



#### TPI POLENE POWER PUBLIC COMPANY LIMITED

SUSTAINABILITY REPORT 2024



ZERO CARBON ZERO WASTE

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WORLD CLIMATE ENVIRONMENT IMPROVEMENT



# TPIPP COMMITS TO ESG POLICY FOR DECARBONIZATION AND SUSTAINABLE GROWTH

# **VISION**

To become a leader in efficient renewable energy as a Clean and Green Energy Producer focusing on developing technology and innovation in all dimensions of working, and as the largest waste disposal plant in the country and in the ASEAN region for greenhouse gas emissions to be zero or negative, conducting business responsibly for sustainable growth in economic, environmental, and social dimensions under good corporate governance.



#### **Environmental Dimension**



To focus on developing a low-carbon economy and society, aiming to achieve carbon neutrality by 2037, business operations are guided by circular economy principles, increasing energy efficiency, , addressing municipal waste, waste, and water consumption, preserving biodiversity and mitigating soil degradation.

#### **Social Dimension**





To operate business responsibly, prioritize all stakeholders in a balanced manner, respecting for and protecting human rights across the entire value chain, including employees, business partners, customers, and social communities, generate strong returns to shareholders, create shared value and enhance the quality of life for communities and society, driving sustainable and inclusive development.

#### **Governance Dimension**





To adhere to the principles of accuracy and compliance with relevant laws and regulations under the Code of Conduct and business ethics, have an operating framework based on the principles of good corporate governance, transparently disclosing information and operating results, comprehensively managing risks, implement anti-corruption measures, establish a procurement system on transparent and fair basis.



# 01 Message from the Chairman (GRI 2-22)





On behalf of the Board of Directors of TPI Polene Power Public Company Limited, we express our sincere gratitude to all stakeholders for their ongoing trust in the Company's operations. The Company remains steadfast in its dedication to conducting business with social responsibility as its primary focus. This commitment is aimed at achieving the objective of fostering sustainable growth across corporate, national, and international levels, thereby collectively and continually creating benefits for the economy, society, and environment as we strive towards a sustainable future together.

> (MR. PRACHAI LEOPHAIRATANA) **CHAIRMAN**

#### **Dear Stakeholders**

Amidst a changing world striving for clean energy and energy security, the Company is confident that, with a broad vision and systematic risk management, it can cope with changes in ESG (Environmental, Social, and Governance) dimensions in a stable and sustainable manner.

2024 has been another year marked by challenges such as economic volatility, geopolitical conflicts, and severe climate change, leading to natural disasters and environmental crises that impact business supply chains. In response, the Company has implemented risk management guidelines and sustainable business development to help the organization adapt effectively.

# Promotion of Sustainable Development in ESG

As the largest waste-to-energy power plant operator in the country and home to the world's largest community waste disposal plant in the same area, the Company has invested in technological advancements, emphasizing research and innovation to enhance power plant efficiency and strengthen the preparedness and reliability of the power system. Additionally, it has prioritized efficient resource management to create sustainable growth by integrating environmental, social, and corporate governance (ESG) principles into its business strategy. Beyond reducing the Company's operating costs, these efforts contribute to lowering carbon dioxide emissions, one of the key drivers of greenhouse gases and global warming, while also helping to reduce PM 2.5 dust pollution. Furthermore, the Company's initiatives enhance the quality of life for local communities, mitigate economic and social inequality, and create a balance between business growth and social and environmental responsibility, ultimately generating positive impacts for all stakeholders.

#### **Environmental Operations**

The Company has set a goal to achieve carbon neutrality by 2037 by utilizing municipal waste as fuel for electricity generation instead of fossil fuels. In 2024, the Company used a total of 2,917,559.93 tons of various types of waste as fuel for its power plants and sold sorted waste to be used as fuel for the cement plant of TPI Polene Public Company Limited. These operations help reduce landfill waste, which generates methane gas, and contribute to lowering greenhouse gas emissions by approximately 6,768,739.04 tons of carbon dioxide equivalent.

In addition, the Company has registered for carbon credits with Thailand Greenhouse Gas Management Organization (Public Organization), accumulating a total of 2,022,585 tons of carbon dioxide equivalent. The Company has also been certified with a Renewable Energy Certificate (REC) through Electricity Generating Authority of Thailand (EGAT) for producing renewable energy (from waste fuel and waste heat). Furthermore, the Company has registered and opened a trading account for the obtained RECs under The International REC Standard (I-REC), with a total accumulated amount of 2,504,658.94 RECs.

The Company also plans to expand its power generation capacity from renewable energy sources, such as solar and wind power, while increasing green spaces through reforestation projects to help absorb greenhouse gases.

#### **Social and Human Rights Operations**

The Company also prioritizes social and human rights management across the entire value chain, including employees, communities, business partners, and customers. It operates based on the principles of fairness, transparency, and ESG responsibility to drive sustainable growth.

Employee Management: The Company has implemented a fair employment policy, promoted opportunities for disadvantaged workers, and provided appropriate welfare while emphasizing occupational health and safety systems. As a result, in 2024, there were no serious injuries or fatalities related to employee or contractor work activities, and the rate of work-related illnesses remained at zero. Additionally, the Company supports employee development through training programs, with an average of 23.45 training hours per employee per year. It also conducts annual employee satisfaction and engagement assessments, achieving an average score of 82.96% in the past year. The Company continuously utilizes these assessment results to enhance its personnel management approach.

#### Community Development and Engagement:

The Company is committed to enhancing the quality of life for communities surrounding its power plants by promoting local economy, supporting local employment, and developing education, health, and infrastructure development. In 2024, the Company hired 67 new employees at its plant locations, accounting for 75.28% of all new hires, to further strengthen the local economy. Moreover, the Company has

gathered community feedback through the Stakeholder Engagement mechanism and has utilized this information to continuously improve its business practices to minimizing potential impacts.

Business Partner Management: The Company conducts business with its business partners based on the principles of fairness, transparency, and social responsibility. Supplier selection is guided by criteria that consider quality, price, and ESG standards, aligning with the Company's Code of Conduct and Supplier Code of Conduct. The Company also encourages the participation of micro-enterprises, SMEs, and local businesses to reduce economic inequality. Additionally, it conducts continuous assessments of the economic, social, and environmental risks associated with its businesss partners to ensure that they conduct business responsibly.

**Delivering Value to Customers:** The Company is committed to delivering high-quality services while ensuring power system stability, developing clean energy innovations, and adhering to international safety standards. Additionally, it implements robust data protection measures to safeguard customer information. The Company also encourages customers to adopt renewable energy and regularly assesses customer satisfaction to enhance its services. In 2024, it

achieved a 100% satisfaction rating from customers in the power plant business and 94.75% from customers in the waste fuel plant business.

#### **Corporate Governance Operations**

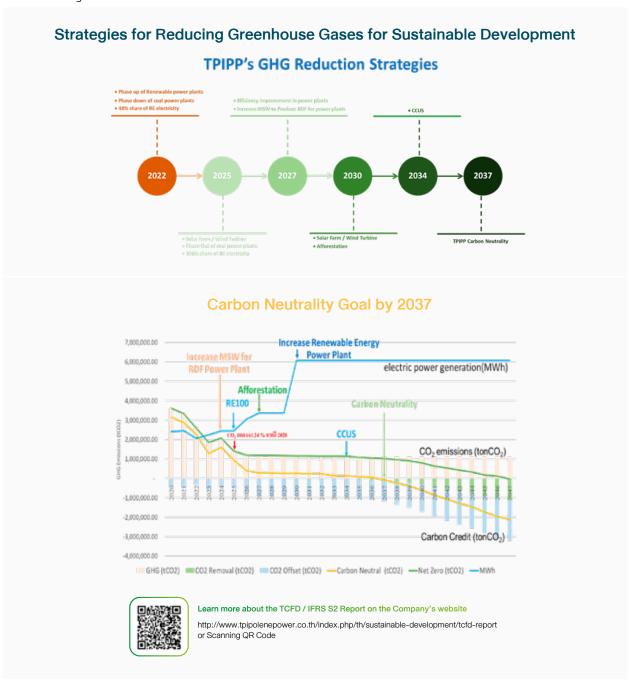
The Company is committed to conducting business with transparency and responsibility toward all stakeholders. The Board of Directors and Sustainability Development Committee play a crucial role in overseeing and driving the tangible implementation of sustainability initiatives. The Company periodically evaluates its sustainability performance and continuously prepares reports for submission to the Board of Directors, ensuring that its operations align with international standards and effectively meet stakeholder expectations.

On behalf of the Board of Directors of TPI Polene Power Public Company Limited, we express our sincere gratitude to all stakeholders for their ongoing trust in the Company's operations. The Company remains steadfast in its dedication to conducting business with social responsibility as its primary focus. This commitment is aimed at achieving the objective of fostering sustainable growth across corporate, national, and international levels, thereby collectively and continually creating benefits for the economy, society, and environment as we strive towards a sustainable future together.



# "CLEAN & GREEN ENERGY PRODUCER FOR OUR HEALTY COUNTRY"

After all this time, the Company has emerged as one of the leading organizations placing importance on sustainable growth. This is achieved by aligning the strategies of the organization and of TPI Polene Group, in compliance with the Sustainable Development Goals (SDGs). The focus is on achieving balanced growth across all dimensions—economic, environmental, and social—guided by principles of good corporate governance (Environmental, Social, Governance: ESG). This approach aims to manage the business for the benefit of all stakeholders in a balanced manner, while simultaneously mitigating the impacts of climate change.





# **Sustainability Management Policy (ESG)**

The Company is committed to conducting business in alignment with its sustainable development policy while driving organizational growth. It has established a clear vision, mission, business model, and strategic plan in accordance with the United Nations Sustainable Development Goals (SDGs) to address key sustainability issues and meet stakeholder expectations. The Company's business strategy is built on the principles of environmental responsibility, social commitment, and strong corporate governance (Environmental, Social, and Governance: ESG) to maximize value and benefits for all stakeholders.

The Company is committed to addressing global warming and adapting to climate change by focusing on renewable energy businesses. This includes generating electricity from waste fuel processed from community waste to help reduce greenhouse gas emissions, as well as utilizing clean energy from solar and wind power.

The Company aims to achieve carbon neutrality by 2037 and transition all coal-fired power plants to waste-to-energy power plants by 2025.

at reducing greenhouse gas emissions and achieving carbon neutrality by becoming a green power plant that generates electricity from renewable and clean energy. It follows the BCG model as a management guideline, reusing waste from the production process to maximize benefits, reduce the consumption of limited natural resources, and increase the production capacity of renewable energy for sale to affiliated companies, thereby lowering the carbon footprint of the organization. Additionally, the Company aims to become a producer of RE100 products (using 100% renewable energy) and is investing in local community waste management projects. It also actively participates in bidding for renewable energy projects that align with the energy development plan, supporting the Company's growth and increasing revenue in line with its policy.

The Company has set an operational direction aimed

In addition, the Company prioritizes community and social development by adhering to laws and regulations on human rights management and the fair treatment of stakeholders, including employees, business partners, customers, and communities. It integrates social and environmental responsibility into every step of the business value chain to create a balance between business growth and long-term sustainability.

# **Key Sustainable Development Activities in 2024**



Total revenue Baht **11,096.76** mil.



Tax payments
Baht **197.36** mil.

EBITDA
Baht **4,787.62**mil.

Net profit
Baht **3,302.24** mil.



Dividend per share Baht **0.16** 



Environment

Certified for **2,022,585** TonCO<sub>2</sub>e carbon credits and granted a Renewable Energy Certificate (REC) for a total of **2,504,658.94** RECs

The Company achieves
6.77 million TonCO<sub>2</sub>e reduction by converting 2.92 million tons of waste into fuel



Coal-fired power plants aim to use 100% of their waste fuel instead of coal for their electricity generation by 2025

Investment value in the environment-friendly projects Baht **13,275** mil.



Proportion of recycled water **4.59%**of the total water usage

Waste emissions (Zero Waste)
decreased by 16.86% compared to 2022
(base year), 100% can be recycled
Hazardous / non-hazardous
waste 0% / 100%

Ground-mounted solar farm power plant project (Solar farm phase 1 and 2) 73.21 MW

10



Disposed of **4,973.71** tons of non-hazardous industrial waste, utilizing them as refuse-derived fuel.

Community and social contributions Baht **38.22** mil.

Lost Time Incident Rate (LTIR) = 1.22 and contractors = 0



#### 1,920,000

accident-free work hours (12.94% increase compared to 2023)

Zero Work-related deaths of employees and contractors





Satisfaction and employee engagement with the organization at 82.96%



Average training hours for employees 23.45 hours/person/year

Employee Turnover (Turnover rate) = 1.91%



Portion of independent directors 33.33%

Portion of female directors **22.22%** 



**No** complaints about the protection of customer personal information Suppliers acknowledge the Company Code of Conduct **97.85%** 



No complaints of human rights violations (discrimination, child labor, illegal labor)

Satisfaction of power plant customers and waste fuel customers are 100% and 94.75%, respectively.

Improve waste fuel quality to reduce moisture to 40–42 %



Improve the fuel feed system to increase combustion efficiency, reduce energy consumption by **2.9%** compared to 2023

Improving the alternative fuel supply system to reduce the use of coal for combustion by **2.8%** compared to 2023

The power plant's overall machinery availability level(Availability - A) averages at **99.19%** 

The power plant's overall machinery performance level (Performance -P) averages at **95.21%** 

Sales value of low carbon products (2024) Baht **7,354.61** mil

Reduce the amount of steam used per production 2.02% compared to 2023 (base year)





#### 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 duties and responsibilities, all employees are required to work under Four Rddhippada: Basic For Success 4, which consists of the follows:

- Chanda: (Aspiration): Intention or purpose or desire or zeal. The need to do and always be willing to do what is assigned and aspire to make it work even better.
- 2. Viriya: (Effort) or energy or will,
- 3. Citta:(Concentration) Consciousness or mind or thoughts, concentrate on work
- 4. Vimansa : Planning, Result Checking, 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 Four Sublime States of Mind) which consists of the followings:

Metta : Mercy Karuna : Kindness Mudita :Sympathetic Joy Upekkha : Equanimity

Announced on January 5, 2022

Prachai Leophairatana Chief Executive Officer

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





See more details on the Company's website: http://www.tpipolenepower.co.th/index.php/th/th-aboutus/empprinciple or Scan QR Code

#### 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)

Rejoice in the success of others, compersion

# Upekkha (EQUANIMITY)

Stillness, impartiality

#### Iddhipada 4

(BASIS FOR SUCCESS 4)

# Chanda (ASPIRATION)

Passions to do things and desire to make even better results

#### Viriya (EFFORTS)

Diligence, patience, commitment, endurance, sedulousness

# Citta (CONCENTRATION)

Consciousness of the senses, mindfulness

#### Vimamsa (R&D)

Planning, measuring, and devising solutions

Principles of Iddhipada 4 Dharmas of Success for work consisted of:

Chanda means love for work - being satisfied with the work that is being done.

Viriya means being diligent in one's work.

Citta means being attentive and responsible for one's work.

Vimangsa means scrutinizing and using intelligence to work.

#### **Four Noble Truths**

Essence of Buddha's Teachings (Ariyadhamma to End Suffering)

Ariyadhamma of Buddhism is Buddha's doctrine as a metaphysics for the liberation from 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 Noble Truth does not mean suffering in the Thai language as it is commonly understood, but also refers to difficult conditions to endure in the same conditions and oppressive situations.

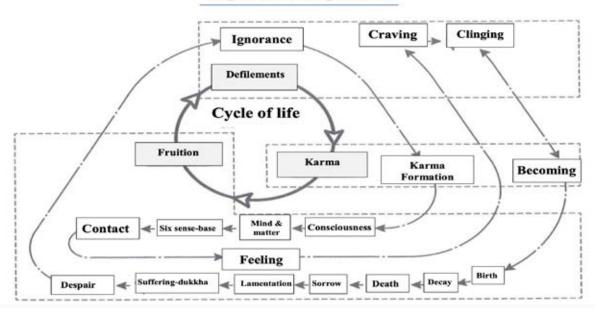
#### 2. SAMUDAYA

#### THE ORIGIN OR ARISING OF DUKKHA

THE ORIGIN OR ARISING OF DUKKHA

Considering from the Cause of Suffering

#### **Dependent Origination**



#### 3. Nirodha: Cessation of Suffering is Nirvana.

#### (EXTINCTION OF SUFFERING)

It is the elimination of defilements with the power to follow the Eightfold Path until attaining that path.

#### 4. Marga

#### (THE NOBLE EIGHTFOLD PATHS)

Dharma that kill defilements or end ten Samyojana<sup>4</sup>

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

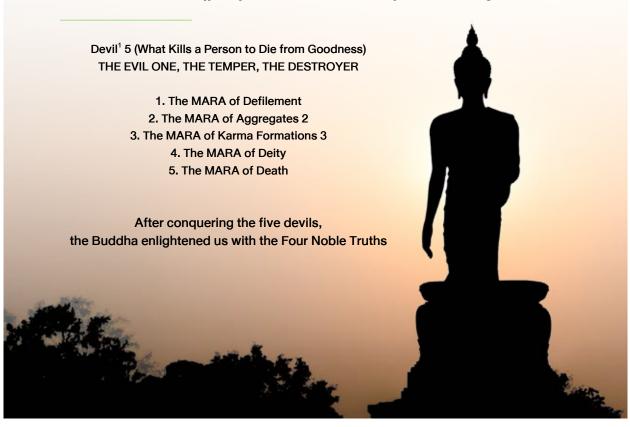
6. Right effort

7. Right mindfulness

8. Right concentration

### Chants conquering Evil: Panmare Chino Na Tho

Panmare Chino Natou Patto Sampothimuttaman Chatur Satjung Pakasti Thammajakang Pawattayi Etena Sajjavajchena Hotu Me Chayamankalang



#### Note:

- MARA (The Destroyer) is something that kills one from their virtue or from noble results, or something that consumes virtues or hinder one from achieving virtuous achievements.
  - 1. MARA of Defilement is love, greed, anger, delusion, and evil spirit.
  - 2. MARA of Aggregates is a devil who destroys one's aggregates, causing sickness, disability, and eliminating one's opportunity to

do good deeds.

3. MARA of Karma Formations is thought, emotion, and karma cultivator that prevents one from being released from suffering in the cycle of

samsara or rebirth of one in 31 places of existence.

4. MARA of Death is death that deprives one of the opportunities to do good deeds.

5. Devaputta Mara is an evil deity who is powerful and inspire one not to do good deeds.

Five Khandha (Five Groups of Existence or Five Aggregates) are five aggregates of form and abstract that make up the collective units, which are called animals, persons, selfness, they, we, etc.

1. Corporeality (rupa-kkhandha)

2. Feeling sensation (vedana-kkhandha)

3. Perception (sanna-kkhandha) is the aggregate that remembers what one received and is the part that defines the meaning of what

have been known (Arrom 6) such as white, green, black, red, etc.

4. Mental formation, Volitional Activities (sankhara-kkhandha) is the aggregate of thought to identify what you feel and remember whether it good or bad, or neither good nor bad. The mind was led by intention to be good or bad or upyakrit (neither good nor bad), kaya-sankhara (physical intent), vajee-sankhara (verbal intent), and mano-sakhara (mind intention).

Consciousness (vinnana-kkhandha) is the aggregate of cognition or knowing of things through the six senses including eyes, ears, etc.
 The Five Aggregates are abbreviated into two groups, namely abstract and corporeality.

3. Apisankhara 3 is the thought, emotion, and karma cultivator, comprising of:

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 that binds the mind to the cycle of defilement, karma, and the result of karma.

1. Sakkaya-ditthi: One has the view that the five aggregates are self.

2. Wichikitcha: One has doubts in the virtues of the Three Jewels: 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:

6. Rupa-raka: One has greed for material existence.7. Arupa-raka: One has greed for immaterial existence

8. Mana: One had conceit or pride with the feeling of being better, worse, or equal with others.

9 Uttacca: One is distracted or restless.

10 Avijja: One has ignorance of the Four Noble Truths

Phra Sodaban is the one who puts an end to all of the first three fetters, namely Sakkaya Ditthi, Vicikiccha, and Silabbat

Pramas.

Sakathakami is the one who puts an end to all first three fetters, and reduces lust and anger.

Anakami is the one who puts an end to the five lower fetters.

Arahant is the one who puts an end to all 10 fetters.

5. Sankhara is bodily 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, and all things that are made up (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 being formed or improvised, which is all the mind and forms.

In Paticca-samuppada, Sankhara 3 includes:

Kayasangkhara: Vodily volition
 Vajisangkhara: Verbal volition
 Manosangkhara: Mental volition

#### Sankhara has three qualities known as Trilak as follows:

1. Anicca: 2. Duhkha: 3. Anatta: Impermanence State of suffering or being oppressed, state No real self,

which cannot stand it in its original condition, state that will deteriorate because of being oppressed by Anicca.

incapable of being in power

## The opposite of Sangkhara is Wisangkhara

Wisangkhara is Nirvana, which is eternal. It leads to Nicca, Sukhang, Anatta (dharma).



# 02 Awards of Success and Pride 2024

The awards received both nationally and internationally in 2024 serve as confirmation of the outstanding performance of TPI Polene Power Public Company Limited ("TPIPP") in the realms of economy, society, and environment.

#### National -Level Awards



TPIPP has been recognized as "AAA Sustainable Stock" in 2024 (SET ESG Ratings: AAA)

by the Stock Exchange of Thailand (SET) for its ESG-driven business operations, which integrating environment, society, and corporate governance principals, ensuring sustainable benefits for all stakeholders in sustainable manner.



#### 5-Star Corporate Governance Assessment -"Excellent" Rating

TPIPP has continuously enhanced its corporate governance practices, earning a 5-star "Excellent" (Excellent CG Scoring) rating in the 2024 Corporate Governance Report of Thai Listed Companies (CGR). This recognition was awarded by the Thai Institute of Directors (IOD).



#### TPIPP has been selected as one of the ESG100 securities.

recognized for its outstanding performance in Environmental, Social, and Governance (ESG) for the fifth consecutive year. This recognition is based on the 2024 assessment of listed securities conducted by the Thaipat Institute.



#### TPIPP's waste-to-fuel plant and waste-toenergy power plant have successfully passed the efficiency assessment for Circular Economy

implementation within the organization. This recognition was awarded under the Project for the Development and Enhancement of Industrial Enterprises in applying Circular Economy Principles, conducted by the Department of Primary Industries and Mines.



#### Sustainability Disclosure Award

TPIPP received the Sustainability Disclosure Award for 2024 for the third consecutive year, the highest level of recognition for sustainability disclosure assessment (based on the Sustainability Report and Form 56-1 One Report 2023) from the Thaipat Institute.



#### CSR-DIW Continuous Award for 2024

TPIPP received a plaque and certificate from the project to promote industrial factories to be responsible for society and the community sustainably, CSR-DIW Continuous Award category, year 2024 from the Department of Industrial Works, Ministry of Industry, for the 9th consecutive year since 2016, including power plants TG1-3 (60MW), TG4 (30MW), TG5 (60MW), TG6 (70MW), TG7 (40MW) and TG8 (150MW).



# TPIPP received a plaque of honor as one of 34 pilot power plants that successfully passed the sustainability assessment across five key areas,

based on 42 indicators under the Power Plant Sustainability Index Criteria for Thailand. This recognition, awarded through the Power Plant Sustainability Index Criteria Development Project for Thailand, reflects TPIPP's commitment to becoming a model for next-generation power plants, integrating sustainable development with energy security to support the country's long-term economic growth.



# Outstanding Leadership Award and Excellence in Creativity & Innovation Award

Both awards were presented to Mr. Prachai Leophairatana, Chairman of TPI Polene Power Public Company Limited, in recognition of his exceptional contributions to the public, visionary leadership, and ability to effectively apply knowledge into practice.



#### Award for Good Deeds in Return for the Country

The award from the One Million Seeds of Goodness in Return to the Country Project in 2024, in the areas of environment, society, and good governance, symbolizes the promotion and support of those who perform good deeds, give back to the country, and benefit society and the nation. It is granted by the Foundation for Thai Society as part of the One Million Seeds of Goodness in Return to the Country Project.



# Outstanding Creativity and Innovation Award of the Year

The award from the One Million Seeds of Goodness in Return to the Country Project in 2024, under the category of Production Innovation to Increase Competitiveness, symbolizes the promotion and support of those who perform good deeds in return for the country, benefiting society and the nation. This award is granted by the Foundation for Thai Society as part of the One Million Seeds of Goodness in Return to the Country Project.



#### Outstanding Company of the Year Award from the One Million Seeds of Goodness in Return to the Country Project 2024

The Award for the Use of Resources Leading to Sustainable Development is a symbol of the promotion and support of those who contribute to the country and society. It recognizes individuals and organizations that give back and benefit the nation, awarded by the Foundation for Thai Society under the "One Million Seeds of Goodness in Return to the Country" project.



#### Outstanding Service Award from the One Million Seeds of Goodness in Return to the Country Project 2024

The award in the Good Service category symbolizes the promotion and support of those who perform good deeds, give back to the country, and benefit society. It is granted by the Foundation for Thai Society as part of the One Million Seeds of Goodness in Return to the Country Project.



#### CSR-DIW Continuous Award 2024

This award is part of a project aimed at promoting industrial factories to uphold social and community responsibility in order to achieve the Sustainable Development Goals (CSR-DIW to Achieve SDGs) in 2024. It reflects a strong commitment to conducting business responsibly, considering the society, community, and surrounding environment, to create sustainability in alignment with ESG guidelines.

#### Thailand Energy Awards 2024 on Renewable Energy

This award is a **biofuel** project from the **Refuse Derived Fuel** project, Na Di project, Mueang District, Samut Sakhon Province.

#### International-Level awards



#### **ASEAN ENERGY AWARDS 2024**

ASEAN Renewable Energy Project Awards 2024 presetned by ASEAN Centre for Energy (ACE) from the Refuse Derived Fuel Project, Na Di Project, Mueang District, Samut Sakhon Province.



#### Best Sustainable Practices in Energy Sector Thailand 2024 Award

This award is presented by World Business
Outlook, a print and online magazine that provides
comprehensive analysis of the financial industry,
international business and the global economy.
It is highly prestigious, recognizing organizations
with strong business operations, outstanding
innovation and international reputation.



# TPIPP Being Certified with ISO14064-1 (Carbon Footprint Verification or CFV)

ISO14064-1 is a standard outlining principles and organizational requirements for quantifying and reporting greenhouse gas emissions and reductions. It also includes requirements for designing, developing, managing, reporting, and verifying an organization's greenhouse gas emissions and reduction inventory. The certification was awarded by BSI Group (Thailand) Co., Ltd. (BSI: British Standards Institution).



#### Quality Choice Prize for 2024

TPI Polene Power Public Company Limited received the Quality Choice Prize 2024 from ESQR in Vienna, Austria, in recognition of its exceptional success in quality management initiatives. ESQR is an organization dedicated to research and the promotion of international quality standards across various industries and organizations worldwide.

# 03 About TPI Polene Power Public Company Limited (GRI 2-1)

#### **Background**

TPI Polene Power Company Limited (abbreviation: TPIPP) is a 70.24% owned subsidiary by TPI Polene Public Company Limited or TPIPL, listed on the Stock Exchange of Thailand on April 5, 2017, with authorised share capital of 8,400,000,000 baht consisting of ordinary shares 8,400,000,000 shares.

The Company, with the largest waste-fired power plant in Thailand situated in Saraburi Province and a total production capacity of 440 megawatts according to AWR Lloyd data, stands as the foremost operator in electricity and energy production from waste disposal across the ASEAN region. Its primary operation involves processing community waste into fuel, and supplying electricity to both the Electricity Generating Authority of Thailand ("EGAT") and TPI Polene Public Company Limited.

TPI Polene Power operates in the energy and utilities sector with a strong focus on clean energy, including renewable fuels and various types of renewable energy power plants. The Company produces fuel from waste and invests in renewable energy projects, including waste-to-energy power plants, solar power plants, and government waste-to-electricity management initiatives. It distributes electricity under power purchase agreements with Electricity Generating Authority of Thailand (EGAT). Additionally, the Company

manages waste disposal by separating and converting waste into fuel and energy for electricity generation and distribution, emphasizing green electricity or RE100, renewable energy power plants serving customer groups with specific energy needs. Furthermore, it provides oil and gas service stations along with EV charging station services.

In 2024, the Company has a total installed power generation capacity of 440 megawatts, with 180 megawatts supplied to Electricity Generating Authority of Thailand (EGAT) and 260 megawatts sold to the cement plant of TPI Polene and its subsidiaries. All factories are located at No. 299 Mittraphap Road, Kaeng Khoi District, Saraburi Province. Within this area, there are three waste-to-energy factories with a total of 18 production lines, designed to process community waste into energy.

At present, the Company currently operates several types of alternative energy power plants: Waste-to-energy power plants, Waste heat to power plants, Solar power plant and Coal-fired power plants. The Company is currently in the process of shifting from coal fuel to an alternative fuel derived from community waste and other renewable sources, with the aim of phasing out coal usage by 2025.



#### **Business Overview**



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



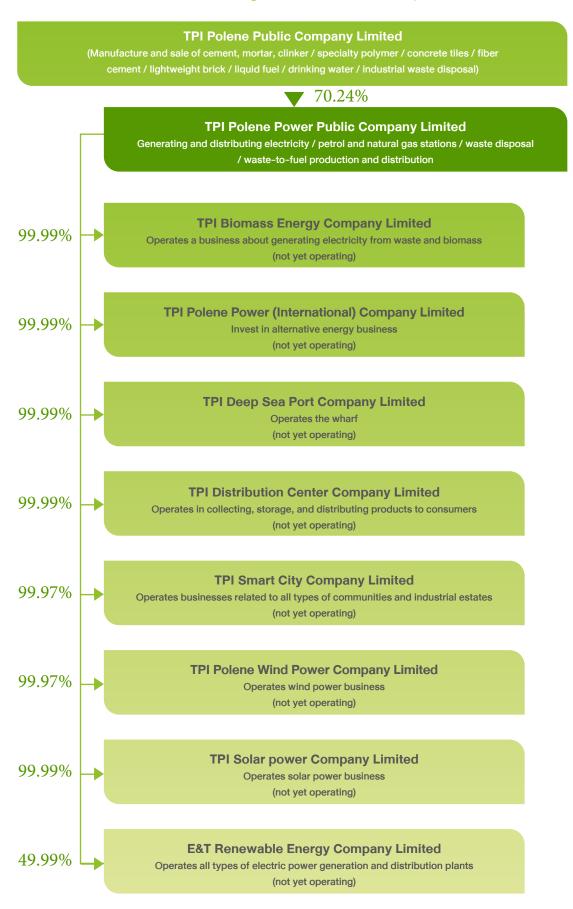
#### **TPIPP Products**



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



#### Shareholding Structure of the Group



#### Policy, Vision, and Mission

Core Competency: As a leader in renewable energy-based electricity production, TPI Polene Power Public Company Limited commits to quality and regulatory standards. The Company persistently advances technological innovation and personnel development to maximize stakeholder returns, all the while administering its corporate responsibilities with ethical integrity and governance excellence.

