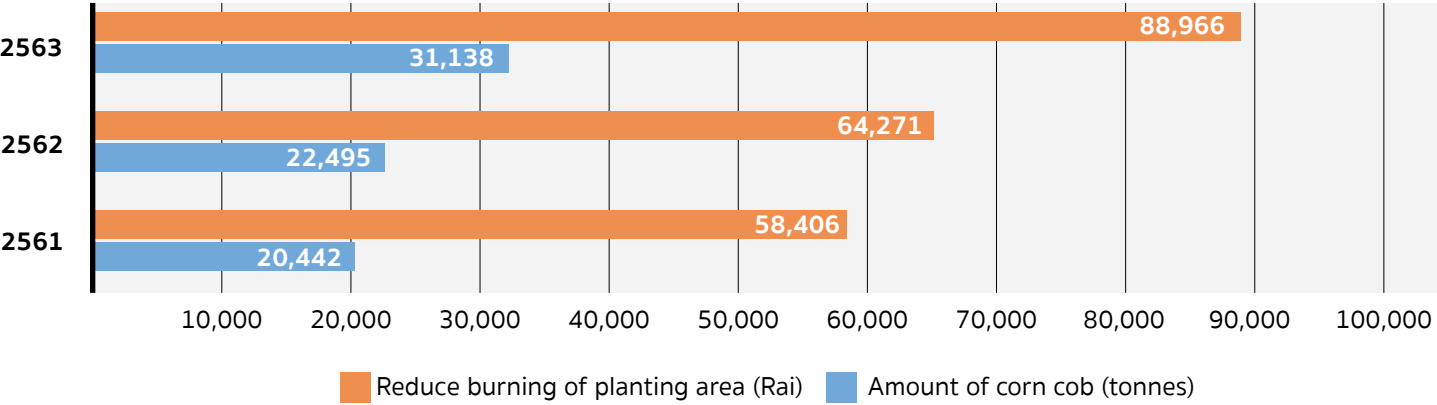
The amount of the purchase of biomass can help reduce the burning of agricultural waste without control in the radius of the biomass's purchase around the power plant at the equivalent rate, which is consistent with the government's policy on a campaign to stop burning agricultural land. The company is encourage farmers to sell agricultural waste to the power plant to use as biomass fuel instead of burning without control.

In 2020 reduce the burning of corncob about 88,966 rai and the equivalent to reduce the burning of Sugarcane leaf, about 8,471.58 rai.

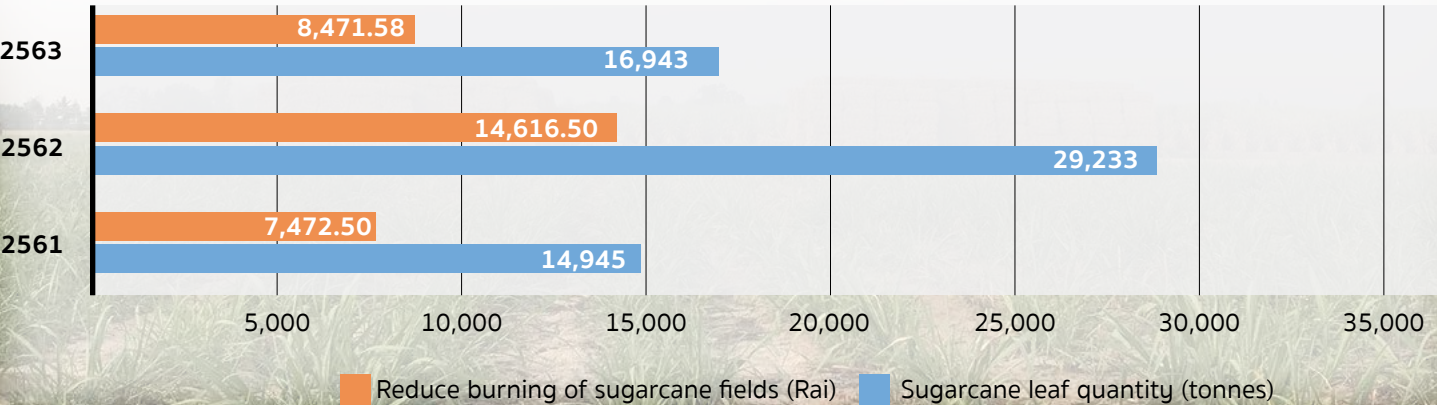
	2018		2019		2020	
Biomass Types	Quantity (ton)	Reduced Burnin Area (Rai)	Quantity (ton)	Reduced Burnin Area (Rai)	Quantity (ton)	Reduced Burnin Area (Rai)
Corncob	20,442	58,406	22,495	64,271	31,138	88,966
Sugarcane leaf	14,945	7,472.50	29,233	14,616.50	16,943	8,471.58



Charts showing the consumption of corncobs for energy production of Sahacogen Group Biomass Power Plant. Equivalent to helping reduce local combustion Planted uncontrolled corn during 2018-2020.



