TPI POLENE POWER Public Company Limited

CLEAN & GREEN

RENEWABLE ENERGY

Sustainability Report 2021

TPI POLENE POWER Public Company Limited


ESG
Environment
Social
Governance

TPIPP

Environmental Dimension

“Upgrading clean energy production while alleviating environmental problems to achieve the goal of net zero greenhouse gas emissions and moving towards sustainable development”

Social Dimension

“Promote creativity and improve the quality of life of stakeholders and strengthen Thai society based on sustainable growth”

Governance Dimension

“Committed to operating the power generation business with the highest efficiency under good corporate governance”

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Message from the Board of Directors

Climate change situation has become so increasingly severe that many countries have worked together to find solutions to solve these problems. These problems have inevitably impacted stability and the future existence of humanity. As a result, countries need to adjust their business concepts to reduce carbon dioxide emissions that cause global warming. In line with these adjustments, TPI Polene Power Public Company Limited is one of these companies that have been aware of these principles and goals. Throughout the past, The Company has focused on renewable waste-to-energy power plants which contribute to solving climate change and global warming problems.

Towards ESG to reduce greenhouse gas emissions for sustainable development
"CLEAN & GREEN ENERGY PRODUCER FOR OUR HEALTHY COUNTRY"

TPI Polene Power Public Company Limited ("Company") is a leading operator of Municipal Solid Waste (MSW)-fired power plants in Thailand, with the largest and most successful waste-to-energy power plant operations in the country and in the ASEAN region. It is the largest municipal waste disposal plant in Thailand and the largest single-location municipal waste disposal facility in the world. At present, The Company produces power by using the amount of MSW disposal of approximately 14,400 tons per day, instead of using coal, resulting in The Company being the largest community waste disposal plant located in the same area in the world (Thailand has community waste or municipal solid waste of about 70,000 tons per day). The Company's waste fuel plants were able to dispose of 2.19 million tons of municipal waste in 2021 to be used as waste fuel to produce power for The Company and to produce cement for TPI Polene Plc.

Throughout the past, the Company was one of the leading organizations focusing on power plants using waste fuel, which helps reduce CO2 emissions and decrease global warming. This sustainable growth can be achieved by linking the Sustainable Development Goals (SDGs) with corporate strategy to grow in all areas, including on the economy, the environment and society, and with an emphasis on good corporate governance (Environmental Social Governance: ESG) in order to manage the business for the benefit of all stakeholders in a

In 2021, the Company operated its business in many important areas as follows:

Environmental Dimension

TTPI Polene Group always pledges its commitment to continuously pursue and research innovations for its waste-to-energy power plants, waste heat-to-energy power plants, and alternative power plants to enhance maximum efficiency and safety to serve the need for clean power energy and reduce the use of energy from fossil fuels. This is part of our commitment to the preservation of the environment. TPI Polene Group aims to be a Net Zero Greenhouse Gas Emission Producer by using 90-100% of the Company's waste fuels instead of fossil fuels in its power production and using 30-40% of waste fuel in the cement plants of TPI Polene Plc. The Company also implemented environmentally friendly low-carbon production processes that helped alleviate the PM 2.5 problem and the overall global warming problem caused by greenhouse gases, and waste problems in communities. The Company aims to be the country's community waste disposal plant to tackle climate change due to greenhouse effects.

By the end of 2021, the Company was certified by TGO of the amount of greenhouse gas reductions (carbon credits) from the project to use community waste as fuel, amounting to 59,526 tons of carbon dioxide equivalent. The Company is in the process of being registered with TGO (for the project to use waste as fuel) to certify the amount of greenhouse gases that have been reduced (carbon credits) for approximately 709,752 tons of carbon dioxide equivalent.

In 2021, the Company reduced greenhouse gas emissions by 5.08 million tons equivalent (registered carbon credits were in the process of being approved by TGO) from the amount of waste that has been sorted for use as fuel, about 2.19 million tons.(reducing landfills which leads to greenhouse gas emissions).

From October-December 2021, the Company disposed of solid waste infected with COVID-19 (a total of 3,892 tons) by properly burning it every day during the COVID-19 pandemic.

For business development plans, the Company has projects to improve a coal-fired power plant (TG7) to switch from using coal fuel to 100% waste fuel (in 2022-2023) and 90-100% waste fuel for a coal-fired power plant (TG8) (in 2024-2025). As a result, the Company will become a carbon-free power producer from waste fuel.

Social Dimension

The Company continues to operate its business by emphasizing a balanced responsibility towards all stakeholders in various issues such as creating good returns for shareholders, consideration of human rights, protection of labor rights, proper payment of labor compensation, occupational health and safety, and creating a good working environment, proper management and development of staff member's abilities and skills using virtual classrooms, etc.

TPI Polene Power Public Company Limited joined forces to alleviate the suffering of society, our communities, and employees due to the spread of COVID-19 in 2021 through social assistance projects, in the amount of approximately Baht 126.04 million. These projects include: supported the Respiratory Extension Project for the purchase of "High-flow machines" to the Siriraj Foundation; supported a mobile X-ray truck for Chana Hospital, Songkhla Province to help visiting villages in the south; supported a high-flow oxygen machine, Powered Air Purifying Respirator (PAPR), negative pressure stretcher, and ISOLATOR, etc., for Songkhla Provincial Public Health Office to be used in six hospitals, namely Jana Hospital/ Somdet Na Nathawi Hospital/ Thepha Hospital/Saba Yoi Hospital/ Sadao Hospital/ Padang Pesar Hospital; and supported an excellent mobile vehicle for Songkhla Nakarin Hospital, Faculty of Medicine, Songkhla Nakarin University; donated TPI Polene bio-sanitary products to medical personnel, front-line staff, and COVID-19 patients, such as Siriraj hospital, field hospitals at 14 locations in Saraburi province, police hospitals; supported TPI boards to build the shower rooms for Busarakham field hospital (Muang Thong Thani); supported the construction of a field hospital of Lerdsin hospital; supported 31,000 boxes of rice boxes to medical personnel at the Central Bang Sue Vaccination Service Center including providing rice, dry food and bio-sanitary products of the TPI Polene Group to the Songkhla Provincial Administrative Organization and people in the areas of Na Thap, Taling Chan, Sakom and Chana, Songkhla Province

In addition, TPI Polene Group also provided testing equipment for all employees to get tested for COVID-19 including the provision of vaccines against the coronavirus for all employees. TPI Polene Group also continuously provided sets of TPI Polene bio-sanitary products for employees and their families so that they could maintain good health and immunity against COVID-19.

Governance Dimension

In 2021, the Company commenced operations of a MSW-fueled power plant, Plant No. 2, with 4 additional production lines (Production line 10-13) with installed capacity of 2,400 tons of MSW fuel per day. The Company's waste fuel plants were able to dispose of 2.19 million tons of municipal waste in 2021 to be used as fuel instead of coal. In 2021, the Company was selected to implement MSW-fired power plant projects in Songkhla (7.92 MW) and Nakhon Ratchasima (9.9 MW) provinces with a total power sales volume of 17.82 MW (Currently, the Company is in the process of preparing the Environmental Impact Assessment Report in parallel with the power plant contractor company to survey the area to design the power plant construction). In 2022, the Company has a project to operate another waste fuel production plant, Plant No. 3, with 5 additional production lines (Production line 14-18) with installed capacity of 4,500 tons of MSW fuel per day, to feed waste fuel to the Company's coal-fired power plant (TG7 & TG8), which will switch from using coal to 100% waste fuel, resulting in the Company having a total installed capacity of 11,700 tons of waste fuel per day, which is equivalent to the amount of waste disposal of 23,400 tons per day.

The Company therefore has a plan to invest in the Southern Seaboard Development Project or Prototype City of Advanced Futuristic Industries (PAFI) in Chana District, Songkhla Province, with an investment value of approximately Baht 300 billion, to develop in areas such as the Future Industrial Estate Project and in the agriculture industry (excluding the petrochemical industry). The "Zero Pollution Clean & Green Energy" Power Plant Project includes a clean energy power plant, a deep seaport, and a distribution center, and a smart city building project. The Company expects that such an investment will increase the potential for economic, social, and resource

"The Company continues to operate its business by emphasizing a balanced responsibility towards all stakeholders in various issues such as creating good returns for shareholders"

utilization for maximum benefit along with minimizing environmental impact both on land and at sea. The Project will consider all stakeholders to improve the economic and social conditions in the southern border provinces.

With a determination and focus on work processes that create sustainable growth, in 2021, the Company was granted a Green Industry Certificate Level 4 by the Ministry of Industry for its power plants. The Company was also named one of Asia's Most Influential Companies 2021 and received a Asia Corporate Excellence & Sustainability Award (ACES), organized by the MORS Group, in the category of organizations that specialize in waste-to-energy power plants. The Company also has a business model in accordance with Bio Circular Green ("BCG") and Environmental Social Governance ("ESG") guidelines. In addition, the Company, which has the largest waste-to-energy power plant in the ASEAN region, has been awarded the Most Innovative Initiative Towards Waste Processing Plant 2021 by International Finance Magazine (IFM), the leading global business and finance magazine. The Company was also included on the ESG100 Sustainable Securities List for 2021, and was recognized as an outstanding organization for environment, social, governance and sustainable growth by the Thaipat Institute. In addition, the Company received the ESG performance award at the Gold Level from the Thaipat Institute, which measures 30 ESG indicators from WFE ESG Metrics of the World Federation of Exchanges in 2021. The Company is determined to operate its business according to good corporate governance models, the rule of law, transparency, fairness, social, cultural and environmental responsibility. The Company also works to enhance sustainable development for our personnel, customers, communities, and all our stakeholders. Under the management, in accordance with good governance and ideology, all employees follow the Employee Handbook attached herein.

On behalf of the Company, the Board of Directors would like to take this opportunity to thank all related parties for their ongoing support and trust in the Company to create continuous progress for the organization and to motivate the management team and all levels of the Company's staff to overcome obstacles to achieve the goal of building stability in the organization with integrity, enhance the economic strength of the country, and support the public well-being and consistently protect the surrounding environment to further enhance the sustainable growth of the country.

Sincerely Yours,

Mr. Prachai Leopairatana
Chairman

Announcement
Issue no. 1/2022
Subject: Principles of employee duties

For success in creating sustainable business growth of The Company, TPI Polene Group adheres to Environmental, Social and Governance (ESG) criteria, (Environmental, Social, Corporate Governance), by embracing the Bio Circular Green Economy as a sustainable business model under the standards of good corporate governance. In carrying out their duties and responsibilities, all employees are required to work under Four Rddhippada: Basic For Success 4, which consists of the follows:

1. Chanda : (Aspiration) - Intention or purpose or desire or zeal. The need to do and always be willing to do what is assigned and aspi re to make it work even better.
2. Viriya : (Effort) or energy or will.
3. Citta : (Concentration) - Consciousness or mind or thoughts, to concentrate on work
4. Vimansa : Planning, checking results, good governance, research and development.

With a committed heart to create a balanced happiness with a better quality of life in a sustainable manner pursuant to the Four Sublime States of Mind, which consists of the following:

Metta : Mercy

Karuna : Kindness

Mudita : Sympathetic Joy

Upekkha : Equanimity

Announced on January 5, 2022

(Prachai Leophairatana)
Chairman

Note : This principle of living follows the metaphysical concept of the Four Noble Truths.

Brahma–vihara 4
(FOUR SUBLIME STATES OF MIND)

Metta	(Mercy)	Love, desire for others to be happy.
Karuna	(KINDNESS)	Desire to get others out of their sufferings
Mudita	(SYMPATHETIC JOY)	Pleasure that comes from delighting in other people's well-being, even if one did not contribute to it.
Upekkha	(EQUANIMITY)	Even-mindedness and serenity, treating everyone impartially.

Iddhipada 4
BASIS FOR SUCCESS 4

Chanda	(ASPIRATION)	To be content and happy in doing good deeds with enthusiasm and strong intention.
Viriya	(EFFORTS)	Diligence, patience, commitment, endurance, willingness to work hard and to never give up; having the courage to tackle any obstacle and having the courage to make changes.
Citta	(CONCENTRATION)	Consciousness of the senses, subconscious mind and intellect, is of immense power
Vimamsa	(R&D)	Involves conducting an investigation or discrimination, a plan, a measure, an invention of a solution.

The Principles of Iddhipada 4 : Path of accomplishment in work, which consists of the following

Chanda (Aspiration): Satisfied with the work we're performing.

Firstly, we need to explore ourselves for what kind of job we like or what areas of work we have faith in, and then go down that path. We can start easily by questioning ourselves about what we work for and whether we are happy if such a job is not a job we love. In case we have time to find and adjust ourselves or adapt our faith to our work.

Viriya (Efforts) - Diligence about work

All work that can be done requires diligence. Viriya is another tool that can lead to success. The more we work hard, the rewards we receive are even more. More importantly, Viriya can be achieved with the love of work, not just dedicated to work to live but virility is a self-training one.

Citta (Concentration)

The mind that focuses on work is completely good for the work that is done. Chitta is Thamma that represents consciousness, prudence, and responsibility and helps us to work without distractions. Once we have both Chanda and Viriya, Chitta can be considered as the fence of a path that does not distract us from success.

Vimansa Contemplation and use of wisdom to monitor the work.

The best way to get the job done is in this last element of the basis for success 4. Vimansa means contemplate, working with wisdom and thinking with the brain, not just working on it. Reconsidering ourselves steadily about what we have done all day, summarizing the reasons why we have done everything we did today, so we can be encouraged in the fol lowing days and know that we're not going to repeat our mistakes, and we can see a way to see which paths will actually lead to success.

Therefore, if Iddhipada 4 (Basis for Success 4) is applied at work, if we love the work, work hard, and take responsibility for the work and know how to contemplate carefully, the way to success is not beyond our reach (Source: Division of Planning, Office of the President, Maha Sarakham University). This is the main principle of Iddhipada 4 and is the way to succeed at work, a commitment to creating balanced happiness with a sustainable quality of life.

FOUR NOBLE TRUTHS

Heart of Buddhism (Ariyatham to the Cessation or Extinction of Suffering)

❖ The basic doctrine of Buddhism is the noble path leading to the complete destruction of suffering. ❖

1. Dukkha (Suffering)
2. Samudaya (The Cause or Origin of Suffering)
3. Nirodha (The Cessation or Extinction of Suffering)
4. Marga (The Path leading to the Cessation or Extinction of Suffering)

1. DUKKHA

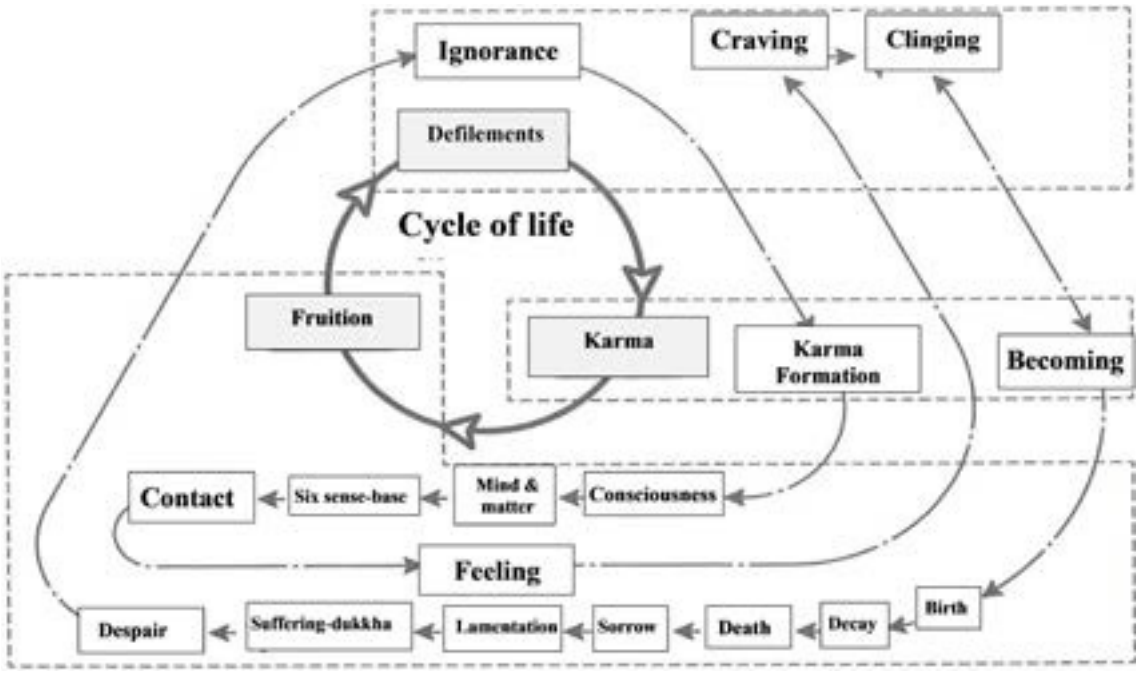
UNSATISFACTION, SUFFERING, PAIN

The word suffering in the heart of Buddhism does not just mean “suffering” in Thai as it is understood. It also means difficult conditions to endure in the same condition and clinging to impermanent states and things or stressful conditions.

2. SAMUDAYA

THE ORIGIN OR ARISING OF DUKKHA

Consideration of Patiicca-samuppada: Cause of Suffering. Paticca-samuppada or the Law of Dependent Origination is the Dhamma or natural law



3. NIRODHA
(EXTINCTION OF SUFFERING)

The Cessation or Extinction of Suffering can be attained by the renouncement or letting go of Tanha.

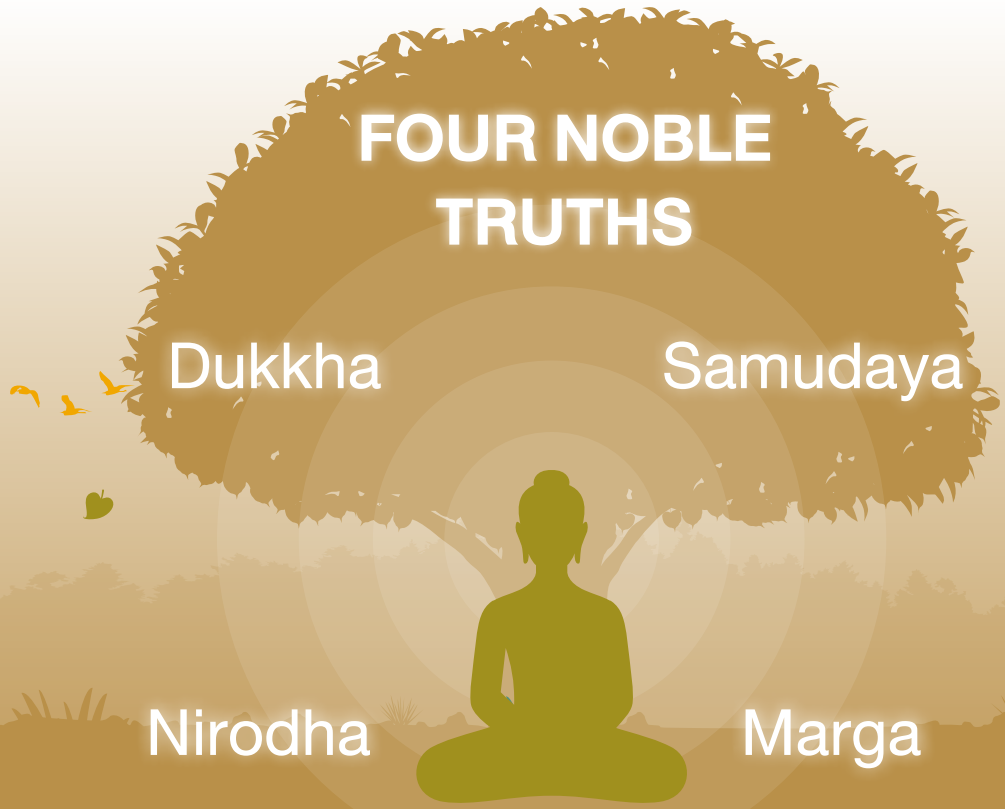
4. MARGA
(THE NOBLE EIGHTFOLD PATHS)

The Path leading to the Cessation or Extinction of Suffering

1. Right view
2. Right intention
3. Right speech
4. Right action
5. Right livelihood
6. Right effort
7. Right mindfulness
8. Right concentration

❖ **Chants Conquering the Evil : Panjamare Chino Na Tho** ❖

Panjamare Chino Natho Patto Sampothimuttaman
Chatur Satjung Pakaseti Thammajakang Pawattayi
Etena Sajjavajchena Hotu Me Chayamankalang



MARA 5 (What Kills a Person to Die from Goodness)

THE EVIL ONE, THE TEMPER, THE DESTROYER

- The MARA of Defilement
- The MARA of Aggregates
- The MARA of Karma Formations
- The MARA of Deity
- The MARA of Death

After conquering the five MARA,
the Buddha enlightened us with the Four Noble Truths.

Note

1. MARA (The Destroyer) is something that depletes one from his virtues or noble results or something that consumes virtues or prevents one from attaining good results.
   1. MARA of Defilement — is love, greed, anger, delusion, evil spirit.
   2. MARA of Aggregates — is something that destroys one's Aggregates, makes him painful, sick, crippled, depriving one of the opportunity to do good deeds.
   3. The MARA of Karma Formations — is the thought, emotion, and karma cultivator that prevents one from avoiding the suffering in samsara or rebirth of one in 31 places of existence.
   4. The MARA of Death — is death that deprives one of the opportunity to do good deeds.
   5. The MARA of Deity is an evil deity who — is powerful and inspires one not to do the good deeds.

2. Five Khandha (Five Groups of Existence or Five Aggregates) are the five aggregates of form and abstract that make up the collective units which are ordinarily called animals, persons, beings, he, we, etc. The five components incorporated into life.
   1. The corporeality group (rupa-kkhandha) — is the aggregate of form which is the mixture of earth, water, air, and fire elements such as hair, skin, bone, and blood.
   2. The feeling group (vedana-kkhandha) — is the aggregate of processing feelings such as happiness, suffering, or indifference.
   3. The perception group (sanna-kkhandha) — is the aggregate that remembers what one received or felt. It is the part that defines or perceives the meaning of what have known (Arrom 6) such as white, green, black, red, etc.
   4. The mental-formation group (sankhara-kkhandha) is the aggregate of thought to identify what you feel and remember whether it good or bad or indifferent, neither good nor bad. The mind was led by intentions to be good or bad or upyakrit (neither good nor bad) such as kaya-sankhara (physical intent), vajee-sankhara (verbal intent), and mano-sakhara (mind intention).
   5. The consciousness-group (vinnana-kkhandha) is the aggregate of cognition or knowing of things through the six senses including the eyes, ears, nose, tongue, body and mind.

   The Five Aggregates are abbreviated into two groups, namely the abstract and the form (Rupa Khandha).

3. Apisankhara 3 is the thought, emotion, and karma cultivator, comprising:
   1. Punyaphisangkhara — is a thought that enhances good karma (merit).
   2. Apunyaphisangkhara — is a thought that enhances evil karma (sin).
   3. Anenchaphisangkhan — is a thought that is calm, unable to be upset or excited.

4. Fetter is the defilement that binds the animals to suffering or defilement that binds the mind to the cycle of defilement, karma, and the result of karma. There are 10 fetters:

   ❖ Otingiyat Sangyojan, Sangyot, Low 5 Frustration ❖

   1. Sakkaya-ditthi : One has the view that the five aggregates are self.
   2. Wichikitcha : One has doubts about the virtues of the Three Jewels, namely the Buddha, the Dharma, and the Sangha.

3. Silappatapramas : One adheres to the sacred things or customs by believing in magic which is not Buddhism or adheres to the wrong practices, which is not the aim of Buddhism.
4. Kamaraka : One has contentment in sensual pleasures or lust.
5. Vengeance : One adheres with anger.

❖ Udhamphakiyasayojana or the Five Higher Fetters are: ❖

1. Rupa-raka : One has greed for material existence or attachment to realms of form.
2. Arupa-raka : One has greed for immaterial existence or attachment to formless or abstract realms.
3. Mana : One has conceit or pride with the feeling of being better, worse, or equal with others.
4. Uttacca : One is distracted or restless.
5. Avijja : One has ignorance of the Four Noble Truths.

Phra Sodaban is the one who puts an end to all of the first 3 fetters, namely Sakkaya Ditthi, Vicikiccha, and Silabbat Pramas.
Sakathakami is the one who puts an end to all of the first 3 fetters, and reduces lust and anger.
Anakami is the one who puts an end to the 5 lower fetters.
Arahant is the one who puts an end to all 10 fetters.

5. Sankhara is Body and Mental Formations, together with Volitional Formations and Volitional Activities. Sankhara also means “formations” or “that which has been put together” of all, including ingredients, decorations, parts of the body, mind, life, spirit, all things that make up the world. (Volitional Formation is what our brains think. The more we think, the more formations follow like a shadow following our body. What is in the brain will be expressed through words and actions, which is karma. Since our minds are endlessly concerned or embellished, we commit karma endlessly, resulting in us being reborn indefinitely). In the Trinity (Trilak), sankhara is the thing which is being formed or improvised, which is all the mind and forms.

[Paticca-samuppada (the Dependent Origination; conditioned arising) Sankhara 3 is :

1. Kayasangkhara : bodily formation, bodily volition
2. Vajisangkhara : verbal formation, verbal volition
3. Manosangkhara : mental formation, mental volition]

Sankhara has three qualities known as trilak (three marks of existence) as follows:

1. Anicca : Impermanence
2. Duhkha : State of suffering or being oppressed, state which cannot stand in its original condition, state that will deteriorate because of being oppressed by Anicca.
3. Anatta : No real self, incapable of being in power.

The opposite of Sangkhara is Wisangkhara. Wisangkhara is Nirvana, which is eternal. It leads to nicca, sukhang, anatta (dharma).

Awards That Made Us Proud Y2021

- **Thailand Voluntary Emission Reduction : T-VER**
  The Company registered Thailand Voluntary Greenhouse Gas Emission Reduction (T-VER) for the project to convert municipal solid waste into fuel by Thailand Greenhouse Gas Management Organization (Public Organization) or TGO.

- **Low Emission Support Scheme : LESS**
  The Company implemented projects to support greenhouse gas reduction activities such as Light bulb replacements at Turbine (TG1-7) and Cooling Towers which were assessed to reduce greenhouse gas emissions by 280.013 tons CO2 equivalent (April 1, 2020 – February 28, 2021).

- **The Company was accredited with the management system according to International Organization for Standardization (ISO)**
  by Socotec Certification (Thailand) Co., Ltd.

- **ESG100 2021:**
  The Company was on the Top 100 Sustainable Securities List for Outstanding Organizations for Environment, Society, Good Governance and Sustainable Growth, out of 824 companies by the Thaipat Institute.

- **CSR-DIW Award and CSR-DIW Continuous Award**
  The Company complied with the responsibility of industrial businesses towards society by the Department of Industrial Works, Ministry of Industry.

- **Green Industry Award Level 4 and Level 3 for**
  - TG Power Plants 1, 2, 3 received GI Level 4 certification, Green Industry Level: Green Culture, which means that everyone in the organization cooperates with one another, operates in an environment-friendly manner in all aspects of business operations until it becomes part of the corporate culture.
  - TG 4, 5, 6, 7 and 8 Power Plants have been certified GI Level 3, Green Industry Level 3: Green System, which is a systematic environmental management with monitoring, evaluating and reviewing for continuous improvement including certification of various environmental standards.

- **Thailand Energy Awards Outstanding Award for Renewable Energy by the Department of Alternative Energy Development and Efficiency, Ministry of Energy**
  - The On-Grid Transmission System Projects, Waste-to-Energy Power Plant 20 MW, Waste-to-Energy Power Plant 60 MW, Waste-to-Energy Power Plant 70 MW.
  - The Off-Grid Transmission Line Projects, the renewable fuel from Community Waste Project 2
  - Renewable Energy Application Project (project to increase efficiency and reduce downtime of renewable fuel waste power plants, 60 MW)

THAILAND ENERGY AWARDS
CREATIVE ENERGY CATEGORY

ASEAN CENTRE FOR ENERGY • ACE •
ASEAN Centre for Energy
One Community for Sustainable Energy

- **ASEAN Energy Awards by the Department of Alternative Energy Development and Efficiency, Ministry of Energy**
  - 1st - Runner-up: Renewable Energy: The On-Grid Transmission System Projects, Waste-to-Energy Power Plant 60 MW
  - 2nd - Runner-up: The Off-Grid Transmission Line Projects, the renewable fuel from community waste project.