#### Policy:

Committed to conducting business to enhance value to business and society sustainably, focusing on ethics, transparency, fairness, and social responsibility towards culture and the environment. Concurrently fostering sustainable development for employees, customers, communities, and all stakeholders, under governance that aligns with principles of corporate governance and ideals.

#### Vision:

To be a leader in efficient renewable energy and is a producer of clean, green energy (Clean and Green Energy Producer), focusing on developing technology and innovation in every dimension of business operations. For sustainable growth in both economic, environmental and social dimensions under good corporate governance

#### Mission:

#### Adhere to Sustainable Corporate Development towards the Future based on ESG Principles for Well-being of Society "Innovation Sustainability: Driving ESG and BCG for a Greener Future"

- To support the disposal of municipal waste to various local organizations to be converted into fuel in the form of renewable energy correctly and efficiently.
- Developing various alternative fuel technologies and electricity generation methods to reduce the problem of overflowing garbage in Thailand and reduce waste fuel costs
- To enhance the production efficiency of power plants, it involves designing and installing equipment for immediate use, establishing backup plans to prevent disruptions, and promptly resolving any arising issues.
- To produce electrical energy from renewable sources utilizing fuel derived from community waste for grassroots economies, instead of relying on fossil fuels and coal, and incorporating clean energy from solar and wind sources to mitigate greenhouse gas emissions.
- To promote and develop personnel potential to achieve quality and readiness in driving organizational competency and competitiveness and have high level occupational skills
- To operate based on the principles of BCG (Bio-Circular-Green Economy) model for managing environmental impacts and preserving biodiversity within the ecosystem. This includes effectively managing various types of waste to maximize reuse and ensuring zero waste disposal outside the system.
- To conduct business with responsibility to all stakeholders in a balanced manner and strive to develop society to grow along with sustainable development of the organization.



## Nature of business (GRI 2-6)

The Company operates in 2 types of businesses: Energy and Utilities Business, and Petrol and Natural Gas Station Business including services of electric charging stations for EV vehicles which operates within Thailand only, with the following details:

#### 1. Power and Utilities Business consists of:

#### 1.1 Power plants

The Company operates three types of power plants: (1) waste heat power plants, (2) municipal solid waste power plants, (3) coal-fired power plants and (4) Solar power and wind supplemented with additional renewable fuels. The Company believes that operating power plants utilizing waste heat energy, waste-to-energy, and renewable energy will benefit from government policies that support and promote electricity generation from these sources. These policies align with the national energy plan, which prioritizes clean energy and aims to achieve net-zero carbon dioxide emissions (Net Zero Emission) by 2065–2070. This direction is consistent with global efforts to reduce global warming.

As of December 31, 2024,(GRI203-1) (GRI203-2) the Company operates eight power plants totaling 440 megawatts in installed capacity that are in commercial operation., consisting of five waste-to-energy plants with a combined capacity of 250 megawatts. (This includes a Power Purchase Agreement for 163 megawatts with the Electricity Authority of Thailand, with the remaining electricity sold to TPI Polene Public Company Limited.) In addition, there are two waste heat-to-power plants with a combined installed capacity of 40 megawatts, and one coal-fired power plant with a total capacity of 150 megawatts (currently transitioning from coal to waste fuel). These plants exclusively sell their generated electricity to TPI Polene Public Company Limited and are all located in Kaeng Khoi District, Saraburi Province, in close proximity to TPI Polene Public Company Limited's cement production plant. The categories of power plants can be summarized as follows:

Power Plant Type	Operational Characteristics	Production Capacity
A. Waste Heat Recovery	• Located within the same area as the cement manufacturing	Consists of 2 power generating
Power Plant	facility of TPI Polene Public Company Limited, utilizing the	units with an installed capacity
	waste heat emitted from the cement production process	of 20 megawatts per unit,
	of TPI Polene Plc. in the electricity production process of	totaling 40 megawatts.
	a waste heat power plant. This process transfers the waste	
	heat left over from the clinker kiln instead of treating it	
	by reducing the temperature before releasing it into the	
	atmosphere to the boiler for electricity generation without	
	using any additional fuel. This method produces electrical	
	energy and can also reduce the impact on the climate.	
B. Waste-to-energy power	Generates electricity by burning waste fuel as the main fuel by	The waste-to-energy power
plant	converting municipal waste into the fuel process to produce	plant has a total installed
	steam from the steam boiler in order to use the steam to	capacity of 250 megawatts,
	further generate power.	selling 180 megawatts of
	• The process of converting municipal waste into fuel to	electricity to the Electricity
	generate power is the method to dispose municipal waste	Generating Authority of
	and reduces impacts on the environment and reduced	Thailand and 70 megawatts to
	$green house \ gas\ emissions\ which\ is\ better\ than\ land fill\ was te$	cement factories.
	management. The Company was evaluated by the Thailand	
	Greenhouse Gas Management Organization for reducing	
	greenhouse gas emissions by using municipal waste as fuel	
	in order to register for a carbon credit certificate.	

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Power Plant Type	Operational Characteristics	Production Capacity
	The Company completed the installation incinerators and grate boilers, which can be used to burn municipal waste directly and increase the amount of steam produced, thereby increasing the rate of utilization of electricity capacity in waste-to-energy power plants. They can also dispose of scraps left from the waste fuel production process. Each incinerator, which is the largest capacity in Thailand. Situated in the same area (Economy of Scale), it boasts the highest waste	
C. Coal-fired and renewable fuel power plant	<ul> <li>The Company operates a coal-fired power plant utilizing a highly efficient steam generator technology. Subsequently, the Company modified it to incorporate additional alternative fuels to partially reduce coal consumption. This power plant supplies electricity to cement factories and is equipped with pollution control systems that exceed the standards set by the Office of Natural Resources and Environmental Policy and Planning (ONEP) for environmental impact reporting. Currently, the Company's coal-fired and alternative fuel power plants have a combined installed capacity of 150 megawatts.</li> <li>The Company plans to phase out coal usage in its electrical generation processes, transitioning to an investment strategy aimed at converting all steam boilers to utilize waste and other renewable energy sources as substitutes for coal. Scheduled for completion by 2025, this transition not only addresses the financial implications of increased coal prices but also positions the Company to apply for greenhouse gas reduction certification through Carbon Credits.</li> </ul>	fuel power plants have an

D. Solar Power Plant The Company operates four ground-mounted and roof-top -	- Project 1: A ground-mounted
solar power plant projects in Kaeng Khoi District and Chaloem Phra Kiat District, Saraburi Province, consisting of:  Project 1: A ground-mounted solar power generation system with a production capacity of 52.2 megawatts, which produces and distributes electricity to the system for supply to cement factory. It is also preparing to supply electricity to factories in the area, with construction and operations scheduled to begin in late 2024.  Project 2: A solar roof power plant with a production capacity of 5.1 megawatts in Chaloem Phra Kiat District, Saraburi Province, designed to produce electricity for sale to the Fiber Cement Plant. The plant is expected to begin producing and selling electricity commercially in August 2024.  Project 3: A ground-mounted solar power generation system with a capacity of 9.6 megawatts is under construction and is expected to become operational and commercially available in July 2025.  Project 4: A ground-mounted solar power generation with a power generation capacity of 14.48 megawatts is under construction and is expected to be operational and commercially available by the end of 2025.  The Company has jointly invested with Electricity Generating Public Company Limited to establish E&T Renewable Energy Co., Ltd. as a joint venture with a registered capital of Baht 2,000 million and a paid-up capital of Baht 500 million. The objective is to operate power plants, including solar power plants and ground-mounted solar power plants with an energy storage system (Battery Energy Storage System: BESS). The Company and its joint ventures are ready to participate in bidding for renewable energy power generation projects under the Feed-in Tariff (FiT) scheme for the years 2022-2030, for the group with no additional fuel costs.	solar power generation system with a production capacity of 52.2 megawatts  Project 2: A solar roof power plant with a production capacity of 5.1 megawatts  Project 3: A ground-mounted solar power generation system with a capacity of 9.6 megawatts  Project 4: A ground-mounted solar power generation with a power generation capacity of 14.48 megawatts

#### 1.2 Community Waste-to-Fuel Production

#### **Business**

The Company operates a factory for sorting and processing community waste to produce fuel in the form of Refuse-Derived Fuel (RDF). The main factory, located in Kaeng Khoi District, Saraburi Province, processes community waste and receives initially sorted RDF2-type waste as raw materials. The construction and operation details are as follows:

Fuel Production Plant No. 1 consists of nine production lines as follows:
 Lines 1-4 have a production capacity to receive raw materials at 40 tons per hour.
 Line 5-6 have a production capacity to receive raw materials at 30 tons per hour.
 Line 7-9 have a production capacity to receive raw materials at 40 tons per hour.

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- Fuel Production Plant No. 2 consists of three production lines as follows:
  - Line 10-12 have a production capacity to receive raw materials at 40 tons per hour.
- Fuel Production Plant No. 3 consists of five 5 production lines as follows:
  - Line 13-17 have a production capacity to receive raw materials at 60 tons per hour.

The Company also constructs waste separation plants near community waste sources, in collaboration with 13 business partners and 15 factories across 11 provinces. These plants have an installed production capacity to process 40 tons of community waste per hour, separating waste, producing raw materials, and delivering approximately 5,000 tons per day to the factory. The Company invests in machinery and assigns partner companies to handle production and distribution. In return, the Company receives machinery rental fees from the raw material manufacturers.

In 2024, the Company can receive approximately 5,000 tons of municipal solid waste and pre-sorted community waste per day at its waste-to-fuel production plant in Saraburi. This waste is sourced directly from local administrative organizations and private contractors working with local governments, ensuring proper sanitary disposal at the Company's facility. The waste is used as raw material for fuel production and fed into waste incinerators to generate steam. Additionally, the Company procures and imports approximately 5,000 tons of sorted waste daily to be used as raw materials or refined refuse-derived fuel. In total, the Company processes around 3.2 million tons of waste annually for fuel production and electricity generation.

#### 1.3 Community Waste Management for Power Generation Project Business

Incineration Technology: The waste incinerator is designed with consideration for the characteristics of waste, including moisture content and variable heating value. It features effective combustion control to prevent air and environmental pollution. Additionally, a system is in place to eliminate toxic gases, soot, and particles generated during combustion, in compliance with legal requirements. The ash produced, approximately 10% by volume and 25–30% by weight of the waste burned, is either landfilled or repurposed as paving material for road construction. Ash containing metal can be recovered and reused. Furthermore, in areas with large amounts of landfill waste, incineration can be used to generate heat energy for steam production, which can then be converted into electricity.

The Moving Grate Boiler is a waste combustion technology that does not require prior waste sorting. It operates at temperatures above 800 degrees Celsius and is widely used, having been tested for reliable technical performance. This technology can efficiently incinerate waste with varying compositions and heating values. Additionally, it includes a system to control emissions in gas, liquid, and solid forms throughout the entire combustion process.

Therefore, in community waste management projects led by various local government agencies, the use of this technology is mandated for waste incineration and disposal. The winning bidder of the auction receives revenue from waste disposal fees based on the actual amount of waste processed, as well as earnings from electricity generated through the combustion process.



In addition, TPI Polene Power has successfully been selected in bidding participated for three municipal waste-fuel power plants and receiving compensation through tipping fees and electricity sales to the Provincial Electricity Authority for a period of 20 years, as follows:

Project	Installed capacity	Power Purchase Agreement	Sold to	Commercial operation commenced (approx.)
Municipal Waste Power Plant, Songkhla     Provincial Administrative Organization	9.9	7.92	Provincial Electricity Authority	2025
Municipal Solid Waste Power Plant in     Mukdahan Municipality, Mukdahan     Province	9.9	8.0	Provincial Electricity Authority	2026
3. Municipal Solid Waste Power Plant in San Sai Ngam Sub-district Municipality, Chiang Rai Province	9.9	8.0	Provincial Electricity Authority	Waiting
Total	29.7	23.92		

The Company participated in the bidding and was selected as the winner of the bidding with the following project details:

#### Community Waste Management Project for Electricity Generation, Songkhla Provincial Administrative Organization

The project has an installed capacity of 9.9 megawatts, with a contract to sell 7.92 megawatts of electricity to the Provincial Electricity Authority. It has a duration of 20 years and generates revenue through a waste disposal fee of Baht 400 per ton, which increases by 10% every three years. The Songkhla Provincial Administrative Organization (SAO) supports the project by supplying 400–500 tons of waste per day.

The project announced the winning bidder for the community waste power plant in March 2021, and the Company signed a waste concession agreement with the Songkhla Provincial Administrative Organization in September 2021. On March 13, 2023, the Company finalized a power purchase agreement with the Provincial Electricity Authority to sell electricity generated from the community waste-fueled power plant in Songkhla Province. The power plant is currently under construction and is expected to begin commercial operations in 2025.

#### • Community Waste Management Project for Electricity Generation in Mukdahan Municipality, Mukdahan Province

The project has an installed capacity of 9.9 megawatts and an electricity distribution capacity of 8 megawatts. On February 27, 2024, the Company signed a power purchase agreement with the Electricity Generating Authority of Thailand (EGAT). The project has a duration of 20 years and generates revenue through waste disposal fees of approximately Baht 510 per ton, with a 10% increase every three years. The project is undergoing public hearings for the environmental impact report and the preparation of a report for the Energy Regulatory Commission, scheduled for August 2024. Commercial operations are expected to begin in 2026.

# Community Waste Management Project for Electricity Generation, San Sai Ngam Sub-district Municipality, Chiang Rai Province

The Company submitted a bid for the community waste management and electricity generation project in San Sai Ngam Sub-district Municipality, Chiang Rai Province. The project has an installed capacity of 9.9 megawatts and electricity sales of 8.0 megawatts, with revenue generated through waste disposal fees of approximately Baht 500 per ton, increasing by 10% every three years. The bid was submitted on October 25, 2024. Subsequently, on November 20, 2024, the Company received a procurement notification, confirming its selection as the winning candidate. The Company met all technical qualifications and proposal requirements and achieved the highest score for the project.

#### Solar Power Plant

The Company operates four ground-mounted and roof-top solar power plant projects in Kaeng Khoi District and Chaloem Phra Kiat District, Saraburi Province, consisting of:

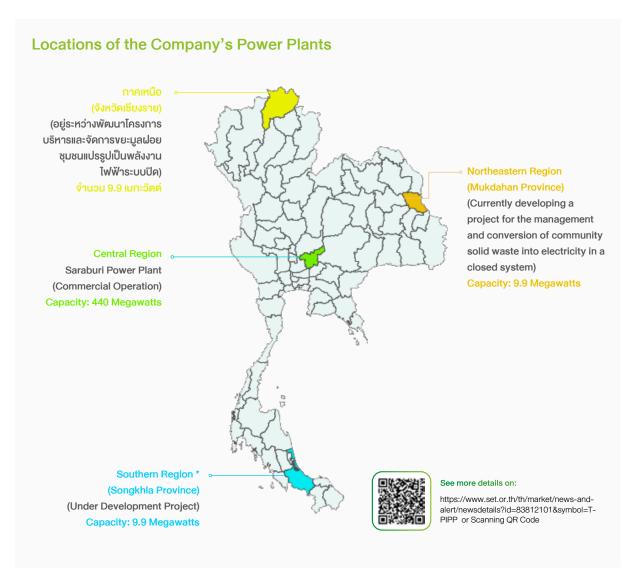
- **Project 1:** A ground-mounted solar power generation system with a production capacity of 52.2 megawatts, which produces and distributes electricity to the system for supply to cement factory. It is also preparing to supply electricity to factories in the area, with construction and operations scheduled to begin in late 2024.
- **Project 2:** A solar roof power plant with a production capacity of 5.1 megawatts in Chaloem Phra Kiat District, Saraburi Province, designed to produce electricity for sale to the Fiber Cement Plant. The plant is expected to begin producing and selling electricity commercially in August 2024.
- **Project 3:** A ground-mounted solar power generation system with a capacity of 9.6 megawatts is under construction and is expected to become operational and commercially available in July 2025.
- **Project 4:** A ground-mounted solar power generation with a power generation capacity of 14.48 megawatts is under construction and is expected to be operational and commercially available by the end of 2025.

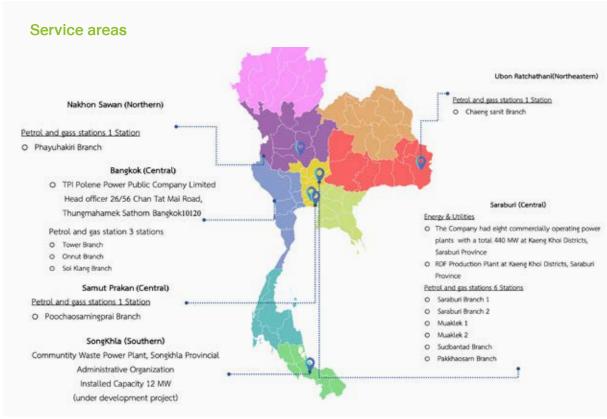
#### 2. Petrol, natural gas, and Electric Charging Stations

At present, the Company operates 12 petrol/natural gas (NGV) service stations and electric charging stations under the TPIPP trademark. Customers using the services include those transporting cement for TPI Polene, customers of affiliated companies, customers with credit lines, and general retail customers. The service stations are located as follows: 3 branches in Bangkok, 1 branch in Samut Prakan Province, 6 branches in Saraburi Province, 1 branch in Nakhon Sawan Province, and 1 branch in Ubon Ratchathani Province. The types of services offered are as follows:

- 6 petroleum-only service stations
- 2 petroleum and natural gas service stations
- 2 petroleum and electric charging stations
- 1 natural gas and electric charging station

The Company is authorized to use the trademark of TPI Polene Power Public Company Limited under the Trademark License Agreement dated 7 March 2016. (Permission granted by the Department of Intellectual Property on April 4, 2018) for the sale of products made from certain types of fuel and natural gas (NGV)





# Employee information in 2024 (GRI 2-7) (GRI 2-8)

The Company has a total of 1,151 employees, consisting of 97 employees at the head office and 1,054 employees at Saraburi plants details are as follows:

Total number of employees classified by employment contract (full-time and contract staff) and by gender

	Male		Female		Total	
Details	Number (persons)	Percent	Number (persons)	Percent	Number (persons)	Percent
Full-time staff (person)	975	93.12	73	70.19	1,048	91.05
Contract staff* (person)	72	6.88	31	29.81	103	8.95
Total (person)	1,047	100	104	100	1,151	100
Percentage of total employees	90.96		9.04		100	

Notes: \* Contract staffs are annual contract employees and daily contract employees.

Total number of employees classified by employment contract (permanent and temporary contracts)

Details	Total	%
1. Full-time staff (person)	1,048	91.05
2. Contract staffs		
- Annual contract staffs (person)	14	1.22
- Daily contract staff (person)	89	7.73
Total Contract staffs (person)	103	8.95
Total (person)	1,151	100

Notes: \* Contract staffs are annual contract employees and daily contract employees.

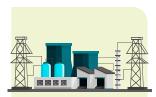
In 2024, the Company employed 1,054 local employees in Saraburi Province (where the Company's power plant and waste fuel plant are located), representing 91.57% of the total workforce.

The Company provides equal employment opportunities without discrimination, encompassing both disabled individuals and other disadvantaged groups. In 2024, a total of 96 new employees were hired, comprising 89 general employees, 5 elderly individuals, and 2 disabled people. Additionally, the Company contributed to the Empowerment for Persons with Disabilities Fund, as stipulated in Section 23 of the Empowerment of Persons with Disabilities Act, B.E. 2550 (2007). The Company employed 10 disabled individuals, representing a disabled employment rate of 1.04% of the total number of employees.

## Supply Chain of TPI Polene Power Public Company Limited (GRI 2-6)



Investment initiation with value-driven capital from shareholders and financial institution creditors across several power plant projects entails budget allocation for investment in technology and innovation. This involves procurement of machinery/equipment from partners with assured quality. Regarding waste procurement and transportation, the Company has has entered into waste procurement contracts with several domestic partners, who recognize and uphold the ethical code of conduct in procurement, supply, and contracting with the Company. This support extends to the disposal of community waste for local organizations, transforming it into fuel and energy efficiently and effectively through a transparent procurement process.



Midstream operations



Power generation by using innovative technology that will reduce production costs, control risks in safety, occupational health, and environment that may lead to loss of life, injury, illness due to the work of employees and contractors which affects the interruption and continuity of business operations and may affect the communities, society and environment, as well as strictly operating on the environment in accordance with the announcement of environmental policy regulations has resulted in the Company receiving awards and certifications for management systems according to international standards.



Downstream operations

Power generation that prioritizes transmission and distribution efficiency to 2 important customers, Electricity Generating Authority of Thailand and TPI Polene Plc. by the Company delivers electricity to customers continuously to maintain customer satisfaction.

For business operations from upstream, midstream, and downstream, the Company has operated with its personnel throughout the business value chain. The Company's business operations take into account the impact on the environment and local communities, strict compliance with regulations, rules, environmental laws, and other relevant laws, employing labor management and labor relations, taking appropriate care of occupational health and safety responsibly and adding value to employees, paying attention to human rights practices, managing efficiently according to corporate governance principles with good corporate governance, making the Company's business stable and growing continuously.

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#### **Good Corporate Governance**

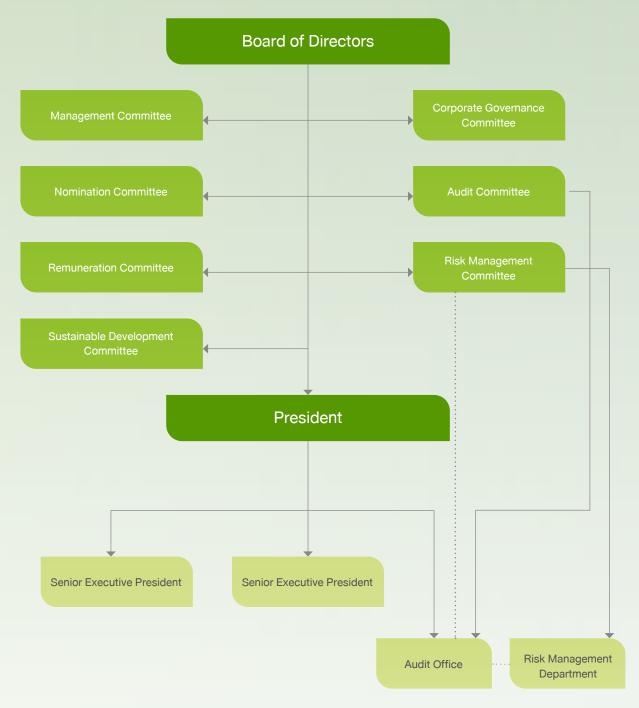
The Company recognizes the importance of good corporate governance in order to contribute to sustainable development, and the Company has established corporate governance policies and codes of conduct of the Company and is determined to promote the firm to be an organization that does business with transparency, ethics, and responsibility for shareholders, stakeholders, customers, employees, society and other stakeholders. The Company is determined to be an effective organization under an administration that complies with "Transparent Thailand where all citizens live happily". The Company's Board of Directors specifies principles of Good Corporate Governance for the Board, Management, and all employees of the Company to follow as a guideline practice.

Conducting business operations in accordance with a good corporate governance policy and business ethics, as well as developing operational standards to be at an international level, the Company has monitored an assessment of operational performance to ensure effective implementation, which covers investments, joint planning, defining a clear roadmap, following up operating results, reporting on the progress of operations on a regular basis, as well as establishing long-term strategies and long-term goals for sustainable growth development.

In addition, the Company has established anti-corruption policies and a Supplier Code of Conduct to promote transparency, prevent fraud and anti-corruption, and prevent conflicts of interest in order to ensure that the Group's business operations are transparent, fair, take into account equality and integrity in business operations, as well as to strengthen good relationships with partners and related stakeholders to be in line with good corporate governance principles, the Company's Code of Conduct, and provisions and relevant governing laws to further develop into a sustainability organization.



# Corporate Governance Structure (GRI 2-9)



.....Coordinate and exchange information

As of December 31, 2024, the Company's management structure consists of the Board of Directors and has 7 sub-committees consisting of Management Committee, Audit Committee, Remuneration Committee, Nomination Committee, Corporate Governance Committee, Risk Management Committee, and Sustainable Development Committee.

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#### **Role of Board of Directors**





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

# **Management Committee and Audit Committee**





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

#### **Remuneration Committee**





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

#### **Nomination Committee**





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

#### **Corporate Governance Committee**





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

#### **Risk Management Committee**





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

#### **Sustainable Development Committee**





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



For sustainability in economic, environmental, social, and corporate governance dimensions for maximum efficiency and effectiveness, the Company appointed a Sustainable Development Committee (ESG Committee), which consists of 2 sustainability development committees: Sustainable Development Committee (Head Office) and Sustainable Development Committee (Saraburi Plant) with the roles and responsibilities of each committee as follows:

Chairman of the Sustainable Development Committee (GRI 2-12) (GRI 2-13) (GRI 2-14)

Mr. Pakkapol Leopairut

# Sustainable Development Committee (Head Office)

- Ms. Chularat Danwattanachai
   (Chairman of Head Office)
- 2. Mr. Panya Taengsingtrong
- 3. Mr. Pakorn Leopairut
- 4. Mr. Kanok Arunrasamesopha
- 5. Dr. Virat Chatdarong
- 6. Dr. Porakrit Leophairatana
- 7. Ms. Thanthida Sriraksa
- 8. Ms. Malee Posprichakul
- 9. Ms. Oratai Jiaranai
- 10. Mr. Nitisit Chongpitakrat
- 11. Mr. Nopporn Suwannapura
- 12. Mr. Hanchai Ekritvarodom
- 13. Ms. Jutamas Surojrat

# Sustainable Development Committee (Saraburi Plant)

- Mr. Worawit Lerdbussarakam
   (Chairman of the Board Saraburi Plant)
- 2. Mr. Arun Prukpaiboon
- 3. Mr. Nawee Tangmanowiriyakul
- 4. Mr. Paisarn Pinkoh
- 5. Mr. Naradol Tanjarupan
- 6. Mr. Panlop Saengpakdee
- 7. Dr. Puwirin Nilrungsi
- 8. Mr. Somkiat Teeratkulpisarn
- 9. Mrs. Sirirat Kerdratanasak
- 10. Mrs. Wibulsiri Boonpat

#### Functions and Responsibilities of the Sustainable Development Committee

- To set policies, strategies, and frameworks, to implement strategies and to consider the selection of issues that promote
  the sustainable development of the organization, as well as to set sustainable development goals to be in line with the
  implementation of the business operations in Economic, Society & Environment to be proposed to the Chief Executive
  Officer for approval.
- 2. To supervise, review, and monitor the progress of the operation and evaluate the effectiveness of the implementation to comply with the Company's sustainability policy.
- 3. To encourage concrete implementation and participation in various projects within the framework of sustainable development with related departments, both inside and outside the organization.
- 4. To provide advice, promotion, and support of appropriate resources and the right personnel in order to implement sustainable development strategies throughout the organization and to be aligned in the same direction.
- 5. Chairman of the Sustainable Development Committee has the power to appoint a sub-committee or a working group responsible for the implementation of sustainable development in each field to be comprehensive and consistent with the key issues of the organization
- 6. Report on the performance ESG and the preparation of the sustainability report to the top management.
- 7. To oversee the implementation of the climate change strategy.

### Conflicts of Interest (GRI 2-15)

The Company places importance on considering transactions that probably have conflicts of interest between the Company and its shareholders. In the event that the Company has connected transactions with individuals who may have conflicts of interest, it will comply with the rules and regulations of the Capital Market Supervisory Board, the Securities and Exchange Commission, and the Notification of the Board of Governors of the Stock Exchange of Thailand Re: Disclosure of Information and Other Acts of Listed Companies Concerning the Connected Transactions. The directors and executives who have interests in the transactions made with the Company will not be involved in the decision-making of such transactions. Disclosure of transactions that may have conflicts of interest or connected transactions must be in accordance with the regulations set by the Capital Market Supervisory Board, the SEC, and the SET, which is disclosed in the annual report/annual information disclosure form (Form 56-1 One Report) or other reports as the case may be, as well as in accordance with generally accepted accounting principles. In addition, according to the Company's Articles of Association, the directors must notify the Company without delay if they have interests in contracts made with the Company or hold more or fewer shares or debentures in the Company.

In 2024, the Company did not identify any wrongdoing or receive any whistleblowing reports or complaints related to vested interests or conflicts of interest that violated the Company Group's corporate governance principles.

# Remuneration for Directors and Executives (GRI 2-19) (GRI 2-20)

Remuneration for executives at all levels is based on their performance which is in accordance with the consideration of the Board of Directors as the Remuneration Committee, with the Chairman, the President, and the top executives jointly considering their perspectives of work processes within the organization and employees and covering both annual performance and assessment of potential and leadership, to ensure that it can lead the organization to achieve Company's long-term strategic goals. Each executive position will have performance indicators that correspond to their roles and responsibilities. Each year, the Board of Directors considers salary adjustment for the President and the President considers the salary adjustment of top executives according to their performance. However, such salary adjustments must be in line with the Company's criteria.

