IEC
since 1922

Sustainability Development

Report 2016

The International Engineering Public Company Limited

Content

Message from President

The vision and commitment of the International Engineering Public Company Limited's is to undertake renewable energy service and other businesses with profitable and sustainable returns. The crises and obstacles IEC experienced in 2016 forced the company and its subsidiaries to adapt their operations to the changing situation and environment in order to get through the crises and problems as soon as possible. The new executive team is committed to operate business with honesty and transparency while integrating knowledge and technology together with moral, ethics and good governance to ensure concrete results in parallel to economically, socially and environmentally balanced growth as well as responsibility to the society, eventually leading to sustainable development of the Company in the future.

Lt.

(Dr. Suphornchai Siriwoharn)
Chief Executive Officer
The International Engineering Company PCL.

About IEC

The International Engineering Public Company Limited (IEC) was established in 1922 to undertake engineering work on the Bangkok-Aranyaprathet Railway. In 1953, the company registered as Thai company with registered capital of 10 million baht. Later in 1965, it attained the honor of 'Royal Appointment' from His Majesty King Bhumibol Adulyadej and was granted permission to use "Garuda emblem". In 1983, the Siam Cement Plc. (SCC) acquired IEC as SCC affiliate. When Siam Cement Group adjusted the investment policy in 1990, IEC management proposed to be the sole investor. With additional new investors, the company increased the registered capital to 120 million baht. In 1992, IEC was listed in telecommunication segment of Stock Exchange of Thailand. In 1983, the company changed the status to "public company limited" and has been increasing the registered capital.

Foreseeing that the community expansion increased the amount of waste and need for electricity, the company started the energy business in four segments: (1) Renewable Energy Business such as solar power plant, municipal solid waste-to-energy (MSW) power plant, biomass power plant, and biogas power plant (2) Waste plastic recycling (3) Information and communication technology business and (4) Engineering Consulting.

On July 4, 2016, the Stock Exchange of Thailand (SET) changed IEC's category from Information and Communication Technology to Resources.

IEC first started the construction of Lamphun Solar Power Plant 1 and 2 in Mae Tha district, Lamphun province, with 1.92-MW electricity generation capacity. The company later operated many more power plants such as Mae Malai Solar Power plant 1 and 2 in Mae Tang district, Chiang Mai province, and Mae Ramad Solar Power Plant* in Mae Ramad district, Tak province, with total capacity of 9.09 MW. Then, IEC expanded the renewable energy business and operated Municipal Solid Waste-To-Energy Power Plant with 6.5-MW electricity generation capacity in Hat Yai district, Songkhla province. GIDEC, indirect subsidiary of IEC, made a contract with Hat Yai Municipality to daily manage 250 tons of community waste, which was used as feedstock for electricity generation and sold to Provincial Electricity Authority. Municipal Solid Waste-To-Energy Power Plant in Hat Yai was therefore the first power plant that used waste as feedstock and applied European technology with high standard of environmental management. Furthermore, the company invested in 8-MW biomass power plant in Sa Kaeo province by acquiring 100% shares from the existing shareholders of Kaew Lamduan Power Supply Co., Ltd. This biomass power plant uses agricultural waste such as Eucalyptus bark, palm fiber and bean meal as the feedstock in electricity generation process.

Operating municipal solid waste-to-energy power plant and partnering garbage entrepreneurs, IEC studied the components of community waste and found that plastic components could be recycled as fuel component or plastic pellets used in the industry. The company therefore studied both domestic and global market of plastic pellets and found a business opportunity to turn the waste plastic from landfills into recycled Polyethylene plastic pellets. With lower cost than processing the used plastic from factories, the rate of return was expected to be at satisfactory level. The company is currently implementing machinery overhaul to produce the specifications of plastic pellets that meets the customer needs.

At present, the first plant that produces plastic pellets from waste plastic in Rayong province and the second plant to be constructed in Songkhla province have the minimum electricity generation capacity of 96 tons a day and can increase the capacity to at least 300 tons. However, the plant in Rayong is undergoing the renovation to improve the production process and ensure that the quality of plastic pellets meet the customer expectation.

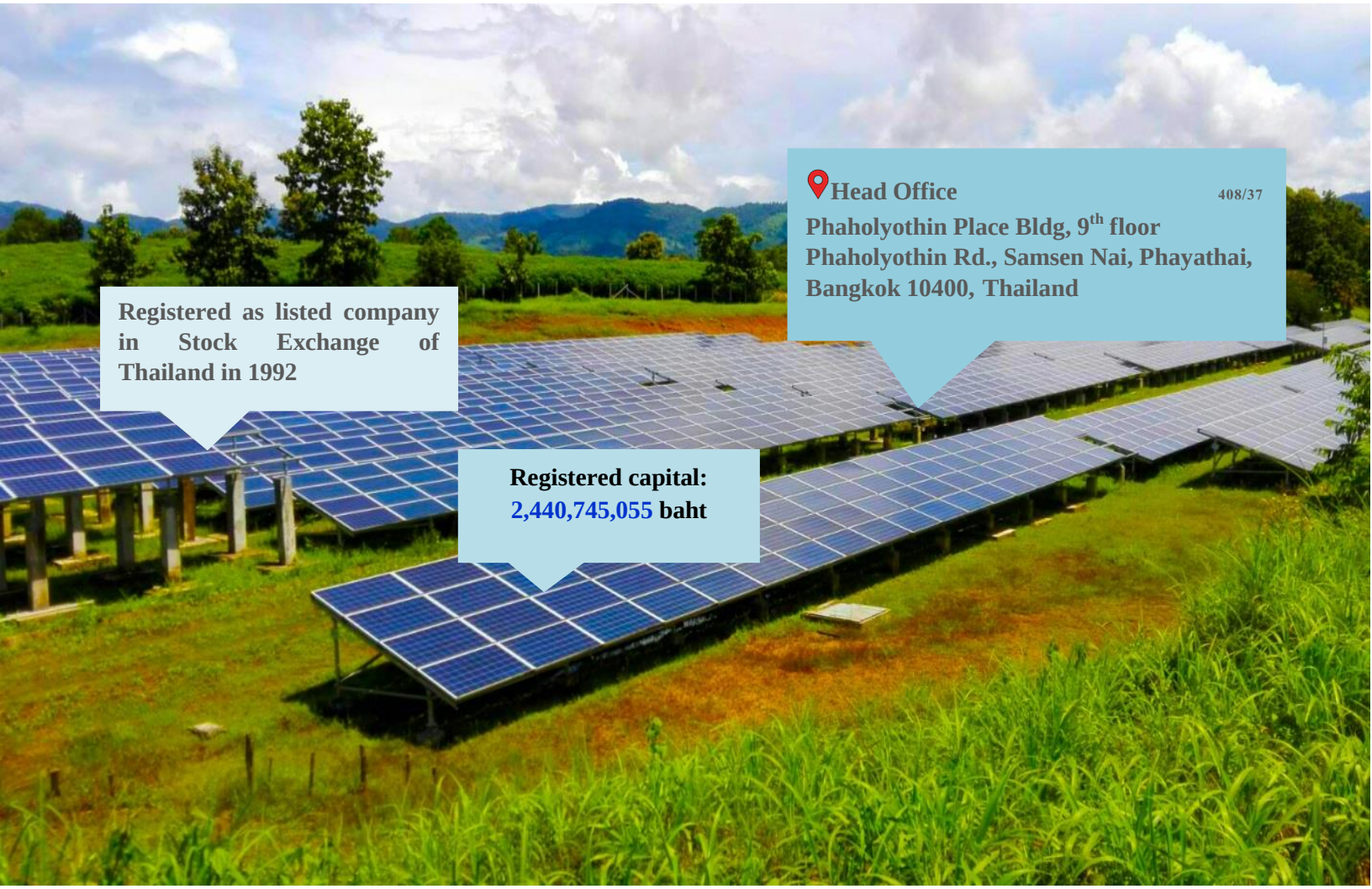
* IEC sold IEC Mae Ramad Co., Ltd. in December 2016.

In addition to solar power plant and biomass power plant, IEC expanded the business to biogas by establishing Kampangpetch Biogas Power Plant. It uses molasses as feedstock in the manufacture by decomposing it with microorganisms in a complete bio process. This microbial food is ready for further degradation in the production of biogas. This will lessen the degradation process for producing biogas and help to control the amount of gas produced. Two gas lagoons can produce biogas up to 60,000 cubic meters per day, which is enough to generate 6 MW of power and sell it to PEA. The company is in the process of buying 100% shares from Thaworn Energy Co., Ltd. (TE). After purchasing this project in Kampangpetch province, IEC has the policy to enhance the efficiency of Methane production. To further expand biogas business, it will apply this technology by installing 6-MW generator. In the future, IEC will conduct more studies on technologies.

IEC domestically and internationally conducted the study on electricity generation from biogas, ranging from production process, quality of biogas, and proper technology that the company can apply and optimize under suitable budget in each step. The company discovered that biogas power plant that uses wastewater like Vinasses, byproduct in ethanol plant, can produce the electricity. It therefore acquired 100% shares of Wongwai Kolayut Group to own Nongree Biogas Power Plant, with 3-MW electricity generation capacity, in Nongree sub-district, Bo Phloi district, Kanchanaburi province. It is IEC's policy to sustainably drive the business based on SET guideline for sustainable development.

Our vision over the next five years, from 2016 to 2021, is a passion for new innovations of world-class technologies with a view to spurring high productivity of renewable energy and other related businesses that sustainably yields high return.

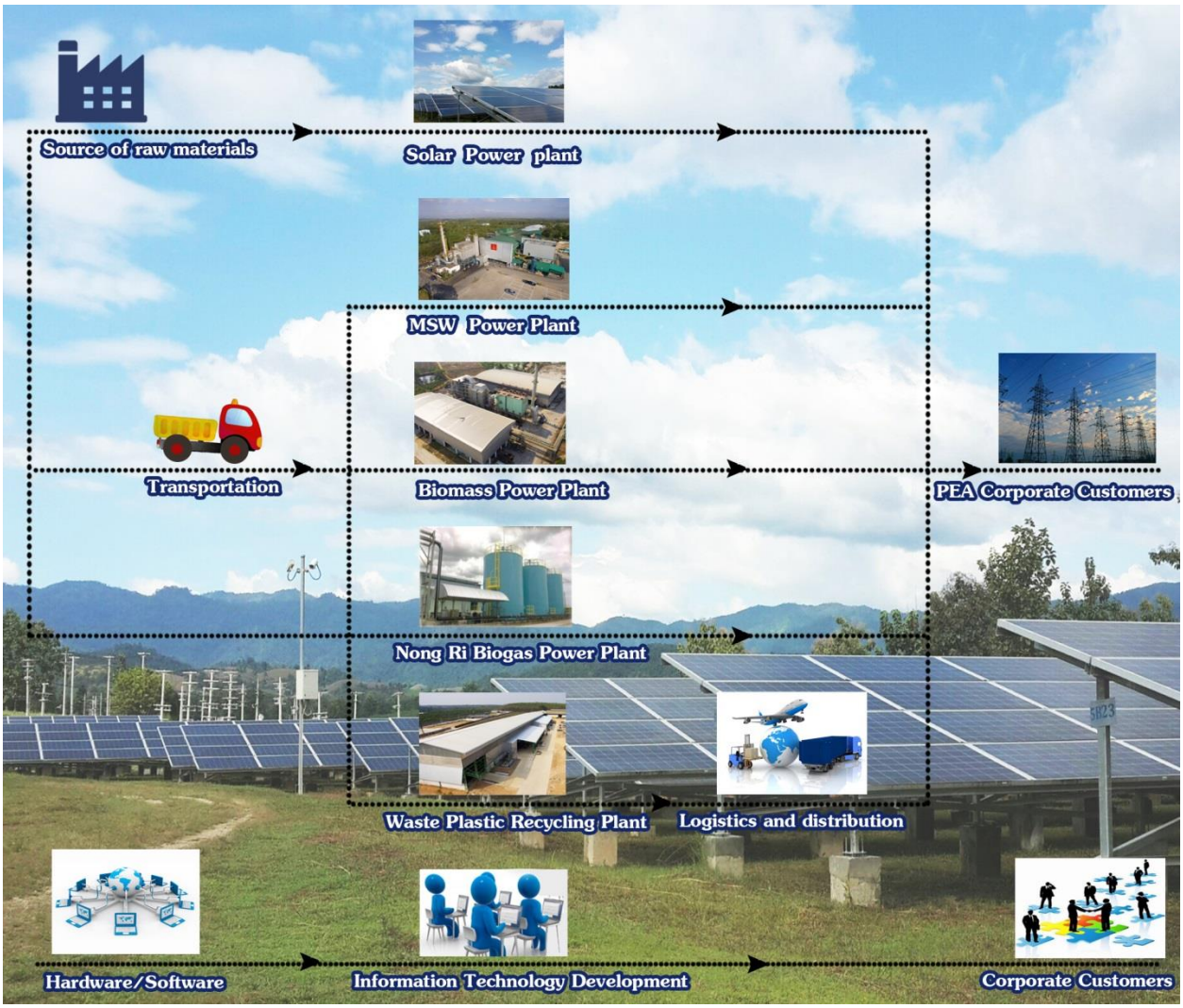
The mission we set forth is focusing on enhancing the technologies of renewable energy for MSW Power Plants, Compressed Biogas Power Plants, Plastic Pellets plant from recycled municipal waste and healthcare business.



International Engineering Plc. operates its business chiefly in the area of renewable energy, with power plants in many provinces throughout Thailand. Being aware of the significance of renewable energy in the era to come, IEC aims to develop and pursue business operations in renewable energy that will benefit surrounding communities and increase the strength and stability of energy for Thailand.

IEC Value Chain

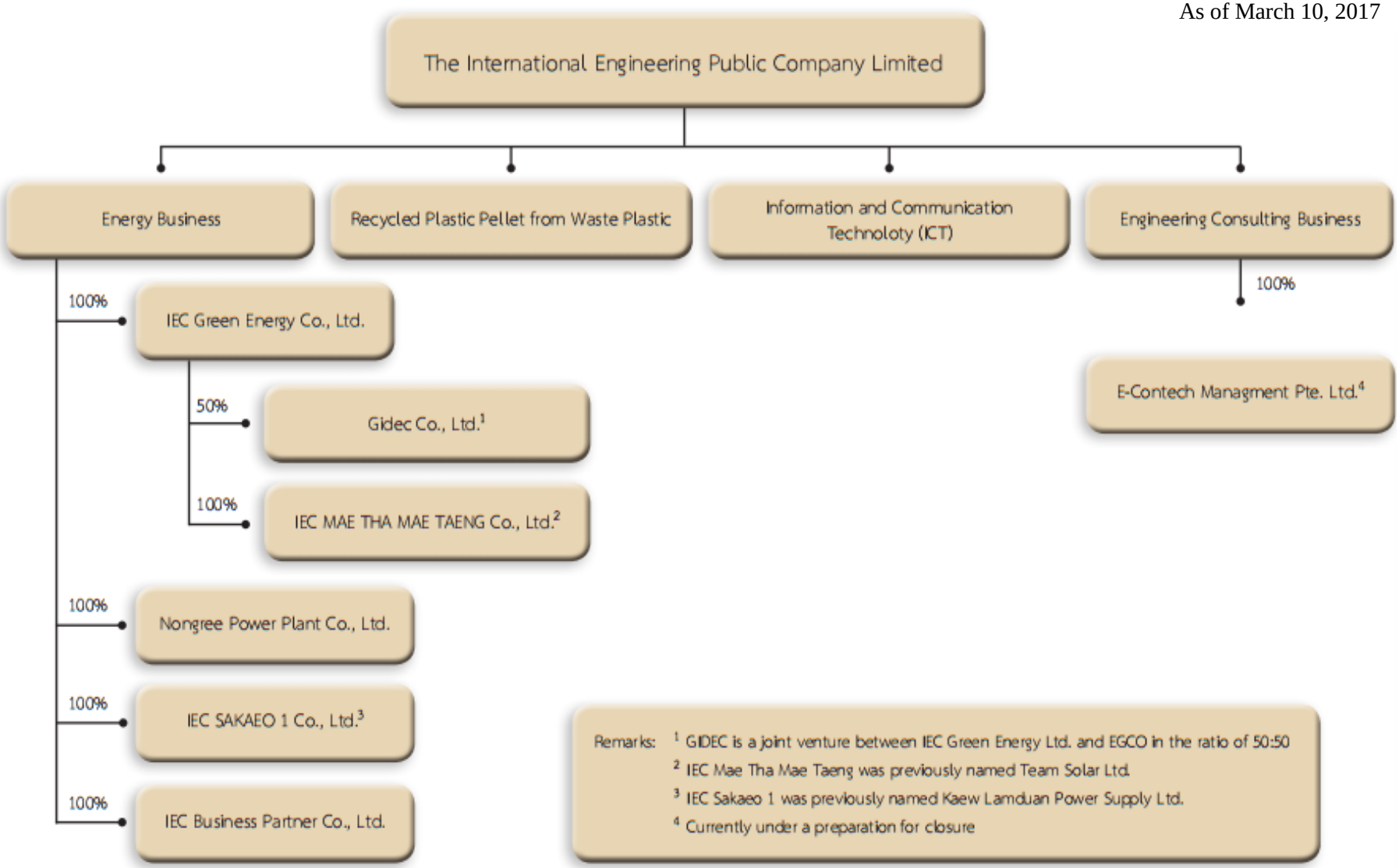
G4-DMA, G4-12



IEC focuses on operating the business under the concept to sustainable development by taking into account the value chain and all stakeholders. This report mainly covers the stakeholders within the value chain. IEC value chain starts from the sources of raw materials or the locations where the raw materials are located. From there, the raw materials are transported to different project areas to be used as fuel in electricity generation or as raw materials in plastic pellets production. The final products are delivered to both domestic and international customers via transmission lines of the Provincial Electricity Authority (PEA) and distribution of plastic pellets. The business operations in telecommunication and information technology, hardware and software supplied from manufacturers or sales distributors will be developed to suit the requirements of the customers as scheduled.

IEC's Business Structure

As of March 10, 2017



Information and Communication Technology Business

IEC functions as a system integrator. It collaborates with the business alliances consisting of leading domestic or international information technology companies. This allows IEC to present information technology systems that serve the customers' specific needs and requirements. The previous accomplishment includes being entrusted by CAT Telecom Public Company Limited (CAT) to engineer the Integrated Billing and Customer Service System (IBACSS), with a project value of over 900 million baht. The project was completed and delivered in 2011. Since then, the company has been chosen to oversee and administer the necessary system maintenance. In 2015, IEC repaired and maintained IBACSS Software worth 48.80 million baht and handled enterprise payment integration system in hardware, software, classroom training (HW&SW) and conceptual design for a project worth 20.70 million baht. This will result in greater service efficiency and effectiveness and utmost customer satisfaction. In this business, IEC collaborated with nationally and globally renowned partners in technology such as IBM and Oracle.

Renewable Energy Business

Currently, energy business is considered IEC's core business and consists of subsidiaries whose operations involve integrated renewable energy and recycling. The key renewable energy business comprises Lamphun 1, 2 Solar Power Plant in Mae Tha District, Lamphun province, with a total power generation capacity of 1.92 MW, and the Mae Malai 1, 2 Solar Power Plant in Mae Taeng District, Chiang Mai province, with a total power generation capacity of 1.92 MW. Both power plants are operated by IEC Mae Tha Mae Taeng Co., Ltd., which is an indirect subsidiary of the company. (The shares are held by IEC Green Energy Co., Ltd., a direct subsidiary of IEC). IEC also has Mae Ramad Solar Power Plant in Tak province, with total power generation capacity of 5.25 MW and under operation of IEC Mae Ramad Co., Ltd. Furthermore, IEC Green Energy Co., Ltd. has expanded its renewable energy business by acquiring GIDEC Co., Ltd. in a 50/50 joint venture with Electricity Generation Co., Ltd. (EGCO) to operate the waste-to-energy power plant in Hat Yai District, Songkhla province, with an electricity generating capacity of 6.5 MW. GIDEC Co., Ltd. made a long-term contract with the Hat Yai Municipality to daily manage 250 tons of waste, which is used as feedstock in PEA's electricity generation process. MSW power plant is the first in Thailand to use advanced European technology. Its operations benefit the surrounding communities by reducing the excessive accumulation of solid waste and pollution, unlike previous waste management method that used landfill. IEC later invested in a biomass power plant, with 8-MW capacity, in Sa Kaeo province by buying a total of 75% shares from former shareholders of Kaew Lamduan Power Supply Co., Ltd. The power plant uses agricultural wastes such as eucalyptus barks, palm fibers and bean meals as fuel in the production process of clean and environmentally friendly electricity.

In renewable energy business, IEC is developing several projects such as producing ethanol from agricultural crops as fuel, with capacity of 150,000 liters per day at Rayong plant operated by IEC Business Partners, subsidiary of IEC. For the production of biogas, the company is acquiring 100% shares from Thaworn Energy Co., Ltd. (TE). After purchasing this project in Kampangpetch province, IEC has the policy to enhance the efficiency of Methane production. To further expand biogas business, it will apply this technology by installing 6-MW generator. In the future, IEC will conduct more studies on technologies.

IEC domestically and internationally conducted the study on electricity generation from biogas, ranging from production process, quality of biogas, and proper technology that the company can apply and optimize under suitable budget in each step. The company discovered that biogas power plant that uses wastewater like Vinasses, byproduct from ethanol plant, can produce the electricity. In Thailand, Korat Industry Power Plant (KI) is the project reference, located in Phimai district, Nakhon Ratchasima province. Furthermore, IEC conducted field study to learn pros and cons of different systems in biogas power plant that uses Vinasses. That is why the company selected specific technology to properly manage each part of power plant and ensure the maximum effectiveness. It therefore acquired 100% shares of Wongwai Kolayut Group to own Nongree Biogas Power Plant, with 3-MW electricity generation capacity, in Nongree sub-district, Bo Phloi district, Kanchanaburi province.

Table 1. Locations and power generation capacity of IEC power plants

	Location	**COD**	**Adder (THB / KW per hour)**	**Total Electricity Purchased (MW)**
Lamphun Solar Power Plant 1 and 2	Takat sub-district, Mae Tha district, Lamphun	Sept 2013	6.50	1.92
Mae Malai Solar Power Plant 1 and 2	Kee-lhek sub-district, Mae Taeng district, Chiang Mai	Jun 2014	8.00	1.92
Mae Ramad Solar Power Plant *Sold on 26 December 2016	Kanye Jeu sub-district, Mae Ramad district, Tak	Dec 2013	6.50	5.25
Sa Kaeo Biomass Power Plant	Salalamduan sub-district, Meung district, Sa Kaeo	Apr 2013	0.30	8
Hat Yai Waste-To-Energy Power Plant	Kuanlang sub-district, Hat Yai district, Songkhla	Dec 2014	3.50	6.5
Nongree Biogas Power Plant	Nongree sub-district, Bo Phloi district, Kanchanaburi	Expected in 2017	0.30	3
Total Electricity Generation Capacity				23.59

Waste Plastic Recycling Business

Operating Hat Yai Waste-To-Energy Power Plant, IEC saw a new business opportunity to recycle waste plastic in old landfills. Across Thailand, about 28 million tons of waste plastic has accumulated. The company therefore treated the waste plastic with advanced in-house technology before using it as raw material in the production process of plastic pellets. Receiving high demand, these pallets can be used to manufacture new products or raw materials or in other industries that need plastic pellets of lesser quality at lower price than plastic pellets made of petroleum. The plastic recycling optimizes the use of resources, reduces greenhouse gas often resulting from petrochemical production processes, protects the environment, and yields satisfactory rate of return for the company. IEC's operations in waste plastic recycling for export purpose were first set into motion in 2015 and received investment incentives from the BOI. The first waste plastic recycling plant that produced plastic pellets was built in Rayong province, with the second plant expected to be built in Songkhla province. The minimum electricity generation capacity is 100 tons a day but will soon be scaled up to at least 300 tons daily. Currently, the Rayong plant is improving the production process to enhance the quality of plastic pallets and fulfill the customers' and market's needs.

