

พลังงานยั่งยืน ดันประโยชน์สู่สังคม

รายงาน 
CORPORATE ความยั่งยืน
SUSTAINABILITY REPORT 2016

CORPORATE 2016 SUSTAINABILITY REPORT

CORPORATE SUSTAINABILITY REPORT 2016

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Sustainable Energy, Social Responsibility

CORPORATE SUSTAINABILITY
REPORT 2016



Message from the Managing Director

The sustainability and energy development of Sahacogen & Affiliates are the common commitment together with providing fair benefits to stakeholders. In compliance with business ethics, community involvement and development, government collaboration, the corporate social responsibility awareness embedded in the company culture, these have been well carried on and carried out. In 2016, Sahacogen & Affiliates have enhanced activities involving initiatives beneficial to society in synergy with public sector according to the government's citizen-state policy; for instance, allowing those registered agriculturists to use the land by growing crops as agro-forestry in the plantation center. Another public-private collaboration practice is to run a campaign to reuse and recycle agro-residues to reduce air pollution from burning agro-wastes after harvesting. In order to strengthen the corporate governance compliance, the company already joined the Thailand's Private Sector Collective Action Coalition Against Corruption (CAC), and finally received the certification in October 2016.

As committed, the Board of Directors has the righteous intention to instill the corporate social responsibility and corporate governance awareness among the management and employees to ensure the stability and sustainability.



(Mr. Viroj Theeravatvatee)

Managing Director

Chairman of the Corporate Social Responsibility



Agro-forestry Project

Sahacogen And Affiliates

Sahacogen & Affiliates, operating energy business under Saha Group, includes Sahacogen (Chonburi) Public Company Limited and its subsidiaries; Sahacogen Green Company Limited, Sahagreen Forest Company Limited and Sahagreen Energy Company Limited.

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 demand for energy of ever-increasing industries in Saha Group Industrial Park, Sriracha, the Company decided to develop the cogeneration combined circle power plant expansion project phase III with the net capacity of 21 MW of electricity and 21 tons of steam per hour. The project is expected to be completed and started commercial operation (COD) in the beginning of year 2018. Consequently, the total cogeneration capacity of the Company will be 195 MW of electricity and 102 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. Sahacogen Green Compan Limited was established to develop the cogeneration power plant with the installed capacity of 9.6 Megawatts of electricity and 25 tons of steam per hour by utilizing biomass as the fuel. The plant has started commercial operation since 2011 distributing electricity to the Provincial Electricity Authority (PEA) under Very Small Power Producers (VSPP) program and steam to the factories within Saha Group Industrial Park, Lamphun. Moreover, the company had initiated and implemented 7,000 Rais of the fast-growing trees plantation to establish sustainable biomass source along with extended employments and earnings to communities.

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 Prankratai district, Kamphaengphet province, The plant has started commercial operation since December 2012 distributing electricity to the PEA VSPP program.



Sahacogen's Business Group



Sahacogen (Chonburi) Public Co., Ltd.

Location : Chonburi province

Product : Electricity and steam

Capacity : 174 MW of electricity,
81 Tons of steam per hour

Type of Fuel : Natural gas

Production Process :

Cogeneration Combined Cycle



Sahacogen Green Co., Ltd.

Location : Lamphun Province

Product : Electricity and steam

Capacity : 9.6 MW electricity,
25 Tons of steam per hour

Type of Fuel : Biomass

Production Process : Cogeneration



Sahagreen Forest Co., Ltd.

Location : Khampangphet province

Product : Electricity

Capacity : 7.5 MW electricity

Type of Fuel : Biomass

Production Process :

Thermal Power Plant



Sahagreen Energy Co., Ltd.

Location : Lampang Province

Product : Electricity and steam

Type of Fuel : Biomass pellets



บริษัท สหโคเจน ทรัสต์ จำกัด
SAHACOGEN GREEN CO., LTD

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. Produce and distribute high quality and reliable energy to meet the requirements and satisfactions of customers
2. Enhance capability and competence with continuous development
3. Comply to good governance principles with respect to society, counter parties and employees
4. Operate the business with concerns regarding safety, occupational health hazards and environment issues

Core Values

- Positive Thinking
- Initiative
- Teamwork
- Entrepreneurship
- Proactive



About This Report

Sahacogen and its affiliates prepared this Sustainability Report to express our intention for sustainable development and growth in compliance with social responsibility. The elements of the corporate social responsibility performance is based on an approach compatible with the Sustainability Development Framework.

This Report illustrates the corporate performance of Sahacogen (Chonburi) Public Company Limited and its 3 subsidiaries, in the fiscal year 2016 from January 1 to December 31, 2016. This covers economic, environmental, and social aspects in concerning with all stakeholders. The corporate social responsibility activities are implemented in the business processes (CSR-in-process), separating from the business process and non-profitability (CSR-as-process) and separating from the business process and occurring afterwards (CSR-after-process). Besides, this Report also discloses the operating performance in relation to support and cooperation for public-private collaboration (Pracharat Rak Samakee).

For any questions or recommendations, please contact Public Relations and Community Relations Division of Sahacogen (Chonburi) PLC. via telephone number: 038-481555, or E-mail: pr-csr@sahacogen.com



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.



Customers 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.

Corporate Social Responsibility Policy

CSR Policy



Anti Corruption

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



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.



Labor Practices

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



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.



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.