Charts showing the amount of sugarcane leaves used to produce energy of Sahacogen Group Biomass Power Plant. Equivalent to helping reduce local combustion Planting Sugarcane leaf without control during 2018-2020

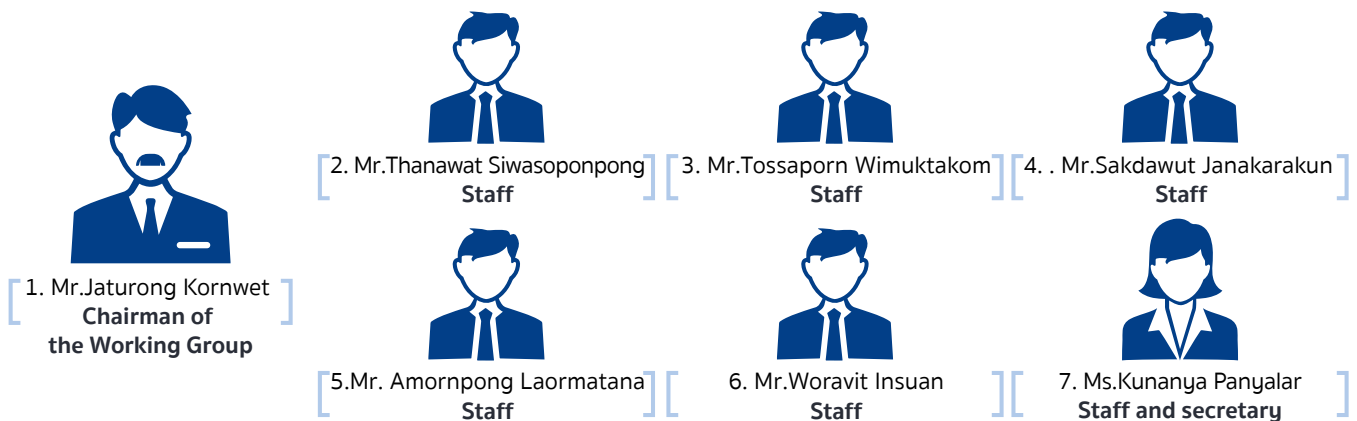


COOL THE WORLD REDUCTION OF GREEN HOUSE GAS EMISSION

As the commitment of Sahacogen & Affiliates, the business operations must be harmonized with environmental conservation awareness as “Environmental & Social Benefits”. The goal has set up to reduce green house gas emissions from power generating process, fast-growing trees for energy project, plantation activities, alternative energy development and other helpful practices to reduce the greenhouse gas emissions.

1. Management of greenhouse gases. To comply with the policy of quality, environment, safety, energy conservation policy and energy management method of the company.
2. Coordinate with relevant departments, for cooperation in management of greenhouse gases According to the policy of quality, environment, safety, energy conservation policies and energy management methods. Including training or activities to raise awareness about energy conservation to suit the employees in each department.
3. Control of greenhouse gas management. And management methods for greenhouse gas.
4. Report the results of greenhouse gas management To the Corporate Social Responsibility Committee for acknowledgment.
5. Implementing greenhouse gas management as assigned.

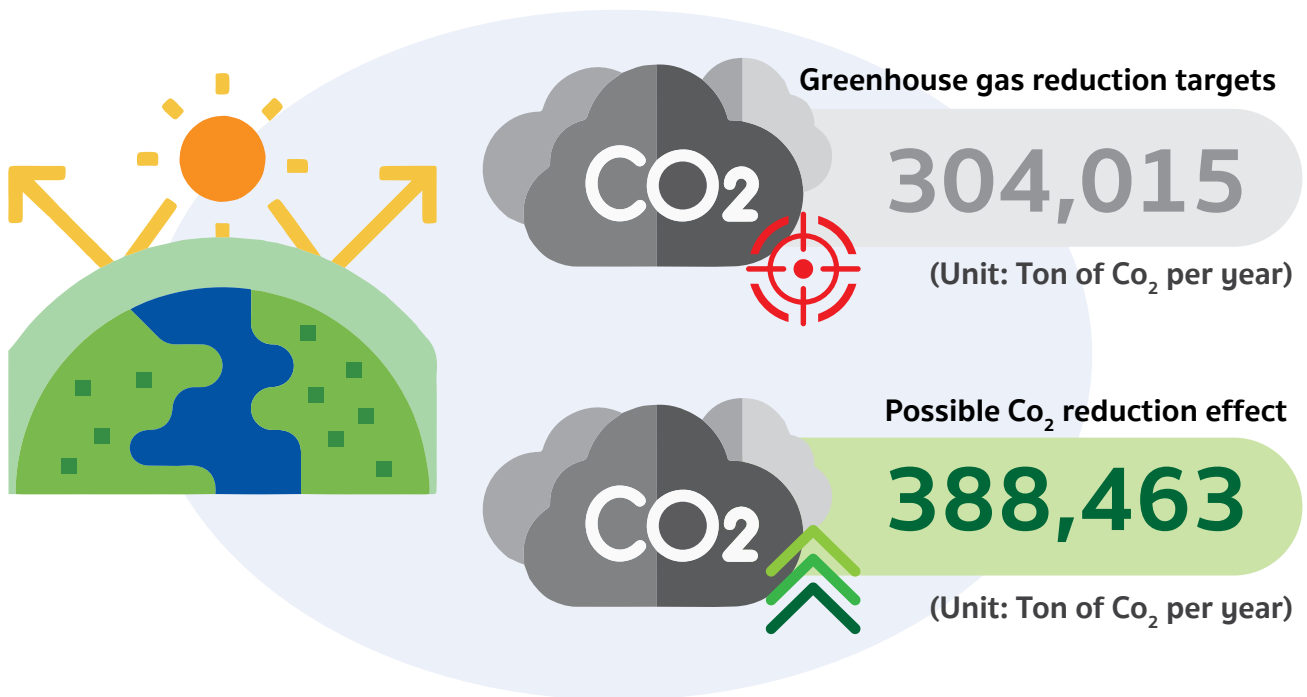
Greenhouse Gas Management Working Group



In 2020, Sahacogen Group has the following performance targets to reduce greenhouse gas emissions:

