

Corporate Social Responsibility (CSR)

The Electrical transformers manufacturing industry is an ongoing industry, which involve with electricity power because electric transformers are products used in transmission and distribution system. It is the basic fundamental energy crucial for the well-being of the people and drive country's economy as a whole.

Tirathai recognizes its importance and strives to be a part in delivering sustainable electric energy along with being a good member of the society. The company conducts the business with awareness of collective responsibility towards the public, caring for the community, society, and environment as well as strengthen engagement with stakeholders and the public. The company has a corporate social responsibility performance as follows,

1. Good Corporate Governance

The company conducts business in accordance with the relevant laws and regulations with transparency, disclosing important information, and verifiable. The Compliance Policy with Good Corporate Governance, the company is taking into account the benefits to shareholders, employees, communities, society, business partners, customers, competitors, trade, creditors, and all stakeholders.

In 2020, the company received a very good CG Score Assessment at the Annual General Meeting at 96 score.

2. Fair Business Operation

The company prioritize the importance of conducting business with fairness and continuously adheres to the practices by treating supplier partners equally and fairly with honesty, integrity, respect Intellectual property rights, promote political rights and fulfill commitments to stakeholders equally and reasonably to all parties.

2.1 Fair Competition

Practice and Guidance

1) Stipulates all terms and conditions in the contract and strictly adhere to the agreement. In the event that the conditions cannot be complies with, the company will immediately inform customer for further discussions and mutually find the resolutions to solve the problems.

2) Provide the customer with the necessary information and provide the customer with accurate, adequate and up-to-date advice to inform the customer about the products, services.

3) Understand and respond appropriately and timely to customer needs and expectations.

4) Deliver quality products that meet the requirements with customers at a fair price.

2.2 Promoting social responsibility with business partners

The company has not yet officially implementing social responsibility promotion for all stakeholders in the business chain.

2.3 Respects for property rights

Practice and Guidance

1) Encourage management and employees to use the Company's resources and assets effectively to increase the competitive edge and provide good service to customers. Promote copyright products and discourage the Intellectual property infringement.

2) The company is committed to protecting the intellectual property owned by the company is free from unauthorized infringement or use and respects others intellectual property rights.

2.4 Responsible related to politics

Practice and Guidance

1) The company operates business with political impartiality without bias and have no interests in pursuing any political party or political authority. The company do not use the financial funds or resources to support, direct or indirect, to any political party or politician.

2) Promote and encourage employees to exercise their political rights independently without obsessing, inducing, intimidating, coercive and engaging in any way.

3. Anti-Corruption

The company is in the process of continuing to operate this matter and in line with the guidelines and other laws relating to the declaration of intent to join the Private Sector Collective Action Coalition against Corruption (CAC) has achieved the company's goals in accordance with the policy and intention of preventing corruption involvement with 3 persons in subcommittees namely: Mr. Singha Nikornpun, Mr. Upakrom Thaweephoke, and Mrs. Sunan Santichotinan to proceed as follows:

1. Draft policies concerning prevention of any corruption involvement.
2. Announce policies concerning prevention of involvement in any corruption.
3. Announce intent to join in the anti-corruption campaign (Collection Action Coalition Against Corruption: CAC)

4. Respect for Human Rights

The company aims to promote and value respect for human rights, everyone's human dignity and treats all the stakeholders, employees, communities, and surrounding society with respect to human values and without violating fundamental rights, which is the cornerstone of human resource management and development. This is an important factor in the business to create added value and increase productivity.

Practice and Guidance

1) The company promotes the compliance with human rights mandate covering to the operation of its subsidiaries, joint venture, and business partners.

2) Protect the personal information of employees in possession or maintenance of the company. Disclosure or transfer of employees' personal information to the public is only with employees' consent.

3) The company encourages and provides opportunities for employees, communities, and society to participate in expression of opinions if there is an act that may violate the human rights.

5. Fair Labour Practices

The company recognizes and values the fair treatment of workers, respects and abides by laws and ethics without discrimination in employment, no forced labor, nor child labors. Employees have freedom in associations along with consideration of health and safety in workplace, improving of the working environment, providing good quality of life, and the opportunity to show their potential and gain opportunities to train and enhance their skills equally. This is considered to be a long-standing and continuous corporate value.