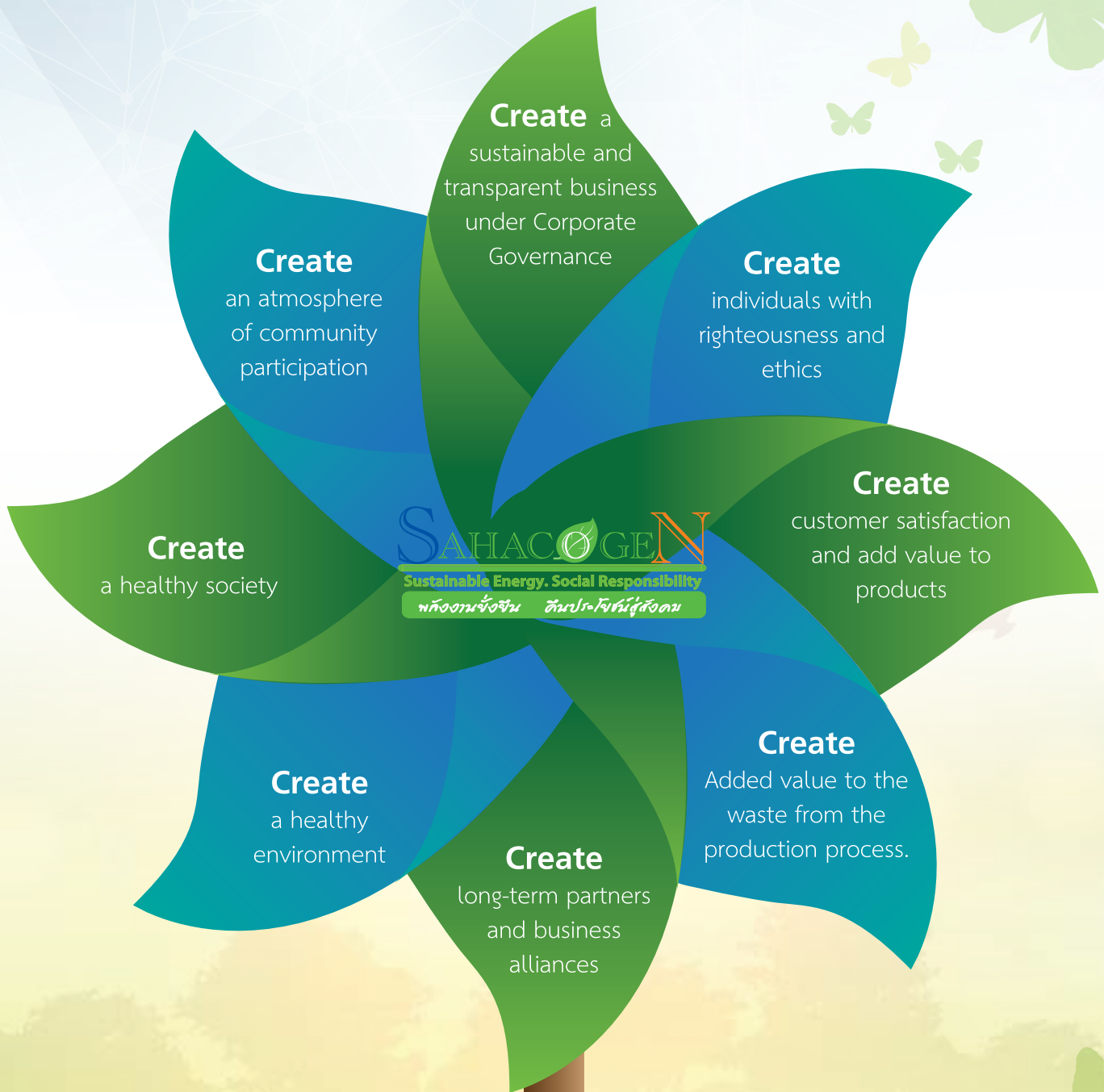


Innovation and Dissemination

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.



Sustainable Business



Operating Business under Corporate Governance

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.

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. Corporate Governance Policies
2. The Principles of Corporate Governance divided into 5 categories
3. Business Ethics
4. Code of Conduct for Company directors, executives and employees

Moreover, such handbook has been created and communicated to directors, management, and employees, as well as disclosed in the annual registration statement (Form 56-1, 56-2), 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.



Risk Management

The Board of Directors of Sahacogen (Chonburi) Public Company Limited realizes the importance of various risk factors which affect the company's business operation. Consequently, the Board assigned the Risk Management Committee to be responsible for the supervisory tasks in terms of the organization's 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 stakeholders' 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



The 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
- Oversee and keep track of the progress

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 (OHSAS 18001 & TIS 18001) 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

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 publizing the code of conduct and anti-corruption policy. Guidelines and practices for the operation of Anti-Corruption in the organization as below;



1. The Board of Directors has given the resolution for the Company to sign a declaration of intent to join Thailand's private sector Coalition Against Corruption (CAC) and establish the anti-corruption policy on February 18, 2015, with the aim to foster clean business pratices. The plan for risk management about corruption is supported to prevent fraud and corruption practices in the organization and stakeholders.



2. The management and all employees are to raise awareness of anti-corruption policy by providing such information via various channels as well as organizing seminars and workshops to employees for enhancing and maintaining anti-corruption awareness.



3. The management and all employees are prohibited to accept gifts from business partners and to meet the achievement of work in a fraudulent way.



4. The Company's Business Ethics require all employees to have the duty to interact honestly, responsibly and with integrity towards public and themselves. They are prohibited to use their positions to obtain benefits for themselves or other parties, which is stated publicly in "Code of Conduct" handbook.



5. The internal audit of the Company is required to assess, analyze, evaluate and keep track of the risk of corruption and internal control system. If such corruption is found, the internal audit must inform directly to the Audit Committee. After that, the Audit Committee will report to the Board of Directors.



6. There are channels for employees, related persons and informants to provide notices of causes for suspicion with confidence of protection.

Furthermore, the company has a policy to strengthen anti-corruption awareness among business partners and all stakeholders via appropriate communication channels. The systematic protection has been applied to ensure the operational objectives, or joining anti-corruption networks. These are the intention to drive the anti-corruption and integrity enhancement.

The Company received the certification from Thailand's Private Sector Collective Action Coalition against Corruption (CAC) on October 14, 2016. As committed, the anti-corruption practices are continually carried on.