In 2024, the Company's Remuneration Committee considered the Board of Director remuneration 1 time whereby the meeting discussed comparing the similar type of business and size, together with the fact that each director had more burdens, duties, and responsibilities in the Company than before as the Company was in the period of expanding the scope of business operations. In addition, in the past year, the Company's turnover increased satisfactorily, reflecting the dedication and attention of the Board of Directors to the Company.

Remuneration for the Board of Directors is considered within the scope authorized by the resolution of the Extraordinary General Meeting of Shareholders No. 2/2016 on April 29, 2016, Agenda 2.6, in return for good performance, effective for the Company's business management, and for morale in performing duties to be more efficient and effective. This shall take effect from the date of approval of the shareholders' meeting onwards and the remuneration for the Board of Directors shall be reported to the shareholders on the date of the annual general meeting of shareholders for further information.

# **Development of Directors and Executives** (GRI 2-17)

The Company has a policy to support the training on the sustainable development (ESG - Environmental, Social, and Corporate Governance) under the Company's good corporate governance principles to the Board of Directors and top executives to promote knowledge and understanding of how to operate under the principles of good corporate governance of listed companies. The Company arranges an orientation for new directors and provides a director's handbook, documents, and useful information for being a director, and encourages directors to attend training sessions with the Thai Institute of Directors Association and other institutions throughout the year to promote knowledge and understanding of how to operate under the principles of good corporate governance of listed companies in order to increase knowledge about the roles and responsibilities of directors which will lead to continuous improvement and modernization.

The Board of Directors and senior executives prioritize regular participation in training and seminars to enhance their knowledge and ability to fulfill their duties effectively. All directors have attended training programs with Thai Institute of Directors (IOD), as well as other leading organizations and institutions, and have participated in various seminars on relevant topics.

Currently, some directors have completed training courses related to their duties through Thai Institute of Directors (IOD), including Directors Certification Program (DCP) and Directors Accreditation Program (DAP).

The Company consistently arranges for directors to attend training courses organized by Thai Institute of Directors (IOD) to enhance their knowledge regarding their duties as directors.

From 2021 to 2024, the Board members participated in various internal and external training courses as follows:

See more details in Form 56-1 One Report 2024, on Page 216-218 at





http://www.tpipolenepower.co.th/index.php/th/th-investment/ar/ar-h/category/94-annual-report-form-56-1

### Assessment of the Board of Directors (GRI 2-18)

The Board of Directors arranges for self-assessment and annual assessment of other directors to be used as a framework for examining the performance of the Board of Directors and considering, reviewing, analyzing the performance, and bringing improvements to the performance independently at least once a year. It is a self-assessment of the Board of Directors, sub-committees, and Chief Executive Officer (CEO)/Chairman of the Management Committee in order to comply with good corporate governance principles, taking into account the elements that determine the Company's ESG sustainability performance as part of the performance assessment indicators of the Board of Directors, directors and management, and focusing on using the assessment results for improving the performance of the Board of Directors and Chief Executive Officer (CEO)/ Chairman of the Management Committee. The assessment form consists of:

 Performance Appraisal Form for the Board of Directors as a whole consists of 6 topics: structure and qualifications of directors, roles, and responsibilities of committees, meetings of committees, duties, relationship with the management and self-development of directors and the management.

- Performance Appraisal Form for the Board of Directors
  of each committee consists of 3 topics: structure and
  qualifications of directors, meetings of sub-committees,
  roles, duties, and responsibilities of sub-committee
- Performance Appraisal Form for the Board of Directors on an individual basis (for committees/sub-committees) consists of 3 topics: structure and qualifications of committees/sub-committees, meetings of committees/ sub-committees, roles, duties and responsibilities of committees/sub-committees.
- 4. Performance Appraisal Form for Chief Executive Officer (CEO)/Chairman of the Management Committee consists of financial performance (e.g. revenue, company sales, Economic Value Add (EVA), other financial performance) and environmental, social, and/or governance (ESG) performance, for example, employee/business partner/community satisfaction, occupational health and safety management in the work environment, performance in climate change management, especially the aim of reducing greenhouse gas emissions, reducing the Company's use of resources, etc.) are part of the performance evaluation indicators for senior executives (CEO or equivalent) consisting of 10 topics as follows:
  - 1. Leadership
  - 2. Strategic formulation
  - 3. Strategy implementation
  - 4. Planning and financial performance
  - 5. Relationship with the Board of Directors
  - 6. External relations
  - 7. Management and personnel relations
  - 8. Succession
  - 9. Knowledge of products and services
  - 10. Personal Characteristics

In addition, the Board of Directors remains committed to management in order to make the organization grow sustainably as follows:

- Clean: To perform duties with transparency, and honesty, conduct oneself in accordance with rules, regulations, ethics, and Code of Conduct, taking into account the reputation of the organization and the benefit of the community.
- Commitment: To take responsibility for their own work, help others, and share responsibility for the success of their team and organization.
- Skill: To possess the ability to manage tasks and budgets according to good governance principles, as well as develop modern working methods.

- Collaboration: To have good human relations, be tolerant and respect others' opinions, and be able to effectively communicate and coordinate with related parties.
- 5. To possess the ability to make decisions and prevent and solve problems accurately and timely.
- 6. To possess the ability to manage personnel and develop personnel, including team members, to have evident work potential.

Performance Assessment Process of Highest Supervisory Authority for 2023

See more details on the Company's website:





http://www.tpipolenepower.co.th/index.php/th/th-aboutus/boadrd-mgt/board-assessment-result

# Domestic and International Environmental Performance Standards

The Company has been inspected and certified with a Certification Body issued for its implementation of international standards in various systems from SOCOTEC Certification International Thailand as follows:

- ISO 9001:2015: Quality Assurance Management System Implementation
- ISO 14001:2015 is an international standard for an organization's environmental management system to enhance the environmental performance within the organization and for environmental sustainability.
- ISO 50001:2018 is an energy management system standard as the framework of energy management.
- ISO 45001:2018 is an occupational health and safety management system standard.
- ISO 14064-1:2018 is a management standard on reporting greenhouse gas (GHG) emissions of the organization.



- In addition, the Company has received certifications from the following institutions:
- $\bullet \qquad \text{Certification for the use or production of renewable energy in 2019 (Gold Label) from the Thailand Environment Institute}\\$
- Thailand Voluntary Emission Reduction: T-VER Thailand Voluntary Emission Reduction Registration (T-VER) for RDF
   Production from Municipal Solid Waste of TPI Polene Power PCL from Thailand Greenhouse Gas Management Organization (Public Organization)
- Certification of "Green Industry Level 4" from Ministry of Industry

### Organization membership (GRI 2-28)

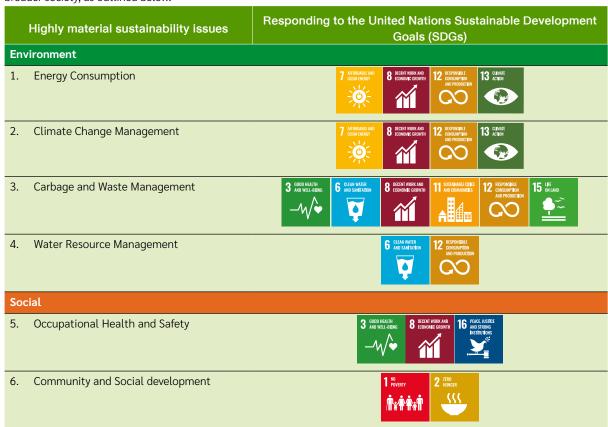
- Listed company on the Stock Exchange of Thailand (SET)
- Sustainability Disclosure Community (SDC) with Thaipat Institute
- Saraburi Power Development Fund
- ESG Credit Program with Thaipat Institute
- Member of the Thai Institute of Directors Association (IOD)
- The Company is a member of Thailand Carbon Neutral Network (TCNN) under the category of "Greenhouse Gas Management Initiator." TCNN is an organization that supports the reduction of greenhouse gas emissions and promotes the transition toward sustainable carbon neutrality. The Company's participation in TCNN reflects its commitment to systematic carbon management through greenhouse gas reduction, the development of environmentally friendly production processes, and the promotion of clean energy usage. These efforts contribute to addressing climate change and enhancing sustainability at both the national and global levels.



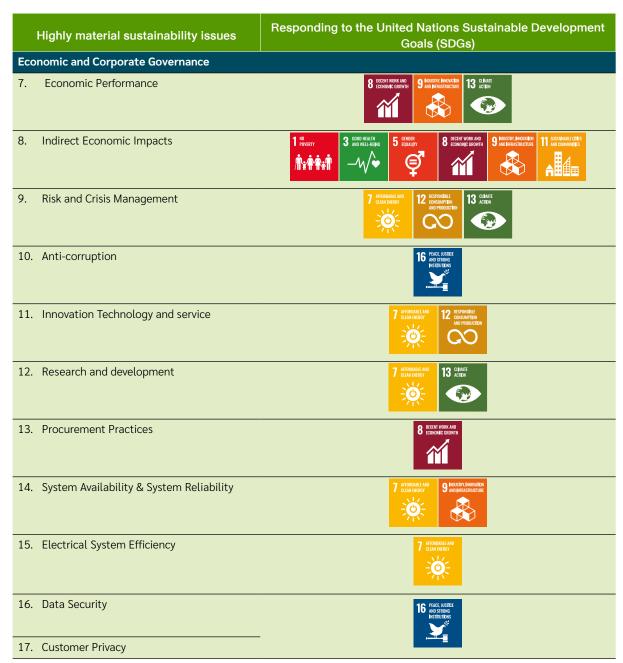
# Business operations that respond with the Sustainable Development Goals (SDGs) of the United Nations (Sustainable Development Goals: SDGs)

TPI Polene Power Public Company Limited is firmly committed to conducting business in alignment with sustainable development principles, integrating ESG considerations alongside organizational growth. It has identified material business issues (Materiality) and significant impacts through key business relationships. By adopting the principle of Double Materiality, the Company assesses and reviews sustainability topics based on their impacts, risks, and/or opportunities across the entire value chain. For 2024, the Company has identified 17 key material sustainability topics that align with the United Nations Sustainable Development Goals (SDGs). This approach reflects the Company's commitment to addressing critical sustainability issues while meeting the expectations of stakeholders comprehensively.

Currently, the Company contributes to 13 out of the 17 SDGs, covering environmental, social, economic, and governance dimensions. This integrated approach aims to create positive impact and long-term resilience for both the organization and broader society, as outlined below:







Note : The definition of the 17 United Nations Sustainable Development Goals (SDGs) are:





- Goals 1: End poverty in all its forms everywhere
- Goals 2: End hunger, achieve food security and improved nutrition and promote sustainable agriculture
- Goals 3: Ensure healthy lives and promote well-being for all at all ages
- Goals 4: Ensure inclusive and equitable quality education and promote lifelong learning opportunities for all
- Goals 5: Achieve gender equality and empower all women and girls
- Goals 6: Ensure availability and sustainable management of water and sanitation for all
- Goals 7: Ensure access to affordable, reliable, sustainable and modern energy for all
- **Goals 8:** Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all
- Goals 9: Build resilient infrastructure, promote inclusive and sustainable industrialization and foster innovation
- **Goals 10:** Reduce inequality within and among countries
- Goals 11: Make cities and human settlements inclusive, safe, resilient and sustainable
- **Goals 12:** Ensure sustainable consumption and production patterns
- Goals 13: Take urgent action to combat climate change and its impacts
- Goals 14: Conserve and sustainably use the oceans, seas and marine resources for sustainable development
- **Goals 15 :** Protect, restore and promote sustainable use of terrestrial ecosystems, sustainably manage forests, combat desertification, and halt and reverse land degradation and halt biodiversity loss
- **Goals 16:** Promote peaceful and inclusive societies for sustainable development, provide access to justice for all and build effective, accountable and inclusive institutions at all levels
- Goals 17: Strengthen the means of implementation and revitalize the Global Partnership for Sustainable Development

In this regard, the Company has a strategy for sustainability in accordance with the policy framework and sustainability management that promotes the vision of TPI Polene Group along with good practices according to the principles and international standards of the United Nations as detailed above. The Policies and targets are reviewed annually to cover potential risks that may arise in the future.

# 04 TPI Polene Power and Sustainability

The TPI Polene Group set its Group's direction aiming for sustainable development by operating in accordance with the Circular Economy to maximize the use of resources by recycling or reusing resources for maximum benefit, and the Green Economy, aiming to reduce the impact on the environment in terms of resource utilization, product production, as well as end-of-life products to low carbon production where the main goal is to reduce greenhouse gas emission. TPI Polene Group has set policies and goals for sustainable management as follows:

### Sustainable Management Policy and Goals (GRI 2-12)

The Board of Directors and top executives have formulated a sustainability policy by emphasizing on being a tool to drive the organization to achieve its vision of sustainable development in line with business directions and strategies by supporting the Sustainable Development Goals (SDGs) of the United Nations in order to create a balance in terms of economy, environment, and society under good corporate governance with a policy framework and sustainability management as follows:

# Policy Sustainability Management Focusing on using technology and innovation in the production

1.Economic amd
Corporate Governance
dimension

Focusing on using technology and innovation in the production of quality products and services, efficient management in every step, using technology to change work processes, applying research and development results to develop business models, continuously adding value to products and services, seeking investment opportunities with good returns, strategizing for both short-term and long-term business growth, being flexible, take into account both internal and external risk factors and having systematic readiness and production efficiency.



To focus on developing a low-carbon economy and society, aiming to achieve carbon neutrality by 2037, conducting business using circular economy policies, increasing energy efficiency, enhancing the utilization of renewable energy, appropriately addressing issues of solid waste, waste, and water consumption, paying attention to biodiversity and soil degradation, establishing an efficient transportation system, reducing the impact of operations throughout the value chain, and responding to all stakeholders in a balanced manner.

#### 3. Social Dimension



To conduct business responsibly, prioritize all stakeholders in a balanced manner, operate with respect for and protection of human rights across the value chain, including employees, suppliers, customers, and social communities, generate returns for shareholders, ensure occupational health and safety as well as a positive working environment, continuously manage and develop the abilities and skills of personnel, attend to the health and safety of customers, evaluate suppliers based on societal criteria, provide clear product labeling information, respect personal data, support youth education, and engage in activities that contribute to creating value and enhancing the quality of life in communities and society for sustainable growth.

# 4. Human Rights Dimension



Adhering to the principles of accuracy and compliance with relevant laws and regulations under the Code of Conduct, Business Ethics, with a framework based on good corporate governance principles, disclose information and performance with transparency, manage all risks, have flexibility in management, act against corruption, have a transparent and fair procurement system, do not use inside information to seek interests, and have security of information and information systems.

For more information on our sustainability policies and goals, please visit:





http://www.tpipolenepower.co.th/index.php/th/sustainable-development/sdgs





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

### $\textbf{Implementation of Human Rights}^{(GR12-23)(GR12-24)}$

# Establishment of Foundation for Human Rights Operations.

The Company emphasizes the implementation of human rights, conducting its business with responsibility towards stakeholders in a balanced manner, guided by principles of corporate governance, under good corporate governance and respect for human rights. This includes adherence to business management guidelines focusing on sustainable development, accuracy, and strict compliance with relevant laws and regulations. These practices align with government policies promoting the BCG Model, aimed at comprehensively enhancing the quality of life for communities and society in the country, facilitating the effective distribution of opportunities, and reducing inequality.

The Company upholds human rights principles in its treatment of stakeholders across the value chain, encompassing employees, suppliers, customers, and local communities. The Company adheres to the UN Guiding Principles on Business and Human Rights and the OECD Guidelines for Multinational Enterprises. This commitment is entrenched in the Company's policies, such as the Code of Conduct and Supplier Code of Conduct, which are crafted collaboratively with suppliers. The Company also adheres to provisions stipulated in international human rights principles and labor standards, including the United Nations Universal Declaration of Human Rights, the Universal Declaration on Fundamental Rights and Rights at Work of the International Labor Organization, the Thai Labor Protection Act 2017, and respects the International Labor Organization (ILO).

#### **Management Guidelines**

# The Company's Prioritization on Respecting the Rights of Employees

The Company's labor management is based on respect for human rights in various aspects such as race, religion, gender, age, sexual orientation, disabilities and Nationality, providing equal and fair opportunities for work and career advancement without discrimination, ensuring the right to freedom of association and collective bargaining as fundamental rights, securing employees' personal data, eradicating illegal child labor, and refraining from the use of coerced labor (labor which is illegally coerced to work) and forced labor (forcing laborers to work exceeding legal limits without compensation).

The Company's labor management is based on respect for human rights in various aspects such as gender, religion, sexual orientation and belief, providing equal and fair opportunities for work and career advancement without discrimination, ensuring the right to freedom of association and collective bargaining as fundamental rights, securing employees' personal data, eradicating illegal child labor, and refraining from the use of coerced labor (labor which is illegally coerced to work) and forced labor (forcing laborers to work exceeding legal limits without compensation).

The Company ensures fair treatment of employees in accordance with human rights principles, upholding their fundamental rights to live and express opinions. HR Department serves as the coordinator for employee welfare, while a welfare committee, along with employee representatives, is responsible for negotiating agreements that impact employees. The Company aims to enhance employees' quality of life by ensuring a safe and happy work environment. It prioritizes workplace safety, provides necessary and sufficient facilities, and creates employee well-being in alignment with the principles of the Happy Workplace project.

The Company treats employees fairly according to human rights principles. A welfare committee has been established, comprising employee representatives who play roles in negotiating with the Company on agreements affecting employees. Performance evaluations are conducted for every employee using clear criteria, and the results are used to determine fair compensation. Various training courses are organized for employees based on their job positions and

responsibilities, aiming to promote progress and develop their potential. The Company also measures employee satisfaction and engagement levels annually and takes the results of these satisfaction assessments into consideration when developing projects, policies, and procedures to enhance care and promote employee potential. Additionally, the Company provides a comprehensive occupational health and safety system in the working environment for its employees.

# The Company's Prioritization on Respecting the Rights of Suppliers

The Company treats its suppliers equally and fairly, providing a transparent procurement process and ensuring fair competition without discrimination. Personal data of suppliers is securely handled. Additionally, the Company encourages suppliers to adhere to human rights principles by prohibiting the use of child labor, coerced labor, and forced labor. The Company has integrated human rights and occupational health and safety issues into its Supplier Code of Conduct, which is jointly prepared with suppliers. Additionally, the Company evaluates the environmental, social, and corporate governance (ESG) risks of its suppliers annually to ensure that they conduct business with respect to human rights. Moreover, the Company appropriately provides an occupational health and safety system for its suppliers and contractors.

# The Company's Prioritization on Respecting the Rights of Customers

Ensuring fair treatment of customers involves producing and delivering stable electricity, as well as consistently supplying safe electricity while maintaining the security of customer personal data. This commitment extends to conducting quarterly surveys and assessments to gauge satisfaction among both power plant and waste fuel factory customers. The Company utilizes customer satisfaction assessment results to enhance and improve its business operations while continuously raising production standards to ensure higher quality and better meet customer needs.

## The Company's Prioritization on Respecting the Rights of Local Communities

The Company recognizes the importance of local communities and actively promotes strong relationships by supporting public relations activities, listening to community feedback, regularly engaging with community members, and participating in events at temples and schools. Additionally, the Company prepares annual reports on compliance with

environmental impact prevention and mitigation measures, as well as environmental impact monitoring for power plant projects. These reports include environmental quality monitoring reports (Aquatic biological resources), economic and social monitoring survey reports, community satisfaction survey summaries, and performance reports in accordance with Corporate Social Responsibility (CSR-DIW) standards. These reports assess concerns from communities and society that may be affected by the Company's operations. The findings are used to resolve issues and improve practices to reduce any potential negative impacts on communities and society as a whole. Furthermore, the Company promotes local employment by hiring workers from surrounding communities and engaging community labor for annual reforestation projects. This initiative not only supports income generation for local residents but also contributes to sustainable community well-being alongside the Company's business operations.

#### **Operational Goals**

The Company acknowledges the importance of respecting human rights in its business operations, as evidenced by its commitment reflected in the Company's human rights policy. It has initiated a comprehensive human rights inspection process aimed at assessing risks arising from potential opportunities and impacts related to human rights issues. This process aids the Company in understanding the potential human rights impacts on both internal and external stakeholders, while also facilitating the identification and prioritization of human rights risks at the enterprise level. Such an approach enables the Company to effectively plan and manage the impacts of high-risk human rights issues through additional impact assessments.



#### **Human Rights Due Diligence (HRDD)**

The Company recognizes the importance of human rights management, as stakeholders within the value chain may be affected by rights violations. To address this, the Company conducts a comprehensive Human Rights Due Diligence (HRDD) process under the supervision of Sustainable Development Working Group, following these steps:

#### Steps in the Comprehensive Human Rights Due Diligence (HRDD) Process



#### 1. Policy Commitment

The Company has established a human rights policy to encompass the entire value chain, including its employees, suppliers, customers, and local communities. This policy incorporates various guidelines such as TPI Polene Power's Code of Conduct, Supplier Code of Conduct, as well as announcements regarding the International Human Rights Policy (No. 006/2016) and the Personal Data Protection Policy (BorKor No. 0017/2021).

### TPI Polene Power's Code of Conduct





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

#### **Supplier Code of Conduct**





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





Announcements regarding the International Human Rights Policy (No. 006/2016) and the Personal Data Protection Policy

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

#### 2. Cultivation through Organizational Policy

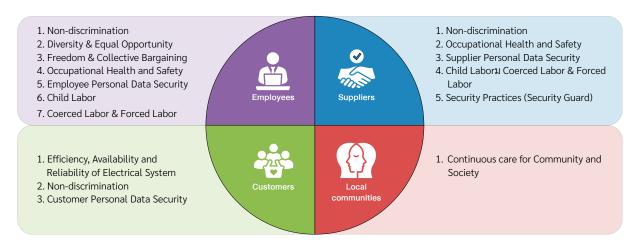
The Company is committed to following the human rights policy by promoting a culture of respect for human rights principles throughout the organization. This includes providing training and disseminating knowledge regarding respect for human rights principles to employees at all levels within the organization, as well as conducting continuous assessments of human rights risks.

#### 3. Assessment of Human Rights Risk

The Company has assessed human rights risks and will study and review human rights risks related to business operations throughout the value chain on an annual basis. This is to ensure that the plan and measures to mitigate, correct, and remedy the human rights impacts of the Company are appropriate, effective, and updated. The results of the risk assessment will help the Company effectively conduct business according to human rights principles in operating areas that are at risk, helping to prepare for and prevent damage that may occur from human rights violations.

#### 3.1 Determination of Inspection Scope

The Company has considered activities that pose a risk of violating human rights in its main operating areas, namely the Bangkok office and the Saraburi Power Plant, where it conducts business or engages in activities with employees, suppliers, customers, and nearby local communities. The human rights issues of stakeholders in the value chain can be summarized as follows:



#### 3.2 Assessment of Human Rights Risks

The Company's risk management process, as outlined in its policy, adopts the criteria of The Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management (COSO-ERM) as guidelines, comprising 8 elements as follows:

- 1. Internal Environment
- 2. Objective Setting
- 3. Event Identification
- 4. Risk Assessment
- 5. Risk Response
- 6. Control Activities
- 7. Information & Communication
- 8. Monitoring

The evaluation criteria of the Company take into account the severity of impacts and potential opportunities stemming from activities that carry a risk of violating the human rights of stakeholders across the value chain, as outlined in 3.1.

#### 3.3 Prioritization of Human Rights Risks

Based on the result of the human rights risk assessment 10 issues, one high-risk human rights issue was identified: the risk of occupational health and safety for employees. Other human rights issues within the value chain pose medium to low risks, as follows:

#### Result of Human Rights Risk Assessment

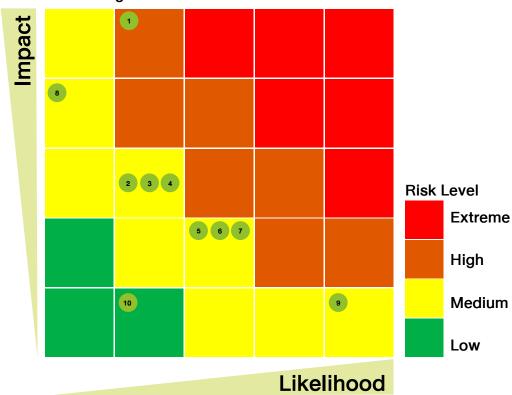
	Level of Human Rights Risks	
High Risk	Medium Risk	Low Risk
1. Occupational	2. Efficiency, Availability and Reliability of Electrical System	10. Security Practices
Health and Safety	3. Non-discrimination	(Security Guard)
	4. Diversity & Equal Opportunity	
5. Freedom & Collective Bargaining		
6. Child Labor		
7. Coerced Labor & Forced Labor		
	8. Local Communities	
	9. Personal Data Security	

The Company has established guidelines to control operations strictly adhering to international standards, ensuring safety for all stakeholders amidst occupational health and safety issues posing high risks. Further details are available in the Section "Occupational Health and Safety in the Work Environment".

Remarks: Risk scores are divided into 4 levels as follows:

Overall Risk Level	Score	Meaning
Low	1-2	The level of risk is deemed acceptable without requiring further risk control or additional management.
Medium	3-6	The level of risk is deemed acceptable, requiring risk control measures to prevent it from accelerating to unacceptable levels.
High	7-12	The level of risk is considered unacceptable, necessitating risk management to maintain it at an acceptable level.
Extreme	13-25	The level of risk is unacceptable, requiring urgent implementation of risk management to immediately maintain it at an acceptable level.





The Company can manage risks according to the guidelines for human rights operations, with measures to prevent and reduce the risk of various human rights violations being strictly defined. The operation is closely monitored, as stated in the guidelines for managing human rights complaints and remedies, including continuous monitoring and reporting of performance results. This aligns with the goal of having no cases of human rights violations throughout the value chain.

Furthermore, the Company is committed to taking corrective actions in the event of any future violations. This ensures that affected parties will receive appropriate remedies for any damages incurred, as well as timely protection or assurances to prevent recurrence of the infringement.

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Table: Potential Impacts and Mitigation of Impacts on Stakeholders of its Value Chain

#### Stakeholders **Impacts Impact Management Guidelines** Employment conditions with Establishment of relevant policies in accordance with Code of discrimination and unequal Conduct under good corporate governance, such as human opportunities for employees rights policies, preventing employees from being abused, **Employee** based on race, religion, gender, preventing child labor and forced labor, and protecting the age, sexual orientation, disability, Company's personal data. Hiring employees with competitive compensation that and nationality. Occupational health and safety exceeds the market average and implementing clear and fair of employees performance evaluations based on their respective positions • Employment of child labor, • Promoting employee health and safety through system standards such as ISO 45001: 2018 involuntary labor and forced labor Employee personal data may leak • Implementing measures to address public health risks, such to outside parties. as epidemics and infectious diseases, by facilitating workfrom-home arrangements and conducting online meetings. • Establishing a welfare committee to support the right to collective bargaining. • Employee satisfaction and engagement surveys and annual employee engagement surveys, with the results of which are used to improve employee care. Discrimination against suppliers • Signing for acknowledgment and Supplier Code of Conduct in Occupational health and safety the business operations of manufacturers procuring products, of suppliers raw materials, and services. Supplier Supplier personal data • Explaining to suppliers at the operational level and complying Hiring illegal workers with guidelines for supervising operations to be consistent with the Company's requirements and standards and labor laws of the International Labor Organization (ILO) regarding labor rights Complying with the supply chain management system. • Incorporating social and environmental considerations into procurement policies, procedures, and regulations. · Assessing economic risks posed suppliers. Evaluating and monitoring the performance of suppliers through the ESG RISK assessment of suppliers • Evaluating the On-Site ESG Audit with suppliers. Reliability in the efficiency of • Quarterly assessing environmental and climate risks and electrical system. preparing a report on the project's production operations to Satisfaction with various services propose to EGAT once a month. Customer Discrimination against customers. Conducting customer satisfaction surveys twice a year. Customer personal data • Taking appropriate action to address customer complaints.

#### Stakeholders Impacts



#### Community

- The standard of living and quality of life of people in the community.
- Community's access to clean water sources.
- Negative impacts on the environment such as air pollution emissions, improper waste management, occurrence of unexpected events

#### **Impact Management Guidelines**

- Prioritizing addressing and resolving community-related issues by preparing annual reports on compliance with measures to prevent and mitigate environmental impacts, as well as monitoring the environmental impacts of power plant projects. These include reports on environmental quality monitoring (aquatic biological resources), economic and social monitoring surveys, a community satisfaction survey summary, and a CSR-DIW report. The results of these surveys, along with any information received regarding impacts on the community and society (if any issues are found), are analyzed, and appropriate improvements are made to mitigate the impacts.
- Continuously engaging in community relations through social projects by Corporate Communications team.
- Sustainable water management policies and plans ensure that access to clean water sources is not obstructed, such as preventing the blockage of water sources or the withdrawal of community water for use, which could lead to water shortages.
- Establishing an Environmental Management System with measures to prevent and solve problems in the short and long terms.
- Strictly adhering to the measures outlined in the environmental impact assessment report to prevent and mitigate environmental impacts.
- Continuously developing innovations to mitigate environmental impacts.

#### 4. Impact Remedies

In providing remedies for cases of human rights violations, the Company will establish a process for accepting complaints. All employees are expected to collectively monitor compliance with the principles of good corporate governance and the Code of Conduct, encouraging the reporting of any practices that conflict with, or are suspected of conflicting with, the rights of stakeholders in good faith. All received information will be treated as confidential. Complaints supported by clear evidence will be handled with fairness, transparency, and care, ensuring equitable treatment for all parties involved. An appropriate period will be allocated for the inspection and investigation of complaints. Additionally, guidelines will be established to protect the rights of stakeholders affected by violations arising from the Company's operations. Compensation for damages will be considered to be provided at a rate no less than that specified by law.

The Company also prioritizes grievance management and the resolution of issues for individuals and communities that may be affected by its business activities. It has established a grievance management mechanism that explicitly addresses human rights and ensures convenient, transparent access for both internal and external stakeholders.