- **Gold Level ESG**
  The Company received the ESG Performance Award at the Gold Level from the Thaipat Institute, which measures 30 ESG indicators from WFE ESG Metrics of the World Federation of Exchanges.

- **Asia's Most Influential Companies**
  The Company was also named one of Asia's Most Influential Companies 2021 and received the Asia Corporate Excel lence & Sustainability Awards (ACES) organized by MORS Group, a media organization from Malaysia.

- **Most Innovative Initiative Towards Waste Processing Plant**
  The Company has been awarded the Most Innovative Initiative Towards Waste Processing Plant 2021 by International Finance Magazine (IFM) from the UK, (no award given yet)

- **"Sustainability Disclosure Acknowledgement" Award**
  The Company received "Sustainability Disclosure Acknowledgement" Award 2021, by the Thaipat Institute to encourage listed companies and business organizations that are members of the Sustainability Disclosure Community (SDC) to realize the importance of dissemination of operating information, including economic, social, and environmental or (ESG) issues.

General information of TPI Polene Power Public Company Limited

Background

TPI Polene Power Public Company Limited or TPIPP, (102-1, 102-5) a subsidiary 70.24% held by TPI Polene Public Company Limited or TPIPL, was listed on the Stock Exchange of Thailand on April 5, 2017, with registered capital of Baht 8,400,000,000 consisting of ordinary shares 8,400,000,000 shares.

The Company is a power plant operator in Thailand, with the largest waste-to-energy power plant operations in the country in terms of installed waste-to-energy power generation capacity, according to AWR Lloyd, and is the largest waste-to-energy power producer in the ASEAN region. The Company operates three types of power plants, namely, waste-fired power plants, waste heat recovery power plants, and coal-fired power plants.

TPIPP Business Overview

http://www.tpipolenepower.co.th/index.php/th/

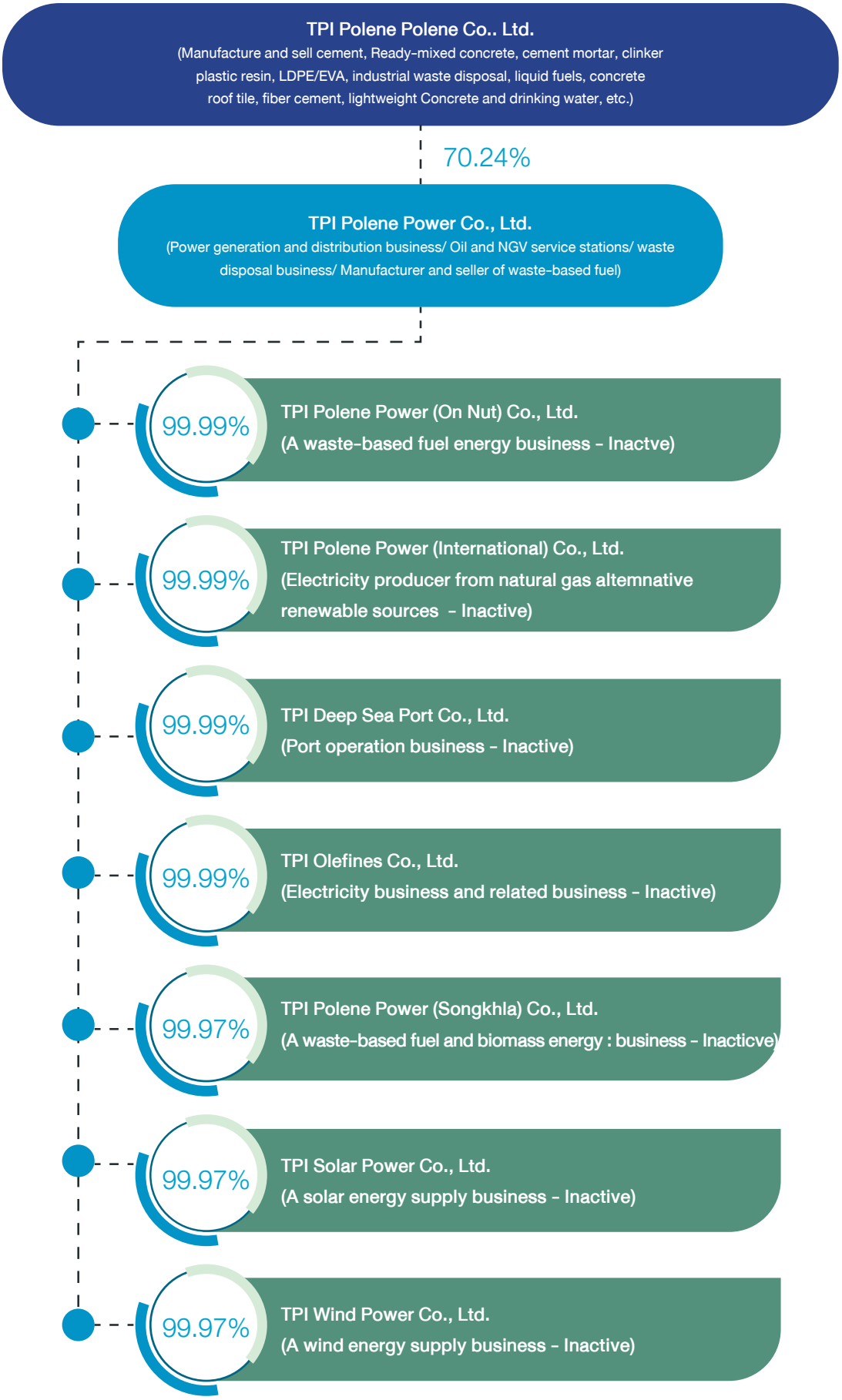
Product of TPIPP

http://www.tpipolenepower.co.th/index.php/th/th-product/energy-utilities-business/electric-energy

Projects at Chana

http://www.tpipolenepower.co.th/index.php/th/pafi

Shareholding Structure



Policy, Vision and Mission (102-16)

Core Competencies : TPI Polene Power Public Company Limited is a leader in the production of electricity using quality and standard renewable energy, with the focus on the continuous development of technology and personnel and generating maximum returns for shareholders and employees, and managing the organization with ethical principles and good governance.

Policy: TPI Polene Power Public Company Limited is committed to doing business in accordance with corporate governance models, focusing on the rule of law, transparency, fairness, social, cultural, and environmental responsibility, while enhancing sustainable development for all our personnel, customers, communities and stakeholders under an administration that complies with good governance and ideology.

Vision : The Company is determined to maintain its position as a leader in the business of power generation using clean and efficient renewable energy sources, a "Clean and Green Energy Producer", and focuses on technology development and innovation in all areas of operations to be the largest waste disposal plant in the country and in the ASEAN region, and to reduce the problem of greenhouse gas emissions to zero or net negative. In addition, The Company intends to operate its businesses by adhering to the principles of environmental, social, and good corporate governance and responsibility.

Mission

1. Support local communities to process communities waste into fuel properly and effectively.
2. Develop production technologies to adapt to characteristics of waste in Thailand and reduce the cost of waste fuel.
3. Improve the production efficiency of power plants including designing and installing equipment to be in a ready-to-use condition to prevent any problems. If there are any problems, they can be solved quickly.
4. Generate power from renewable energy using fuel from community waste to support foundational economy, instead of using coal, to reduce the problem of greenhouse gas emissions.
5. Promote and develop the potential of personnel to drive the organization to be competitive.
6. Maintain compliance with BCG (Bio-Circular-Green Economy) standards for environmental impact management including making the most out of waste and implementing a Zero Waste policy.
7. Conduct business with balanced responsibility for all stakeholders and develop society in parallel with sustainable organizational development.

Nature of Business (102-2, 103-4, 102-6, 102-7)

The Company operates in two categories: the energy and utilities business and the fuel and natural gas station business, operated only within Thailand. Details are as follows:

1. Energy and Utilities Business consists of

1.1 Power plants

The Company currently operates three types of power plants:

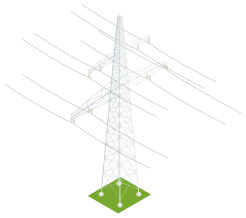
(1) waste heat recovery power plants, which use waste heat emitted during TPIPL's cement production process to generate power; and

(2) waste fuel-fired power plants, which generate power by burning combustible waste known as waste fuel as the primary fuel.

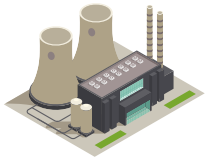
(3) coal-fired power plant. The Company believes that its waste heat recovery power plants and waste fuel-fired power plant operations are well-positioned to benefit from the trend towards renewable energy, and particularly, in regard to the Thai government's policy of promoting and supporting power generation from renewable fuel sources.

In selling power to the Electricity Generating Authority of Thailand ("EGAT"), all of the Company's waste fuel-fired power plants in operation are entitled to an adder of THB3.5 per kWh, which is payable in addition to the base price of power under the power purchase agreements.

As of December 31, 2021, the Company had eight commercially operating power plants with a total of 440 MW of installed power generation capacity. First, waste fuel -fired power plants with an installed power generation capacity of 180 MW, sold power to the Electricity Generating Authority of Thailand ("EGAT") under a Power Purchasing Agreement ("PPA") of 163 MW. Second, waste heat recovery power plants and coal-fired power plants with an installed power generation capacity of 260 MW, sold power to TPIPL under a Power Purchasing Agreement ("PPA") of 230 MW. All of the Company's power plants are located in the same vicinity as TPIPL's cement production plants in Kangkhoy, Saraburi Province in Thailand. The details are as follows:

Type of Power Plant	Operation Characteristics	Capacity
1. Waste Heat Recovery Power Plant		
• WHPP-40MW (TG1&2) 	• Located in the same vicinity as TPIPL's cement production plants, this waste-heat-recovery power plant commenced commercial operations in June 2009. • Under the purchase and service agreement, TPI Polene PCL agrees to sell the waste heat in the form of hot gas released from the cement production process to the Company for use in the production of electricity from the waste heat energy of the WHPP-40MW (TG1 & 2). • WHPP-40MW (TG1&2) also derives income from the sale of steam to TPIPL.	The installed capacity of 40 megawatts consists of 2 power plants, each with an installed capacity of 20 MW per plant, totaling 40 MW.
2. Waste Fuel Power Plant		
• Waste Fuel PP-20MW (TG3) 	• Waste fuel PP-20MW (TG3) generates power by burning waste fuel as well as partially utilizing waste heat emitted from TPIPL's cement production process. • The Waste Fuel PP-20MW commenced commercial operations in January 2015. The Company's sale of power from waste fuel PP-20MW to EGAT is on a non-firm basis, and as such, while EGAT is required to offtake power supplied to it from waste fuel PP-20MW, waste fuel PP-20MW is not obligated to supply a minimum amount of power to EGAT under the waste fuel PP-20MW PPA. • The Company completed the installation of an additional waste fuel boiler of 75 ton per hour capacity at waste fuel PP-20 MW (TG3) which will maximize the utilization rate of power generation and could deliver excess steam to WHPP-40MW (TG1&TG2) to increase the utilization rate of production.	The installed capacity of 20 MW.

Type of Power Plant	Operation Characteristics	Capacity
• Waste fuel PP-60MW (TG5) 	• Generates power by burning waste fuel as well as partially utilizing waste heat emitted from TPIPL's cement production process. • Commenced commercial operations in August 2015. The power plant has an installed power generation capacity of 60 MW. The Company sells power generated from waste fuel PP-60MW (TG5) to EGAT pursuant to the waste fuel PP-60MW PPA, which specifies a contracted power generation capacity of 55 MW. The Company's sale of power from waste fuel PP-60MW to EGAT is on a non-firm basis. • The Company completed the installation of the Grate Boiler, which can use unsorted waste and/or waste fuel as fuel. The capacity is 75 tons per hour which have the ability to receive waste of 750 tons per day to increase the amount of steam production to maximize the utilization rate of waste fuel PP-60 MW (TG5).	The installed capacity of 60 megawatts
• Waste fuel PP-100MW (TG4 & TG6) 	• Sold electricity to Electricity Generating Authority of Thailand (EGAT) under the power purchase agreement of 90 MW • Commenced commercially operation on April 5, 2018. • The Company improved the efficiency of operations of WHPP-30MW (TG4) when recovering waste heat from TPIPL's cement production process. This improvement increases WHPP-30MW's utilization rate. • The Company also installed a waste fuel steam boiler of 75 tons per hour to increase the amount of steam to increase the utilization rate of WHPP-30MW (TG4) for maximum efficiency which can still send the remaining steam to the WHPP-40MW power plant project (TG1 & TG 2). • The Company installed the Grate Boiler, which can use unsorted waste and/or waste fuel as fuel. The capacity is 75 tons per hour with the ability to receive direct waste of 750 tons per day for a steam boiler to increase the amount of steam production in order to increase the utilization rate of waste fuel PP-70 MW (TG6) for maximum efficiency.	The installed capacity of 100 megawatts consists of 2 power plants: • WHPP-30MW (TG 4) • Waste fuel PP-70MW (TG 6)

Type of Power Plant	Operation Characteristics	Capacity
• MIXED FUEL-PP-70MW (TG7) 	• Is designed and constructed to enhance the Company's operational flexibility. In the event that any of the Company's waste fuel PP-60MW (TG5) or waste fuel PP-70MW (TG6) operates at less than full capacity due to machinery breakdown, maintenance or otherwise, PP-70MW can be used as a backup power plant to provide power for such power plants, where necessary. • In the case of the generator of this power plant has not yet used for the waste fuel PP-60MW (TG5) or the waste fuel PP-70MW (TG6), the Company is able to produce electricity by using boilers that has 150 tons of steam per hour capacity which currently produces steam to sell to the Autoclaved Aerated Concrete Plant of TPI Polene Plc. When the aerated brick factory does not use steam, the Company will use steam for this MIXED FUEL-PP-70MW (TG7), which will generate about 40 MW of electricity.	The installed capacity of 70 MW with an authorized capacity of 40 MW.
3. Coal Power plant		
• Coal-PP-150MW (TG8) 	• Commenced commercial operations and sold electricity to TPI Polene PCL on January 25, 2019. Under the Coal-PP-150MW Power Purchase Agreement between the Company and TPI Polene Plc, Coal-PP-150MW is obligated to supply and TPIPL is obligated to offtake at least 30% of power generated by Coal-PP-150MW each year to TPIPL	The installed capacity of 150 megawatts

1.2 Waste Fuel Plant

The Company has the largest single-location community waste or MSW disposal facility in the world. The installed capacity of receiving community waste into the production process is 14,400 tons per day to produce 7,200 tons of waste fuel per day. The Company has a facility to store raw materials and waste fuel up to 100,000 tons which is enough for the operation of the waste fuel power plant.

All of the Company's waste fuel plants can help reduce greenhouse gas emissions by using such waste to produce fuel, instead of landfill (which causes global warming). In 2021, the Company reduced greenhouse gas emissions by 5.08 million tons (registered carbon credit has to wait for approval from the relevant agencies) from the amount of waste that has been sorted for use as fuel, about 2.19 million tons to be used as an alternative fuel for coal in the Company's power generation process and the cement production process of TPI Polene Plc., with the goal of receiving more waste to be used as fuel respectively.

Petrol and Gas (NGV) Stations Business

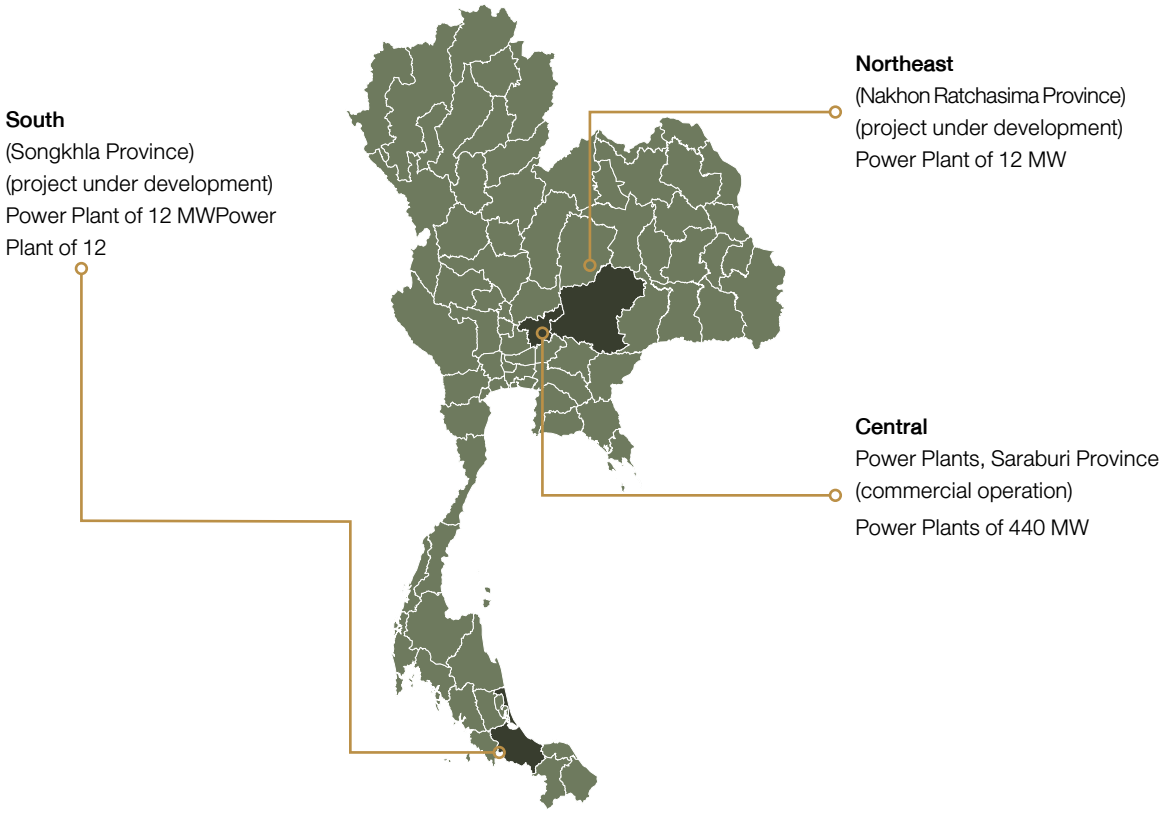
The Company operates petrol and gas stations and derives revenue from the sale of goods from these stations. Currently, the Company has eight petrol stations, one gas station, and three petrol and gas stations under the "TPIPP" brand. The Company's petrol stations are in Bangkok and other provinces in Thailand: six in Saraburi, one in Ubon Ratchathani, one in Nakhon Sawan, and one in Samut Prakan and primarily sells petrol, gas, and other products to retail customers.

The Company was granted a license to use the TPIPL trademark in accordance with the "TPIPL Trademark Agreement", entered into on March 7, 2016 (which was approved by the Department of Intellectual Property of Thailand on April 4, 2018) in connection with the Company's sales of certain petrol and gas products.

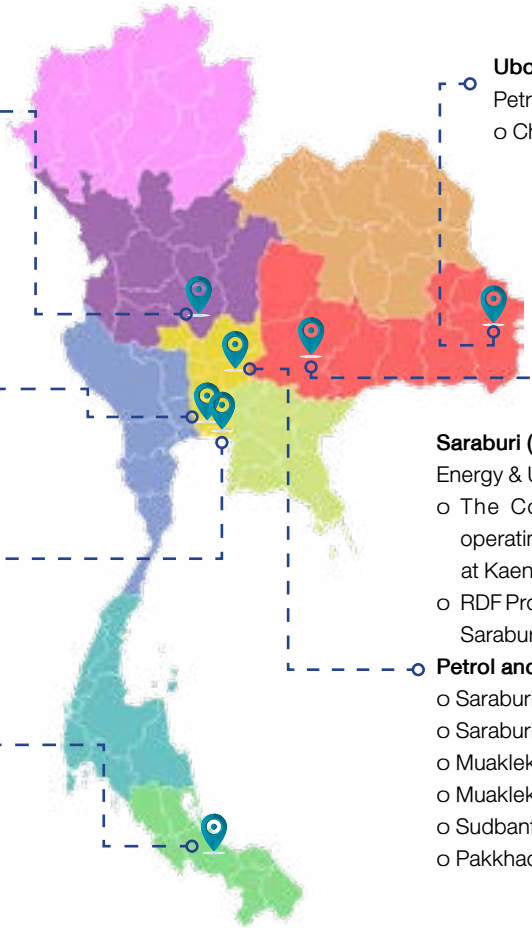
The Company procures petrol for its petrol stations from oil companies such as Bangchak Petroleum Public Company Limited, Esso (Thailand) Public Company Limited, IRPC Public Company Limited and Shell Oil Company Limited at market price on a spot basis.

The Company procures gas for its gas stations from PTT Public Company Limited ("PTT") under long-term gas sale and purchase agreements.

Operation area of the Company's power plant project (102-3, 102-4, 102-6, 102-7)



Service area of Petrol and Gas (NGV) Stations Business (102-3, 102-4, 102-6, 102-7)



Nakhon Sawan (Northern)
Petrol and gass stations, 1 Station
o Phayuhakiri Branch

Bangkok (Central)
o TPI Polene Power Public Company Limited Head officer 26/56 Chan Tat Mai Road, Thungmahamek Sathorn Bangkok10120

Petrol and gas station, 3 stations
o Tower Branch
o Onnut Branch
o Soi Klang Branch

Samut Prakan (Central)
Petrol and gass stations, 1 Station
o Poochaosamingprai Branch

SongKhla (Southern)
Communtity Waste Power Plant,
Songkhla Provincial
Administrative Organization
Installed Capacity 12 MW
(under development project)

Ubon Ratchathani (Northeastern)
Petrol and gass stations, 1 Station
o Chaeng sanit Branch

Nakhon Ratchasima (Northeastern)
Community Waste Power Plant
Nakhonratchasima Municipality
Installed Capacity 12 MW

Saraburi (Central)
Energy & Utilities
o The Company had eight commercially operating power plants with a total 440 MW at Kaeng Khoi Districts, Saraburi Province
o RDF Production Plant at Kaeng Khoi Districts, Saraburi Province

Petrol and gas stations, 6 Stations
o Saraburi Branch 1
o Saraburi Branch 2
o Muaklek 1
o Muaklek 2
o Sudbantad Branch
o Pakkhaosarn Branch

Employee information in 2021 (102-7,102-8)

The Company has a total of 1,142 employees, comprising 98 people at head office and 1,044 people at the Saraburi factory. Details are as follows:

Total number of employees classified by contract (full time employee and contract workers) and classified by gender

Details	Male		Female	
	ppl	%	ppl	%
Full Time Employee (people)	990	96.02	74	66.67
Contract workers* (people)	41	3.98	37	33.33
Total (people)	**1,031**	**100**	**111**	**100**

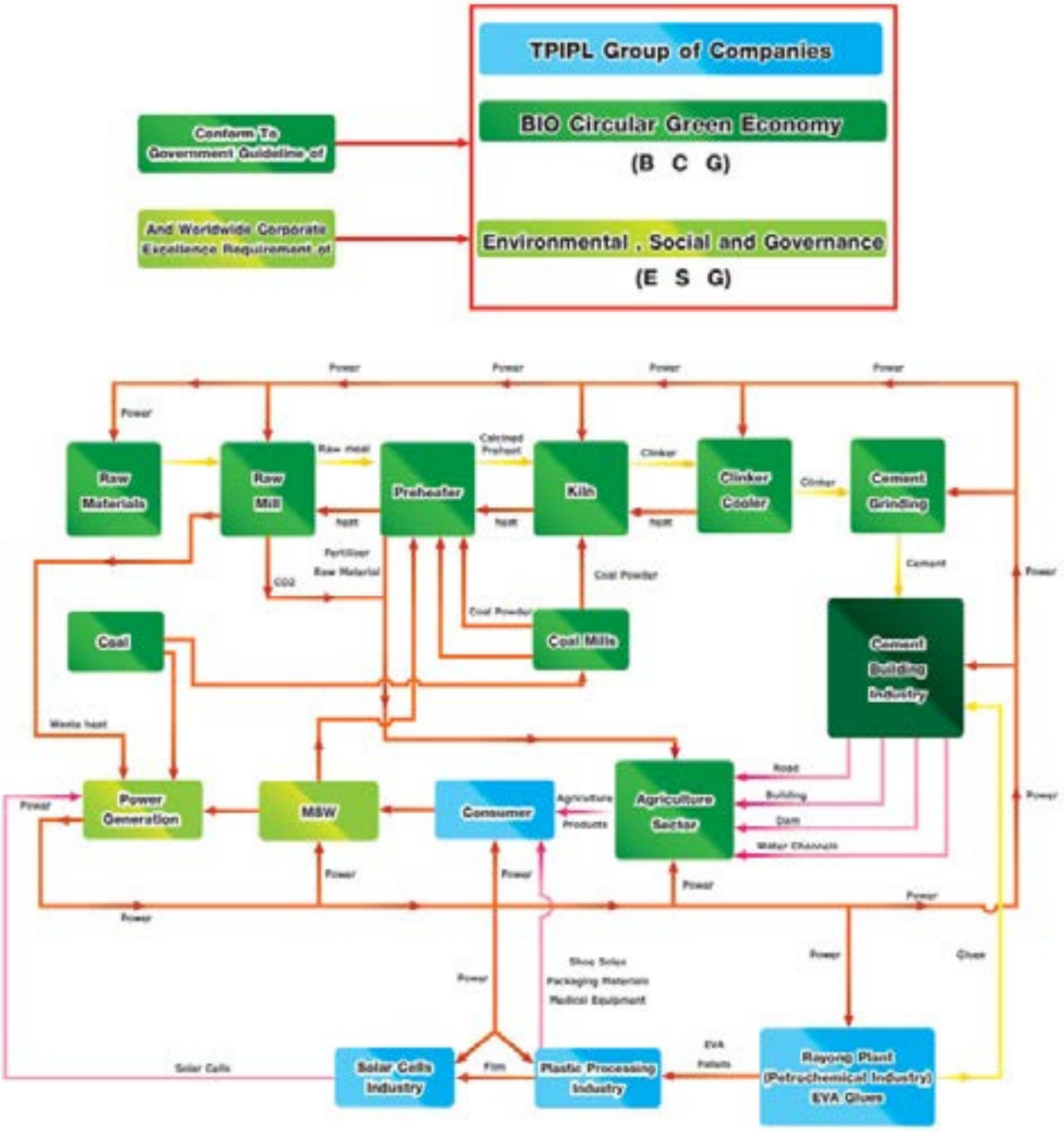
Note : * Contract employees are annual contract employees and daily contracts.

Total number of employees classified by contract (full time employee and contract workers) and classified by location area

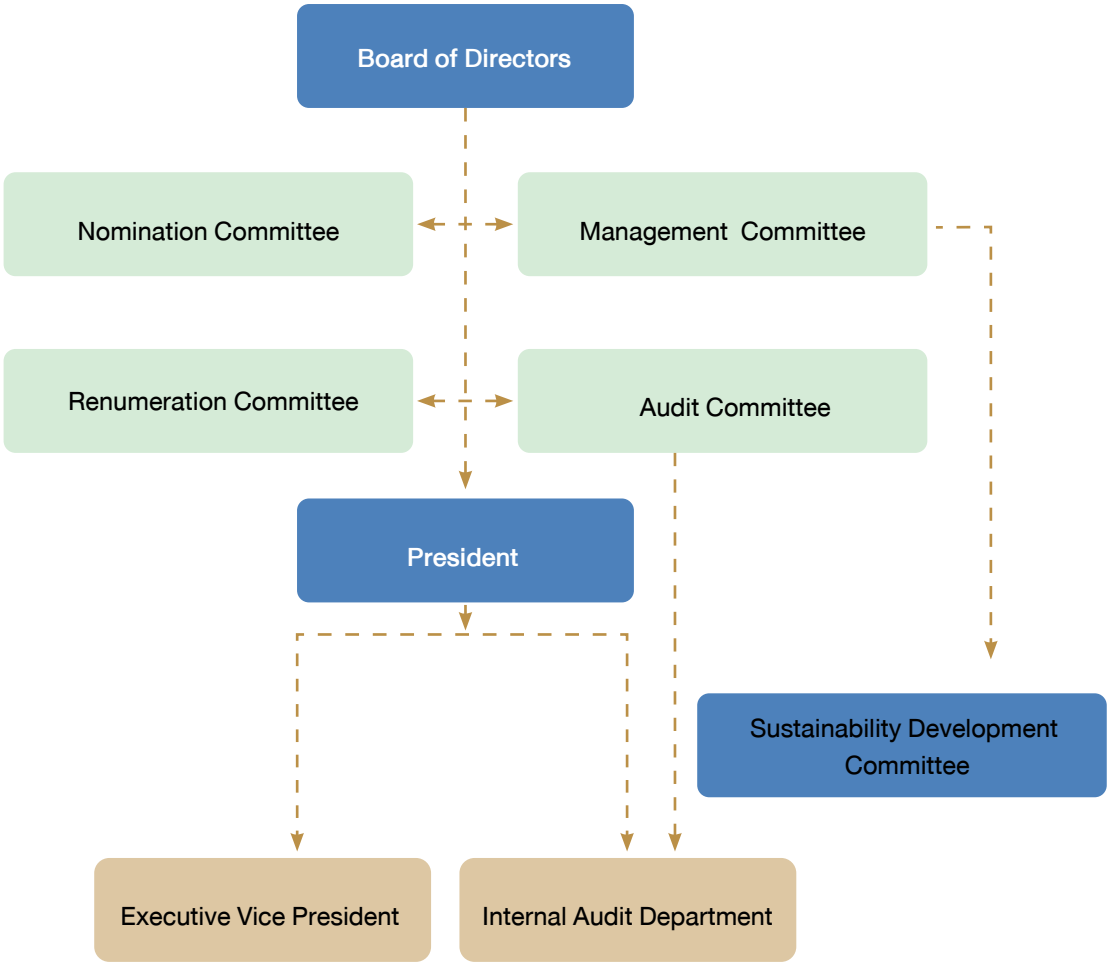
Detail	Central Area	North Area	North Eastern Area
Full Time Employee (people)	1,064	-	-
Annual contract employee (people)	20	-	-
Daily contract employee (people)	58	-	-
Total (ppl)	**1,142**	**-**	**-**

Note : * Contract employees are annual contract employees and daily contracts.