Whistleblowing

Contacts	Telephone	E-mail Address
Chairman of the Board of Director	038-481555 Ext. 202	directors@sahacogen.com
Chairman of the Audit Committee	038-481555 Ext. 203	auditcommittee@sahacogen.com
Chairman of the Risk Management Committee	038-481555 Ext. 260	riskcommittee@sahacogen.com
Chairman of the CSR Committee	038-481555 Ext. 290, 291	pr-csr@sahacogen.com
Managing Director	038-481555 Ext. 200	viroj@sahacogen.com
The Company Secretary	038-481555 Ext. 282	pannee@sahacogen.com
Investor Relations	038-481555 Ext. 202, 282	investorrelation@sahacogen.com
Human Resources Administration	038-481555 Ext. 242, 243	hradmin@sahacogen.com

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, Sriracha, Chonburi 20230

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



STAKEHOLDER RESPONSIBILITY

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

Stake-holders	Means of Communication	Expectations	Policies and Actions
Customers <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 • 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.

Stakeholders	Means of Communication	Expectations	Policies and Actions
<p>Shareholders</p> <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.

Stakeholders	Means of Communication	Expectations	Policies and Actions
Business Partners <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 Web Site/E-mail 	<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 friendliness to the environment. 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. The Company does not demand, receive or consent to the receipt of properties or any other benefits outside trade agreements.
Competitors <ul style="list-style-type: none"> Other Power Producers 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.
Creditors <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. 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

Stakeholders	Means of Communication	Expectations	Policies and Actions
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 	<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 	<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 pro-moted. • 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. • Facilities 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.

Stakeholders	Means of Communication	Expectations	Policies and Actions
Community and Society <ul style="list-style-type: none"> Nearby community/ Society Remote community/ Society 	<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 Web Site/E-mail 	<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

Government Sector			
<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 	<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.

Economic Performance

Regarding to the situation of the global energy markets that the oil price has been fluctuated and decreased significantly. This impacted to the selling price of electricity and steam, the main income of Sahacogen and affiliates, accounted for 98.46 % of the total consolidated income due to the fact that the structure of electricity and steam price is partially referred to the energy market price. However, the company has implemented the improvement of the production efficiency as well as controlled the production cost intensively and consistently in order to mitigate the effect to the operation resulted by this uncontrolled risk.

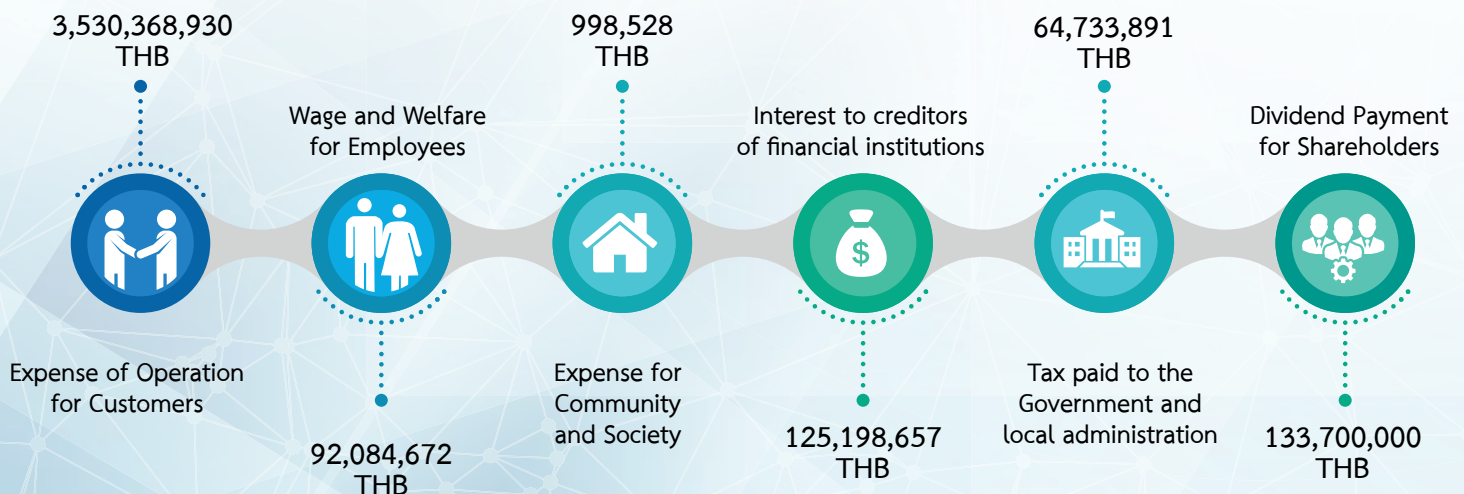
In the year 2016 compared to the year 2015, the revenues of the company and its subsidiaries totaled THB 3,973 million, decreased by THB 109 million or 2.7 %, resulted from the decrease of selling price of electricity and steam as above-mentioned.

The total administrative expenses were THB 3,628 million, decreased by THB 216 million or 5.6 % comparing to the same period last year. Financial expenses decreased THB 13 million as the result of the reduction in the interest rate with some financial institutions. The corporate income tax increased THB 6 million. Those changes resulted in the net profit on its consolidated statements of THB 160 million, increased from the previous year by THB 115 million or 259 %.

Performance Summary and Financial Highlights

	2016	2015	Change (%)
Sales	3,964,956	3,910,263	1.4
Other Revenues	3,972,886	4,081,964	-2.7
Total Revenues	3,628,368	3,844,891	-5.6
Cost of sales	125,199	138,570	-9.6
Income Tax	59,818	54,114	10.5
Cost of Sales and Expense	159,502	44,390	259.3
Profit (Loss)	161,841	44,078	267.2

Income Distribution to Stakeholders Expense in 2016





Green Business Practices



Environmental Management

Sahacogen & Affiliates have defined environmental objectives committed to continually develop the environmental management system to ensure the effectiveness and meet the international standard, as well as running business with environmental and social responsibility.