Project/ Activity	Target (metric tons of CO ₂ per year.)	CO ₂ reduction (metric tons of CO ₂ per year.)
Cogeneration Combined Cycle Sahacogen (Chonburi) Power Plant in Chonburi province	150,000	169,891
Sahacogen Green Biomass Power Plant in Lumphun	50,000	57,520
Clean Development Mechanism Project (CDM) Sahagreen Forest power plant in Kamphaengphet	28,000	37,514
Floating Solar Project	6,000	6,000
Solar Power Project, installing solar panels on the roof of the garage of Sahacogen (Chonburi) PCL.	15	19
Fast-growing trees for energy Project	50,000	83,054
Waste Bank for Environment Project	20,000	34,465
Total	304,015	388,463

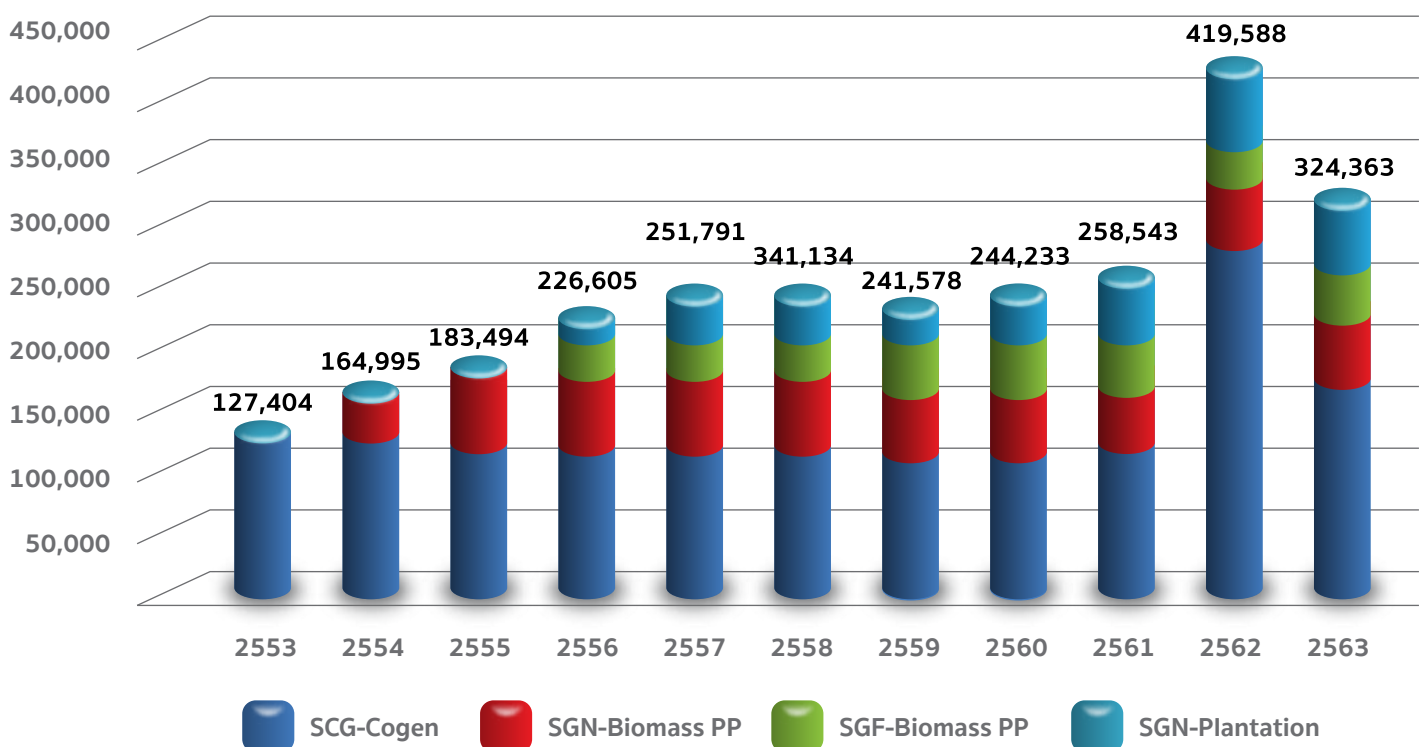
**In 2020 Sahacogen Group
Has a performance that reduces
Greenhouse gas target**



• Power and Steam Business

Historical data statistics for 10 years. Sahacogen Group's energy production process reduced greenhouse gas emissions by approximately 2,945,083 tons of CO₂ equivalent per year. In 2020, Sahacogen Group's energy production process reduced greenhouse gas emissions by approximately 347,979 tons of CO₂ equivalent per year.