1) The company values employment without discrimination and brings indifferences in racial, religion, gender, age, disability, social status, educational status, or educational institution in considering and judging for the employment.

2) The company treats all employees fairly in providing compensation, migration appointment, and capacity development along with moral development in order to promote talent employees being good citizen of the society such as providing appropriate compensation according to their potential, taking care of pregnant employees with regard to health and safety as priority.

3) The company cares for safety and hygiene of employees and related parties by promoting an instill a sense of safety, occupational health and working environment. According to the safety and occupational health policy the goal is to prevent accidental loss

and occupational illness by developing a work accident prevention plan, promoting engagement, eliminating the risk point and constant updates to create a safety culture at work for employees at all levels and associates.

3.1 The company set up specific department to control and drive safety operations, Occupational health and working environment including the Occupational Health and Safety Management Committee (OCSC), holds meetings at least once a month in order to suggestions for improvement, risk analysis and risk assessment including monitoring the progress of the operations and plans.

3.2 The company has implemented the occupational health actions to assess health risks, Health Risk Assessment (HRA) in order to observe the level of risk to the health of employees to ensure that the employees will be taking care of and manage health risks by receiving the examination of lead in blood level, volatile substances in urine, visual effects, lungs conditions, and hearing capability. The Health check-up results according to risk factors in 2020 found no abnormal employees except hearing capacity of 44 unusual employees. The company has prescribed corrective measures by repeated examinations to confirm the results, and the results of repeated examinations showed abnormal employee hearing performance does not affect the work and daily life. The company has implemented preventive measures by managing to reduce noise levels at the source, including providing appropriate personal protective equipment to employees, and supervising employees to wear loud protective equipment throughout their work, including monitoring the environment according to the standards, and repeated inspections every year. In addition, the company has also created "Hearing Conservation Campaign" for those affected employees.

3.3 The company has launched a "Safety Campaign Program" to follow up and monitor the safety plan and the environment suitable for working standards and relevant rules or regulations. In 2020, the company has implemented the following:

Safety Recommendations from Employees	114 cases
Number of cases approved for adjustment	75 cases
Completed Adjustment	59 cases

In 2020, the company has awarded "Zero Accident" to high risks of accidents functions with total 28 functions participating received awards 19 functions. There are 9 function received Zero Gold Award for those without any accidents from working for 3 consecutive years. By the year 2020, the performance has achieved the target set.

4) The company has provided various welfare benefits such as group life insurance, accident insurance and organ loss from accidents, health insurance, Provident Fund (PVD), Shuttle Bus, free lunch and dinner for over-time working (OT), and health check according to the risks involved, etc. In 2020, there are 440 employees' health checks base on risk factors for 41,020 baht, a financial support to assist the funeral of the parent of the 16 employees, totaling 105,680 baht. In addition, there are also "Tirathai Family Care for Each Other Project" by giving 12 maternity and sick employees for a total of 12,334 baht.

5) The company promotes and supports the education of employees at all levels by establishing a regulation for permission to continue their studies in accordance with the Human Resource Management Regulation B.E. 2551 (2008) to enable employees to learn and increase their potential, as well as to have a good quality of life by allowing employees to take short and long-term leave or training.

6) The Company has organized a Tirathai Savings Cooperative in order to encourage employees to save money and plan to use money following to the Sufficiency Economy Philosophy of His Majesty the King Bhumibol Adulyadej. Tirathai Cooperatives established on 29 March 2006. In 2020, there are 272 members with a total share capital of 37,221,100.00 baht.

7) The company has established a grievance process for employees who were treated unfairly according to Work Regulations B.E. 2551 (2008) in order to strengthen the labor relations that lead to a good understanding between the company and employees and among employees themselves. The company has determined the procedures for the grievance process, investigations, consideration of complaints, and settlement process as well as protection of complainants and related parties, etc.