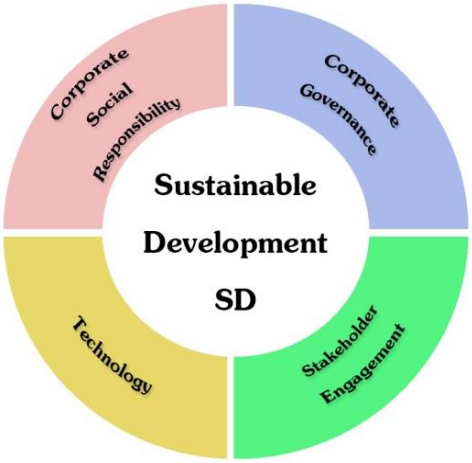
Engineering Consulting Business

For engineering consulting business, the research project for Adaptive Viscosity Reduction System (AVRS), contracted with PTTEP-CA, ended in 2015. IEC is considering terminating this business.

Sustainable Development Policies

G4-DMA, G4-8, G4-36, G4-45

With IEC's vision to be an integrated renewable energy service provider by using advanced technologies in renewable energy and cutting-edge information and communication technology, our company operates our businesses principally in electricity generation using a great variety of renewable energy with sustainable development and management policies that are developed and used to ensure the highest possible returns and benefits for both investors and stakeholders. This is made possible by our close collaboration with our partners in renewable energy technology along with our partners in communication and information technology. Building confidence for all stakeholders by committing ourselves to operational excellence with business procedures that accords with the principle of business transparency being socially and environmentally responsible, our company aims to develop our business operations in all different areas to ensure continuous compliance with the company's vision. Our good management scheme for the sustainable development is as follows.



► The company focuses our business operations in electricity generation, renewable energy and production of plastic materials from various types of plastic waste, while also taking into account the significance of bringing about the highest possible returns and benefits to our shareholders and related parties over the long run. The company pursues business operations with responsibility and accountability toward all economic, social, and environmental stakeholders and aims to develop its personnel and increase its capacity and future opportunity for business improvement in order to better respond to the needs of all stakeholders and secure sustainable growth of our business.

► Because the company emphasizes sustainable growth of our business, the company is, therefore, committed to business administration that aligns with the principles of good governance, with risk management and integrated and systematic inspection procedures to ensure transparency and justice within the system.

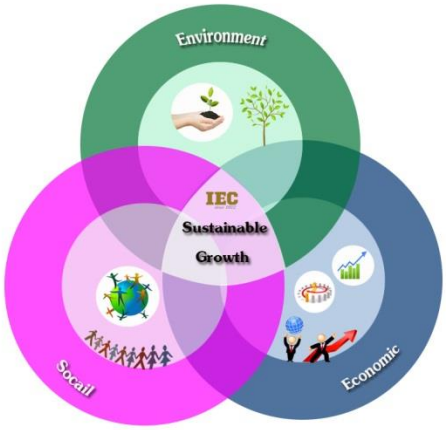
► The company has the policy to disclose information as well as details of communication with correct, up-to-date information to all stakeholders with both efficiency and effectiveness, due transparency and fairness, in compliance with the sustainable development reporting frameworks of the Global Reporting Initiatives (GRI).

► The company is committed to undertake all of our business operations with policies that encourage our personnel at every level in our organization—directors, executives and all employees to join force in executing the tasks and missions as assigned by strictly following the company's business code of conducts and the principles of good governance and taking into their consideration the principles of human rights and labors. With well-thought out and well-planned decision making, employees' remunerations must correspond to the business performance of the company both in the short and long term and for both employees and related parties in the demand chain of the business justly, transparently and in line with related laws, regulations and standards.

► The company is determined to develop products that can best respond to the needs whether economic, social or environmental as well as those of our stakeholders. The company holds ourselves responsible for our products and production process by not only abiding ourselves by the rules, laws and regulations, but by also committing to the task of lowering possible negative consequences that may occur to community, society and the environment. The company aims to develop greater co-existence among our business and the surrounding communities, as well as respecting the rights of all stakeholders and is resolved to the collaboration of sustainably developing all surrounding communities as well as continuing to provide trainings on important environmental issues to all of our employees.

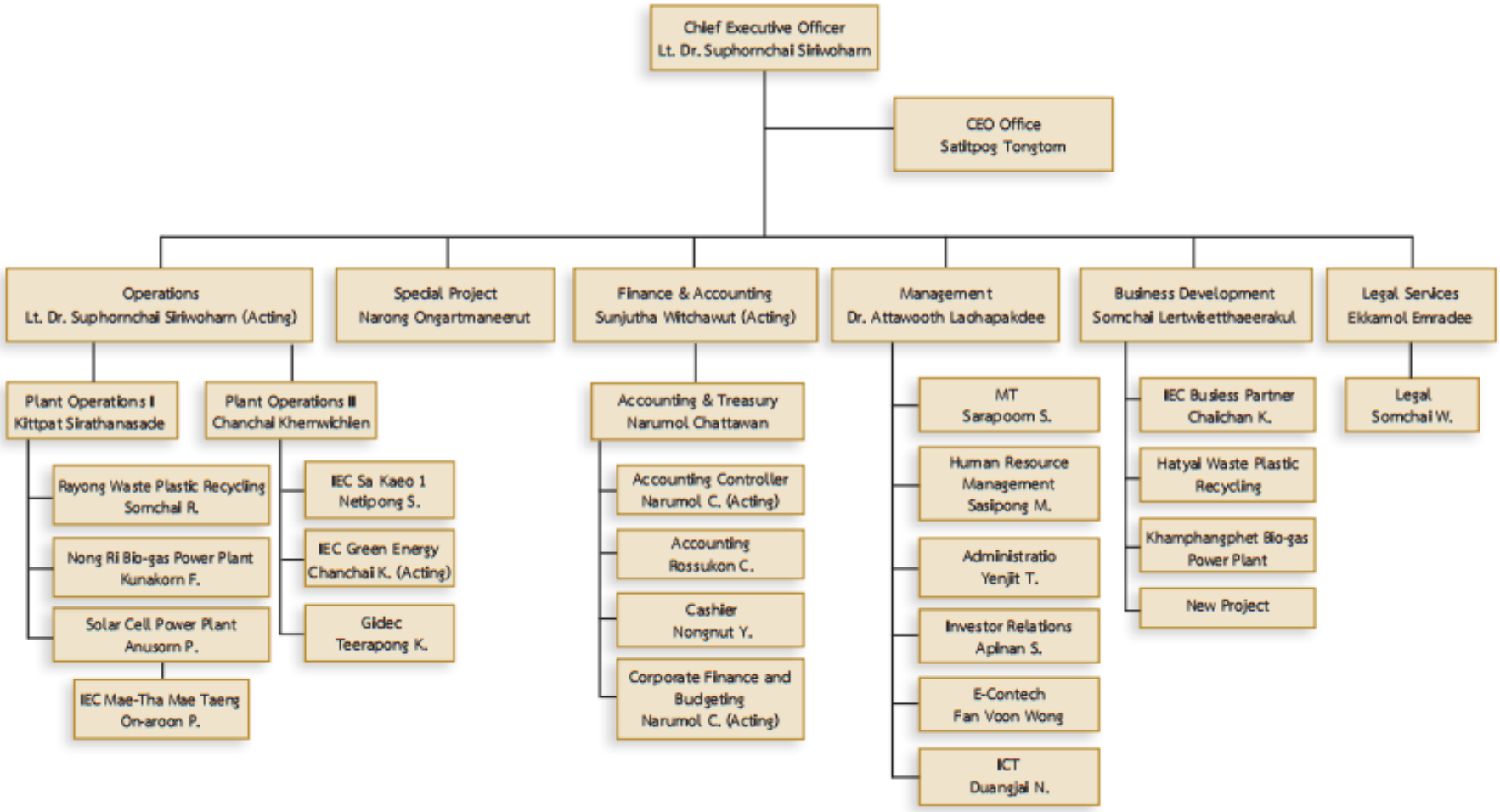
Sustainable Management Approach

G4-18, G4-19-22, G4-34-35, G4-38



IEC is determined to operate our business in accordance with the principles of good governance in conjunction with recognizing the importance of business performance which is the essential foundation of business. The company aspires to undertake all of our business operations while being socially responsible, and connect stakeholders in all areas to be able to participate be thoroughly and fairly informed about relevant administrative policies. This is an important step to ensure every party involved is resolute in the use of technology to push the organization forward, sustain our growth and development. The concentration is on economic, social, and environment, which will ultimately lead to the future sustainability of the organization. The company has established administrative policies for sustainable development in order to increase highest possible returns and benefits for all of all shareholders and relevant stakeholders by firmly adhering to work approaches and work standard. The company has plans to apply for global standard certifications such as management system, environment, occupational health and safety in order to enhance the company's business operation towards the global arena and also to be acknowledged and recognized by customers and investors globally. In addition, in order to express our intentions and determination to undertake all business operations with a good business code of conduct, the company has participated in CAC (Collective Action Coalition Against Corruption), organized by IOD or Thai Institute of Directors, to promote our intentions of being an ally in Thailand's Private Sector Collective Action Coalition Against Corruption. IEC however, has submitted for an extension on coalition membership certification period because the company is currently in searching for a new auditor. The coalition committee has considered and came to a conclusion to approve additional 6 months period for the company from the date of application for certification. Documents for approval are due for submission within the 2nd quarter of 2017.

Structure of Sustainable Management

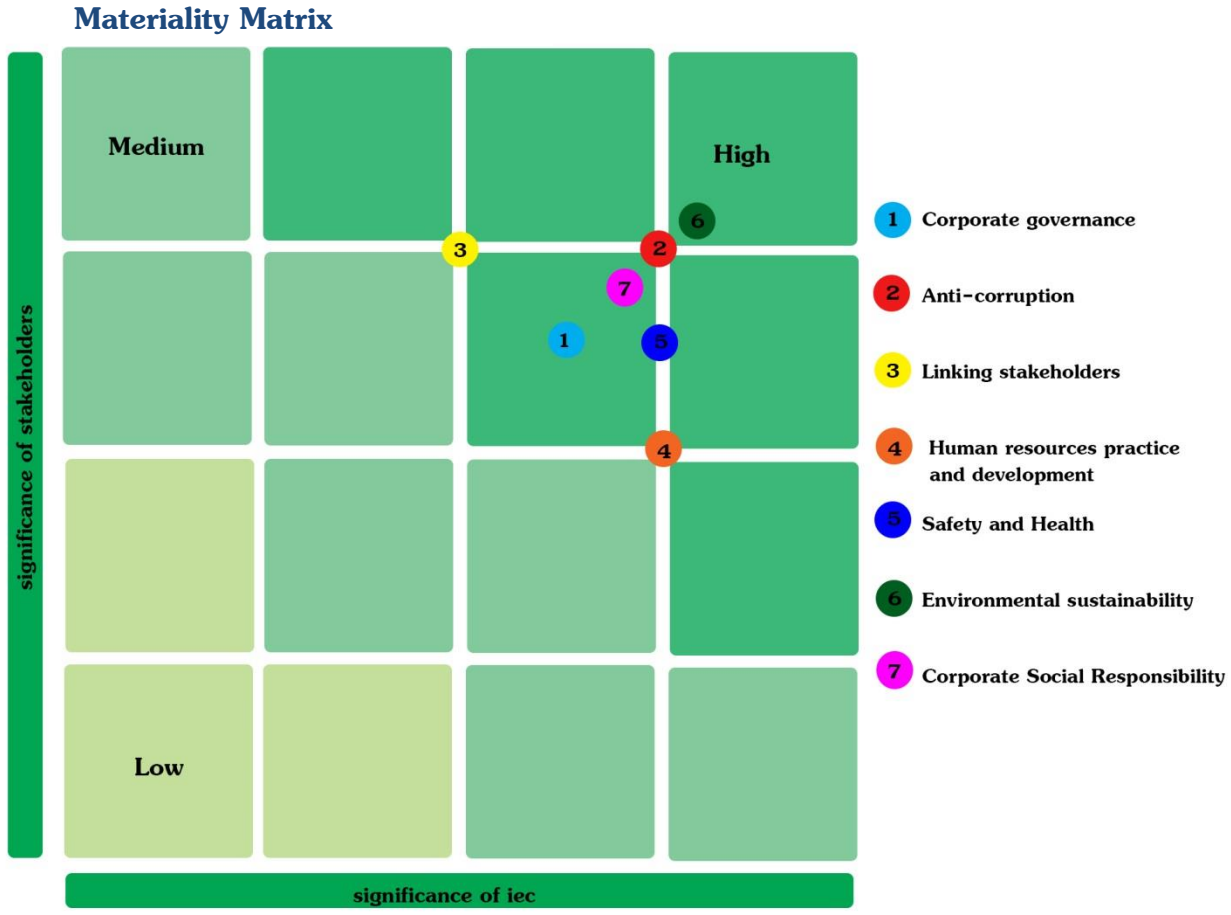


Board of Directors as of 10 March 2017

1.	Lt. Somsak Yamasmit	Honorary Chairman
2.	Mrs. Sunjutha Witchawut	Vice Chairman / Executive Chairman / Acting Chairman
3.	Lt. Dr. Supornchai Siriwoharn	Chief Executive Officer
4.	Asst. Prof. Kasemsan Pipatsirisak	Audit Committee Chairman
5.	Mr. Metha Thamviharn	Audit Committee
6.	Dr. Morakot Siriwattanaroj	Audit Committee
7.	Prof. Dr. Pairote Sattayatham	Independent Director
8.	Dr. Attawooth Laohapakdee	Director
9.	Mr. Narong Ongartmaneerut	Director

Sustainability topics

IEC prioritizes stakeholders in the form of materiality matrix with the horizontal axis representing the significance to IEC and the vertical axis representing the significance to the stakeholders. IEC highly and particularly emphasizes on environmental sustainability as well as occupational health and safety and social responsibility. For significance to the outside stakeholders, IEC highly prioritizes environmental sustainability, stakeholder engagement and social responsibility. All of these aspects of our business operation are governed by the various principles under IEC Corporate Governance as depicted below.



It can be seen that IEC highly emphasize on the environment in our business operations. Our current business model involves electricity generation using environmentally friendly and renewable energy sources. The development on our waste-to-energy power plant and plastic pellets plant from waste plastic similarly bring great benefits to the surrounding communities by reducing the amount of waste in the community as well as generate electricity and recycle waste from the community. The use of energy and the production process of IEC group are pertinent to the environment in many aspects, as follows.

Table 2. Subsidiaries operating businesses related to aspects of environment

Company	Production	Raw Materials				Ebviroment			Energy Conservation	Safety
		Solid Waste	Bio – mass	Solar Power	waste water	Air	Water	Waste		
Internationnal Engineering	●	●				●	●	●	●	●
IEC Green Energy	●	●				●	●	●	●	●
MSW Power Plant	●	●				●	●	●	●	●
IEC Mae Ta – Mae Taeng	●			●					●	●
IEC Mea Ramad (sold on 26 Dececber 2016)	●			●					●	●
IEC Sra Kaew1	●		●			●	●	●	●	●
Nong Ri Biogas Power Plant	●				●	●	●	●	●	●

All business operations of IEC are undertaken while being conscious of environmental preservation, co-existence and sustainable harmony between surrounding communities and our business operations as well as the importance of energy conservation. All companies under IEC group use renewable materials and natural energy in the production. In particular, IEC Green Energy Company Limited, GIDEC Company Limited and IEC use waste as the raw materials for their electricity generation and plastic pellets productions. IEC SaKaeo 1 uses agricultural waste as biomass to provide a heat source for its electricity generation. Additionally, IEC Mae Ta - Mae Taeng Company Limited and IEC Mae Ramad Company Limited are among the leaders in solar power plant projects in Northern Thailand by using of the most abundant natural energy source or solar energy, which is a clean and both environmentally friendly and community-friendly energy source in electricity generation. Lastly, Nong Ree power plant uses distillery slop which is a leftover material from making ethanol as an energy souce.

IEC business operations of power plants and plastic pellets plant always take into consideration the environmental preservation in all areas-air, water, waste-in order to ensure that our business operations and various projects can harmoniously and sustainably co-exist with the surrounding communities.

Accomplishments & Operations for Sustainability 2016

G4-EN2, G4-EN34, G4-LA6, G4-LA10, G4-SO11

IEC is committed to develop environmentally-friendly products, as being demonstrated through the raw materials used, which are entirely renewable. Although in the past IEC invested great effort in selecting suitable technologies and in designing production processes such that the impacts on the surrounding communities were minimized, the foul smell occasionally spread over to the nearby communities during the repair of the machinery used in the waste-processing production line or from the waste sorting and cleaning process. The matter was taken seriously by IEC, and the Company has made continuous efforts in solving the problem, including relocating the waste sorting and cleaning process, which is part of the plastic pallet production line in Rayong, to the landfills to reduce community impacts.

Environmental Investment

With a new business structure, IEC puts a high priority on environmental responsibility in all areas of its business activities, starting by selecting good technology, controlling pollution released into the environment, and assessing the impacts on the surrounding areas to resolve any problems occurred. These actions help to build confidence within the communities and among all groups of stakeholders. The environmental investments IEC made in 2015 were as follows:

Waste-To-Energy Power Plant, Hat Yai District

The company places great importance on the environmental impact of society and, therefore, has taken initiatives to conduct an opinion survey, clarify problems, and implement measures to resolve environmental issues. With the recent problem regarding the foul odour of waste that has affected the surrounding communities, the Company has set out to resolve the issue by spaying enzymes and EM (Effective Microorganisms) to eliminate odour originating from solid waste collected from Hat Yai Municipality and from the waste unloading yard in the plant area. The frequency of spraying has been increased to 3 times/week for the solid waste and 4 times/week for the waste unloading yard. For a long-term solution, the Company is currently in the process of proposing a plan to related agencies. Additionally, the Company has carried out several actions to improve various steps in the production process as follows:

- Installation of ID fan to reduce sound disturbance and to increase the airflow for a more complete combustion process
- Installation of Bag Filter, which is an effective industrial air filter system used in keeping pollution level within the standard permissible limit.
- Installation of Heat Recovery System, which captures heat energy that is further used for reducing fuel moisture for a more complete combustion process
- Repair of Continuous Emission Monitoring Systems (CEMS)
- Improvement of the landscape and environment of the surrounding communities and plant premises by planting Asoke trees inside and around the plant site as a natural fence to trap dust particles and odour; restoration of pavement around the plant area to obtain a better landscape of the premises.

Waste Plastic-to-Recycled Plastic Pellets Production Plant

At located at Nikom Pattana District, Rayong Province. The plant's construction began in the middle of 2015, and at present the plant produces producing B Grade plastic pellets from recycled waste plastics. After a test-run of the production machinery, the nearby communities have been affected by foul smell from wastes used for the production process. The Company has clarified the issue with the communities' residents and relevant government agencies, and has all along implemented actions to improve and remedy any problem-causing production process and the affected environment. The Company has moved the waste sorting process to the landfill area in Ban Baueng District, Chonburi Province. Only sorted plastics will be used as raw materials for the plastic pellet production. At present, the issue has been resolved. In additional to the relocation of the waste sorting process to deal with the odour problem, the plant has scheduled the spraying of EM 3 times/week around the plant area and has installed Deodour Air, which is a high-pressure air spraying system, to eliminate unwanted odour in the plant area and the surrounding communities. The Company has also proactively undertaken various improvement actions for the production process as follows:

Image from Ban Bueng District, Chonburi Province

- Improvement of condition of the waste unloading yard by cementing the yard and constructing a barrier to prevent leachate seeping into groundwater and to stop plastic waste debris scattering

Waste Unloading Yard before Improvement **Waste Unloading Yard after Improvement**

- Treatment of smoke arising from plastic pellet melting process by using Activated Carbon System, which treats air pollution, especially smell, using an ozone system
- **Resolution of complaints raised by the nearby residents, SAO (Sub-district Administrative Organization), and the Public Health Unit concerning noise disturbance from the plant**

  After receiving complaints about noise issue, the waste plastic-to-recycled plastic pellets production project conducted a survey among residents claiming to be affected by the noise and discussed the findings in the meeting attended by all related parties. Actions arising from the meeting to resolve the noise issue were as follows:

  1. Placing metal sheets around the production building to keep noise arising from the production process within the building.
  2. Sharpening blades used in the shredder weekly for better performance, which in turn helps lowering noise level generated.
  3. The quality of raw materials used is one factor contributing to the noise level the shredder produces. Therefore, the plant will only use quality raw materials that are easily shredded to ensure low noise level.

The SaKaeo Biomass Power Plant is in the process of applying for ISO 14000, as required by the Company's environmental policy, which focuses on pollution prevention and environmental law compliance. In 2016, the Company conducted an annual environmental risk assessment and decided on action plans to deal with and prevent pollution issues. The environmental investments the Company has entered into are as follows:

- **Improvement of Electrostatic Precipitator (ESP)** by changing the positive ion collecting plate and the negative ion discharge electrode to improve efficiency of the air pollution treatment system and to ensure that the quality of air emitted from the emission stacks meets the legal requirements.
- **Introduction of Fly Ash Chain Technology for Ash Transportation** – Waster Conveyor System was previously used for ash transportation, resulting in several environmental issues such as water resource waste, pollution distribution – which led to large quantity of effluent, and dust particle dispersion. Owing to this reason, the Fly Ash Chain Technology was introduced; the technology employs a chain conveyor system, helping to eliminate problems existing in the previous system by:
  1. Cutting down water usage in the ash transportation process by 100%
  2. Reducing wastewater generated from the production process and reducing pollution distribution
  3. Reducing dust dispersion in the production area as the new transportation method is a closed conveyor system
  4. Reducing erosion of machinery used in the air pollution treatment system

Ash Transportation using Water Conveyor System Technology

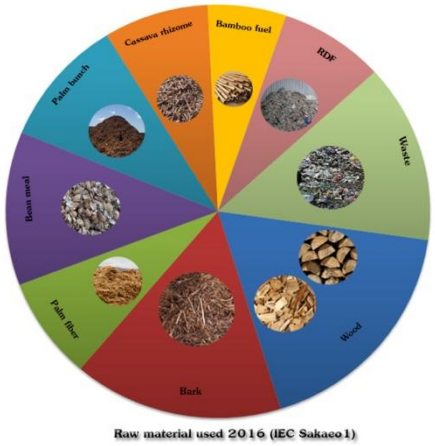
Before Improvement

Ash Transportation using Fly Ash Chain

After Improvement

- **Production Process Wastewater Collection System –** in the past, there were several point sources of wastewater discharge from the Boiler Zone in the production process. These are Blow down boiler, Sampling, Drain deaerator, and Coolant. Without proper wastewater collection system in place, wastewater ran to the storm water drainage system before being discharged outside the plant area. A wastewater collection system was, hence, constructed to transport wastewater from the production process to the treatment pond. This approach also prevents wastewater from flowing into the storm water gutters.
- **Neutralization pond Actual 50% -** the environmental assessment revealed that the production process wastewater had a pH value exceeding the wastewater quality standard. A neutralization pond was therefore set up with a chemical system capable of treating wastewater coming from the production process. The system incorporates 50% sulfuric acid (H_2SO_4) into wastewater to ensure acceptable wastewater quality.