Supply Chain of TPI Polene Power Public Company Limited (102-9)



Corporate Governance Structure (102-18)



As of December 31, 2021, the management structure of the Company consists of the Board of Directors, which comprises four Committees: the Executive Management, the Audit Committee, Nomination Committee, and Remuneration Committee.

Role of the Board of Directors

http://www.tpipolenepower.co.th/index.php/en/en-aboutus/directors

Management Committee and Audit Committee

http://www.tpipolenepower.co.th/index.php/en/en-aboutus/committee

In order to perform sustainably both in the economic dimension, social dimension, and environmental dimensions effectively and efficiently, the Company has appointed an ESG Committee, which consists of two Sustainability Development Committees, namely the ESG Committee (Headquarters) and the ESG Committee (Saraburi Factory) and has defined the roles and duties of each committee as follows:

1. Set policies, strategies, and frameworks to implement strategies and consider selecting issues that promote the sustainable development of the organization, as well as setting sustainability development goals in line with business operations in the economic, social & environment dimensions to be presented to the Chairman of the Management Committee for approval.
2. Supervise, review, and monitor the progress of the operations and assess the effectiveness of the implementation of the sustainability development policy.
3. Encourage actions and engage in projects within the framework for Sustainable Development with related parties both inside and outside the organization.
4. Provide advice, promote, support the right resources and personnel in order to implement sustainable development strategies throughout the organization and be aligned in the same direction.
5. The Chairman of the Board of Directors has the power to appoint subcommittees or working groups to be responsible for the implementation of sustainable development in each area to be comprehensive and in line with key aspects of the organization.
6. Report on the performance of the preparation of sustainability reports to senior management.

Standards of operation both domestically and internationally regarding the environment (102-11, 102-12)

The Company has been inspected and certified for the implementation of the international standard system in various systems from SOCOTEC Certification International Thailand as follows:

- ISO 9001:2015 is quality management systems (2021).
- ISO 14001:2015 specifies the requirements for an environmental management system that an organization can use to enhance its environmental performance and environmental sustainability (2021).
- ISO 50001:2018 is standard to be used as a framework for an energy management system (2021).
- ISO 45001:2018 specifies requirements for an occupational health and safety (OH&S) management system (2021).
- Certified to use or produce renewable energy for the year 2019 (gold label) from the Thai Environment Institute
- Thailand Voluntary Emission Reduction: T-VER: the Company registered Thailand Voluntary Greenhouse Gas Emission Reduction (T-VER) for the project to convert municipal solid waste into fuel by Thailand Greenhouse Gas Management Organization (Public Organization) or TGO
- Low Emission Support Scheme: LESS the Company implemented projects to support greenhouse gas reduction activities such as Light bulb replacements at Turbine (TG1-7) and Cooling Towers which were assessed to reduce greenhouse gas emissions by 280.013 tons CO2 equivalent (April 1, 2020- February 28, 2021).
- Green Industry Award Level 4

Corporate Membership [102-13]

– Member of Sustainability Disclosure Community (SDC) with the Thaipat Institute
– Saraburi Provincial Electricity Development Fund

TPI Polene Power and Sustainability

The Company and TPI Polene Public Company Limited (TPI Polene Group) realize the importance of resource utilization as global population growth, limited resources, and inefficient use of resources could cause various problems. TPI Polene Group has set the direction of the operation of the entire group of companies with the aim of sustainable development. The Company operates in accordance with the Circular Economy principles in order to use resources to the maximum benefit by recycling resources or reusing them. TPI Polene Group is committed to the Green Economy with the goal of reducing environmental impact in terms of resource use, product production, as well as product disposal management to achieve low-carbon production. The primary goal is to reduce greenhouse gas emissions. TPI Polene Group has established policies and goals for sustainability management as follows:

Policies and Goals for Sustainability Management

The Board of Directors and the top management of the Company have established sustainability policies with a focus on being instrumental in driving the organization to achieve its sustainability vision in line with the direction and strategy of business operations to create a balance for the economy, environment, and society using good corporate governance with a framework for sustainability policy and management as follows:

1. Economic Dimension: With an emphasis on the adoption of technology and innovation in the production process of quality products and services with effective management at every stage; with R&D results to further continually develop business models and create added value for products and services as well as seeking investment opportunities that offer high returns on investment.
2. Environmental Dimension: Aiming to develop into a low-carbon society by targeting net zero greenhouse gas emissions at cement plants and surrounding areas of Mauk Lek and Kaeng Khoi, Saraburi province within 2024, with the implementation of the Green Manufacturing production process under the circular economy policy to increase energy efficiency, increase the capacity to use renewable energy while tackling solid waste, waste and proper water consumption, and further reducing the impact of operations throughout the value chain, and responding to all stakeholders in a balanced way.
3. Social Dimension: Conducting business with social responsibility, creating balanced consideration to all stakeholders, creating good returns on investment for shareholders, and taking into account human rights principles, protecting labor rights, safety, hygiene and creating a good working environment, continuously managing and developing talent and skills for personnel, respecting privacy of information , promoting youth in education and contributing to creating value and improving the quality of life of the community and society to grow sustainably.
4. Corporate Governance Dimension: Adhering to the principles of accuracy and compliance with applicable laws and regulations under business ethics with an operating framework based on good corporate governance principles with transparent disclosure of information and performance with versatile risk management and flexibility in management.

Details of the Company's sustainability management policies and goals can be found at:

http://www.tpipolenepower.co.th/index.php/en/en-investment/ar/sustainability

Social Responsibility

http://www.tpipolenepower.co.th/index.php/en/en-investment/social-responsibility

Business operations that support the United Nations' Sustainable Development Goals (SDGs)

The Board of Directors and the top management of the Company have established sustainability policies towards the Sustainable Development Goals (SDGs) of the U.N. in line with the vision, mission, business nature, strategic plans, key sustainability issues and stakeholder expectations. The selected 10 of 17 main sustainable development goals are as follows:

SDGs	Operating guidelines	Results
	• Determine operating guidelines in accordance with the ISO45001 Occupational Health and Safety Management System. • Provide additional welfare to workers to access medical services in cases of non-operational related injuries. • Support employees' health care by defining additional health checklists according to the risk of age groups, such as blood lipid testing (Total Cholesterol, LDL, HDL, Triglycerides) for employees to monitor their own health. • Determine the policy and vision to be an environmentally friendly cement and electric power producer. TPI Polene Group has been targeted to be a Net Zero Greenhouse Gas Emission Producer at the cement plants and surrounding areas at Muak Lek District and Kaeng Khoi District, Saraburi Province, mainly from the Company's waste fuel as coal replacement in the cement production process of 30-40% (under the management by TPI Polene Public Company Limited, which is the parent company) and in the 90-100% power production process of the Company itself. • The Company's waste fuel plant reduces greenhouse gas emissions by using waste to produce fuel instead of landfilling, which causes global warming. • Participated in the voluntary greenhouse gas reduction projects under Thai standards and waste management project (T-VER) under Thailand Greenhouse Gas Management Organization (TGO).	• Injury rates from the work of employees is equal to zero • Accidental rate from the work of employees is equal to zero • In 2021, the Company reduced greenhouse gas emissions by 5.08 million tons (registered carbon credit has to wait for approval from the relevant agencies) from the amount of waste that has been sorted for use as fuel, about 2.19 million tons. The Company aims to receive more waste to use as fuel. This will result in reducing emissions of greenhouse gases and global warming which has led to better health and well-being of people. • As of the end of 2021, the Company has been registered by Thailand Greenhouse Gas Management Organization (TGO) for the reduction of greenhouse gas (Carbon Credit) from the project to use community waste as fuel, amounting to 82,056 tons of carbon dioxide equivalent. and is in the process of being registered by the TGO to certify the amount of greenhouse gas reduction (Carbon Credit) for approximately 709,752 tons of carbon dioxide equivalent.
	• Determine training plans for employees to develop both soft skills and hard skills, totaling 115 courses in 2021, with the goal of training at least18 hours per person per year.	• Number of training hours: 28.04 hours/person/year. Classified as male 30.67 hours/person/year, female 3.52 hours/person/year • A total of 1,142 employees, representing 100 percent, were assessed on their performance.

SDGs	Operating guidelines	Results
	• Follow the 3Rs (Reduce, Reuse, Recycle) principle by increasing water use efficiency by reducing the amount of water used in the production process and bringing back wastewater from the office through the treatment to reuse water without discharged outside the factory (water treatment) by the Company's water management.	In 2021, the Company has managed water as follows: • Water consumption of 9,357,646 cubic meters. • Use of recycled water from treatment process of 355,304 cubic meters.
	• Set a target for internal energy use (Station Service Used) must not exceed 12% of the amount of energy produced. • Set guidelines for energy management according to ISO 50001 standards.	During 2021-2022, the Company has taken the following actions: • Cooling Tower Optimization to increase turbine efficiency and reduce electrical power for cooling system. • Perform turbine maintenance to clean Turbine condensers No. 5 and 7. • Perform the air volume adjustment in Boiler B8 to increase combustion efficiency.
	• Developing and investing in projects related to clean energy with the goal of reducing environmental impact and generating income distribution to society such as – Investment in the construction of waste fuel power plant projects 1. Waste-to-power project of Nakhon Ratchasima Municipality Installed capacity of 12 megawatts, contract period of 20 years, with an investment of approximately 2,000 million baht, expected to start COD in 2024. 2. 2Waste-to-power project in Songkhla province, installed capacity of 12 megawatts and contract period of 20 years, with an investment of approximately 2,000 million baht, is expected to start COD in 2023 – Improving production processes to reduce greenhouse gas emissions and make efficient use of resources by 1. The boiler improvement project of the coal-fired power plant TG7 (70MW) to be a waste-to-power plant with an investment of approximately 1,000 million baht to use waste fuel to replace 100% coal. It is expected to complete Phase 1 in 2022-2023 with the capacity 40 MW of production and the second phase in 2024 will expand the capacity to 70 MW 2. The boiler improvement project of the coal-fired power plant TG8 (150MW) to be a waste-to-power plant with an investment of approximately 3,000 million baht to use waste fuel to replace 25% coal at Phase 1	• Two community waste power plants (at Nakhon Ratchasima and Songkhla provinces) • Boilers Improvement Project of TG 7 in 2023-2024 onwards • Boilers improvement project of TG 8 which aims for cost savings. • The future industrial model city project, with an investment value of approximately 300 billion baht, is expected to result in 100,000 jobs. It is a project to strengthen national security through the promotion of export-import industries products and higher employment

SDGs	Operating guidelines	Results
	in 2022 and less than 10% coal at Phase 2 in 2025. This not only reduces the cost of electricity generation, but also reduces the import of coal and greenhouse gas emissions. – Prototype City of Advanced Futuristic Industries (PAFI) Project, Chana District, Songkhla Province, with an investment value of approximately Baht 300 billion to invest in the industrial estate project, green power plant, commercial and tourism ports, warehouses, logistic centers, and smart city. All projects are in the process of negotiation to find foreign partners for joint investment with investors from South Korea, Japan, Germany, and Malaysia who are interested in investing in the projects.	
	• Continuous improvement of fuel and machinery quality to keep pace with changes in global energy trends towards green energy development.	• Make the total machine capacity of the power plant (Performance -P) in 2021 to be 92%, an increase from 88% in 2020.
	• Promote the “Zero Waste” policy • Establish a systematic approach for waste management in business processes according to the 3Rs (Reduce, Reuse, Recycle) principle. • Improve the production process of the cement plant to be able to use 30-40% of waste-based fuel instead of coal by purchasing waste-based fuel from local producers, who are responsible for sorting waste. This would help reduce the amount of community waste, create more jobs, reduce socio-economic inequality, and increase economic value.	• Use waste from one plant to use as a raw material or fuel in another plant of TPIPL. • Use waste as a waste fuel, instead of coal, for cement and power plants
	• Determine business policies by incorporating the concept of a Bio-Circular-Green Economy (BCG) into the core business process to reduce the use of natural resources from raw material procurement, manufacturing, selling, and transporting, operating, to waste management by using energy and natural resources that are limited to the maximum benefit.	• Using waste sorted as fuel. • Using the organic matter from the segregation as a soil conditioner at the Rayong Provincial Administrative Organization project and the sorting plant at Chanthaburi. • Using ashes from power plants to mix in concrete.

SDGs	Operating guidelines	Results
	• Allocating a budget of 1,485 million baht for research and technology development or project implementation for the purpose of mitigating risks or mitigating climate change impacts.	1. Expanding waste fuel production capacity to replace coal in Boiler B6, Boiler B8 and use in cement plants. 2. Invest to construct and modify Boiler B6 of TG7 power plant to generate 100% renewable energy. 3. Using old tires as a substitute for coal in Boiler B8 of TG8 Power Plant 4. Development of a system for cleaning and briquetting of wire scraps from tires to create added value.
	• Strict compliance with laws covering business, social and environmental laws. • Set guidelines for Environmental Impact Assessment (EIA) and Environmental and Health Impact Assessment (EHIA). • Prepare reports on environmental law compliance, Environmental Impact Assessment (EIA), and Environmental and Health Impact Assessment (EHIA) to government agencies and communities.	The Company has carried out air quality measurements and environmental impact monitoring according to the EIA report, as well as hired environmental experts to undertake additional environmental impact assessment and monitoring projects further from the EIA standard.

TPI Polene Group has a sustainability strategy in accordance with the sustainability policy and management framework that promotes the Group's vision in conjunction with the U.N.'s international principles and standards in accordance with the details mentioned above. The policy and targets are reviewed annually to cover new risks that may arise in the future.

Major Sustainable Development Performance of the Company in 2021

Economic Dimension (Unit : mil)	Environmental Dimension	Social Dimension	Corporate Governance Dimension
Revenues Baht 11,351.08 mil.	Carbon Credit certified 82,056 tons Co_2 equivalent and is in the process of being registered to certify carbon credit from TGO, of approximately 709,752 tons Co_2 equivalent	Investment in social assisting Baht 126.04 mil	Proportion of Independent Directors 33.33%
Employee expenses Baht 58.21 mil.	Reduce greenhouse gas emissions by using community waste to energy 5.08 mil tons Co_2 equivalent (which carbon credit registration must obtain certification from the relevant authorities.)	Injury Frequency Rate (IFR) of Staff and contractors 0.354 and 0	Proportion of Female Directors 26.67%
Tax expenses Baht 115.61 mil.	Waste to energy plants can dispose of community waste. 2.19 mil. tons	No loss time injury (hrs.) 538,968 hrs. (an increase of 49.65% over 2020)	Discrimination Complaints 0
Net profit Baht 4,191.33 mil.	Reduction of energy consumption, compared to the amount of last year.4,195,833.44 Gigajoule	Death and injury rates from the work of employees and contractors	Data Security of customer No complaints of personal data breach
Dividend per share Baht 0.25	Waste management under the three Rs approach to total waste quantity100%	Average training hours to employees 28.04 hrs. per person per year	Acknowledgement of the Partner Code of Conduct by trade partners 90.38%
	Budget for research and technology development. Baht 1,485 mil.	Disposing of COVID-19 infected waste 3,892,000 Kg (Oct-Dec 2021)	

Stakeholder Engagement

The Company realizes the importance of stakeholder engagement by analyzing internal and external stakeholders which are related to the value chain of the business. The Company believes that good relationships are based on trust and that the opinions and suggestions of stakeholders towards the organization are valuable to achieve the goal of an organization that develops and grows sustainably. Moreover, stakeholder management will help the organization to respond effectively to the needs of stakeholders and to reduce the risk that may cause damage to the image of the Company and the opportunity for business interruption.

The Company recognizes the importance of stakeholder engagement based on the principles of collaborative value creation by analyzing internal and external stakeholders, which are related to the value chain of the business, and consists of eight groups: shareholders and investors, customer and distributors, supplier and contractors, creditors, governances, employees, community and society, and competitors. (102-42, 102-40)

The Company has established appropriate communication channels for each stakeholder group to listen to problems, operational impact, opinions, and suggestions which the Company will use to make policy and operational strategies to effectively meet the needs and expectations of stakeholders through the following operational guidelines.

Table :The stakeholders' guidelines of TPI Polene Power Public Company Limited

Stakeholders (102-40)	Participation channels (102-43)	Issues of interest to stakeholders Participation channels (102-44)	Plan implementation
1. Shareholders and Investors	• Annual General Meeting of Shareholders • Giving shareholders the right to attend the shareholders' meeting equally, such as questioning and voting. • Presentation of investment information through investor relations activities at least 7 times per year • 56-1 One Report • Channels for communication through media including website, letter, email, phone or other at least 15 times per month • Sustainability report • Financial report 4 times per year	• Good performance, share price and dividend at reasonable level • Continuous business expansion • Disclose key information of the Company in a timely basis, transparent, reliable way through channels that are easily accessible to shareholders. • Give shareholders equal rights to attend annual shareholders' meetings. • Organize activities to build and maintain good relationships with shareholders • Conduct business with environmental considerations Corporate Governance Society or ESG • Transparency • Risk management system	• Set goals, strategies for business growth, as well as seek channels and opportunities for expansion and investment development. • Manage the efficiency of electricity generation and distribution to create long-term income stability. • Set a policy to maintain liquidity and financial stability • Prepare an annual sustainability development report. • All shareholders are entitled and treated equally. • Appropriate risk management. • Manage the organization according to the Company's vision and corporate governance principles with honesty, integrity, cautiousness, and without any conflicts of interest. • Clarify details about the shareholders' meeting as well as all information related to matters that require shareholders to make decisions at the meeting in advance. • Business Ethics • Research and development to further business • Emergency response manual and emergency drills (in case of Fire)
2. Employees	• Collect information from all channels, including complaints • In-house communication through channels such as creating line groups for senior management to communicate with all employees. Line groups specific to related management documents to inform employees in each party Documents closed by establishment banners. • Welfare Committee in the organization • Sustainability Report/Annual Report • Executives meet employees once a week.	• Salary and wages as well as welfare to be equivalent or comparable to those in the same industry. • The organization has stability and progress in its work. • Develop employees' potential for stability and progress in its work. • The organization has a good image. • Fair Evaluation System • Safety and quality of life at work • Allow expression of views and advices. • Equal Practice and respect human rights • Respect personal information	• Establish a welfare committee made up of employer and employee representatives (elected by employees) as required by law to take care of issues related to employment conditions. with 100 percent of employees being cared for under the agreement with 100 percent of employees being cared for under the agreement. • The Company has clear rules and regulations on employment to be strictly applied, which also include equal opportunities for employees to progress in their careers regardless of sex, age, generic information, race, religion, or

Stakeholders (102-40)	Participation channels (102-43)	Issues of interest to stakeholders Participation channels (102-44)	Plan implementation
	• Provide clear in-house communication through various channels to notice to various agencies within the Company such as the LINE app, website, comment box, e-mails and Facebook. • Performance evaluation 4 times a year. • Employee Engagement Survey. (Not yet implemented)		educational background. The employment policies and conditions of work are based on job requirements. • Fair Evaluation System • Allow expression of views and advice. • The Company offers salary and wages as well as welfare to be equivalent or comparable to those in the same industry. • Occupational health and safety system • Do not employ migrant workers, including contractors. and subcontractors • Comply with human rights requirements and respect personal data. • Provide opportunities and support further education of employees • Provide training to increase potential and progress in work. • Savings cooperative. • Determine policies and practices related to principles of respect for human rights and protection of personal data.
3. Supplier and Contractors	• Complaints and communication channels such as websites, emails, phone calls, letters, etc. • Relation activities with partners to generate participation engagement at least once per year • Meet business partners at the partner office at least 2 times a year • Business negotiations, exchange of business information and opinions at least twice a year.	• Transparent, fair, non-discriminatory, corruption-free purchasing system • Building relationships to grow together • Comply with the established agreements and do not exploit customers, pay on time. • Safe to work • Respect human rights • Respect personal information • Scheduled on time payment • Occupational health and safety system	• Transparent and verifiable procurement system • Strictly comply with the terms of trade and compliance with the contract with the trade partner. • Take into account the mutual benefits of partners and business equity. • Employees in Affiliated group must not claim the benefits of supply, must be neutralized. • The Company does not do business with partners who are illegally behaving. • Support ESG knowledge to enhance partner operations to reduce erosion In operation and reputation • Establish measures to operate partners, including the use of digital and online technologies for safety under the COVID-19 pandemic crisis.

Stakeholders (102-40)	Participation channels (102-43)	Issues of interest to stakeholders Participation channels (102-44)	Plan implementation
			• Respect human rights and respect personal information • Occupational health and safety system
4. Customers and Distributors	• Visiting and meeting with customers and distributors once a year • Business visit once a year • Perform activities with customers for 12 months a year. • Complaints and communication channels such as websites, emails, phone calls, letters, etc.	• Distribution of electricity at reasonable prices. • Produce and deliver stable and safe electricity with a continuous supply of electricity. • Generate electricity using technology that is environmentally friendly and does not affect the community and society. • Compliance with agreements and contracts, with integrity and ethics towards customers. • Maintain confidential information of customers. • Provide fast service and assistance. • Receive and respond to complaints.	• Produce and deliver stable and safe electricity • Electricity generation with quality and efficiency by using modern and environmentally friendly technology, which shall not affect the community and society. • Fair compliance with agreements and contracts to customers. • Distribution of electricity at the correct and reasonable price. • Management according to production standards and quality control systems such as ISO 9001, ISO 14001, ISO 50001, ISO 45001, "Green Industry Level 4" certification. • Regular improvements, developments and maintenance of machines, including the development of modern and environmentally friendly technology. • Retain confidential information and strict compliance of customer with the code of conduct and ethics.
5. Creditor/Bondholders Analyst/Credit Rating Institute /Insurance companies	• Submit a quarterly financial statement report. • Annual Report • Sustainability Report	• Good Corporate Governance • Manage with transparency • Carefully manage risk • Full and on-time payment • Good performance with potential for debt repayment.	• Conduct business with transparency, auditability Under good corporate governance • Fully comply with the borrowing conditions • Complete payment on time • Provide complete financial information
6. Governances	• Report on business performance and performance to government agencies for the period specified by the government, such as: 1. Report on the performance of professional work safety officers every three months 2. Report on compliance with the Company's EIA measures every six months	• Acting in compliance with rules, regulations, and policies of relevant controlling persons. • Social and environmental responsibility • Living sustainably with communities in a • shared economy • Safety and environment management system • Support and cooperation with	• Use waste as an alternative fuel for coal in the cement production process to reduce greenhouse gas emissions according to the government's environmental policy • Conduct business with transparency. • Prepare a sustainability report. • Social and environmental responsibility.

Stakeholders (102-40)	Participation channels (102-43)	Issues of interest to stakeholders Participation channels (102-44)	Plan implementation
	• Nine plant visits and studies in 2021 due to covid-19 prevention measures, • Monitor policy and regulations of government to be at least once a month	government agencies • Actions to mitigate climate change problems. • Payment of taxes, related fees.	• Determine operating policies for sustainable coexistence with communities. • Comply with rules, regulations and laws, and cooperate in government projects.
7. Community and Society	• Complaints and communication channels such as websites, emails, phone calls, letters, etc. • Participate in community relations activities at least 28 times a month • Community relations at least two times a month	• Develop surrounding communities • Preserving the community environment • Create a task Strengthen the economy for the community. • Operation of the establishment to ensure environmental safety and livelihoods • Support for community activities and ongoing participation • Educational Assistance • Concentrate on community complaints	• Community Visit and create acceptance • Support of community activities • Educate and train employees at all levels as appropriate to make employees aware of the environment and communities. • Explore community needs and opinions • Organize mobile medical units to serve the community continuously for better quality of life. • Prepare a replacement forest plantation and rehabilitation project after mining • Promoting community traditions • Develop communities to be employed the economy in the community has improved. • Budget for community development, including education • Create jobs, create careers. and revenues for the people in the community
8. Competitors	• Collect information from all channels such as websites, mail, phones, etc.	• Under the fair competition circumstances. • Maintain market shares	• Business blackening within the rules of free and fair competition • Do not slander to damage the reputation of commercial competitors. • Do not infringe intellectual property and copyrighted work of the competitors. • Do not violate identifiable information of competitors • To perform in compliance with good practices for trading. • Innovation and Technology Management

Defining significant sustainability issues (102-46)

In the preparation of this sustainability report, the Sustainability Working Group of TPI Polene Power Public Company Limited adheres to the GRI reporting standards for content determination to disclose sustainability issues that have a significant impact. The details of the content determination process are as follows:

Identification

The Sustainability Working Group has identified issues that affect the sustainability of the organization by using criteria for selecting matters related to the sustainability context and stakeholder inclusiveness, including considering sustainability performance data from key internal sources such as the 2020 Sustainability Report, regarding stakeholder concerns and expectations of all stakeholders.

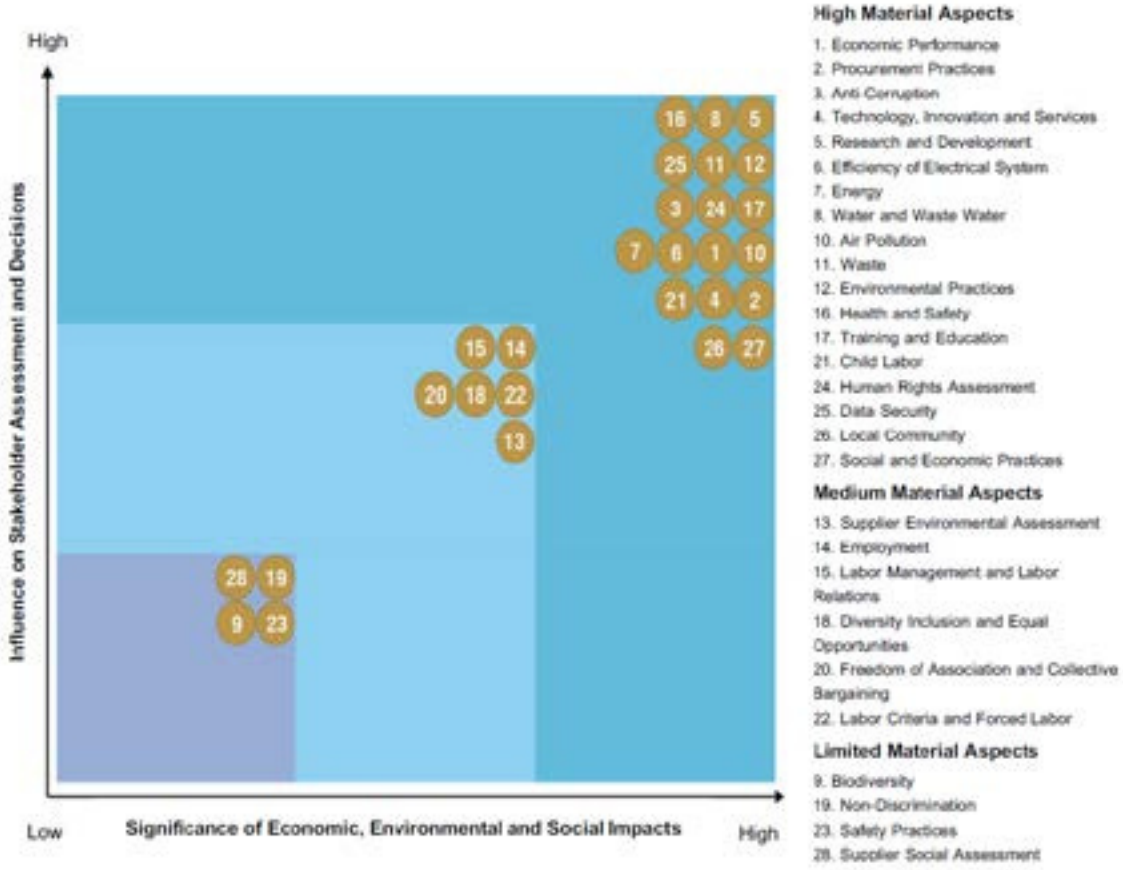
Prioritization

The Sustainability Working Group has considered and scrutinized relevant sustainability issues and prioritized sustainability issues (Material Topics) under the principle of materiality by using the Materiality Test, which has criteria for consideration of two perspectives: the level of influence on stakeholder assessments and decisions and the level of significance of the organization's economic, environmental, and social impacts. The sustainability issues that are highly significant for a total of 18 issues are as follows:

Validation

In 2021, the management of the Company assessed sustainability issues in accordance with the Completeness principle and approved the action list for the validation process in the sustainability report of the Company for the year 2021. The issues shall cover sustainability performance in economic, environmental, and social aspects according to the details of the assessment results of the significant issues and the scope of reporting.