The number of employees of the Company and its subsidiaries as of 31 December 2019 and 31 December 2020 are as follows:

Company	Number of Persons			
	31 December 2019		31 December 2020	
	Male	Female	Male	Female
1. Tirathai Public Company Limited	360	143	442	154
2. Thai Fin Co., Ltd.,	49	11	56	11
3. Tirathai E&S Co., Ltd.,	23	7	16	7
4. L.D.S Metal Work Co., Ltd.	268	56	202	50
5. L.D.S-N.D.P (JV)	384	46	–	–
Total	1,084	263	696	222
Number of employees by employment type				
Full-time employees	771	220	667	215
Contract employees	313	43	29	7

8) The company gives employees the freedom to express opinions without interference, allows employees to be participate in the Welfare Committee to provide employees with regular information about the company's operations and status, as well as support discussions and cooperation with the Welfare Committee in order to improve the quality of life of employees.

6. Responsibility to Consumers

The company has policy to meet customer satisfaction. Consumers who directly purchase products and services from the company will obtain quality products and services up to international standards at fair and reasonable price. The company pays close attention to the needs and expectations of consumers' responses appropriately and timely manner. In addition, the necessary information gatherings will be utilizing to improve quality of products and services in order to build trust in company's products and services.

Practices and Guidance

1) Assurances of quality and safety of electric transformers

All transformers pass the electrical qualification test before being used, as transformers are peripheral devices in a high-voltage electrical power transmission system. If there is a defect caused by the transformer, it will cause damage to the property, business opportunity as well as harm to users and people involved. The company is aware of such impact and therefore pay close attention to every process from design process, production process, and testing processes of which TRT is capable of testing all transformers in every single test process from Routine Tests, Type Tests, and Special Tests in accordance with IEC60076, IEEE C57.12.90 and TIS 384-2543 standards. There is only short-circuit withstand test will be sent to the KEMA Testing Laboratory in Netherlands. In addition, the company's testing laboratories are appointed by Office of Industrial Products is a central laboratory for testing and certifying by TIS 384-2543 Industrial Standard including ISO 9001, OHSAS/TIS 18001, ISO 14001 and ISO/IEC 17025 Electrical Testing Laboratory and Calibration Laboratory. Electrical testing and calibration laboratories to confirm the quality of production design and ability to check transformers according to international standards before reaching customers.

2) Protection of the Confidentiality and rights of customers

The company has measures to protect customers' confidentiality information including technical information, testing results or any other confidential information. The company has procedures in collecting and sending the information in consideration of customer's confidentiality, and maintain customers' rights such as allowing customers to monitor Witness Test for their own transformers in order to provide confident in the results of the test. In 2020, there are 11 customers attend the Witness Test process.

3) Provision of accurate and sufficient information to customers

Tirathai transformers that have passed the test are labeled with Name plate (product label) of every unit, which will be attached on the tank of the transformer to show the transformer identification details. The details are shown in accordance with the international standard IEC60076-1 and Thai Industrial Standard TIS 384-2543 with the following main details: Standard Number, Manufacturer name, manufacturer serial number, year of manufacture, number of phases, power size, frequency, voltage rating, maximum current, insulation level, weight, etc. These labels inform customers all the details of each transformer. Besides, the user instruction manual and the training for how to use Precautions and Maintenance of transformers for customer before use.

4) Dissemination of knowledge in transformer engineering

The company published an academic journal under the name "Tirathai Journal" with the objective of disseminating knowledge about transformer engineering to those who are interested. The preparation has no commercial purposes and do not reserve the copyright to distribute the content. The Editors and staffs are employees of the company. The publication contains knowledge about electrical engineering, valuable thesis in engineering of students from various universities, including technique of operation and maintenance of transformers, as well as conveying the concept of management philosophy outside the textiles which is another angle that the university has never taught. In addition, the company also aims to make this book eco= friendly and health-conscious to the readers. The cover and contents of the book are therefore printed on paper made from agricultural waste materials with a non-toxic process and use ink made from soybean oil etc. In 2020, the journals distributed to employees and customers Electricity Generating Authority of Thailand, Metropolitan Electricity Authority, Provincial Electricity Authority, various Libraries Universities as well as the general public. Presently, 1,548 volumes are published in the 27th edition, and are available for free download on our website.: www.tirathai.co.th

5) Hearing Opinions

In order for customer to be confident in the quality of the transformers, the company had opened the customer to visit the Production Process, Testing Process, as well as to listen to opinions and exchanging knowledge learning between the company and customer. The various suggestions will be brought into analysis process for improvement, which will lead to better customer satisfaction. In 2020, there are government agencies, including private customers both domestically and internationally, visited the transformer manufacturing process of Tirathai a total of 389 persons such as Metropolitan Electricity Authority, Provincial Electricity Authority, Federation of Thai Industries, Metropolitan Waterworks Authority etc.