In addition, a welfare committee has been established, which plays an important role in overseeing and suggesting guidelines for improving welfare and safety at work to create a more suitable and safer working environment. Past operations include:

- Landscaping the parking lot area to increase safety
- Painting rough surfaces and marking different-level lane lines to make it clearer for traffic
- Creating speed bumps to reduce the speed of trucks in the factory area
- Distributing and regulating the use of safety helmets to enhance workplace safety.
- Organizing safe motorcycle parking areas
- Upgrading employee shuttle buses to air-conditioned vehicles for enhanced comfort

#### Contact

TPI Polene Power Public Company Limited No. 26/56 TPI Tower, Chan Tat Mai Road, Thungmahamek, Sathorn, Bangkok 10120

Tel. 02 2131039

EMAIL: orapin@tpipolenepower.co.th

However, in 2024, there were no reports or complaints of human rights violations from employees, partners, customers, and communities. Therefore, no remedial action was taken.

#### 5. Follow-up & Reporting

The Company follows up on compliance with the human rights mitigation measures outlined, with a focus on mitigating and reducing negative impacts. Functions that have implemented mitigation measures must monitor, inspect, and review action plans to ensure effective development and undergo re-evaluation to ensure that the impacts are properly and appropriately addressed.

#### **Human Rights Operations in 2024**

The Company has set clear goals and directions to promote and protect human rights while preventing violations. It can assess risks and minimize opportunities for future human rights violations. Additionally, the Company has raised awareness about the importance of respecting human rights to create value, develop, and expand various projects. This is achieved by increasing participation based on the principles of human rights respect for all stakeholders throughout the value chain. Additionally, the Company has established a welfare committee to support and strengthen relationships with employees and stakeholders. This committee meets quarterly, four times a year, to gather feedback, suggestions, and concerns, ensuring the continuous improvement of the working environment and employee well-being.

In addition, the Company has strengthened employees' understanding of human rights by providing training and knowledge through the Code of Conduct Handbook, along with a test to assess their comprehension of human rights principles. The Company plans to expand and diversify training programs to further enhance employee potential and knowledge development. The results of last year's human rights risk assessment indicated that human rights risks within the Company's work processes were low, and no complaints were reported regarding material human rights issues.

In 2024, the Company has implemented human rights initiatives for various stakeholders as follows:

#### Engagement with Internal Stakeholders Respecting Employees' Rights

- A new Welfare Committee for the year 2024 was elected; it represents employees with roles and responsibilities in negotiating with the Company regarding agreements that affect employees.
- The Company provides equal employment opportunities without discrimination, encompassing both disabled individuals and other disadvantaged groups. In 2024, a total of 96 new employees were hired, including 89 general employees, 5 elderly individuals, and 2 disabled persons. Additionally, the Company made a financial contribution to the Empowerment for Persons with Disabilities Fund, as stipulated in Section 23 of the Empowerment Of Persons With Disabilities Act, B.E. 2550 (2007). The Company employs 10 disabled individuals, representing a disability employment rate of 1.04% of the total workforce.
- The Company has continuously managed and developed the potential and skills of personnel, with the set goal of providing training for no less than 20 hours per person per year. The Company has a total training period of 26,995 hours, an average of 3.91 training days per employee, and an average of 23.45 training hours per employee per year.
- In 2024, the measure of employee satisfaction and engagement revealed an average total score of 82.96%, surpassing the Company's target of 75%. Leveraging the results from the employee opinion survey, the Company has consistently crafted activities aimed at fostering positive relationships with employees to maximize their satisfaction levels.
- Concerning the occupational health and safety of employees, the Company observed zero work-related fatalities, zero injuries stemming from high-impact work, and zero illnesses due to occupational diseases, all aligning with the Company's established goal of occupational health and safety.
- The Company has established channels for employees to submit complaints, suggestions, and whistleblowing reports, encouraging them to express their opinions or

raise concerns about working conditions. These channels are clearly defined and publicly communicated as part of the Company's policy, ensuring that all employees can participate in open and safe communication with management.

- The Company adjusts its base wage rate in accordance with changes to the legally mandated minimum wage, ensuring compliance with relevant standards and regulations.
- The Company provides competitive, above-market compensation along with additional benefits, such as accommodation and travel allowances for employees working in other provinces, to enhance motivation and promote long-term commitment to the organization.

## Engagement with External Stakeholders Respecting Suppliers' Rights

- Suppliers, amounting to 97.85% of a total of 557, have signed to acknowledge the Supplier Code of Conduct concerning human rights practices, which the Company emphasizes for strict compliance by suppliers.
- The economic risk arising from the Company's suppliers and the ESG Risk (environmental, social, and corporate governance) were assessed with 8 suppliers in Critical Tier 1, accounting for 1.44% of a total of 557 suppliers. The assessment concluded that they met reliable criteria, indicating no economic risk from suppliers and no ESG risk across all assessment topics.
- The Company enhances the human rights risk management process by focusing on reducing the risk of human rights violations and improving the quality of life in the working environment, which covers labor, health, safety, and well-being. Additionally, it provides knowledge to foster understanding and awareness about the importance of respecting human rights, and conducts random inspections through actual field visits. As a result of these efforts, it was found that suppliers had no cases of human rights violations.

#### **Respecting Customers' Rights**

- Continuously generating and delivering stable electricity and safe in supplying electricity
- The overall satisfaction assessment from power plant customers, including EGAT and TPI Polene Public Company Limited, averaged 100%. The Company has established a yearly satisfaction goal for these customers of no less than 80%.
- The overall satisfaction assessment from customers of the waste-fueled power plant and TPI Polene Public

- Company Limited averaged 94.75%. The Company has established a yearly satisfaction goal for these customers of no less than 80%.
- The Company utilizes customer satisfaction assessment results to enhance business operations through research and development, technology, innovation, and service improvements. This includes increasing the efficiency, and reliability of electricity production, as well as raising the quality standards of waste fuel production.
- The Company consistently delivers electricity to all customers while ensuring safety, which is a basic right and promotes a good quality of life for the customers of the Company and its affiliates.

#### Respecting the Rights of Local Communities

- The Company produces high-quality and efficient electricity using modern, environmentally friendly technology that minimizes impacts on the community and society. This aligns with the policy of reducing coal fuel usage, which generates high pollution, by transitioning to renewable energy sources.
- A survey is conducted to assess community conditions and concerns of communities and society that may be affected by the Company's operations. The following reports have been prepared for 2024: A report on compliance with measures to prevent and mitigate environmental impacts, as well as monitoring and inspection of environmental impacts; A report on the economic and social impact assessment of the Company's power plant projects; A summary report on community satisfaction with the Company's power plant projects; A report on operations in accordance with the CSR-DIW continuous social responsibility standards for entrepreneurs. The survey results and collected data on community and societal impacts (if any issues are identified) are analyzed, and appropriate improvements are implemented to mitigate these impacts effectively.
- Throughout 2024 The Company under TPI Polene Group have continuously supported natural resource and environmental conservation by collaborating with agencies and communities in Saraburi Province to organize various activities. These efforts include Muak Lek River Conservation Day at Chet Sao Noi Waterfall National Park in partnership with Muak Lek District, tree planting projects to restore forests and expand green spaces in collaboration with the Thap Kwang Research Station, Faculty of Forestry, Kasetsart University, and tree planting activities to honor His Majesty the King's

6<sup>th</sup> cycle birthday anniversary. Reforestation efforts have taken place in many areas across community forests, national forest reserves, and educational institutions, with more than 10,667 trees planted, covering a total area of 150 rai. These activities aim to create green spaces, reduce greenhouse gases and air pollution, prevent soil erosion, and restore biodiversity.

- The Company fosters participation and executes projects aimed at enhancing the quality of life for individuals in communities surrounding the power plants and society at large. These initiatives adhere to principles emphasizing respect for fundamental rights and job security.
- The Company has supported various public benefit projects and activities, amounting to approximately Baht 38.22 million in total, benefiting communities, educational institutions, temples, hospitals, and various government agencies. The Company donates health products and products of the TPI Polene Group, including cement, construction materials, organic biofertilizers, drinking water, and health products to prevent pathogens.
- The Company has supported the voluntary budget to help communities and society surrounding these power plants as follows:
  - (1) The health insurance fund for communities within a 5-kilometer radius of the power plant has been in operation since 2019 to provide relief for illnesses potentially caused by the project. As of the end of 2024, the fund has accumulated a total of Baht 3,533,779.06.
  - (2) The fund for research projects focusing on community career development, natural resource conservation, and environment restoration has been operational since 2019. By the end of 2024, the fund has accumulated a total of Baht 2,466,800.

- (3) The budget supporting personnel quality, medical equipment, and public health research has been operational since 2019. By the end of 2024, this budget had accumulated a total of Baht 8,093,723.80.
- (4) The budget supporting occupational health and safety to be used for supporting the increase of the hospital's potential, promoting sub-district health facilities and public health personnel has been operational since 2019. By the end of 2024, this budget had accumulated a total of Baht 356,273.
- (5) The budget supporting biodiversity for supporting tree planting activities and increasing forest areas for communities and related agencies, has been operational since 2019. By the end of 2024, this budget had accumulated a total of Bath 1,086,000.
- In 2024, TPI Polene Group provided scholarships to students in schools surrounding the factory in Saraburi Province, with a total budget of Baht 295,000, as summarized below.
  - Thap Kwang Sub-district
    - 1. Ban Sab Bon School: Baht 60,000
    - 2. Thap Kwang Kindergarten School: Baht 60,000
    - Nikhom Thap Kwang Songkhro Community 1 School: Baht 60,000
  - Muak Lek Sub-district
    - 4. Ban Khao Mai Kwian School: Baht 40,000
  - Mittraphap Sub-district
    - 5. Wat Muak Lek Nai School: Baht 35,000
    - 6. Ban Sap Prik School: Baht 40,000 and scholarships for children in the Kaset Samphan community, Village No. 10, Thap Kwang Sub-district, Kaeng Khoi District, Saraburi Province, with a total budget of Baht 45,500, divided into 16 scholarships.

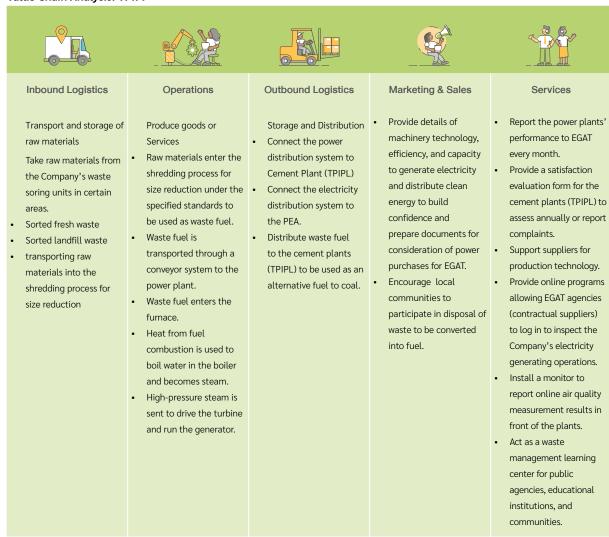


### Stakeholder Engagement (GRI 2-29)

The Company highly values stakeholder engagement by conducting a comprehensive analysis to identify internal and external stakeholders across the entire business value chain. It believes that building trust-based relationships and actively listening to stakeholders' opinions and suggestions are fundamental to driving organizational sustainability. Effective stakeholder management enables the Company to identify and mitigate risks that may impact its image, prevent potential business disruptions, and promote long-term sustainable growth and development.

#### The value chain of TPI Polene Power

#### Value Chain Analysis: TPIPP



#### Stakeholders of TPI Polene Power

The Sustainability Development Working Group, comprising executives and staff from different departments of the Company, encompassing both the head office and the Saraburi Power Plant, directly engaged in business operations with diverse stakeholder groups, collaboratively analyzed and assessed the significance of stakeholders, taking into account their influence and impacts on the Company across various issues, as outlined below:

- Does this group of stakeholders have a significant influence on the Company's economic, social, and environmental performance?
- Has this group of stakeholders been significantly influenced or impacted by the Company's economic, social, and environmental performance?
- Will this group of stakeholders have significant influence or be significantly influenced/affected by the organization in the future?
- Is this group of stakeholders at risk of human rights violations from the organization or the value chain?
- Based on the above assessment, it can be concluded that the Company's stakeholders are classified into 9 groups, comprising:
  - 1. Employees\*
  - 2. Community and Society\*
  - 3. Government Agencies\*
  - 4. Shareholders/Investors
  - 5. Suppliers and Contractors

Note: The first three major stakeholders of the Company.

- 6. Customers/Distributors
- 7. Creditors/Financial Institutions/Bond Holders
- 8. Business competitors
- 9. Mass Media



The Company has prioritized all nine groups of stakeholders by establishing guidelines for engaging with them. These guidelines encompass creating engagement to address stakeholders' concerns or expectations that are impacted or may be impacted by the Company's operations. They also entail fostering cooperative relationships to generate mutual benefits between the Company and all groups of stakeholders, as well as consistently and effectively improving channels for conveying stakeholders' feedback to the relevant departments. The operational guidelines are as follows:

Table: Guidelines for engaging with stakeholders of TPI Polene Power Public Company Limited

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Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
<u> </u>	Collect information from all channels including	Compensation and welfare that are consistent with •	Treat employees fairly in accordance with
α) )→	complaints.	the industry are appropriate and fair.	human rights principles with equality, without
	• Communication within the organization through •	The organization is stable and progressive in work.	discrimination, child labor, forced labor and migrant
1. Employees -	various channels, such as creating a Line chat	Potential development for stability and	workers, including protecting personal information.
Full-time	group for top executives to communicate with	opportunities for career advancement	Skill development and promotion of employee
and Contract	all employees, specific Line chat groups to	The organization has a good image.	advancement through training courses.
Employees	related management, internal memo circulated •	Fair performance appraisal system	Employee motivation and retention by evaluating
	to employees in each department, announcement	Occupational safety and quality of work life	employee performance with clear and fair criteria to
	notice board in the establishment.	Provide opportunities to express opinions, the right	determine compensation and benefits appropriate
	Workplace Welfare Committee	to freedom of association, and the ability to engage	to their abilities and performance.
	<ul> <li>Occupational Safety, Health and Working</li> </ul>	in collective bargaining.	Employee satisfaction and engagement levels with
	Environment Committee	Providing equal and fair opportunities for	the organization are measured, and the results are
	<ul> <li>Annual Information Disclosure Form / Annual Report</li> </ul>	employment and career advancement without	used to enhance employee care.
	(Form 56-1 One Report)	discrimination.	Provide good occupational health and safety
	Sustainability Report	Respect for human rights and personal data.	system.
	• Executives meet with employees at the plant once	•	Provide a risk assessment on labor issues.
	a week.		Provide employees with the right and freedom
	• Provide clear communications within the		to collectively bargain to protect their rights in
	organization through channels such as notifications		determining fair and transparent employment
	to the departments within the Company and Line App.		conditions while promoting good relations between
	<ul> <li>Website comment box, email, Facebook</li> </ul>		the Company and its employees.
	• Performance appraisal 3 times a year	•	Provide channels for opinions and suggestions.

Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
(SEE	Complaints and communication channels such as	Pay attention to community and social feedback.	The concerns of communities and society that may
BBBB BBBB	websites, email, telephone, letters, etc.	<ul> <li>Keep developing communities and supporting their</li> </ul>	be affected by the Company's business operations
	<ul> <li>Participate in community relations activities at least</li> </ul>	activities.	are surveyed, by preparing following annual
2. Community and	28 times per month.	<ul> <li>Preserve the community environment.</li> </ul>	reports: a report on the results of compliance with
Society - Local	• Organize public relations at least 22 times per	<ul> <li>Create jobs and strengthen the economy for the</li> </ul>	environmental impact prevention and mitigation
communities	month.	community.	measures and environmental impact monitoring
surrounding the			measures for power plant projects, a report
establishments/			on environmental quality monitoring (aquatic
societies who			biological resources), a report on economic and
access goods and			social monitoring surveys, a summary report on
services			community satisfaction surveys, and a CSR-DIW
			report. The survey results and data received on
			impacts on communities and society (if any issues
			are found) are analyzed and improvements are
			taken to alleviate the impacts appropriately.
			<ul> <li>Care for the community and society.</li> </ul>
			<ul> <li>Allocate budgets to support public projects</li> </ul>
			and activities for the community, including the
			education of youth in the community.
			• Projects to support or participate in solving social
			problems, including creating jobs, creating careers,
			and creating sustainable income for the community.

Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
(<	Report business performance to public agencies	• Report business performance to public agencies • Compliance with rules, regulations, laws and • Comply with rules, regulations and laws.	<ul> <li>Comply with rules, regulations and laws.</li> </ul>
8	according to the period specified by the government	policies of regulatory agencies	• Conduct business with responsibility to the
)	as follows:	• Be responsible to the community, society and	community society and environment with
3. Governances/	- Report the performance of safety officers in	environment.	sustainable good corporate governance.
related public	professional work every 3 months.	• Sponsorship and cooperation with public agencies	<ul> <li>Cooperate policy support and projects of public</li> </ul>
agencies/	- Report on compliance with EIA measures of the • Actions to mitigate climate change problems	<ul> <li>Actions to mitigate climate change problems</li> </ul>	agencies appropriately.
regulatory	Company every 6 months.	<ul> <li>Payment of taxes, related fees</li> </ul>	
agencies/	- Report Service standard of power operation to		
local public	Energy Energy Regulatory Commission of		
organizations	Thailand (ERC) once every 3 months		
	• Be a place to visit and study business visits 33		
	times in 2024		
	• Monitor policies, regulations, government		
	requirements at least once a month.		
	Prepare project performance reports, both in terms		
	of construction and operation reports to public		
	agencies.		
	<ul> <li>Support hygienic waste management for public</li> </ul>		
	agencies/local administrative authorities.		

Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
aaa	<ul> <li>Visit and meeting once a year</li> </ul>	<ul> <li>Offer electricity at fair and appropriate prices</li> </ul>	<ul> <li>Generate and deliver stable and safe electricity for</li> </ul>
	Business visits once a year	<ul> <li>Stable and safe power generation and delivery with</li> </ul>	uninterrupted power supply.
	somi+ ovlow+ +scol +c stacilo dtim soitivitoc to bacol	Vacing source bottomasctainin	mobom dtiw aciteracio roman tacicity bac vtile. O
A Customore		nulliterrupted power supply	<ul> <li>Quality and emcleric power generation with modern,</li> </ul>
4. Custolliers	per year	<ul> <li>Power generation with environmentally friendly</li> </ul>	environmentally friendly technology which does not
and distributors -	<ul> <li>Project production report to be prepared and</li> </ul>	technology that does not cause any impact on	cause any impact on the community and society.
Major customers	submitted to EGAT once a month.	communities and society	<ul> <li>Compliance with fair trade agreements and contracts,</li> </ul>
including	<ul> <li>Conduct customer satisfaction assessments for</li> </ul>	<ul> <li>Compliance with agreements and contracts</li> </ul>	selling electricity at right and reasonable prices.
Electricity	power plants twice a year	• Give importance to listening and responding to •	<ul> <li>Strict compliance with business ethics including</li> </ul>
Generating	<ul> <li>Conduct customer satisfaction assessments</li> </ul>	complaints.	protection of customer information
Authority of	<ul> <li>for waste fuel products twice a year</li> </ul>	<ul> <li>Respect for human rights without infringing</li> </ul>	<ul> <li>Respond to the policy of using clean energy in</li> </ul>
Thailand (EGAT)	<ul> <li>Complaints and other communication channels</li> </ul>	upon the personal data of customers, prioritizing	electricity generation by reducing the use of coal,
and TPI Polene Plc.	such as website, email, telephone, letter, etc.	the importance of listening and responding to	helping to reduce greenhouse gases.
(TPIPL)		complaints.	<ul> <li>Conduct customer satisfaction surveys twice a</li> </ul>
			year and use the results of customer satisfaction
			assessments to continuously develop and improve
			the Company's products, services, or business
			processes.
<b>∞</b>	Annual General Meeting of Shareholders	Good performance, stock prices and dividends are	• Manage the organization according to the vision
888	<ul> <li>Opportunity for shareholders to attend the annual</li> </ul>	at a reasonable level and financially stable.	under the BCG and ESG policies under good
	shareholders' meeting such as questioning and	<ul> <li>Operations are transparent and the business</li> </ul>	corporate governance.
5. Shareholders /	voting.	continues to expand.	<ul> <li>Manage the efficiency of power generation and</li> </ul>
Investors/	<ul> <li>Presentation of information for investment to</li> </ul>	<ul> <li>Disclosure of important information of the</li> </ul>	distribution to create long-term income stability.
Analysts/ Credit	investors and analysts through investor relations	Company with accuracy, completeness, timeliness,	<ul> <li>Manage the innovations and technology, including</li> </ul>
Rating Agency	activities at least 7 times a year.	transparency, and reliability through channels that	research and development for business expansion.
	Annual Information Disclosure Form / Annual Report	are easily accessible to shareholders.	<ul> <li>Follow the policies to maintain liquidity and</li> </ul>
	(Form 56-1 One Report)	<ul> <li>Conduct business with environmental, social,</li> </ul>	strengthen financial stability.
	<ul> <li>Provide communication channels through media</li> </ul>	governance or ESG considerations.	<ul> <li>Conduct proper all-round risk management</li> </ul>
	including website, letter, email, telephone or others	<ul> <li>Provide effective risk management system</li> </ul>	<ul> <li>All shareholders have rights and are treated equally.</li> </ul>
	at least 30 times per month.	• Opportunity for shareholders to attend the annual	<ul> <li>Clarify sufficient details regarding the shareholders'</li> </ul>
	<ul> <li>Annual Sustainability Report</li> </ul>	shareholders' meeting and activities to engage and	meetings, as well as all information relating to
	<ul> <li>Financial Report 4 times a year</li> </ul>	maintain good relations with shareholders.	matters requiring shareholders to make decisions
			at the meetings in advance.

Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
6. Suppliers and Contractors - Manufacturers / sellers and service providers, including raw materials, machinery and equipment / contractors for the projects	<ul> <li>Complaints and communication channels such as websites, email, telephone, letters, etc.</li> <li>Relationship building activities with suppliers at least once a year to create engagement.</li> <li>Conduct meetings with suppliers at their premises at least twice a year.</li> <li>Business negotiations, exchange of information and business opinions at least twice a year.</li> </ul>	Procurement system that is transparent, fair, non-discriminatory, free from corruption Build relationship to grow together Comply with the agreed terms, never take advantage of customers, and make payments on time. Respect human rights and personal data, ensuring no infringement on the privacy of partners and maintain an appropriate occupational health and safety system in the work environment.	<ul> <li>Conduct business together according to the Supplier Code of Conduct with strict equality.</li> <li>Taking into account environment social Governant and Economics (ESG) issues in procurement</li> <li>Follow-up on compliance with the Supplier Code of Conduct</li> <li>Determine a fair payment period to suppliers so that they have financial liquidity and is capable of continuing their business.</li> </ul>
7. Creditors / financial institutions / debenture holders	<ul> <li>Submit a quarterly financial statement report.</li> <li>Annual Registration Statement/Annual Report (Form 56-1 One Report)</li> <li>Sustainability Report</li> </ul>	Good corporate governance  Manage with transparency  Manage risks prudently  Payment in full and on time  Good performance, liquidity and solvency	<ul> <li>Conduct business with transparency and accountability under good corporate governance.</li> <li>Comply with the conditions of the loan agreement and debentures.</li> <li>Full disclosure of the Company's information and its financial information</li> </ul>
8. Competitors - Businesses in the same industry	Collect information from all channels such as websites, letters, telephone, etc.	Establish conditions for fair competition     Maintain market share	Conduct business in accordance with the Code of Conduct, within the framework of free and fair competition, avoiding infringement of intellectual property and copyright of competitors and not violating competitors' confidential information.

Stakeholders	Guidelines for engaging with stakeholders	Concerns/Expectations	Approaches to response
E	<ul> <li>Occasional business visits and activities for the</li> </ul>	Occasional business visits and activities for the • To be a company that conducts business with a • Conduct business with a focus on the community	• Conduct business with a focus on the community
	community and society	focus on sustainable ESG.	society and environment by appropriately and
)	<ul> <li>Support media activities in line with company policy</li> </ul>		regularly disclosing and disseminating information
9. Press and media	Benefits to the community and society		that is beneficial to society.
	<ul> <li>Regularly disseminate information and news that</li> </ul>		
	is beneficial to the Company.		
	<ul> <li>Annual Information Disclosure Form / Annual Report</li> </ul>		
	(Form 56-1 One Report)		
	Sustainability Report		
	<ul> <li>Quarterly earnings press conference</li> </ul>		
	<ul> <li>Participate in the Opportunity Day of the Stock</li> </ul>		
	Exchange of Thailand		

In driving organizational sustainability, the Company promotes and supports employee engagement and proposal of ideas for ESG (Environmental, Social, and Governance) sustainability operations through various activities, such as

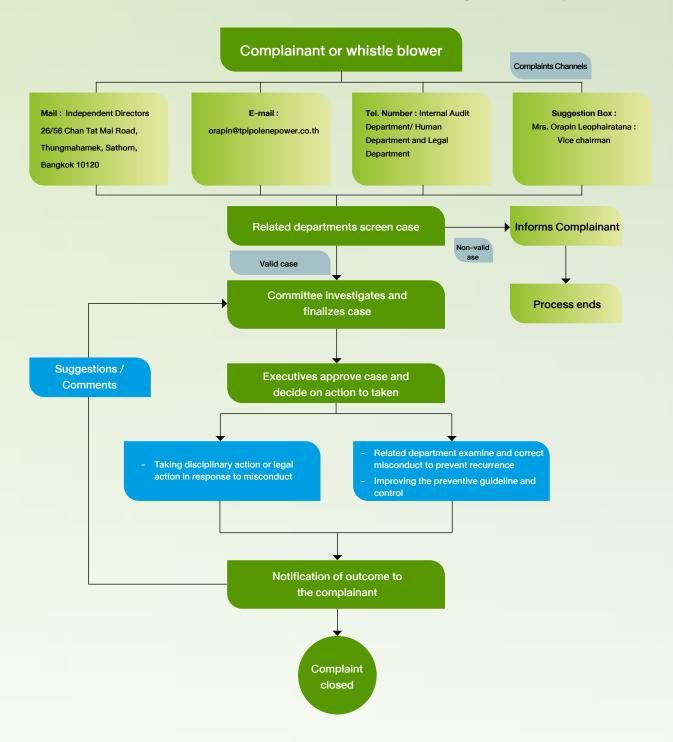
- Organizing workshops for employees to jointly identify issues that are material to the business.
- Organizing workshops for employees to jointly assess the significance of stakeholders and seek ways to collaborate to create benefits for all groups of the Company's stakeholders.
- Arranging for employees to complete an annual assessment of job satisfaction and employee engagement.
  - Holding meetings for employees to jointly propose the Company's annual employee care project.
- Organizing TOTAL PREVENTIVE MAINTENANCE activities for employees to jointly propose improvement projects for machinery and various work procedures to enhance productivity and reduce waste.
- Holding an annual meeting for savings cooperative members, where they can jointly propose ideas and management guidelines beneficial to the cooperative.
- Arranging for employees to participate in other ESG activities alongside executives and local communities on appropriate occasions, such as the annual reforestation project and blood donations to the Thai Red Cross Society.

In addition, the Company has announced written guidelines for the treatment of each group of stakeholders, adhering to the principle of creating shared value between the Company and stakeholders. The top executives are responsible for overseeing the participation of all groups of stakeholders, including improving channels for expressing opinions. They are tasked with gathering stakeholder feedback and forwarding it to various responsible departments on an ongoing basis, particularly from stakeholders directly affected by the Company's business operations.

The Company established a policy for handling complaints and suggestions (GRI 2-25) (GRI 2-26) by announcing the Company's Policy No. 007/2016 on receiving complaints/suggestions/whistleblowing channels that cause damage to the Company as a channel to effectively oversee the interests of the Company and to enable the Company to solve problems timely as well as to encourage its stakeholders to participate in the corporate governance process. In the event that stakeholders have inquiries or witness suspected misconduct, violations, or non-compliance with laws, rules, regulations, and business ethics, the Company has set up a grievance mechanism as detailed in the Flow diagram/Process for handling complaints From the process of receiving complaints to taking corrective actions and reporting back to relevant stakeholders as follows: (GRI 2-16)

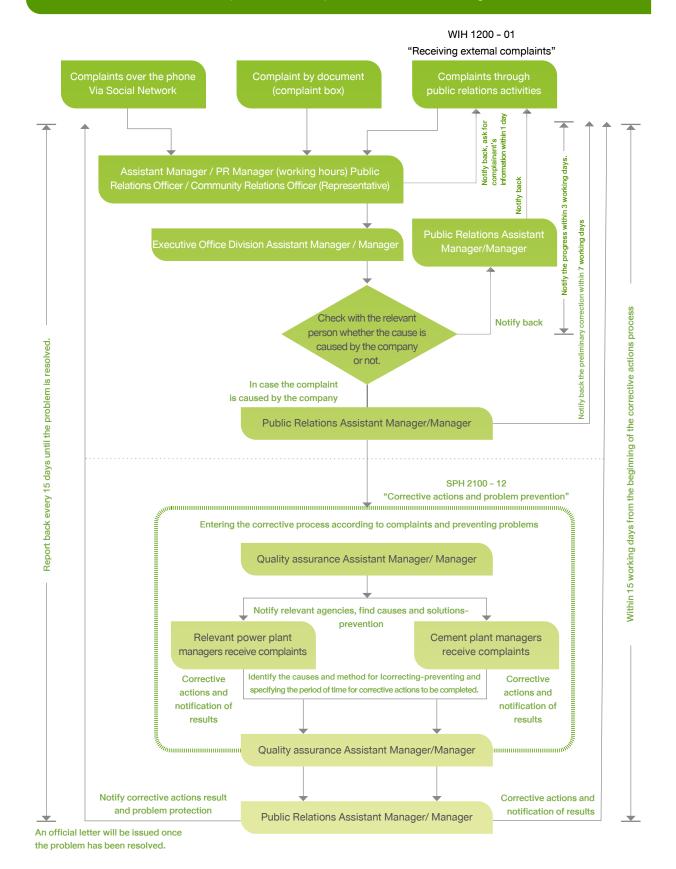
- 1. Complainants, stakeholders, or the public may make complaints, suggestions, and report clues through the four channels specified by the Company, namely:
  - (1) Letter to the Vice Chairman
  - (2) Electronic mailbox (E-mail: orapin@tpipolenepower.co.th)
  - (3) Phone calls to the Head of Internal Audit, Head of Legal Department, Head of Human Resources (Head Office), or Head of Personnel and Administration (Plant)
  - (4) Comment Box
- 2. Screening complaints: Once the Company receives a complaint, it will ask the Human Resources Department, the Internal Audit Department, or the relevant departments to consider and screen the complaint, with a detailed examination of the clue or complaint to ensure that it is true, clear, or sufficient to ascertain the facts to proceed. In the event that there is no evidence, the complaint will be returned to the complainant or requested additional documents within 10 days.
- 3. Fact checking: In the case of receiving a complaint, it must be clear or sufficient to ascertain the facts. The Company will consider appointing executives from the Internal Audit Department, the Human Resources Department, and executives from other relevant departments to be the Fact-Finding Committee, who will be appointed from time to time by the President or Executive Vice President.
- **4. Fact-Finding Committee:** The Company will proceed with the procedures for collecting facts, processing, and screening information to determine the appropriate management approach for each subject, as well as to propose disciplinary action or take legal action if misconduct is found and suggest and prevent the recurrence.
- **5. Result Report:** Fact-Finding Committee is responsible for reporting results to the President or Executive Vice President in order to proceed as proposed by the Board of Directors or order as it deems appropriate.
- 6. Implementation of inspection results and notify the complainant: When the relevant departments have taken action as instructed by the Company, it shall notify the Audit Committee to follow up on corrective actions, and improvements, and determine the operational guidelines that have been instructed until completion and notify the whistleblowers of the results of the action and provide comments or suggestions to improve the work ordering mechanism.
- 7. Guidelines for Handling Violations of Ethics, Code of Conduct, Human Rights, and Corruption: In the event of violations related to ethics, code of conduct, human rights, or corruption, the Company will enforce disciplinary measures and take legal action if wrongdoing is confirmed. Additionally, relevant agencies will be notified to implement corrective actions. The Company also prioritizes the prevention of future incidents by reviewing related processes in collaboration with relevant departments. This includes analyzing weaknesses and improving work procedures to enhance overall efficiency.