• 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

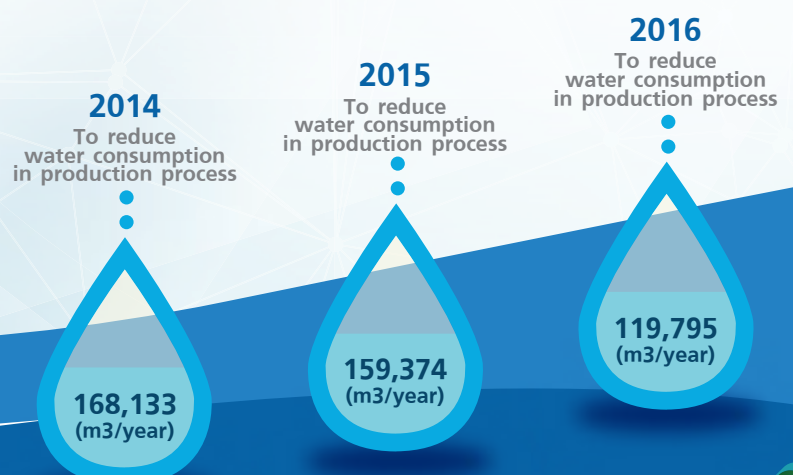
• Water Management

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:

- 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.

Moreover, 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.

Key Performance RO Rejected Water Recycle in 2014 - 2016



- 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.

Sahacogen's Water Management Water Usage for Production in 2016



• Air Emission Management

The company strictly follows the regulations of air pollution measures. 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 amount of those pollutants are within the legal limits. Moreover, the company also 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 were 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 2016

Sahacogen (Chonburi)'s Power Plant	Average Results (Min-Max)	Legal Standards
Total Suspended Particulate (TSP)	1.25 - 6.49	≤ 60
Sulfur Dioxide (SO ₂)	0.94 - 1.51	≤ 18
Nitrogen Oxide (NO ₂)	52.20 - 87.57	≤ 110

Sahacogen Green's Biomass Power Plant	Average Results	Legal Standards
Total Suspended Particulate (TSP)	31.2	≤ 120
Sulfur Dioxide (SO ₂)	< 1.3	≤ 60
Nitrogen Oxide (NO ₂)	87.9	≤ 200

Sahagreen Forest's Biomass Power plant	Average Results	Legal Standards
Total Suspended Particulate (TSP)	6.9	≤ 120
Sulfur Dioxide (SO ₂)	15.1	≤ 60
Nitrogen Oxide (NO ₂)	17.6	≤ 200



• Noise Pollution Management

- Appropriate design and install the machines and equipment that may cause the noise pollution including 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 2016

Power Plant

Average Results (Min-Max)

Legal Standards

Sahacogen (Chonburi)'s Power Plant

The results of noise measurement in general (Leq 24 hr)

Power plant's fence line on the side of office building	60.5 - 63.8	90 dBA
Ban Rai Nueng	53.8 - 60.2	90 dBA

Sahacogen Green's Biomass Power Plant

The results of noise measurement in general (Leq 24 hr)

Nong Pla Kho Temple	49.0 - 58.1	70 dBA
San Luang Temple	45.6 - 58.2	70 dBA

The results of noise measurement in workplace (Leq 12 hr)

Personal noise dosimeter (Leq 12 hr)	80.65	87 dBA
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Sahagreen Forest's Biomass Power plant

The results of noise measurement in general (Leq 24 hr)

Baan Huay Nam Sai School	49.1 - 58.3	70 dBA
Si Chum Phorn Wachirawat Temple	52.2 - 58.8	70 dBA

The results of noise measurement in workplace (Leq 12 hr)

Personal noise dosimeter (Leq 12 hr)	73.03	87 dBA
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• 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:

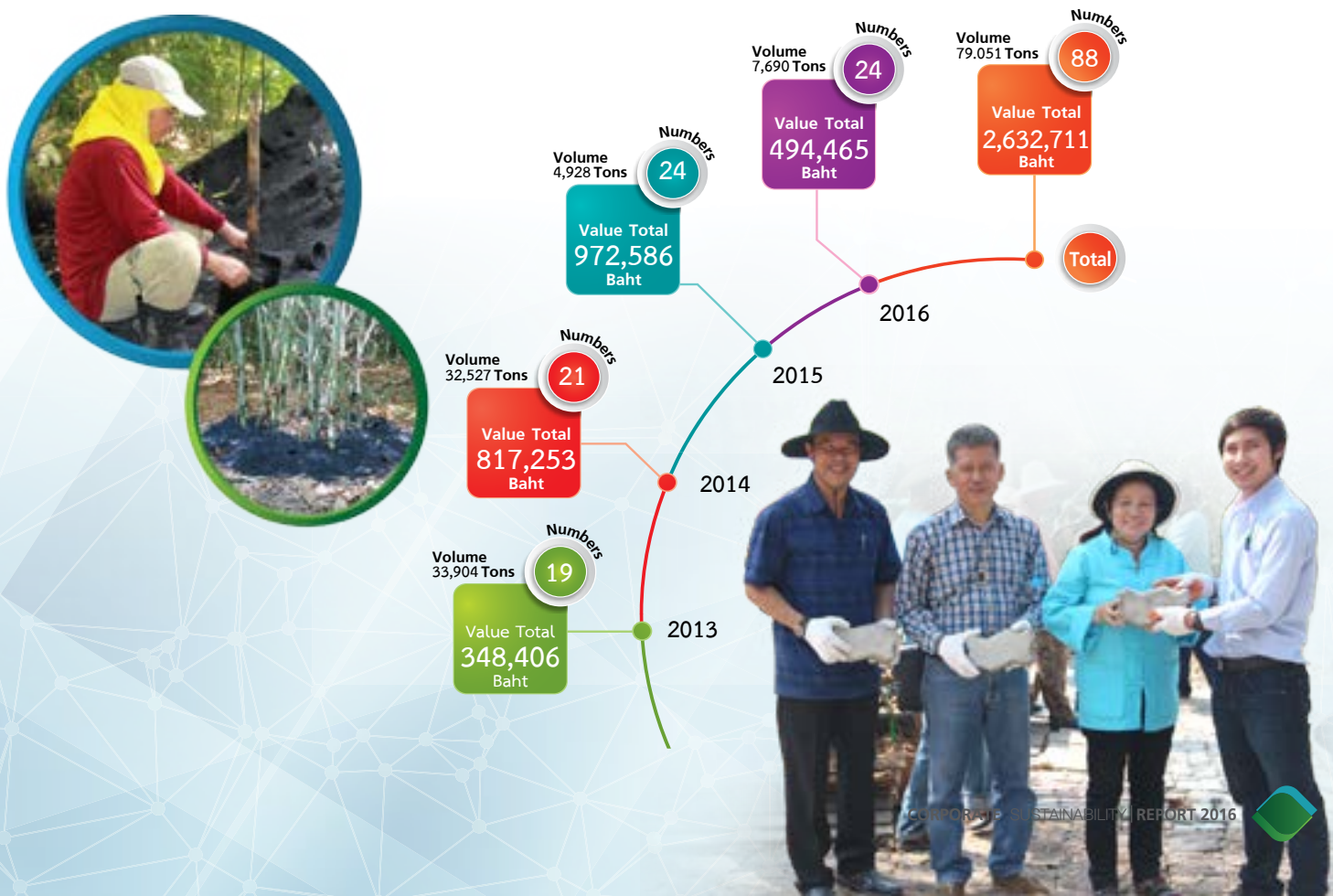
1. Hazardous wastes are those that can be harmful to an environment, such as transformer oil, lubricants and chemical containers. These wastes are disposed according to the approved procedures to the agencies authorized by the Department of Industrial Works.