The Usage of Renewable Energy and Recyclable Raw Materials in the Production Process



Raw material used 2016 (IEC Sakaeo1)

The biomass power plant at SaKaeo Province has a production capacity of 8 MW and runs on 100% biomass fuel, which is developed from wood bark, wood chip, palm fiber, palm bunches, bean meals, and RDF – all of which are agricultural wastes from nearby agricultural areas and are considered a clean and renewable fuel. The raw materials will enter the production line for a high-temperature combustion process followed by a dust filtration process. These steps help lessen possible environmental impacts. The operation of the biomass power plant at SaKaeo Province also contributes to increased earnings experience by the nearby agricultural communities through providing a channel where the farmers in the area can sell their agricultural wastes, such as those from eucalyptus trees or other economic crops commonly available in SaKaeo Province.

The Waste-to-Energy Power Plant in Hat Yai District has an electricity generation capacity of 6.5 MW and is part of the waste management project that has been contracted to GIDEC Co., Ltd by Hat Yai Municipality. The municipal solid waste will go through a sorting process and a moisture adjustment process to increase an efficiency of a high-temperature combustion reaction. The heat produced will be used to boil water to generate high-pressure steam that drives an electrical generator. The benefits that the waste-to-energy power plant in Hai Yai District will deliver to the surrounding communities includes a disposal of an increasing amount of municipal waste and a generation of electricity from household waste combustion. This waste-to-energy power plant is one of the most successful power plants that harnesses the available resources in the communities to deliver highest possible benefits while reduces environmental pollution caused by solid waste landfilling.

Power from the sun is regarded as the most important renewable energy. It is also a clean energy that does not initiate any reaction that may be harmful to the environment. IEC operates three solar power plants for electricity generation, which are the Lampoon 1 and Lampoon 2 Solar Power Plant (combined output of 1.92 MW), the Mae Malai 1 and Mae Malai 2 Solar Power Plant (combined output of 1.92 MW), and the Mae Ramad Solar Power Plant (combined output of 5.25 MW). All IEC solar power plants utilizes natural clean energy to generate electricity without imposing negative impacts on the environment.

100%

Ratio of Solar Energy Used as a Power Source In the Solar Power Plants

At present, IEC has already sold all its investments in IEC Mae Ramat Co., Ltd. In addition to selling electricity generated to Provincial Electricity Authority (PEA), in 2016, IEC expanded its business operations into recycling raw materials available in the communities to produce Grade 2 plastic pellets. The raw materials used are plastic wastes from landfills, which are sorted to separate out P.E. plastics from soil and other sediments. The plastic materials are then cleaned to get rid of sand and contaminants before being melt into Grade 2 plastic pellets, which will be sold to manufacturers of plastic materials in both domestic and international markets. This is a good example of a business opportunity that we have rightly seized through building upon the expertise in waste-to-energy power generation technology that the Company has accumulated. Our sophisticated waste sorting system allows us to repurpose P.E. plastics, which are too economically valuable to be used as burning materials for heat, into plastic pellets, which are starting raw materials used in many plastic product industries. As such, IEC's plastic pellets production essentially helps to moderate pollution issues that the communities are being affected by through reducing the amount of waste in landfills and recycling economically valuable materials into plastic pellets for a more beneficial purpose.

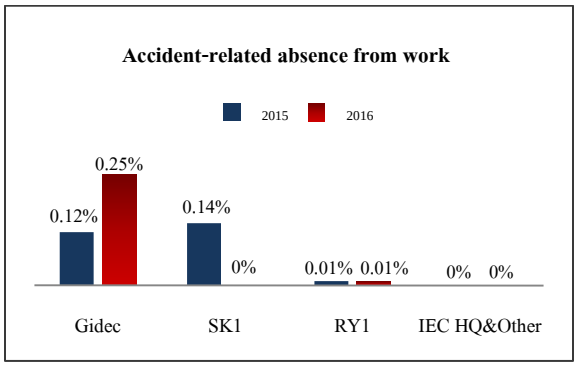
100%

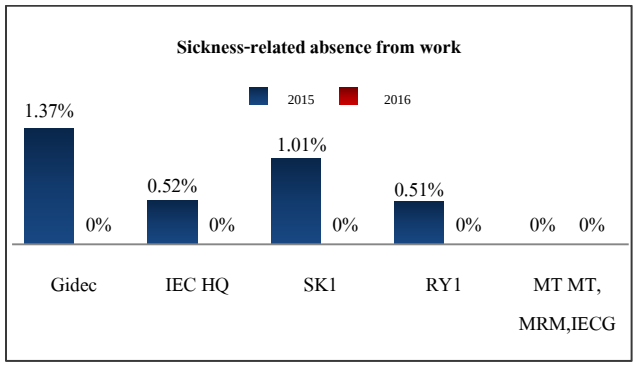
Ratio of Plastic Waste from Landfills Used as Raw Materials is the Waste Plastic Recycling Plant

Evaluation of Occupational Health and Safety Performance

Rates of Accidents and Sickness that Necessitated Absence from Work

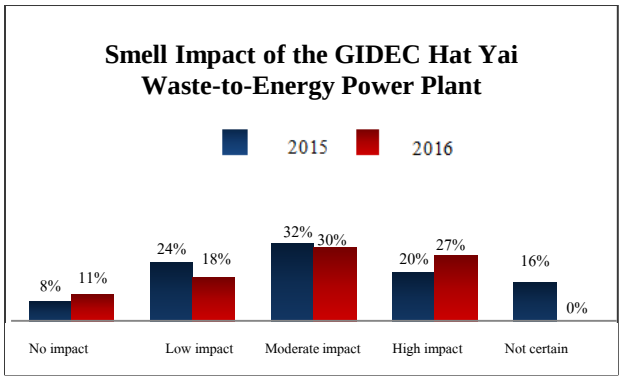
IEC recognizes the importance of safety and occupational health of employees, business partners, contractors, and contacts, as part of the stakeholders. They are required to strictly comply with safety and occupational health regulations defined the Company in order to ensure maximum safety in all operating procedures. Professional safety officers have identified ways of preventing the recurrence of accidents and monitored corrective measures on a continual basis. All employees are required to wear personal protection equipment, such as safety helmets, shoes, gloves, and masks while working. Hazardous areas have been identified, of which all employees have been informed to ensure their compliance with relevant requirements. As a result, the number of accident and sickness cases that necessitated absence from work among employees in 2016 compared to man hours in IEC's overall establishments reduced, and some of them saw no serious accidents that necessitated absence from work.



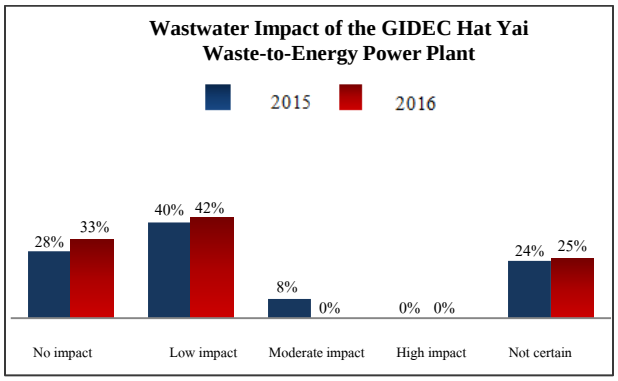


Impacts on Surrounding Communities

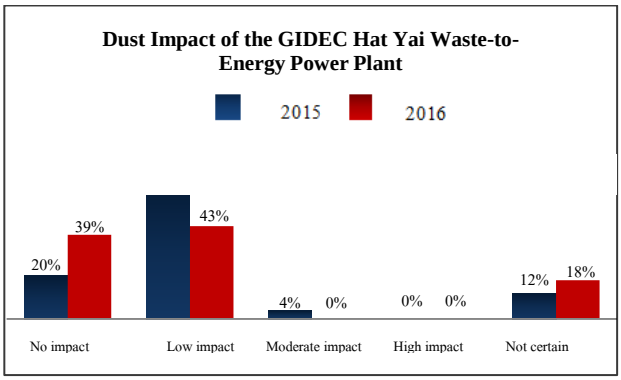
During 2016, IEC had a policy specifying that all power plants, especially those using the thermal process in their production, must survey potential impacts of their operations on surrounding communities. The Hat Yai Waste-to-Energy Power Plant organized community relations activities, which involved surveying the impacts of their operations on five surrounding communities on 24 July 2016. These communities consisted of the Wat Ko Community, Airport Community, Ing Kamon Community, Chat Kaew Community, and Hat Yai Municipality Officer Residence. Based on the survey conducted on smell, wastewater, dust, air pollution, noise pollution and other impacts, 'smell' was their main concern, which came from the Hat Yai Municipality's landfill which was used for over 40 years. Aware of this issue, IEC formulated an action plan on spraying EM at the landfill area once a week to reduce this impact for the communities.



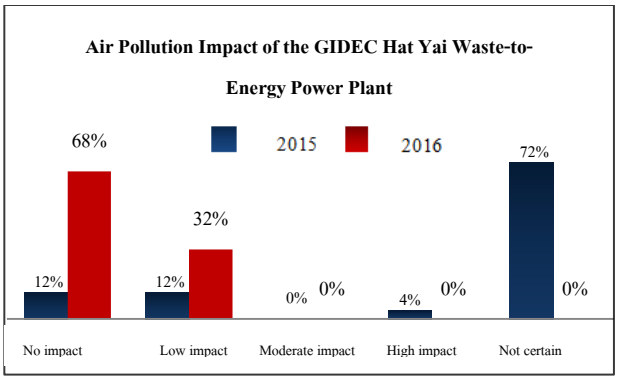
Smell impact of the GIDEC Hat Yai Waste-to-Energy Power Plant – In 2015, 32% of surveyed people responded that the odor issue was at a moderate level. The 2016 survey showed a decrease in bad odor, which resulted from the fact that the Company sprayed EM with a higher frequency and increased landfill space.



Wastewater impact of the GIDEC Hat Yai Waste-to-Energy Power Plant – In 2016, the percentage of people who responded that they were not affected or were slightly affected by wastewater was 75%. The percentage was higher than that in 2015. This was because the Company improved and added retention ponds to the production process to allow the entire water from the production process to flow into the new .retention ponds. Wastewater from solid waste was sent to the wastewater treatment plant, so there was no wastewater from the production process and from the plant released to the outside of the plant.



Dust impact of the GIDEC Hat Yai Waste-to-Energy Power Plant – In 2015, 64% of surveyed people indicated that they were slightly affected by dust. In 2016, the percentage of surveyed people who indicated that they were not affected by dust increased to 39%. This was because the Company installed bag filters to filter air to achieve the air pollution standard level.



The air pollution impact of the GDIEC Waste-to-Energy Power Plant, Hat Yai– The 2016 survey identified that 68% of the respondents indicated that the power plant had no impact on surrounding communities. From November to December 2016, GIDEC was shut down for revamp as the pollution from air released from stacks exceeded the legally acceptable levels. Thus, the bag filter system was installed to filter air pollution to ensure that it stayed at an acceptable standard level since some waste from stacks cannot be seen with naked eyes.

Local Visits for Surveys

On November 10, 2016, the Biomass Power Plant, Sakaeo Province, surveyed impacts on two surrounding villages – the Noen Takhian Village and the Khok Charoen Village. Taking into account results of the 2015 survey, the Company made improvements and took corrective actions to reduce potential impacts on the local communities, such as the impacts on road conditions and travel, dust, noise, odor, quality of water in the Phra Sathueng Canal, and health of local people. **Thus,** the 2016 survey reflected its implementation concerning improvement and corrective actions to address these impacts for the past one year (2016). It was identified that the impacts on the physical environment, water resource use, and health of local people were lower, as indicated by diminishing negative impacts, as follows:

1. Change in physical environment impacts

• Road conditions and travel – The number of local people with negative feelings decreased from 59.8 percent in 2015 to 18.5 percent in 2016.

• Dust – The number of local people with negative feelings decreased from 28.2 percent in 2015 to 8.7 percent in 2016.

• Noise – The number of local people with negative feelings decreased from 23.6 percent in 2015 to 9.6 percent in 2016.

• Smell – The number of local people with negative feelings decreased from 21.0 percent in 2015 to 6.0 percent in 2016.

2. Change in water resources use impacts

• Quality of water in the Phra Sathueng Canal – The number of local people with negative feelings decreased from 28.7 percent in 2015 to 10.7 percent in 2016.

• Aquatic animals in the Phra Sathueng Canal – The number of local people with negative feelings decreased from 26.4 percent in 2015 to 9.6 percent in 2016.

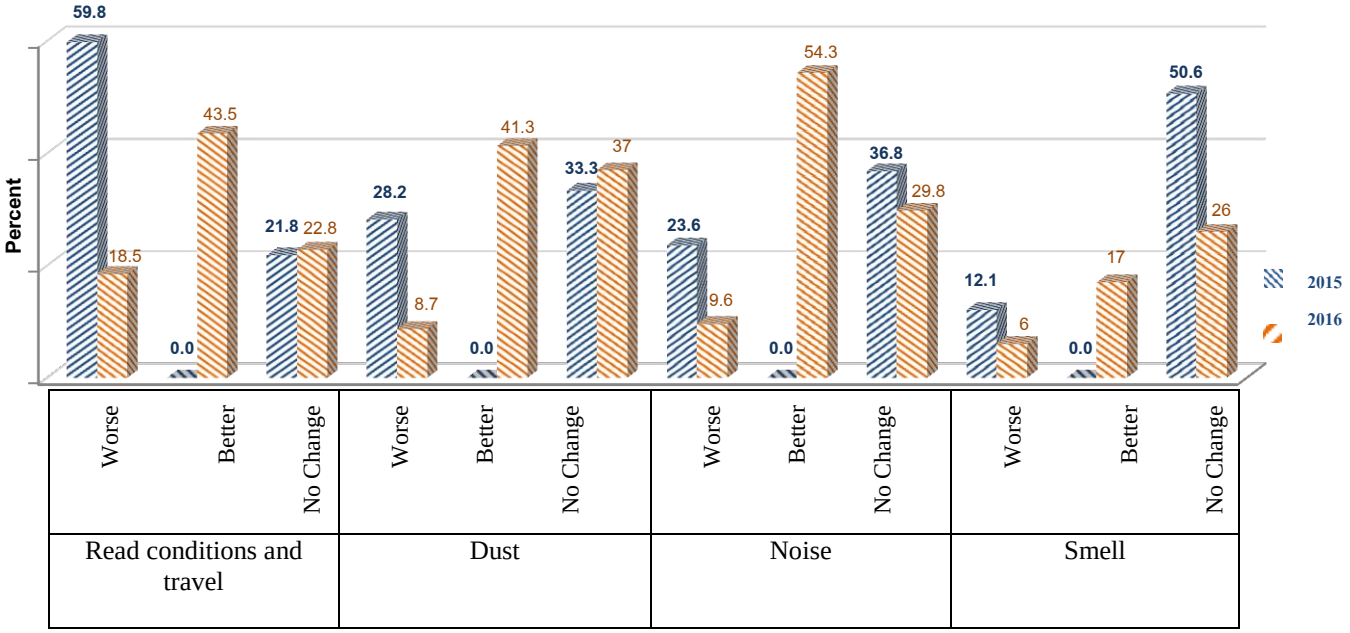
3. Change in health impacts

• Sickness from respiratory diseases – The number of local people with negative feelings decreased from 18.4 percent in 2015 to 4.9 percent in 2016.

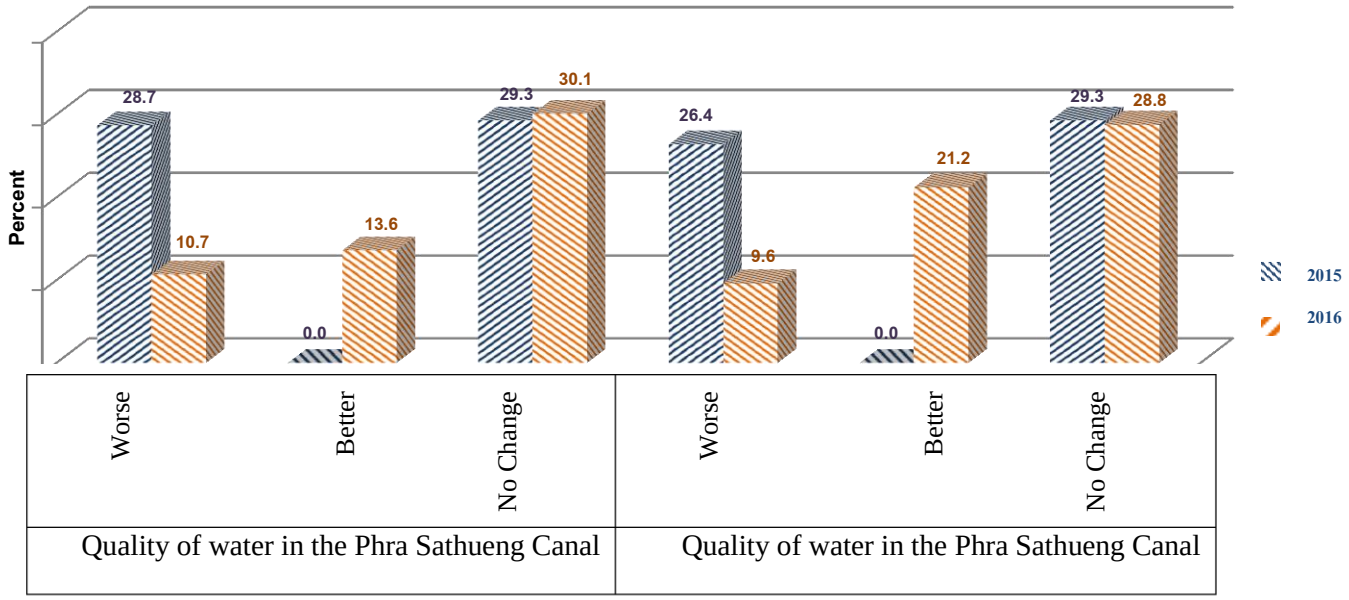
• Sickness from skin diseases – The number of local people with negative feelings decreased from 21.8 percent in 2015 to 11.4 percent in 2016.

• Sickness from eye diseases (infected or irritated eyes due to dust) – The number of local people with negative feelings decreased from 12.6 percent in 2015 to 8.7 percent in 2016.

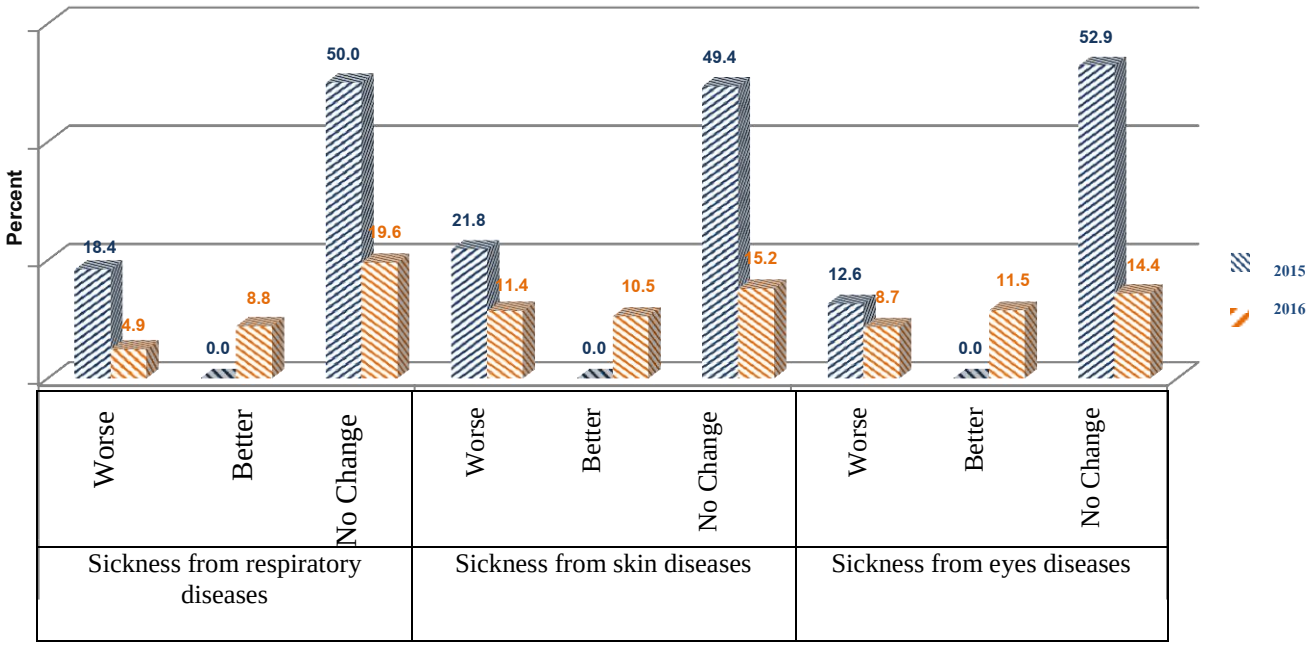
Comparions of 2015 - 2016 Opinion Surveys on Physical Environment Impacts



Comparions of 2015 - 2016 Opinion Surveys on Water Resources Use Impacts



Comparions of 2015 - 2016 Opinion Surveys on Health Impacts



Opinions and suggestions from local people

The survey showed local people requested and recommended that the power plant take action to make improvement and take corrective actions in the following orders:

1. Fifty-three percent of the respondents (majority) would like the power plant to comply with the community contract on lights on the village access road, from the entrance to the front of Nong Sai Temple. Initially, they would like street lights from the entrance to the intersection behind the plant.

2. Thirty percent would like the damaged village access road to be improved. The plant improved the road before the site visit by using cement to fix potholes. The progress of the road repair was 80%.

Village Access Road Improvement by Laying Concrete into Potholes (80% Progress)

3. Eleven percent suggested that the plant should improve the rainwater gutter placed in front of and beside the power plant to ensure better rainwater flow into the Phra Sathueng Canal during the rainy season. The gutter beside the company was not connected to the gutter through which water was released into the Phra Sathueng Canal. In addition, the village gutter through which water was released into the Phra Sathueng Canal was clogged with dirt and grass debris, which blocked water flow. During heavy rain, the water flow was not good, and the laterite road next to the plant was flooded, which caused inconvenient travel and potholes.

4. Four percent would like the plant to improve the laterite road next to the company, which was a public road used by local people to access their agricultural areas. The road had large potholes, which resulted in travel difficulty.

5. One percent suggested that the plant should repair the broken motorcycle-crossing plate, which could involve risks. The repair was already completed.