# Complaint/Whistleblowing Process In case of Violation of Ethics, Code of Conduct, Human rights and Corruption



The Company has continuously and regularly organized activities in the factory area to build relationships with stakeholders, listening to their problems and addressing the associated impacts.

#### Order of response to complaints from external agencies



In the process of the whistle-blowing complaint process, when the Fact-Finding Committee has informed the result of the action to the whistle-blower, it will inquire about satisfaction, and suggestions, and bring useful suggestions to revise and establish guidelines to make its operations more efficient, and when the Company's relevant departments have taken and improved the actions as instructed by the Company, it shall notify the Fact-Finding Committee to inspect and follow up on the results of the action to ensure efficiency and to prevent a recurrence and report the results to the Vice President for acknowledgment.

Complaint Channel	Number of Complaints in 2024	Percentage of Successfully Resolved Complaints
(1) Letter to the Vice President	0	0
(2) Electronic mailbox	0	0
(3) Phone calls to the Head of Internal Audit, Head of Legal	0	0
Department, Head of Human Resources (Head Office), or		
Head of Personnel and Administration (Plant)		
(4) Comment Box	0	0

#### Legal Compliance Performance (GRI 2-27)

In 2024, the Company investigated non-compliance with laws and regulations that may cause risks or affect the organization, including penalties in case of non-compliance with such laws.

Non-compliance with social and economic laws and regulations	Contexts resulting in significant fines or non-monetary penalties	Value of fine (baht)	Total amount of non-monetary penalties	Number of cases going through the dispute resolution process
0	0	0	0	0

### Determination of Material Sustainability Issues (Materiality) (GRI 3-1)

In preparing this 2024 Sustainability Report, the Company's Executive Committee, Sustainability Development Committee, and Sustainability Development Working Group have adhered to the materiality issue determination process based on the GRI Standards (Global Reporting Initiative) 2021. This process identifies material topics and significant impacts that the organization should address through its business relationships. In 2024, the Company applied the Double Materiality principle to assess and review material issues in terms of impacts, risks, and/or business opportunities across the value chain. This approach ensures the disclosure of highly significant sustainability issues arising from the Company's business operations. The Company follows a process for determining material sustainability issues and assessing the scope of impacts, consisting of four key steps, namely:

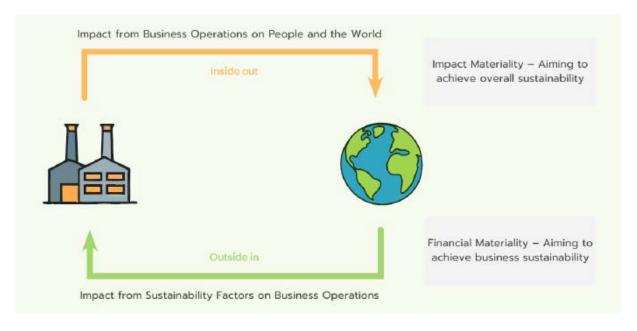
#### 1. Understand the organization's context

The ESG Committee has studied and reviewed related business activities and relationships by considering the Company's context in terms of economics, the environment, people, and human rights. The committee has assessed key information, including internal factors such as the Company's vision, mission, goals, policies, and operational directions, as well as external factors such as industry trends at both national and international levels, stakeholder interests, and expectations. This information has been analyzed based on the principles of sustainability context.

#### 2. Identify actual and potential impacts Risks and Opportunities

The Sustainability Development Working Group has collaboratively identified issues related to sustainability impacts, risks, and opportunities (IRO Topics) by considering sustainability performance data from key internal and external sources. This data is obtained from executives or representatives of relevant departments who have directly engaged with the Company's stakeholders to gather insights. The working group identifies actual and potential impacts, both positive and negative, along with risks and opportunities for the Company. This process considers factors such as international sustainability standards relevant to the power plant industry, key sustainability performance details from the power plant business, the Company's vision and business strategies for 2024, and the concerns and expectations of all relevant stakeholder groups. Taking into account all stakeholders who have participated in determining material issues to ensure that the Company considers all issues of all stakeholder (due diligence) and applies the Double Materiality Perspective in accordance with the European Sustainability Reporting Standards (ESRS). This approach helps identify material sustainability issues that the Company needs to address by integrating both types of analysis, namely:

- Analysis of financial materiality resulting from economic, social and environmental factors that may affect the organization (Outside-in), and
- Impact Materiality Analysis of the organization's economic, social and environmental impacts that may affect stakeholders (Inside-out).



3. The Company collaborates with representatives from relevant departments to identify characteristics of sustainability issues related to business impacts, risks, and opportunities, as well as to determine relevant stakeholders. Through this process, a total of 26 issues related to the Company's sustainability context have been identified. These issues will be further assessed for the significance of their impacts and prioritized for reporting in the next stage, to assess the significance of the impacts.

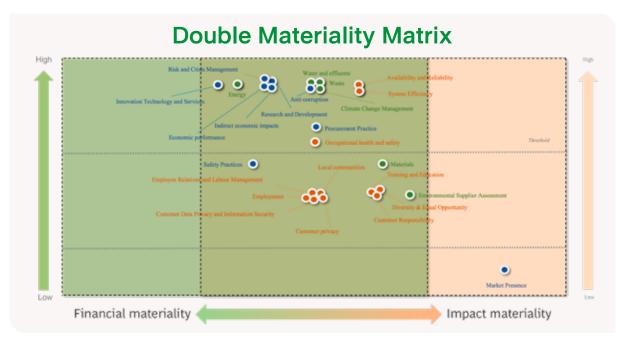
The ESG Committee, in collaboration with executives from relevant departments, has conducted an assessment of the significant impacts of business operations on all stakeholders through a structured prioritization process. The criteria for assessing impacts, risks, and opportunities (IROs) include the severity of the impact, the likelihood of occurrence, human rights considerations, the scale and scope of the impact, and the magnitude and likelihood level of risks and opportunities. Additionally, the assessment takes into account the Company's operational policy framework and commitment to these issues, ultimately leading to the identification of material topics for reporting.

#### 4. Prioritize the most significant impacts for reporting

The Sustainability Development Working Group has analyzed and filtered the sustainability-related material topics identified by the Company, totaling 26 issues, to select key material issues and prioritize them using the Double Materiality Test tool. This assessment considers two key aspects: Impact Materiality, which evaluates the primary effects of the Company's core business operations on the economy, society, environment, and human rights; and Financial Materiality, which assesses the impacts on the Company's business, including business opportunities and risks. Based on this analysis, the findings revealed 14 material IRO topics of high significance; 11 issues of moderate significance; and 1 issue of low significance, with details as follows:

#### **Results of Sustainability Issue Prioritization**

	High Significant Impact		Moderate Significant Impact		Low Significant Impact
1.	Energy Consumption	1.	Supplier Environmental Assessment	1.	Role in the Market (Hiring Local
2.	Water Management	2.	Employment		Workers)
3.	Garbage and Waste Management	3.	Labor Management and Labor		
4.	Climate Change Management		Relations		
5.	Occupational Health and Safety in	4.	Training and Education		
	Working Environment	5.	Diversity and Equal Opportunities		
6.	Risk and Crisis Management	6.	Customer Satisfaction		
7.	Economic Performance	7.	Customer Privacy		
8.	Indirect Economic Impacts	8.	Information Security		
	(Investment in Basic Utilities for	9.	Security Practices (Providing correct		
	Society)		security knowledge to security		
9.	Anti-corruption		guards)		
10	. Technology, Innovation and Service	10.	. Participation in Community and		
11	. Research and Development		Social Development		
12	. Electrical System Efficiency	11.	. Materials		
13	. Availability and Reliability of the				
	Electrical System				
14	. Procurement Practices				



### Validation (GRI 2-14)

The Senior Management Team and the Sustainability Development Committee jointly considered and assessed relevant sustainability issues according to the principles of Completeness and approved the issues to be implemented for identifying information to be disclosed (Validation) in the Company's Sustainability Report 2024, covering sustainability operations in environmental, social, economic, and corporate governance dimensions. There are 17 highly material sustainability issues for the Company, as follows:



#### Report dissemination channel

This report is available for download at https://tpipolenepower.co.th/index.php/en/en-investment/ar/sustainability

#### Contact for inquiries and suggestions (GRI 2-3)

1. Mr. Chayutd SuphapodokPosition: Department ManagerFinance Management Department2. Ms. Ooy ChuajumroonPosition: Asst. Department ManagerFinance Management Department

#### TPI Polene Power Public Company Limited

No. 26/56 Chan Tat Mai Road Thungmahamek, Sathorn, Bangkok 10120

Telephone: +66 (0) 2213-1039, 2285-5090 Ext. 12159/ 12984

E-mail: chayutd@tpipolene.co.th / ooy@tpipolene.co.th



### 05 Environmental Impact Management



Certified for

**2,022,585** TonCO e

carbon credits and granted a Renewable Energy Certificate (REC) for a total of

**2,504,658.9365** RECs



The Company achieves 6.77 million TonCO e reduction by converting **2.92** Million tons of waste into fuel

Proportion of recycled water 4.59%



Ground-mounted solar farm power plant project (Solar farm phase 1 and 2) 73.21 MW



Greenhouse gas emissions decreased by **1,875,558.57** TonCO<sub>g</sub>e compared to 2020 (Base Year)



Coal-fired power plants aim to use 100% of their waste fuel instead of coal for their electricity generation by 2025

Investment value in the environment-friendly projects Baht 13,275 mil.

Waste emissions (Zero Waste) decreased by



#### **Environmental Management**

The Company recognizes the importance of using natural resources efficiently and cost-effectively. It is committed to addressing the challenges of resource limitations and reducing dependence on fossil fuels, which contribute to climate change and have economic, social, and community impacts. The Company adopts the Circular Economy as a key guideline for environmental management, emphasizing the use of renewable energy, water and waste material reuse, and waste management in line with the Zero Waste concept. It also focuses on improving efficiency throughout the supply chain to create a balance between business, society, and the environment, working toward a sustainable future for both present and future generations.

#### **Management Guidelines**

The Company is committed to reducing greenhouse gas emissions and achieving carbon neutrality by operating a green power plant business that generates 100% renewable and clean energy. It applies the BCG Model (Bio-Circular-Green Economy) in its management approach by recycling waste from the production process to maximize its benefits, minimizing the use of limited natural resources, and increasing renewable energy generation for use in subsidiaries. These efforts aim to reduce the Company's carbon footprint and achieve RE100 status (using 100% renewable energy). The Company invests in community waste management projects and participates in renewable energy project bidding to drive sustainable growth and generate income. These efforts align with the sustainability development approach, ensuring a balanced integration of Environmental, Social, and Governance (ESG) principles. Additionally, the Company has integrated the BCG Model concept into every step of the value chain. This includes replacing coal with waste fuel in electricity generation, eliminating coal usage entirely, and striving to become a clean, green industry with zero greenhouse gas emissions. The Company's operations encompass research and development, resource sourcing, high-efficiency production, optimal resource utilization, and the creation of environmentally friendly green products. Consumers of these products also play a role in contributing to a sustainable, greener world.

As a result of its environmental initiatives, the Company has received ISO 14001:2015 certification through an audit and certification by SOCOTEC Certification International Thailand.

This certification reflects the Company's commitment to systematic and efficient environmental management. The Company adheres to established principles that enable it to identify and assess the environmental impacts of its activities, products, and services while effectively managing related risks. In addition, the Company complies with environmental requirements at both legal and other relevant levels. It adheres to the principle of continuous improvement by using annual operational data to plan and enhance environmental operations regularly. This approach aims to reduce negative impacts and encourage stakeholder participation at all levels, including employees, business partners, customers, and communities. By doing so, the Company creates trust and credibility while minimizing the use of natural resources and energy, reducing greenhouse gas emissions, decreasing waste and pollution, and strengthening its competitive edge in a sustainability-focused market.

The Company has identified four sustainability issues with high materiality concerning the environment in 2024 as follows:

- 1. Climate Change Management
- 2. Energy Consumption
- 3. Water Management
- 4. Garbage and Waste Management

### 1. Climate Change Management (GRI 3-3)

The Company, as a producer and distributor of electricity, has continuously placed importance on addressing problems arising from the impacts of climate change. It has set a goal of achieving carbon neutrality by 2037 by managing and disclosing climate information according to the Task Force on Climate-Related Financial Disclosures (TCFD)\*, which consists of four main elements: Governance, Risk management, Strategy, and Metrics and Targets. Details are as follows:

\* Further information is available in TCFD / IFRS S2 Report on the Company's website: http://www.tpipolenepower.co.th/index.php/th/sustainable-development/tcfd-report or Scanning QR Code

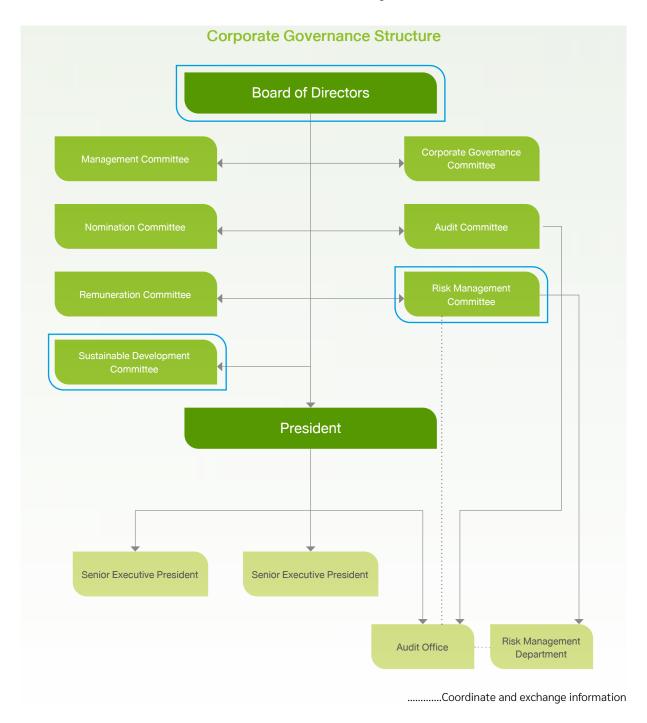




http://www.tpipolenepower.co.th/index.php/th/sustainable-development/tcfd-report

## Governance

The Company recognizes the important role the energy sector plays in driving solutions to climate change and the transition to a low-carbon economy and society. Therefore, the Company has integrated climate change management into its organizational structure, starting at the Board of Directors level and extending to related committees, including the Sustainability Development Committee and the Risk Management Committee, which falls under the purview of the Board of Directors and functions responsible in supervising climate change. The Company has established Key Performance Indicators (KPIs) comprising leading indicators and indicators of risk management. Climate change performance has been determined as a KPI at the organizational level for assessing and monitoring climate risks and opportunities to meet set goals. Employees are encouraged to utilize these risk indicators in their operations. Regular monitoring, evaluation, and reporting to the Board of Directors and related sub-committees are conducted, with the following details:



## TPIPP'S CLIMATE CHANGE GOVERNANCE



## Sustainability **Development Committee**

- · Oversee the implementation of the climate change strategy and manage overall climate change risks and opportunities at the corporate level under the organization's ESG policy.
- Approve all strategies, policies, objectives, and annual action plans related to climate change in alignment with the organization's strategic plan, to seek for approval from the Board of Directors.



#### **Board of Directors**

- Approve the climate change strategy. annual operational plan, goals, and Key Performance Indicators (KPIs) related to climate change.
- Oversee performance in accordance with climate change goals.
- Consider investments in clean energy businesses to align with the annual budget, short-term, and long-term strategic plans.
- Approve all strategies, operational plans, Key Performance Indicators (KPIs), and goals related to climate change to obtain approval from the Board of Directors.



## Risk Management Committee

- · Assess organizational risks, including risks and opportunities related to climate change, risk mitigation plans within the risk management systems and processes proposed by the Risk Management Department.
- Monitor performance, operational plans, Key Performance Indicators (KPIs), and goals related to climate change.



## **Power Plant Management** Department

- · Supervise the operation of the power plant and report on greenhouse gas emissions and climate change risks at the power plant level.
- · Be responsible for the implementation of low carbon projects and manage climate change risks in operations.



## Climate-related Executive Team and Risk Management Department

- Incorporate climate change risks and strategies in recommending ongoing business strategies.
- Approve and monitor the implementation of the climate change strategy to align with business strategies, goals, and projects, and present them to the Board of Directors.
- Assign tasks to those responsible for implementing the climate change strategy and risk management.
- Integrate the assessment and management of climate change risks and opportunities with the organization's risk management systems and processes.





## **Financial Management** Department

- · Assess the financial impact of climate change risks and opportunities.
- Disclose information about financial risks from climate change in the annual registration statement/Annual Report (Form 56-1 One Report) and sustainability report.
- Integrate climate change risks and opportunities into strategic business planning.
- Integrate climate change strategies into the overall business strategy of the Company and identify business opportunities.



## TQM ESG Department

- · Monitor greenhouse gas emissions, climate change risks, and operations related to low carbon projects in each operating area.
- · Monitor the performance of the operating area at the management level and overall, and coordinate with internal stakeholders regarding physical risks and transition risks.



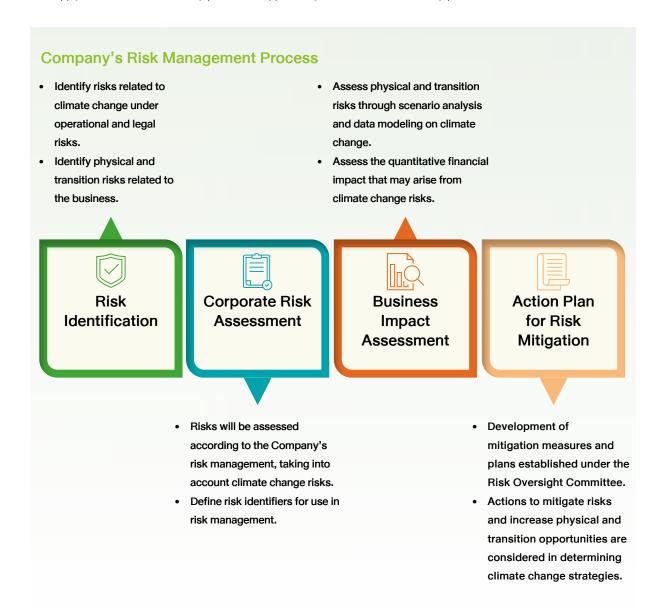
#### Climate-related **Functions**

- · Coordinate with internal stakeholders on climate change issues.
- · Be responsible for reporting and disclosing climate change information to external stakeholders.

## **Climate Change Risk Management**

The Company has established an integrated approach to organizational risk management in accordance with the principles of The Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management (COSO-ERM). This approach is aimed at cultivating a culture conducive to the integration of strategic objectives and operational performance in risk management, incorporating the assessment of climatic risks within the standard evaluative framework of organizational risks.

From the risk assessment, it was found that physical risks, such as water shortages and floods, are classified as medium-level basic risks and low-level risks, respectively, not causing any problems for the Company. This is because the Company is able to continually assess the situation and implement measures to mitigate them. Legal risks, such as regulations regarding greenhouse gas emissions control through mechanisms like carbon taxes, and the use of a carbon tax as a tool for trade barriers through the Carbon Border Adjustment Mechanism (CBAM), as well as support for the use of electric vehicles, clean energy, etc., all pose high risks to the fossil fuel electricity production business. However, they pose low to moderate risks to the supply chain. Furthermore, they present an opportunity for low-carbon electricity production businesses.



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## Scenario Analysis

In 2023, TPIPP has broadened its focus to assess climate change risks and opportunities comprehensively. This expansion aims to identify, assess, and manage potential impacts more efficiently by reviewing and categorizing climate change risks in each relevant scenario. This encompasses both risks and opportunities in transition and significant physical properties. The Company has collected and summarized information assessing the risks of climate change as follows:

## **Timeframe:**

• Short-term: 1-4 years

 Mid-term: 5-10 years, showing results for the year 2030 in assessing impacts and prioritizing operations to mitigate those impacts.

 Long-term: more than 10 years, showing results for the year 2050 to align with the TPIPP Group's goal of carbon neutrality.

## Scope:

- The transition risk assessment covers all of the Company's operations, while the physical risk assessment covers all operational areas of business, considering the impacts of climate change on TPI Group's business operations in three areas: fossil fuel production, renewable energy production, and the supply chain.
- The impacts of climate change are assessed, covering three business operation areas: electricity generation from fossil fuels, electricity generation from green energy sources, and the supply chain.
- The impact on business operations and the value chain is assessed.

Data used in Scenario
Analysis

## **Physical Scenario:**

• Baseline: Historical data of Saraburi area

- IPCC RCP 2.6: The scenario is employed to evaluate physical phenomena under the assumption that the transition to a low- carbon society is in place and that the goals of the Paris Agreement are achieved, resulting in a change in the global average temperature of 1.6°C in 2050.
- IPCC RCP 8.5: The scenario is employed to evaluate physical phenomena under the assumption that the world's situation is at
- its worst, resulting in a change in the global average temperature of 4.3°C in 2050.

## Transition Scenario:

- Stated Policies Scenario (STEPS): The scenario assumes that the governments of all countries around the world can uphold their commitments to address the climate change issue and achieve net-zero greenhouse gas emissions within a specified timeframe. The global temperature is projected to increase by approximately 2.6°C by 2100 in this scenario.
- Net Zero Emission 2050 Scenario (NZE 2050): The scenario assumes that the goals of the Paris Agreement are successfully achieved. This includes limiting the global temperature rise to no more than 2°C, reaching net-zero global greenhouse gas emissions by 2050, and ensuring that global surface temperatures do not rise more than 1.5°C by 2100.

## **Risk Assessment**

Physical risk assessment includes the power plant and MSW fuel production plant located in Thap Kwang Sub-district, Kaeng Khoi District, Saraburi Province, Thailand. The assessment utilizes Think Hazard to evaluate the baseline danger level (BSL) and the Climate Change Knowledge Portal by the World Bank (CCKP) in the transformation project under the RCP 2.6 and RCP 8.5 scenarios for 2030 and 2050

## Physical Risk Prioritization from Climate Change

Physical Risk	Impact on Business Operations	Supporting Measures
1. Water shortage	In the production process, due to the drought crisis, when assessing danger levels in 2030 and 2050 under both RCP2.6 and RCP8.5 scenarios, a slight decrease in danger was observed. However, given the moderate baseline danger level, this could lead to potential business interruptions, affecting the operational reliability of the Company, or increased production costs due to higher water supply expenses.	<ol> <li>Continuously monitor the news and assess the drought situation to align with the reserved water levels.</li> <li>Regularly measure the water level in the factory's reservoir to assess its adequacy for use.</li> <li>Enhance water use efficiency in the production process by recycling water and refraining from releasing used water.</li> <li>The Company assessed water stress in the power plant area using Program AQUEDUCT and identified it in the Medium-High range (20-40%). According to the definition, this doesn't qualify as being in an area with significant water stress.</li> </ol>
2. Flooding	In both RCP2.6 and RCP8.5 scenarios, the danger levels in 2030 and 2050 will increase insignificantly for the Company. However, given the low baseline danger level, there is a possibility of delays in fuel delivery by suppliers to the Company, which could impact the electricity generation process.	Monitor the news and assess weather forecasts to prepare for fuel reserves delivered from customers before flooding occurs, thereby minimizing the impact on the electricity generation process.
3. Extremely Hot  Weather	In the production process, during periods of extreme heat, the danger levels for 2030 and 2050 vary depending on the scenario. Under the RCP2.6 scenario, the danger decreases slightly. However, under the RCP8.5 scenario, the danger increases slightly in 2030 and moderately in 2050. Given that the baseline danger level is already moderate, this could result in heat-related illnesses, directly impacting employee health.	Monitor news and assess changes in air temperatures while coordinating with the Saraburi Provincial Public Health Office to develop management guidelines for heat-related illnesses. Focus on public education, raising awareness, treating heat-related conditions, and providing care for at-risk groups.

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Impacts potentially caused by risks and opportunities related to climate change in various areas are as follows:-

Opportunities and risks from climate change	Impacts	Supporting Measures
1. Carbon Tax Price (Risk)	The Company's operating expenses will increase in proportion to the amount of greenhouse gas emissions.	<ol> <li>Evaluate the organization's greenhouse gas emissions to ensure consistency with policies and laws regulating emissions within the country and in the territories of trading partners, both those currently determined and those anticipated in the future.</li> <li>The Company establishes strategies to advance the Bio-Circular Green Economy (BCG) in order to define the scope of applying circular economy principles in its operations and to raise awareness among personnel regarding limited resources.</li> </ol>
2. Fuel Prices (Risk)	The Company's operating expenses will increase due to higher fuel prices.	The Company formulates strategies to utilize waste fuel as a substitute for fossil fuels, aiming to lower production costs and mitigate greenhouse gas emissions (Scope 3) associated with fuel transportation.
3. Growth in electricity generation from renewable energy sources (Opportunity)	The Company's income increases due to the growing demand for electricity from renewable energy sources.	The Company establishes plans and strategies for climate management, aiming to invest in clean technologies such as renewable energy projects and initiatives to reduce fossil fuel usage.
4. Application of Carbon Capture Utilization and Storage (CCUS) Technology (Opportunity)	The investment in such technology remains expensive.	Study Carbon Capture Utilization and Storage (CCUS) Technology.  The Company formulates its innovation strategies to respond to the needs of its stakeholders, with a focus on enhancing efficiency in the production process and augmenting product values. Additionally, it incorporates the use of Carbon Capture Utilization and Storage (CCUS) technology to decrease greenhouse gas emissions, leading to a reduction in the CFP value of the products and the CFO value when the investment in such technology becomes cost-effective.

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## **Strategies on Climate Change**

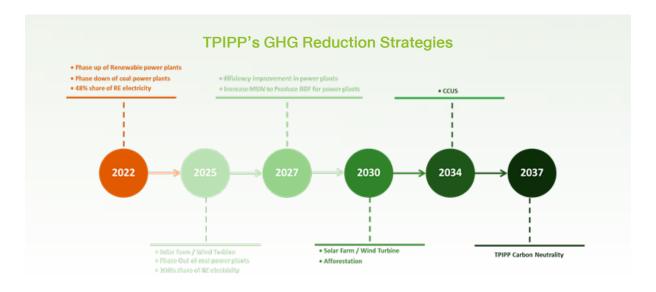
The above risk assessment leads to the development of climate change strategies, serving as guidelines for mitigating the impacts of climate change issues and supporting the Company's adaptation efforts. The strategies on climate change aim to reduce greenhouse gases and consist of six main areas, as follows:-



**Short-term strategy (1-2 years):** Enhance production efficiency to minimize breakdowns, reduce external electricity consumption (PEA), and lower greenhouse gas emissions under Scope 2. Additionally, decrease electricity production from fossil fuels to reduce greenhouse gas emissions under Scope 1 and Scope 3, specifically in Category 3 (Fuel-and-energy-related activities) and Category 4 (Upstream transport and distribution).

**Medium-term strategy (less than 5 years):** Expand community waste acceptance to enhance waste fuel production and invest more in renewable energy electricity generation. This approach aims to increase Carbon Credit from community waste fuel production while reducing greenhouse gas emissions per unit of production.

**Long-term strategy (more than 5 years):** Expand reforestation efforts, enhance carbon offsetting and trading, and implement Carbon Capture, Utilization, and Storage (CCUS) to capture Scope 1 greenhouse gas emissions from the production process. Additionally, increase Carbon Credit through reforestation initiatives.



## **Operational Goals**

## Short-term Goals within 5 years

- Reduce Scope 1 greenhouse gas emissions by using fuel from municipal waste instead of coal.
- transportation related to coal imports used for electricity generation (Category 3: Fuel- and energy-related activities, and Category 4: Upstream transport and distribution).