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.

• Potential Utilisation of Biomass Ashes

"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 conducted since 2013 to the present.



• 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.





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.



**Cogeneration
Combined Cycle
Power Plant**
116,635
metric tons of
CO₂ per year.

Cogeneration Combined Cycle Power Plant

Electricity and steam generation by the cogeneration combined cycle system of Sahacogen (Chonburi) PLC. in Chonburi province helps reduce greenhouse gas emissions approximately 116,635 metric tons of CO₂ per year.

Biomass-Fired Power Plant

The biomass-fired power plant run by Sahacogen Green Co., Ltd. in Lumphun generates electricity and steam by using biomass, renewable energy. This helps reduce greenhouse gas emissions approximately 50,075 metric tons of CO₂ per year.

**Biomass-Fired
Power Plant**
50,075
metric tons of
CO₂ per year.



**Fast Growing
Tree Plantation
Project**
74,907
metric tons of
CO₂ per year.

Fast Growing Tree Plantation Project

The Fast Growing Tree Plantation Project was established by Sahacogen Green Co., Ltd. as a sustainable source of biomass fuel. This helps reduce greenhouse gas emissions approximately 74,907 metric tons of CO₂ per year.

Clean Development Mechanism Project (CDM)

The power plant of Sahagreen Forest Co., Ltd. in Kamphaengphet received the certification of Clean Development Mechanism by the United Nations Framework Convention on Climate Change or UNFCCC. From 2014 to present, the CDM project activity is to use renewable energy such as agri-residues or biomass for generating electricity. This helps reduce greenhouse gas emissions approximately 28,725 metric tons of CO₂ per year. Consequently, Sahacogen and Affiliates can earn more income by selling such carbon credits to the carbon market.

**Clean Development
Mechanism Project
(CDM)**
28,725
metric tons of
CO₂ per year.



In 2016, Sahacogen and Affiliates's business operations mutually help reduce the greenhouse gas emissions approximately 274,342 tons of CO₂ equivalents per year. Back to 18 years since the start of the operation, it is totally 2,738,897 tons of CO₂ reduction per year.



Energy Conservation

1. Energy Saving for the Cooling Tower Project

Description: Installing energy saving propellers of the cooling tower to reduce the resistance, since weight of the previous propellers are heavy which required high energy consumption. The energy saving propellers are lightweight and designed to reduce resistance while spinning.



Venue : The power plant of Sahacogen (Chonburi) PCL. Power Plant

Title	Quantity	Unit
The capacity of Cooling Tower Fan (normal design)	43.58	kW
The capacity of Cooling Tower Fan (energy-saving design)	30.79	kW
Power Saving	14.14	kW
Electricity Saving	114,417.20	kWh/year
Return on investment (base on cost of electricity price at 2.84 Bath/unit)	312,358.95	Bath/year

2. Efficient energy usage in office buildings

Campaign : To foster energy saving by cleaning air-conditioning systems such as condensing unit, cooling system, cooling fins, and filter to ensure the effectiveness and steady operating system conditions.



Venue : Biomass Cogeneration Plant, Sahacogen Green Co.,Ltd

Details	kW	kWh/Annum	Baht/Annum
Quantative Results	13.50	2,160	8,640
Before using the energy-saving campaign	33.75	54,000	216,000
After using the energy-saving campaign	20.25	51,840	207,360
Energy saving	13.00	2,052	8,208

3. Cooling Tower Energy Reduction Project

Campaign : Sahagreen Forest Co., Ltd. reduced the energy consumption of the Cooling Tower by redesigned and enlarged the pipeline of makeup water without using the existing pump; 4 kW motor (the actual usage 2.6 kW).



Venue : Sahagreen Forest Co., Ltd.'s power plant

Details	kW	kWh/Annum	Baht/Annum
Quantative Results	2.6	16,848	76,490
Before using the energy-saving campaign	2.6	16,848	76,490
After using the energy-saving campaign	0	0	0
Energy saving	2.6	16,848	76,490





Social Enterprise



Labor Practices & Human Rights

• Employment

Sahacogen group has a standardized and just employee candidate 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



Male 141 Woman 53
Total 194



Male 33 Woman 27
Total 60



Male 73 Woman 19
Total 92



Male 35 Woman 5
Total 40



Woman 2
Total 2

• Human Rights and Labour Practices

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

- There shall be no activities or support of activities which violate human rights.
- 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.
- 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.
- 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.



- 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.





• 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 organized 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. This 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 more. The adjustment serves to boost employee morale and a strong relationship with the organization.



The summary of welfare and support allowance provided to employees in 2016

Welfare & Support Allowance									Total
	Number of Employees	Amount (Baht)	Number of Employees	Amount (Baht)	Number of Employees	Amount (Baht)	Number of Employees	Amount (Baht)	
Funeral	3	30,000	1	10,000	1	10,000	-	-	50,000
Marriage	1	5,000	3	15,000	2	10,000	1	5,000	35,000
Maternity	5	25,000	3	15,000	5	25,000	1	5,000	70,000
Ordination	-	-	2	10,000	-	-	-	-	10,000
Illness	12	13,854	16	16,000	2	2,000	-	-	31,854
Total	21	73,854	25	66,000	10	47,000	2	10,000	196,854

• Fringe Benefit and Supporting the Employees

Sahacogen and affiliates have the strong policy in fringe benefits to our managements and employees. The details are as listed here. : SAHACOGEN HAPPY FAMILY

• Happy Health

- In terms of health welfare, we provide life insurance and health insurance packages for employees and their family members.
- We have annual health checkup service. 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.