The Company's highly substantive sustainability issues for 2021 are composed of the following 18 issues:



Environmental aspect (5 issues)	Social aspect (7 issues)	Economic and Corporate Governance aspect (6 issues)
1. Energy 2. Water and Wastewater 3. Air pollution 4. Waste 5. Environmental practices	1. Occupational Health and Safety 2. Training and Education 3. Child Labor 4. Human Rights Assessment 5. Data Security 6. Local Community 7. Social and Economic Practices	1. Economic Performance 2. Procurement Practices 3. Anti-Corruption 4. Technology, Innovation and Services 5. Research and Development 6. Efficiency of Electrical System
Action	**Action**	**Action**
1. Develop towards a low-carbon society by setting a Net Zero GHG Emission goal by using 100% waste-based fuel as a substitute of coal. 2. mprove production efficiency to be highly efficient to save energy. 3. Embrace circular economy, recycle waste from one plant as raw materials or fuel of another plant towards Zero Waste policy 4. Develop Green Manufacturing technology and innovation 5. Construct rainwater reservoirs to replace natural water sources, including recycling waste water for reuse. 6. Disposal of Covid-19 contamination waste	1. Comply with labor laws and labor relations 2. Respect human rights principles and personal information of employees, partners and contractors 3. Create a good environment in work-place with appropriate safety and hygiene 4. Training and skills development for personnel, providing opportunities for progress with indiscriminate. 5. Award scholarships to children of employees 6. Establish a Partner Code of Conduct 7. Promoting and supporting communities and society	1. comply with the related legal regulations 2. transparency with anti- corruption policy 3. Technology and innovation to drive the organization with an emphasis on effective management policy 4. Extend R&D results to create value added to products 5. Seek investments that create high return on investment 6. Mitigate risk management as well as climate change risks 7. Supply chain management

Defining report content and topic boundaries

ESG Topics by GRI Standard (102-47)	Impact Boundaries (102-46, 103-1)						
	Within organization	Outside of organization					
		Shareholders	Customers	Suppliers	Creditors	Government	Communities and Society
Economic Aspect							
Economic Performance	✓	✓		✓	✓	✓	✓
Procurement Practices	✓			✓			
Anti-Corruption	✓	✓	✓	✓		✓	
Technology, Innovation and Services	✓		✓				✓
Research and Development	✓		✓				
Efficiency of Electrical System	✓		✓				

ESG Topics by GRI Standard (102-47)	Impact Boundaries (102-46, 103-1)						
	Within organization	Outside of organization					
		Shareholders	Customers	Suppliers	Creditors	Government	Communities and Society
Environment aspect							
Energy	✓						
Water and wastewater	✓						✓
Air pollution	✓						✓
Waste	✓						✓
Environmental Practices	✓						✓
Social Aspect							
Occupational Health and Safety	✓			✓			
Training and Education	✓						
Child Labor	✓			✓			
Human Rights Assessment	✓			✓			
Data Security	✓		✓				
Local Community	✓						✓
Social and Economic Practices	✓			✓			✓

Report Publishing Channels

- Download this report at

http://www.tpipolenepower.co.th/index.php/th/th-investment/ar/sustainability หรือ

Contact point for questions and suggestions regarding the report (102-53)

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2. Mr. Chayutd Suppapodok	Department Manager	Finance Management Department

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Environmental Impact Management

Environmental Performance 2021

Carbon Credit certified 82,056 tons Co_2 equivalent and is in the process of being registered to certify carbon credit from TGO, of 709,752 tons Co_2 equivalent

Reduce Carbon of greenhouse gas emissions by using community waste to produce power, in a total of 5.08 mil tons Co_2 equivalent (which carbon credit registration must obtain certification from TGO)

Waste to energy plants can dispose of community waste of 2.19 mil tons

Reduction of energy consumption of 4,195,833.44 Gigajoule, compared to the amount last year.

Waste management under the three Rs approach to reduce total waste quantity 100%

Budget for research and technology development. Baht 1,485 mil.

Environmental Management

The Company and TPI Polene Plc. (or TPI Polene Group) realize the importance of resource utilization given global population growth. While the resources are limited, an inefficient use of resources will cause many problems, namely a waste of resources, inefficient energy consumption, greenhouse gas emissions which result in global warming, and waste from consumption. This will lead to many other environmental problems including marine debris. (103-1)

"We are using the natural resources of our descendants." This reflects a need to realize a more efficient use of resources, including the use of raw materials, energy, and the reduction of environmental impact problems and the problem of garbage overflowing which causes global warming. TPI Polene Group is determined to play a role in solving such problems under the Circular Economy principle to complete all stages of business operations, from research planning, development, production processes and products delivered to consumers, to maximize the benefits of resource utilization, renewable fuel consumption. The Group will also create value added for the rest of the production process and waste management for reuse to maximize the benefits of resource utilization that lead to sustainable development in the supply chain, the sector, business sector, society and community.

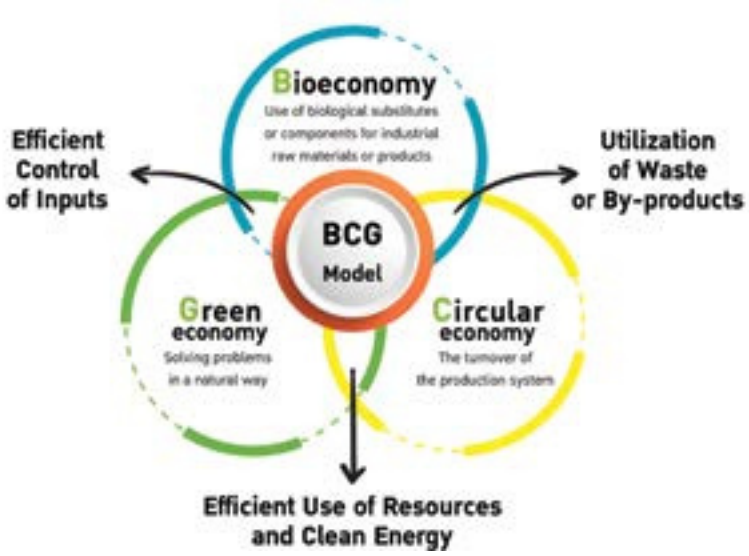
The Management Approach (103-2)

TPI Polene Group is committed to playing a role in solving environmental problems under the Circular Economy principle to maximize the benefits of resource utilization, renewable fuel consumption, create value added for the rest of the production process and waste management for reuse to maximize the benefits of resource utilization. It is also linked to the Green Economy with the goal of reducing environmental impact in terms of resource use, product production, as well as product disposal management to low-carbon production. The initial goal is to reduce greenhouse gas emissions by using renewable energy such as waste and

waste heat recovery in the production system, as well as developing TPI Polene Group products by applying biotechnology to add value or apply them together with TPI Polene Group products to create added value and support the country's agricultural sector to become a bio-economy.

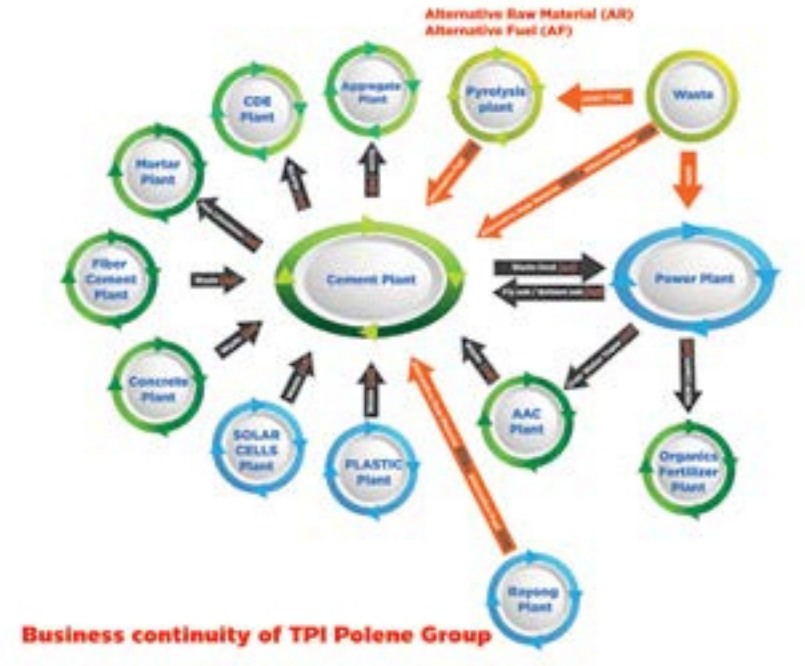
Driving the economy towards sustainable development (BCG)

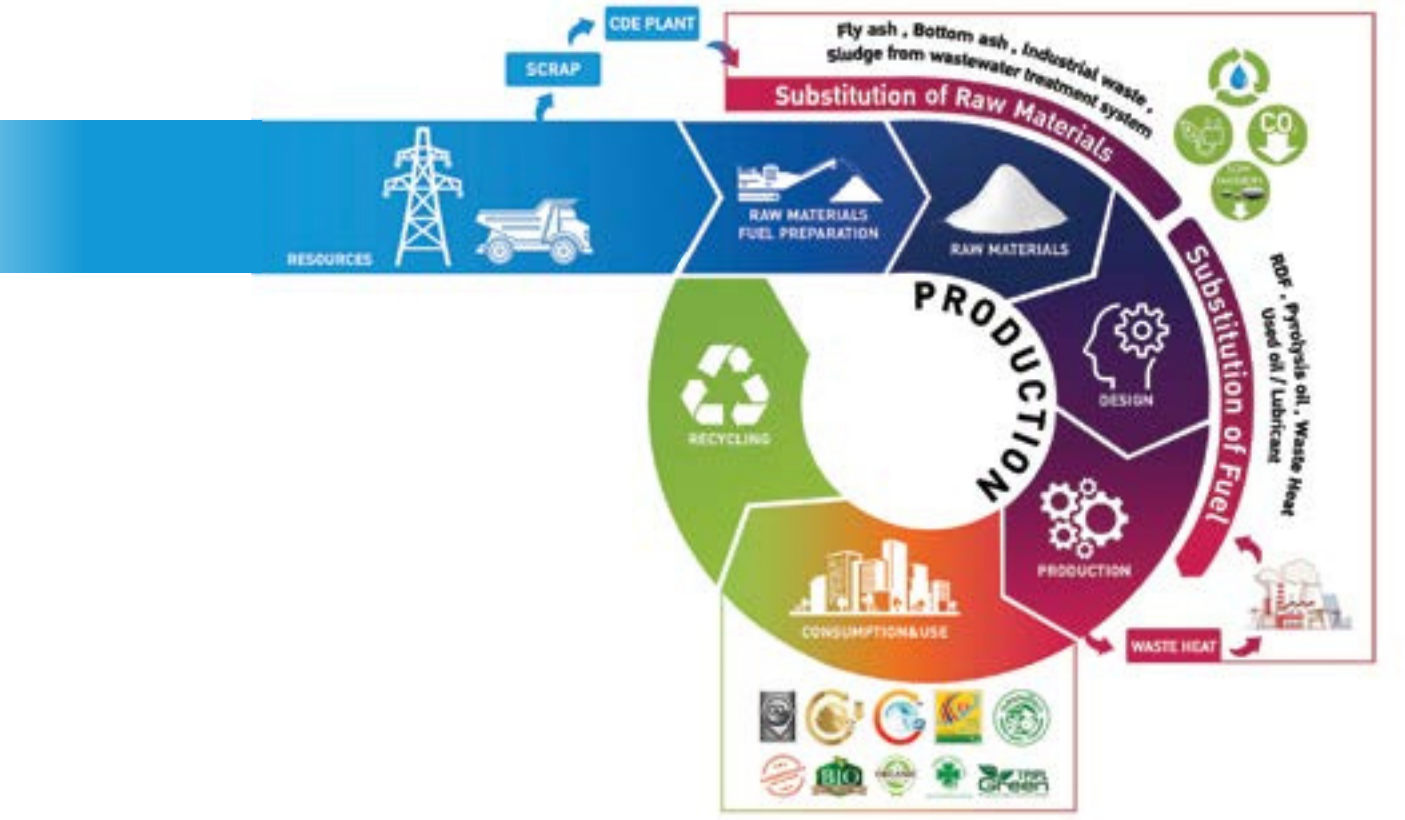
http://www.tpipolenepower.co.th/index.php/th/th-investment/bcg-th



These three sections are jointly executed towards Sustainable Development, called Bio-Circular-Green Economy (BCG), an important strategy to drive the TPI Polene Group to grow with globally competitive innovations and to contribute to the distribution of income to the community by preserving the environment with sustainable development.

TPI Polene Group places an emphasis on all stages of business operations, from research and development planning, production processes, and to the delivery of our products to consumers, to maximize the benefits of resource utilization with high efficiency production in both resource use and environmental protection with consumers as part of the green world, covering sales, transportation, and services. Details are shown in the diagram as follows:





Environmental Performance (103-3)

The Company adheres to environmental regulations and relevant laws. In 2019, there were disputes with third parties. The Company has exercised its right to defend itself and take legal action against such third parties. The Company's legal advisor is of the opinion that The Company has been granted a license and operates the construction of a power plant (according to the dispute) according to a project that has been licensed by government agencies accurately and transparently according to the law. In this case, government officials have acted in good faith and have no conflict of interest in issuing licenses. The plaintiff's claim is not true. The case is currently being investigated by the investigators.

In 2021, The Company was not involved in any litigation, arbitration, and proceedings concerning any environmental issues or compliance issues.

Energy Consumption

The Company operates an energy business that focuses on the production of electric power and renewable fuels. The energy management system has been applied within the company. The Company realizes that energy conservation is important. Energy efficiency helps reduce fuel consumption, costs, and environmental problems caused by the source of energy production and use of energy. For energy efficiency, it is the duty of all employees to work together to promote the best use of energy. (103-1)

Action Goals (103-2)

- The use of internal energy (Station Service Used) must not exceed 12% of the amount of energy produced.

Significant Performance (103-2)

TPI Polene Group has a policy to manage energy by adopting ISO 50001 as a management guideline. At the operational level, the Company has applied the Focused Improvement (FI) practice, which is one of the initial pillars of a Total Productive Maintenance (TPM) deployment, aimed to eliminate or reduce systematic loss. The practice helps find the point of energy loss, reduce costs, and improve it by establishing a project team to achieve the objectives and goals of energy conservation. The Company, therefore, can manage energy efficiently in the electricity, lighting, and air conditioning systems by installing and maintaining related electrical control devices, thus continually reducing the use of electricity.

Therefore, the Company has established an energy conservation policy to use as a guideline for energy operations and to promote energy use for efficiency and maximum benefits as follows:

1. Implement and develop an appropriate energy management system by stipulating that energy conservation is an integral part of the Company's operations in accordance with relevant laws and regulations.
2. Conduct a measurement plan or collect energy consumption data to create a database to analyze the continuous improvement of the organization's energy efficiency and suitable technology for the business and good practice guidelines.
3. Set energy consumption targets in each production segment and implement an energy management system to follow up, evaluate, and control the energy consumption to meet the specified goals.
4. Establish continuous performance improvement projects by making plans and goals and annual reviews to improve energy efficiency.
5. Communicate that energy conservation is the duty and responsibility of the executives and employees at all levels to cooperate to comply with the prescribed measures so that all employees understand and act correctly in the same direction.
6. Support budgets for human resources, equipment, machinery, energy products and services to improve energy performance.
7. Encourage employees to participate in presenting their opinions to develop energy use, disseminating information, training employees, and organizing activities to promote energy conservation.
8. Support cooperation among external organizations, both the public and private sectors, in energy management.

Evaluation Of Performance (103-3, 302-1, 302-3)

Table Total energy consumption of TPI Polene Power (only power plants and waste fuel plants (302-1)

(Unit : GigaJoule)

Internal Energy Use	Energy Consumption		
	2019	2020	2021
Heat Consumption (Non-renewable energy)			
Coal	15,305,745.83	17,181,455.84	12,583,468.75
Fuel Oil	0	0	0
Diesel	12,473.09	37,566.54	18,400.37
NGV	1,295.60	646.38	466.67
Heat Energy (Renewable Energy)			
Waste Fuel	19,205,090.20	20,768,378.58	21,162,454.70
Total Heat Energy	34,524,604.72	37,988,047.34	33,764,790.49
Electrical Energy	1,059,806.47	1,125,732.67	1,153,156.08
Total Energy Use	**35,584,411.19**	**39,113,780.01**	**34,917,946.57**

Remarks :
- 1 kilowatt-hour of electrical energy is equal to 0.00360 gigajoules, 1 kg of coal is equal to 0.01750 gigajoules, 1 liter of fuel oil is equal to 0.03977 gigajoules, 1 liter of diesel is equal to 0.03642 gigajoules, natural gas (dry type) 1 cubic foot is equal to 0.00102 gigajoule. Data from Department of the Energy Development and Promotion, Ministry of Energy
- The heat energy of 1 ton of steam is calculated from the amount of heat that passes into or out of the system in a process at constant pressure (Enthalpy) at a steam pressure of 25 bar, equal to 2.711073 GJ.

Table: Intensity of Energy Consumption*(302-3)

Intensity of Energy Consumption	Units	2019	2020	2021
Specific Energy Consumption: SEC - Waste fuel production	MJ/ton of waste fuel	34.63	59.31	31.82
Specific Energy Consumption: SEC Power generation	MJ/kWh	15.46	15.62	14.21

Remark : The intensity of energy consumption can be determined as a proportion of the energy consumption compared to the output scale in each plant based on the energy consumption per unit of production. (Specific Energy Consumption : SEC)

Water Resource Management

Water is a very important resource to TPI Polene Power's business. Water resources are one of the main raw materials used in the production process. The Company realizes how important it is to maximize water usage efficiency from natural water sources and surface water, including wastewater from production processes, to avoid affecting the overall water management of the Pasak River Basin Irrigation Project and those who use water from the Pasak River. (103-1)

Action Goals (103-2)

- Cut back on water consumption from the Pasak River by reusing surface water and used water
- Control the amount of water from the Pasak River for use within the plants of not more than 12,000,000 cubic meters per year.
- Reuse the wastewater from the electricity production process for no less than 30,000 cubic meters per month.

Significant Performance (103-2)

TPI Polene Group has expressed a clear intention in internal water management to achieve the most cost-effective use of water sharing with the community. The Company's water sources will be procured by TPI Polene Plc., with raw water sources coming from two main sources, namely the Pasak River and water from surface water tanks, including wastewater inside the factory. Details are as follows: (303-1)

1. Water from the Pasak River will be pumped up to the cement plant's water treatment plant, which is a water supply system to be used in various production processes, in both cement plants and power plants.
2. Water from surface water tanks and wastewater inside the factory consists of:
    2.1. A well of 180,000 cubic meters, which collects rainwater that falls in the factory area.
    2.2. A well of 1,500,000 cubic meters, which collects rainwater that falls in the mine area and nearby areas.
    2.3. A well of 1,000,000 cubic meters in which TPI Polene Co., Ltd. has a water management plan to develop additional surface water reservoirs. This 1,000,000 cubic meters well is in the process of being dug, and will be the Company's reserve water source to prevent impact on the use of water by people in nearby areas. The water from the above-mentioned surface water reservoirs will be pumped and combined with water from the Pasak River to improve the water quality before being sent to cement plants and power plants. It is also a reservoir for storing water for use in the dry season if the amount of water from the Pasak River is insufficient for industrial use.

In addition, TPI Polene Group uses groundwater to produce drinking water for sale and for drinking within the factory. The guidelines that TPI Polene Group has followed include to reduce the use of water resources from natural rivers by making surface water storage wells to be a reserve water source which are sufficient for use in cement plants and power plants. This is to prevent impact on people's use of water in nearby areas:

- In order to pump water from the Pasak River, the Company will be controlled by the Royal Irrigation Office, Saraburi. The office will issue a license to the company to pump water of not more than 1,000,000 cubic meters per month. The Company must prepare and submit a monthly summary report on the volume of water pumped from the Pasak to the Royal Irrigation Project Office, Saraburi. In addition, the office will arrange for their staff to check the amount of water pumped from the Pasak River by the Company on a monthly basis. (303-1)

- The Pasak River is used by many sectors such as agriculture, industrial sector, commercial sector, household sector, etc. Therefore, water use must be controlled and allocated by the Saraburi Royal Irrigation Office to ensure that all sectors receive appropriate and fair water usage. (303-1)
- The Company does not drain water outside the factory. The Company will have a wastewater collection well to reuse the wastewater in the factory. The Company also provides a monthly water quality analysis. (303-2)

In addition, TPI Polene Group follows the 3Rs (Reduce, Reuse, Recycle) principle by increasing water use efficiency i.e. by reducing the amount of water used in the production process, and by bringing back wastewater from the office to go through water treatment for reuse without discharging water outside the factory. For example, we reuse the recycled water on plants. The Company regularly monitors the quality of water from the good water, the wastewater, and the water from the water treatment.

Evaluation of the Performance (103-3)

Table: Volume of Water Procurement (only for Power Plants) (103-3, 303-3)

(Unit: Cubic meters)

Water sources	Volume of water in particular areas			Water content in areas with water stress		
	2019	2020	2021	2019	2020	2021
Surface water						
Water with a total volume of soluble solids ≤1,000 mg/litre	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0
Underground water						
Water with a total volume of soluble solids ≤1,000 mg/litre	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0
Seawater						
Water with a total volume of soluble solids ≤1,000 mg/litre	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0
Water from the production process						
Water with a total volume of soluble solids ≤1,000 mg/litre	262,555	449,245	355,304	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0
External water (tap water) produced by TPI Polene Plc.						
Water with a total volume of soluble solids ≤1,000 mg/litre	6,506,411	8,248,194	9,002,342	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0
Total volume of water to be used						
Water with a total volume of soluble solids ≤1,000 mg/litre	6,768,966	8,697,439	9,357,646	0	0	0
Water with a total volume of soluble solids >1,000 mg/litre	0	0	0	0	0	0

Note : No water is drawn from water stressed areas.

Table: Volume of Sewage (only for Power Plants) (103-3, 303-4)

(Unit: Cubic Meter)

Drainage of waste water to the discharged sources.	Volume of water in the area			Water content in areas with water		
	2019	2020	2021	2019	2020	2021
Surface water						
Water with a total volume of soluble solids ≤1,000 mg/l	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/l	0	0	0	0	0	0
Underground water						
Water with a total volume of soluble solids ≤1,000 mg/l	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/l	0	0	0	0	0	0
Seawater						
Water with a total volume of soluble solids ≤1,000 mg/l	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/l	0	0	0	0	0	0
Transferred to another external organizations						
Water with a total volume of soluble solids ≤1,000 mg/l	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/l	0	0	0	0	0	0
Total sewage volume						
Water with a total volume of soluble solids ≤1,000 mg/l	0	0	0	0	0	0
Water with a total volume of soluble solids >1,000 mg/l	0	0	0	0	0	0

Note : No water is drawn from areas of water stress.

Table: Substances assessed as having an environmental impact, which requires water treatment. (only for Power Plants) (103-3, 303-4)

Substances assessed as having environmental impacts which requires the treatment of drained water	Criteria according to the standards announced by the Ministry of Industry*	Measured Values		
		2019	2020	2021
pH	5.5 – 9.0	8.2	8.0	8.0
TDS	≤ 3000	826.3	759	899
SS	≤ 50	26.1	17.9	19.0
BOD	≤ 20	5.8	2.6	5.1
COD	≤ 120	32.9	52.2	50.3
Oil and Grease	≤ 5	0.8	0.1	ND

Remark : Standard measurement rate from the Ministry of Industry Announcement on determining standards for Controlling Factory Sewage 2017

Table: Water Consumption (only for Power Plants) (103-3, 303-5)

(Unit : cubic meter)

Water usage at major operating sources	Volume of water in the area			Volume of Water in areas with water stress		
	2019	2020	2021	2019	2020	2021
Total water consumption	6,768,966	8,697,439	9,357,646	0.00	0.00	0.00
Total amount of water stored in the TPIPL area	1,680,000	1,680,000	1,680,000	0.00	0.00	0.00
Total amount of recycled and reused water	262,555	449,245	355,304	0.00	0.00	0.00

Remark : No water is drawn from water stressed areas.

Emissions

The problem of climate change has been the focus of the world leading to the global goal of reducing greenhouse gas emissions. On the global stage at the 26th United Nations Climate Change Conference (COP26), the Prime Minister of Thailand announced his intention that Thailand is ready to fully raise the level of solving climate problems by every means possible to achieve the carbon neutrality goal by 2050 and to achieve the greenhouse gas emissions target of net-zero by 2065. This has led to measures to regulate future greenhouse gas emissions. As a result, there are now measures and penalties at the national level to control greenhouse gas emissions.

TPI Polene Group focuses on reducing greenhouse gas emissions in the production process. Fuel-burning activities in the cement production process and coal-fired power plants generated greenhouse gas emissions. This led to the problem of climate change that is increasing the current danger to humanity. TPI Polene Group therefore formulated a policy and a vision of becoming an environmentally friendly cement producer, implementing the Net Zero GHG Emission policy and finding ways to reduce greenhouse gas emissions that cause global warming in line with the government and other private sectors which are aware of the problem. Thailand is one of the countries that is clearly affected by the problem of climate change. This is an important issue that all sectors must work together to devise preventive and corrective measures to reduce the amount of greenhouse gas emissions. (103-1)

Action Goal (103-2)

TPI Polene Group has set a target to have net zero GHG emissions at cement plants and surrounding areas at Mauk Lek and Kaeng Khoi District, Saraburi Province. All the Company's waste fuel plants can help reduce greenhouse gas emissions by using such waste to produce fuel, instead of landfill (which causes global warming). In 2021, the Company reduced greenhouse gas emissions (carbon reduction) by 5.08 million tons. The amount of waste that has been sorted about 2.19 million tons was used as fuel. The Company has a goal of receiving more waste to be used as fuel accordingly.

Significant Performance

TPI Polene Group is committed to research and development and continuously adopts new technologies and innovations in the production process. The Company's cement plants have been developed and improved to continuously reduce energy consumption, including installing machines to be able to use waste fuel to replace 30-40% of coal in cement plants and 90-100% in power plants. In addition, TPI Polene Group follows the Circular Economy concept to utilize resources for maximum benefits and operates according to Green Economy principles to reduce environmental impact, and to reduce CO2 or greenhouse gas emissions that cause global climate change.