GHG Reduction & Absorbntion by Shahacogen (Ton CO₂/Year)



• Fast-growing trees for energy Project

The fast-growing trees which the company selects to cultivate are Acacia Mangium, Leucaena, Eucalyptus, Mahogany, Samanea Saman and so on. It is a sustainable renewable energy source to prevent a lack of biomass fuel as raw material to generate power of Sahacogen & Affiliates' alternative energy business and also adding green areas and reducing global temperature.

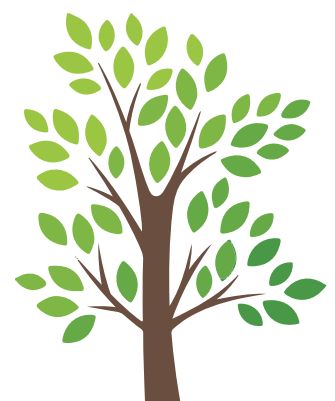
In 2020, the trees from the project can reduce greenhouse gases approximately 83,054 tons of carbon dioxide equivalent per year. Starting from 2007, the accumulation of fast-growing trees aging 1-5 years has been cultivated in 4,849 rais in Lamphun and Lampang province. There are 4,129 rais of company's own land; 121 rais of rental land; 199 rais of joint-venture land; and 400 rais of fast-growing trees promoting member's land. The total of fast-growing trees planted are 1,294,813. Moreover, the employment in localities is more than 200 people per year, and the income of agriculturists values 1,000,000 Baht per year.

Performance of fast- growing tree for energy 2020

Year	Plantation area (Rai)	Fast- growing tree (Tree)
2018	5,838	1,558,756
2019	5,192	1,386,368
2020	4,849	1,294,813

• Communities Green Area Project

Sahacogen has plant propagation center to distribute seedlings to communities, agencies and other people. This will lead to more green area comprising various plant species such as rare tree species, native tree species, decoration plants, economical tree species and multi purposed tree species. This project was initiated in 2012 and has been continued since then. The statistics of young plant distribution were more than 60,000 trees, helping expand green area more than 300 rais of land.



In 2020 the company donates more than

2,000 Tree

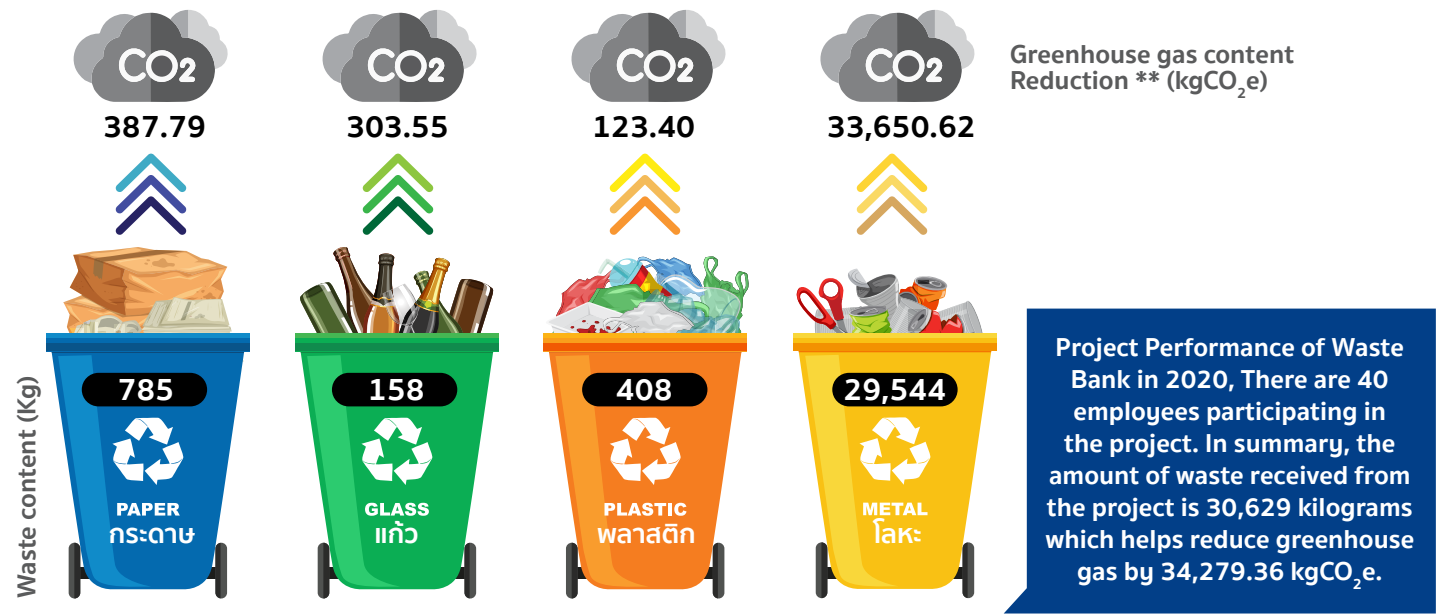
In 2020 the company donates more than 2,000 young plants to support planting projects with community.

- The project in Lamphoon Province
- The project in Kampanetch Province

• Waste Bank for Environment Project

Waste Bank for Environment Project has been set up to motivate and enhance the eco-conscious awareness among employees. Waste must be categorized both in office and plant, as well as the employees can bring their waste from home for donation or exchange before the company sells those waste to purchaser for recycling. This is another way to save the world which revenue from selling waste will be use for organizational activities and donation.