6. One percent suggested that the plant repair four street lights. The villagers informed that some power plant staff promised to provide the assistance.

Motorcycle-crossing Plate Improvement (100% Progress)

Environmental Performance

Concerning the Company Group's environmental performance, in addition to complying with laws, IEC recognizes potential impacts on local communities. All plants provide environmental standard inspection on a continual basis. The results of air, water and dust quality measurements for the GDEC Hat Yai Waste-to-Energy Power Plant between 2015 and 2016 manifested that the amount of dust from stacks reduced from the previous year and was 67 percent lower than the standard acceptable level (the value detected was 22.9 mg/m^3 while the standard value is 70 mg/m^3). The total suspended particulates increased from the previous year and was 42 percent lower than the standard acceptable level (the value detected 0.19 mg/m^3). The quality of air from stacks (NO2, SO2, TSP, Pb, Cd, Hg, HCl, Dioxins, Opacity) were within the legal limit, except dioxin and hydrogen chloride (HCl), the parameters of which were higher than standard acceptable levels. An analysis revealed that the dioxin & furan and hydrogen chloride discharge from the solid waste burning process was the major problem for almost all furnaces in Thailand, especially dioxins & furans. The control of dioxin & furans discharge was quite difficult. The plant has reduced the discharge of hydrogen chloride and dioxins & furans by:

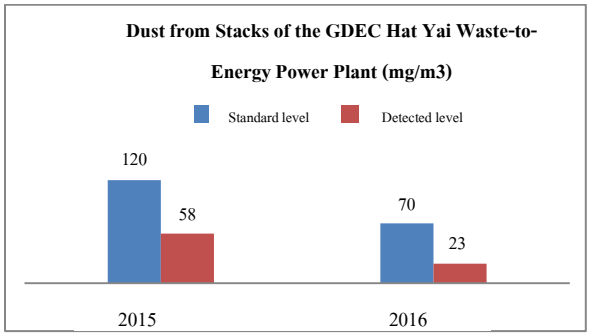
1. Reducing the moisture content of solid waste through the drying system to ensure proper moisture content.

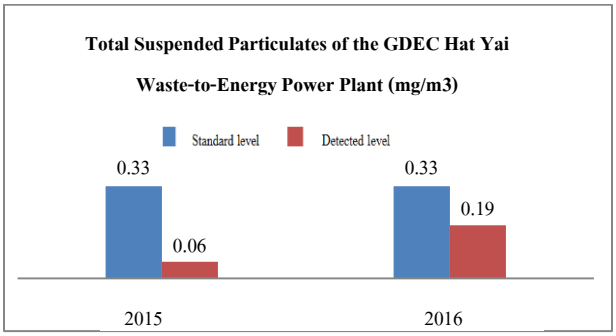
2. Controlling the temperature in the combustion chamber for particular fuels.

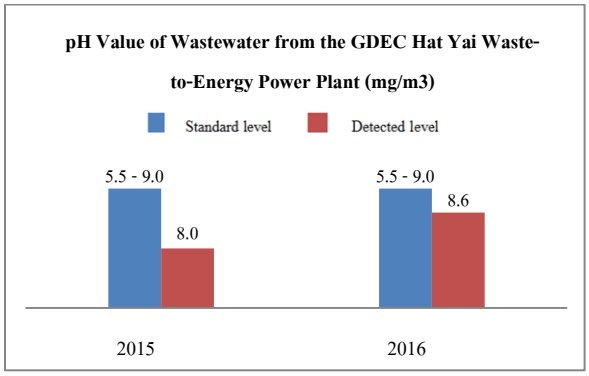
3. Installing the carbon injection system. Under the system, activated charcoal powder is injected into air currents before the dust removal system. Dioxins & furans and heavy metals will be absorbed by activated charcoal powder, which has porous surface. Then, the activated charcoal powder will be trapped by the dust trap system.

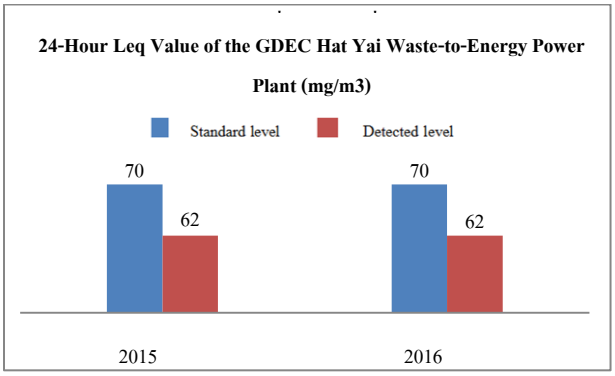
4. Some chemicals when mixed with waste will reduce the formation of hydrogen chloride and dioxins & furans in the combustion process, such as lime, kaolin and CEMs.

The pH value of wastewater increased from the previous year but was within the acceptable standard level. The sound volume was similar to the previous year but was lower than the acceptable standard level. In addition, to inform the general public and local people about the quality of air emitted from the energy-to-waste power plant, the company showed real time air quality measurement values on its website and LED screen placed in front of the plant.

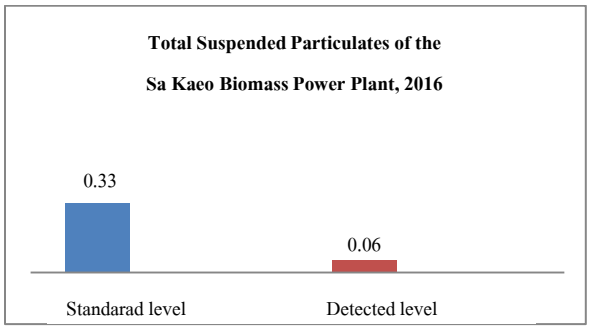


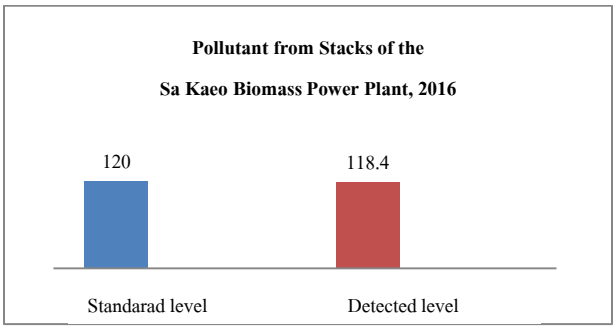


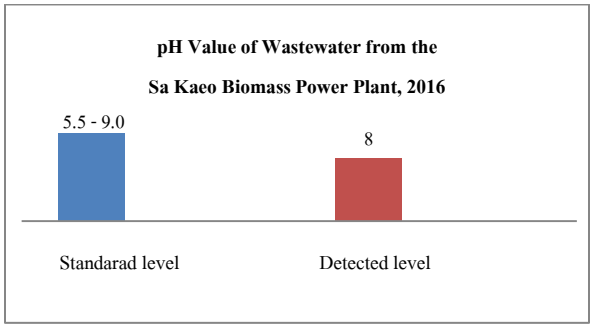


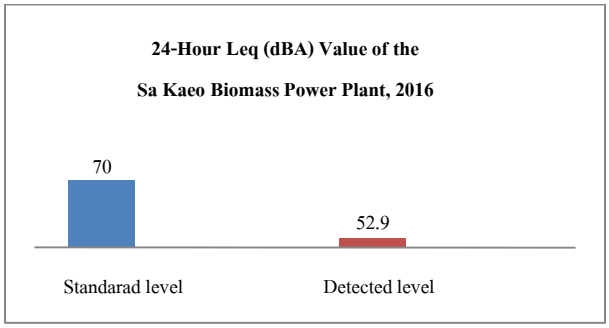


The results of the environmental quality measurements of the SaKaeo Biomass Power Plant showed that the total suspended particulates represented 81% lower than the acceptable standard level (the value detected was 0.06 mg/m^3). The amount of pollutant discharged from stacks was 1% lower than the acceptable standard level (the value detected was 118.4 mg/m^3). The pH value of wastewater and the noise level was below the acceptable standard level.

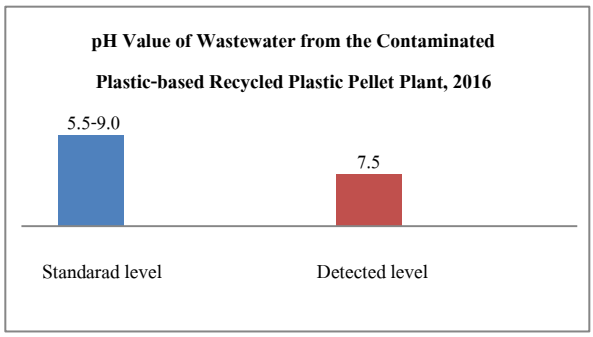


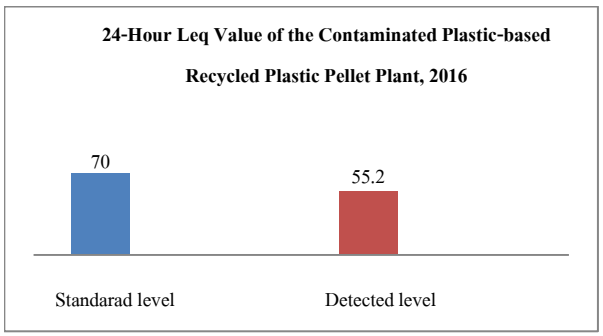


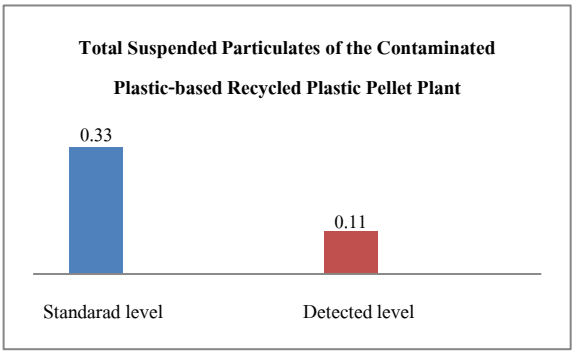




At the Contaminated Plastic-based Recycled Plastic Pellet Plant, the total suspended particulates represented 67% lower than the acceptable standard level (the value detected was 0.11 mg/m^3). The noise level was below the acceptable standard level.

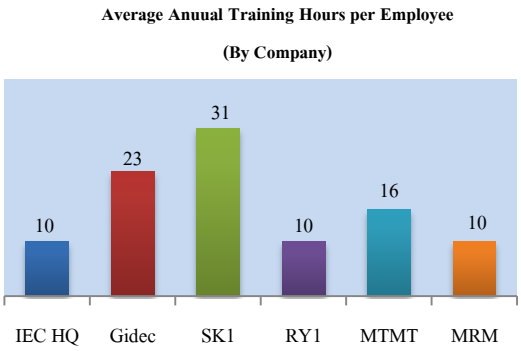






Environmental Quality Measurements

Staff training



Throughout 2016, employees from IEC and its subsidiaries were trained to improve their work skills on a continual basis through different training courses. In-house training included the CAC Code of Conduct (compulsory), Healthy Workplace (compulsory), Business Securities Law, High Building Safety, and Exercise to Combat the Office Syndrome. Public training included Microsoft Office, Financial Professions, Legal Professions, and Engineering Professions. The hours for compulsory training, safety training, MS Office training, and professional training represented 12, 36, 11 and 41 percent, respectively. All employees had to be trained in CAC-Code of Conduct and anti-corruption policies and practices. The training principles and policies were improved in line with business operations. IEC recognizes that training is important part of employees' key responsibilities, which is a KPI for employee performance evaluation. All employees must attend training for a minimum of six hours per year as required by law. In 2016, the average number of training hours of each employee was 17 hours per year, which reduced by 2 percent from the previous year, when the average figure was 19 hours. Some employees worked outside the Company on the training day, so they could not attend the training. The 2017 training plan involved surveying the need for training from the function management

Risks and Risk Management

G4-DMA, G4-14, G4-46, G4-47

IEC recognized the significance of evaluation and risk management to ensure that our business operations are carried out with the lowest risks possible, along with constant and sustainable returns, as well as peaceful and sustainable co-existence with the surrounding communities. The company takes various measures to evaluate the risks involved in our business operations through our Risk Management Committee, appointed by the company's Board of Directors to perform the tasks and duties as follows: 1) Evaluate all aspects of the company's business operations and devise measures to manage and govern the risks involved in all business operations to provide for a secure opportunity to invest and carry out all purposed business activities of the company when the risks involved are optimally minimized; 2) Report the results of measures taken to manage the risks involved in all business operations to the company's Board of Directors, and in case significant risks appear that may have damaging effects on the company's business operations, the risk factors/incidents must be reported to the company's Board of Directors as soon as possible; 3) Consider other issues relevant to the risks involved in all of the company's business operations as has been assigned by the company's Board of Directors.

The Risk Management Committee adheres to the principles of risk management according to COSO (The Committee of Sponsoring Organization of the Treadway Commission, 2004) which is an integrated framework for enterprise risk management that accords with relevant global standards and is widely accepted as the framework of operational approach for implementing risk management systems currently used by various organizations as well as the Stock Exchange of Thailand.

RISK MANAGEMENT PROCESS

The process of risk management started from identification of possible risks towards the Company. Risks are about chances that may cause problems, damage, leakage, waste or unfavourable consequences in the future and there might cause any influences or cause the business operation not to be able to accomplish an organization's objectives or targets, in term of strategy, operation, financial and management, for both positive impacts and negative impacts by measuring such inflicted impacts and likelihood of events. The Risk Management Committee shall perform the risk assessment of projects on the basis of 4-5 projects annually. In 2016, the Risk Management Committee had performed the assessment on these projects as following: 1.) Electricity production efficiency increase project for IEC SaKaeo 1 Power Plant. 2.) Investment plan adjustment within IEC Green Energy Company Limited. 3.) Risk assessment on IEC SaKaeo 1 Company Limited upon order of control of property as assigned from the Central Bankruptcy Court. 4.) Lease the plastic separator in Amphoe Bang Bueng, Chonburi Province, etc.

The process for risk management starts from defining the scope of risks that might occur to the business operations. Risk refers to chances or possibilities of mistakes, mishaps, damages, leakages, wastes, or undesirable situations that may occur in the future and can have damaging effects or cause some parts of the company's business operations to remain unfulfilled both in terms of the business objectives and the goals of the company, whether in terms of strategies, work operations, finances, or corporate management. The consequences of the risks can be either negative or positive. The risks involved can be measured from the impacts perceived and the likelihood of such incident. The Risk Management Committee must carry out risk evaluations for each project on 4-5 different occasions annually. In 2016, the Risk Management Committee had performed the assessment on these projects as following: 1.) Electricity production efficiency increase project for IEC SaKaeo 1 Power Plant. 2.) Investment adjustment with IEC Green Energy Company Limited. 3.) Risk assessment on IEC SaKaeo 1 Company Limited under the order of control of property issued by the Central Bankruptcy Court. 4.) Leasing the plastic sorting machine in Amphoe Bang Bueng, Chonburi Province, etc.

RISKS ARE CATEGORIZED INTO 4 ASPECTS

Once all of the risks involved are identified, the committee will move on to the next steps of risk analysis and risk assessment, and ranking all the risks involved by evaluating the likelihood of such risks and their impacts. The risk management and control described above can be achieved through the following principles:

1) Risk Acceptance

Risk acceptance involves accepting potential risks that have a low chance of happening, thus, often referred to as acceptable / low risks, without having to take any additional action to minimize the risks. This can be because the cost of such actions, if taken, will be too high and is not worth the expenses that may be incurred because the risks are relatively low.

2) Risk Reduction

Risk reduction involves improving work operations and performance systems involved, or designing new work systems in order to minimize the chances for the risks involved or the possible impacts of damages, and presents itself as the most suitable course of action to minimize the risks to a more acceptable level.

3) Risk Sharing

Risk sharing involves sharing or transferring the risks involved to other individuals or organizations, or sharing the responsibility for managing the risks expected to happen.

4) Risk Avoidance

Risk avoidance refers to a method of risk management for high risks that the organization cannot accept. In such event, the company will very likely resolve to cancel any future pursuit of the project / activity.

Safety, Health and Environmental Risks

IEC has an operational approach to manage and improve the efficiency in all work operations that involve safety, health, and the environment to ensure suitability with our current business operations. IEC has developed different work operations for each project because the climate, type of power plant and type of business operations, etc. are different among the companies within the group. Hence, the company has devised policies and operational approaches with the aim to minimize the risks involved, such as in the form of occupational accidents and also to find ways to encourage good health and physical condition among all of our employees. And most importantly, the company has taken various measures to ensure our continuous contribution to the environment and business sustainability. The company also requires the same form of communication approaches and operating policies from its business partners.
In our environment-related operations.

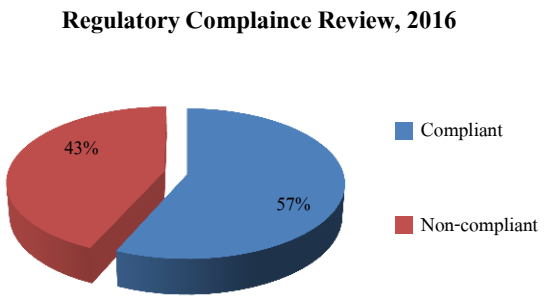
IEC focuses and is determined to have all of our production plants certified with management and environment standards including ISO standard certification, OHSAS standard certification, etc.

Compliance risks

IEC established our Compliance Department since 2015 and have operated until August 2016. After August 2016, Compliance Department became under the supervision of the Office of Internal Control by that the Office of Internal Control shall have responbilities to drive and operate such function under the direction from the Audit Committee. The scope is to oversee and ensure that our business operations accord with rules, regulations, laws, as well as public sector policies and company policies by ensuring compliance in the five areas as follows.

1. Compliance with the law and government rules and regulations
2. Compliance with duties and obligations
3. Compliance with the company policies
4. Compliance with the principles of Corporate Governance
5. Compliance with CSR policies according to the SET approaches

The Compliance Department specifies that operational plans of each department must be reviewed twice every year in order to make sure that all departments are and will continue to be on the same track in compliance with the principles in all five areas. The Compliance Department will provide the necessary support to ensure that all departments within the company can comply with relevant rules and regulations in all five areas and also participate in determining rules, regulations and work standards by providing assistance to all of the company's power and production plants to be certified with ISO 9001 and ISO 14000 standards or any other international standard.



The results of the regulatory compliance review in 2016 (from January to August) identified that regulatory compliance among functions in the Company Group represented 56.57%. Major non-compliance issues consisted of incomplete reports to government agencies and legally non-compliant environmental actions. Thus, the Compliance Department created an understanding with different functions within the company to ensure that their business operations complied with government regulations and laws.

Creating Shared Value

G4-44, G4-56

IEC and GOOD CORPORATE GOVERNANCE

IEC is a registered company with the Stock Exchange of Thailand which has been operated for a long time while taking into consideration the benefits of every stakeholder. And in order to achieve good and sustainable success, both the company and all of its personnel must have the trust and confidence on the basis of Good Corporate Governance from all parties.

IEC undertakes our business operations by observing principles of good corporate governance and making certain that our personnel at all levels—from company directors, the administration, and all employees—understand and are united in practice based on the principles while executing their duties and tasks within their scope of responsibility and act in compliance with the policies and codes of conduct specified in the IEC Good Corporate Governance manuals. Directors, executives and all employees must be informed and able to act in line with the policies and codes of conduct specified therein. In addition, executives at all levels are also responsible for fostering the environment where employees under their supervision understand and strictly observe the ethics and principles as discussed in the company's good corporate governance manuals.

In 2016, the company organized mandatory trainings on CAC – Code of Conduct: Guideline for Anti-Corruption and Good Corporate Governance Y2016 in four different occasions, these trainings were executed on site of the company's four affiliates, IEC Headquarter, GIDEC Waste-to-energy power plant in Hat Yai, Biomass Power Plant in SaKaeo, Plastic Pellets from Waste Plastic Materials Production Plant and contents is pertaining with policy and guideline for anti-corruption. The aim is to ensure that the company's employees are aware and understand how they should go about acting in accordance with the principles of good corporate governance. Furthermore, the company also provides the information through the website intranet used by companies in the group to broadcast the information to all of the company's power and production plants located in other provinces to ensure that all employees of the company are better thoroughly informed and able to act in compliance with the principles of good corporate governance.

The good corporate governance committee, appointed by the company's Board of Directors, is tasked with proposing policies and reviewing existing good corporate governance principles to ensure that they are in line with international standards as well as following up on the operation results and reporting to the company's Board of Directors. Currently, there are 3 members on the good corporate governance committee. And in 2016, the good corporate governance committee convened on two different occasions.

BOARD OF DIRECTORS' CODE OF CONDUCTS

The Board of Directors is the highest sub-organization of the company. Board of Directors must be a good example of adherence and commitment to the principles of good cooperate governance. All members of the Board of Directors must demonstrate good leadership and be able to govern and control the work operations of the management with both efficiency and efficacy to accomplish the tasks at the heart of the company's business operations. The Board of Directors must build up, strengthen and increase the value of investment made by both shareholders and all stakeholders. The Board of Directors together with the company's administration and management team must determine the vision, mission, and values of the company and implement necessary measures to ensure compliance from all employees. In addition, the Board of Directors must be fully responsible for ethical and legal aspects of the company's business operations both to the company and shareholders. The Board of Directors must carry out their tasks and responsibilities carefully with skills, integrity and free expression of their own opinions. The Board of Directors must always, at their own discretion, express their own opinions and evaluate all business operations of the company in order to maintain trust and confidence from shareholders. The Board of Directors is also responsible for making considerations and nominations with discreetness and transparency for suitable candidates who may be elected as new members of the committee after a vacancy to both the members of the Board of Directors and to company shareholders at shareholders' meeting. All members of the Board of Directors must dedicate themselves and be fully committed to the company's mission. They shall readily and regularly attend company's meetings and trainings to continue improving their knowledge and skills necessary for their work performance

The Board of Directors has specified sustainable development policies which cover economic, social and environmental aspects of the company's business operations. The management, with IEC Executive Director, has accepted and taken actions into further concrete implementation.

G4-DMA, G4-49, G4-57, G4-58, G4-SO4

Anti-Corruption

IEC is committed to operate the business with morality and responsibility to society and every group of stakeholders through good corporate governance and a good practice of IEC. With our intention and dedication to fight against corruption in every form, IEC signed a Collective Action Coalition of private section in Thailand. To ensure that IEC established the approaches and responsibility for the person involving in anti-corruption activities in the business of IEC, we have set the anti-corruption measures as follows.

Definition of "Corruption"

Corruption is the acquirement of authority or advantage with immoral intention by whatsoever act, including illegal act for their own benefit by using authority and influence that they hold, as well as the offer, the promise to offer or the provision of asset or advantage which is inappropriate to governmental or private authorities or officers or persons in charge either directly or indirectly with the aim to gain advantage from such intended negligence. It excludes the acts allowed by the laws or in accordance with a good business and trade practice which is generally accepted.