The Company has a policy to focus on business growth using the Company's expertise by focusing on the production of electricity along with the conservation of the environment. The Company uses community waste fuel or municipal solid waste to produce electricity, which helps reduce the amount of waste in the country. Using municipal waste or community waste weighing one ton to produce waste fuel will help reduce greenhouse gas emissions by at least 0.23TCO2e (calculated according to the Thailand Voluntary Greenhouse Gas Reduction Program or T-VER). If community waste or MSW is not used to produce waste fuel, it will be disposed of in landfills which becomes a source of methane emissions (methane gas has a global warming potential of 28 times that of carbon dioxide). So, one ton of waste placed in landfills will release 2.32 TCO2e of carbon dioxide. The management plan is in line with Thailand's energy management plan and the government's greenhouse gas reduction policy. In the past, the Company had major operations as follows:

- The Company has participated in the greenhouse gas reduction projects of the Thailand Greenhouse Gas Management Organization (TGO), such as the Thailand Voluntary Emission Reduction Program (T-VER) under the waste management project, which registered for greenhouse gas emissions reductions (credit period between May 2015 - April 2017) with an amount of 82,056 TCO2. The Company also participated in the Low Emission Support Scheme (LESS) which is an energy project that assessed the Company's greenhouse gas emissions reductions of 280 TCO2 in 2020 and expected reductions of the emissions of approximately 258 TCO2 in 2021.
- By the end of 2021, the Company was certified by TGO of the amount of greenhouse gas reductions (carbon credits) of 82,056 tons of carbon dioxide equivalent from the project to use community waste as fuel. In the current, the

Company holds an outstanding carbon credit of 59,526 ton of carbon dioxide equivalent, resulted from sold a portion of them. The Company is in the process of being registered with TGO (for the project to use waste as fuel) to certify the amount of greenhouse gases that have been reduced (carbon credits) for approximately 709,752 tons of carbon dioxide equivalent.

- In 2021, the Company reduced greenhouse gas emissions by 5.08 million tons equivalent (registered carbon credits were in the process of being approved by the relevant agencies) from the amount of waste that has been sorted for use as fuel, about 2.19 million tons.(reducing landfills which leads to greenhouse gas emissions).

The Company emphasizes continuous innovations in both production processes and products in projects such using waste as fuel in waste heat recovery power plants and renewable energy power plants, and other energy-saving activities. As a result, the Company participated in the contest and received a Thailand Energy Award and an ASEAN Energy Award sponsored by the Ministry of Energy

In 2021, the Company also allocated a budget in the amount of Baht 1,485 million for technological research and development and projects for the purpose of reducing risks and reducing the impacts of climate change.

In addition to alleviating greenhouse gas emissions, the Company also places importance on compliance with environmental laws, especially air pollution management to monitor the emission of waste from the combustion process of the power plant and to monitor the surrounding air quality of the areas in the vicinity of the factory. The Company monitors and controls nitrogen oxides (NOX) and sulfur dioxide (SO2) levels in each combustion process. The temperature and fuel-to-air ratio are controlled during the combustion process to maintain the level of waste emissions within the specified criteria.

Evaluation of Performance (103-3, 305-1, 305-2, 305-3, 305-4, 305-5, 305-7)

Table of the Power Plants' Greenhouse Gas Emissions (103-3, 305-1, 305-2, 305-3)

	Units	2019	2020	2021
Scope 1 (Direct)	$TonCO_{2e}$	3,276,732.24	3,608,173.00	3,201,398.15
Scope 2 (Indirect)	$TonCO_{2e}$	267.85	226.19	410.09
Scope 3	$TonCO_{2e}$	174,646.89	181,273.98	139,897.22
Total	**$TonCO_{2e}$**	**3,451,646.98**	**3,789,673.17**	**3,341,705.46**

Remark:
(1) Set the year 2019 to be the base year since the installation and operation of all eight power plants for the production of power plants was completed in this year.
(2) Greenhouse gas emissions are calculated in accordance with the "Requirements for Calculation and Reporting of Corporate Carbon Footprint" by Thailand Greenhouse Gas Management Organization revision no. 5, January 2021.
(3) The greenhouses gases that are taken into account in emissions calculations in Scope 1, 2 and 3 are: CO_2, CH_4, N_2O, HFCs, and SF_6

The Table of the Company's Emission Levels compared with the standards under Thai law and the World Bank are as follows: (103-3,305-7)

(Unit: mg/m^3 regular)

	Sulfur Dioxide (SO_X)	Nitrogen Oxide (NO_X)
TPI Polene Power Company Limited	30.0	120.0
World Bank Emissions Standards	< 230.0	< 510.0
Requirements under Thai Law	< 320.0	< 350.0

The Concentration of Greenhouse Gas Emissions of Power Plants (103-3, 305-4)

Activities	Units	2019	2020	2021
Greenhouse gas GHG (1)*	$TonCO_{2e}$	3,451,646.99	3,789,673.17	3,341,705.46
Non-greenhouse gas emissions (2)**	Ton	2,800	3,200	3,700
Power generation unit (3)	MWh	2,300,582.01	2,501,941.66	2,455,585.01
Ratio (1) / (3)	$TonCO_2$/MWh	1.5003	1.5146	1.5044
Ratio (2) / (3)	Ton/MWh	0.001217	0.001279	0.001507

Remark : *Greenhouse gas emissions are calculated in accordance with the "Requirements for Calculation and Reporting of Corporate Carbon Footprint" by the Greenhouse Gas Management Organization revision no. 5, January 2021

**Non-greenhouse gas emissions are SO_2 and NO_2

Table: Carbon Reduction to achieve Net Zero GHG for TPI Polene Group(103-3, 305-5)

(Unit: Million Tons Carbon Dioxide equivalent)

Related Source / Process	2021	2022	2023	2024	2025	2026
1. TPIPL						
1.1 Clinker Production[1]	(7.56)	(7.56)	(7.47)	(7.30)	(7.30)	(7.30)
1.2 Other activities[1]	(1.41)	(1.30)	(1.20)	(1.05)	(1.00)	(1.00)
1.3 Production of Hydraulic cement[2]	0.25	0.26	0.27	0.27	0.27	0.27
Net- TPIPL	(8.72)	(8.60)	(8.40)	(8.08)	(8.03)	(8.03)
2. TPIPP						
2.1 Reduce community waste landfill by producing it as waste fuel[3]	5.08	6.61	8.87	10.86	11.85	12.45
2.2 Production of waste fuel, steam and electricity[1]	(3.34)	(3.20)	(2.90)	(2.7)	(2.7)	(2.7)
Net- TPIPP	1.74	3.41	5.97	8.16	9.15	9.75
3. Waste landfill Reduction (million tons)	2.19	2.85	3.82	4.68	5.10	5.37

หมายเหตุ :
(1) Greenhouse gas emissions are calculated in accordance with the "Requirements for Calculation and Reporting of Corporate Carbon Footprint" by the Greenhouse Gas Management Organization no. 5, January 2021.
(2) Calculate greenhouse gases using the T-VER-METH-OTH-03 method of Thailand Greenhouse Gas Management Organization.
(3) Emission Factor, calculated based on the case of emissions to landfill waste, which is 2.32 tons of greenhouse gases / one ton of landfill waste

From the above estimates, TPI Polene Group will reduce net greenhouse gas emissions (Net Zero GHG Emission) at cement plants and the surrounding area at Muak Lek District and Kaeng Khoi District, Saraburi Province. TPI Polene Group can reduce carbon dioxide emissions to zero (Net Zero GHG Emission) along with disposal of solid waste, instead of using landfills which cause pollution problems. These initiatives enhance business immunity against risks associated with climate change, and increase competitiveness. This is in response to the expectation and satisfaction of the stakeholders of TPI Polene Group to continuously and sustainably to promote and develop sustainability in Thailand.

Waste Management

The Company's businesses play an important role in the efficient disposal of various wastes in different areas to be used to produce fuel. Therefore, it is an innovative business that recycles waste to be useful. It also helps the community to reduce the amount of waste, which is a national problem, and help reduce waste disposal processes of government agencies and other private sector organizations, which indirectly helps save energy.

In addition, the Company's electricity production process has led to the creation of a large amount of industrial waste as well. This industrial waste can lead to negative impacts on the environment and the community if there is a lack of good management in disposal. The Company therefore places great importance on waste management efficiently and in accordance with the required laws. (103-1)

Action Goals

- Utilize industrial waste equal or more than 95 % of the amount of industrial waste generated each year
- Manage business operations according to industry regulations and government legislation.
- Recovery, recycle, and reuse industrial waste as much as possible

Management Guidelines(103-2,306-1, 306-2)

The Company is committed to following the "Zero Waste" policy by controlling, supervising and developing various processes to ensure that the rate of discharge of waste from the Company's business operations is below the permitted emissions threshold set by the Department of Industrial Works. The Company also periodically controls the quality of the waste discharged for monitoring and minimizing environmental impact to ensure that it meets the standard requirements. Therefore, the Company complies with emissions and discharge requirements.

The Company systematically manages waste and waste in its business processes using the 3R (Reduce, Reuse, Recycle) principle. The Company has a waste management system for power plants by making the most of the benefits from its waste. In 2021, the Company had no waste or zero waste because TPI Polene Group has a strategy to collect industrial waste of TPI Polene Group to incinerate at the cement kiln. Then, there is nothing left from this process because bottom ash and all fly ash can be used as an alternative raw material at the Group's cement plants.

Processes for collecting and verifying waste-related data (306-2)

1. Waste management must follow an announcement of the Ministry of Industry: Disposal of Sewage or Unused Material B.E. 2548.
2. The use of industrial waste, for example as a renewable fuel or a substitute material to be recycled or disposed of, requires permission from the Department of Industrial Works. The Company needs to inform the Department of Industrial Works of the details of the waste, disposal methods, weight, and disposal recipients.
3. 3. When the Company wants to use industrial waste, for example as a renewable fuel or a substitute material or to be recycled or disposed of, it must prepare transportation documents as legal evidence.
4. The Company prepares an account of collecting data and controlling the weight of industrial waste that is utilized, for example as an alternative fuel or a renewable material to be recycled or disposed of.

Evaluation of Performance (103-3)

Table: Scrap quantity and waste management (only for Power Plants) (103-3, 306-3, 306-4, 306-5)

(Unit: Tons)

Scrap and Waste Management	2019	2020	2021
1. Total waste content classified by type of waste			
- Hazardous Waste	23.22	88.05	79.63
- Non- hazardous Waste	74,086.93	64,801.08	25,183.91
Total quantity of waste	74,110.15	64,889.13	25,263.54
2. Exploitation*			
Hazardous Waste			
- Renewable Fuel	23.22	79.63	66.74
- Substitute material	0	0	0
- Recycle	0	8.42	12.89
Non- hazardous Waste			
- Renewable Fuel	2.50	5.49	10.75
- Substitute material	73,674.53	64,215.93	24,520.04
- Recycle	409.90	579.66	653.12
Total utilized waste content	74,110.15	64,889.13	25,263.54
3. Disposal*			
Hazardous waste	0	0	0
Non- hazardous Waste	0	0	0
Total disposal waste content	**0**	**0**	**0**

Remark : * Utilization and disposal occur within the physical boundaries or under control and management of the Company (onsite).

Community and Social Development

Community and Social Development Performance in 2021

- Investment to help communities and societies Baht 126.04 million
- Injury Frequency Rate (IFR) of Employees and contractors is 0.354 and 0, respectively
- Number of no lost time injuries 538,968 hours (Increased by 49.65% compared to that of 2020)
- Death and injury rates from the work of employees and contractors 0
- Average number of training hours to employees 28.04 hours/person/year
- Disposing of waste infected with COVID-19 3,892 tons (October-December 2021)

Management policies set forth by the Company in writing

Code of Conduct
http://www.tpipolenepower.co.th/index.php/th/th-aboutus/code-of-conduct-th

Universal Human Rights Policy
http://www.tpipolenepower.co.th/index.php/th/th-investment/social-responsibility-th

Employee Handbook
http://www.tpipolenepower.co.th/index.php/th/th-aboutus/empprinciple

Data Protection Policy
http://www.tpipolenepower.co.th/index.php/th/th-aboutus/pdpa

Social Responsibility
http://www.tpipolenepower.co.th/index.php/th/th-investment/social-responsibility-th

Anti - Corruption Policy
http://www.tpipolenepower.co.th/index.php/th/th-aboutus/anti-corruption

Human Resources Management

Training and Education

Due to the rapid change of economic, social, environmental, and technological situations, the Company is well aware of the importance of the development of employee knowledge and capabilities to support the corporate strategy and growth and to build business resilience to effectively respond to the changing business landscape. Therefore, the Company has set goals to develop strategies such as training, educating, and building skills for employees. The Company aims to enhance employees' knowledge and capability to work efficiently, to build employee confidence and pride, and to develop the best relationships among employees. (103-1)

Management Guideline (103-2, 103-3, 404-2)

The Company sets a guideline for training and educating employees in accordance with the personnel development and training policy according to the announcement No. 016/2016, regarding the results of the annual training necessity survey and an annual training program.

Action Goal (103-2)

The Company has set a target (KPI) of training of, on average, at least 18 hours per person, per year.

Performance (103-3, 404-2)

In 2021, the Company set up a training plan for employees to develop both soft skills and hard skills in both internal training formats and outside the organization, totaling 115 courses as follows: (404-2)

Table of training courses to develop skills, knowledge, and abilities of employees in 2021

Course category*	Number of courses	Objectives
1. Management and Leadership courses	18	Enhance leadership skills such as driving people within the organization to accomplish their objectives.
2. Occupational Health and Safety and Environmen tal Programs	27	Organizes safety tasks to reduce the risk associated from illness, injury or death and to care for the quality of life of personnel within the organization.
3. Technical areas	67	Focuses on improving skills and employee efficiency with learning, especially occupational skills, to encourage em-ployees to show their full potential.
4. Technology & Engineering	1	To adapt the organization to keep pace with the digital era. Therefore, staff must have knowledge of technology and innovation.
5. Supporting and Delivering work and preparing for retirement	2	To prepare employees for retirement and delivering jobs smoothly.

Remark : * The courses mentioned above include both hard skill courses, defined as specialized skills required for the profession, and soft skill (competency skill) courses that allows you to work and communicate with others effectively.

Evaluation of Performance (103-3, 404-1)

Due to the COVID-19 pandemic, the Company has been unable to conduct training as usual. Therefore, the Company organized more online training, so training can be conducted from any location and for all departments. This is another good training channel. In 2021, the Company had an average number of training hours of 28.04 hours/person/year, which was more than the number of training hours target which was set to be not less than 18 hours/person/year. It can be summarized as follows:

Table: Employee Training Information (404-1)

(Unit : Hour/ Person/ Year)

Employee Training Information	2019	2020	2021
Average number of training hours per person per year	45.67	44.89	28.04
Average number of training hours, classified by gender *			
Male	49.68	48.86	30.67
Female	6.36	6.16	3.52
Average number of training hours, classified by employee group			
TOP EXECUTIVE	34.25	69.75	7.5
AVP/ VP/ SVP	6.00	9.60	6.0
ASST.DEPT MGR.- DEPT. MGR.	5.27	4.76	3.63
ASST.SUP. – SECTION MGR.	37.56	36.52	14.10
OFFICER	47.44	46.83	30.85

Remark : * Due to the suitability of the job characteristics in the industrial factory, the majority of personnel is male, rather than female.

In order to assess the effectiveness of the training, the Company prepared monthly, quarterly and annual training summary reports including a satisfaction survey in evaluating training arrangements. In summary, a trainee evaluates training in the subject content, achievement of objectives, speakers, and training processes. The Company uses the results obtained to improve training plans, and search for appropriate training topics according to the needs of employees to enhance the employer performance. The satisfaction survey score resulting from evaluating training arrangements was measured at 90 percent (measured at 4.5 out of 5 scale from the evaluation form after the seminars representing 90 percent). (103-3)

In 2021, there were a total of 1,142 employees, representing 100% of which have been assessed on the Company's performance. The Company assesses the performance of its employees annually three times a year in April, August, and December, in order for employees to develop and improve their performance regularly. All employees at all levels were assessed on their performance by their supervisors according to the topic in the performance evaluation form. (404-3)

Child Labor

All children, wherever they are or under any circumstances, have the right to protection, nurturing, and freedom from violence, harassment, neglect, abuse and exploitation as stipulated in the Convention on the Rights of the Child. Respecting and promoting these rights is the essence of Child Safeguarding. Therefore, the Company gives great importance to operations that strictly take into account compliance with labor laws, the selection process of business partners, and to the use of legal labor to build credibility and prevent incidents that may affect the corporate image. (103-1)

Management Guideline (103-2)

The Company set a management policy that complies with Thai labor standards and laws by establishing the "TPI Polene Code of Conduct" involving labor practices, not hiring child labor, and informal labor. The Company encouraged its contractors, subcontractors, and all business partners to comply with requirements related to labor and child labor, and stated that "Partners

must not act or encourage the hiring of underage workers as required by law" under the topic of labor and human rights of the Supplier Code of Conduct, as well as not giving and never encouraging the use of child labor in work that is hazardous to health, or in an environment that is harmful to health and safety, or is prohibited by law. The Company requiring partners to sign an acknowledgment of the agreement with the Company.

Performance(103-3, 408-1)

In 2021, a total of 613 trade partners, representing 90.38 percent, signed the agreement and the Company did not find any violations of child labor practices or working with occupational health and safety risks in the Company's hiring process and partner operations.

Occupational Health and Safety

A good and effective Occupational Health and Safety Management System is a major part of conducting business with responsibility for employees, partners, contractors, and stakeholders who are related to the operations in the Company's area and all relevant operational areas. The Company is committed to strictly complying with safety and occupational health requirements including risk assessment in every business process. It also instills and builds awareness of safety in the work for employees and related parties to continuously create a culture of safety at work, to prevent and reduce the loss that may occur to life, property, as well as the potential impact on the surrounding community and the environment. (103-1, 103-2)

Management Guidelines (103-2, 403-1)

The Company set a policy and guidelines related to occupational health, safety and good working environments for employees, workers, contractors and sub-contractors, including communities and stakeholders in the Company's operating activities. The goal is that everyone should have a good, safe quality of life. No accidents resulted in serious injury or death or illness from work. It operates under the Occupational Health, Safety and Environment Policy, including the requirements for operating guidelines in accordance with the ISO45001 Occupational Health and Safety Management System. The guidelines are as follows:

Risk assessment and guidelines for occupational health and safety risk management work environment, including risk assessment and risk management guidelines that may affect surrounding communities and environment

Establish operational safety manuals and supervising operations in accordance with safety manuals and procedures

Accident and incident reporting and investigation, including setting solutions and precautions to prevent repetition of accidents

Supervision of performance under occupational health and safety laws, and work environment and other related regulations and supervise the operators, outsiders and those involved in the work area to strictly comply with the regulations

Supervise the working environment; provide personal protective equipment for employees to use in compliance with the law.

Prepare to respond to an emergency including business continuity management

Communicate a policy, cultivate conscience, create a work culture, develop knowledge and skills, and organize activities to promote safety, occupational health, and a good working environment.

Risk Assessment Guidelines, incidence checks, and risk management for safety, occupational health and working environment (403-2)

The Company established a policy and guidelines related to occupational health, safety and good working environments for employees, workers, contractors, and sub-contractors including communities, and stakeholders of the Company to have a good quality of life and optimum safety. The Company does not want any accidents that cause serious injuries, death, or sickness from work to occur by operating under the Occupational Health, Safety and Environment Policy that complies with the ISO45001 Occupational Health and Safety Management System.

Environment Control at Work

- Employees and related persons wear personal protective equipment to prevent injuries and accidents at work.
- There are signs and symbols indicating various hazards in the operation area.
- Regularly measure and assess the working environment to make sure that the measurement values are in accordance with the law such as air quality, noise level, light intensity, etc.

Supervision

- Determine rules and regulations to cover the operations of employees, third parties and stakeholders working in the area
- Security officer, owner of the area, and all employees are responsible for supervising the implementation of the measures and safety guidelines as specified, such as
  - Safety training and related regulations to all contractors before entering the work area
  - The application for permission to enter the work area must be authorized in accordance with the factory procedures.

Reporting and Investigation

- Report accidents. or unusual events that occur and keep a systematic record both abnormal events in the production process and a near-miss accident
- Employees who are involved in the incident or who have witnessed the incident must report the incident to their supervisor and safety officers should be notified within 24 hours.
- Appointment of a working group to investigate accidents or events that occur and to investigate the root cause by applying the Why

Environment Control at Work	Supervision	Reporting and Investigation
	– The contractor must have a supervisor who has knowledge of safety, can assess potential hazards from work, is responsible for controlling and supervising both general and specialized work. – Risky work must request a work permit and strictly comply with the requirements of each work permit.	Analysis principle to lead to the determination of measures, corrections, prevention, and monitoring of corrective actions • Periodically update the specified preventive measures. • Develop learning materials from accidents for employees and contractors through the Company's media in order to ensure the most effective and effective protection

Management Structure of Safety, Occupational Health and Environmental (103-2, 403-4)

The Company has set up a safety operations committee for Occupational Health and Environment, which consists of the management team and professional safety officers of the Company to perform their duties and responsibilities for the management of Safety, Occupational Health, and Work Environment in compliance with the requirements of the Occupational Health and Safety Management System (ISO 45001) and safety laws.

Security, Occupational Health and Work Environment Policy

Safety Occupational Health and Work Environment Operations Committee

Consider a Safety Roadmap	Supervise all parties to follow the legal policy and requirements in accordance with ISO45001	Communicate to boost knowledge and understanding for stakeholders	Investigate accidents and define solutions and preventive measures.	Continuously monitoring of assessment for continuous system development

Target : No occupational accidents to Death and no occupational diseases.

The Company established the Safety, Occupational Health and Environment Department to coordinate and monitor the safety and environmental operations of all factories to ensure compliance with relevant laws and regulations, policies, plans, and goals set by the Company, including Risk Assessment and Management Preparation of an assessment of the impact on safety, occupational health and the environment, as well as the performance report to the Occupational Health, Safety and Environment Committee for acknowledgment on a regular basis.

The Company appointed an Occupational Safety and Health and Working Environment Committee in each factory which is in accordance with the Ministerial Regulation for Management of Occupational Safety, Health and Environment B.E. 2549, consisting of representatives of not less than 50 percent of the entire committee being operational level employees. Employee representatives at the operational level are elected by job division in order to have representatives from all departments.

The Committee is required to meet at least once a month with roles and duties in receiving information from employees in each line through representatives and informing and following up on the progress of operations and plans for the future. This includes developing, improving, promoting and creating a body of knowledge in order to cultivate a work culture and develop occupational health and safety skills for employees, contractors and related people who come to work in the factory area. These skills comprise training to improve knowledge of safety and the working environment, organizing Safety and Environment Week Activities, Occupational Safety Training Fire Drills and Basic Evacuation Training in first aid and cardiopulmonary resuscitation, CPR & AED, as well as joining safety networks in safety campaigns and activities, etc.

Occupational Health and Safety Services and health promotion of employees (103-2, 403-3, 403-6)

The company established a service that promotes a culture of safety within the organization that covers the service and promoting good health in the workplace such as:

- Infirmary rooms within the workplace, with physicians and nurses available to provide advice on illnesses or first aid in case of injury to employees and contractors.
- Employee health checks from the start of work by providing a health check-up according to the risk factors that must be performed, such as a hearing test, and lung function tests, Electrocardiogram (EKG) examination in the case of working in confined areas.
- Annual health checks for both general health and specific health check-ups, according to occupational health risk factors. An occupational medicine doctor and the Company's occupational health staff jointly determine the health check-up list for staff based on internal factors and external factors. If employees have abnormal health results, they must see a doctor and receive advice on ongoing healthcare. They determine additional test items according to the risk of age groups, such as blood lipid testing (total cholesterol, LDL, HDL, triglycerides) in the employee health check program to cover diseases that may be caused by daily living, and they encourage employees to constantly monitor their health.
- Assign Medical Expense Benefits (OPD) to employees, parents, spouses and legitimate children.
- Set up additional benefits to support workers in accessing medical services for non-operational cases such as examination and primary medical care, and emergency treatment at the Company's hospital room for employees and contractors. These benefits are free of charge and include annual health check-up services, and influenza and coronavirus vaccinations for employees.

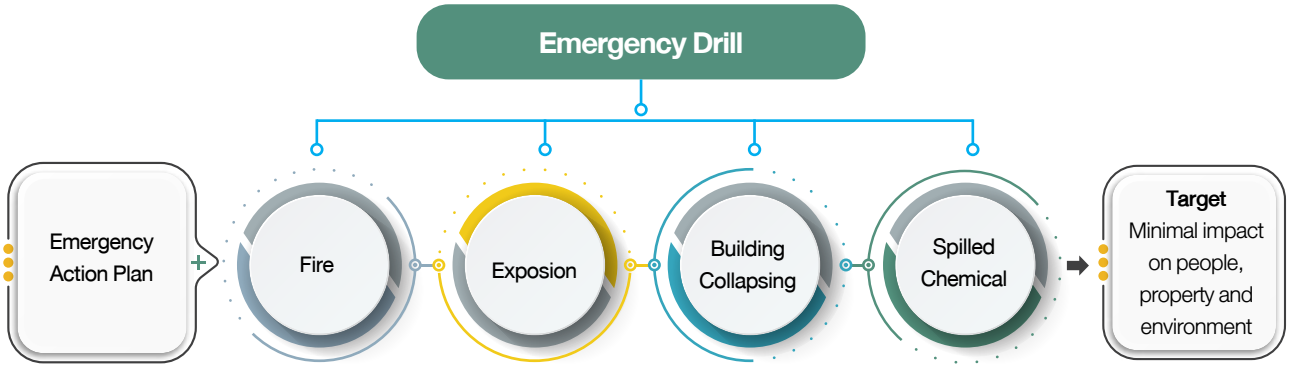
Occupational Health and Safety Employee Training (403-5)

The Company has established training courses in occupational health & safety, and fire prevention and suppression that are required and suitable for the positions, type of work, and potential risks of employees and contractors, in order to develop knowledge, skills, understanding of events that may be dangerous and cause accidents. They also learn protection methods and control hazards while working, and perform assigned duties with safety. Moreover, all the training history and evaluation are being recorded and filed.

Training course topics	Number of Participants
Occupational Health and Safety, working environment for current and new employees	4
Safety when driving a forklift	0
Review of safety when working in confined place	12
Basic Fire Fighting	4
Occupational Safety, Health and Environment Committee	8
Safety Officer - Management Level	3
Safety Officer - Supervisor Level	26

Emergency Response Preparedness (403-7)

The Company has provided an emergency response plan. Every factory has an emergency response plan which has clearly defined roles, responsibilities, and procedures as well as an annual emergency response plan drill, such as in the event of a fire, chemical spill, boiler explosion, etc. In this regard, the Company holds the drill and assessment of the emergency plan to bring recommendations to improve the efficiency of emergency response operations. In addition, the Company provided training to increase knowledge and expertise for employees who are responsible for responding to emergencies, such as advanced firefighting training, preventing chemical spills, and training on emergency management.



Performance (103-3)

The Company set the criteria for measuring results and assessing work safety, occupational health, and working environments, by considering accident rates at work, the number of safe working hours, the rate of fatal work-related accidents, and the number of occupational illnesses or diseases. The operating results in 2021 are as follows:

Table: Employee information under the Company's Occupational Health and Safety Management System (103-3, 403-8)

	Number of Participants	%
Employees and workers in the establishments controlled or supervised by the organization		
Employees	981	100
Workers	41	100
Employees and workers in the establishments controlled or supervised by the organization (and audited by the organization)		
Employees	250	25.48
Workers	15	36.58
Employees and workers in the establishments controlled or supervised by the organization (and audited by external organizations)		
Employees	56	5.71
Workers	10	24.39

Remarks : Employee refers to the Company's personnel. (Not including those in subsidiary companies)Worker refers to personnel of other establishments, controlled or supervised by the Company under ISO 45001:2018 standards.

Table: Work-related health problems

Performance	2019	2020	2021
Mortality rate	0	0	0
Injury Severity Rate	no records	no records	0
Injury Frequency Rate : IFR	0.614	0.996	0.354
Sickness rate from work-related disease	0	0	0
Working hours without accidents	1,695,744	1,085,568	1,624,536

From the above data, the rate of injury frequency in 2021 decreased compared to 2020. The Company significantly improved performance. There were no accidents leading to death, no high-impact work-related injuries, and no sickness due to occupational diseases. As a result, the Company had a better safety performance in 2021.

COVID-19 Pandemic Measurement

The Company was well-prepared for the COVID-19 pandemic that has severely affected society and operations, by having implemented a Business Continuity Plan, which resulted in a low level of impact on business operations. However, the Company is closely monitoring the situation and mitigates risk appropriately with measures taken to ensure confidence as follows:

- The Company provides RT-PCR screening forms for COVID-19 to employees, contractors, and related employees who work in the same workplace, and for infected groups, the Company coordinates to access an immediate treatment system.
- The Company encourages employees and their families to be vaccinated against COVID-19 as quickly and comprehensively as possible; vaccination appointments are coordinated in the vaccination program free of charge by the public sector Social Security Office, with shuttles for employee vaccination trips. The Company also purchased the “Sinopharm” vaccine for employees in the provinces who do not have access to the vaccine, allowing for rapid injections and covering all employees. As of December 31, 2021, the rate of the 1st vaccination dose for TPI Polene Group employees was 99.74% of all employees; the 2nd vaccination does, was 99.38% of all employees; and the 3rd vaccination dose, was 56.12% of all employees.