## Long-term Goals for more than 5 years

- Reduce Scope 1 greenhouse gas emissions by increasing solar power generation.
- Reduce Scope 3 greenhouse gas emissions by minimizing Reduce Scope 3 greenhouse gas emissions by minimizing transportation associated with coal imports and reducing the distance required to transport municipal waste for use as fuel in electricity generation (Category 3: Fueland energy-related activities, and Category 4: Upstream transport and distribution).

## **Climate Change Goals**

Climate Change Go			
Strategy	Performance in 2024	Goals in 2025	Goals in 2043
To establish the proportion of fuel for electricity generation	<ul> <li>Total production capacity is 506.90 megawatts.</li> <li>Proportion of fossil fuels is 29.59%.</li> <li>Proportion of renewable energy is 70.41%.</li> </ul>	<ul> <li>Total production capacity is 506.90 megawatts.</li> <li>Proportion of fossil fuels is 0 %.</li> <li>Proportion of renewable energy is 100%</li> </ul>	<ul> <li>Total production capacity is 2,205 megawatts.</li> <li>Proportion of fossil fuels is 0 %.</li> <li>Proportion of renewable energy is 100%</li> </ul>
2. To reduce the amount of greenhouse gases	<ul> <li>The amount of greenhouse gas emissions is reduced by 1,914,114.60 TonCO<sub>2</sub>e, accounting for 49.49% compared to the base year of 2020.</li> <li>The amount of greenhouse gases per unit of electricity generated is decreased by 47.89% compared to the base year of 2020.</li> </ul>	<ul> <li>The amount of greenhouse gas emissions is reduced by 1,400,000 TonCO<sub>2</sub>e, accounting for 63.06% compared to the base year of 2020.</li> <li>The amount of greenhouse gases per unit of electricity generated is decreased by 60% compared to the base year of 2020.</li> </ul>	<ul> <li>Zero greenhouse gas emissions TonCO<sub>2</sub>e</li> <li>The amount of greenhouse gases per unit of electricity produced is equal to 0 TonCO<sub>2</sub>e /MWh.</li> </ul>
3. To increase the collection municipal waste(MSW) to manufacture wastebased fuel production	Collecting 2.92 mill. tons of municipal waste(MSW) to manufacture waste-based fuel production.	Collecting at least 4.80 mill. tons of municipal waste(MSW) per year to manufacture waste- based fuel production.	Collecting at least 5.44 mill. tons of municipal waste(MSW) per year to manufacture waste-based fuel production.

Strategy	Performance in 2024	Goals in 2025	Goals in 2043
3.1 Reduce the amount of greenhouse gas emissions from landfills by at least 6.2 million TonCO <sub>2</sub> e per year (1 ton of community waste emits CO <sub>2</sub> equal to 2.32 tons/year).	• Process approximately 2.92 million tons of all types of waste into fuel in the Company's power plants, and sell it to cement plants of TPI Polene Public Company Limited. This can help reduce greenhouse gas emissions by approximately 6.77 million TonCO <sub>2</sub> e.		
3.2 Receive additional Carbon Credit of at least 180,000 TonCO <sub>2</sub> e per year.	• In 2024, the Company was registered by TGO to certify an additional 463,356 TonCO <sub>2</sub> e in carbon credits, bringing the total amount of carbon credits included with the balance brought forward in 2022 of 1,559,229 TonCO <sub>2</sub> e, to a total of 2,022,585 TonCO <sub>2</sub> e.	<ul> <li>The Company received an additional Carbon Credit of at least 300,000 TonCO<sub>2</sub>e per year.</li> </ul>	<ul> <li>Receive an additional Carbon Credit of at least 500,000 TonCO<sub>2</sub>e per year.</li> </ul>
4. To increase greenhouse gas storage by planting forests and applying CCUS	<ul> <li>The amount of greenhouse gas stored is 2,022,585 TonCO<sub>2</sub>e</li> </ul>	<ul> <li>The amount of greenhouse gas stored is 2,423,994 TonCO<sub>2</sub>e</li> </ul>	<ul> <li>The amount of greenhouse gas stored is 3,546,758 TonCO<sub>2</sub>e</li> </ul>
5. To apply for Renewable Energy Certificate (REC)	To apply for Renewable Energy Certificate (REC) for 2,504,658.94 RECs.	To apply for Renewable Energy Certificate (REC) for 1,400,000 RECs/year	To apply for Renewable Energy Certificate (REC) for 1,600,000 RECs/year.
6. To disclose information	Sustainability Report     according to GRI Standard and     56-1 One Report	<ul> <li>Sustainability Report according to GRI Standard</li> <li>56-1 One Report and Participating in the sustainability assessment of organization both domestically and internationally</li> </ul>	<ul> <li>Sustainability Report         according to GRI Standard,         56-1 One Report or as         related.</li> <li>Carbon Disclosure Project         (CDP)</li> <li>Participating in the         sustainability assessment         of organization both         domestically and         internationally</li> </ul>

Further information is available in TCFD/ IFRS S2 Report on the Company's website:





http://www.tpipolenepower.co.th/index.php/th/sustainable-development/tcfd-report

# **Key Operations** (GRI 305-5)

TPI Polene Public Company Limited and TPI Polene Power Public Company Limited have established a comprehensive roadmap aimed at achieving carbon neutrality. This mission is pursued through various business operations, supported by plans for development and investment in production infrastructure, product research and development, and innovative breakthroughs as outlined below.

- Green Cement is an innovative solution aimed at reducing the use of clinker by increasing the use of substitute
  materials and promoting low-carbon alternatives, such as developing hydraulic cement to replace Portland Cement Type
   The increased use of hydraulic cement can significantly reduce the greenhouse effect and contribute to sustainable
  development in the cement and construction industries in the future.
- 2. Alternative Energy: Using alternative fuels to reduce the reliance on fossil fuels and coal, in the burning of clinker. By increasing the use of alternative fuels produced from waste fuel plants, the Company can replace and reduce coal usage, potentially cutting coal consumption in the cement production process by 25%. Additionally, the Company can produce oil through the Pyrolysis process, using old tires as raw materials to create liquid fuel, which can fully replace the use of fuel oil in the production process. This has reduced the annual consumption of fuel oil by 5,000,000 liters, enabling the company to lower fuel costs by over 50 million THB per year.
- 3. RE100 Renewable Energy 100% for Electricity Use: TPI Polene Group plans to use 100% renewable energy (RE100) for all its production processes, sourced from TPI Polene Power Public Company Limited. The Company aims to minimize the proportion of electricity purchased from the Provincial Electricity Authority (PEA) and offset this purchase with Renewable Energy Certificates (RECs) certified to TPI Polene Power. This initiative helps reduce the carbon footprint, demonstrates environmental responsibility, and aligns with the company's ESG goals, supporting its sustainability efforts.
- **4. Electrification:** TPI Polene Group has implemented an energy transition by replacing machinery and transportation systems for raw materials and products, as well as production processes that previously used fossil fuels or coal, with electricity. The electricity used is sourced from renewable energy, which helps reduce dependence on fossil fuels and supports the reduction of greenhouse gas emissions. Examples of operations include:
  - Using conveyor belts instead of trucks to transport raw materials, saves energy, reduces transportation and maintenance costs, and decreases pollution caused by combustion.
  - The installation of a Regenerative Downhill Conveyor—a project designed to generate electricity from the energy generated by transporting raw materials via conveyor belts instead of using trucks. It can convert the generated mechanical energy into electricity and feed it back into the power supply system. This enables the Company to reduce energy costs associated with diesel fuel in transportation and improve energy efficiency.
  - Using a mobile crusher or re-location of a crusher to reduce the transportation of raw materials.

    In addition, trucks and heavy machinery that previously used fuel engines and NGVs have been converted to electric power (EV) engines, which not only reduces greenhouse gas emissions but also lowers fuel costs in production. This enables TPI Polene Group to reduce production costs and operate more cost-effectively and sustainably.
- **5. Energy Efficiency Program:** A project aimed at improving production efficiency by reducing energy consumption and enhancing overall productivity, as outlined below:
  - Polytrack Grate is a new aeration technology that operates at reduced pressure, ensuring consistent aeration with low energy consumption (reducing at least a 1 kWh/ton of clinker). This results in energy savings and minimizes wear and tear on machinery by lowering air velocity through the vents, thereby reducing maintenance costs and increase service life of machine. Consequently, the Company can now lower its energy expenses for both heating and electricity.
  - The utilization of AI technology to control the production system in clinker kiln ensure balance and consistent operations throughout the entire production process, effectively reducing energy consumption per unit of production and improving product quality standards.

- The application of a speed control system for inverter motors in various equipment that has speed adjustment such as fans, water pumps, and air compressors, allows for precise control and energy savings.
- Changing the raw material feeding system in the kiln from pneumatic conveying to mechanical conveying using a bucket elevator can reduce energy consumption in production, lowering electricity usage by 5-6%.
- 6. Recycle Raw Materials: to minimize the use of natural resources by fully utilizing by-products from production processes to create added value through reprocessing or adjustments. This includes the use of waste materials generated from cement production, waste-to-energy plants, and combustion processes for electricity generation. For example, bottom ash and fly ash are repurposed as substitute raw materials in the company's cement production processes, such as:
  - Dry mortar, a ready-mixed mortar or cement, is produced using leftover rocks or sand from the limestone production process as the main raw material instead of purchasing rocks or river sand.
  - The CDE plant, a washing recycle plant, processes crushed stone from construction stone factories (aggregate plants) through sorting and cleaning to produce construction stone and sand, replacing natural river sand.
  - Incinerator Bottom Ash (IBA), or heavy ash from the waste incineration ash separation plant, is used to separate iron for sale as recycled material, while the ash itself serves as a substitute in cement production. This process helps reduce waste, increase the value of leftover materials, minimize contamination of heavy metals and toxins in soil, water, and air, and supports the circular economy.
  - Fly ash, a by-product of the combustion process in power plants, is captured by electrostatic precipitators or bag filters and mixed with cement to replace some of the clinker or used in concrete to enhance strength. It is considered a valuable material in the construction industry and waste management, helping to reduce environmental impact and create added value from materials left over from the energy production process.
- **7. Afforestation:** Planting forests to mitigate the impact of climate change. TPI Polene Group has been engaged in this effort continuously more than 30 years since 1992 and will continue to do so in order to expand green areas and promote the absorption of greenhouse gases from business operations, with the aim of:
  - increasing carbon sequestration by reducing the amount of greenhouse gases in the atmosphere
  - supporting the conservation of biodiversity to promote sustainable ecosystems
  - Support the community in developing green spaces to raise awareness and instill a sense of responsibility for social and environmental quality among stakeholders.
- 8. Carbon Capture & Utilization/ Storage (CCUS): By studying the technology of carbon capture, utilization, and storage using the hydrator and carbonator process, carbon dioxide emissions from the cement production process are captured, and the carbon footprint is fixed. TPI Polene has an investment plan to reduce greenhouse gas emissions using this method, which can enable the long-term fixation of CO<sub>2</sub> in buildings.
- 9. Cancellation of MSW Landfills: Using community waste to produce fuel to reduce the impact of landfills. In 2024, TPI Polene Group launched a waste fuel production project for the benefit of the country as a whole by separating community waste and using it as alternative fuel instead of landfilling it, totaling more than 3 million tons. If this waste had been managed using the traditional landfill method, it would have released greenhouse gases equivalent to 6.9 million tons of CO<sub>2</sub> equivalent.

In 2024, the Company initiated a waste fuel production project aimed at benefiting the country as a whole. The Company separates community waste and utilizes it as an alternative fuel instead of sending 2.92 million tons of municipal waste to landfills, the country stands to mitigate the release of greenhouse gases from landfills into the atmosphere by up to 6.77 million tons  $CO_2$ e. According to the Thailand Voluntary Emission Reduction Program (T-VER), the conversion of one ton of fresh municipal waste or municipal waste into waste fuel can curtail greenhouse gas emissions by at least 0.543 Ton  $CO_2$ e. Conversely, landfill disposal of this waste would contribute to methane gas emissions, which possess a global warming potential 28 times that of carbon dioxide. Hence, for every ton of garbage sent to a landfill, carbon dioxide gas equivalent to 2.32 TONCO2 e would be released.

The Company has been registered for carbon credits by the Greenhouse Gas Management Organization (Public Organization), totaling 2,022,585 tons of carbon dioxide equivalent, and has been certified with the Renewable Energy Certificate (REC) through EGAT for renewable energy production (from waste fuel and residual heat). The Company registered and opened a trading account for the acquired RECs with The International REC Standard (I-REC), amounting to 2,504,658.9365 RECs (1 REC represents 1 MWh of electricity produced from renewable energy). This mechanism enables producers and consumers to authenticate their renewable energy generation and consumption, promoting renewable energy production through REC trade and offering renewable energy project investors the opportunity to earn additional revenues through the sale of these energy certificates.

In addition, in 2024, the Company allocated a budget to research and develop technology or carry out projects for the purpose of reducing risks or mitigating the impact of climate change, 6 projects in the amount of Baht 13,275 million. The Company has also expressed its commitment to joining the Thailand Carbon Neutral Network (TCNN) as a pioneering organization in greenhouse gas management.

In addition to reducing greenhouse gas emissions, the Company also places great importance on compliance with environmental laws, particularly in air pollution management. The Company has consistently utilized a system to monitor waste emissions, specifically from the combustion process in power plants, and to monitor the surrounding air quality of several areas near the factory. The Company monitors and controls levels of nitrogen dioxide (NO2) and sulfur dioxide (SO2) in each section of the combustion process, while also regulating temperature and fuel-to-air ratio during combustion to maintain waste emission levels within specified criteria.

## **Performance**

Table: Greenhouse gas emissions of power plants (GRI 305-1) (GRI 305-2) (GRI 305-3)

Greenhouse gas emissions	2022	2023*	2024*
Direct Greenhouse Gas Emissions (Scope 1)	2,477,534.70	1,561,295.61	1,780,875.71
Indirect Greenhouse Gas Emissions from Energy Consumption (Scope 2)	588.79	12,365.10	14,982.97
Total GHG emissions (Scope 1 + 2)	2,478,123.49	1,573,660.71	1,795,858.68
Other Indirect Greenhouse Gas Emissions (Scope 3) consists of:	120,150.63	115,136.05	118,255.92
Category 1: Purchased goods and services	2.75	823.78	812.85
Category 2: Capital goods	N/A	N/A	N/A
${\it Category3: Fuel-and energy-related activities (not included in Scopes 1 or 2)}$	66.83	72,443.7	83,174.16
Category 4: Upstream transport and distribution	120,081.05	41,585.59	34,078.06
Category 5: Waste generated	N/A	N/A	N/A
Category 6: Business travel	N/A	N/A	N/A
Category 7: Employee commuting	N/A	N/A	N/A
Category 8: Upstream leased assets	N/A	N/A	N/A
Category 9: Downstream transport and distribution	N/A	282.91	190.84
Category 10: Processing of sold products	N/A	N/A	N/A
Category 11: Use of sold products	N/A	N/A	N/A
Category 12: End-of-life treatment of sold products	N/A	N/A	N/A
Category 13: Downstream leased assets	N/A	N/A	N/A
Category 14: Franchises	N/A	N/A	N/A

Greenhouse gas emissions	2022	2023*	2024*
Category 15: Investments	N/A	N/A	N/A
Total GHG emissions (Scope 1 + 2+3)	2,598,274.12	1,688,796.76	1,914,114.60
Greenhouse Gas Emissions per Unit of Output (tCO <sub>2</sub> e/MWh)	1.2646	0.7540	0.7892

Note: \* Carbon footprint is verified by the Management System Certification Institute Thailand (MASCI) as per ISO14064-1:2018 and CFO-TGO

Further information is available in TCFD/ IFRS S2 Report on the Company's





http://www.tpipolenepower.co.th/index.php/th/sustainable-development/tcfd-report and Scan QR Code

Table: The Company's Sulfur Dioxide  $SO_2$  and Nitrogen Oxide  $NO_2$  emissions compared to World Bank emissions standards and regulations under Thai law  $^{(GRI\ 305-7)}$ 

(unit: milligrams/normal cubic meter)

	Sulfur Dioxide (SO2)	Nitrogen Oxides (NO2)
TPI Polene Power	30.0	120.0
World Bank emissions standards	< 230.0	< 510.0
Regulations under Thai law	< 320.0	< 350.0

# The Company's Significant Air Emissions $^{(GRI\ 305-7)}$

(Unit: Tons)

Significant Air Emissions (By Type)	2022	2023	2024	
$NO_2$	2,852.35	1,167.74	1,233	
SO <sub>2</sub>	413.10	190.47	103	
Persistant Organic Pollutants (POP)	-	-	-	
Volatile Organic Compounds (VOC)	-	-	-	
Hazardous Air Pollutants (HAP)	-	-	-	
Particulate Matters (PM)	155.48	34.52	20.45	
Air emissions specified in other relevant regulations (specifyif any)				

## Note:

- 1. The dust measurement method uses the isokinetic method (Method 5) and calculates pollution emissions based on the textbook of pollution emission calculation from measurement data provided by the Pollution Control Department.
- 2. The SO<sub>2</sub> measurement method uses the isokinetic method (Method 6) and calculates pollution emissions based on the textbook of pollution emission calculation from measurement data provided by the Pollution Control Department.
- 3. The NO<sub>2</sub> measurement method uses the isokinetic method (Method 7) and calculates pollution emissions based on the textbook of pollution emission calculation from measurement data provided by the Pollution Control Department.

## Goals for Reducing Air Pollution Emissions per Production Unit

## Short-term Goal within 5 years

## Long-term goal for more than 5 years

- To reduce air pollution emissions per unit of electricity
   production to no more than 0.00165 Ton/MWh in 2022,
   0.00130 Ton/MWh in 2023, 0.00100 Ton/MWh in 2024
   and 0.00055 Ton/MWh in 2025.
  - To reduce air pollution emissions per unit of electricity production to not exceeding 0.00050 Ton/MWh within 2030.

Table: GHG emission intensity of power plants (GRI 305-4)

Activity	Unit	base year of 2020	2022	2023	2024
Greenhouse Gas GHG (1)	TonCO <sub>2</sub> e	3,789,673.17	2,598,274.12	1,688,796.76*	1,914,114.60*
Non greenhouse gases pollution (2)**	Ton	3,200	3,421	1,393	1,356
Power generating unit (3)	MWh	2,501,941.66	2,054,617.07	2,239,827.73	2,425,337.30
Proportion (1)/(3)	TonCO <sub>2</sub> e/ MWh	1.5146	1.2646	0.7540	0.7892
Proportion (2)/(3)	Ton/ MWh	0.001279	0.001665	0.000622	0.000559

Note:

The table above shows that the Company successfully reduced greenhouse gas emissions per unit of electricity generation from  $1.5146\,\text{TonCO}_2\text{e}/\text{MWh}$  in the base year  $2020\,\text{to}\,0.7892\,\text{TonCO}_2\text{e}/\text{MWh}$  in 2024, representing a 47.89% decrease compared to 2020. Additionally, non-greenhouse gas air pollution emissions per unit of electricity generation decreased from  $0.000559\,\text{Ton/MWh}$  in  $2023\,\text{to}\,0.000554\,\text{Ton/MWh}$  in 2024, a 10.13% reduction compared to 2023.

Throughout 2024, the Company has strictly implemented environmental measures, leading to the receipt of an environmental performance certificate from United Analyst and Engineering Consultant Co., Ltd. (UAE). This certification recognizes the Company's compliance with environmental impact prevention, mitigation measures, and environmental impact monitoring for the power plant project. The Company has fully and accurately adhered to the requirements outlined in the Environmental Impact Assessment (EHIA) report, demonstrating its commitment to sustainable business operations and effective environmental management.

## Guidelines for Measuring Effectiveness against Established Targets

- 1. The Company has a clear management approach and medium-term goals to reduce greenhouse gas emissions by 61.24% by 2025, as part of its strategy to achieve carbon neutrality by 2037. These efforts align with the Paris Agreement. The Company actively promotes and encourages customers and business partners to contribute to the transition toward the Net Zero goal. Furthermore, the Company is committed to conducting business through global collaboration and participation. To ensure the most efficient operations, stakeholder engagement has been integrated into its framework for transitioning into a low-carbon organization. This engagement aligns with the Paris Agreement goals, creating momentum for the Company to achieve its objective of becoming a low-carbon business.
- 2. In addition, the Company has established policies, goals, and key performance indicators (KPIs) related to climate

<sup>\*</sup> Carbon footprint is verified by the Management System Certification Institute Thailand (MASCI) as per ISO14064-1:2018 and CFO-TGO

<sup>\*\*</sup> Non-greenhouse gases include SOx and NOx .

change to monitor its performance and support international commitments to reducing climate change impacts. The Company's climate change goals align with both national and global objectives, including Thailand's Nationally Determined Contributions (NDCs), the Paris Agreement goals from the 26th Conference of the Parties (COP26) to the United Nations Framework Convention on Climate Change (UNFCCC), and the United Nations Sustainable Development Goals (UN SDGs) 7 and 13.



**UN SDG 7:** Affordable and Clean Energy



**UN SDG 12:** Affordable and Clean Energy



**UN SDG 8:** Decent Work And Economic Growth



UN SDG 13: Climate Action

	Strategy	Performance in 2024	Goals in 2024	Summary of operating results
1.	To establish the proportion of fuel for electricity generation	506.90 megawatts.	<ul> <li>Total production capacity is 506.90 megawatts.</li> <li>Proportion of fossil fuels is 34 %.</li> <li>Proportion of renewable energy is 66%</li> </ul>	On target
2.	To reduce the amount of greenhouse gases	<ul> <li>The amount of greenhouse gas emissions is reduced by 1,914,114.60 TonCO<sub>2</sub>e, accounting for 49.49% compared to the base year of 2020.</li> <li>The amount of greenhouse gases per unit of electricity generated is decreased by 47.89% compared to the base year of 2020.</li> </ul>	<ul> <li>The amount of greenhouse gas emissions is reduced by 2,273,803.8         TonCO<sub>2</sub>e, accounting for 40% compared to the base year of 2020.</li> <li>The amount of greenhouse gases per unit of electricity generated is decreased by 40% compared to the base year of 2020.</li> </ul>	On target
3.	To increase the collection municipal waste(MSW) to manufacture waste-based fuel productio	Collecting 2.92 mill. tons of municipal waste(MSW) to manufacture waste-based fuel production.	Collecting at least 2.80 mill. tons of municipal waste(MSW) per year to manufacture waste-based fuel production.	On target

	Strategy	Performance in 2024	Goals in 2024	Summary of operating results
3.1	Reduce the amount of greenhouse gas emissions from landfills by at least 6.2 million TonCO <sub>2</sub> e per year (1 ton of community waste emits CO <sub>2</sub> equal to 2.32 tons/year).	<ul> <li>rocess approximately 2.92 million tons of all types of waste into fuel in the Company's power plants, and sell it to cement plants of TPI Polene Public Company Limited. This can help reduce greenhouse gas emissions by approximately 6.77 million TonCO<sub>2</sub>e.</li> </ul>		
3.2	Receive additional Carbon Credit of at least 180,000 TonCO <sub>2</sub> e per year	• In 2024, the Company was registered by TGO to certify an additional 463,356 tons CO <sub>2</sub> e in carbon credits, bringing the total amount of carbon credits included with the balance brought forward in 2022 of 1,559,229 TonCO <sub>2</sub> e, to a total of 2,022,585 TonCO <sub>2</sub> e.	• The Company received an additional Carbon Credit of at least 300,000 TonCO <sub>2</sub> e per year.	On target
4.	To increase greenhouse gas storage by planting forests and applying CCUS	• The amount of greenhouse gas stored is 2,022,585 TonCO <sub>2</sub> e.	• The amount of greenhouse gases stored is more than 2,000,000 TonCO <sub>2</sub> e	On target
5	To apply for Renewable Energy Certificate (REC)	To apply for Renewable Energy Certificate (REC) for 2,504,658.94 RECs.	To apply for Renewable Energy Certificate (REC) for 1,400,000 RECs/year	On target



## Lessons Learned from Climate Change Action

From the Company's commitment to driving strategy and direction toward achieving carbon neutrality, it has established a framework and process for effectively reducing greenhouse gas emissions while also creating business opportunities to develop low-carbon technologies and products that meet consumer needs. This approach not only adds business value but also enables waste-to-energy production plants and waste-to-energy power plants to meet the circular economy efficiency assessment under the Department of Primary Industries and Mines' project for upgrading industrial establishments to apply circular economy principles. Additionally, the Company has been recognized with an "AAA Sustainable Stocks" rating in 2024 (SET ESG Ratings: AAA) from the Stock Exchange of Thailand for conducting ESG-driven business practices that prioritize environmental, social, and corporate governance (ESG) principles. These efforts enhance the Company's credibility and reputation, reinforcing its commitment to climate change and environmental sustainability for the benefit of all stakeholders.

## • Stakeholder Engagement in Climate Change Management

The Company has raised awareness and understanding regarding how to cope with climate change among its employees while also collaborating with business partners, customers, and agencies, such as Thailand Carbon Neutral Network. Additionally, the Company has partnered with Saraburi Province, becoming part of the "PPP-Saraburi Sandbox: A Low Carbon City" prototype initiative. The Company plays a crucial role in utilizing community waste as fuel to reduce greenhouse gas emissions. As a result, in 2024, the Company received 0.14 million tons more community waste for fuel production compared to 2023, contributing to a reduction of 2.92 million tons of landfill waste in Thailand. This initiative also helped decrease greenhouse gas emissions from landfills by up to 6.77 million  $TonCO_2e$ .

## 2. Energy Consumption (GRI 3-3)

The Company operates an energy business centered on producing electric power and alternative fuels, with an implemented energy management system. Acknowledging the significance of energy conservation, the Company understands that using energy efficiently not only decreases fuel consumption and organizational expenses but also alleviates environmental issues stemming from energy production and usage. Every employee is tasked with promoting energy use for maximum benefit, emphasizing the importance of cooperative efforts in achieving efficient energy utilization.

## **Operational Goals**

# Short-term goal within 5 years Station Service Used must not exceed 12% of the total energy generated. The total consumption of energy of all types per unit of electricity production is reduced to no more than 15.00 MJ/kWh in 2022, 14.50 MJ/kWh in 2023, 13.75 MJ/kWh in 2024 and 13.50 MJ/kWh in 2025. The total consumption of energy of all types per unit of electricity production is reduced to not exceed 13.25 MJ/kWh by 2030.

## **Key Operations**

TPI Polene Group established an energy management policy by applying the ISO 50001 standard as management guidelines at the operational level, using the focus improvement pillar of total productive maintenance, which is regarded as a pillar that focuses on reducing "loss" in a systematic way to find the point of energy loss-reduce costs, and apply it to improve by establishing a project team to achieve objectives and energy conservation goals by being able to efficiently manage energy in both lighting, lighting and air conditioning systems, including installation and maintenance of equipment to control the operation of the relevant electrical system, enabling continuous reduction of electrical energy consumption.

The Company established an energy conservation policy to be used as a guideline for energy operations and to promote

efficient use of energy for maximum benefit as follows:

- 1. Implement and develop appropriate energy management systems by stipulating energy conservation as part of the Company's operations in accordance with relevant laws and regulations.
- 2. Implement measurement plan or data collection of energy consumption to be used in the preparation of a database to analyze the improvement of energy efficiency of the organization continuously and appropriate to the business, technology used and best practices.
- 3. Set energy consumption targets in each production segment and apply energy management systems to monitor, evaluate, and control energy consumption to meet the set targets.
- 4. Determine ongoing efficiency improvement projects, establish plans and targets, and review annual energy efficiency improvements.
- 5. Consider that energy conservation is the duty and responsibility of executives and employees at all levels to comply with the specified measures, and communicate to them to understand and comply with the measures in the same direction.
- 6. Support budget, human resources, equipment, machinery, products, and energy services to improve energy performance.
- 7. Conduct a Performance–Energy Efficiency Assessment whenever there is a design improvement or purchase with a significant impact on a process or machine.
- 8. Encourage employees to participate in presenting ideas for energy development, dissemination of information, training for employees, and organizing activities to promote energy conservation.
- 9. Support cooperation between external organizations, both public and private sectors in terms of energy management.

# Performance (GRI 302-1) (GRI 302-3)

In 2024, the Company controlled and conserved Station Service Used, resulting in internal energy consumption accounting for 8.48% of the total energy produced. This achievement aligns with the target of not exceeding 12% of the total energy produced. Additionally, all types of total energy values per unit of electricity production equal 13.52 MJ/kWh, which is consistent with the target of not exceeding 13.75 MJ/kWh.

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

(Unit : Gigajoules)

Otation Comics Hand	Energy consumption				
Station Service Used	2022	2023	2024		
1. Heat energy(non-renewable energy)					
Coal	7,641,672.37	10,308,969.03	11,957,833.61		
Fuel oil	-	-	36,092.02		
Diesel	33,892.65	34,151.80	29,378.30		
Natural gas	6,271.71	-	629.11		
Total	7,681,836.73	10,343,120.83	12,023,933.04		
2. Heat energy(renewable energy) Waste fuel	17,627,916.96	19,793,549.45	21,114,333.33		
Total heat energy (1) + (2)	25,309,753.69	30,136,670.28	33,138,266.37		
3. Electrical energy	695,631.24	756,081.09	701,046.02		
Total energy (1) + (2) + (3)	26,005,384.93	30,892,751.37	33,839,312.39		

## Note:

<sup>1</sup> kilowatt-hour of electrical energy is equal to 0.00360 Gigajoules. 1 kg of coal is equal to 0.01630 Gigajoules. 1 liter of fuel oil is equal to 0.03977 Gigajoules. 1 liter of fuel (diesel) is equal to 0.03642 Gigajoules. Natural gas (dry) 1 cubic foot is equal to 0.00102 Gigajoules. Data from the Department of Alternative Energy Development and Efficiency, Ministry of Energy

<sup>- 1</sup> ton of steam heating power is calculated from the amount of heat that passes into or is discharged from the system of enthalpy at a steam pressure of 25 bar is 2.711073 GJ.

## Table: Energy Concentration \*(GRI 302-3)

Energy Concentration*	unit	2022	2023	2024
Specific Energy Consumption(SEC) per waste fuel used	megajoules/ton	39.62	38.47	36.76
Specific Energy Consumption(SEC) per power production	megajoules/kWh	12.62	13.74	13.52

Note: Energy intensity may be determined from the energy consumption ratio against the output scale of each plant considering the specific energy consumption per unit of production (SEC).