Anti-Corruption Policies

Employees, executives, and the members of the Board of Directors must be committed to act in accordance with the IEC principles of good corporate governance and stopping anyone from violating the company's anti-corruption policies or tolerance of corruption in any and all forms, whether directly or indirectly with coverage over all relevant departments and also making sure that all business operations are regularly supervised and reviewed according to the operational approaches along the lines of anti-corruption policies to ensure that the company's business operation catch up with the changes in the world of business, law, regulations, society, culture, and the economy. The board of directors, executives and employees must perform their tasks and responsibilities while bearing in mind and being conscious of their duty and responsibility to act in accordance with the principles of good corporate governance especially in the following areas:

1. Responsibility: All personnel must have the responsibility to carry out their assigned tasks with both efficiency and effectiveness, in line with their scope of responsibilities as defined by the Board of Directors or any relevant subcommittee. The board of directors must arrange for a good and effective system of internal control and internal audit. The executive director and other executives shall be responsible for taking necessary actions to allow for preventive measures against any form of corruption, reviewing the suitability of all current measures currently taken, as well as providing necessary support to anti-corruption policies and communicating with all relevant parties, in addition to the company's employees to ensure strictest compliance with the policies without any intentional involvement in any form of corruption, whether directly or indirectly.
2. Accountability: All personnel—company's directors, executives, and employees must be accountable for their actions, decisions, or omissions. Everyone must be aware of the possible consequences of their actions and be held accountable by stakeholders from economic, social, and environmental aspects. Any involvement or encouragement to any act of corruption, or any act of omission, willful ignorance toward any act of corruption that may negatively affect stakeholders is considered a violation to the company's anti-corruption policies. Individuals who commit such action, or lack thereof shall be made aware of their violations with disciplinary actions proportional to their offenses.
3. Transparency: All personnel must undertake their duties and responsibilities in accordance with the approaches and principles of good corporate governance and risk management, and take every step in inspection procedures with transparency and fairness. Any employee who finds or sees any act of corruption within or involving IEC must report the issue to his or her supervisor or relevant person in charge as soon as possible to the Good Corporate Governance Committee

directly on the IEC website and cooperate in the subsequent investigation for factual information of the matter. The company will take measures to ensure fairness and protection for the individual who cooperates with the company's anti-corruption policies by reporting or providing necessary information to the fullest.

4. Communication: The Company and its personnel must disclose relevant information and communicate with all stakeholders regarding their business operations. IEC shall disclose its information to all stakeholders and take into account the opinions of all stakeholders both through the channels provided by the law or other appropriate channels in accordance with the scope of the rules and regulations of the Stock Exchange of Thailand. The information must be provided accurately and in a timely manner so that all groups of stakeholders can investigate the business operations of the company, make recommendations or suggestions, inquire, and follow up on the current progress of all business undertakings with efficiency, effectiveness, thoroughness, transparency, fairness and the confidence that IEC is truly committed to undertaking its business operations while adhering to the principles of good corporate governance, respecting the rights, dealing with all groups of stakeholders with integrity and impartiality as well as providing opportunities for all stakeholders to participate in its business operations without bias or prejudice.

The anti-corruption policy is enforced in every process at every stage of IEC's business operation. Everyone in the company, from the directors, executive to employees must strictly observe the anti-corruption policy and regard it as the an absolutely unacceptable practice in organizational culture of IEC.

Duties and Responsibilities

- Company's Directors: Responsible for making considerations regarding policies and operational approaches along the lines of the company's anti-corruption policies as well as governing, and providing necessary support to ensure that the policies and operational approaches are observed and used throughout the organization efficiently and effectively.
- Internal Audit Committee: Responsible for directing the process of internal audit, making financial reports in order to make sure that the internal control of the company is effective, efficient, and compelling enough to motivate employees in all departments to act in accordance with anti-corruption policies and approaches.
- Good Corporate Governance Committee: Responsible for determining and reviewing of anti-corruption and good corporate governance policies and approaches to be implemented appropriately with the company's situation.
- Risk Management Committee: Responsible for managing and evaluating of anti-corruption policies-related risks.
- Executive Committee: Responsible for pushing forward and providing necessary support to both executives and employees to thoroughly comply with the company's anti-corruption policies efficiently and effectively.
- Chairman Group of the Board of Directors: Responsible for managing, communicating, directing, governing and providing support so that executives and employees can implement the anti-corruption policies with effectiveness and efficiency throughout the organization as well as reporting the results of the implementation to the administrative committee and other committees relevant to the issues.
- Executives and Employees at All Levels: Responsible for performing their assigned roles and responsibilities while strictly adhering to the anti-corruption policies and approaches, refusing any involvement in corruption and reporting and providing information related to corruption activities.

In 2016, even though the company has designated anti-corruption policies and approaches for the directors, executives and employees to follow, in practice there are still many points to be addressed such as internal control system for purchasing, good receiving and payment in order to ensure that the company's policy and principle of good governance are implemented efficiently and effectively according to the objective.

Monitoring in order to prevent and follow up on the risks involved

1. Directors, executives and employees of IEC must not be involved in or be part of any form of corruption, whether directly or indirectly. All personnel must act in compliance with the company's anti-corruption policies, principles of good corporate governance, the company's announcement and relevant regulations.
2. IEC employees must; with regards to charity donations, gifts giving or gift receiving, joining welcoming dinners/parties and giving financial supports – take necessary precautions according to the required steps for approval specified in the IEC manual. The person in charge for investigating and giving approval on such matter is responsible to carry out necessary investigation in order to ensure that the charity donations, gifts giving or gift receiving; joining welcoming dinners/parties and giving financial supports are not related in any way to corruption or used to cover up acts of corruption.
3. If any wrongdoing/act of corruption is witnessed or found, IEC employees must notify their superior through multiple channels provided and specified by the company.
4. Any action related to corruption is considered a violation of the company's ethical codes and the principles of good corporate governance. Directors of the company shall be responsible for following up and taking appropriate disciplinary actions against the wrongdoers per the company's regulations. The internal audit department must report evaluation results on actions that do not comply with anti-corruption policies to the company's internal audit committee which shall investigate the matter further and submit final reports on the matter to the board of directors.
5. The company has arranged for internal audits in order to make sure that the internal audit process and internal controls throughout the organization is effective and sufficient as well as to ensure that the company's anti-corruption policies and approaches are indeed strictly observed throughout the organization.
6. Realize and be aware of the importance of advertising, providing trainings, and explaining to the personnel within the company regarding the negative impacts on the company as a result/due to an act of corruption.
7. Arrange for a systematic and well organized document storage system, making it both easy and ready for investigation, verification, and suitability of financial reports and procedures in order to make certain that there has not been any action that may constitute a violation to the company's anti-corruption policies.
8. Anti-corruption policies and related work approaches cover all business operations, undertakings and pursuits of both IEC and its subsidiary and affiliated companies.

The result of the monitoring and follow up on risks involved by the audit committee in 2016 indicated that there were some business-related corruption incidents which will be further investigated and appropriate disciplinary actions will be taken against the wrongdoers per the company's regulations and applicable law.

Employee training

In 2016, IEC organized anti-corruption training in parallel with good corporate governance training for 2016. The trainings were held at 4 locations, IEC headquarter, GIDEC waste-to-energy plant, Sakaeo biomass power plant and thermoplastics manufacturing project in Rayong. The content of both trainings included the policies and approaches in regards to anti-corruption.

Pictures of CAC (Code of conduct) anti-corruption approaches training course.

Whistle Blowing

The company's employees and stakeholders can notify or inform any acts of corruption or violations through company's website by contacting the president of Good Corporate Governance Committee directly at all times. Once the issue has been raised/officially notified, the company will be able to follow the required steps of action in order to investigate and determine the most suitable approach to deal with the specific issues. There was no issue raised in 2016.

Stakeholder Engagement

There are many stakeholders in IEC's business operation. Each group of stakeholder is essential to the operation. Connecting stakeholders together is not only crucial to the development of IEC's operation but also increase the business's sustainability.

IEC divides all stakeholders into groups which include shareholders, business partners, debtors, competitors, consumers, communities, and relevant agencies both in the public and private sectors. IEC has arranged for multiple channels with which stakeholders can communicate with IEC and for IEC to respond to their needs as appropriate as possible. We take into our consideration all groups of stakeholders by keeping in mind the rights each stakeholder has according to the law and the mutual agreements that have been made. IEC has specified approaches that should be taken in order to govern and monitor all stakeholders in the 2015 Good Corporate Governance manual. This is an essential component that all employees at IEC must adhere to. And from the evaluation of IOD in the same year, IEC received a CG score under the investors section of as much as 98% which reflects how much IEC emphasizes the rights of all of our investors.

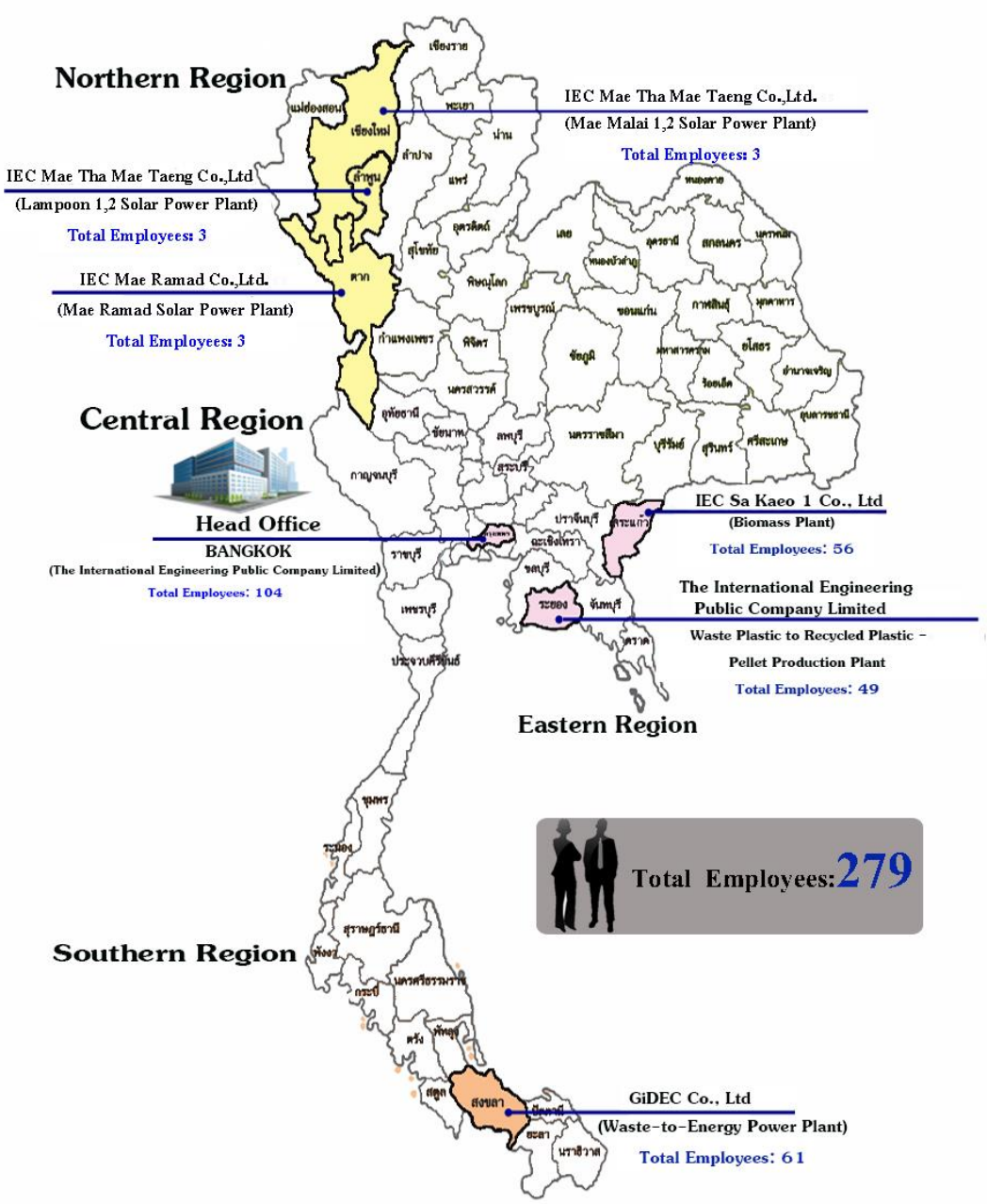
In 2016 however, IEC could not appoint an auditor for the 2nd and 3rd quarter financial statements and 2016 financial statements resulting in SP and NC trading signs from the Stock Exchange of Thailand and received no CG score from the IOD or Thai Institute of Directors.

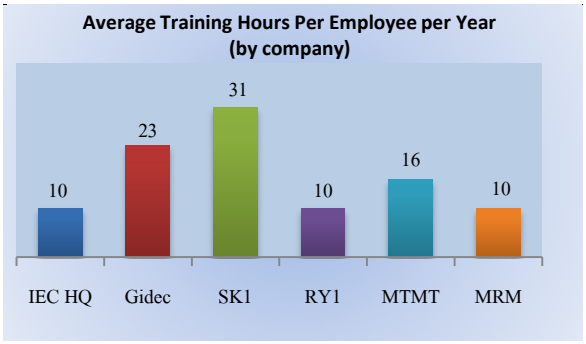
Communicating with Major Stakeholders

Order	Groups of Stakeholders	Communication and Response Expectations / Interest	Expectations / Interest
Shareholders	Institutional Investors	♦ Communication through relevant employees	♦ Providing correct, comprehensive, up-to-date information
	Free Float Shareholders	♦ Official statement on the company's business performance through a variety of media	♦ Increased returns of investment as well as regular dividends-paying
		♦ Disclosure of important information on the company's website	♦ Business stability and business growth
		♦ Annual General Meetings and Extraordinary General Meetings	♦ Transparency in business administration
		♦"We Love IEC Outing" — Official Visits (2-3 times a year)	
		♦ Opportunity Day Activities - Quarterly	
		♦ Shareholders Meet with the Company's Executives (IEC Line Club Meeting) (2-3 times a year)	
Business Partners	Trading / Business Partners	♦ Meeting with business partners to discuss suggestions and concerns in order to find ways to fix the existing problems together	♦ Business operations with fairness and transparency
		♦ Arranging meetings 2-3 times in each business quarter	♦ Mutual development and enhancement for business sustainability
	Supplier and EPC	♦ Arranging meetings according to suitability of the works	♦ Proportionally appropriate remuneration packages ♦ Clear description regarding the scope of works
			♦ Allocating work areas appropriately
			♦ Assistance in emergencies
Employees	Full-time Employees	♦ Communication through electronic channels	♦ Proportionally appropriate remuneration packages
		♦ Whistle Blowing in order to send opinions and complaints to Good Corporate Governance Committee	♦ Work safety ♦ Career advancement and job stability
		♦ Annual meetings between the company's executives and employees	
		♦ Message from IEC's Executive Director (Once every month)	
	Daily / Part Time Staffs	♦ Communication through company's representatives	♦ Proportionally appropriate remuneration packages
			♦ Safety and occupational health considerations
Customers	Provincial Electricity Authority	♦ Arranging a meeting for suggestions and concerns once every year	♦ Sending electricity generated to the system with efficiency
		♦ • Arranging small impromptu meetings in the event of problematic incidents/situations where there are problems that must be fixed/solved together	♦ Strict compliance with power purchase agreement (PPA)
			♦ Compliance with other rules, regulations or other suggestions
	Plastica Pellets Customers	♦ Meeting to discuss suggestions and concerns/problems regarding business operations on occasions.	♦ Selling and distributing raw materials at normal prices with fairness
			♦ Manufacturing quality products on a regular basis
Surrounding Communities	Communities in close proximity	♦ Organizing public relations as appropriate	♦ Paying attention to the environment in surrounding areas
	► Villages	♦ Inviting community representatives for occasional visits at the plants	♦ Solving problems that may rapidly affect the communities
	► Schools	♦ Organizing CSR activities or participating in CSR activities of all power and production plants 1-2 times per business quarter	♦ Participation in communities development ♦ Public relations on various aspects of business operations.
	► Temples		
	► Agencies/ Authorities in the surrounding areas		

Human Resource Management

The Employees of IEC Co., Ltd is a driving force of the organization's future success. We place great importance in taking care of our employees, building personnel capabilities, and equipping our people with knowledge and skill sets necessary for their peak performance. Accordingly, in 2016, with a determination to strengthen the organization's knowledge base, enhance competitiveness, and respond effectively to the needs of the stakeholders, IEC Co., Ltd put great effort into developing a career progression plan for employees of all levels. The plan will be reviewed annually by the employee, the line manager, and the Human Resource Management to ensure that the plan remains relevant and is capable of motivating the employee to progress through the journey.


Northern Region
IEC Mae Tha Mae Taeng Co.,Ltd.
(Mae Malai 1,2 Solar Power Plant)
Total Employees: 3
IEC Mae Tha Mae Taeng Co.,Ltd
(Lampoon 1,2 Solar Power Plant)
Total Employees: 3
IEC Mae Ramad Co.,Ltd.
(Mae Ramad Solar Power Plant)
Total Employees: 3
Central Region
Head Office
BANGKOK
(The International Engineering Public Company Limited)
Total Employees: 104
IEC Sa Kaeo 1 Co., Ltd
(Biomass Plant)
Total Employees: 56
The International Engineering
Public Company Limited
Waste Plastic to Recycled Plastic -
Pellet Production Plant
Total Employees: 49
Eastern Region
Total Employees:279
Southern Region
GiDEC Co., Ltd
(Waste-to-Energy Power Plant)
Total Employees: 61


Average Training Hours Per Employee per Year
(by company)
10
23
31
10
16
10
IEC HQ
Gidec
SK1
RY1
MTMT
MRM


Total
Training
จำนวนชั่วโมง
การฝึกอบรม
Hours/year
ชั่วโมง/ปี
6,115
Average
หรือเฉลี่ย
Hours/year
ชั่วโมง/คน/ปี
17

IEC Personnel Development

With IEC's commitment to enhance its personnel capabilities, several trainings and personnel development programmes were offered in 2016. These are as follows:

In-House Training 2016	Objectives
1.Human Resource Development Programme e.g. Report Writing Course	➢ To prepare and enhance report writing skills for employees working in the secretary group
2. Safety Training e.g. high-risk area work, fire training	➢ To be well-prepared for both normal work situation and crisis, and to reduce operational risks
3. Occupational Health and Fitness Programme e.g. First Aid Training, Exercise Activity to Combat Office Syndrome	➢ To provide medical access and encourage a health promotion focus than a curative focus
4. Engineering Development e.g. Basis Pneumatic System	➢ To enhance skills, improve work process, and promote engineering advancement
5. Production Line Improvement Operational Preparation	➢ To improve efficiency of the production line, cut down loses, and increase productivity
6. The Management System ISO 9001, ISO 14000	➢ To achieve and maintain the international standards in the industrial and environmental management
7. IT Development Course	➢ To enhance efficiency in data transmission network between the head office and the operational work areas
8. General Trainings e.g. communication, foreign languages, computer, new employee orientation, and work guidelines	➢ To improve employees' capabilities for potential future staff rotation and replacement

- **Writing and Correct Use of Written Language**

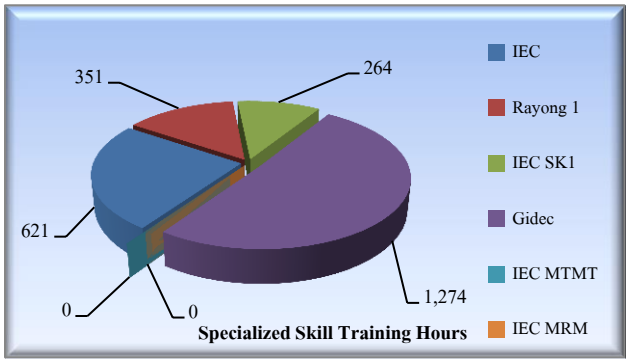
IEC Co., Ltd, Hat Yai Office organized a training on a topic of writing and correct use of written language for employees working in the secretary group and for those responsible for producing the department reports. The training was intended to equip participants with knowledge and understanding of essential report and memo writing practices. It was a great honor to have Assoc. Prof. Napalai Suwannathada and Asst. Prof. Dr. Apirak Anaman, from the Continuing Education Center, Sukhothai Thammathirat Open University, leading the training and sharing their knowledge and insights with all participants on various writing topics, such as official correspondence, proposals, official documents such as minutes of meeting, and case studies.

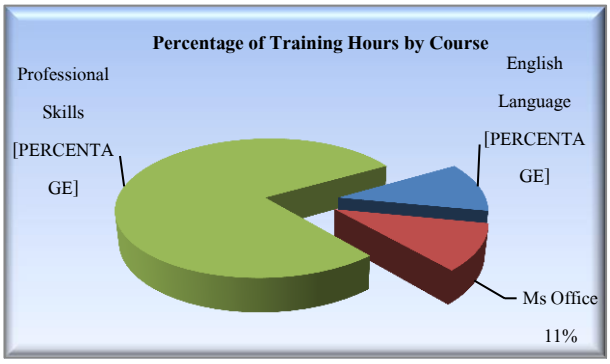
Company's Rules and Regulations

The rules, regulations, and guidelines of IEC have been tailored to suit the current economic situation, society, and the nature of the business operation. The Human Resource Management Department hold responsibilities in collating information and arranging compliance trainings. The training attendance is also incorporated into the employees' annual performance review. The compulsory training courses conducted in 2016 were CAC Code of Conduct, Anti-Corruption Guidelines, Healthy Workplace, and interesting topics such as Business Collateral Act, Work Safety for High-Rise Building Workers, etc.