[Result of Waste Bank in 2020 Summary of waste and greenhouse gas emissions that can be reduced from waste separation for recycling]



**Low Emission Support Scheme: LESS (<http://ghgreduction.tgo.or.th/>)



ENERGY SAVING

Sahacogen focuses on the energy saving attempt. The policy was set to create awareness for energy saving among management and employees. The energy management committee is set to implement and monitor the activities such as doing reports of energy consumption, excursion trips, information announcement and activities with employees. The examples of activities are energy day, picture contest, energy saving motto selection and reduction of consumption campaign, etc.

In 2020, the energy saving projects were launched with the supports from staff and managements. The reduction in energy consumption was achieved.



Topic	Description	Targeted quantity of heat power (Unit : MJ)	Result of reduction (Unit : THB/year)
Steam trap in steam distribution system maintainance	Replacing new steam trap components to reduce the steam leakage from the steam distribution system.	2,942,325	444,788.00
Steam Trap maintainance (2020)	Replaced a faulty Steam Trap device to reduce the loss of steam inside the power plant.	4,087,342	572,466.00



Topic	Description	Targeted quantity of heat power (Unit : MJ)	Result of reduction (Unit : THB/year)
Inspecting & Correcting hot water leakage within the boiler	To increase the efficiency of the boiler by reducing energy loss from hot water leakage in the system.	3,483,371	590,143.47



Topic	Description	Targeted quantity of heat power (Unit : MJ)	Result of reduction (Unit : THB/year)
Inspecting & Correcting hot water leakage within the boiler	Replace a 36 watt bulb with an 18 watt bulb. Total 200 bulbs Can be used for 8-24 hours per day. At the office building and fuel room	116,892	73,707.05
Replaced the Steam trap, reducing the leakage of steam in the steam distribution pipeline.	Replaced a faulty Steam Trap device. To reduce the loss of steam in the power plant area of the Boiler, Steam Pipe, Super Heater	4,273,945	422,436.09

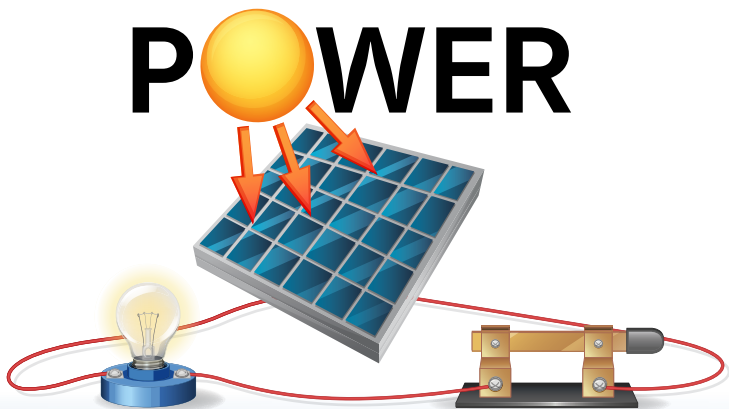
• Solar Power Generating Project

The solar power project was setup to produce electricity used in office by installing solar cells on the car park rooftop of Sahacogen (Chonburi) PCL. The electricity cost has been reduced from the power generation starting from March 5, 2008 to present.

Project results

Year	Electricity production (kWh)
2018	22,044.88
2019	22,221.73
2020	20,158.07

SOLAR POWER



IN 2020, THE ELECTRIC POWER



+ the electric power was generated
20,158.07 kWh



✓ The total value was
56,000 Baht per year



✓ The CO₂ emission reduction
was **19 tons per year**

*which was equivalent to planting new 19 tree
per year or reduction
**of crude oil consumption 10,000 liters per year.



THE BIODIVERSITY

Sahacogen (Chonburi) Public Company Limited, subsidiaries and the other operating units such as the trading center of biomass, fast-growing cultivation sites are located in Sahagroup industrial park and the area allocated for industrial businesses, factories and agricultural businesses. The factory sites are developed specifically for factory building. The environmental impact assessment did not show any forest area covered. The wildlife animal was not found in the area. The the factory building and business operation will cause the environmental impact to the aquatic and on-land biological resources at the low level.

The social responsibility management of the company is complying with the policy of the government that supports the collaboration between public and private sectors. The forest management office number 3 (Lampang), an office under the Forest Department, Ministry of Natural Resources and Environment, launched a bamboo planting project to help create sustainable revenue sources for local community in Tungpueng sub-district, Jaehom district, Lampang Province. The pilot project covers the area of 1,000 rais based on the policy to improve the deforested area. The areas for agricultural activities are provided together with the bamboo sprouts.

The planting areas provided by the government as well as the supports in terms of training sessions about planting bamboo plants as a sources of foods and to generate revenue for people in local cummmunities. Moreover, the bamboo planting also helps reduce the deforestation. The bamboo parts can be used in various ways. The soil fertility can also be improved and enhance the ecology variety. The project running supports the goal to comply with the united nation goals of sustainability development in economy, society and envirotnment. The poverty reduction, the development of food supplies and nutritions; the sustainable agricultural activities; civilliance's well-being; good water supply and irrigation system; the protection and sustainable usage of the aquatic, on-land, forest resouces; and the support to bio-diversity.