## Electricity production (GWh) (by energy source type)

	2022	2023	2024
Gross Generation based on non-renewable energy	sources:		
1. Coal (GWh)	696.99	862.29	940.43
2. Other non-renewable (GWh)	-	-	-
3. Total non-renewables (GWh)	696.99	862.29	940.43
Gross Generation based on renewable energy sour	ces:		
1. Solar (GWh)	-	-	23.62
2. MSW (GWh)	1,214.96	1,230.54	1,346.07
3. WHRP (GWh)	142.66	147.00	138.85
4. Total renewables (GWh)	1,357.62	1,377.53	1,508.54
Total Gross Generation (GWh)	2,054.62	2,239.83	2,448.96

## Proportion of electricity production (by type of energy source)

	2564	2565	2566			
Gross Generation based on non-renewable en	nergy sources:					
1. Coal	33.92%	38.50%	38.40%			
2. Other non-renewable	0.00%	0.00%	0.00%			
3. Total non-renewables	33.92%	38.50%	38.40%			
Gross Generation based on renewable energy sources:						
1. Solar	0.00%	0.00%	0.96%			
2. MSW	59.13%	54.94%	54.96%			
3. WHRP	6.94%	6.56%	5.67%			
4. Total renewables	66.08%	61.50%	61.60%			
Total Gross Generation (GWh)	100.00%	100.00%	100.00%			

# Initiatives to reduce energy consumption (GRI 302-4)

Initiatives to reduce energy consumption	Operation details	Reduced amount of energy
Change the feed set from Double     Screw Feeder to Vibration Feeder     for feeding waste fuel.	- Reduce energy consumption and for efficiency in feeding RDF fuel by changing the Feed set	4,074.45 GJ/year
2. Modify Suction Seal of Boiler fan 14	- Modify the Inlet Suction Seal to increase the flow rate and reduce the electrical power of the machine	874.69 GJ/year
3. Air heating equipment for waste fuel combustion utilizing waste heat	- Utilizing waste heat from production to reheat the air in the combustion chamber reduces fuel consumption for steam production in electricity generation.	37,408.98 GJ/year

## Guidelines for Measuring Effectiveness Against Established Goals

The Company has established objectives and goals for energy management within the ISO 50001 management system to control operations in accordance with the established objectives and goals. The Company has appointed a working group responsible for overseeing operations related to ISO 9001, ISO 14001, ISO 45001, ISO 17025, and ISO 50001 management systems on a monthly basis. This group is tasked with evaluating the tendency of operational results according to the monthly plan, aiming to improve and address any issues that arise during operations in order to achieve the set goals.

## • Lessons Learned from Energy Operations

The Company can efficiently manage energy by utilizing the Focus Improvement Pillar of Total Productive Maintenance to systematically reduce "losses". This approach helps identify areas of energy loss and minimize costs. Establishing a Project Team to address these issues enables the achievement of energy conservation objectives and goals, facilitating a continuous reduction in electrical energy consumption.

## • Engagement with Stakeholders in Energy Management

The Company has managed its operations according to the ISO 50001 system. Engagement with stakeholders is one of the significant requirements within the ISO 50001 system, emphasizing the understanding of stakeholders' needs and expectations. Consequently, the Company has adopted a policy to utilize fuel derived from waste to replace coal, aiming to mitigate greenhouse gas emissions that contribute to the changing climate both locally and globally, thus ensuring that the Company's operations do not negatively impact society

## • Planning for Future Energy Improvements

The Company plans to reduce its reliance on coal energy for electricity generation, a fossil fuel, and transition to energy from community waste, a renewable source. In 2024, the Company adjusted coal usage in electricity generation to 20% of total generation capacity. By 2025, the Company aims to achieve 100% renewable energy (RE 100) for electricity generation.

The Company has implemented an energy operation approach to minimize the impact of energy use, with a focus on reducing fossil fuel consumption to lessen environmental and climate impacts. Additionally, the Company aims to lower greenhouse gas emissions to achieve carbon neutrality and net-zero carbon by transitioning electricity generation from coal to municipal waste energy and solar power. By 2025, the Company plans to become a 100% Renewable Energy (RE 100) electricity producer.

# 3. Water Resource Management (GRI 3-3)

Water is a very important resource to the business operation of TPI Polene Power as it is one of the main raw materials used in the production process. The Company realizes and places importance to the use of water resources from natural and surface water sources, including wastewater from the production process for maximum efficiency in order not to affect the overall water management of the Pasak River Basin Irrigation Project and those who consume water from the Pasak River

## **Operational goals**

## Short-term goals within 5 years

- Wastewater from the electricity production process can be filtered and reused for a minimum of 31,000 cubic meters per month.
- The average water use per unit of electricity production is reduced to no more than 4.5 liters/kWh in 2022, 4 liters/ kWh in 2023, 3.60 liters/kWh in 2024 and 3.30 liters/ kWh in 2025.

## Long-term goals for more than 5 years

- Recycle wastewater from the power generation process for reuse at least 50,000 cubic meters/month within 2030.
- The average water use per unit of electricity production is reduced to no more than 3 liters/kWh in 2030

## **Key operations**

TPI Polene Group has shown a clear intention to manage internal water to achieve the most cost-effective use of water within the community. The Company's water source will be procured by Plc. TPI Polene from two main sources of raw water, namely the Pasak River and water from surface water reservoirs, including wastewater within the plants. The details<sup>(GRI 303-1)</sup> are as follows:

- 1. Water from the Pa Sak River will be pumped up to the cement plant's water treatment plant, where a water supply system to be sent for use in production processes both cement plants and power plants.
- 2. Water from surface water reservoirs and wastewater within the plants consists of:
  - 2.1 A reservoir of 180,000 cubic meters for rainwater that falls on the plant area.
  - 2.2 A reservoir of 1,5000,000 cubic meters for rainwater that falls in the mine area and nearby areas.
  - 2.3 A reservoir of 1,000,000 cubic meters by TPI Polene Public Company Limited to be a reserve water source for the Company as well as to prevent impacts on the water consumption of people in nearby areas. Water from the surface water reservoirs will be pumped together with water from the Pa Sak River to improve its quality before being sent to cement plants and power plants and is also a reserve water storage reservoir for use in the dry season in cases where the amount of water from the Pa Sak River is insufficient for industrial consumption.

In addition, TPI Polene Group also uses groundwater for producing drinking water for sale and drinking within the plants. The approach that TPI Polene Group has followed is to reduce the use of water resources from natural rivers by building surface water reservoirs for use in cement plants and power plants to prevent impacts on the water consumption of people in nearby areas. Therefore, the Company undertakes the following actions:

• Water pumping from the Pa Sak River is controlled by the Saraburi Provincial Irrigation Project Office. The Office will issue a license for the Company to pump water not exceeding 1,000,000 cubic meters per month. The Company is required to prepare a monthly report summarizing the amount of water pumped from the Pa Sak River to the Saraburi Provincial Irrigation Project Office. In addition, the Office will arrange for staff to check the meters to check the volume of water pumped from the Company's Pa Sak River on a monthly basis. (GRI 303-1)

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- Since the Pa Sak River is used by many sectors such as agriculture, industry, commerce, and households, water use must be controlled and allocated. The Saraburi Irrigation Project Office will control and allocate water use so that all sectors receive proper and fair water allocation. (GRI 303-1)
- The Company does not drain wastewater outside the plants but has wastewater collecting reservoirs for reuse within the plants. However, the Company arranges a monthly effluent quality analysis. (GRI 303-2)

In addition, TPI Polene Group complies with the 3Rs (Reduce, Reuse, Recycle) principle by increasing the efficiency of water use, including reducing water consumption in the production process and returning wastewater from the office through the treatment system and reusing it along with checking the clear reservoirs and the wastewater reservoirs, as well as the water obtained from wastewater treatment without draining it outside the plants (water treatment), such as watering plants and reusing.



Table: Amount of water drawn (only for power plants) (GRI 303-3)

(Unit: cubic meter)

	Amon	Amount of water in the areas	areas	Amount of v	Amount of water in the water stress areas	stress areas
Sources of water	2022	2023	2024	2022	2023	2024
Surface water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids $> 1,000~{ m mg/L}$	0	0	0	N/A	N/A	N/A
Ground water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids $> 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Sea water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Process water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	396,322	383,461	380,648	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Water from external sources (tap water) produced by TPI Polene	ne					
Public Company						
Water with total dissolved solids ≤ 1,000 mg/L	9,068,317	8,162,450	7,921,372	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Total amount of water withdrawn						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	9,464,639	8,545,911	8,302,020	N/A	N/A	N/A
Water with total dissolved solids $> 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A

Note: No water from the water stress areas

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Table: Amount of wastewater discharge (GRI 303-4)

						(Unit : cubic meter)
	Amou	Amount of water in the areas	areas	Amount of w	Amount of water in the water stress areas	stress areas
Drainage of wastewater by the discharged water source	2022	2023	2024	2022	2023	2024
Surface water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Ground water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Sea water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Water sent to other organizations outside						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Total amount of wastewater discharged						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A

Note: No water discharged to the water stress areas

Table: Wastewater Discharge Volume (GRI 303-4)

Drainage of wastewater by the discharged water source						
Drainage of wastewater by the discharged water source	Amor	Amount of water in the areas	areas	Amount of v	Amount of water in the water stress areas	r stress areas
	2022	2023	2567	2022	2023	2024
Ocean total Discharge						
Water with total dissolved solids ≤ 1,000 mg/L	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Surface Discharge						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids $> 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Subsurface Discharge						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Discharge of Untreated Water						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A
Total amount of wastewater discharged						
Water with total dissolved solids $\leq 1,000 \text{ mg/L}$	0	0	0	N/A	N/A	N/A
Water with total dissolved solids > 1,000 mg/L	0	0	0	N/A	N/A	N/A

Note: No water discharged to the water stress areas

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Table: Substances rated for environmental impact requiring discharge water treatment (GRI 303-4)

Substances classified as having	Criteria under Notification of	M	easured valu	ıe
an environmental impact requiring discharge water treatment	the Ministry of Industry*	Measured value	2566	2567
рН	5.5 – 9.0	8.13	8.3	7.6
TDS	< 3000	560	587	759
SS	< 50	16.65	20.7	9.7
BOD	< 20	2.3	4.5	4
COD	< 120	29.2	24.6	<25
Oil and Grease	< 5	ND	ND	<3

Note: The measurement value is referring to the standard according to the Notification of the Ministry of Industry on Factory Effluent Drainage Control Standards B.E. 2560

# Table: Water consumption (limited to power plants) (GRI 303-5)

(Unit: cubic meter)

Water use at major operating sites	Amount	of water in	the area	Amount o	f water in wa	ater stress
	2022	2023	2024	2022	2023	2024
Total water consumption	9,464,639	8,545,911	8,302,020	N/A	N/A	N/A
Total amount of water stored in the TPIPL areas	2,680,000	2,680,000	2,680,000	N/A	N/A	N/A
Total amount of water recycled	396,322	383,461	380,648	N/A	N/A	N/A
Total amount of water recycled (per month)	33,026.83	31,955.08	31,720.66	N/A	N/A	N/A
Percentage of water recycled	4.19	4.49	4.59	N/A	N/A	N/A

Note: No water from the water stress areas

## **Water Supply Consumption of Power Plant**

Water Supply Consumption	Unit	2022	2023	2024
Average Water Usage Rate per Unit of Electricity	Litres/kWh	4.41	3.64	3.23
Production				
Actual water supply consumption	cubic meter	9,068,317	8,162,450	7,921,372
Total amount of water recycled	cubic meter	396,322	383,461	380,648
Total water consumption	cubic meter	9,464,639	8,545,911	8,302,020
Water supply expense	million baht	274.47	240.34	235.82

 ${\tt Note:}\ \ {\tt Water supply expense was collected from actual payment of water supply in each cycle.}$ 

## **Performance Results**

In 2024, the Company used a total of 8,302,020 cubic meters of water, consisting of 7,921,372 cubic meters of tap water and 380,648 cubic meters of treated water from the power generation process for reuse. The Company reduced tap water usage by 241,078 cubic meters compared to 2023 and, combined with the reuse of 380,648 cubic meters of wastewater from the power generation process, achieved a total water reduction of 621,726 cubic meters per year.

This treatment and reuse are carried out through an RO water quality treatment system, resulting in an average reduction of 31,720.67 cubic meters of water usage per month, which aligns with the target of reusing no less than 30,000 cubic meters of wastewater per month.

Additionally, the rate of water reuse in the power generation process increased to 4.59% of total water consumption in 2024, up from 4.49% in 2023. The tap water consumption rate per unit of power generation decreased to 3.23 liters/kWh, down from 3.64 liters/kWh in 2023.

## **Guidelines for Measuring Effectiveness Against Established Goals**

TPI Polene Power Public Company Limited has established objectives and goals for water management. To ensure that operations align with these objectives and goals within the ISO 14001 management system, the Company has formed a working group responsible for overseeing operations related to ISO 9001, ISO 14001, ISO 45001, ISO 17025, and ISO 50001 management systems on a monthly basis. This group evaluates operational trends monthly to facilitate improvements or address issues that arise during operations, aiming to achieve the established goals.

## • Lessons Learned from Water Operations

TPI Polene Group has recognized the importance of internal water management to achieve the most cost-effective use of water within the community. The water source for the Company's use will be provided by TPI Polene Public Company Limited, which has raw water sources from two main sources, namely the Pa Sak River and water from surface water reservoirs, as well as wastewater within the factory. The Company has managed it by using raw water from both sources in the production process in a cost-effective manner. Looking at the amount of water from exeternal sources (tap water) produced by TPI Polene Public Company Limited in 2024, the amount has decreased compared to 2023.

## • Engagement with Stakeholders in Water Management

The Company has managed according to the ISO 14001 system, engagement with stakeholders is one of the important requirements in the ISO 14001 system, which is understanding the needs and expectations of stakeholders. For this reason, the Company's business operations do not affect the community's water use. Therefore, the Company has built a pond to collect rainwater for use in the production process. During the summer, the natural water source has a low amount of water, up to 2,680,000 cubic meters, and the Company does not drain waste water outside the factory. The Company will have wastewater collection ponds to reuse wastewater within the factory.

## · Planning for Future Improvements in Water Management

## Guidelines and Measures for Managing Water Resource Risks in Power Plants

- 1. Each power plant requires water producers and distributors to provide reserve water and emergency water sources to support operations during periods of drought or water shortages, ensuring sufficient water for the production process.
- 2. A reservoir or water storage system will be provided to store water for use within the project for at least 10 days.
- 3. A water quality improvement system will be installed prior to water entry into the system to ensure quality control.
- 4. Water is recirculated in the cooling system for the maximum number of cycles to reduce raw water withdrawal for the production process. The goal is to increase the number of cycles from 2.5 to 6 cycles by 2025.
- 5. The use of recycled water is maximized within the project, including the reuse of water from the RO treatment system in the production process. Additionally, rainwater or treated water from the production process is used for purposes such as machinery washing, equipment cleaning, and plant watering.
- The condition of water pipes is regularly inspected to prevent leaks and minimize water loss.



# 4. Waste Management (GRI 3-3)

The Company's business plays an important role in efficiently disposing of various wastes in certain areas used to produce fuel. It is an innovative business that reuses waste to benefit, helps communities to reduce the amount of waste which is a national problem, and reduces the waste disposal process of other government agencies and private sectors which is indirect energy savings.

However, conversely, the Company's electricity production process also results in the generation of substantial amounts of industrial waste. If such industrial waste is not managed and disposed of properly, it can lead to environmental and community impacts, as well as affect the Company's business, including the possibility of having the Company's license revoked for non-compliance with legal waste management regulations. Therefore, the Company places significant emphasis on the efficient and lawful management of waste.

## **Operational Goals**

# Short-term Goals within 5 years Use of industrial waste ≥ 95% of the amount of industrial waste generated each year Reduce hazardous waste by at least 10% per year compared to the base year of 2022. Reduce non-hazardous waste by at least 10% per year compared to the base year of 2022. Reduce non-hazardous waste by at least 10% per year compared to the base year of 2022.

# Management Guidelines (GRI 306-1) (GRI 306-2)

The Company is committed to operating in accordance with the "Zero Waste" guidelines and complies with the policy by controlling, supervising, and developing several processes to ensure that the emission rate from the Company's operations is lower than the maximum emission threshold allowed by the Department of Industrial Works. The Company also periodically controls the quality of discharged waste for monitoring and mitigating environmental impacts to ensure compliance with standard requirements. Therefore, it can be said that the Company strictly complies with the emission and discharge requirements.

The Company systematically manages garbage and waste in business processes according to the 3R principle (Reduce, Reuse, Recycle) by managing waste generated from power plants and utilizing them for maximum benefit such as the use of all heavy ash and fly ash as a substitute raw material at the cement plants of TPI Polene Pcl.

## Processes to collect and verify information related to waste:

- Industrial waste management must comply with the Notification of the Ministry of Industry on Disposal of Sewage or Unusable Materials, B.E. 2548.
- 2. Use of industrial waste, such as alternative fuels, alternative materials, recycling, or disposal requires approval from the Department of Industrial Works and provides details of waste, disposal method, weight, and disposal agent.
- 3. Use of industrial waste, such as alternative fuels, alternative materials, recycling, or disposal requires shipping documents every time that is transported for use as legal evidence.
- 4. Prepare an account to collect information and control the weight of industrial waste utilized, such as alternative fuels, and alternative materials for recycling or disposal.

## Performance

In 2024, the Company reported a reduction in the volume of waste by 16.86%, in comparison to the year 2022 (base year). However The volume of waste disposal, both hazardous and non-hazardous, exceeded the initially set objectives for waste reduction.

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This achievement involved the beneficial reuse of industrial residues, both hazardous and non-hazardous, originating from manufacturing processes, as alternative energy sources, materials, and for recycling purposes, amounting to a total of 16,383.13 tons, which represents 100% of the generated industrial waste.

Table: Amount of waste and waste management (only for power plants) (GRI 306-3) (GRI 306-4) (GRI 306-5)

(Unit: Ton)

Waste and waste management	2022	2023	2024
1. Total amount of waste classified by type of wast	e		
-Hazardous waste	24.26	2.36	0
-Non-hazardous waste	19,682.40	13,188.08	16,383.13
Total waste	19,706.66	13,190.44	16,383.13
2. Utilization*			
Hazardous waste			
-Alternative fuel	24.26	2.36	0
-Substitute material	0	0	0
-Recycle	12.89	0	0
Non-hazardous waste			
-Alternative fuel	99.81	150.01	69.82
-Substitute material	17,355.38	11,528.87	16,150.78
-Recycle	2,227.21	1,509.20	162.53
Total amount of waste for utilization	19,706.66	13,190.44	16,383.13
3. Disposal *			
Hazardous waste	0	0	0
Non-hazardous waste	0	0	0
Total amount of disposal waste	0	0	0

Note: \* Exploitation and disposal occurs within the physical scope or control and management of the Company (Onsite).



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# **06 Community and Social Development**





Community and social contributions
Baht 38.22 million

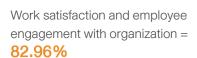
Lost Time Incident Rate (LTIR)

1.22 and 0, respectively

**Zero** Work-related deaths of employees and contractors



1,920,000
accident-free work hours
12.94%
for employees
(increase compared to 2023)





**Zero** Occupational illness and disease rates to be recorded in total **1** million hours worked

Employee Turnover (Turnover rate) = 1.91%

Disposed of **4,973.71** tons of non-hazardous industrial waste, utilizing them as refuse-derived fuel.



## **Community and Social Development Management Policy**

The Company prioritizes community and social development, thus establishing policies and practices in alignment with laws, regulations, and guidelines that comply with social and community management. This commitment extends to the respect for human rights and fair treatment of all stakeholders throughout the Company's value chain including employees, partners, clients, and the community, integrating responsibility towards all stakeholders across the business value chain.

The Company has implemented a policy to establish a socially responsible organization, emphasizing on balancing stakeholder involvement by nurturing an adaptable and learning-oriented workforce. This initiative ensures the organization can effectively respond to its own requirements as well as those of society. In addition, it is imperative to prioritize the health and safety of employees, along with environmental stewardship to ensure business operations are conducive to environmental sustainability. This strategy underlines the concept of creating a socially responsible organization that offers sustainable benefits to both the organization and the community.

In 2024, the Company identified two key sustainability concerns in the social dimension as follows:

- 1. Occupational Health and Safety
- 2. Community and Social development

#### **Code of Conduct**





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

## **International 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-Fraud and Corruption Policy**





http://www.tpipolenepower.co.th/index.php/th/th-aboutus/pdpa-2

# 1. Occupational Health and Safety (GRI 3-3)

A good occupational health and safety management system is a fundamental responsibility related to operations in the Company's area and all related work areas. The Company is committed and adheres to and strictly complies with the requirements for safety and occupational health in the workplace, including assessing risks from work in all business processes, as well as instilling and building awareness of safety in the work of employees and those involved to create a culture of safety in the workplace in order to prevent and reduce the loss that may occur to life, property, including the impact that may occur on surrounding communities and the environment. The Company aims to be an organization with zero accidents.

## **Operational Goals**

	Goal 2024	Performance Results in 2024	Goal 2025	Goal 2030
The number of fatalities resulting from work-related injuries among employees and business partners is zero.	0 case	0 case	0 case	0 case
The rate of high-impact work-related injuries among employees, business partners, and contractors is zero.	0 case / 1 million	0 case / 1 million	0 case / 1 million	0 case / 1 million
	working hours	working hours	working hours	working hours
The occupational disease morbidity rate is zero.	0 case / 1 million	0 case / 1 million	0 case / 1 million	0 case / 1 million
	working hours	working hours	working hours	working hours
Lost time incident rate for employees	< 1.25 cases / 1 million working hours		< 1 case / 1 million working hours	0 case / 1 million working hours
Lost time incident rates for business partners and contractors	0 case / 1 million	0 case / 1 million	0 case / 1 million	0 case / 1 million
	working hours	working hours	working hours	working hours

# Management guidelines (GRI 403-1)

The Company has set a policy and guidelines related to occupational health, safety, and good working environment, covering employees, operators, contractors, and subcontractors, including communities and stakeholders with the Company's operational activities so that everyone will have a good and safe quality of life, no accidents causing serious injury to death or illness morbidity work, with operations under the policy on occupational health, safety, and environment, including requirements for operating guidelines that comply with the ISO45001 occupational health and safety management system with the following guidelines:



Assess risks and risk management guidelines for occupational health, safety, and working environment covering all work processes that may affect communities, society, and the environment, including meetings to discuss, supervise and monitor the operations regularly.



Prepare a safety manual for operations and supervise the operation in accordance with the manual and operating procedures to ensure safety.



Report and investigate accidents, and incidents including the determination of solutions and being careful to prevent repeated accidents.



Supervise operations according to the laws on safety, occupational health, and working environment and other related regulations as well as supervising operators, third parties, and those involved in the work area to strictly comply with the rules and regulations.



Supervise the working environment and provide personal protective equipment for employees who use it in performing duties in accordance with the laws.



Be prepared to respond to emergencies, including business continuity management.



Communicate policies, instill consciousness, create a work culture, develop skills and knowledge, and organize activities to promote safety, occupational health, and a good working environment.

# Guidelines for risk assessment incidence investigation and risk management in occupational safety, health, and working environment (GRI 403-2)

The Company has established a safety risk assessment process, occupational health, and working environment in accordance with the ISO45001 occupational health and safety management system by allowing workers who own the risk to analyze their own job characteristics and other related parties such as third parties and contractors to identify hazards, assess opportunities and impacts that may occur from operations as well as risk prioritization, supervision and follow up on operations to be in line with plans and goals.

Elimination

Substitution

Engineering Control

Management Control

PPE

Tasks with an Acceptable Level of Risk

## **Working Environment Control**

- Employees and related parties wear personal protective equipment to prevent injuries and accidents at work.
- Put signs and symbols indicating hazards in the work areas.
- Regularly measure and assess the working environment with measurement values in accordance with the law, such as air quality, noise level, and light intensity.

## Supervision

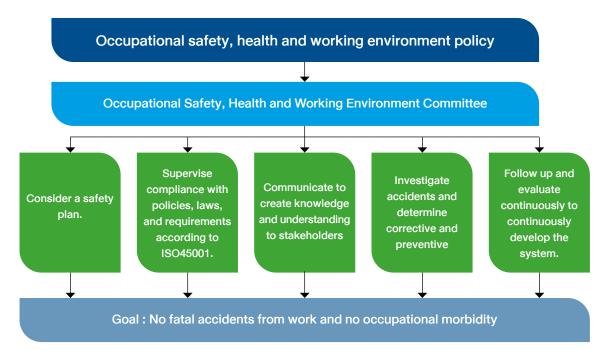
- Define rules and regulations for operations covering the operation of employees, third parties, and stakeholders working in the areas.
- Safety officers, area owners and all employees are responsible for supervising the implementation of the prescribed safety measures and guidelines, such as:
  - Training on safety and related regulations to all contractors before entering the work areas.
  - Application for permission to enter the operational area must be approved according to factory procedures.
  - Contractors must have a supervisor with safety knowledge who can assess the dangers that may arise from work, are responsible for controlling and supervising both general work and work that requires specific skills.
  - Risky work requires a work permit and strictly complies with the requirements for each work permit.

## Reporting and Investigation

- Accidents or abnormal incidents must be reported and recorded systematically, both in the production process and near-miss incidents.
- Employees who witnesses must report
  the incident to their supervisors and
  safety officers within 24 hours. (It is
  the duty of all employees and serves
  as a criterion for evaluating safety
  results).
- Appoint a working group to investigate accidents or incidents and to investigate root causes using the principles of Why-Why-Analysis to lead to the determination of corrective measures, prevention, and monitoring of corrective actions.
- Continuously implement improvements according to the established preventive measures.
- Develop learning materials from accidents for employees and contractors through the Company's media to ensure the most efficient and effective prevention.

## Safety, Occupational Health and Environment Management (GRI 403-4)

The Company has appointed a Safety, Occupational Health and Environment Committee, consisting of executives and safety officers at the professional level of the Company responsible for managing safety, occupational health and working environment to meet the requirements of ISO45001 occupational health and safety management standards system and related safety laws.



The Department of Occupational Health and Environment has been established to coordinate and monitor the operations of safety and the environment of all plants in compliance with relevant laws and regulations, policies, plans, and goals set by the Company, including risk assessment and management Preparation of impact assessment reports on safety, occupational health, and environment, as well as performance reports to the Occupational Health, Safety and Environment Committee for acknowledgment on a regular basis.

As well as the appointment of the Safety, Occupational Health and Environment Committee in each plant, which is in accordance with the Ministerial Regulation on Occupational Safety, Health and Working Environment Management B.E. 2549, consisting of representatives from employees at the operational level not less than 50% of the entire committee, whereby the representatives of the employees at the operational level are elected separately according to their line of work so that there are representatives of employees from all lines of work, which is scheduled to hold a meeting at least once a month, responsible for receiving information from employees in each line through representatives and notifying news, along with following up on the progress of operations and plans for future operations, including development, improvement, promotion, and creation of knowledge, in order to instill a culture and develop skills and knowledge in occupational health and safety for employees, contractors, and those who come to work in the plant areas such as training to develop knowledge of safety and working environment, organizing weekly activities on safety and environment, training on safety at work, basic firefighting and evacuation drills, training in first aid and basic life support, CPR & AED, participating in safety networks in campaigning and organizing safety activities.

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# Role and Duties of Occupational Health and Safety Committee in the Workplace in Supervising and Overseeing Occupational Health and Safety to Ensure a Safe and Healthy Work Environment.

- To develop a safety, occupational health, and working environment policy for the business and submit it to the Board of Directors for approval.
- 2) To establish guidelines for preventing and reducing accidents, hazards, illnesses, or suffering resulting from employees' work or unsafe working conditions, and to submit them to the Board of Directors.
- 3) To report and suggest measures or guidelines for improving working conditions and the working environment to ensure compliance with occupational safety laws. Submit these recommendations to the Board of Directors to ensure the safety of employees, contractors, and external parties who work or use services at the business premises.
- 4) To promote and support workplace safety activities within the business.
- 5) To consider the manual on workplace safety, occupational health, and working environment and provide recommendations to the Board of Directors.
- 6) To conduct surveys on workplace safety operations and report the results, including accident statistics, at each Safety Committee meeting.
- 7) To consider training projects or plans related to occupational safety, including those covering the roles and responsibilities of employees, supervisors, executives, employers, and personnel at all levels, and to provide recommendations to the Board of Directors.
- 8) To establish a system that requires all employees, at all levels, to report unsafe working conditions to the Board of Directors.
- 9) To hold monthly Safety Committee meetings to monitor progress toward safety goals and present updates to the Board of Directors.

# Occupational health and safety services and promoting employee health (GRI 403-3) (GRI 403-6)

The Company provides services that promote a safety culture within the organization that covers service and promotes good health in the workplace such as:

- Infirmary within the workplace where there are doctors and nurses on duty to give advice on illnesses and first aid in case of injuries to employees and contractors.
- Employee health check-ups since starting work according to the risk factors such as a hearing test and pulmonary function tests Electrocardiogram (EKG) in case of working in a confined space.
- Annual health check-ups, both general health check-ups and health check-ups according to occupational health risk factors, with the Company's occupational medicine physicians and occupational health professionals to jointly determine the health checklist of workers from factors inside and outside the workplace. If an employee has an abnormal health check-up, he/she must visit a doctor and receive continuous health care advice. There are additional checklists according to the risk of age groups, such as lipid tests (Total Cholesterol, LDL, HDL, Triglycerides) in the employee health check-up program to cover diseases that may be caused by daily life and for employees to continuously monitor their health. In 2024, employees and business partners/contractors received their annual health check-ups from Medical Line Lab Co., Ltd. between August 21 and 30, 2024, with Dr. Pichai Sampathanukul serving as the occupational health physician.
- Determine medical expenses welfare (OPD) for employees, parents, spouses, and legal children.
- Determine additional welfare to support workers in accessing medical services for non-work related cases such as basic medical examination and treatment and emergency treatment at the Company's infirmary for employees and contractors, including annual health check-ups, influenza and COVID vaccinations for employees.
- Promote employee participation in improving and developing health and safety in the workplace by organizing activities
  or mechanisms where employees can play an active role. This includes expressing opinions and suggesting solutions to
  safety issues within the organization through various channels, such as Safety Web Application, Line Group, and others.
- The Occupational Health and Safety Committee holds meetings or discussions with employee representatives to consult on developments and improvements in workplace health and safety. This includes gathering employee suggestions and collaboratively addressing potential problems or risks on a monthly basis.