The Company purchased ATK testing kits using saliva and nasal swabs to screen for COVID-19 for vulnerable employees and visitors. If positive results are found, they will be sent through the RT-PCR system for further treatment. The Company also encourages employees who need to be in contact with third parties to test with ATK testing kits before meeting. This includes salespeople, freight workers, and all employees who need to meet with customers outside the premises.

- Support the cost of COVID-19 detection: Both RT-PCR and Rapid Antigen Tests for at-risk employees to help quickly isolate infected people from non-infected people. Infected people can enter the care system and non-infected persons can operate in the workplace safely.
- Arrange working hours to create social distancing by allowing toggle work times, and shifting arrangements to keep space between individuals, reduce employee congestion. Having lunch together is also not allowed to reduce direct communication and reduce the risk and likelihood of spreading pathogens.
- For employees who reside in a severe outbreak areas or were at risk of infection during a round trip by bus, the Company provides temporary accommodation to employees within the Company and controls the employee’s outings in accordance with bubble and seal principles.
- The Company purchased and reserved “Andrographis” for employees who have fever, cough, sore throat or a COVID -19 infection. It helps to relieve mild symptoms and is used in low-risk people to reduce the likelihood of pathogens spreading to the lungs.

The Company recognizes that human resources are valuable and a force in driving the organization and focuses on developing people to be qualified, moral, ethical, and adhere to integrity, responsibility to the organization and to society. The Company also encourages employees to participate in corporate social responsibility, which the Company believes helps develop employees to be good and talented to further encourage sustainable growth in the organization.

Community and Social development

Community and Social Development Participation

In an effort to participate and promote community and social development, the Company has set up goals toward the quality of life and the co-existence of the business, the environment, society, and communities. As a Thai power enterprise, the Company has acknowledged the importance of sustainable energy as well as waste management efficiency, which are direct ways to solve social problems and support the careers of people in the communities. This leads to sustainable development for both the Company and Thai society as a whole.

Operational Goals (103-2)

"No Complaints or Claims for Remedies or Compensation"

Management Guidelines (103-2)

Throughout past operations, the Company has consistently assessed the social and community impacts since most of the investment projects are large-scale projects with environmental and social risks. Therefore, the Company places importance on the process of assessing impacts based on the ability to respond to the needs or expectations of affected communities.

The Processes and Methods of The Community and Social Impact Assessment on the Company's Operations (413-2)

The Company has operated its business in strict compliance with the relevant laws and regulations by maintaining information transparency, receiving feedback and suggestions of communities, evaluating the implementation of projects before and after operations, and establishing committees representing several sectors of the communities to monitor and propose complaints or suggestions.

In addition, the Company has established voluntary funds, which are not required by law, to support communities and has appointed community representatives as managers.

The Company has also organized open house events for community representatives, educational institutions, government agencies, and relevant parties to learn more about the Company's businesses and provide a direct opportunity to communicate with professionals.

The Company has a plan to invest in the Southern Seaboard Development Project or Prototype City of Advanced Futuristic Industries (PAFI) in Chana District, Songkhla Province, with an investment value of approximately Baht 300 billion. It is to support the government in economic development in the southern border provinces to increase job creation and income for locals in the area, resolve political conflict in southern Thailand, and strengthen national security. The Company has set out plans to invest in four industries with an investment value of approximately Baht 300 billion to promote Chana to become a modern industrial hub for the ASEAN region as follows:

(1) The Prototype City of Advanced Futuristic Industries (PAFI) project

- Food processing, agriculture, and biotechnology industries, such as rubber processing, palm and fishery products will be of great importance in the southern region where there is a good source of rubber, palm and fishery products of Thailand. In the past, palm and fishing product processing industries were only concentrated in the eastern region. Thus, promoting and developing more of such industries in the southern region is not only a way to distribute income to southerners but also benefits the country as a whole. However, there are limitations, such as the lack of investors, technology, and support infrastructures, leading to volatile prices for rubber, palm and fishery products. Thus, the Prototype City of Advanced Futuristic Industries (PAFI) project is a scheme to eradicate those problems as the Company can bring modern technology, innovations, and essential facilities to the area.
- Future industries such as the silicon industry, electronics industry, wind turbines, solar panels, electric vehicles, and batteries. The Company plans to invest in these industries through joint ventures.
- Biotechnology, the medical food technology industry (synthetic meat, and artificial organs), and halal food industry, which are among the key industries in Chana, can all help to develop a comprehensive medical device manufacturing center in line with the Thailand's international medical hub policy.

(2) A smart city project which includes plans to develop a digital industry center, integrated medical hub, training and career center, all-inclusive financial center, one-stop service center, residence to support the upcoming industries. The above-mentioned projects will be a foundation for smart-technology-based projects such as smart hotels, smart resorts, smart government centers, smart buildings, as well as promoting the area to be a special economic area to support international trade and finance.

(3) A deep seaport and distribution center (both off-shore and in-land) project are industrial infrastructure projects that support transportation in the area. The deep seaport aims to become the second deep seaport in the Songkhla area, which consists of a container port and break-bulk port to support the transportation of raw materials as well as a gateway to the export of raw materials or finished goods from the industrial projects to other areas. This would bring good future prospects to Thailand's industries, as well as being a geographical advantage of Thailand to become a gateway to connect ASEAN to the world.

(4) Clean energy center project include wind, solar, biomass or waste materials and natural gas (LNG) totaling 3,700 MW to supply clean energy to all of the industrial development projects in the area. At present, the Southern region needs to import energy from the central part of Thailand or from Malaysia of up to 950 MWh (the peak) since there are not enough power supplies in the area in spite of the potential of the Southern area as well as the trend of electric vehicles that will replace petrol cars. Given those reasons, demand for electricity in the Southern area could increase exponentially. Thus, the Company aims to develop all kinds of clean energy businesses and is inviting in vestors from different countries to cooperate in these projects. This would drive the country's economy and improve the well-being of locals in line with the stability and sustainability policy in the Southern border provinces.

The reason why the Company is focused on the development of the Southern region is because investors are not confident in political conditions, leading to low investment and unemployment problems. In addition, agricultural, fisheries, and livestock production have slumped which makes it impossible to process raw materials into semi-finished and finished products. Thus, the Internal Security Operations Command (ISOC) and the Southern Border Provinces Administrative Center (SBPAC) invited the Company to be a developer of the PAFI project according to Thai Cabinet resolutions on May 7, 2019, and January 21, 2020. The project consists of an industrial park project, a 3,700 MW power project, a deep seaport and distribution center project, and a smart city project. The Company has also applied environment friendly practices and stakeholder impact analysis on all of the processes. In addition, the Company must establish an environmental impact analysis system from the development of the project (EIA or EHIA, as the case may be) in accordance with the relevant regulations, as well as the environmental policies.

Overall, the Company's Southern Seaboard Development project will be able to create 100,000 jobs in industrial sectors and other related sectors, generating huge cash flows, especially enhancing national security in the Southern broader province. Under the government's "live well, eat well, have happiness" policy, whenever the area is prosperous as well as people having jobs, savings, and income, the South Thailand insurgency would be reduced and resolved. This project is therefore a national security project in accordance with the Cabinet resolution that all ministries and government agencies have to provide support and strictly attach importance to consideration as a top priority over other projects.

The Company is assured that this project shall benefit communities and locals in the form of opportunities, employment, and quality of education as the scholarships and social security funds have to be provided to enhance local workers to support the upcoming industries. This will ensure the well-being as well as create a sustainable peaceful life for the people of the Southern border provinces.

Case Study of Southern Seaboard Development Project in Songkhla Province (103-2, 413-2)

The Company is ready to continue investing in the Southern Seaboard Development Project or Prototype City of Advanced Futuristic Industries (PAFI) in Chana District, Songkhla Province as a part of the national security policy and to increase the potential for economic, social, and resource utilization for maximum benefit. The Company also plans to minimize environmental impact, both on land and at sea, and take into account all stakeholders to improve the economic and societal conditions in the Southern border provinces, as well as adopt the Bio-Circular-Green economy (BCG) and environmental, social, and governance (ESG) guidelines to create sustainability in both the entire economy and society.

The Company has currently been contacted by both domestic and foreign investors who have expressed their intention to invest in the projects, which can be summarized as follows:

1. Clean energy center project: The Company has signed a Memorandum of Understanding (MOU) with Korea Gas Cooperation, Norinco International Cooperation Limited, and China Datang Overseas Investment Company Limited,

a Chinese state-owned company, as well as foreign companies who are interested in investing in clean energy from a number of countries such as the United States, Mexico, Canada, Indonesia, Malaysia, Denmark, and Spain

2. Deep seaport (container and bulk) project and logistic center: The Company has signed a Memorandum of Understanding (MOU) with CRCC Malaysia BHD, one of the subsidiaries of a China state-owned company. Both projects have also been expressed interest in by a number of leading companies in countries such as Belgium, the Netherlands, and Singapore.
3. Smart city project: Some companies expressed their interest in the project from Thai leading companies to foreign companies from countries such as the United Kingdom and Hong Kong.
4. Advanced futuristic industries park project: Currently, there are numerous parties that have expressed their interest in joint ventures, developing the project, and setting up their factories in the industrial park. The parties include government representatives from Hong Kong, China, and foreign companies from Belgium, Germany, and Spain. In addition, the New Zealand government is interested in running sustainable clean modern fisheries and livestock in the area.

In addition, the Company is currently negotiating joint ventures with foreign partners to invest in battery cell production projects and the fully integrated silicon industry project. This has created a great opportunity for the Company to grow further along with global trends, as the partners are top-tier specialist companies.

The Company was also honored by Mr. Taha McPherson, New Zealand Ambassador to Thailand, for jointly discussing modern-technology-related organic agriculture and livestock, in particular, in production, marketing, and product processing according to future trends. The concept is expected to be used as a part of the prototype city project, the Triangle (stable-prosperous-sustainable) Model City 4 Project, in the Chana District, Songkhla Province.

When the Prototype City of Advanced Futuristic Industries (PAFI) projects start commercial operations, about 100,000 jobs are expected to be created for locals and the country. Fresh graduates, technicians, engineers, and academics who are experts in various academic fields such as trade and investment, tax law, industrial businesses, financial and banking, civil engineering, mining, mechanical engineering, electrical engineering, chemical, electronics, agriculture, biotech, bio-organic (biochemistry), bio-pharmaceutical for both humans and animals (biopharmaceutical industry), AR (augmented reality), AI (artificial intelligence), computer science, mechatronic systems, robots, and modern services, including medical and nursing, are all considered essential personnel for the project. Their skills shall be a factor for facilitating rapid economic growth in the SEZs and creating more economic value to the country. However, the ultimate goal of the project is to reduce the violent situation in Thailand's three Southern border provinces and create stability for the country.

Risk from holding the purchased land for the Southern Seaboard Development Project at Chana, Songkhla Province (413-2)

Over the years, the Company has bought land, aimed at investing in the Southern special economic zone development project at Chana district (Na Thap, Taling Chan, and Sakom), Songkhla province. This was a result of the cabinet's approval of the Southern Border Provinces Administrative Center (SBPAC)'s proposal, which is to designate Chana district (Na Thap, Taling Chan, and Sakom), Songkhla province as a special economic zone under the Southern Border Administration Act. Thus, the Company proposed a project implementation plan, worth approximately 300 billion baht, by spreading prosperity to the region, creating careers for people in the area, and providing economic benefits. Subsequently, on May 7, 2019, the Thai cabinet approved the plan and ordered the SBPAC and related agencies to proceed in accordance with the approval

On March 7, 2020, the SBPAC sent a letter to inform the Company that the SBPAC had proposed the Southern border provinces development and strategy committee to give an approval in accordance with the meeting resolution of the Southern border provinces development and strategy committee No. 1/2019 on October 31, 2019, and the approval of the Thai cabinet on January 21, 2020. The Southern Border Provinces Administrative Center has coordinated with the parties involved in the project's investment plan to proceed in accordance with a requirement that any parties from the private sector are obliged to conduct an Environmental Impact Assessment (EIA) and/or Environmental and Health Impact Assessment (EHIA) studies. In March 2021, the prime minister reaffirmed the government's commitment to developing the project by approving SBPAC to continue in accordance with the resolutions of the Cabinet.

The Company aims to become a developer of the Futuristic Advanced Industrial City project in a coastal area of Southern Thailand. The project shall include natural gas and other renewable power plants with a total capacity of 3,700 MW in Phase 1 and deep seaports. The Company plans to purchase land covering a total area of about 16,753 rai. At the end of 2021, the Company has already paid for the land amounting to approximately Baht 10,000 million and expects to pay additional Baht 6,000 million by using operating cash flow, when the project makes more progress. The Company's purchase of such land in advance has resulted in higher liabilities and may expose the Company to many risks, such as the risk of project delays, the risk from a change in government policy, and the risk of receiving objections from local residents. In addition, such a project can take many years to complete since there is no specific timeline. Therefore, the Company may have to hold the land without receiving any returns for a long time.

If the project does not occur, the Company will be able to gradually sell the land. However, the Company considers that it is very unlikely that the project will not occur since the Thai Cabinet has already approved the development of the project. In addition, the key objective of the project is to enhance national security and economic conditions in the Southern region. Most of the purchased land is located in three sub-districts (Na Thap, Taling Chan, and Sakom) which are the areas designated by the government as development areas for the project. The Company has also collected and bought land along the beach about 2.1 kilometers to develop a deep seaport which is part of the project. If other companies plan to invest in the project, it would be difficult to collect large tracts of land adjacent to the sea for developing a deep seaport since the remaining land in these three sub-districts is mostly community areas or a public area.

The Company shall not invest in the project further except in the case that the Company receives an official approval from the government, such as PPAs or BOI's investment promotions.

Corporate Social Responsibility Projects (103-3, 413-2)

The Company values its business operations under corporate social responsibility practices in parallel with social conservation and environmental preservation to improve the quality of life of local people in the communities and society to be strong and grow sustainably. In 2021, the Company carried out corporate social responsibility projects of approximately Baht 126.04 million as follows:

Social and community support activities during the COVID-19 pandemic

1. Donated a budget of Baht 74.45 million to purchase medical supplies and equipment, bio-sanitary products, building materials of TPI Polene Group and other items to hospitals and other organizations for assisting the operations of medical personnel, front line staff, to help control the situation of the COVID-19 outbreak as well as helping those who were infected with COVID-19. These included:
   - Supported the Respiratory Extension Project for the purchase of "High-flow machines" to the Siriraj Foundation; supported a mobile X-ray truck for Chana Hospital, Songkhla Province to help visiting villages in the south; supported a high-flow oxygen machine, Powered Air Purifying Respirator (PAPR), negative pressure stretcher, and ISOLATOR, etc., for Songkhla Provincial Public Health Office to be used in six hospitals, namely Jana Hospital/ Somdet Na Nathawi Hospital/ Thepha Hospital/Saba Yoi Hospital/ Sadao Hospital/ Padang Pesar Hospital; and supported an excellent mobile vehicle for Songkhla Nakarin Hospital, Faculty of Medicine, Songkhla Nakarin University.
   - Donated TPI Polene bio-sanitary products to medical personnel, front-line staff, and COVID-19 patients, such as Siriraj hospital, field hospitals at 14 locations in Saraburi province, police hospitals; supported TPI boards to build the shower rooms for Busarakham field hospital (Muang Thong Thani); supported the construction of a field hospital of Lerdsin hospital; support psychiatric patients in Srithanya Hospital Foundation to live more independently and to fulfill their potential; supported the rooftop solar panels project on the patient building of Kaeng Khoi Hospital, Saraburi; supported a water treatment project for producing tap water in Muak Lek Hospital, Saraburi; supported 31,000 boxes of rice boxes to medical

personnel at the Central Bang Sue Vaccination Service Center including providing rice, dry food and bio-sanitary products of the TPI Polene Group to the Songkhla Provincial Administrative Organization and people in the areas of Na Thap, Taling Chan, Sakom and Chana, Songkhla Province; donated blood sugar testers, medical tool bags, digital thermometers, and foot pedal operated hand sanitizer dispensers to health volunteers of nine villages, Mittraphap Subdistrict, Muak Lek District, Saraburi Province to perform their duties in communities.

2. 2. Donated a budget and construction materials from TPI Polene Group, worth Baht 39.42 million, to build, renovate, and repair buildings of temples and schools across the country, including

the operations of the foundations and various organizations that perform activities that are beneficial to society, as well as other activities such as co-hosting the Kathin unity offering at Sri Don Mun Temple, Chiang Mai Province, Ban Hin Lap Temple, Saraburi Province; supporting the Rak Kaew Sasana Heir Novice Project and co-publishing the book print media Dharma CDs and DVDs of Buddhism Propagation Department, Rama 9 Temple Kanchanaphisek; supporting the dissemination of Buddhism on the World Buddhism Television Station of Thailand, Wat Yannawa (WBTV); supporting the painting of the interior painting work inside the 2nd floor of the 60th Anniversary Building of Wat Khao Sukim in Chanthaburi province; co-developing Rai Thep Raksa Mind Development Center of Prayurawongsawas Worawihan Temple Mission Organization in Ratchaburi province; pouring the floor of the field hospital of Lerdsin hospital to support Covid-19 patients; establishing a house rebuild project for the underprivileged in the area of Muak Lek District, for four people; as well as donating 10,000 blankets to winter affected villagers in the North and the Northeast.

3. Participating in promoting the environment and improving the quality of life of Thai people as follows:
   - TPIPP tree planting project: The project aims to develop community forests of 162 rai in three areas which are in Ban Tham Namphu Community Forest, Kaeng Khoi

District, Saraburi Province; Khao Lom Community Forest Ban Sap Phrik School and Wat Sap Phrik, Muak Lek District, Saraburi Province; and Ban Thai Community Forest, Kaeng Khoi District, Saraburi Province, to conserve nature and the environment, replace degraded forests, increase green space, as well as reduce global warming by cooperating with local people and communities.

- Waste-to-energy promoting project: The project aims to promote and advertise waste-to-energy to communities by setting up waste recycling exhibit booths recycling product showcases, and through a demonstration of making cloth bags from old bags at the office of the subdistrict headman, unit 10, Thap Kwang Subdistrict, Kaeng Khoi District, Saraburi Province, as well as providing health education to create good hygiene habits in waste management.
- Water dispenser project: The project aims to provide safe and clean drinking water to people in 14 villages within a 5-kilometer radius around the Company's power plants.
- Provided scholarships and construction materials of TPI Group, totaling Baht 12.16 million, for the building and renovating 23 schools and educational institutions across the country to improve the quality of life of the students.

The aforementioned activities are only a part of the Company's activities which focus on improving the quality of life for local people in communities and society to be strong and grow sustainably. In addition, the Company realizes the important role of corporate social responsibility and aims to support society, education, youth, religion and the environment to create a supportive society, good environment, and the sustainable growth of Thai economy.

Procurement Practices

The Company attaches great importance to purchasing and supplying both machinery and raw materials from domestic partners and manufacturers as appropriate to reduce the cost of importing machinery from abroad in case we can produce by ourselves. The main raw material is community solid waste that is used as fuel for the electricity production process, which is one of the important processes because it is the main cost that affects the business operations of the Company. Procurement of used tires, non-hazardous industrial waste, and materials that provide high heating values are produced as renewable waste fuels using coal. They are purchased by operators from waste collection points nationwide based on the quality, quantity, and delivery of goods, as well as requirements under environmental law to have raw materials enter the production process continuously and sustainably. They reduce the Company's production costs and bring stability in electricity generation, including economic promotion and revenue distribution through domestic contractor hiring. (103-1).

Management Guidelines (103-2)

- Transparent and Auditable Procurement System
- Strictly comply with the commercial terms and conditions as stipulated in the contracts with suppliers.
- Take into account the mutual benefits with suppliers and equality in business operations.
- Employees in affiliated groups must not claim the benefits from procurement and must be counterbalanced.
- The Company does not do business with suppliers who behave illegally.
- Support ESG knowledge to upgrade business operations with trade partners to reduce risks associated with business operations and any act that may affect the Company's reputation.
- Establish measures for business operations with suppliers as well as the use of digital and online technologies for safety during the COVID-19 pandemic.
- Respect human rights and respect personal data.
- Provide Occupational Health and Safety systems to contractors who work in the working area of the Company.
- Additional employment of local contractors for the production or repair of spare parts to replace the purchase or import of materials from foreign manufacturers, which help reduce machine repair and maintenance costs.

Performance (103-3, 204-1)

- The number of suppliers who are under procurement procedures are 613 suppliers and 554 business partners who have acknowledged the Supplier Code of Conduct, representing 90.38 % of the Company's total suppliers, excluding government authorities, local municipalities and state enterprises, totaling 54 parties. But there is a limitation on the signing of the Supplier Code of Conduct.
- No complaints from suppliers.
- In 2021, the Company procured community waste from Garbage Assortment Centers in the country, which are: a local municipal government agency in 16 provinces in the nearby plant – the total amount of raw materials feeding into the production process amounted to 2,035,275 tons. In addition, the Company employed a labor force for the construction and maintenance of machinery using contractors and local workers, which can be summarized as follows: (204-1)

Types of products and services locally procured	Operation Source	Procurement Budget (Million Baht)	% of budget for local procurement*
- Service and Repair Work	TPI Polene Power	113.27	11.01
- Construction Work	TPI Polene Power	21.02	2.04
- Report employment	TPI Polene Power	24.76	2.41
- Community Waste	TPI Polene Power	870.00	84.54
Total local procurement budget		1,029.05	100

In addition, the Company participated in alleviating the suffering of society by disposing of contaminated waste from Public Health Organizations – this waste had to be properly and effectively managed during the COVID-19 pandemic in order not to affect the environment and public health. From October - December 2021, the Company was able to dispose of approximately 3,892 tons of contaminated waste.

Respecting Human Rights

Presently, stakeholders, as well as younger generations who will become quality personnel of the organization, have turned their attention and demand for the leading business organizations in the country to play an importance role in raising the quality of life and creating a good society through core business operations that take into account respect for human rights and fundamental freedoms, regardless of race, religion, sex, skin color, language, values, beliefs or any other status as a basis for discrimination. For this reason, the Company is therefore determined to operate our business on the fundamentals of human rights to create trust with stakeholders and to be a quality organization with social responsibility that is recognized internationally. (103-1)

Identify the Operation Target (103-2)

The Company is committed to operating its business under the principles of humanity, promoting employment diversity, supporting the employment of local people in the surrounding communities at the Company's plant, with no discrimination against any particular individual. In 2021, the Company had 29 new employee positions, of which 21 were new employees from the surrounding community at the plant, representing 72.41% of new recruits joining the Company. In 2022, the Company has a target of hiring local people from the surrounding communities of power plants, at a rate of at least 50%.

Management Guidelines (103-2)

The Company is committed to complying with the provisions set out in the International Human Rights Principles and International Labor Standards, including the United Nations Universal Declaration of Human Rights and the International Labor Organization's Universal Declaration of Fundamental Rights and Rights at Work. The Thai Labor Protection Act, B.E. 2560 (2017) and respect for the International Labor Organization (International Labor Organization: ILO)

The Company has set its policy in the Company's Code of Conduct regarding treating each other with respect for human rights, privacy, respecting privacy rights, and protecting the information of customers, business partners, employees and related parties to the highest standard according to the Personal Data Protection Act B.E. 2562, with equal treatment in security support and respect for the political rights of employees and fundamental right to life, and the right to petition against any allegations. In this regard, an independent and fair committee was set up to investigate and inspect matters, for which the accused have the right to defend the allegations against them. In addition, the Company has conducted significant activities regarding human rights as follows:

1. Announcement on the International Human Rights Policy No. 006/2016 that stipulates guidelines for activities and business operations that create sensitivity to society and communities. The Board of Directors, executives and all employees of the Company are required to comply with the related governing laws, traditions and local culture as the Company has taken action in particular areas by adhering to the following guidelines:
    - Employees must treat and interact with any other person in the plant areas, on the basis of human dignity, fairness, and mutual respect, as well as complying with all enforced laws within the country.
    - The Company promotes diversity in employment and provides employees with opportunities to grow and progress in their careers, with no discrimination against a particular person due to similarities or differences in race, nationality, religion, country, education, age, gender, status, physical disability, etc.
    - Employees must process information of related stakeholders carefully and prudently.
    - Employees will not disclose the confidentiality of stakeholders to non-authorized persons unless approved in writing by the stakeholders themselves or from the authorized person as assigned by the Company.
    - Employees must limit the disclosure of use and access to stakeholder information as necessary as the case may be.
    - Employees are strictly prohibited from performing any acts such as persecution, harassment or sexual irritation in the plants.
2. Defined in Suppliers' Code of Conduct by establishing human rights practices to prevent human rights violations in all business activities of the Company, which covers the issue of labor and illegal child labor, and which requires all business partners to strictly comply with the policy.
3. Defined as the TPI Polene's Code of Conduct policy on treating each other with respect to human rights, equal treatment, and it has been enacted within the Company.

4. Notification of Personal Data Protection Policy No. 0017/2021 by strictly requiring the Company to have an operation that strictly respects the privacy rights of customers, partners, employees and related parties.

Performance (412-1, 412-2)

In 2021, the Company had not yet established guidelines for assessing risks associated with human rights. However, the Company recognizes the importance of operating on a respectful basis for human rights. It has designated training for employees within the organization, as well as communicating to employees about the organization's human rights policies, to gain knowledge, understanding and to operate prudently and carefully in order to prevent violations of human rights practices, as the case may be, either intentionally or unintentionally. The Company is therefore preparing for a further assessment of human rights risks within the organization.

The Company also urges its trade partners (suppliers) to strictly comply with the requirements and provisions of the Suppliers' Code of Conduct which governs human rights practices through the acknowledgement of such agreements to reflect that the Company has concrete implementation of human rights operations. In 2021, 90.38% of suppliers signed the Suppliers' Code of Conduct. The Company is in the process of getting all suppliers to sign the Suppliers' Code of Conduct.