6) Satisfaction Survey

The company conducted a satisfaction survey of customers who came to watch the Witness on the satisfaction with salesperson service, satisfaction with test employee, satisfaction with production and testing process, satisfaction with products as well as environment. In 2020, the satisfaction score of Factory 2 was 84.6%, and at Factory 3, the score was 94.8%.

7) Complaint

The company has a process for receiving complaints about the quality of products and services through many channels such as 30 lines of call center, e-mail, and fax. The company has a service team who operate 24 hours call center in response to handle complaints and solving problems quickly.

7. Participation in Community and Society Development

The Company strives to be a good member of society and conduct business by recognizing responsibility to the public, sharing profits in return and creating communities and society for business. In 2020, the company has organized environmental governance projects in conjunction with Bangpoo Industrial Estate by removing wood chips from wooden pallets of transformer insulation paper. It is used to make fences for Rung Thawee Community playgrounds Installed on 28/11/20 with a total of 55.4 meters of fence installation.



Practices and Guidance

1) Learning resources outside the classroom

The Company has a policy to provide the organization as a learning center outside the country's transformer manufacturing engineering classroom. The students are experiencing the production process of electric transformers for both Distribution Transformer and Power Transformer. In 2020, there are students from various educational institutions visited the transformer production process including quality management system, environment and safety up to master degrees. There are total of 264 people, such as Faculty of Engineering Ubon Ratchathani University, Faculty of Science Suan Sunana Rajabhat University, Faculty of Engineering Rajamangala University of Technology Thanyaburi, Princess of Naradhiwas University, Faculty of Engineering King Mongkut's Institute of Technology Ladkrabang, Faculty of Engineering and Architecture Rajamangala University of Technology Suvarnabhumi, etc.

In addition, the company has collaboration program on internships and co-operative education from various universities with an aim of providing students with practical training work experience. In 2020, there are 68 students enrolled for the internship, the total allowances of 690,228 baht.

2) Public Interest Activities

On August 13, 2020, the company offered educational equipment for use in teaching and learning to the Faculty of Engineering, Princess of Naradhiwas University, to be a new learning center for electrical engineering that will take place in the 3 southern border provinces as well.

In addition, on October 9, 2020, the company signed an academic and research cooperation agreement (MOA) on high voltage transformers, smart grid and energy storage system as well as visiting the production and testing of 525 kV transformers with a voltage level of 1000/3 MVA, which are transformers of size and maximum voltage made by Thai people and the Department of Electrical Engineering, Rajamangala University of Technology Thanyaburi.

8. Environmental Management

Environmental management is necessary to carry conjunction with business operations, the company has conducted policy to administer the environment to reduce the potential impacts arising from production processes or activities by adhering to environmentally friendly practices. The company strictly comply with applicable laws and other requirements that will lead to requirements, this will lead to true sustainability for the organization, Community and Society.

Practices and Guidance

1) The company has been certified in accordance with ISO14001 Standard which cover all areas in the company by an assessment of independent external auditors. According to the latest assessment in 2020, there found no deficiencies.

2) The company has taken actions that comply with environmental laws, including monitoring environmental impacts that are carried out. It was found the value of pollution was different and in accordance with the specified environmental standards which can be summarized as follows:

Air Pollution

The company has installed air pollution treatment system, a Bag House Filter System to vacuum dust caused by the process of producing insulation paper. It measures the air quality drained from the insulating paper production process and covers other areas of the process so as not to affect the environment and nearby communities where the results of the inspection are in accordance with the law.