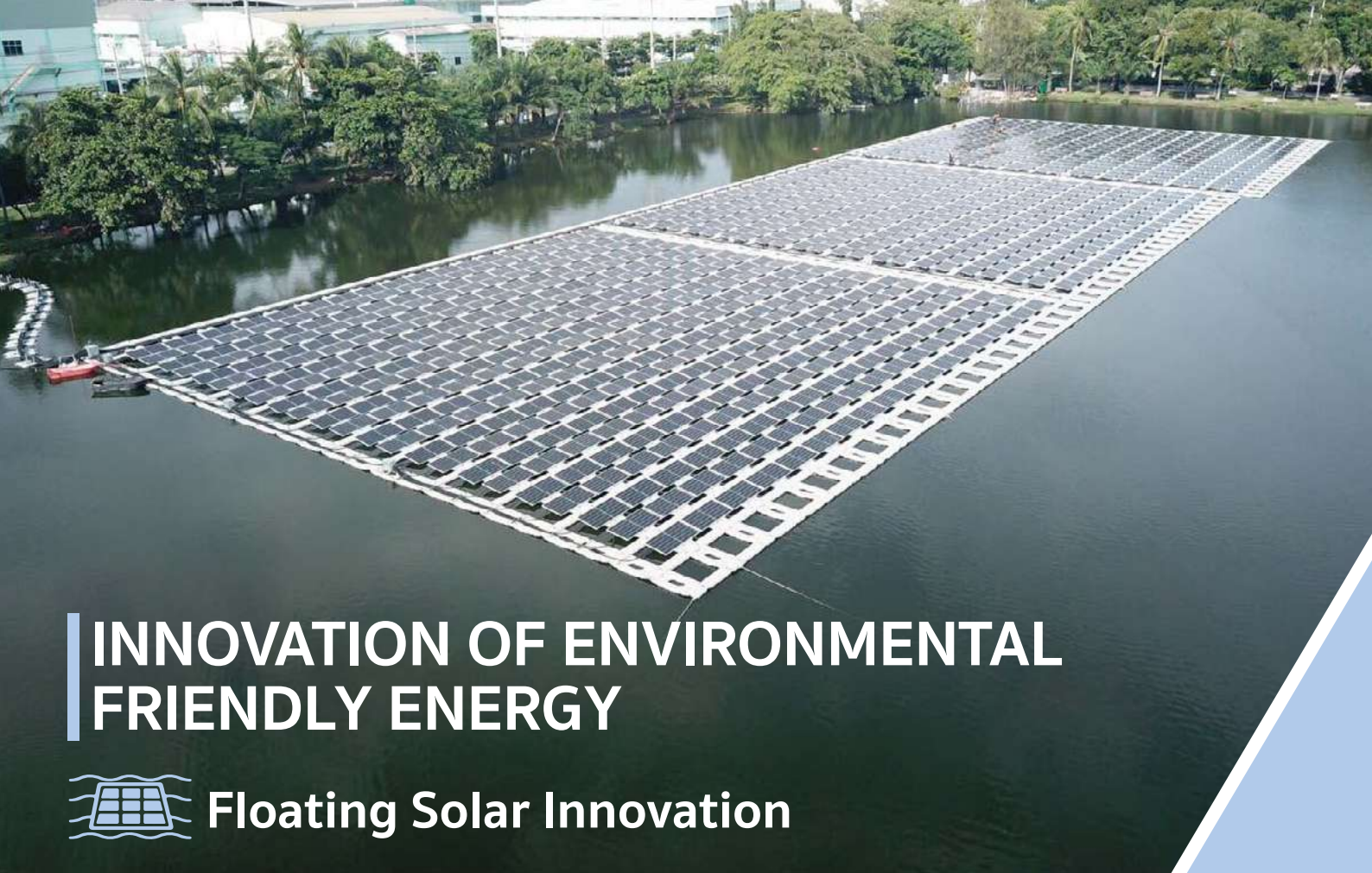
(Sustainable Development Goals –SDGs) focus in part of Economic, Society and Environment such as Poverty eradication, Improving food security and nutrition, Sustainable agriculture, Improving well-being in life and promoting well-being of people, Good water supply and sanitation, Protecting, restoring, and promoting sustainable use of onshore ecosystems, Sustainable forest management And increasing biological diversity etc. In 2018, Sahacogen (Chonburi) Public Company Limited and subsidiaries has organized activities to give bamboo seedlings, training, plant visits And planting bamboo in degraded forest areas Total value is 1,026,667 baht and has operated the project continuously until now.

In 2019-2020 The Company has expanded the project area by arranging bamboo plant distribution activities for the communities in the launched a bamboo planting project. More than 40,000 bamboo trees in approximately 1,000,000 Thai Baht with members participating in the project over 300 households. To increase green area with planting bamboo in the degraded forest area and also build careers for the local community in Lampang Province.



THE GLOBAL GOALS
For Sustainable Development





INNOVATION OF ENVIRONMENTAL FRIENDLY ENERGY



Floating Solar Innovation

Saha Group realizes the importance of renewable energy development. The company has been striving for the clean energy development in the industrial park to support the sustainable industrial growth and good standard of living. Then, the company has started a long term renewable energy project by the co-operative supports from Saha Group, Sahacogen (Chonburi) PLC. together with Impact Electron Siam Group. The investment is under Impact Solar Co., Ltd., investing in solar rooftop business. The green electron generated from solar rooftop will be sent to smart energy grid as the secondary source of the energy reserved for businesses located in the industrial park of Saha Group. The renewable energy will help reduce energy cost allowing businesses to efficiently manage manufacturing cost and reduce environmental impact. This project got the support from Japan government through Joint Crediting Mechanism (JCM) which is the model of combining multi-source of renewable energy within the same industrial park to reduce green-house gas emission.