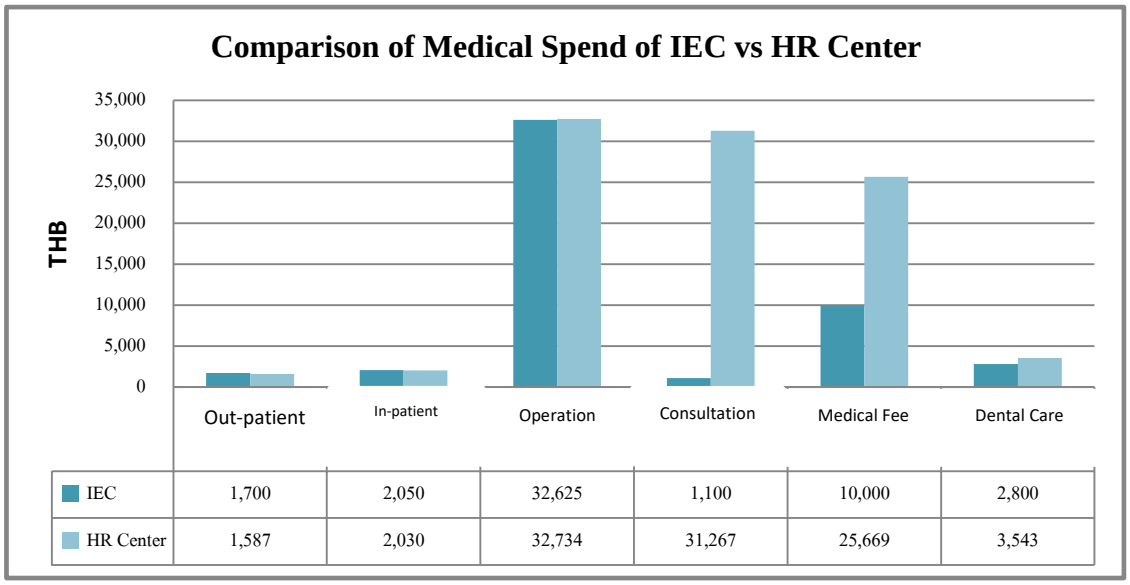
- **CAC - Code of Conduct & Anti-Corruption Guidelines**

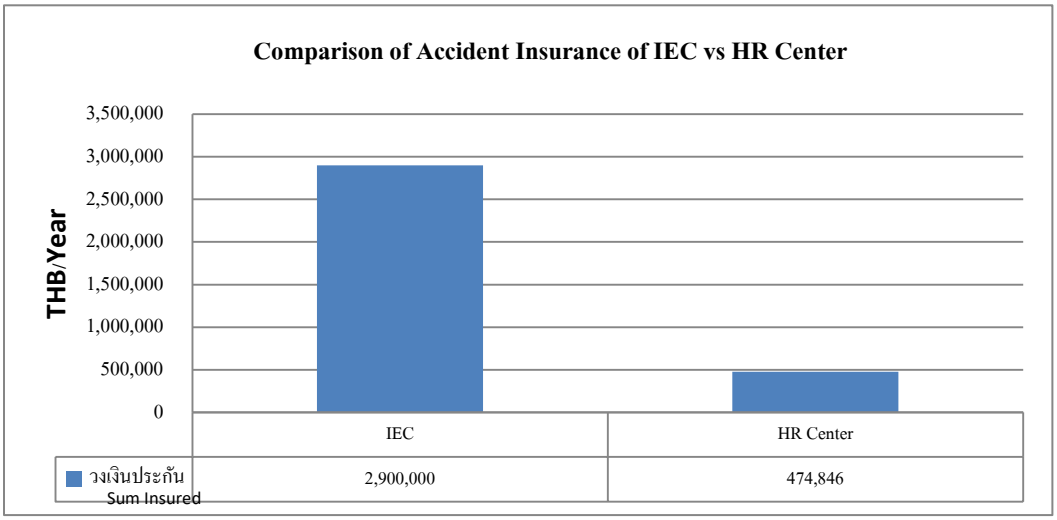
IEC organized 4 compulsory training sessions on CAC – Code of Conduct & Anti-Corruption Guidelines, along with additional trainings on IEC Corporate Governance 2016. The trainings were offered at the Head Office and 3 subsidiary companies, which are the GiDEC Waste-to-Energy Power Plant, Hat Yai District; the Biomass Power Plant, SaKaeo Province; and the Plastic Pellets from Waste Plastic Material Production Plant, Rayong Province. Additionally, the content of the training includes anti- corruption guidelines and policy.





The IEC group provides the employees basic employee fringe benefits, as required by law, and the social security benefits. Additional employee fringe benefits the Company offers are, for example, a provident fund, an annual health examination, the National Health Insurance Programmes, and an accident insurance. These employee benefits are made available to ensure that the employees are physically fit and able to work at their maximum efficiency. When comparing the additional medical benefits that the Company provides with the market average, based on figures obtained from the 2016 survey conducted by HR Center Co., Ltd, the medical expenses that the Company covered for in each category were 5% higher than the market average. The sum insured of accident insurance that the Company offered is also higher than the market average by 58%. The decisions on the arrangement of employee fringe benefits are guided by the Employee Fringe Benefit Committee of the Company, whose members, which are representatives from each department, discuss and advise on suitable schemes to ensure fairness between the employees and the employer.





Employee Welfare 2016

Fair and Reasonable Remuneration for Employees

IEC recognizes all employess as valuable resources driving the future success of the organizational operations. Hence, the Company places a strong emphasis in ensuring that all employees are remuerated fairly according to their endeavours and performances. The Company pays remueration in the form of a salary, based on the Company's salary structure, which corresponds to the general market rate. The remuneuration level is decided on the basis of the employee's compentencies and experiences for the current position. Salary increases are determined based on overall annual performance and personal KPI achievements reviewed by line manager, and are hoped to help build employee morale, encourage employee engagement, and motivate employees to be active participants in the organizational growth, in turn leading to higher compensations and greater security for all the employees in the long rum.

Labour Practices and Human Rights

The Company has set up the Employee Fringe Benefit Committee, as prescribed by Thai Labour Law, whose members are representatives from each department. The committee has responsibilities in monitoring labour practices, human rights, and employee fringe benefit schemes of the IEC group, and in ensuring fair labour treatment and absence of human rights violation. In 2016, IEC had over 102 new recruits, consisting of 279 permanent employees and 106 daily-waged employees. The daily wage rate usually takes into consideration the costs of living and the local daily wage rate. For IEC, the Company decides its daily wage rate based on the local daily wage rate. In addition to ensuring suitable work environment, IEC is committed to treat all employees equally and to value diversity in nationalities, religions, and other related aspects. Teamwork activities are encouraged among the employees to create harmony and unity within the organization. Also, the Company greatly emphasizes not only on employment law compliance but also on full respect of human rights and equal treatment. The employees are hired based on suitability without discrimination against nationality, gender, age, and religious beliefs. The Company will as well ensure fair treatment to all stakeholders.

"I would like to say a big thank you to our big IEC family for making someone's dream come true. From the very first day of building the solar power plant to achieving COD, all members of this power plant have stayed committed to their responsibilities to build this family to last.

Ms. Ornarun Paleekul, Acting General Manager

Mae Tha Mae Taeng Solar Power Plant

Employee Provident Fund is an employee saving scheme for retirement, in which each employee who opts into the scheme is required to contribute 3% of the salary with the Company contributing an equal amount.

Employee Fringe Benefit Policy – Emergency Loan
The Employee Fringe Benefit Committee of the Company has implemented an employee emergency loan policy to provide assistance to employees who find themselves facing an emergency or in an urgent need of financial aid. A grant of loan is available for both emergency purposes, such as education, illness, family support, accidents, and for formal traditional functions, such as ordination, funeral, etc.

Employee Annual Health Examination – as part of IEC's policy to ensure that all employees are in good health, the Company selects a good standard hospital to provide an annual health examination for all staff and executives. It is an opportunity for the employees to discuss with a medical doctor their health conditions and to receive advice on recommended actions or future suitable treatments. Additional health check-ups, such as pulmonary examination, blood test, and urinalysis chemical testing, are provided for staff of the subsidiaries based on the nature of their work.

First Aid Room
In 2016, the GiDEC's solid waste-to-energy power plant in Hat Yai District set up first aid facilities with a professional safety officer responsible for overseeing the first aid provision and medication dispensary. However, there is no permanent registered nurse working on site as the number of staff is below the required figure specified by law (in order to be eligible for a permanent registered nurse on site, the law requires a company to have a minimum of 200 employees). In the event of an accident, the safety officer will perform first aid procedures. In a severe case, the casualty will be sent to a nearby hospital for further treatments.

Employee Exercise Activity to Combat Office Syndrome

IEC places great importance on employees' health, and, therefore, started a health promotion activity, called Exercise Activity to Combat Office Syndrome, to strengthen employees' health against illnesses. The exercise session is available on Wednesdays and Thursdays in the afternoon instructed by staff who is knowledgeable in this area teaching correct exercise techniques.

Ceremony to commemorate and pay tribute to the late King Bhumibol Adulyadej

The Company held a ceremony to commemorate and to sign a book of condolences for the late King Bhumibol Adulyadej. The ceremony was presided by Chief Executive Officer, Mrs. Sunjutha Witchawut, with attendance from the executives and staff. Standing before the portrait of the late King Bhumibol Adulyadej, the participants observed a moment of silence for 89 seconds, sang " "San Sern Pra Baramee," or "Salute to the Monarch", and signed a book of condolences. The ceremony, which was held in the IEC Hall, 17th Floor, Phaholyothin Place, was also to honor the 'Royal Warrants of Appointment', granted in the name of His Majesty the King, and the bestowing of 'the Royal Garuda (Phra Khrut) Emblem' to the Company in 1965.

Local Traditional Activities

- **Merit-making and water-blessing ceremony on Songkran Day 2016 at SaKaeo 1 Power Plant**

Entertainment Activities 2016 – Get Together

- **IEC New Year Party**

Human Resource Development Plan

On Good Labour Practices and Human Rights

IEC intends to elevate the employees' capabilities and to apply the concept of "Put the Right Man on the Right Job" in the revamping of the organizational functions in order to stay relevant with the current economic trends, employment market, and social support needs in the area of human rights. IEC is ready to welcome those who have potentials, would like to advance their career, and to be part of the driving force of the organization in creating innovations and contributing to the organizational sustainable growth. The Company recognizes the importance of career advancement and, therefore, promotes employee capability building and better work-life balance. Furthermore, to demonstrate equal work opportunities in the workplace, people with disabilities who have potentials will be given an opportunity to join the organization, provided that a suitable position is available and is appropriate for the applicant's physical conditions. In addition to its commitment to strictly comply with laws governing labour practices, IEC places great importance on work environment to ensure that employees work together happily.

With regard to employee health care, IEC has improved its medical examination plan, provides extra health check-ups for those required to perform high-risk work, and increases protection cover for employees' health and accident insurance policies. The Company encourages a health promotion focus than a curative focus through initiating exercise activities and educating employees on the right work behavior's and habits, etc.

Employee Engagement survey

In 2017, IEC conducted an employee engagement survey to measure the engagement level of employees, both in quantity and quality aspects. The survey allows the Company to be aware of factors that impacts a sense of connection and belonging that the employees have towards the organization. The results from the survey are also used in the process improvement of human resource management, enabling the organization to be more efficient in the areas related to human resource development.

- Employees' opinions on connection building between the employees and the organization
- Employees' opinions on work environment
- Employees' opinions on leadership
- Employees' opinions on career opportunities and advancement in the organization
- Employees' opinions on work and personal life balance

IEC has put together a plan that focuses on building a good relationship towards the organization, as well as on strengthening connections and understanding between the employees and the organization. The plan is implemented in the forms of activities such as field activities, informal meetings with the employees, community service activities, charitable activities, and community development initiatives, etc.

On Employee Development

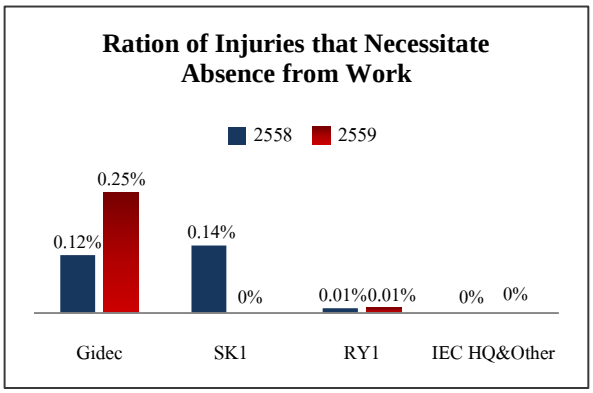
In the employee development plan 2017, IEC aims to equip its employees with essential knowledge and skill sets relevant to the current business direction, as well as to increase the organizational capabilities for current and future competitiveness. The Company has hence developed training courses, both in-house and outsourced, to enhance employee's specialized skills and knowledge. The employees may attend the courses, as permitted by the Company's rules and regulations. Key courses offered this year to all levels of employees are Self-Development, Team Development, and HR for Non HR. The Company encourages employees to grow in specialized skills that are needed for their current position such as accounting, production, engineering, and safety, etc. Above efforts and initiatives are mechanisms to improve and further the employees' competencies, knowledge, experiences, attributes, and career advancement, as well as to provide the employees with clear direction, in turn motivating them to progress further in the future.

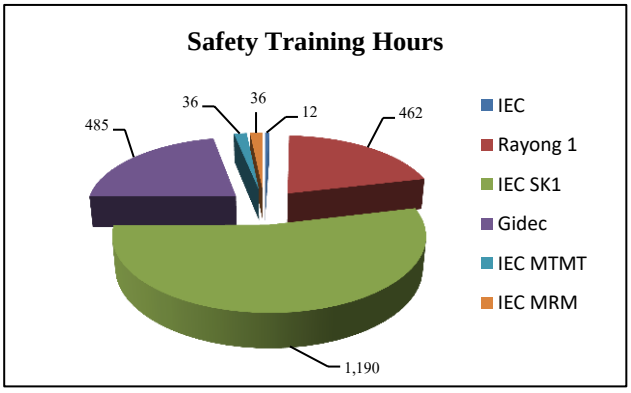
Occupational Health and Safety

G4-DMA, G4-5

IEC places its importance on occupational health and safety management for employees as they are yet important ones among our stakeholders. Our employees are strictly required to behave in compliance with occupational health and safety rules which the company have issued with an aim to create the ultimate safety condition for every processes of operation.

IEC always seeks for approaches to reduce accidents and avoid repetitive accident by adopting preventive measure for accidents, initiating investigation for all cases, performing risk assessment of each danger for any specific workplace. With all of these measures, they can secure the ultimate safety condition for employees. In addition, IEC devises the zero accident policy and arranges several safety activities such as safety patrol, safety in workplace, safety talk with employees or subcontractors before starting work every morning and more inclusive safety operation plan such as safety rules determined that employees shall wear personal protective equipment every time they go out of the building, emergency drills and weekly safety meeting. As a result, the operation of 2016 in this area showed that injuries that necessitate absence from work are 0.26% when compare to working hours per head, which was decreasing.





SOLAR POWER PLANT

IEC has three solar power plants in the northern region of Thailand. The solar power plant business is the electricity generation industry with almost no environmental effects from its business operations at all for the reason that there is no combustion of any kind and so there is no smoke, gas, smell or waste from the process. Hence, the safety operational plans for our solar power plants focus on maintaining the general safety conditions and normal operations of the power plant.

All IEC's solar power plants have devised policies associated with occupational health and safety through these two years. The Company has all electricians in power plants attend the particular training and examination for Interior Electrician Level 1 as to gain skills certification under Skill Development Promotion Act (2nd). There are also operation standards securing their safety by enforcing all employees at all plants to have inspection duties of equipment, tools and machinery whether they are ready and safe for electricity generation at all time. Employees are also responsible for immediately reporting to their superiors when machineries become out of order so that those can be repaired in time and also to prevent any accidents or any danger arising. All employees working in the fields/power plants are required to wear PPE or Personal Protective Equipment at all times while working. All of IEC's solar power plants are also equipped with spare units of PPE for visitors, coming to our power plants every year. IEC also organizes emergency drill and fire drill to prevent the emergency and to provide opportunities for them to familiarize themselves with the fire safety equipment. All of our power plants are well equipped with fire safety equipment in both indoor and outdoor locations. The Company also requires fire emergency drills to be carried out once every year. As for 2016, there was no emergency/accident which occurred within our three IEC's solar power plants.

WASTE-TO-ENERGY POWER PLANT (HAT YAI)

In 2016, waste-to-energy power plant in Hat Yai has implemented policy regarding occupational health and safety for all levels of employees with the objective to safeguard them from injury and sickness as following;

• Measure working environment or working area every year as regulated by laws.

• Organize safety-related training sessions for skills and knowledge development to enable employees to perform their operation with safety such as training for the qualification of Safety Officer in Supervising Level, Safety Officer in Management Level, conducting fire and evacuation drills, arranging training about safety in working with chemical substances and safety in working with electricity, and first aids.

• Arrange PPEs and fire safety equipment. The company supports the arrangement for PPEs based on risk exposure of each work for employees such as safety helmets, safety shoes, safety boots, safety belt preventing from falling, etc.

• Fire safety management. Fire safety system was installed in the facility, especially fire extinguishers and fire hoses under are in ready-to-use condition and placed in all areas.

• Organize safety campaigns in workplace for employees. With an objective to support and promote safety so all employees can perform their works with safe conditions, if there is no injuries that necessitate absence from work in a month, complimentary lunch will be served for employees in that month. Moreover, QSHE: Quality, Safety, Health & Environment Section holds the Safety Committee Meeting on a monthly basis to review the management system and solve the safety-related problem within each month. Each section's representatives are invited to the meeting so they can have opportunities to propose ideas and pass the comments regarding any safety issues. After that, they will work to solve the problem in collaboration and deliberate the preventive measure for maximizing safety condition in workplace.

- **SAFETY ASPECTS**

1. Safety trainings for emergency preparedness were complete for 3 courses as following:

1.1 Chemical substances: The Company organized several courses for the concerned employees about safety on working with chemical substances so they can have knowledge and understanding about how to operate with chemical substances correctly and appropriately for example protection equipment preparation, chemical leakage cleanup and proper selection and usage.

1.2 Fire evacuation drills: Both daytime and nighttime employees participated in the drills for the preparedness towards the emergency situation.

1.3 First aid: To educate the participants with knowledge and understanding in principles and treatment for the correct first aid.

2. Electricity-related work safety training: Trainings were organized for employees in Electricity Generation Section and Electricity Maintenance Section to have knowledge and comprehensive understanding of working with electricity under Notice of Department of Labor Protection and Welfare regarding Standards, Procedure and Condition for Safety Orientation in relation with Electricity Work towards Employees Working with Electricity"

- **Occupational health**

In an aspect of occupational health, the Company holds an annual activity called Big Cleaning Day when all employees come together and clean their own power plants, also 5S Activity in like manner. Besides, all workers in the power plants will receive comprehensive health examination, especially for their respiratory system and detailed health check-ups on occupational diseases and illnesses. The employees are also encouraged to wash their hands regularly, both before and after carrying out their roles and responsibilities at the power plants. The company and the power plants also take great care to provide first-aid medical facilities, hygienic dining areas and clean drinking water stations to ensure good health and good physical conditions for all employees working at the plants. In addition, the Safety Committee also arranges for the detailed inspection and analysis of the environment within the power plants twice a year. The inspection often includes hot environment measurement, light measurement, noise measurement and chemicals measurement in order to ensure that the power plants are safe to work in and also to prevent negative impacts on the surrounding communities.

1. **Big Cleaning Day**


2. **First Aid Station**



BIOMASS POWER PLANTS (SRA KAEW PROVINCE)

- SAFETY

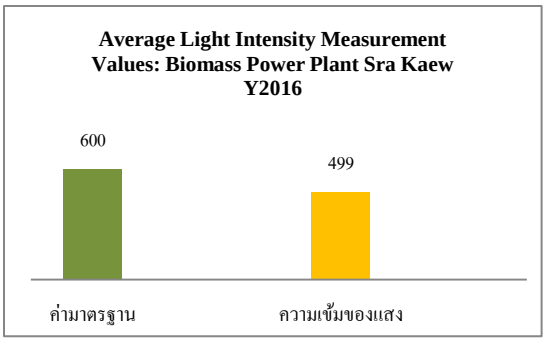
1. Safety promotional activity as human resources development. Safety Section initiated sessions, called “Safety Talk”, for employees and sub-contractors working in the annual preventive maintenance to increase safety awareness in workplace as devised in the policy of Zero Accident.

2. Basic fire safety and firefighting training: Basic firefighting training and fire evacuation drills aim to provide employees with knowledge and comprehensive understanding in lecture contents and be able to apply in actual situation, when fire actually happens. Thanks to honorable instructors from Education Operation Unit, SaKaeo Municipality for delivering the lecture to 51 participants of our employees**.**

- **Occupational Health**

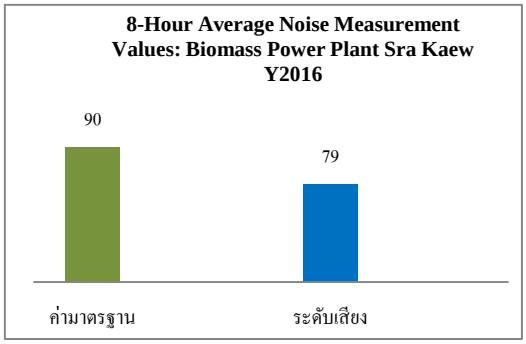
1. Inspection of environment in workplace including light, noise and heat. (Annual inspection frequency)

1.1 Light measurement in workplace



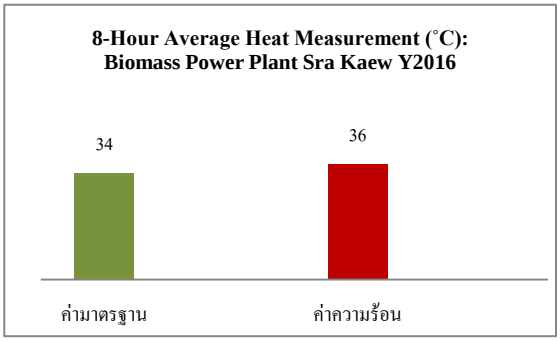
Measure light intensity in Control Room, Store, Office, Weight Gauge Room and Laboratory with 499 lux as a measurement result. Such amount of lux is below the standard of 600 lux in accordance with Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006). The company added electric lighting to increase intensity to meet the standardized requirements.

1.2 8-Hour average noise measurement in workplace



Measure the loudness of noise in average for 8 hours (Leq 8 hr.) in Boiler, Feed Pump. Lower Boiler, Turbine, Generator, DCS Room, Area under Turbine Building and Biomass Crusher's Storage Yard. The measurement results meet the standards as regulated in Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006).

1.3 8-Hour average heat measurement (˚C) in workplace



Measure the hotness in environment around the furnace with Wet Bulb Globe Temperature (WBGT) of 36 C˚ as a result. Such amount of WBGT is over the standard, when compare with Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006), As a countermeasure, the Company apply the insulation covering areas emitting heat. As a result, temperature in front of the furnace decreased and consequently met the standards.

2. Big Cleaning Day

Plastic Pellets from Waste Plastic Production Plant

In 2016, PLASTIC PELLETS FROM WASTE PLASTIC PRODUCTION PLANT focuses on providing necessary trainings to all of its new employees so that they have knowledge and understanding required to execute their roles and responsibilities and assure their own health and safety in the work environment. This includes weekly safety talk before starting work, even so the production process found no obstacles in continuity of its operation, as same as all sections involved. In addition, risk monitoring are performed. Its results are reported to supervisor on a daily basis and summarized into monthly statistic of working hours and accidents for the month, as well as summary of corrective action towards risk found in the month, etc. The Safety Committee holds a meeting every month, maintains safety patrol over workplace that could cause harms and seek for measure with a collaborative efforts, then compiles and submits to government agency every three months, also summarizes operation results (Jor Por Wor 3) and submits to government agency every three months. Regarding the inspection of machinery and equipment, there are requirements such as monthly inspection of fire safety equipment and crane inspection by external body (twice a year, depends on crane specifications). These inspection results are also required to submit further to government agency. In like manner, light measurement, noise measurement, heat measurement and dust measurement are performed by external body and submit report to government agency**.**

- **Safety aspects**

1. Safety talk before starting work

PLASTIC PELLETS FROM WASTE PLASTIC PRODUCTION PLANT sets up safety meeting with employees on every Thursday in every week before starting work so they can gain knowledge and understand safety issue in their own workplace.