Water Pollution

The company has control and wastewater treatment system, where water used from consumption, it will release to wastewater treatment system. The wastewater discharged from the wastewater treatment system is measured once a month, such as pH, BOD, COD, Oil & Grease, SS, TDS, TKN, etc. The measurement results complying with the laws,

Noise Pollution

The company measures to check volume of the noise level and the source of the sound comes from the operation of the machines; therefore, in consideration of effects that may affect employees, and nearby community, the company check volume of the noise level is measured at least once a year, average 8 working hours measurement. The measurement results are in accordance with the laws.

Industrial Waste

The company has a process for handling waste generated from the production process by sorting waste into 3 categories as follows: 1. General waste 2. Recycled waste 3. Hazardous waste. For hazardous waste, the company has hired a licensed agency from the Department of Industrial Plants collect, transport, treat and dispose of sewage or unused materials according to the type of waste. In addition, in order to ensure confidence in the waste management process that the contractor brings out of the factory, the company has sent professional safety officers to inspect the landfill process and sorting debris contaminated. On February 11, 2020, they have examined West 2 Energy Company Limited and AK Mechanical and Recycling Company Limited. In 2020 the company has joined the 3 R project in collaboration with the Institute of Water and Environment For sustainability Federation of Thai Industries to carry out new innovation development projects from materials that are not used by 3R clean technology. Tirathai Public Company Limited has participated in this project and being one of the 10 pilot plant operators who have been selected to participate in the project. The company has sent the waste (sawdust, wood chips) to be processed into more value-added products than scrap as well as reducing the cost of disposal. The result of the waste processing was RDF TYPE 2 (briquette fuel) and by participating in the project, the company received an award for Innovative development from waste materials by clean technology 3R



โครงการพัฒนาสร้างสรรคนวัตกรรมใหม่จากวัสดุที่ไม่ใช้แล้ว โดยเทคโนโลยีที่สะอาด 3R



บริษัท ทิระไทย จำกัด (มหาชน) ประกอบธุรกิจผลิตหม้อแปลงไฟฟ้า เพื่อจำหน่ายทั้งในประเทศและต่างประเทศ รวมถึงการให้บริการติดตั้ง ซ่อมบำรุง และทดสอบหม้อแปลงไฟฟ้า ได้อย่างมีประสิทธิภาพ การจัดการของเสียตามหลัก 3Rs โดยเทคโนโลยีที่สะอาด มาสร้างสรรคผลิตภัณฑ์ใหม่



ผลิตภัณฑ์หม้อแปลงไฟฟ้า

วัสดุเหลือใช้ที่นำมาพัฒนา



ขี้เลื่อยและเศษไม้พาเลท



วิธีการจัดการในปัจจุบัน
↓
คัดแยกเพื่อจำหน่ายต่อ

แนวทางและศักยภาพพัฒนาผลิตภัณฑ์ใหม่ตามหลัก 3Rs

1. RDF (Refuse Derived Fuel: RDF) จากขี้เลื่อย RDF type 2 Coarse RDF คุณภาพสูง ผ่านเครื่องย่อย-คัดแยกชนิดและขนาด 90-150 มิลลิเมตร ค่าความร้อนสูง
2. สารปรับปรุงดินอัดแท่ง (ขี้เลื่อยผสมกับมูลสัตว์)



1. ขี้เลื่อย



3. RDF type 2



2. เครื่องอัดเชื้อเพลิง



4. สารปรับปรุงดินอัดแท่ง



สำนักงานอุตสาหกรรมจังหวัดสมุทรปราการ

3) The company has been certified for Green Industry Level 4, Green Culture from the Green Industry Promotion and Development Bureau, Ministry of industry. The goal of creating a green culture under the "Smiling Garbage" program to encourage all employees to be conscious of waste sorting and environmental protection.

4). In 2020, the Company has no environmental complaints or actions that are inconsistent with the law both internally and externally.