Currently, the solar rooftop had been installed and started the power generation to 10 factories. The total of current capacity is 15 Megawatt and more to be installed. The factories in the industrial park using green electron (clean energy) account for 20% of total electric consumption. The Cabondioxide emission was reduced by more than 6,000 tons per year, which create a good environment for the surrounding communities.

The Floating Solar Innovation is a part of the solar energy project. The company uses the public reservoir area in the industrial park to install the equipments. This innovation becomes the sample model in clean energy production suppling to factories in the industrialpark. The company chose high efficiency technology from Japan, China and America. The key factor to be considered is solar cell that will affect the quality of power generation and multi-pattern of usage. Solar power project within Saha Group Industrial Park Sriracha is a prototype project. This project creates awareness among public and private sector to consider renewable energy as the method to help reducing cost and greenhouse gas emission. The impact from the project will create long term benefit to society corresponding to industrial sustainable development concept.



Project implementation



- **The Floating Solar project is the first solar cell**

installation to the floating platform in Thailand industrial park. Saha Group focuses on encouraging businesses to use clean energy in production, improve the living quality, deliver good products and build good society.



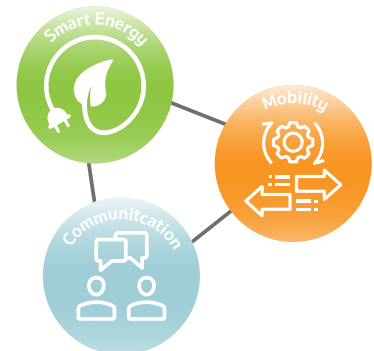
- **The company started the renewable energy project**

in Saha Group industrial park, Sriracha by installing solar rooftop for 10 factories. The target was set to supply electricity more than 15 Megawatts, accounting for 20% of electric consumption. The Carbondioxide emission was reduced by 6,000 tons per year.



- **The company set goal to to create a “Smart City for Customers and Community”**

by constantly investing in 3 areas: Smart Energy, Mobility and Communication. The aim is to support partners’ business for long term growth.





Bamboo charcoal innovation LAMBOOCHAR

The company tries to create more value for the residual parts of the agricultural products or biomass. The use of residual items also helps air pollution problems by reducing burning activity. The company supports the use of wood scraps and bamboo parts from factories producing chopsticks, toothpick, grill meatball stick, handcrafts, and furniture. The innovation is producing “comopressed charcoal” as the fuel sources in household and restaurants.

The LAMBOOCHAR (Charcoal briquette) has won runner-up in category of Resource Efficiency from THAILAND GREEN DESIGN AWARDS 2019. Hosted by Kasetsart Agricultural and Agro-Industrial Product Improvement Institute

The Bamboo Char Deodorizer won the 1st prize in the prototype packaging contest for distribution in category of Consumer Package From Thai Star Packaging Awards 2019 and Asia Star Awards 2019

Bio-charcoal product "Biochar", bamboo joint charcoal for agricultural use. It improves the quality and increases fertility of the soil. As a result, agricultural production has increased. It also helps to restore soil that has been degraded from the use of chemicals over a long period of time. It can also increase the plant's resistance to adverse environmental conditions.

Distribution channels and dissemination of innovation

As Lamboochar products come in various packages, it is necessary to select a distribution channel that fits the image of the product. By classified distribution channels into 3 types as follows

- **Traditional Trade**, consignment with wholesalers in local market Local grill type restaurant and exhibiton.
- **Modern Trade**, consignment in the supermarket, the center of consumer products Consume that is highly popular.
- **Online Market** : Selling products through the storefront in the e-commerce market to respond the buying behavior of consumers through online channels such as

www.lamboochar.com, www.facebook.com/Lamboochar, <https://shopee.co.th/lamboochar> etc.



Performance of the production and distribution of bamboo charcoal innovation.In 2020

LAMBOOCHAR by The Company has bought the bamboo scraps, which are leftovers from local farmers. Introduced into the charcoal production process and distributed as briquette charcoal. The charcoal deodorizer and Bio char, considered to distribute income to the community and add value to agricultural waste in total value