• Happy Heart

- “Warm Hug and Smile by Sahacogen” project is for helping socially disadvantaged people. This project has been annually held by giving financial supports, foods and necessary items to orphans, people with disabilities and elder people in the welfare foster homes.
- Blood donation project collaborated with the Thai Red Cross Society has been held monthly.
- 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.

• Happy Brain

- 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.
- We encourage our employees to study in higher level or study foreign languages.

• Happy Soul

- “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 holidays.
- 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.
- Songkran Festival celebration is normally held by allowing employees to pour water on the Buddha statute, pour water to executives (elder people) for blessing. All this activities are done according to Thai traditions in order to preserve our Thai heritage.

• Happy Family

- 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, there are Sahacogen kids contest, family portraits contest, sport activities. New Year’s Eve party is held for employees and their family every year

• Happy Society

- “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 people of doing so.





Human Resource Development

To maintain sustainable organization, the company aims at skill and competency development in the long run in order to meet its vision, mission, policies and organizational direction. This will guide them to be ready for the competitive world class environment.

The company gives significance to Human Resource Development as its commitment and responsibility, which also should be supported by employee participation. The employees are supposed to assess their annual performance by using Competency Management to measure and develop their potential. To ensure higher efficiency of human resource management, the Competency Management measures are adjusted to be more proficient and effective. Besides, the company also created the Individual Development Plan to fulfill essential competency of its employees.

The individual management plan enables them to learn and gain experience through training, on the job training, action learning, coaching, job rotation, job enrichment, job enlargement, responsibility for projects, assignment, self study training, site visits, seminars, and e-learning system.

The company has improved the system for approval, record, report and monitor of trainings to be easy to use and time saving. To suit its goals and organizational direction in both short term and long term, training programmes must be adjusted consistently to enhance knowledge, skills and experience of the employees. With the confidence of their career path fulfilled with technical, specialized and management skills in readiness for new businesses in the future, such training programs are described as below;

1. Orientation : all new employees acknowledge the expectation of its organization and the overall business operations. They can adjust themselves to the organizational culture, vision, mission, core values, policies and other working processes for achieving efficiency at work. Last but not least, they work with love, good relationship and happiness.

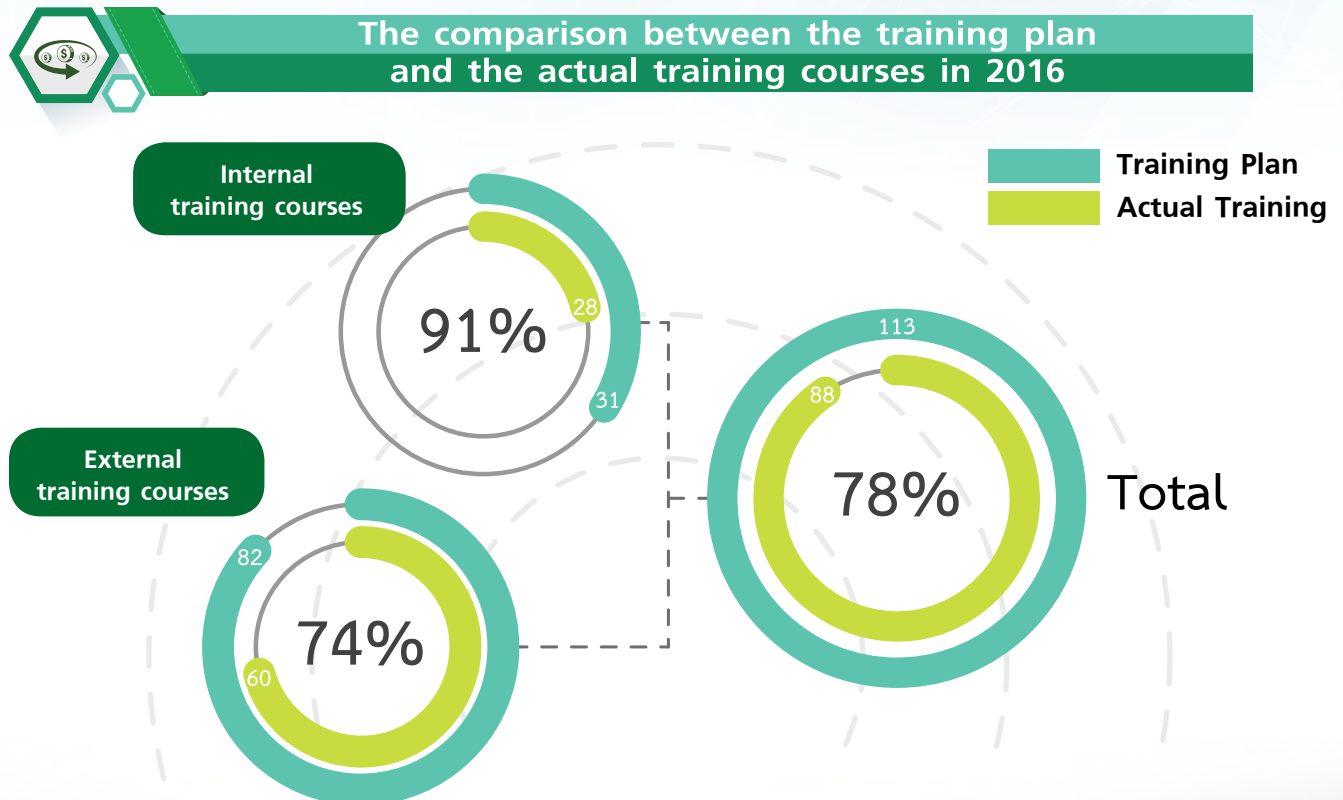
2. Proactive Leadership (Pre-Manager) : It is the succession plan for qualified and experienced employees to assume their roles as Acting Manager to develop the leadership skills such as management to ensure that they are the right person to get promoted