9. Innovation and dissemination of innovation from Corporate Social Responsibility (CSR)

The company brings knowledge, creativity, and experience from business operation combined with the Sufficiency Economy Philosophy that is beneficial to the economic and society to develop, deploy and innovate to create business innovations that can benefits, increase competitiveness as well as create value added for business and society at the same time

Practices and Guidance

Testing transformers is an important process used to determine the quality of transformers in order to build trust and acceptance from customers. Tirathai has long used knowledge, creativity and experience from business operations combined with sufficiency economy philosophy and innovated by developing transformer testing and calibration laboratories according to international standards, such as IEC, IEEE, ANSI, etc. Currently, Tirathai Transformer Testing Laboratory can test transformers up to 900 MVA 3 Ph 50 Hz 550 kV and be certified in the scope of testing:

1. Lightning Impulse Tests
2. Line Terminal AC Withstand Test
3. Switching Impulse Test

According to the IEC 60076 standard, added to the original test list, the company's electrical testing laboratory has been certified to meet the required transformer testing capabilities. In addition, Tirathai's electrical testing and calibration laboratories are certified to meet the standards of laboratory competencies. ISO/IEC 17025:2017 from the Office of Industrial Product Standards (TISI), which can create competitive opportunities both domestically and internationally.

Tirathai's development of transformer testing capabilities is considered as an investment in human resources development of the company to be viable with knowledge of high voltage electricity knowledge that can be applied to testing of other devices such as power cables, traps equipment, overvoltage etc., supports research and development work for other industries Tirathai Testing and Calibration Laboratory has also been designated by the Office of Industrial Product Standards (TISI) as a third party testing center for electrical transformer testing.

In addition, the company has upgraded the production process to be able to produce transformers to cover the country's electricity system and the entire Asian Power Grid systems supporting the country's future renewable energy projects. This is also the preparation of the country's electrical infrastructure to have potential sufficient to compete in the economy under the ASEAN Economic Community framework. The company produces 6 of 333 MVA 525 kV transformers to improve the electrical power transmission system structure in Northeastern region, Lower North Central, and Bangkok to enhance the stability of the electrical system for the Electricity Generating Authority of Thailand. This is the first Thai manufacturer of transformers who can produce power transformers at this level.

10. Preparation of Social and Environmental Reports

The company places great importance on disclosure of information that reflects its full compliance with the Corporate Social Responsibility (CSR) guidelines. The disclosure of information will be beneficial to all stakeholders. The Company has organized the Carbon Footprint Project of the organization, which started the project in 2017 onwards with the goal to reduce carbon emissions by 5% by the year 2027. By 2020, emissions have been reduced by 4.3%, which is expected by 2027 the company will achieve operating results according to the target.

Practices and Guidance

1. The company has prepared a CSR report on social and environmental performance which is specified in the annual report and published the information on the website. www.tirathai.co.th with content covering the following sections:

1.1 Business Operation. The company operates businesses in accordance with the applicable laws and regulations. Transparent Disclosure of important information is subject to good corporate governance policy taking into account of the benefits to shareholders, employees, communities and society, business partners, customers, competitors, creditors and all stakeholders as well as being a good member of the society and conducting business with awareness of corporate responsibility.

1.2 Environmental and Safety Operations. The company is committed to environmental and safety operations taking into account of safety at work, good health of employees, and appropriate environment protection. These are considered as part of business operation, therefore, the company has established an Environmental Management System (ISO 14001), Occupational Health and Safety Management System (OHSAS /TIS 18001), as well as production process waste management process in accordance with the law and in line with other relevant requirements.

1.3 Social Operations. The company treats all employees fairly in term of employment without violating fundamental rights, and provides appropriate compensation and welfare suitable to meet the needs of employees, the development of employee potential in accordance with the organization's values. In addition, the company is a learning center for transformer engineering in the country. Each year, students from many various educational institutes has the opportunity to visit the transformer production process as well as collaborating to support the knowledge and equipment for the establishment of high voltage electricity laboratories. The company also offer project for internships and cooperative education, which shows that Tirathai is more than an electric transformers manufacturer of Thai people, but also participating in promoting the education of Thai people.

2. The company has provided various information dissemination for easy access to the company information. The company prepares Corporate Social Responsibility (CSR) report in both Thai and English through the following channels via Annual Report, and the disclosure of information via website www.tirathai.co.th and Form 56-1.