Amount

70
Tons

Total value of over

100,000
Baht



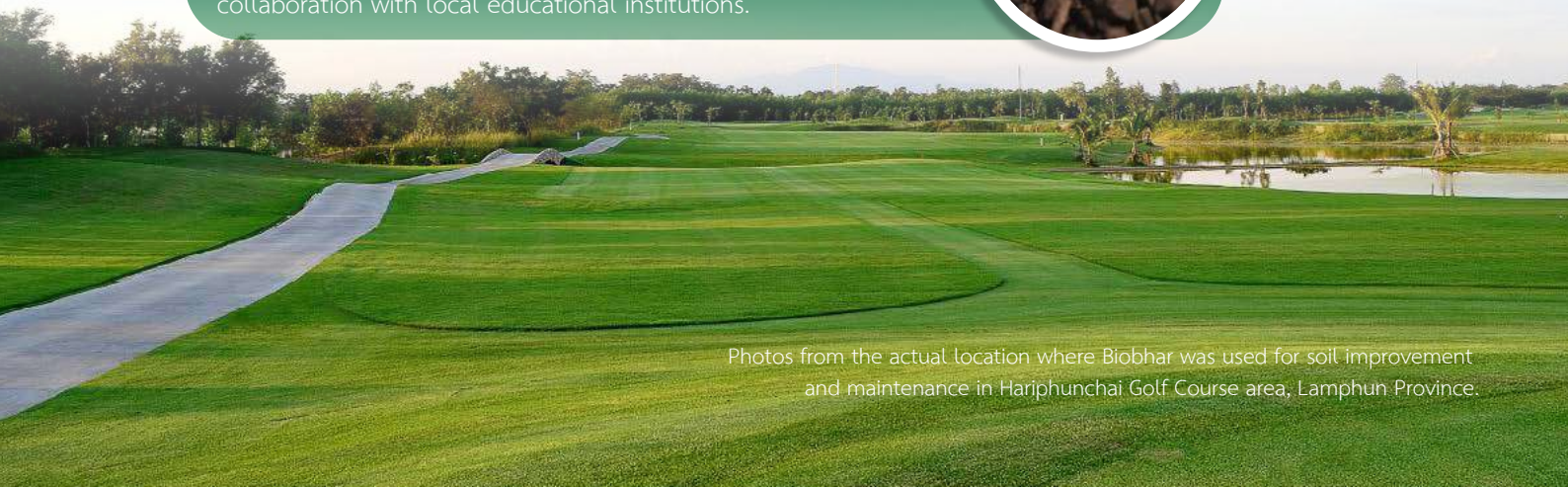
Development project of bamboo fiber

production with the method of steam cracking to replace fiber production with chemical boiling method. For produce biodegradable packaging that is environmentally friendly and can be used for spinning together with cotton for use in the textile industry, with outstanding properties in terms of antibacterial Helps reduce musty smell. The project is in the process of Developed to produce quality bamboo fiber according to the market demand.



Biochar Utilization Development Project

for Golf Courses with the high porosity properties are utilized to reduce golf course turf maintenance costs. And Biochar can reduce the consumption of water and fertilizers by 20-40% and reduces the amount of fungicide used. Save cost and Safe for the environment. The project is in the process of Research and development in collaboration with local educational institutions.



Photos from the actual location where Biochar was used for soil improvement and maintenance in Hariphunchai Golf Course area, Lamphun Province.

COMMUNICATION AND DISSEMINATION

In 2020, Sahacogen publicized knowledge on its business innovation through the following media :

Organizational Communication

Communication is an instrument fostering relationship and help understanding between employees. Thus, the company emphasizes the organizational communication to inform all employees about policies, guidelines, and information from the management in the same direction. There are many communication channels such as monthly magazines, SCG news, e-mail, intranet system (<http://myscg/intranet/>), website www.sahacogen.com, notice boards, and audio network system, etc.

External Communication

Printing Media

Sahacogen & Affiliates had publicized articles and information about energy and activities between Sahacogen and communities on specific, monthly and quarterly printing media ;

- o Suelamphun Newspaper (Lamphun)
- o Lamphun News Newspaper (Lamphun)
- o Chonburipost Newspaper (Chonburi)
- o Tung Setthi Newspaper (Kampaeng Phet)
- o Green Energy Magazine



Open House

Open House for the education of sustainable energy

Sahacogen & Affiliates welcomes all government agencies, educational institutes, department of local administration, and other people both domestic and overseas for visiting the power generating process to enhance their knowledge and experiences. In 2020, there were 23 visiting groups, more than 656 people. The accumulative numbers of visitors during 2009-2020 are more than 450 groups or 15,000 people. Open House activities were organized under strict measures to prevent transmission of the Coronavirus Disease (Covid-19).

Exhibition

o Publicizing Lamboochar bamboo charcoal and environmental products at Lanna Expo 2020 under the concept of eating well, a new way of life. 18 - 27 September 2020 at the 7 International Convention and Exhibition Center, Chiang Mai Province

o Join with the community enterprise to show an exhibition for promote the bamboo planting and transform bamboo as an alternative energy for the community, create a career and producing energy from biomass. At Phai Phet Lanna Community Enterprise, Mae Suk Sub-district, Jae Hom District, Lampang Province by the Office of the Farmers Council of Lampang Province on July 4, 2019



Awards 2020



THSI
THAILAND
SUSTAINABILITY
INVESTMENT 2020

THAILAND SUSTAINABILITY INVESTMENT 2020

“Sustainability Investment award for listed companies that conduct business in accordance with corporate governance with social responsibility. Organized by the Stock Exchange of Thailand.



SUSTAINABILITY DISCLOSURE ACKNOWLEDGEMENT 2020

Honorary Award for Disclosure of Sustainability in 2020 by Thaipat Institute.



The environmental governance project in industrial establishments.

Sahagreen Forest Co, Ltd. joined the environmental governance project in industrial establishments. To promote the establishment of environmental governance also integrate participation between government agencies, communities and business establishments. Including the operation with social responsibility for sustainable coexistence.



Green Industry

Sahacogen Green Co, Ltd. received a certificate level 2 for participation in green industry project (Green Activity) for the successfully implemented activities to reduce the impact on the environment.

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