3. The Supervisor (Pre-Supervisor) : It is also the succession plan for qualified and experienced employees nominated as Acting Supervisor to develop and level up the operational skills and enable to monitor their subordinates to ensure that they are the right person to get promoted



In 2016, the company specified training and seminar courses for each individual as well as organized overall development plan. The expected goal of such human resource development should be above or equal to 75 % of the total courses. The competency development of Sahacogen & Affiliates is described as below;

There were 88 internal and external training courses on account of the annual training plan totaling 113 courses, presented as 78 % (including 28 courses out of 31 internal training courses as averaged by 91 %, and 60 courses out of 82 external training courses as averaged by 74 %). The comparison between the training plan and the actual training courses (average percentage) was summarized as follows;



Safety Commitment



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 environment, safety and energy conservation management strictly adheres to the law and regulations, organizing a safe environment for work while encouraging employees to take actions and recognize the importance of safety.


Quality, Environment, Safety and Energy Conservation Policy


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 SHEE practices, energy conservation and management in compliance with laws and related regulations.
3. Support appropriate and sufficient resources to meet the operational objectives of SHEE 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 SHEE system consistently.







Safety and Hygiene Practices: 2016

 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 Week: An annual activity for safety and environmental preservation, equipping employees of knowledge and encouraging organizational participation for fostering safety.

 5s Action Plan is stipulated to carry out “Big Cleaning Day” 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.

 Organizing emergency drills such as fire drills twice a year

 Chemical leakage drills once a year

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

Zero Accident Program

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.



**Fatal Injuries
Accident 0** Time

**Lost Time
Accident 0** Time



Community Involvement and Development



Throughout the year 2016, Sahacogen & Affiliates places value on fair treatment of stakeholders to step forward for leadership among small power producers and other related businesses. The community involvement and development have been conducted in various aspects as follow;

Details	Amount of Contribution Activities	Budget (Baht)
Education	18	18,4425
Sport	16	267,050
Quality of life	16	11,763,663
Environment	8	124,898
Religion, Culture and Tradition	44	501,488
Public Interest	14	183,336
Total	116	13,024,860

• Education

Sahacogen Knowledge Sharing to the Youth

Education is the key fundamental for development of quality of life, communities and nation. Sahacogen allocates our budgets for sponsorship to schools in kind of books, educational items, sport equipments and computers. It has been 8 years since our first start in 2008.

In 2016, Sahacogen donated books and teaching materials to 18 schools. The total budget for such donation was 15,000 Baht.



Sahacogen Scholarships

Sahacogen has been provided scholarship to the underprivileged Thai youths who screened and selected by community's education committees for 10 consecutive years. Moreover, we also support through other activities such as painting competition, art from biomass, lunch sponsorship and Thai Children Day.

In 2016, Sahacogen & Affiliates supported scholarships for schools nearby the power plants and its business' areas. There were 37 schools obtaining scholarships in totaling amount of 80,000 Baht.

A Community of Readers

Sahacogen group donated a health book set to educate readers on taking care of personal health and helping those who are ill or injured. The company also donated secondhand books to community libraries. This activity is continued for 5 consecutive years since 2012 with the strong intent to give more and more useful books to libraries in communities and department of local administration.

In 2016, Sahacogen & Affiliates donated books to 10 communities in totaling amount of 15,000 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 2016, Sahacogen supported 16 sport activities, which many agencies had participated in. The total contributions were more than 267,050 Baht.



• Enhancing Quality of Life

Good Health to Community Project

It has been 7 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 2016, the health care activities were conducted 18 times. There were 28 communities, over 5,000 people, coming for health check up, valuing over 54,000 Baht.

Village Health Volunteer Development Project (VHV)

Sahacogen has collaborated 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. This is carried on for 7 consecutive years, the total of those junior participants were 100 people in 2016.

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.

In 2016, Sahacogen & Affiliates gave contributions for developing the quality of life totaling 10,483,569 Baht.



• Environment

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.

• 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”, “Ritural 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”



• Public Benefit/Charity

Community Development Volunteer Project

Sahacogen and Affiliates encourage our employees to participate in volunteer activities. We, therefore, motivate our staff to participate in public activities in temples, and public building in many occasions.

Smiling Together 3th Year

Sahacogen organized a happy and warm-hearted activity for elderly people by donating essential items, lunch treats, and contributions totaling 30,000 Baht. In association with Niranrat School (beauty and hairdressing school), Sahagroup branch, provided the elderly with hair and nail services at Banbanglamung Social Welfare Development Center for Older Persons.

Public Utilities Development

In 2016, Sahacogen & Affiliates improved roads, water supplies and electrical system of Doi Ti Temple, Nong Bua Village, Moo 2, Pahsak, Mueang, Lamphun. Such public utilities development valued over 160,000 Baht.





Synergy between Sahacogen and Public Sector

Sahacogen and Affiliates have been fostering the public-private collaboration project to strengthen the collaboration between public and private sectors, creating the role model for economic and social development involving quality of life, well-established groundwork of communities with the concept of sufficiency economy. Regarding corporate responsibility commitment to stakeholders, Sahacogen and Affiliates supported the project “Ongsuay Namsai Ruamjai Pracharat” resolving and dealing with the drought crisis in nearby communities of Biomass Power Plant, Sahacogen Green Co., Ltd., Lamphun province. In addition, Sahagreen Forest Co., Ltd., generating power from biomass in Phran Kratai, Kamphaengphet province, joined the district-level operational partnership of the Public-Private Steering Committee in order to enhance a competitive workforce, etc.

Moreover, Sahacogen participated in the public-private collaboration practice for reducing air pollution especially the haze problem in northern Thailand, by assigning Sahacogen Green Co., Ltd. and Sahagreen Forest Co., Ltd. to research and develop both field-based residues which burnt-out after harvesting to be biofuels for operating two biomass-fired power plants. As the result in 2016, Sahacogen Green Co., Ltd. purchased corn cobs and husks from the upper northern areas totaling 168,700 tons. While Sahagreen Forest Co., Ltd. also purchased sugarcane leaves in the lower northern areas totaling 3,980 tons. These practices actually helped to reduce impacts of uncontrolled burning of agro-residues according to the government policy.