Table demonstrating Employee Training on Human Rights Procedures and Policies (103-3, 412-2)

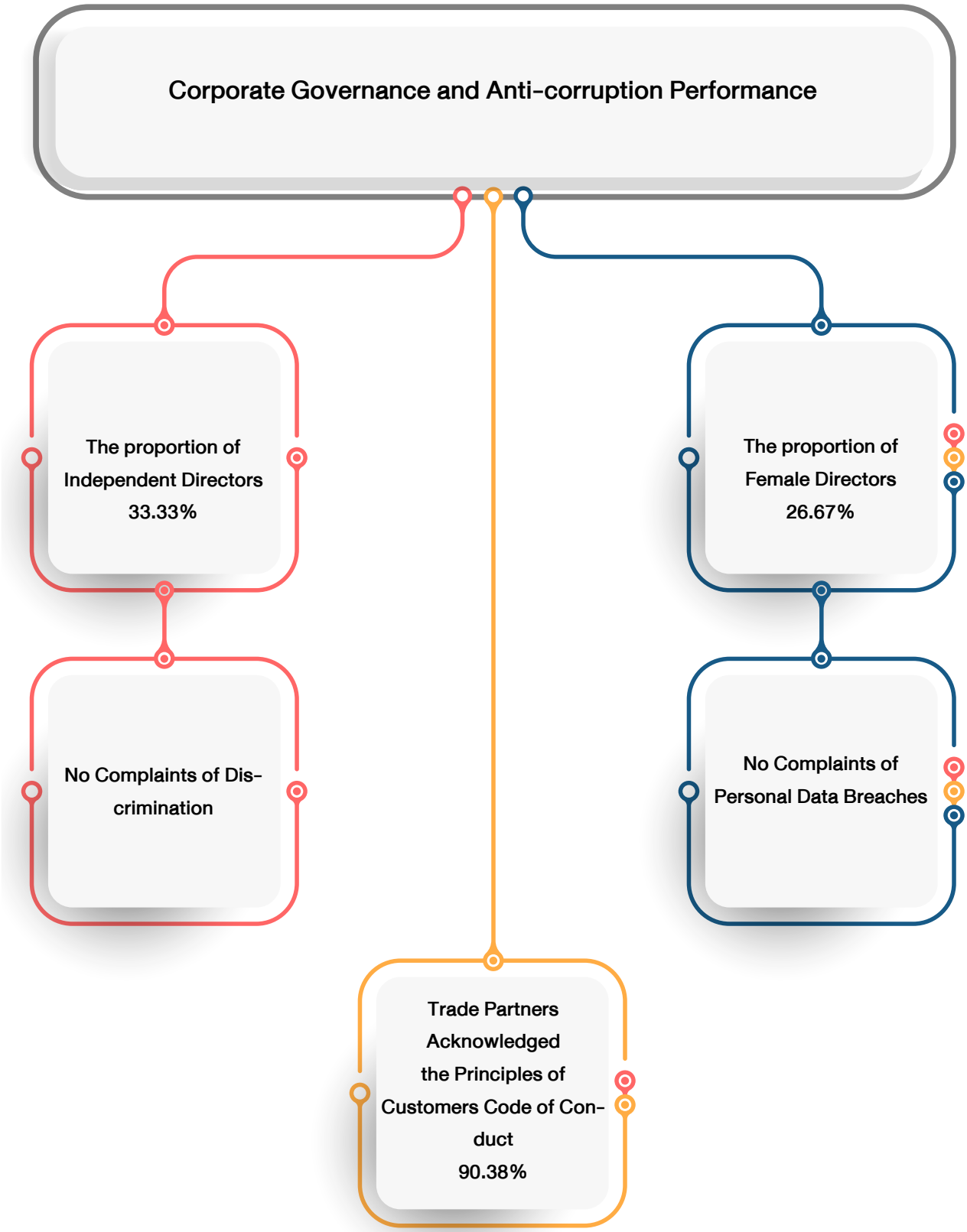
Topics on Human Rights Training	Human rights-trained employees (total)	Human rights-trained employees (representing1 100% of 1,142 employees)
Personal Data Protection Act (Practices)	4 persons	0.35
Personal Data Protection Act (Procedures and Practices)	4 persons	0.35
Total	**8 persons**	**0.70**

Table demonstrating contracts and major investment agreements associated with governing human rights clauses or screening on human rights (103-3, 412-3)

Types of Suppliers (Classified by the organization)	Selected suppliers under human rights criteria (Total Number of Contracts)	Selected suppliers under Human Rights Criteria (percentage of total contracts)
613 persons	554 persons	90.38%

In addition, the Company also has channels to receive opinions and suggestions from all related stakeholders, as well as employees, trade partners, contractors, customers, communities and society, through a variety of channels such as the Company's website, telephone, fax and letters. In 2021, no complaints related to human rights violations were found. (103-3)

Governance and Anti-corruption



The problem of corruption has been a significant constraint that hinders the economic and social development of the country, leading to negative consequences such as injustice, lack of trust, and losses for the country. Therefore, the Company places great importance on conducting business in accordance with honesty, integrity, and transparency by establishing an anti-corruption policy to assure the Company's stakeholders such as directors, advisors, executives, employees of all levels, customers, partners, customers communities, and society. Those stakeholders must acknowledge and behave strictly to enhance a cooperative culture. (103-1)

Operational Goals (103-2)

- Employees shall receive continuous training courses on anti-corruption every year.
- Business partners are becoming increasingly aware of the organization's anti-corruption policies and guidelines every year

Management Guidelines (103-2)

The Company has a policy to prohibit directors, executives, and employees at all levels of the Company to accept or be involved in any form of corruption, whether directly or indirectly, by requiring the Company's personnel to comply with the anti-corruption policy which is in line with the principles of Company's Code of Conduct as well as relevant rules, regulations, and laws.

The Company has defined the scope of stakeholders involved in the anti-corruption policy into two groups as follows:

1. within the organization, consisting of directors, executives, and employees of the Company at all levels
2. outside the organization, consisting of customers or suppliers, contractors, subcontractors, business partners, creditors, government agencies, private agency. The main roles and duties of the Board of Directors and agencies involved in anti-corruption operations are as follows

Board of Directors	Chairman of the Management Committee and Members of the Management	Committee Audit	Head of Internal Audit Department
• Set policies and supervise to have a system that supports effective anti-corruption.	• Establish a system to promote and support anti-corruption policies. tocommunicate to employees and stakeholders • Review operations and policies in accordance with changing situations such as business conditions, rules, regulations and legal requirements, etc.	• Review of financial and accounting reporting systems internal control system Internal Audit and Risk Management System to be concise, appropriate, modern, and efficient	• Check and review the operation to ensure that it is in accordance with the policies, practices, authority, regulations and laws, regulatory requirements • Report to the Audit Committee

Good Corporate Governance Policy [102-16]

http://www.tpipolenepower.co.th/index.php/th/th-investment/cg-principle/cg-principle-h

Company's Code of Conduct [102-16]

http://www.tpipolenepower.co.th/index.php/th/th-aboutus/code-of-conduct-th

Employee handbook

http://www.tpipolenepower.co.th/index.php/th/th-aboutus/empprinciple

In addition, the Company has established anti-corruption guidelines as a framework for employees at all levels with the expectation that all employees will be the Company's eyes and ears and will not be negligent when seeing actions that are considered corruption. The Company will be fair and have measures to protect complainants or those who cooperate in reporting corruption to raise awareness among employees; therefore, the Company disseminates, communicates, trains, and provides knowledge about the anti-corruption policy to employees regularly. The Company also expanded the scope of its anti-corruption policy to the Company's business partners through a campaign to encourage stakeholders to have an understanding of the behavior or avoid the practice involved in corruption. Additional information on measures, complaint channels, and penalties under "Anti-corruption" is available at 56-1 One Report 2021.

Purchasing, Procurement and Hiring [102-16]

Anti-Corruption Policy [102-16]

http://www.tpipolenepower.co.th/index.php/th/th-aboutus/anti-corruption

Trading Partner Code of Conduct

http://www.tpipolenepower.co.th/index.php/th/th-aboutus/supplier-code-of-conduct-th

Privacy Policy

http://www.tpipolenepower.co.th/index.php/th/th-aboutus/pdpa

Human Rights Policy

http://www.tpipolenepower.co.th/index.php/th/th-investment/social-responsibility-th

Performance (103-3, 205-1, 205-2, 205-3)

In 2021, the Company had the following performance:

1. For all departments, especially the agencies dealing with outsiders, there was an assessment of risks linked to fraud and/or corruption, with 16 entities that were assessed for risks linked to fraud, representing 100%.
2. The proportion of employees who participated in the anti-corruption training course is 2.54% of the total 1,142 employees. The employees are 100% aware of the anti-corruption policy.
3. 3. The proportion of business partners who are aware of policies and guidelines of corporate anti-corruption are at 90.38 percent of 613 trading partners, excluding government agencies, local municipalities, and state enterprises, totaling 54 trading partners, who are aware of the supplier code of conduct but limited on signing of the conduct
4. There were no lawsuits in which the organization has been sued for corruption, and no fraud incidents occurred with partners, cooperation partners, and no corruption incidents occurred within the organization.

Category	Number of people receiving communications on corporate anti-corruption policies and practices (persons)	Percent
Committee	15	100
Employee		
TOP EXECUTIVE	4	100
AVP/ VP/ SVP	7	100
ASST.DEPT. MGR.-DEPT. MGR.	19	100
ASST.SUP.– SECTION MGR.	147	100
OFFICER	965	100
Total	1,142	100
Business Partners		
Supplier/ Contractor	554	90.38

Information of the Board of Directors And employees who have been trained in anti-corruption courses. (103-3, 205-2)

Category	Number of trainees Anti-corruption-related courses (person)	Percent
Committee	15	100
Employees of the Company (1,142 Employees)		
Classified by employee group		
Senior Executives (TOP EXECUTIVE)	-	-
Executive Level (AVP/ VP/ SVP)	-	-
Manage level (ASST.DEPT MGR.- DEPT. MGR.)	3	0.26
Command level (ASST.SUP. – SECTION MGR.)	26	2.28
Operating level (OFFICER)	-	-
Total	29	2.54
Classified by place of operation		
Head office	12	1.05
Saraburi plants	17	1.49
Total	**29**	**2.54**

Efficiency of Electrical System

The Company, as one of the leading operators in waste to energy business, has been successfully pioneering the development of waste to energy power plants and renewable energy business in Thailand, as well as being the world's largest single-location municipal waste disposal facilitator. One of the key success factors in the power plant business is system efficiency because inefficiency in the electricity generation system leads to higher costs of generating electricity and the overuse of natural resources. On the other hand, high-efficiency power generation helps reduce pollutant emissions leading to reductions in climate change.

The Company emphasizes research, development, and innovations, especially in technology and innovations involving the green manufacturing practice. The practice focuses on increasing energy efficiency, increasing renewable energy capacity, maximizing electricity efficiency and safety to support increased demand for clean energy, and reducing energy consumption from fossil fuels. (103-1)

Operational Goals (103-2)

- The availability of the overall power plant operation (Availability - A) of more than 90% per year on average.
- The availability of the overall power plant operation (Performance -P) of more than 85% per year on average.
- The quality of the overall power plant operation (Heat Rate Quality - Q) of more than 85% per year on average.
- Increasing the proportion of renewable energy to substitute fossil fuel energy to only 10% of total energy produced by 2025.

[1] Availability (A) represents the performance and availability of machines, Performance (P) represent the ability to operate machines, Quality (Q) represent the quality performance of the machine.

Management Guidelines (103-2)

The Company recognizes the importance of power generation efficiency, thus continuing to improve fuel and machinery quality in order to keep pace with changes in the global energy trend towards the development of clean and green energy through the integration of the strengths of its affiliated businesses. The management details are as follows:

Fuels Procurement Process

The planning of the fuel supply process to be of high quality and continuous availability is a factor in improving the efficiency of electricity generation. The Company plans to ensure stability in the supply of raw materials and reduce production costs as follows:

Procurement of Waste Heat Recovery

- The Company has purchased waste heat from TPIPL pursuant to the TPIPL Framework Agreement. The waste heat is applied to the clinker production process in the kiln.

Procurement of Waste and Waste-based Fuel

The Company's waste fuel-fired power plants generate power by burning waste fuel which the Company produces from waste in its waste fuel production plants, in addition to partially using waste heat. The Company procures three primary types of waste

1. pre-sorted landfill waste generally supplied by waste management companies
2. unsorted landfill waste supplied by waste management companies
3. MSW transported to the Company by municipal governments and waste management companies authorized by municipal governments to dispose of MSW.

Pre-sorted landfill waste is waste from landfills that has been processed by waste management companies to remove items with low combustion value, such as sand, stone and metal. Substantially, all pre-sorted landfill waste can be used for burning in waste fuel boilers as waste fuel with minimal processing. Unsorted landfill waste is waste from landfills that has not been processed. Unsorted landfill waste requires processing by the Company before it can be used for burning in waste fuel boilers as waste fuel.

- The Company invested in waste-based fuel production plants in areas with high accumulated old waste or in areas with high daily per area size waste generation from private sector or state. The waste shall be purchased as raw materials and priced according to the quality of the sorting waste.
- In the process of sorting waste, the Company removes waste with low combustion value. Then, most of the sorting waste is taken through a slightly more quality adjustment process to be used in the boiler.
- As for unsorting landfill waste and community waste, the Company must take them through the Company's sorting process to transform them to waste-based fuel before being able to use them as fuel for boilers.
- The Company has purchased community waste (or municipal waste), landfill waste, and sorted waste from allied operators around the Company's plants or in nearby provinces without relying on any sources of supply in particular.

Procurement of Coal

- The Company purchases coal not only from TPIPL at market price but also from other suppliers.

Electricity Generation Process

- Waste heat power plants generate electricity using waste heat emitted from the cement production process of TPIPL to heat water until it becomes steam, which is used to drive the steam turbine generator.
- Waste-to-energy power plants generate electricity by burning waste fuel as the main fuel and using waste heat energy as auxiliary fuel to produce steam, which is used to drive steam turbine generators.
- The Company puts landfills waste into a process to improve its quality in the Company's waste-based fuel production plant to produce waste-based fuel that is then used as fuel for electricity generation.
- The Company has installed two grate boilers that can use unsorted waste as fuel in the incineration system by working in conjunction with waste-based fuel or not. This produces extra steam for the power plant in case of insufficient steam supply or maintenance stoppage.

At present, the Company's waste-based fuel production plant has the installed capacity to receive 14,400 tons of community waste per day, which can be produced as 7,200 tons of waste-based fuel per day. In addition, The Company has a waste-based fuel storage facility, which can hold up to 100,000 tons of waste-based fuel, which is sufficient for the operation of the Company's waste-to-energy power plant for approximately one month.

Maintenance

The maintenance of the Company's power plants, and waste-based fuel production plants is a critical aspect of the Company's business. By solving machine problems and improving machinery, the Company is able to reduce maintenance stoppages and increase efficiency in electricity generation. Proper maintenance not only enables the Company to operate power plants more efficiently but generate electricity with higher efficiency and more electricity. The details are as follow:

- The Company has improved steam pipelines in power plants with material changes to ensure physical and chemical wear resistance, the new design of steam pipeline layout, and a steam pipe cleaning system, which has ceased operations for approximately 90 days per device.
- The fuel feeding system has been improved to solve the problem of fuel feeding accuracy by designing a new engine system and air system to feed fuel to the boiler.
- The Company has performed routine maintenance and operational inspections for power plants and waste-based fuel production plants independently.
- The Company has scheduled routine maintenance and operational inspections once a year which generally take approximately 15 to 30 days and can be carried out without shutting down the power plants.
- The Company has shut down the steam boiler for maintenance for a period of 30 to 45 days per year. Normally, each boiler is scheduled for maintenance during different periods of time since the Company has several boilers at each power plant.
- The Company also plans the schedule for the maintenance of the Company's waste-to-energy power plant and waste heat power plant in line with the maintenance schedule of TPIPL's cement plants to reduce disruption to the Company's power plant operations and to ensure the continuity of electricity generation.

In addition, TPI Polene Group has available personnel in both the production and maintenance departments through both domestic and international training, developing, and transferring knowledge in practice to be able to fully operate and be able to work in related areas.

Performance (103-3, EU12)

Performance data on electricity generation efficiency is collected and evaluated as the following performance index:

- The availability of the overall power plant operation (Availability - A) of more than 90% per year on average.
- The availability of the overall power plant operation (Performance -P) of more than 85% per year on average.
- The quality of the overall power plant operation (Heat Rate Quality - Q) of more than 85% per year on average.

Performance Index	Data		
	2019	2020	2021
1. The availability of the overall power plant operation (Availability - A) of more than 90% per year on average.	93%	95%	92%
2. The availability of the overall power plant operation (Performance -P) of more than 85% per year on average.	81%	88%	92%
3. The quality of the overall power plant operation (Heat Rate Quality - Q) of more than 85% per year on average.	95%	95%	95%

Future Projects to Improve Power Generation Efficiency

- Nakhon Ratchasima waste-to-energy project: The project has an installed capacity of 12 megawatts under a 20-year Power Purchase Agreement (PPA). The investment costs are approximately Baht 2,000 million, and the commercial operations are slated for 2024.
- Songkhla waste-to-energy project: The project has an installed capacity of 12 megawatts under the 20-year Power Purchase Agreement (PPA). The investment costs are approximately 2,000 million baht, and the commercial operations are slated for 2023.
- The TG7 (70MW) boiler improvement project: The project aims to convert the coal-fired power plant to a waste-to-energy coal-free power plant. The investment costs are approximately Baht 800 million, and the project is able to substitute up to one hundred percent fossil fuels with waste-based fuels. The project is scheduled to complete Phase 1 by the year 2023 with a capacity of 40 MW and Phase 2 by the year 2024 with a capacity of 70 MW.
- The TG8 (150MW) boiler improvement project: The project aims to convert the coal-fired power plant to a waste-to-energy power plant. The investment costs are approximately Baht 2,500 million. Phase 1 of the project is scheduled to complete by the year 2022, which is able to substitute around twenty-five percent of fossil fuels with waste-based fuels. Phase 2 of the project is scheduled to be completed by the year 2025, and is able to substitute up to ninety to one hundred percent of fossil fuels. The project is in line with the goal of reducing the Company's coal consumption to zero which results in reductions in the cost of generating electricity, the imported amount of coal, and greenhouse gas emissions.
- Waste-to-energy plant bidding projects: The Company aims to increase electricity capacity by 2022-2024 by continuously participating in the biddings of the waste-to-energy power plant projects. As a result, the Company will generate more EBITDA to compensate for the adder of the TG3 (18MW) and TG5 (55MW) power plants, which shall gradually expire in January 2022 and August 2022, respectively. After adder expiration, however, the TG3 and TG5 power plants are still able to sell electricity to EGAT at the base price.
- The waste-based fuel production line expansion project: The new production lines will be constructed in the quality-improved waste plant (plant number 3) with an aim to install five additional production lines (lines 14-18) with a total capacity of 5,760 tons per day. The additional waste-based fuel will then be supplied to the waste-to-energy power plants, which will be improved from the coal-fired power plants. The investment costs are approximately Baht 3,000 million, and the project is scheduled to complete around 2022 to 2025.

Technology, Innovation and Services

Technology, innovation, and service are important factors for building competitiveness, especially in managing the power generation business to maximize efficiency. The Company continues to study the development of new technologies and production processes to maximize operational efficiency, increase power plants' utilization rate, and reduce the cost of generating electricity per unit. (103-1)

Identify Operational Goals (103-2)

The Company has guidelines to increase the consumption of waste-based fuel, which substitutes the use of coal in both power plants and TPIPL's cement plants by expanding waste-based fuel production capacity and developing a new production system to improve quality and reduce production costs. The Company aims to increase the capacity of waste-based fuel from 4,800 tons per day to 7,200 tons per day and reduce production costs by 5-10 percent from the new design of production machinery and cutting-edge technology. The processes are scheduled to be completed by the year 2022.

แนวบริหารจัดการ (103-2, 103-3)

The Company's waste fuel power generation business requires a demand for waste-based fuel in large quantities to be used as fuel, and the demand has constantly been increasing. In addition, there are limitations in the waste-to-energy process due to variability and high humidity of the waste, which the variation of the high characteristics has a negative effect on the effectiveness of waste sorting machines.

In addition, the Company has developed and improved machines to have production processes suitable for working conditions to increase the effectiveness of the waste sorting system with low operating and maintenance costs. Those machines can be used appropriately with on-site conditions so that it can expand the scope of operations, build a larger sourcing network, and reduce operating costs, as well as manage and fix waste problems in various areas. If the machines cannot be installed appropriately, it will cause residual waste problems, low quality waste, as well as high operating costs, which do not incentivize co-operators as a supply chain. Therefore, the Company adopts a win-win policy whereby each participating waste source partner must achieve its goal of solving the waste problem in the certain area which creates added value by transforming waste into sustainable fuel. So, the Company can receive high-quality raw materials at sufficient level to meet the demand.

The Company has summarized critical technology, innovation and service management as follows:

- Install waste sorting machines at about 16 different waste sites in various provinces and consider expanding them further in the future to provide a continuous supply of high-quality raw materials. This creates added value for each waste source partner, as well as incentivizes the partners to participate in the supply of raw materials to the Company, leading to the sustainable solution of waste disposal problems for various waste sources.
- The Company is an investor in waste sorting machinery as a machine leaser. The partners as a machine tenant shall only supply sortable waste to the Company's power plants and uses the revenue from the sale of waste-based fuel to pay back in the form of machine rental as a type of funding system for the partners, which is a win-win situation.
- The Company has developed waste sorting technology, redesigned the processing line, and improved imported machinery in conjunction with overseas machinery suppliers. As well, the Company has been supporting the development of domestic waste sorting technology by arranging for engineering teams to coordinate and work with workers at waste sorting plants in various sources, so that the teams can clarify the machinery problems and apply it to improve waste sorting technology. In addition, the Company has sent information, issues, and recommendations to overseas machinery suppliers to continuously develop the waste sorting technology overall.

Evaluating the technology and innovations of sorting machines which are resulted from the operation by:

- Actual production volume in line with the designed capacity.
- Quality of the sorted waste by considering various control parameters such as heat, humidity, contaminant content and controlled chemical composition.
- The number of hours of machine running to monitor the problem of the machine breakdown.
- The cost of the sorting process.
- Maintenance costs

In 2021, the Company initiated significant projects to improve efficiency with a budget of Baht 637.50 million as follows:

Performance (103-3)

Project or Operation in Technology, Innovation, and Service	Detail	Project Value / Investment Budget (Baht)	Economic Result (Baht)
Investment in sorting machines for waste source partners to produce fuel feed the Company's plants at a discount based on production volume.	Invest in machinery according to the waste source, allow the owner of the waste source to install and manufacture by the Company to provide advice on the work and purchase of all output at the agreed price, and deduct the machine rent based on the amount of fuel sent to the Company.	Waste-based fuel production machine worth Baht 300 million	Received waste-based fuels of 1,000 tons per day and machine rental of Baht 120 million per year
		Waste sorting machine worth Baht 300 million	Received sorting waste of 2,000 tons per day and machine rental of Baht 120 million per year
Digester Improvement Project	Design new materials for blades and shafts made locally to reduce wear and tear.	Custom-made blades and shafts are worth Baht 1.5 million per set. The five sets are worth Baht 7.5 million, compared to the imported set of Baht 3.5 million per set, and can be extended service life from 1 year to 2 years.	Save Baht 2 million per set per machine per year, five sets of digesters, saving a total of Baht 10 million baht.
Air classifier sorting machine improvement project	Design and build a new air classifier in the country with higher waste sorting efficiency than importing machinery from abroad.	15 units of Baht 2 million baht each, totaling Baht 30 million baht, compared to foreign imports of 7 million baht each.	Save Baht 5 million per machine, totaling Baht 75 million baht. This increases the heating quality to 150 kcal/kg/ton worth 45 baht per ton, amounting to approximately 10 million baht per year.

Research and Development

From the Alternative Energy Development Plan 2018 – 2037, the government has a policy to support the production of renewable and alternative energy in the form of electricity, heat, and biofuels to strengthen energy security, reduce imports and reduce reliance on petroleum as a wasted fuel source which create a serious impact on climate change. In addition, there is a large amount of community waste accumulated from poor waste management system and the amount is likely to increase due to the COVID-19 pandemic.

The Company, as a leader in the clean and renewable energy business such as waste-to-energy and waste heat recovery, has a policy to create value-added to community waste by transforming it into waste-based fuel. However, there are many limitations to the waste-to-energy power business in Thailand, such as the quality of raw materials, the amount of waste supply, and opposition to waste-to-energy power plants. The limitations have driven the Company to continue researching and developing cutting-edge technologies to create efficiency in providing reliable electricity, promoting sustainable development, as well as reducing environmental impacts and ensuring reliability for surrounding communities to create competitive advantages in the short and long term. (103-1)

Identify Operational Goals (103-2)

The Company has set a goal of reducing coal consumption in coal-fired power plants by using renewable waste fuel as a substitute, and aims to be a Green Power Plant Company, which accounts for less than 10 percent of coal fuel consumption by 2025.

In addition, the Company has prepared to supply waste-based fuel to cement plants that use waste-based fuel as a substitute for coal with about 30-40 percent of the original coal consumption. The project has been completed in cement plants 2 and 3 in 2021, and plants 4 and 1 are scheduled to be completed in 2022. These projects also reduce greenhouse gas emissions.

Management Guidelines (103-2)

The Company's research and development efforts focus on improving and adapting its existing technologies as well as waste sorting and processing techniques so as to increase the operational efficiency of its plants and reduce the environmental impact from its operations. The Company's current research and development initiatives include:

- improvement and development of sorting machines to enhance the efficiency of waste-based fuel production from waste
- design and development of materials for use in steam pipes in boilers
- design and development of boiler cleaning systems
- development of the generator's control system to reduce emergency stoppages due to external power system's failure
- research and development of the heavy ash produced from the combustion process of grate incinerator to be used as a substitute raw material in the production of cement
- improvement in efficiency in converting organic matter into fuel
- reduction of sulfur dioxide emission with the use of limestone sand in boilers
- use of low nitrogen oxide burners
- improvement of the waste-based fuel input system into the combustion system in the steam boiler to increase the efficiency of combustion and reduce the problem of air pollution from incomplete combustion
- improvement of the efficiency of dust settling chambers so as to increase the useful life and efficiency of the steam pipes in the Company's waste heat power plants and reduce dust emissions to the outside
- development of information systems for maintenance by using the Cloud system to store data

Performance (103-3, former EU8)

The Company has conducted significant research and development, categorized into energy efficiency, renewable energy technology, transmission and distribution technology, production and high-end technology, and innovative sustainability-related to services. The total investment budget is Baht 847.50 million as follows:

Research and Development	Detail	Investment Budget
System Efficiency	A factor that directly affects the Company's performance is the efficiency of electricity generation, which requires management tools that can quickly measure and control relevant parameters. Therefore, the Company focuses on research and development of fuel production processes to achieve high quality and reduce fuel production costs by developing both processes and machines for waste-based fuel production. As for power business, the Company has improved efficiency, reduced losses and extend the useful life of boiler during maintenance stoppage periods.	• Continuous investment in machine improvement of at least Baht 1,000 million in 3 years during 2021-2024 or an annual average of at least Baht 333 million. • Increase combustion efficiency, turbine efficiency by investing Baht 500 million per year during 2021- 2023
Renewable Energy Technologies	Waste fuel is a fuel produced from community waste, which has various factors that make the production and quality control of fuel difficult, and its use in electricity generation is also more difficult than using fossil or coal fuels. In addition, foreign technology cannot be used directly because the characteristics of waste in Thailand are very various. Therefore, the Company needs to research and develop the use of integrated technologies such as waste-based fuel and direct sintering to balance and optimize machinery or production processes, as well as manage waste left over from production by creating added value.	Baht 20 million in 4 years during 2020-2023 or an average of Baht 5 million per year

Research and Development	Detail	Investment Budget
Transmission and Distribution Technologies	The Company has researched and developed the design of the power supply system for cement plants in case of problems affected by the Electricity Generating Authority of Thailand (EGAT), which used to cause problems for cement plants. For example, cement production must be stopped if the EGAT stops supplying electricity, voltage outages, or unstable electricity supply, which damages cement plants' machines and production processes. By controlling the distribution system with a smart power grid with the Company, the damage for cement plants can be reduced by more than 90 percent, leading to heighten confidence in the power supply system.	Baht 5 million in 4 years during 2020-2023 or an average of Baht 2.5 million per year
Advanced Generation and Technologies	The Company has researched and developed the use of automatic control systems to measure and control parameters and to generate electricity at optimum. The system shall optimize fuel consumption, air pollution emissions, waste management system, as well as energy savings in production processes, such as using invertors to control industrial fan speeds and controlling the flow of industrial water pumps.	Baht 5 million
Innovative Sustainability Related Services	The Company has created energy monitoring system that can report the production information of all boilers and generators such as fuel consumption and the amount of electricity supplied to the EGAT and cement plants at real-time. In addition, the information can be viewed from mobile devices for quick tracking and monitoring of power plant operations, as well as connecting such systems to the EGAT so that they can monitor and coordinate at any time.	Baht 2 million

In addition, the Company seeks to strengthen its competitiveness and maintain its technological advantage by investing in the development of technologies and processes to increase operational efficiency and reduce environmental impacts, especially green research, and development, such as:

- Developing products based on using alternative raw materials
- Developing products based on using recycled raw materials
- Developing high-quality products to reduce consumer consumption
- Improving product design based on energy considerations
- Manufacturing products as alternative decor to save natural resources
- Developing product innovation, responding to applications and green products

The Company also entered into a research and development service contract with TPIPL to enhance the Company's technology and expertise. TPIPL has a research and development team of more than 150 people and hires professors from universities in Thailand, including Chulalongkorn University, Suranaree University of

Technology, and Kasetsart University, to cooperate with its research and development team in the form of participatory action research, and contributing to sustainable renewable energy security.