2. Basic firefighting course by Ma-kham Khu Municipal Firefighter Team

3. First aid course

4. Safe and Sound Forklift operation

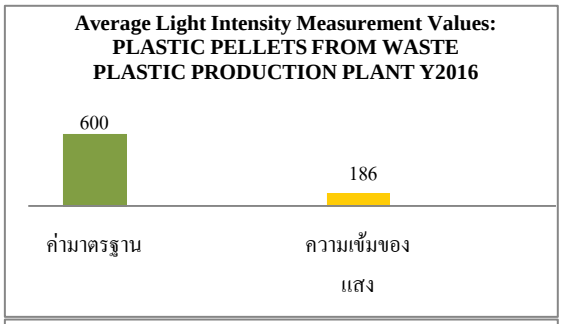
- **Occupational health aspects**

1. **Pipeline installation for high pressure air conditioning spray** PLASTIC PELLETS FROM WASTE PLASTIC PRODUCTION PLANT surveyed across the premises in seek of bad smell locations and prepared layout exhibiting pipeline installation for high pressure air conditioning spray that can lessen bad smell originating in garbage.

2. Inspection of environment in workplace including light, noise and heat. (Annual inspection frequency)

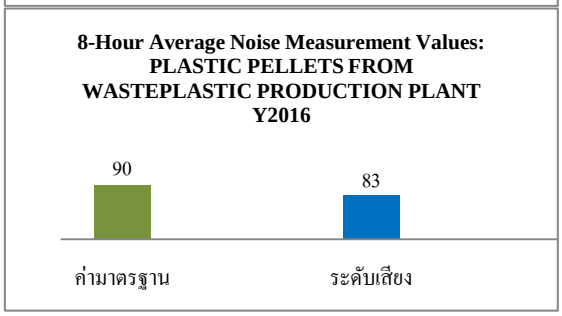
2.1 Light measurement in workplace

Measure light intensity in Control Room, Store, Office, Safety and Environment Room and QC Area Lab with 186 lux as a measurement result. Such amount of lux is below the standard of 600 lux in accordance with Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006). The company added electric lighting to increase intensity to meet the standardized requirements.



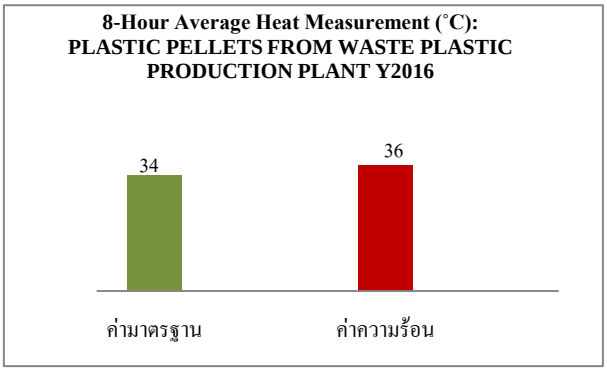
2.2 8-Hour average noise measurement in workplace

Measure the loudness of noise in average for 8 hours (Leq 8 hr.) in Crusher Line 2, Office, end of Extruder, sorting yard, production line 1-6. The measurement results meet the standards as regulated in Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006).



2.3 8-Hour average heat measurement (˚C) in workplace

Measure the hotness in environment around the furnace with Wet Bulb Globe Temperature (WBGT) of 35.8 C˚ as a result. Such amount of WBGT is over the standard, when compare with Ministerial Regulation of Ministry of Labor (2006) regarding Standardization of Safety, Health and Environment Management in relation with Heat, Light and Noise (2006), As a countermeasure, the Company applied the insulation covering areas emitting heat. As a result, temperature in front of the furnace decreased and consequently met the standards.



ENVIRONMENTAL SUSTAINABILITY

G4-DMA, G4-EN30

WATER

Water is the necessary resources for electricity generation. Each power plants consume water in different necessities depends on its technology and fuels in use. Waste-to-energy power plant consumes kitchen garbage from municipality whereas biomass power plant consumes the agricultural residues such as palm bunches, Eucalyptus barks, chopped woods and coconut shells during the combustion process. Then, the water temperature increased until it turns into steam with high pressure enough to drive the steam turbine and afterward drive generators. However, there are both raw water from natural water resources such as surface water, irrigation system and underground water is available geographically depends on each power plants' location and man-made reservoir constructed as the reserve water resources for both normal situation and emergency situation, these sufficiency do not allow negative impacts on the natural water resources under normal consumption of the communities' agricultural activity. The Company implemented several strict measure when control water quality, employing closed-loop water treatment facility that ensure 100% recycling water within the premise and releasing to the natural sources for sustainable co-existence with agricultural sector. For power plants that need no water for their electricity generation like solar power plants, water is necessary only for facility maintenance for example cleaning solar cells, etc.

Waste Plastic Recycling

100%

In the same manner, water is the necessary resources in the production process of PLASTIC PELLETS FROM WASTE PLASTIC PRODUCTION PLANT as garbage from landfills pond in Ban Bueng District is recycled and transformed into plastic pallets. Water washes dirt out of garbage during the first process. Furthermore, water cools down and segregates pallets by its quality during the final process. Water volume from surface water, underground water, and reserve water tank for normal situation and emergency situation is used, these sufficiency does not allow negative impacts inflicted on the surrounding communities. Also, close-loop water treatment system improves water quality before releasing into the natural water sources and reusing in the production process under strict control to maximize the utilization of water resources.

AIR POLLUTION

It is a management-must for power plants with materials combustion to supervise and control possible air pollutions that might drastically cause negative impact to more than 300 households in the surrounding areas. In 2016, the plant monitored and measured dust and gas values regularly by employing private company certified by Pollution Control Department to perform the measurement twice a year. In addition, Pollution Control Department will also directly perform the measurement twice a year. Totally, there will be 4 measurements per year. In 2016, the total dust value measured from the air released from the waste-to-energy power plant's ventilator in Hat Yai was 22.9 mg/m3, which is totally 67% lower than the standard value. In addition, the gas released such as oxides of Nitrogen, Sulfur dioxide and Carbon Monoxide were also 85-97% lower than the standard value. Except for values of dioxins and HCl that were higher than the standard value. After the root cause analysis, dioxins and HCl discharge always becomes major problems with most of garbage incinerators in operation in Thailand. Especially, it is fairly difficult to control dioxin discharge. Even so, the power plant managed to discharge dioxin and HCl with following methods.

1. Decrease humidity in garbage by processing through dehydration until it reaches proper humidity.
2. Temperature control in chamber based on fuel types.
3. Carbon injection system installation, applying the concepts of injecting activated charcoal into air flow before dust collection process, causes dioxins, HCl and other heavy metal compounds to be absorbed onto activated charcoal's surface that is full of pores. After that, the activated charcoal get caught further in the dust collection process.
4. Apply some chemical substances in garbage can help reduce dioxins and HCl generated during the combustion such as lime, illite and employ Continuous Emission Monitoring System (CEMS).

Biomass Power Plant in SaKaeo province is another power plant which uses materials combustion to generate electricity. The plant has competent employees with skills and expertise to regularly monitor and inspect the quality of the air released from the plant's ventilators to remain 2% lower than standard values. Because the plant also has a dust collection system installed. Such system makes use of static electricity to separate particles which can catch dust particles smaller than 1 micron for more than 99.5% and also helps increase the overall efficiency in the plant's electricity generation.

IEC Solar Power Plants are renewable energy power plants which are 100% environmentally friendly. The electricity generation process does not involve any type of material combustion, and consequently, there is no dust or air pollution of any kind.

Plastic Pallets Recycle Project in Rayong province had faced the bad smell problems stem from sorting process within the premise in Rayong. As nowadays, sorting process for plastic was done in waste ponds instead. This change helped mitigate negative impacts to surrounding communities. As a result, no complaints from communities at all, even though there are still some inoperative air conditioners within the production line but they are currently under the progress of improvements.

WASTE

IEC placed importance on waste management for waste from the normal daily operation and unavoidable waste from electricity generation, applying 3R(R:REDUCE R:REUSE R:RECYCLE) on each category of waste management to mitigate negative impact towards environment, social and communities. Waste from power plant is divided into two groups.

Normal waste is the waste discharged out of the production process and caused from the normal operation of human resources within the plant such as trash, paper and plastics. These items can be utilized for the electricity generation. Together with other waste from sorting process that is incombustible and cannot generate heat energy, such as glass bottles, steel scraps, aluminum cans. These types of waste can be processed further in the recycle process.

Hazardous waste is the waste that potentially causes impacts to environment and required particular dispose methods such as ashes from electricity generation using oil as fuels, spray cans, batteries, cell batteries. From the operations and electricity generation at both the Biomass Power Plant and Waste-to-Energy Power Plant, it is unavoidable that there will be waste produced as a result of the power generation. IEC is as aware as ever of the possible impacts that may occur after. Hence, in both power plants, the company has established a special management plan for the ash/waste resulting from the plant's power generation. Currently, the Biomass Power Plant in SaKaeo produces, from its production process, about 32 tonnes for daily ash waste. The method used at the plant to dispose of the waste is (ash) landfilling at designated areas within the power plant. As for the waste-to-energy power plant in Songkhla province, the total amount of ash waste produced each day is about 30 tonnes. The ash is also disposed of with landfilling within the power plant. In addition, both power plants are required to measure the amount of contaminants, impurities, and heavy metal compounds every month in order to minimize environmental effects. In the long run, these plants have plans to make use of the resultant waste from their production process as organic fertilizer, bricks from fly ashes or cement mixture for road building.

Waste from Daily Life		
Normal trash, Recycle waste	**Annual Volume**	**Unit**
• Recycle	0.5	Tonnes
• Sanitary landfills	3.65	Tonnes
Industrial Waste		
Hazardous waste	**Annual Volume**	**Unit**
• Sanitary landfills	6,338	Tonnes
• Reuse	0.60	Tonnes
• Recycle	2.50	Tonnes
• Repurpose	0.30	Tonnes
• Storage, wait for utilization	7,500	Tonnes
• Storage, wait for disposal	0.02	Tonnes
Non-Hazardous Waste	**Annual Volume**	**Unit**
• Reuse	4	Tonnes
• Recycle	20	Tonnes
• Repurpose	0.10	Tonnes
• Storage. Wait for disposal	0.04	Tonnes

*Remark: Waste information form Biomass Power Plant SaKaeo and Waste-to-energy Power Plant Hat Yai

OTHERS

TRANSPORTATION

Throughout the business operations of the company, raw materials must be transported on land. Hence, transport trucks are very essential for suppliers transporting raw materials to both the biomass power plant in SaKaeo province and the plastic pellets production plant in Rayong province. As for the waste-to-energy power plant in Hat Yai, Songkhla province, the waste materials are transported regularly to the plant by municipal garbage trucks. IEC takes into our consideration the possible impacts to the environment and has coordinated and collaborated with all transporters to make the journeys with great care and to not make the journeys during rush hours. In addition, IEC is also aware of the possible impacts on the roads/streets used to transport the materials to the plants for example Biomass Power Plant SaKaeo province repaired the 1.7 kilometers of damage on roads/ streets in front of the power plant since the damage caused from trucks traffic. In addition, the power plant also installed road lightings and the installation was complete so the people living in the communities can use these roads with more safety.

Pictures: Of road improvements at the entry point of the village by filling the pothole with concrete. The current progress is 80%.

Social Responsibilities and Environment

Community Development Collaboration

Electronic Library in Honor of Her Majesty the Queen

With determination to create the learning center for teachers, students, and the general public, Photha Wattana Senee School, Amphoe Photharam, Ratchaburi province has built E-Library for teachers, students, and the general public to come to study and research the available materials. The library uses solar panels installed on its rooftop to generate solar power electricity. The company understood the significance and saw possible benefits toward the youth and surrounding communities and chose to participate in the project by donating a solar panel electricity generation system with a total generation capacity of 10 kW. It is possible to observe the current capacity of electricity generation from the monitoring system installed within the building. Currently, the installation of the solar panel electricity generation system and building construction has been completed in full.

Waste-to-energy Power Plant (Hat Yai)

Garbage Bank Operation Starting from August 2015 until now, The company has continued its purchase of garbage from two locations: Ban Beung Pichai School and Ban Toong Lieeb School. The company arranged to buy sorted plastic bottles, paper and plastic bags with objective to create the awareness of environment by encouraging them to sort garbage before disposal so garbage can be reduced and some can be recycled. However, the volume of garbage this year decrease 3% because students' spending on the daily snack has decreased, causing the relative decrease in monthly accumulation of garbage. Though, the company plan to expand into buying garbage from communities as a measure to promote the local income further on.

Bicycle ride event in Celebration of Her Royal Highness Princess Maha Chakri Sirindhorn's Birthday Anniversary

Waste-to-energy power plant, Hat Yai, participated in Bicycle ride event in Celebration of Her Royal Highness Princess Maha Chakri Sirindhorn's Birthday Anniversary with Khaun Lung Bicycle Club, Khaun Lung Municipality and other 300 local riders in a round trip distance of 50 kilometers, starting from Khuan Lang Temple and passed to second checkpoint at Waste-to-energy power plant and third checkpoint at Klong Lar Reservoir. Waste-to-energy power plant also donated to Khuan Lang Temple School for the sake of this event, so the school can arrange teaching aids items for the student.

Effective Microorganisms Production Project established for bringing organic waste that cannot be used as fuels in the combustion for electricity generation such as ripe fruits, vegetable scraps and food scraps. Such waste is used and added value into Effective Microorganisms (EM). As a benefit, injecting EM onto waste landfill ponds three times a week with support of EM injection car from Hat Yai Municipality can help mitigate negative impacts of bad smell and cockroaches, arising from the waste landfill ponds, on the surrounding area. This project can also be a source of knowledge for the communities by learning how to make effective microorganisms utilizing organic waste in several areas such as household application, agricultural application, livestock application and environment conservation application.

Flow demonstrated the process of making effective microorganism from vegetable and fruits scraps in sorting

Picture of EM injection on landfill

Conduct a PR campaign by participating in several exhibitions such as Khuan Lang Pomelo Fair. In the event, there are the demonstration for how to make EM, multi-purpose solution to the audience and quiz game in the topic related to the plant.

Natural water source restoration program:

To conserve natural sources of water and surrounding nature around the power plant. Sedges (*Lepironia articalata*) that inhibits in Phru Jude Basin can be extra sources of income by utilizing sedges into crafts such as mats or bags. As nowadays, this breed of sedges is close to extinction from deterioration around the area and lack of maintenance. The company realized this importance of the breed, *Lepironia articalata*, to the surrounding communities' ways of life. Hence, the company provides support on the restoration program for Phru Jude Basin, so this could raise the awareness of communities on the natural sources of water and surrounding nature. Also, this can develop into sources of income for households in which there can become great benefits in terms of quality of life, leading to sustainable living.

Jood Canal Check Dam In remembrance of royal grace and to give a royal charity to Phra Bat Somdet Phra Paraminthra Maha Bhumibol Adulyadej Mahitalathibet Ramathibodi Chakkrinaruebodin Sayamminthrathirat Borommanatthabophit (His Majesty the King), as this is the Royal Initiative Project. The management together with local residents around Jood Canal built the semi-permanent check dam from stone and used tires. The check dam can help manage water for agricultural use and rejuvenate the forest for the surrounding communities' benefits.

Relesing fresh water fishes and Planting native plants on the occasion of the Queen's Birthday Anniversary: In collaboration with Khaun Lang Municipality, the events were organized and comprised of planting, releasing fish and plant propagation in Honorary of Her Majesty Queen Sirikit at Phru Chud water source, Amphoe Hat Yai, Songkla province. In the same time, the company organized exhibition educating people about upstream-downstream of garbage. In the event, the company gave complimentary EM that is the product from organic waste and also gave compliment multi-purpose solution as well so the people in the community can actually try these products in their household.

Biomass Power Plant (SAKAEW PRONVINCE)

Participation in the Tripartite Committee to conduct waste water management and solve environmental problems in Pra Pong Canal Community, as the business operation is close to Pra Sathung basin, to initiate collaboration in conserve and preserve Pra Pong-Pra Satueng Basin in Sra Kaew province and Prachin Buri province. According to the Order of Department of Industrial Works no. 187/2559 regarding Tripartite Committee Establishment for Wastewater Management and Environmental Problems Solving of Pra Pong Canal Community, the company were appointed as working party and for that reason the company organized these three activities as following:

1st Activity: March 2016 Tripartite Comes Together. Ta Chang People Happy. Devoted for Environment

2nd Activity: August 2016 Tripartite United for Creation of Community.

3rd Activity: In December 2016,a meeting were organized to discuss regarding water quality in Pra Pong-Pra Satueng Basin. Also, the exhibition was displayed to communicate several environmental activities, including other mini activities in the event such as sports and other activities for public interests such as reforestation, releasing fish and painting temple's wall.

Welcome the visit from inspectors of large-scale manufacturing factory (2nd August 2016) including, provide information of power plant, problems and obstacles in operation and also give the lecture about electricity generation process, the company's environment management and corporate social responsibilities.

PLASTIC PELLETS FROM WASTE PLASTIC PRODUCTION PLANTOrganize complimentary lunch for student: The management and employees organized this event in remembrance of and to give the royal charity to His Majesty King Bhumibol Adulyadej Mahitalathibet Ramathibodi Chakkrinaruebodin Sayamminthrathirat Borommanatthabophit at Tambon Makham Ku Municipal Child Development Center, Amphor Nikhom Phatthana, Rayong province.

Green Area Conservation Activity: On 10th June 2016, the company participate in Green Area Conservation Activity in Rayong province in celebration of and realization of the Royal Idea of His Majesty the King and Her Majesty Queen Sirikit. The activity involved the maintenance of the significant natural resource, the forest, because the forest act as the origin of water sources, also maintain the ecological balance. Main activities are check dam construction and plantation around Jom Hae Mountian, Tambon Makham Ku, Amphoe Nikhom Pattana, Rayong province.



SOLAR POWER PLANT (MAE TA, MAE TANG AND MAE RAMARD)

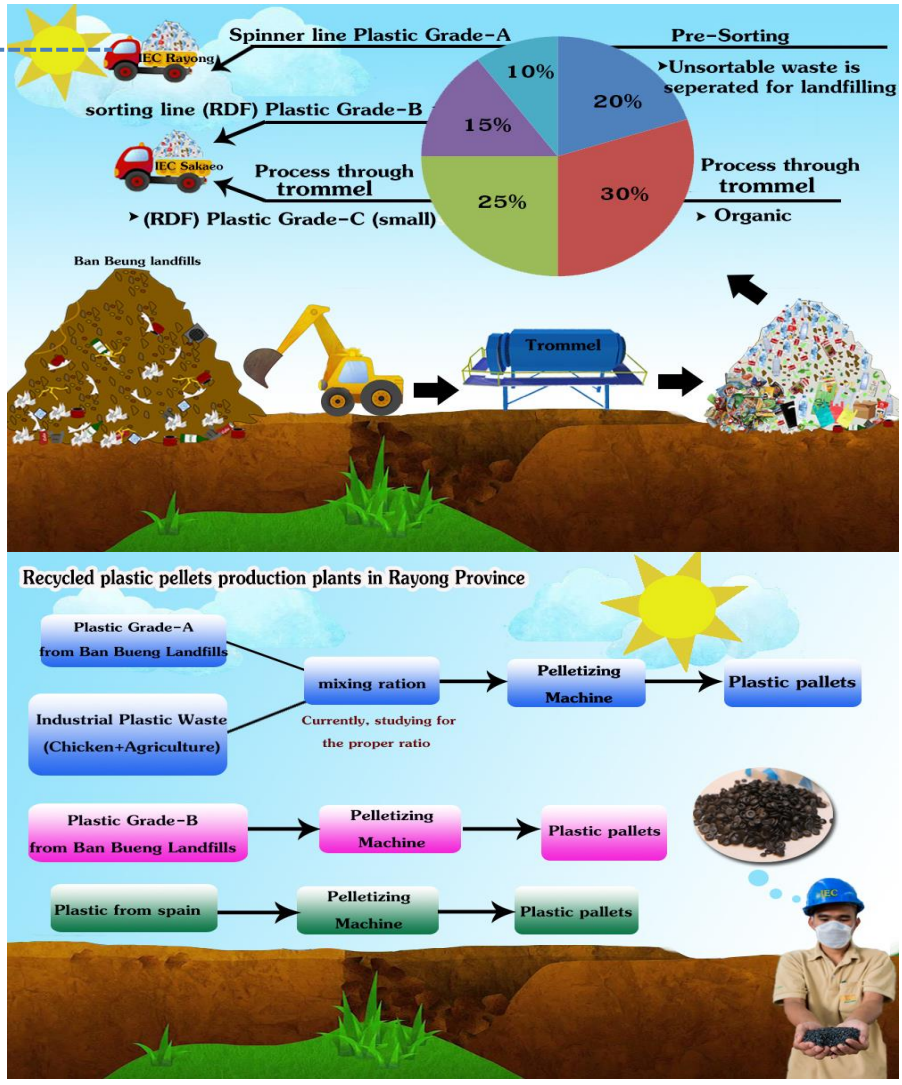
Solar power plant tour: To provide opportunities for college students from several universities and colleges to participate in power plant tour so those students enrolling in electrician curriculum for both vocational professional certificate and high vocational certificate can gain knowledge for further development after their graduation. Mr. Mongkol Nuntagars, our Technician, gave lecture and attended the question and answer session with the students to help them gain knowledge for further development after their graduation.



Promotion the employment of local labor workforce in grass mowing services and solar panel cleaning services: Such employment is the implementation of the company's policy regarding human rights practicing no discrimination of sex, age and race, in the same manner all safety preparation is in compliance with the safety standards. Moreover, the company arranges the accommodation for the local labor. Even solar panels cleaning was done in concern with responsibility over environment impacts, only potable water was used in the process, not to cause negative impacts to the surrounding communities.



Ordination of trees with Tambon Tha Kat Community in Honorary of His Majesty the King: On 8th August 2016, IEC Mae Ta Mae Tang participated in ordination of trees with Tambon Ta Gas Community in Honorary of His Majesty the King and The Seventieth Anniversary Celebrations of His Majesty's Ascension to the Throne, therefore The Celebrations on the Auspicious Occasion of Her Majesty Queen Sirikit's 84th Birthday Anniversary, hosted by Tambon Tagasnua Municipality. Participants including monks, government offices in Amphoe Mae Ta, government enterprises, private sectors, educational institutions and people in the surrounding area, join together and perform ordination on trees.



The recycled plastic pellets production plants in Rayong Province and Songkhla Province are extended business operations built upon the knowledge, experience, and expertise acquired from the company's business operations at the waste-to-energy electricity generation plant in Hat Yai District, Songkhla Province. The company makes use of the knowledge and understanding in sorting economically valuable waste plastic such as P.E. plastic which can be processed, melted, and re-produced as Grade 2 plastic pellets to be sold as initial substance/materials for plastic material manufacturers both in domestic and international markets. The production plant uses up to 16 tonnes of waste plastic daily. Most of the plastic used comes from waste plastic materials that have been landfilled in various areas such as Ban Beung landfills and Hat Yai landfills, etc. The production plant can help reduce the total amount of the landfilling practice by as much as 5,941 tonnes annually. In contrast, if the waste materials are not recycled but instead conventionally forwarded to landfills, the amount of waste materials can take up as

much as 60 Rai of land areas for landfilling. From the same sorting process of all waste materials to find and bring P.E. plastic to be recycled as plastic pellets, IEC can also bring biodegradable materials such as Polymer and foods scraps to produce RDF (Refuse Derived Fuel) and use it as a source of fuel for the IEC Biomass Power Plant SaKaeo - 1. This year, the recycled plastic pellets production plants in Rayong Province delivered 201 tonnes of RDF to IEC Biomass Power Plant SaKaeo – 1 for fuels. Hence, our production processes are truly oriented toward effective preservations of the environment and local ecosystems.