Sustainable Energy, Social Responsibility

Sahacogen & Affiliates' renewable energy development plan aims at expanding integrated biomass business coupled with the partnership with communities in order to drive the economic, social and environmental benefits. This will lead to the original pattern of renewable energy development achieving the sustainability in all aspects.

In 2016, Sahacogen & Affiliates proceeded the CSR-In process plans as below;

• 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, which was initiated in 2007.



Performance of fast-growing trees for energy



Plantation area

6,388

Rais



fast-growing

1,705,652

Trees



Employment

200

People/year



Income distribution

6,500,000

Baht/year



• Agro-forestry Project

Sahacogen allows agriculturists living nearby its plantation center to use the land by growing crops among fast-growing trees as “Agro-forestry”: for example, legumes, corns, rice, watermelons and so on. This project fosters the community participation and benefits in terms of employment enhancement, increasing income and cost-saving to grow crops. After harvesting, those agro residues can be sold for biomass fuel to generate power. Besides, agriculturists help take care of company’s plants along with growing their crops. “Participatory Agro-forestry for Community” is the project to promote natural resource usage to the utmost benefit and sustainable balance of environmental, economic and social aspects.

• Value-Added Biomass Project

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 since 2010 to purchase biomass and agro residues in order to add biomass value and achieve the distributive policy for community benefits.



Performance of value-added biomass project in 2016



Quantity of purchased Biomass

116,000,000 Tons



Total value

100,000,000 Baht



Communication and Dissemination

In 2016, 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

• Exhibitions

• Renewable Energy Exhibition

Sahacogen Green Co., Ltd. organized the exhibition on renewable energy, presenting the biomass-fired power generation, and fast growing tree plantation for producing energy in the event “National Agricultural Fair 2016” from February 27 to March 6, 2016, at Maejo University, Chiang Mai.

• The 20th Saha Group Fair

Displayed energy-related products and innovation in the concept of “Sustainable Energy, Social Responsibility.” (June 30- July 1, 2016, Queen Sirikit National Convention Center)



• Sustainable Forest Management in ASEAN

Sahacogen Green Co., Ltd. organized the exhibition on fast growing tree plantation for producing energy. Especially, the company received the certification in forest management operations that meet the standards of the Forest Stewardship Council: FSC in the event “Sustainable Forest Management in ASEAN” by the Forest Industry Organization, Ministry of Natural Resources and Environment on Monday 15 August, 2016, at Convention Hall, 4th floor, Rama Gardens Hotel, Bangkok.



• Radio Media

MCOT Radio, Lamphun: The radio program was broadcast renewable energy information and knowledge as well as public relation and CSR activities of Sahacogen & Affiliates.

• Energy Experts

Many personnel in Sahacogen & Affiliates have been invited by education institutes, communities, and government agencies to grant knowledge and experience about energy management, renewable energy, fast-growing tree plantation for energy, environmental management, and community relations and so on.



• Printing Media

In 2016, Sahacogen & Affiliates had publicized articles and information about energy and activities between Sahacogen and communities on specific, monthly and quarterly printing media;

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



Open House

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 2016.



Statistics of Study visits



2016

2,000 people



2009-2016

10,000 people





Awards

An achievement in corporate social responsibility practices of Sahacogen & Affiliates had been awarded by numerous organizations for its transparent management, as well as socially and environmentally responsible business practices. The company received the following awards in 2016.

• Investor's Choice Award 2016

Sahacogen (Chonburi) Public Company Limited was awarded "Investors' Choice Award 2016" by Thai Investors Association, with the commitment of transparent disclosure and equitable treatment to the shareholders.



• Certification of Thailand's Private Sector Collective Action Coalition against Corruption (CAC)

Sahacogen (Chonburi) Public Company Limited received the certification from Thailand's Private Sector Collective Action Coalition against Corruption Council (CAC), on October 14, 2016.



• The Green System Certification, Level 3 (Green System)

Sahagreen Forest Company Limited received the certification "the Green System, Level 3" from Ministry of Industry, on the systematic environmental management, environmentally friendly practices as well as social responsibility.



• The assessment of the quality on holding the Annual General Shareholders' Meeting

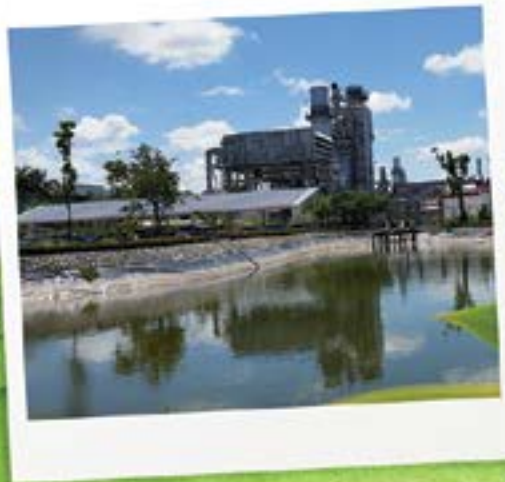
The assessment of the quality on holding the Annual General Shareholders' Meeting 2016 by Thai Investor Association. The company received full score of 100 in the level of "excellent" for the 7th consecutive year. (2010-2016)

• Creative CSR Activities Award

Sahacogen (Chonburi) Public Company Limited was awarded the creative CSR activities by ECO-Green Network, Laem Chabang Industrial Estate, Chonburi province.



พคังงานจั้งจัน ตันปร=โงชนผู้สังคณ



บริษัท สหโคเจน (ชลบุรี) จำกัด (มหาชน)

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โทรศัพท์ 038-481555 โทรสาร 038-481551

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SAHACOGEN

Sustainable Energy. Social Responsibility

พลังงานยั่งยืน ดันประโยชน์สู่สังคม

บริษัท สหโคเจน (ชลบุรี) จำกัด (มหาชน)

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