Economic Performance

Over the past two years of the COVID-19 pandemic, the Company has faced significant challenges affecting the survival of the business and steady growth while taking care of society through this situation together. In 2021, the Company adjusted its strategies to deal with both defensive and proactive situations, such as strategies for increasing revenue, improving power efficiency to maximize capacity utilization, and increasing electricity distribution. The strategies were to generate good performance of the Company, bringing benefits to all relevant stakeholders of the Company. (103-1)

Operational Goals (103-2)

- Generating electricity in line with the target
- Supplying electricity of at least 95 percent of contracted capacity to EGAT
- Supplying electricity to cement plants per their demand and maintaining the availability of least 85 percent of electricity and reducing the power outage from the electricity supply problems of the provincial electricity authority by at least 90 percent.
- Reducing costs of production and administrative costs by reducing waste-based fuel production costs and using waste-based fuel as a substitute for coal
- Investments in new business expansion to generate revenue such as building additional waste power plants and selling waste-based fuel to cement plants
- Generating income by helping society get rid of biomedical waste due to COVID-19 pandemic

Management Guielines (103-2)

- Manage machine operations and maintenance to reduce plant shutdown and can run power plants to full capacity.
- Plan the boiler operation schedule by prioritizing boilers with high efficiency and low production costs.
- The expansion of two additional waste-to-energy power plants in Songkhla and Nakhon Ratchasima, which are scheduled for completion in 2023-2024
- Expand waste-based fuel capacity of 2,400 tons per day for sale to cement plants, which is scheduled for completion in 2021.
- Expand waste-based fuel capacity of 4,500 –5,760 tons per day to substitute for coal in power plants, which is scheduled for completion 2022-2025.
- Disposal of COVID-19 infectious waste from medical facilities or hospital accommodations to reduce COVID-19 waste residues in the original disposal system totaling approximately 3,892 tons during October - December 2021.

Continuing to invest in the construction of selected MSW-fired power plants

In 2021, the Company was selected to implement MSW-fired power plant projects in Songkhla (7.92 MW) and Nakhon Ratchasima (9.9 MW) Provinces with a total power sales volume of 17.82 MW, and disposal fees, for a period of 20 years. Currently, the Company is in the process of preparing an environmental impact assessment report, together with having the power plant contractor company to survey the area to design the power plant construction. It is expected that construction will begin in the second quarter of 2022 and will take approximately two years to complete.

In addition, the Company has a standing policy to seek new opportunities to invest in MSW-fired power plant projects that the government will set conditions for the private sector to participate in the bidding process under the power development plan (PDP) of the country and the government's policy.

Southern Seaboard Development Project in Songkhla Province

The Company initiated investment projects in the eastern seaboard which is the starting point of driving the economy of Thailand, increasing the income of the population in Rayong to be consistently high, and support all dimensions of the industry, namely upstream, mid-stream and downstream to grow continually until today. The Company therefore has an idea to invest in the Southern Seaboard Development Project or Prototype City of Advanced Futuristic Industries (PAFI) in Chana District, Songkhla Province, with an investment value of approximately Baht 300 billion to develop:

1. Future Industrial Estate Project and agricultural industry (without petrochemical industry) will create added value for agricultural crops in the south, especially the rubber processing industry which will increase the value of rubber, instead of exporting raw rubber which has a low economic value, etc. In addition, various wastes that occur in industrial estates will be disposed of and used as fuel for further power generation.
2. "Zero Pollution Clean & Green Energy" Power Plant Project is a clean energy power plant (no fossil fuels, no pollution) which uses natural gas, biomass, and other renewable energy sources as a clean fuel for power generation.
3. A deep seaport and a distribution center will be constructed to create a transportation network for the future of export and import goods including the development of public utilities in the area for maximum benefit.
4. Smart city building project will be managed with modern technology to be a health center and economic and financial center, etc.

The projects are under part of the national security policy and will increase the potential for economic, social and resource utilization for maximum benefit along with minimizing environmental impact both on land and at sea through employment and income opportunities for workers and locals in the southern regions.

Improving Production Processes to Reduce Greenhouse Gas Emissions and Make Efficient Use of Resources (201-2)

The TPI Polene Group is aware of the climate change problem and its long-term effects on the environment and our way of life. Therefore, the Company is committed to improving the efficiency of its overall business operations and production processes to reduce greenhouse gas emissions, which are the main causes of climate change problems. This leads to the formulation of policies, measures and business practices involving the issue of climate change in the Company's risks and opportunity assessment as follows:

- The Company has participated in the Thailand Voluntary Emission Reduction Program (T-VER), developed by Thailand Greenhouse Gas Management Organization (TGO). The program aims to promote and support all sectors to reduce greenhouse gas emission, especially for renewable energy producers and users or industrial organizations who focus on energy efficiency and waste management activities as a main target group. In addition, the reduction unit or carbon credit can be sold under voluntary domestic market.

At the end of 2021, the Company earned carbon credit of 82,056 tons of carbon dioxide equivalent from TGO for community waste improvement project. In the current, the Company holds an outstanding carbon credit of 59,526 ton of carbon dioxide equivalent, resulted from sold a portion of them. Moreover, carbon credit of approximately 709,752 tons of carbon dioxide equivalent is in the process of registration with the TGO.

- In 2021, the Company reduced greenhouse gas emissions by 5.08 million tons (carbon credit registration must wait for approval from the relevant agencies) from the sorted waste of approximately 2.19 million tons (reducing landfills, which produce greenhouse gas).
- Allocating a budget of 1,485 million baht for research and technology development or project implementation for the purpose of mitigating risks or mitigating climate change impacts.

Performance of the Year 2021 (103-3, 201-1)

In 2021, the Company distributed economic value to stakeholders, generating a cumulative economic value of Baht 1,996.48 million (201-1) as follows:

Economic Benefits	Economic Value (Million Baht)
(A) Direct Economic Value Generated	
Revenues	11,351.08
(B) Direct Economic Value Distributed	
Operating costs	6,270.40
Employee wages and benefits	58.21
Payments to providers of capital	2,784.34
Payments to government	115.61
Community investments	126.04
Total	9,354.60
(C) Economic value retained (A-B)	1,996.48

Remark : * from the Company's separate financial statements

The Company has established operational guidelines related to the obligations of the benefit plan and the employee retirement plan, which is a key stakeholder benefit and the main driving force of the organization. (201-3) as follows:

- Provident Fund: The Company contributes 3 percent of an employee's salary to the provident fund and the employees contribute at least 3 percent of their own salary. The Company started putting money into the provident fund in May 2016 and the provident fund expenses amount to Baht 9,472,365 as of December 31, 2021, and covers one hundred percent of the employees who are subject to the terms of contribution payments.
- Retirement plan: In accordance with the Company's work regulations Section 9, Part 1, Article 3, the Company requires employees who have reached the age of 60 to be discharged from their employment status on January 1 of the following year. However, the Company also offers a re-employment program for potential employees who wish to continue working with the Company with the approval of senior management. In 2021, there were five full-time employees who are in the re-employment program.
- At the end of 2021, the Company estimated employee benefits and retirement plans of Baht 151,656,760.26 and paid compensation of Baht 1,047,934 to employees under the Labor Protection Act B.E. 2541 (1998) and the Labor Protection Act (No. 7) B.E. 2562 (2019).

Board of Investment Benefits (103-3, 201-4)

The Company has been granted promotional privileges under the Investment Promotional Act, B.E. 2520 (as amended) by the Thai Board of Investment ("BOI") and subject to the conditions prescribed in the promotional certificates, the principal BOI privileges for the Company's power plants, waste-based fuel production plants and gas station include the following:

- Permission to own land in order to carry on the promoted activities as the BOI deems appropriate;
- Exemptions from import duties on machinery as approved by the BOI;
- An exemption from corporate income tax on net profits derived from the promoted business for a period of eight years commencing from the first date on which the promoted business earned operating income;
- A reduction in the normal rate of corporate income tax on net profit by 50.0% for a period of five years after the expiry date of the corporate income tax exemption period; and
- Exemptions from withholding tax on dividends paid from the profit of the promoted business for a period of eight years.

As of December 31, 2021, the following table sets forth a summary of The Board of investment privileges of the Company's power plants, waste-based fuel production plants and gas station of Baht 3,820.73 million as follows:

Plant / Gas Station	Month on which Income was First Derived from Promoted Activity	Expiration of Full Income Tax Exemption	Expiration of 50% Income Tax Reduction
WH-40MW	June 2009	Card expired	N/A[1]
RDFPP-20MW	June 2009	Card expired	N/A[1]
RDFPP-60MW	September 2015	September 2023	September 2028
WHPP-30MW	January 2016	January 2024	N/A[1]
RDFPP-70 MW	May 2018	May 2026	N/A[1]
Coal-PP-150MW	January 2019	January 2027	N/A[1]
RDF production plants	July 2011	Card expired	June 2024
Gas Station	July 2009	Card expired	July 2022

Notes : (1) The 50% income tax reduction does not apply after the expiry date of the full corporate income tax exemption period.

In 2021, the Company received a corporate tax exemption benefit of Baht 741,047,105.51 from BOI.

Data Security

The Company places great importance on information security because most of the data in the Company's information system is business sensitive information, which is used to develop the Company's business strategies. Data breaches can severely impact not only the reputation, reliability, and business situation of the Company but also stakeholders of the Company. (103-1)

Management Guidelines (103-2)

The Company has established a policy for management of internal information and confidential information, which has been enacted since 2016, with the aim of establishing a framework based on equality and fairness to all shareholders equally, as well as securing material nonpublic information if its disclosure would probably have an impact on the price of a security. Therefore, directors, executives and employees of all levels must maintain internal information in accordance with the following guidelines:

- The Company's employees must maintain and keep customer information and commercial information confidential unless it is legally required to disclose it.
- Disclosure of information that may affect must be made by the authorities.
- Employees and related parties must not disclose information that has not been made public and not trade the securities of the Company they are involved in when they know information that has not been made public.
- Important documents and confidential information must be maintained in a specific way at each level, carefully stored and destroyed in an appropriate way.
- The requirement is not for directors and executives to use the Company's internal information, which has not been made public, for their own benefit.
- The Company has imposed disciplinary action if there is a breach of the code of conduct, starting with a written warning, pay cut, suspension from work without pay, or termination. The punishment will be determined based on the intent of the act and the seriousness of the offense.

However, business operations currently have a wide range of storage models, covering critical commercial information between the Company and its partners and customer privacy information. To protect privacy and ensure information security, the Thai government has introduced the Personal Data Protection Act B.E. 2562 (PDPA) starting on June 1, 2021, to prevent violations of personal data rights from being exploited without the consent of the data subject.

Therefore, the Company has established a personal data protection policy in 2021 to be the practice of employees at all levels to maintain the personal information of customers, partners, employees, and related parties, to strictly use the information in accordance with the requirements of the Act. The policy is to manage the data in strict accordance with the requirements of the Act which covers everything from the process of storing, collecting and disclosing information securely, such as educational information, financial status, work history, and other types of personal information such as fingerprints, voice records, ID number, website usage information as well as sensitive information such as ethnic information, political opinions, religious, health history, criminal record, and disability. The data owners also have the right to access, verify, and withdraw their consent at any time. If there is a violation of the Company's policies and practices, violators will be convicted at the highest rate of prosecution and full compensation for damages incurred at the rate required by law.

The Company is aware of the importance of personal data of customers, suppliers, employees, and visitors or all concerned who are related to the business of TPI Polene Group. The processes of collection, usage and disclosure of personal data shall be used in accordance the purposes that the data owner has consented to and is subject to the Personal Data Protection Act B.E. 2562. Therefore, the Company has established a privacy policy which can be found on the Company's website at www.tpipolene.co.th

As for the data of business partners and customers, the Company has realized the importance of respecting and protecting the personal data of business partners and customers with the aim of efficiently offering products and services to meet

the demand of customers

In order to ensure the corrective and effective implementation of the privacy policy, the Company has established a personal data management officer to manage the personal data of the relevant parties in accordance with the law. In addition, the Company will provide training to improve knowledge and understanding as well as to recognize the importance of the security of personal information to all employees.

In 2021, The Company had no complaints of a personal data breach.

Performance (103-3, 418-1)

Types of Data Breaches	Management Approaches and Solutions	The Number of Data Breaches		
		2562	2563	2564
Unauthorized access to information in information systems from people who do not have the right to that information.	Information systems are reviewed by external auditors. regularly every year	0	0	0
Access to information in information systems by a bad person (Hacker)	Information systems are protected by Firewall/IPS and Endpoint Security information devices on the server and the user. and has renewed the service agreement regularly	0	0	0

Legal Compliance

At present, conducting business with respect to corporate social responsibilities is a basic practice to gain "license to operate" recognition in its surroundings. One of the basic practices for corporate social responsibilities is compliance of regulatory frameworks. Thus, the Company, as an electricity producer, is subject to the National Environmental Quality Promotion and Preservation Act B.E. 2535 (1992). However, the Office of Natural Resources and Environmental Policy and Planning has approved an environmental impact assessment for each of the Company's plants and the Company shall be liable if there is a violation of environmental laws and must undertake development and/or improvements to the Company's plants as necessary to comply with environmental laws. (103-1)

Conducting business in strict accordance with applicable laws, and regulations is an expected practice for stakeholders, communities, and society. In addition, the consequences of non-compliance of laws and regulations shall burden organizations to take corrective action. This also causes additional operating expenses and affects the organization's performance, including delays in business operations, loss of opportunities for corporate profitability, or future

Operational Goals (103-2)

- The Company can comply with environmental law as well as be able to fully assess environmental impact assessment (EIA) and environmental health impact assessment (EHIA) at one hundred percent.
- Report on the results of compliance with environmental laws Environmental impact assessment results and environmental and health impact assessment results to government agencies and communities
- The Company will comply with laws (one hundred percent).

Key Operations (103-2)

The Company places high importance on management of waste from the Company's power plants and its contribution to the environment and operates in strict accordance with applicable laws regarding the environment. Currently, each of the Company's plants complies with all applicable environmental regulations and standards, and the Company has strictly implemented the measures set out in the Environmental Impact Assessment (EIA) report by establishing an environment department to directly supervise environmental work and by establishing an annual environmental management plan to facilitate the control of operations. As well as arranging experts from educational institutions to conduct audits and make recommendations on environmental impacts such as air pollution, wastewater, and waste.

The Main Roles of the Environmental Department

- Ensure environmental measurements in line with the plan.
- The implementation of environmental impact reduction measures in line with the plan.
- Deliver environmental measurements reports to government agencies and communities in completed at the scheduled time.

Case Study of Investment Plan for Southern Seaboard Development Project (103-2)

The Company is ready to continue its investment plan for the Southern Seaboard development project, or Prototype City of Advanced Futuristic Industries (PAFI) in Chana District, Songkhla Province, as part of the national security policy to increase the country's growth potential, especially economic growth, society, and maximized resource utilization. In addition, the project model aims to minimize environmental impact by land and sea, and takes into account stakeholders for economic and social development in the Southern border provinces, which will help to create sustainability in the economy and society in accordance with the Bio-Circular-Green Economy (BCG) and environmental, social, and governance (ESG) policies.

In addition, the Company has prepared an E Impact Assessment report in strict compliance with legal procedures at all stages. Currently, government agencies have granted the district exclusive rights as the 4th model city as follows:

1. The Board of Investment has approved Chana District in Songkhla province as the 4th model city to be eligible for the same rights as other model cities.
2. The Ministry of Finance has approved the four model cities as free zones.
3. The Ministry of Industry approved the waiver of fees for licenses and amendments to factory licenses in four southern border provinces (Satun, Pattani, Yala, Narathiwat) and four districts in Songkhla province (Tepa, Sabayai, Natawi and Chana).
4. The Ministry of Interior approved the reduction of land tax fees, land or condominium transfers, and other fees in special economic zones nationwide.

In addition, the Company has established a policy of responsibility for treating stakeholders in accordance with the needs of each group as follows:

- Treatment of shareholders: Encourage shareholders to exercise their fundamental rights to ensure maximum satisfaction for shareholders by taking into account sustainable growth, creating value added, and providing appropriate returns continuously, as well as conducting business in accordance with good corporate governance principles.
- Treatment of customers: Striving to ensure satisfaction and confidence for customers and the public, good product users, quality at reasonable price levels and continuously raising standards as well as maintaining good and sustainable relationships.
- Treatment of partners: Taking into account the equality and integrity of business operations, maintaining mutual interests with partners by strictly complying with the laws and rules set out together and having a code of conduct in business.
- Treatment of competitors: Treating competitors in accordance with international principles within the framework of the law regarding the principles of competition practice and adhere to the rules of fair competition.
- Treatment of creditors: Adhering to good, conditional, and fair practices to creditors, including repayments at scheduled.
- Treatment of creditors: Establishing guidelines for dealing with the government and government agencies to avoid actions that may affect inappropriate conduct.
- Treatment of employees: Striving to develop the organization as a learning organization, enhancing the culture and work atmosphere, promoting teamwork, providing fair returns, maintaining safety and the work environment, prioritizing development, transferring knowledge and competence of employees, listening to comments and feedback from employees at all levels equally and equitably, defining and furthering the cultivation of its corporate culture by recognizing that all employees are one of the key and valuable factors that benefit the Company's progress and sustainable growth.
- Treatment of communities, society, culture and environment: Conducting business with responsibility to the community, society, culture and environment in aspectя of safety, quality of life and conservation of natural resources, promoting energy efficiency, realizing the quality of life of communities and society in the whole area around the plant and nationally, sharing part of the profits with communities, society and culture, taking into account business operations that will have an impact on the environment from the beginning of the construction of the plants, the selection of technology to the production process, and waste disposal process.

Legal Compliance Outcome (103-3, 307-1, 419-1)

In 2021, the Company investigated non-compliance with laws and regulations that could pose a risk or affect the organization, as well as penalties if one failed to comply with the law.

Non-compliance with laws and regulations in the social and economic area.	The context against which significant fines and non-monetary sanctions were incurred	Total monetary value of s ignificant fines (Baht)	Total number of non-monetary sanctions	cases brought through dispute resolution mechanisms
0	0	0	0	0

General Disclosure of the Report

Principles of Sustainability Report Preparation

TPI Polene Power Public Company Limited has prepared its Sustainability Report of the year 2021 based on the principles of disclosure of reporting information in accordance with the GRI International Reporting Standards in order to disclose management and sustainability performance covering economic, environmental and social dimensions. Details of the sustainability report are as follows:

The level of information disclosed (102-54)	This report is prepared in accordance with GRI Standards: Core option.
Reporting period (102-50)	January 1 to December 31, 2021
Reporting cycle (102-52)	Annually
Scope of the report (102-45)	The disclosure of information in this report is scoped only within TPI Polene Power Public Company Limited.
External assurance (102-56)	TPI Polene Power Public Company Limited There is no policy to assign third party agencies for evaluating quality assurance reports
Date of most (102-51)	The Company has prepared the first sustainability report of TPI Polene Power Public Company Limited for the year 2021.
Restatements of information (102-48)	The Company has prepared the first sustainability report of TPI Polene Power Public Company Limited for the year 2021, so there is no significant change data.
Change in report (102-49)	The Company has prepared the first sustainability report of TPI Polene Power Public Company Limited for the year 2021, so there is no significant change in data.

GRI Content Index (102-55)

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
GRI 101: Foundation 2016						
General Disclosures						
GRI 102 : General Disclosures 2016	102-1 Name of the organization	19				
	102-2 Activities, brands, products, and services	21				
	102-3 Location of headquarters	26				
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	102-5 Ownership and legal form	19				
	102-6 Markets served	21, 26				
	102-7 Scale of organization	21, 26-27				
	102-8 Information on employees and other workers	27				SDG 8, SDG 10
	102-9 Supply chain	28				
	102-10 Significant changes to the organization and its supply chain	Not Significant changes				
	102-11 Precautionary principle or approach	30				
	102-12 External initiatives	30				
	102-13 Membership of associations	30				
	102-14 Statement from senior decision-maker	7-9				
	102-16 Values, principles, standards, and norms of behavior	21, 79-80				SDG 16
	102-18 Governance structure	29				

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	102-40 List of stakeholder groups	37-41				
	102-41 Collective bargaining agreements	38				SDG 8
	102-42 Identifying and selecting stake-holders	37				
	102-43 Approach to stakeholder en-gagement	38-41				
	102-44 Key topics and concerns raised	38-41				
	102-45 Entities included in the consolidated financial statements	98				
	102-46 Defining report content and topic boundaries	42, 43				
	102-47 List of material topics	43				
	102-48 Restatements of information	98				
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GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
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Economic Performance						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	90				
	103-2 The management approach and its components	90-91				
	103-3 Evaluation of the management approach	92				
GRI 201 : Economic Performance 2016	201-1 Direct economic value generated and distributed	92				SDG 8, SDG 9
	201-2 Financial implications and other risks and opportunities dueto climate change	91				SDG 13
	201-3 Defined benefit plan obligations and other retirement plans	92				
	201-4 Financial assistance received from government	92				
Procurement Practices						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	75				
	103-2 The management approach and its components	75				
	103-3 Evaluation of the management approach	75				
GRI 204: Procurement Practices 2016	204-1 Proportion of spending on local suppliers	75				SDG 8

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
Anti-Corruption						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	79				
	103-2 The management approach and its components	79-80				
	103-3 Evaluation of the management approach	80-81				
GRI 205: Anti-Corruption 2016	205-1 Operations assessed for risks related to corruption	80				SDG 16
	205-2 Communication and training about anti-corruption policies and procedures	80-81				SDG 16
	205-3 Confirmed incidents of corruption and actions taken	80				SDG 16
Energy						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	47				
	103-2 The management approach and its components	47-48				
	103-3 Evaluation of the management approach	48-49				
GRI 302: Energy 2016	302-1 Energy consumption with in the organization	48				SDG 7, SDG 8, SDG 12, SDG 13
	302-3 Energy intensity	49				SDG 7, SDG 8, SDG 12, SDG 13
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	49				

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			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	103-2 The management approach and its components	49				
	103-3 Evaluation of the management approach	51-53				
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	303-2 Management of water discharge-related impacts	50				SDG 6
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	51				SDG 6
	303-2 Management of water discharge-related impacts	52-53				SDG 6
	303-3 Water withdrawal	53				SDG 6
Emissions						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	54				
	103-2 The management approach and its components	54-55				
	103-3 Evaluation of the management approach	55-56				
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	55				SDG 3, SDG 12, SDG 13, SDG 14, SDG 15
	305-2 Energy indirect (Scope 2) GHG emissions	55				SDG 3, SDG 12, SDG 13, SDG 14, SDG 15
	305-3 Other indirect (Scope 3) GHG emissions	55				SDG 3, SDG 12, SDG 13, SDG 14, SDG 15

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	305-4 GHG emissions intensity	56				SDG 13, SDG 14, SDG 15
	305-5 Reduction of GHG emissions	56				SDG 13, SDG 14, SDG 15
	305-7 Nitrogen oxides (NOX), sulfur oxides (SOX), and othersignificant air emissions	55				SDG 3, SDG 12, SDG 14, SDG 15
Waste						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	57				
	103-2 The management approach and its components	57				
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Management approach disclosures	306-1 Waste generation and significant waste-related impacts	57				SDG 3, SDG 6, SDG 11, SDG 12
	306-2 Management of significant waste-related impacts	57				SDG 3, SDG 6, SDG 8, SDG 11, SDG 12
GRI 306: Waste 2020	306-3 Waste generated	58				SDG 3, SDG 6, SDG 11, SDG 12, SDG 15
	306-4 Waste diverted from disposal	58				SDG 3, SDG 11, SDG 12
	306-5 Waste directed to disposal	58				SDG 3, SDG 6, SDG 11, SDG 12, SDG 15
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	96				
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GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	103-3 Evaluation of the management approach	97				
GRI 307: Environmental Compliance 2016	307-1 Non-compliance with environmental laws and regulations	97				SDG 16
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	62				
	103-2 The management approach and its components	62, 64-65				
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Management Approach 2016	403-1 Occupational health and safety management system	62-63				SDG 8
	403-2 Hazard identification, risk assessment, and incident investigation	63-64				SDG 8
	403-3 Occupational health services	65				SDG 8
	403-4 Worker participation, consultation, and communication on occupational health and safety	64-65				SDG 8, SDG 16
	403-5 Worker training on occupational health and safety	65				SDG 8
	403-6 Promotion of worker health	65				SDG 3

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	66				SDG 8
GRI 403: Occupational Health and Safety 2018	403-8 Workers covered by an occupational health and safety management system	66				SDG 8
	403-9 Work-related injuries	67				SDG 3, SDG 8, SDG 16
	403-10 Work-related ill health	67				SDG 3, SDG 8, SDG 16
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	61				
	103-2 The management approach and its components	61				
	103-3 Evaluation of the management approach	62				
GRI 408: Child Labor 2016	408-1 Operations and suppliers at significant risk for incidents of child labor	62				SDG 5, SDG 8, SDG 16
Training and Education						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	60				
	103-2 The management approach and its components	60				
	103-3 Evaluation of the management approach	60-61				
GRI 404: Training and Education 2016	404-1 Average hours of training per year per employee	61				SDG 4, SDG 5, SDG 8, SDG 10

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
	404-2 Programs for upgrading employee skills and transition assistance programs	60				SDG 8
	404-3 Percentage of employees receiving regular performance and career development reviews	61				SDG 5, SDG 8, SDG 10
Human Rights Assessment						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	76				
	103-2 The management approach and its components	76				
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GRI 412: Human Rights Assessment 2016	412-1 Operations that have been subject to human rights reviews or impact assessments	77				
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	412-3 Significant investment agreements and contracts that include human rights clauses or that underwent human rights screening	77				
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	68				
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	94				
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	103-3 Evaluation of the management approach	95				
GRI 418: Socioeconomic Compliance 2016	418-1 Substantiated complaints concerning breaches of customer-privacy and losses of customer data	95				SDG 16
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	103-2 The management approach and its components	96-97				
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GRI 419: Socioeconomic Compliance 2016	419-1 Non-compliance with laws and regulations in the social and economic area	97				SDG 16
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GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	87				
	103-2 The management approach and its components	87-88				
	103-3 Evaluation of the management approach	88-89				
GRI 103: Management Approach 2016	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development (former EU8)	88-89				SDG 7, SDG 9, SDG 17

GRI Standard	Disclosure	Page Number (s) And/or URL (s)	Omission			Relation to SDGs
			Identified Omission (s)	Reason (s) for Omission (s)	Explanation for Omission (s)	
System Efficiency						
GRI 103: Management Approach 2016	103-1 Explanation of the material topic and its boundary	81				
	103-2 The management approach and its components	81-83				
	103-3 Evaluation of the management approach	83				
G4 Electric Utilities Sector Disclosures	EU12 Transmission and distribution losses as a percentage of total energy	83				SDG 7, SDG 8, SDG 12, SDG 13, SDG 14

Reader Survey Form

The Company requests your kind cooperation in responding to a reader survey by scanning the QR Code and sending this survey form back to TPI Polene Plc, at the address that appears at the end of this report or by e-mail to: orataij@tpipolene.co.th / chayutd@tpipolene.co.th

1. Personal data

Gender ○ Male ○ Female

Age ○ Under 30 years old ○ 30–50 years ○ More than 50 years

Occupation, please specify……

2. As a reader/data user, please specify that you read/relate to the uses of information from which point of view:

○ Customer ○ Employee ○ Regulatory Authority ○ Educational Institutions/Research Agencies ○ General public

○ Entrepreneur ○ Government agency ○ Financial Institutions ○ Others, please specify……

3. From what sources did you receive/read the Company's Sustainability Report?

○ www.tpipolene.co.th ○ Employees of TPI Polene Public Company Limited

○ Office/Factory/Subsidiary ○ Others please specify……..

4. The purpose of reading this Sustainability Report:

○ To get to know the Company ○ To find out about the decision to use the Company's products/services.

○ To study projects that benefit society and the environment. ○ For research and study of sustainability practices.

○ Others please specify……..

5. What is of your opinion about this Sustainability Report of TPI Polene Public Company Limited?

The completeness of the report covers important issues of interest to you.	○ Much	○ Moderate	○ Low
The beauty of the design of the booklet	○ Much	○ Moderate	○ Low
The appeal of the content, the reports and the presentation style	○ Much	○ Moderate	○ Low
Content clarity, easy to understand not confused	○ Much	○ Moderate	○ Low
Overall reporting satisfaction	○ Much	○ Moderate	○ Low

6. What part of the content of this sustainability report interests you the most?

○ About TPI Polene ○ TPI Polene and its Sustainability ○ Environmental Impact Management

○ Community and Social Development ○ Business Operation under Good Corporate Governance

7. Do you think the contents of this report contain all the issues of interest to you?

○ Complete

○ Not complete, need more information

(Please identify the issues that are of your interest and would like to disclose more in the Company's subsequent Sustainability Report)

……

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8. What additional matters do you think TPI Polene Public Company Limited should develop to improve its sustainability performance

……

……

9. Comments or other additional suggestions to further improve the Company's Sustainability Report.

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. ……

TPI Polene Public Company Limited would like to thank you for your kind cooperation and response in this survey form. Information from this survey on this Sustainability Report will be used to improve the preparation of Sustainability Reports of the Company.

TPI POLENE POWER Public Company Limited

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