Currently, Thailand faces the increasing amount of waste in proportion with the expansion in population, social and economy, including consumption of the population. At present, there are as much as 28 million tonnes of accumulated waste in Thailand. IEC was among the first companies to initiate a more systematic waste management system in order to reduce possible impacts on the ecosystems resulting from inadequate and unsanitary waste management commonly practiced at landfills. In 2016, the waste-to-energy power plant in Hat Yai District, Songkhla Province can help divert waste from landfills from 100 tonnes daily, or more than 86,497 tonnes per year by converting it into electricity power with the help from clean and environmentally friendly technology. This waste and garbage, if not managed systematically, are likely to be forwarded to landfills and end up causing a variety of serious problems to the environment, the ecosystems and nearby communities. The total area of the Hat Yai Municipality landfills is approximately 135 Rai and located at the Kuan Lang Subdistrict, within the Kuan Lang Municipality on the road leading to the Hat Yai International Airport in the province of Songkhla. There are more than one million tonnes of waste accumulated at the landfills, or roughly the height of a 5 to 6-story commercial building. Here IEC business operations at the Waste-to-Energy power plant can help reduce the environmental effects often caused by increasing landfilling.

Pathway toward Sustainable

1922 The International Engineering Company Limited was established and contracted to build Bangkok - Aranyaprathet railway to connect Thailand and Cambodia for the first time.

1953 Registered the company with a registered capital of 10 Million Baht.

1965 Received the Royal Warrant of Appointment with Red Garuda emblem

1983 Appointed as the sole sale representative and distributor of Nokia mobile phones in Thailand

1992 Registered as a Public Company Limited with the Stock Exchange of Thailand

2012 Partnered up with Electricity Generating Public Company Limited (EGCO) to invest in the Waste-to- Energy Power Plant in Hat Yai District, Songkhla Province

2013 - Changed the business operations model to focus more on renewable energy in a variety of projects
- Solar Power Plant in Mae Ta District, Lampoon Province, a with production capacity of 1.02 MW started its business operations
- Solar Power Plant in Mae Ramad District, Tak Province, with a production capacity of 5.25 MW started its business operations

2014 - Invested in common stocks of E-Contech Management Pte., Ltd. to operate engineering consulting businesses. The first project involved conducting a research on the viscosity of oil transported via the pipelines of PTTEP Canada Ltd.
- Solar Power Plant in Mae Taeng District, Chiang Mai Province, with a production capacity of 1.92 MW started its business operations
- Hat Yai Waste-To-Energy Power Plant in Hat Yai District, Songkhla Province, with a production capacity of 6.5 MW started its business operations
- Bought 75% of common stocks from Kaew Lamduan Power Supply Co., Ltd. in order to operate the Biomass Power Plant in Meuang District, Sra Kaew Province, with a production capacity of 8 MW
- Prepared the 2014 Good Corporate Governance Manual
- Established Compliance Unit

2015 - Announced Sustainable Development policies
- Announced Anti-Corruption policies
- Certified with ISO 9001 : 2008 Quality Management Standard for the company's Solar Power Plant at Mae Ta District, Lampoon Province.
- Evaluation of the company's director's work performance
- Improvement in the overall work operations
- Signed on to the Collective Action Coalition of Thailand's private sector to oppose all types of corruption.

2016 - Invest in common stocks of Nongree Power Plants Company Limited for initiating project of biomass power plant
- Change sector classification of the Company from Sector "Information and Communications Technology (ICT)" to Sector "Energy and Utilities" in Industry Group of "Resources".

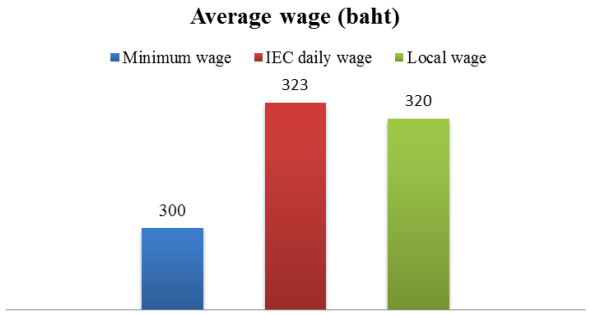
Performance data on Sustainability 2014-2016

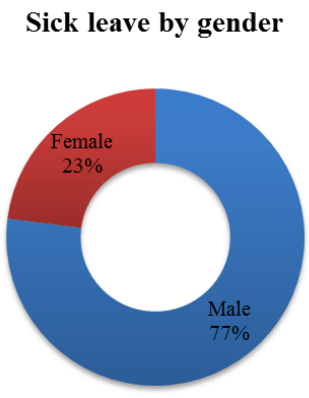
G4-9-10, G4-EC5-6, G4-EN3,G4-EN31, G4-LA2-3, G4-LA7,G4-EN2

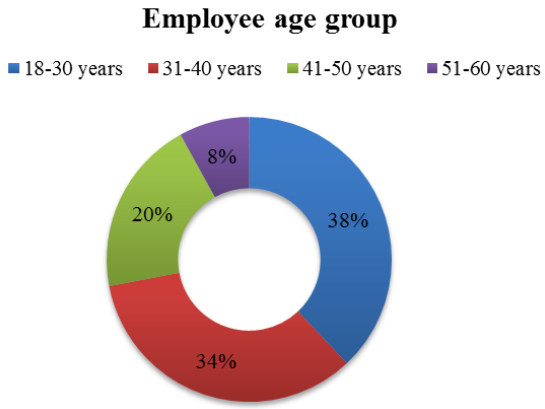
Economic Performance	Unit	2014	2015	2016
Revenues	baht	512,482,993	607,791,740	NA
Total Comprehensive income (loss)	baht	13,408,550	141,773	NA
Financial costs	baht	15,252,974	43,765,103	NA
Total assets	baht	3,891,165,811	4,498,060,051	NA
Total liabilities	baht	1,031,472,110	1,118,647,620	NA
Total equity	baht	2,859,693,701	3,379,412,431	NA
Income tax expense (income)	baht	(600,554)	(920,584)	NA
Employee benefit expenses	baht	72,960,716	148,810,327	NA

Environment and Social performance	Unit	2015	2016
Environmental Investment	baht	118,900,000	NA
Social Investment	baht	2,658,925.90	NA
Employee Information			
Number of Employee	person	283	279
Propotion of employee by gender			
Male	person	204	203
Female	person	79	76
Propotion of new employee by gender			
Male	person	121	78
Female	person	45	24
Number of senior manager	person	40	43
Propotion of local senior management	%	67.5	31
Turnover rate	%	12	25
Propotion of absense by gender			
Male	%	0.5	1
Female	%	0.29	0

Environment and Social performance (Contin	Unit	2015	2016
Employee Trainning	hour	5,467	6,115
Propotion of Employee by sector			
Management	%	36	36
Support	%	31	31
Engineering	%	12	12
Production	%	15	15
Information Technology	%	6	6
Parental leave	%	-	4
Propotion of absense from acident	%	0.27	0.26





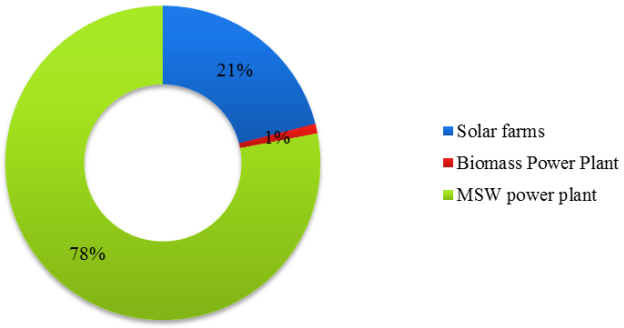


Performance data					
Raw material used	**Unit**	**2015**	**Raw material used**	**Unit**	**2016**
Wood	ton	88,268.12	Bark	ton	61,561.47
Palm fiber	ton	18,136.29	Wood	ton	49,562.01
Bean meal	ton	6,914.08	Palm fiber	ton	3,145.55
Coconut husks	ton	941.36	Bean meal	ton	18,199.40
Waste	ton	11,700.00	Palm bunch	ton	7,346.84
Ash from production	ton	26,150.00	Cassava rhisome	ton	400.44
			Bamboo fuel	ton	29.99
			RDF	ton	201.51
			Waste	ton	34,268.48
			Ash from production	ton	32,721.61

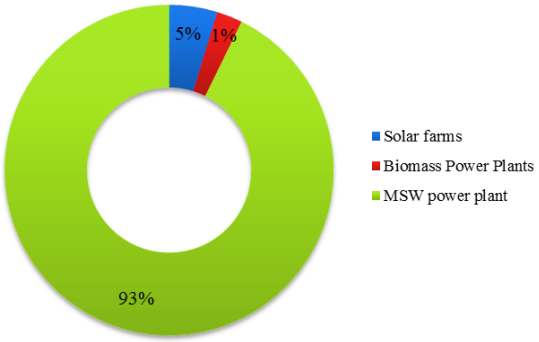
Raw material used 2016 (IEC Sakaeo1)

Performance data	Unit	2015	2016
Electricity generation			
Solar farms	MWh	15,915.24	6,812,850.00
Biomass Power Plants	MWh	34,116.47	41,538.0
MSW power plant	MWh	-	25,100,331.50
Total generation	MWh	**50,031.71**	**31,954,719.50**
Energy Consumption (Power Plant)			
Solar farms	MWh	70.15	56,533.00
Biomass Power Plants	MWh	1,200.00	7,804.0
MSW power plant	MWh	-	1,102,999.67
Total generation	MWh	**1,270.15**	**1,167,336.67**
Total steam generation and consumption	ton	89,200.00	4,100,368.00
Recycled water	m3	210.24	113,860.00

Electricity generation (MWh)



Energy consumption



Total steam generation and consumption (ton)

Water Reuse

113,860 m^3

About this Report

G4-DMA, G4-28-30, G4-32-33, G4-48, G4-EN2

Sustainability Report 2016 was prepared to disclose the management approach toward sustainability topics of IEC. This report covers the period 1st January-31st December 2016. The report is prepared once every fiscal year. This is the edition presented a comprehensive report of International Engineering Public company Limited and its subsidiaries with a concentration on economic, social and environmental issues, following the guidelines of Global Reporting Initiative G4 ('In Accordance' Comprehensive option) The sustainability topics presented in this report is the responsibility of the IEC and executives.

G4 Index	Description	Sustainable Development Report (Page)	Note
GENERAL STANDARD DISCLOSURES			
STRATEGY AND ANALYSIS			
G4-1	statement from the most senior decision-maker of the organization	1	
G4-2	Provide a description of key impacts, risks, and opportunities.	34-36	
ORGANIZATIONAL PROFILE			
G4-3	Report the name of the organization.	6	
G4-4	Report the primary brands, products, and services.	6	
G4-5	Report the location of the organization's headquarters.	6	
G4-6	Report the number of countries where the organization operates	6	
G4-7	Report the nature of ownership and legal form	6	
G4-8	Report the markets served	9-12	
G4-9	Report the scale of the organization	43-44	
G4-10	Report the total number of employees by employment contract and gender	80	
G4-11	Report the percentage of total employees covered by collective bargaining agreements.	80	
G4-12	Describe the organization's supply chain.	7	
G4-13	Report any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain.	-	
G4-14	Report whether and how the precautionary approach or principle is addressed by the organization.	34-36	
G4-15	List externally developed economic, environmental and social charters, principles, or other initiatives	6	
G4-16	List memberships of associations.	6	
IDENTIFIED MATERIAL ASPECTS AND BOUNDARIES			
G4-17	List all entities included in the organization's consolidated financial statements or equivalent documents.	80	
G4-18	Explain the process for defining the report content and the Aspect Boundaries.	13,84	
G4-19	List all the material Aspects identified in the process for defining report content.	13	
G4-20	Descriptions of material aspect boundaries within the organisation.	13	
G4-21	Descriptions of material aspect boundaries outside the organisation.	13	
G4-22	Report the effect of any restatements of information provided in previous reports.	13	
G4-23	Report significant changes from previous reporting periods in the Scope and Aspect Boundaries.	-	

G4 Index	Description	Sustainable Development Report (Page)	Note
STAKEHOLDER ENGAGEMENT			
G4-24	Provide a list of stakeholder groups engaged by the organization.	43-44	
G4-25	Report the basis for identification and selection of stakeholders with whom to engage.	43-44	
G4-26	Report the organization's approach to stakeholder engagement.	43-44	
G4-27	Report key topics and concerns that have been raised through stakeholder engagement.	43-44	
REPORT PROFILE			
G4-28	Reporting period (such as fiscal or calendar year) for information provided.	84	
G4-29	Date of most recent previous report (if any).	84	
G4-30	Reporting cycle (such as annual, biennial).	84	
G4-31	Provide the contact point for questions regarding the report or its contents.	back cover	
G4-32	Report the 'in accordance' option the organization has chosen.	84	
G4-33	Report the organization's policy and current practice with regard to seeking external assurance for the report.	84	
GOVERNANCE			
G4-34	Report the governance structure of the organization.	13	
G4-35	Report the process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees.	13	
G4-36	Report whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics.	12-17	
G4-37	Report processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics.	43-44	
G4-38	Report the composition of the highest governance body and its committees.	14-15	
G4-39	Report whether the Chair of the highest governance body is also an executive officer	-	
G4-40	Report the nomination and selection processes for the highest governance body and its committees	-	
G4-41	Report processes for the highest governance body to ensure conflicts of interest are avoided and managed.	-	
G4-42	Board and executives' roles in the organization's mission statements,	-	
G4-43	Board knowledge of sustainability topics	-	
G4-44	Board performance with respect to governance of sustainability topics	16-17	
G4-45	Board role in the identification and management of sustainability	12-13	
G4-46	Board role in reviewing risk management processes for sustainability topics.	13,34-44	
G4-47	Frequency of the board's review of sustainability impacts, risks, and opportunities	13,44	
G4-48	Report the highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered.	84	
G4-49	Report the process for communicating critical concerns to the highest governance body.	39-41	
G4-50	Report the nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them.	-	
G4-51	Report the remuneration policies for the highest governance body and senior executives	-	
G4-52	Report the process for determining remuneration.	-	
G4-53	Report how stakeholders' views are sought and taken into account regarding remuneration	-	
G4-54	Report the ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees	-	
G4-55	Report the ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees	-	
ETHICS AND INTEGRITY			
G4-56	Describe the organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics.	37-38	
G4-57	Report the internal and external mechanisms for seeking advice on ethical and lawful behavior	39-41	
G4-58	Report the internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity	39-41	

G4 Index	Description	Sustainable Development Report (Page)	Note
SPECIFIC STANDARD DISCLOSURES			
	CATEGORY: ECONOMIC		
MATERIAL ASPECT: ECONOMIC PERFORMANCE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-EC1	Report the direct economic value generated and distributed	-	
G4-EC2	Report risks and opportunities posed by climate change that have the potential to generate substantive changes in operations, revenue or expenditure	-	
G4-EC3	Coverage of the organisation's defined benefit plan obligations	-	
G4-EC4	Financial assistant received from the government	-	
MATERIAL ASPECT: MARKET PRESENCE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-EC5	Report the ratio of the entry level wage by gender at significant locations of operation to the minimum wage.	80-81	
G4-EC6	Report the percentage of senior management at significant locations of operation that are hired from the local community.	80	
	CATEGORY: ENVIRONMENTAL		
MATERIAL ASPECT: MATERIALS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-EN1	Report the total weight or volume of materials that are used to produce and package the organization's primary products and services during the reporting period.	-	
G4-EN2	Report the percentage of recycled input materials used to manufacture the organization's primary products and services.	18,80	
MATERIAL ASPECT: ENERGY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-EN3	Report total fuel consumption from non-renewable sources in joules or multiples.	78	
G4-EN4	Report energy consumed outside of the organization, in joules or multiples.	-	
G4-EN5	Report the energy intensity ratio.	-	
G4-EN6	Report the amount of reductions in energy consumption achieved as a direct result of conservation and efficiency initiatives, in joules or multiples.	-	
G4-EN7	Reductions in energy requirements of products and services	-	Not relevance
MATERIAL ASPECT: WATER			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	64	
G4-EN8	Report the total volume of water withdrawn.	-	
G4-EN9	Report the total number of water sources.	-	
G4-EN10	Report the total volume of water recycled and reused by the organization.	80	
MATERIAL ASPECT: BIODIVERSITY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	77-78	
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	77-78	
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	77-78	
G4-EN13	Habitats protected or restored	-	
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	-	
G4 Index	**Description**	**Sustainable Development Report (Page)**	**Note**
MATERIAL ASPECT: EMISSIONS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-EN15	Direct greenhouse gas (GHG)	-	
G4-EN16	Energy indirect greenhouse gas (GHG)	-	
G4-EN17	Other indirect greenhouse gas (GHG)	-	
G4-EN18	Greenhouse gas (GHG) emissions intensity	-	
G4-EN19	Reduction of greenhouse gas (GHG) emissions	-	
G4-EN20	Emissions of ozone-depleting substances (ODS)	-	
G4-EN21	NOX, SOX, and other significant air emissions	-	

G4 Index	Description	Sustainable Development Report (Page)	Note
MATERIAL ASPECT: EFFLUENTS AND WASTE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-EN22	Total water discharge by quality and destination	-	
G4-EN23	Total weight of waste by type and disposal method	64	
G4-EN24	Total number and volume of significant spills	-	
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention2 Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	-	
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	-	
MATERIAL ASPECT: PRODUCTS AND SERVICES			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	9-11	
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	-	
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	-	Not relevance
MATERIAL ASPECT: COMPLIANCE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	-	
MATERIAL ASPECT: TRANSPORT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-EN30	Significant environmental impacts of transporting products and other goods and materials for the organization's operations, and transporting members of the workforce	64-76	
MATERIAL ASPECT: OVERALL			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	81	
G4-EN31	Total environmental protection expenditures and investments by type	80	
MATERIAL ASPECT: SUPPLIER ENVIRONMENTAL ASSESSMENT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-EN32	Percentage of new suppliers that were screened using environmental criteria	-	
G4-EN33	Significant actual and potential negative environmental impacts in the supply chain and actions taken	-	
MATERIAL ASPECT: ENVIRONMENTAL GRIEVANCE MECHANISMS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	64	
G4-EN34	Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance mechanisms	18-32	
CATEGORY: SOCIAL			
SUB-CATEGORY: LABOR PRACTICES AND DECENT WORK			
MATERIAL ASPECT: EMPLOYMENT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender, and region	46-49,80	
G4-LA2	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by significant locations of operation	80-81	
G4-LA3	Return to work and retention rates after parental leave, by gender	80-81	
MATERIAL ASPECT: LABOR/MANAGEMENT RELATIONS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	80-81	
G4-LA4	Minimum notice periods regarding operational changes, including whether these are specified in collective agreements	80-81	
			0
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	57,59,61	
G4-LA5	Percentage of total workforce represented in formal joint management–worker health and safety committees that help monitor and advise on occupational health and safety programs	44-63	
G4-LA6	Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of workrelated fatalities, by region and by gender	44-52	
G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	-	
G4-LA8	Health and safety topics covered in formal agreements with trade unions	-	

G4 Index	Description	Sustainable Development Report (Page)	Note
MATERIAL ASPECT: TRAINING AND EDUCATION			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	61	
G4-LA9	Average hours of training per year per employee by gender, and by employee category		
G4-LA10	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	18	
G4-LA11	Percentage of employees receiving regular performance and career development reviews, by gender and by employee category	44	
MATERIAL ASPECT: DIVERSITY AND EQUAL OPPORTUNITY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-LA12	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity	80-81	
MATERIAL ASPECT: EQUAL REMUNERATION FOR WOMEN AND MEN			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	55	
G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	-	
MATERIAL ASPECT: SUPPLIER ASSESSMENT FOR LABOR PRACTICES			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-LA14	Percentage of new suppliers that were screened using labor practices criteria	-	
G4-LA15	Significant actual and potential negative impacts for labor practices in the supply chain and actions taken		
MATERIAL ASPECT: LABOR PRACTICES GRIEVANCE MECHANISMS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-LA16	Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms	-	
SUB-CATEGORY: HUMAN RIGHTS			
MATERIAL ASPECT: INVESTMENT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-HR1	Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	-	
G4-HR2	Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained	-	
MATERIAL ASPECT: NON-DISCRIMINATION			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-HR3	Total number of incidents of discrimination and corrective actions taken		
MATERIAL ASPECT: FREEDOM OF ASSOCIATION AND COLLECTIVE BARGAINING			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR4	Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights	-	
MATERIAL ASPECT: CHILD LABOR			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-HR5	Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor	-	Not relevance
MATERIAL ASPECT: FORCED OR COMPULSORY LABOR			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR6	Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor	-	
MATERIAL ASPECT: SECURITY PRACTICES			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR7	Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant to operations	-	

G4 Index	Description	Sustainable Development Report (Page)	Note
MATERIAL ASPECT: INDIGENOUS RIGHTS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.		
G4-HR8	Total number of incidents of violations involving rights of indigenous peoples and actions taken	-	
MATERIAL ASPECT: ASSESSMENT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR9	Total number of incidents of violations involving rights of indigenous peoples and actions taken	-	
MATERIAL ASPECT: SUPPLIER HUMAN RIGHTS ASSESSMENT			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	-	
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	-	
MATERIAL ASPECT: HUMAN RIGHTS GRIEVANCE MECHANISMS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	-	
SUB-CATEGORY: SOCIETY			
MATERIAL ASPECT: LOCAL COMMUNITIES			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	77-78	
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	77-78	
G4-SO2	Operations with significant actual or potential negative impacts on local communities	34-38	
MATERIAL ASPECT: ANTI-CORRUPTION			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	38	
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	-	No incident
G4-SO4	Communication and training on anti-corruption policies and procedures	39-41	
G4-SO5	Confirmed incidents of corruption and actions taken	41	No incident
MATERIAL ASPECT: PUBLIC POLICY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-SO6	Total value of political contributions by country and recipient/beneficiary	-	
MATERIAL ASPECT: ANTI-COMPETITIVE BEHAVIOR			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	-	
MATERIAL ASPECT: COMPLIANCE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	-	
MATERIAL ASPECT: SUPPLIER ASSESSMENT FOR IMPACTS ON SOCIETY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	-	
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	-	
MATERIAL ASPECT: GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	18-32	

G4 Index	Description	Sustainable Development Report (Page)	Note
SUB-CATEGORY: PRODUCT RESPONSIBILITY			
MATERIAL ASPECT: CUSTOMER HEALTH AND SAFETY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	-	Not relevance
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	-	Not relevance
MATERIAL ASPECT: PRODUCT AND SERVICE LABELING			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	-	Not relevance
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	-	Not relevance
G4-PR5	Results of surveys measuring customer satisfaction	-	
MATERIAL ASPECT: MARKETING COMMUNICATIONS			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-PR6	Sale of banned or disputed products	-	Not relevance
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship, by type of outcomes	-	Not relevance
MATERIAL ASPECT: CUSTOMER PRIVACY			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	-	Not relevance
MATERIAL ASPECT: COMPLIANCE			
G4-DMA	Report why the Aspect is material. Report the impacts that make this Aspect material.	-	Not relevance
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	-	Not relevance

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