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• Promote a safety-focused organizational culture and encourage cooperations among workers, personnel at all levels, and executives. This includes creating shared safety values and a clear safety culture of "Stop, Report, Wait" to achieve the common goal of reducing occupational hazards, accidents, and illnesses.

## Occupational Health and Safety Employee and suppliers /contractors Training $^{(GRI\ 403-5)}$

The Company established criteria for determining training courses in occupational health, safety, fire prevention, and suppression that is necessary for employees and suppliers /contractors that are suitable for job positions, types of work or risky activities to develop knowledge, competence, and understanding of what may be dangerous and cause accidents, how to prevent, and control hazards while working, to be able to perform assigned duties safely by requiring assessments and storing training records.

## **Employee training history**

Training Course Topics	Number of employees trainees (persons)	
	2023	2024
Safety, occupational health and working environment for general employees and new employees	11	785
Occupational and environmental diseases	11	0
Primary fire fighting	11	0
Review of working in confined spaces	221	0
Training or review of crane work	80	46
Radiation safety	10	0
Risk issues and safe working techniques	11	68
Environmental issues	11	159
Total	366	1,058

## Training history of suppliers /contractors

Training Course Topics	Number of suppliers /contractors trainees(persons)	
	2023	2024
Safety, occupational health and working environment for general employees and new employees	53	71
Occupational and environmental diseases	0	0
Primary fire fighting	0	0
Review of working in confined spaces	0	0
Training or review of crane work	0	0
Radiation safety	0	0
Risk issues and safe working techniques	53	71
Environmental issues	53	71
Total	159	213

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#### **Project Benefits**

Employees and suppliers /contractors who come to work at the Company are required to understand the contents of the safety curriculum related to their own work conditions, especially the risks associated with their works, and be able to deal with those risks and cope with emergency situations that may occur. This is aimed at reducing the severity of impacts on people, property, production, and the environment. Consequently, each function is prepared to efficiently handle emergencies, ensuring continuous business operations.

This resulted in an improvement in the Company's safety performance in 2024 compared to 2023, with an Lost time Incident Rate (ITIR) of 1.22 per million hours of operation, a decrease of 0.09 from 2023. In 2024, there were 1,920,000 hours of work without lost-time accidents, an increase of 219,984 hours compared to 2023. Additionally, the total records of sickness and occupational diseases among employees and suppliers /contractors were Zero. Moreover, organizing training for such suppliers /contractors is also considered an activity to develop sustainable business operations with suppliers /contractors.



# Emergency Response Preparedness (GRI 403-7)

The Company established an emergency response plan whereby every plant is required to prepare an emergency response plan which clearly defines roles, responsibilities, and operational procedures, as well as requiring rehearsals, annual emergency responses such as fire, chemical leakage, and boiler explosion. In this regard, there must be an assessment and rehearsal of such an emergency plan in order to apply suggestions to improve the efficiency of emergency response operations. The Company also provides training to add expertise to employees who are responsible for responding to emergencies, such as advanced firefighting training, chemical leakage prevention, and emergency management training.

#### **Performance**

The Company set criteria for measuring and evaluating work in occupational safety, health and working environment by considering the rate of accidents from work, the number of safe working hours, the rate of fatal work-related accidents and the number of occupational morbidity or disease, with 2024 performance as follows:

Table: Information of Employees and Workers under the Company's Occupational Health and Safety Management System (GRI 403-8)

	Number (persons)	Percent		
Employees and workers of establishments controlled or supervised by the	ne organization			
Employees	1,000	100		
Workers	117	100		
Employees and workers of establishments controlled or supervised by the organization (and monitored by the				
organization).				
Employees	401	40.10		
Workers	50	42.74		

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				Number (persons)	Percent
Empl	oyees and	workers o	of establishments controlled or supervised by th	ne organization (and m	onitored by the
outsi	de organiz	ation).			
Employees 105 10.5				10.5	
Worke	ers			33	28.21
Note :	Employee	means	personnel of the Company.		
	Worker	means	personnel of other establishments controlled or supervised by the C	Company under ISO 45001 standa	rd.

Table: Establishments that have received ISO 45001 certification for the Company's occupational health and safety management system. (GRI 403-8)

	Number (persons)	Percent		
Establishments controlled or supervised by t	he organization			
Power plants	532	100		
Fuel Production plant from solid waste	372	100		
Head Office	96	100		
Total	1,000	100		
Establishments controlled or supervised by the organization (a	nd monitored by the or	ganization).		
Power plants	532	100		
Fuel Production plant from solid waste	372	100		
Head Office	96	100		
Total	1,000	100		
Establishments controlled or supervised by the organization (and monitored by the outside organization).				
Power plants	250	46.99		
Fuel Production plant from solid waste	0	0		
Head Office	0	0		
Total	250	25.00		

Table : Work-related Injuries and Health Problems  $^{\rm (GRI\,403-9)\,(GRI\,403-10)}$ 

Performance	2022	2023	2024
Employee Mortality Rate (people / 1 million hours of operation)	0.00	0.00	0.00
Mortality Rate of Business Partners (people/ 1 million hours of operation)	0.00	0.00	0.00
Mortality Rate of Contractors (people / 1 million hours of operation)	0.00	0.00	0.00
Number of employee (people)	986	993	1,000
Number of supplier (people)	26	26	27
Number of contactor (people)	58	58	90
Number of employee fatalities (cases)	0	0	0
Number of business partner fatalities (cases)	0	0	0
Number of contractor fatalities (cases)	0	0	0
Number of work-related contractor fatalities (cases)	0	0	0
Rate of high-impact work-related injuries among employees (people / 1	0.00	0.00	0.00
million hours of operation)			

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Performance	2022	2023	2024
Rate of high-impact work-related injuries of contractors (people / 1 million	0.00	0.00	0.00
hours of operation)			
Rate of high-impact work-related injuries of business partners (people /	0.00	0.00	0.00
1 million hours of operation)			
Number of employees who sustained high-impact work-related injuries (cases)  Number of business partners who sustained high-impact work-related injuries (cases)		0	0
Number of business partners who sustained high-impact work-related injuries (cases)	0	0	0
Number of contractors who sustained high-impact work-related injuries (cases)	0	0	0
Injury Frequency Rate (IFR) of Employees	1.77	1.31	1.62
(Number of times/1 million working hours)			
Injury Frequency Rate (IFR) of Business Partners	0.00	0.00	0.00
(Number of times/1 million working hours)			
Injury Frequency Rate (IFR) of Contractors	0.00	0.00	0.00
(Number of times/1 million working hours)			
Lost Time incident Rate (LTIR) of Employees	1.77	1.31	1.22
(Number of times/1 million working hours)			
Lost Time incident Rate (LTIR) of Business Partners	0.00	0.00	0.00
(Number of times/1 million working hours)			
Lost Time incident Rate (LTIR) of Contractors	0.00	0.00	0.00
(Number of times/1 million working hours)			
Occupational Disease Incidence Rate among Employees	0.00	0.00	0.00
Occupational Disease Incidence Rate of Business Partners	0.00	0.00	0.00
Occupational Disease Incidence Rate of Contractors	0.00	0.00	0.00
Working Hours without Lost Time Accident in case of Employees	1,665,945	1,700,016	1,920,000
Working Hours without Lost Time Accident in case of Business Partners	59,904	119,808	182,016
Working Hours without Lost Time Accident in case of Contractors	133,632	267,264	667,872
Employee Working Hours	2,271,744	2,287,872	2,458,649
Working Hours of Business Partners	59,904	59,904	62,208
Working Hours of Contractors	133,632	133,632	218,592
No. of Level 3 Emergencies (including fires, chemical spills, explosions, and	0	0	0
building collapses)			
Note:			

1. The fatality rate per million working hours is the number of injuries resulting in death multiplied by the number of working hours, then divided by one million working hours.

Fatality rate per million working hours = 

number of injuries resulting in death x number of working hours

one million working hours

2. The high-impact work-related injury rate per million working hours is the number of work-related injuries resulting in more than 180 days off work or loss of a limb, multiplied by the number of working hours, then divided by one million working hours.

= umber of work-related injuries resulting in more than 180 days off work or loss of a limb x number of working hours

one million working hours

High-impact work-related injury rate

3.	Lost T	ime l	ncident Rate (LTIR) per million working hours is the number of lost time injuries multiplied by the number of working hours, then divided by one million working hours.
	ITIR	_	number of lost time injuries x number of working hours
	LIII	_	one million working hours

4. Injury Frequency Rate (IFR) per million working hours is the number of accidents multiplied by the number of working hours per year, then divided by one million working hours.

IFR = number of accidents x number of working hours
one million working hours

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Work-related injuries (GRI 403-9)

					Types of Injuries (/)	ıjuries (/)							
Fatality and injury statistics of employees and non-employees, but works and/or establishments are controlled by the organization.	Back and spine injuries	serutseri enoB	sunng)	Ear injuries (including tinnitus	Facial injuries (eye, nose, and jaw)	Loss of digits and limbs	Repetitive stress injuries	Sprains, strains, and tears (soft tissue injuries)	Foxic exposure	(IBT)) rejnuļui niesd Oi‡emusıT	Number of working hours	Number (people)	Death/injury rate (calculated based on 1,000,000 working hours)
Employee deaths and injuries													
Death from Work-Related Injuries	0	0	0	0	0	0	0	0	0	0		0	0
High Impact Work-Related Injuries (not including death)	0	0	0	0	0	0	0	0	0	0	2,458,649	0	0
Recordable work-related injuries	0	0	0	0	-	0	0	2	0	0		4	1.62
Deaths and injuries of non-employees but works and/or their establ	oloyees bu	t works and	d/or their e	stablishme	nts are reg	lishments are regulated by the organization.	he organiz	ation.					
Death from Work-Related Injuries	0	0	0	0	0	0	0	0	0	0		0	0
High Impact Work-Related Injuries (not including death)	0	0	0	0	0	0	0	0	0	0	280,800	0	0
Recordable work-related injuries	0	0	0	0	0	0	0	0	0	0		0	0

Note: - High-impact work-related injury means an occupational injury that results in death or injury resulting from a worker's inability to or unable to work or unable to expect fully recover to the pre-injury state within 6 months

<sup>-</sup> Recordable work-related health problems refer to an occupational injury, resulting in any of the following: death, absence from work, work restriction or transfer, medical treatment other than first aid, loss of consciousness, serious injury diagnosed by a physician or a licensed medical practitioner.

Work-related health problems (GRI 403-10)

	Type	Types of health problems (number)	ber)		
	Stress, depression or anxiety	Musculoskeletal disorders	Occupational lung disease	Number (people)	Rate of death (percentage)
Deaths and work-related health problems of employees	yees				
Death from work-related health problems	0	0	0	0	0
Recordable work-related health problems	0	0	0	0	0
Deaths and work-related health problems of non-employees, but works and/or their establishments are regulated by the organization.	nployees, but works and/or th	eir establishments are regula	ated by the organization.		
Death from work-related health problems	0	0	0	0	0
Recordable work-related health problems	0	0	0	0	0

Note: Recordable work-related health problems refer to poor health, resulting in any of the following: death, absence from work, work restriction or transfer, medical treatment other than first aid, loss of consciousness, serious injury diagnosed by a physician or a licensed medical practitioner.

Based on the above information, the Company has improved performance in occupational health and safety, with no fatalities, high-impact work-related injuries, or illnesses due to occupational diseases. Lost time Incident Rate: LTIR per million working hours in 2024 was 1.22, a decrease of 0.09 compared to 2023, and there were 1,920,000 working hours without lost-time accidents, an increase of 219,984 hours compared to 2023. The total occupational illness and disease rate required to be recorded among employees and contractors is zero cases.

#### • Guidelines for Measuring Effectiveness Against Established Goals

The Company has established objectives and goals for safety management in order to control operations according to the established objectives and goals. The Company has appointed an ISO45001 management system working group to monitor performance on a monthly basis and evaluate the tendency of operating results according to the plan each month, aiming to improve or resolve problems that occur during operations to achieve the set goals.

#### • Lessons Learned from Occupational Health and Safety Operations

The Company has improved and developed occupational health and safety operations to align with changes in the current occupational health and safety standard system, including the application of technology in operations, to reduce the chance of loss and prevent risk factors that may cause occupational diseases.

#### • Engagement with Stakeholders in Occupational Health and Safety Management

The Company has managed according to the ISO 45001 system. Engagement with stakeholders is one of the vital requirements in the ISO 45001 system; therefore, preventive measures have been put in place for both machinery and the working environment. Additionally, the Company has heightened awareness of dangers and occupational health and safety measures, and involves stakeholders in providing suggestions for setting up an occupational health and safety committee, holding an annual management system review meeting, and convening an annual general meeting of shareholders in order to improve and develop safety management to keep up with the times and legal requirements for the safety of stakeholders. The Company prioritizes participation in providing assistance and raising awareness of sustainable business operations among business partners by offering training on occupational health and safety for business partners or contractors.

#### • Planning for Future Improvements

To ensure that work safety meets the objectives and goals, the Company has implemented technology to enhance safety and efficiency. For example, the Company requests permission for dangerous work electronically, replacing paper-based processes, allowing executives to monitor the status of hazardous work in real time. In 2025, the Company will introduce Alpowered CCTV cameras to monitor the work of employees and contractors. If safety regulations are not followed, the Company will immediately notify Security Department to address unsafe work. CCTV cameras will also monitor entry and exit in hazardous areas. If an unauthorized person enters or attempts to enter, the Security Department will be notified to investigate and prevent unauthorized access.

Description	2022	2023	2024
Total number of contractors	84	84	117
Number of work-related fatalities involving contractors	0	0	0
Number of contractor fatalities	0	0	0





## 2. Community and Social Development (GRI 3-3)

The Company is committed to community and societal development by enhancing quality of life, continuously caring for the environment, and ensuring that the power industry coexists with communities in a supportive and sustainable manner. As a Thai power producer, the Company prioritizes environmentally friendly power generation and implements efficient waste management practices, directly addressing social issues.

In addition, the Company is aware of the potential impact on surrounding communities and prioritizes supporting local occupations to enhance their quality of life and create economic stability. These efforts contribute to sustainable development at both the corporate and social levels, benefiting Thailand in the long term.

## **Operational Goals**

### Participation in Community and Social Development

- No complaints or demands for remedies or compensation
- The employment rate for factory-area employees is set to exceed 50% of the Company's total new hires each year.

#### Management guidelines

Throughout the past operations, the Company has always taken into account the impact that may occur on society and communities, covering all sources of operations of the Company (100%) (GRI 413-1) due to the investment in each project of the Company is a large-scale project which may have risks at any stage with the potential to create both social and environmental impacts. The Company places importance on the impact assessment process based on the ability to respond to the needs or expectations of affected communities. The Company supports the local economy by providing employment in the communities where its plants are located, demonstrating its commitment to creating economic stability and promoting sustainable employment in the area.

# Methods or processes for evaluating the impacts on communities due to the organization's operations (GRI 413-2)

The Company has operated in accordance with relevant regulations by providing information and details of numerous projects that have been carried out transparently in order to obtain opinions and suggestions of the communities to be taken into account before and after the operation of the projects, as well as establishing a committee representing the sectors of the communities to participate in the operation of the Company in monitoring and proposing complaints or suggestions in order to communicate and resolve arising problems.

In addition, the Company has set up funds for the community which are additional voluntary funds that are not stipulated in the law, managed by community representatives.

The Company has also organized open house activities for community representatives, educational institutes, government agencies, or related private sectors to visit the management process and factories in order to give an opportunity to see the actual conditions and have the opportunity to communicate directly.

Learn more details at "Organization of CSR activities for communities in the area where the plants are located to listen to problems and solve the impacts on a regular basis" according to the diagram shown.

#### Establishment of a power plant fund to promote and support social responsibility activities

The Company has provided financial support by establishing funds with the objective of promoting the care of communities in the areas surrounding the Company's power plant operations for educational institutions, research institutes, academics, and community representatives, and the Company has participated in the implementation of the projects for the following purposes:

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#### 1. Health insurance fund for communities surrounding the power plant

For the benefit of being collateral for the treatment of illnesses of people in a radius of 5 kilometers around the projects in the event that the illness is caused by the operation of the projects, 1,000,000 baht will be deposited into the fund account in the first year and 500,000 baht in subsequent years every year. From the year 2019 to the end of 2024, the fund has accumulated a total amount of 3,533,779.06 baht.

# 2. Fund for research projects for community career development and resource conservation and restoration of nature and environment

To support research and development related to the conservation and restoration of natural resources and the environment, as well as the promotion of occupational capacity and community development, the Company allocates a budget of Baht 200,000 per project, with no fewer than 2 projects per year from 2019 to the end of 2024. The total accumulated fund amounts to Baht 2.466.800.

#### 3. Quality of medical equipment and personnel and public health research support budget

To support public health activities in the areas to promote and monitor health at the sub-district, district, and provincial levels, such as supporting the training of village health volunteers, supporting research budgets, monitoring health impacts, purchasing medical equipment, and supporting public health personnel, etc., with a fund of 300,000 baht each year. From the year 2019 to the end of 2024, the fund has accumulated a total amount of 8,093,723.80 baht.

#### 4. Occupational health and safety support budget

To support the increase of the hospital's potential, promote sub-district health and public health personnel, maintain the health of people in the areas by supporting medical supplies and equipment, annual training and practice from personnel in occupational health or hygiene or occupational science, with a fund of 300,000 baht each year. From the year 2019 to the end of 2024, the fund has accumulated a total amount of 356,273 baht.

#### 5. Biological resources support budget with operating budget of Baht 300,000 per year

Supporting forest restoration activities for communities and related agencies, with a focus on reforestation, reflects the organization's commitment to increasing green space in the area. In the future, the Company hopes that the operational area will serve as a "lung" to help absorb air pollution, provide a habitat for local wildlife, restore water sources, and offer a food source for communities. This initiative has been implemented through the Environmental Foundation for Life from 2019 until the end of 2024, with a total accumulated support budget of Baht 1,086,000.

## Performance

The Company hired 67 new employees in the factory area, accounting for 75.28% of all new hires, surpassing the set target. Additionally, the Company has received no complaints from the community or society.

# Social Activities (GRI 413-2)

The corporate social responsibility operations are divided into two main areas: Community Relations and Corporate CSR. In 2024, the Company and TPI Polene Group supported the budget for construction materials and healthcare products in TPI Polene Group, amounting to Baht 38,222,404.02 for the surrounding communities and society. The work was carried out concurrently, and can be summarized as follows:

#### (4.1) Community Relations

The Company has solid waste fuel production plants located in various communities. The Company has a proactive policy for every production unit to support hygiene and reduce the impact of epidemics, without waiting for the community to request assistance. The Company

(1) Strengthening communities to promote health, providing mobile medical unit services under the 'Annual Healthcare Project', offering public health examinations, chest X-ray examinations, complete blood counts, and eye examinations to people of Kaeng Khoi District, Muak Lek District, Saraburi Province.

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- (2) Promoting and enhancing the quality of life for Thai people, the Company has partnered with the 2nd National Blood Service Sector (Lopburi Province) and the Red Cross Society of Saraburi Province to organize blood donation activities. TPI Polene Group's executives, employees, and contractors joined in donating more than 240,000 cc of blood to assist patients in Saraburi and nearby provinces.
- (3) Project to Separate Soldi Waste in Exchange for Electricity for Community Development aims to provide knowledge on household solid waste separation, reducing solid waste volume within the community. This includes educating individuals on designing and creating products from recycled solid waste. By transforming solid waste into usable products, the community can generate income through product sales and by selling household solid waste to the Company for electricity generation. This initiative not only reduces environmental impact but also improves overall health and hygiene. Community members will convene to drive ongoing activities and create supplementary income opportunities for residents.
- (4) Supporting water filters and maintenance for basic community healthcare, ensuring access to clean drinking water for the people and promoting the local economy. This initiative targets 14 villages in the Kaeng Khoi and Muak Lek Districts of Saraburi Province, surrounding the factory.
- (5) The "TPI Sharing Kindness, Replacing Plastic Bags, Reducing Global Warming" project provides paper and cloth bags for medicine, donated by employees from both Saraburi factory and Head Office. A total of more than 2,700 bags were delivered to Saraburi Hospital for patients receiving services at the hospital's Outpatient Department, allowing them to take their medicine home from the designated service point in front of the dispensing room.

#### (4.2) Corporate CSR

Additionally, the Company also participates in improving the quality of life and promoting community involvement. In 2024, it engaged in various activities with the community, including the following significant activities:

#### **Society and Community Assistance Activities**

#### Community involvement and development

- Various agencies have received support through donations aimed at enhancing the quality of life for Thai people. For example, TPI Polene Public Company Limited, TPI Polene Power Public Company Limited, executives, employees, and their relatives jointly donated Baht 16,941,441 to the Mahidol Day Fund for 2024. The funds raised will support the renovation of the operating room and the 3rd, 4th, and 5th floors of the Syamindra Building, Siriraj Hospital. Additionally, part of the proceeds will be directed toward assisting underprivileged patients and funding seven medical devices for patient care through the ENT Clinic Project of Suranaree University of Technology Hospital, amounting to Baht 2,980,800. Further contributions include support for the AIDS and Infectious Disease Research Center, co-hosting the Kathin Ceremony under the Maha Kuson Kathin Project, assisting blind individuals across the country in gaining literacy and employment in 2024, and sponsoring the 24th Running Project of Prince of Songkla University (Hat Yai) to Nature in 2024. The donations also contributed to purchasing a sound system for Ban Nong Talum Puk School in Nakhon Ratchasima Province.
- The Company co-hosted the Maha Chula Kathin Ceremony at Wat Sri Don Moon in Chiang Mai Province; the Kathin Ceremony at Wat Ban Hin Lap in Saraburi Province; the Pha Pa Samakhi Ceremony at the Sataban Saengsawang Foundation under the patronage of HRH Princess Soamsawali Krom Muen Suddhanarinatha; the Royal Kathin Ceremony at Wat Lum Mahachai Chumphon in Rayong Province. The Company donated 172 tons of TPI cement products, 83 cubic meters of TPI dry concrete, TPI Nano Super Armor paint, and other materials to government agencies, schools, and temples for renovation and repair projects. These included contributions to Wat Maha That Wachiramongkol in Krabi Province for the construction of a Buddhist shrine and a pagoda as a religious site in Buddhism, featuring a 32-meter-high Buddha statue in the "attitude of world-opening" posture, as well as seating and beds for the temple. Additionally, the donation supported improvements to the landscape and multipurpose area for parking at Chana Police Station, facilitating access for visitors. It also contributed to pouring floors and roads and repairing school buildings in seven schools across Songkhla and Ubon Ratchathani Provinces.

In addition, the Company also participates in promoting and maintaining Buddhism in various areas, which includes supporting projects such as the Novice - Primary Root of Religious Successor Project at Rama IX Kanchanaphisek Temple, contributing to the dissemination of Dhamma through the Dharma Inspiration Channel at Weruwan Temple in Kanchanaburi Province, and supporting the spread of Buddhism on the World Buddhist Television Station of Thailand at Wat Yannawa (WBTV), among others.

The Company under TPI Polene Group have continuously supported natural resource and environmental conservation by collaborating with agencies and communities in Saraburi Province to organize various activities. These efforts include Muak Lek River Conservation Day at Chet Sao Noi Waterfall National Park in partnership with Muak Lek District, tree planting projects to restore forests and expand green spaces in collaboration with the Thap Kwang Research Station, Faculty of Forestry, Kasetsart University, and tree planting activities to honor His Majesty the King's 6th cycle birthday anniversary. Reforestation efforts have taken place in many areas across community forests, national forest reserves, and educational institutions, with more than 10,667 trees planted, covering a total area of 150 rai. These activities aim to create green spaces, reduce greenhouse gases and air pollution, prevent soil erosion, and restore biodiversity.





# 07 Corporate Governance



Proportion of independent directors **33.33%** 



Proportion of female directors 22.22%

No complaints of human rights violations (discrimination, child labor, illegal labor)

Suppliers acknowledge the Supplier Code of Conduct 97.85%



Improve the fuel feed system to increase combustion efficiency, reduce energy consumption by **2.9%** compared to 2023.

The power plant's overall machinery availability level (Availability - A) averages at 99.19%

Value of low-carbon goods Baht **7,354.61** million



Improve waste fuel quality to reduce moisture to 40-42%

No complaints of the security of customer data



Improve the alternative fuel supply system to reduce the use of burning coal by 2.8% compared to 2023.

ปรับปรงระบบป้อนเชื้อเพลิงเพื่อเพิ่มประสิทธิภาพการ เผาไหม้ลดการใช้พลังงานลง 2.9% เทียบกับปี 2566

Satisfaction of power plant customers and waste fuel customers are equal to 100% and 94.75%



The power plant's overall machinery performance level (Performance -P) averages

at 95.21%



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# **Economic and Corporate Governance Management Policy**

The Company is committed to operating under a sustainable development approach, focusing on efficient, reliable, and ready-to-use electricity generation, alongside continuous research and development of technology and innovation. The Company adheres to the principles of corporate governance under the good corporate governance, which comprehensively takes into account all stakeholders engagement, human rights, enabling the Company to grow alongside sustainable development.

The Company's 8 sustainability issues with high materiality in terms of the economy and corporate governance in 2024 are as follows:

- 1. Economic Performance & Indirect Economic Impacts
- 2. Research and Development
- 3. Technology, Innovation and Service
- 4. Electrical System Efficiency and the Availability and Reliability of the Electrical System
- 5. Anti-corruption
- 6. Procurement Practices
- 7. Risk and Crisis Management
- 8. Data Security and Customer Privacy

# 1. Economic Performance (GRI 3-3) and Indirect Economic Impacts

Creating economic value through an environmentally friendly power generation business model is the key to creating shared values between the Company and society to grow together sustainably and efficiently. In 2023, the Company formulated important business strategies such as strategies to increase revenue, improve electricity production efficiency to increase the maximum capacity utilization rate, increase the amount of electricity sold, and reduce production costs, and growth by expanding investment to generate good performance of the Company which leads to the distribution of income and benefits to all groups of stakeholders of the Company.

#### **Management Guidelines**

- Management of power purchase agreements for power plants with current power purchase agreements as there are three current power purchase agreements with the Electricity Generating Authority of Thailand and it is sold to the cement plants with different prices in each agreement. For example, a selling electricity price per unit for the 90 MW project has an adder included in the base electricity cost. Therefore, it plans to manage to sell electricity to the full agreement in this part. The second part is the electricity sales agreement with the cement plants, which has the second highest electricity rate, but the cost of coal-fired power generation is higher than that of waste-fired power plants and the 18 and 55 MW power sale contracts where the adder has already expired since the electricity tariff is based on the TOU electricity scheme, the price of electricity during the peak time will be higher than the off-peak period. Therefore, it is necessary to plan the operation of the power plants in order to maximize revenue in case of limited production due to boiler maintenance shutdown and plan to reduce electricity distribution during off-peak periods in case of being affected by coal fuel cost price for profit optimum with the Company.
- Increasing the amount of electricity production and distribution as the adder in the electricity agreements with PEA in 2022 starts to expire and the cost of coal prices has increased very high. The plans for major maintenance have resulted in a decrease in power generation and electricity sales. In 2023, the electricity rate has increased due to the increase in the variable FT electricity. Therefore, production planning in 2023 is to operate the power plants with more production capacity to generate more profit than in 2022.
- Reducing production costs, which means fuel costs, fuel efficiency in power generation, and maintenance costs, has organized a plan of action in order for business operations to establish a clear goal of reducing total production costs by at least 10% by:
  - Reducing fuel plants will be carried out to increase the proportion of municipal waste and low-quality sorting waste, which will reduce the overall raw material purchase cost.

- Using a higher proportion of low-quality waste fuels in order to reduce the cost of steam production per unit.

  The Company has implemented grate incinerators and boilers that support unsorted waste and low-quality waste, making it a management guideline to reduce fuel costs and power generation costs.
- Applying the combustion control system, if implemented, can increase the efficiency of power generation, expected to reduce the cost of power generation in AI-powered generating units by approximately 5%.
- Using waste to replace the use of coal has implemented a project for coal-fired boilers that can replace boiler 6 by completely eliminating coal-using waste, which has been completed in early 2023.
- Reducing coal consumption with alternative fuels from waste, wood, and other renewable fuels in boilers 8, which can reduce coal consumption by 10-15%.
- Maintenance costs by planning major maintenance shutdowns continuously from 2022, causing investment in major renovations of the boilers and allowing for reduced long-term maintenance costs for power plants and increased efficiency in power generation.

#### · Investment project to increase the volume of green electricity sales, totaling Baht 13,275 million

The Company has engaged in investment operations for the purpose of expanding production capacity and electricity sales contracts, 6 projects detailed as follows:

#### 1. Boiler Fuel Replacement Project for Power Plant, TG 8, with a capacity of 150 megawatts

On 27 April 2022, TPI Polene Power signed a contract to procure machinery and equipment, including construction and installation for three sets of RDF Boilers 160TPH, as part of the development plan for the power plant, TG 8. The objective is to transition from coal to waste fuel by 2022, with additional boilers currently being installed. The project has reached 25% completion and is slated for full operation using waste fuel by 2025. This transition will enable TPI Polene Power to generate a total of 440 megawatts of electricity, converting all plants to renewable energy power plants.

#### 2. Solar Farm Project (Zone 1 - 2)

The construction site, located in Kaeng Khoi District, Saraburi Province, features installed power on the ground for Phase 1, amounting to 61.226 megawatt peak or 52.20 megawatt AC, and Phase 2, amounting to 11.99 megawatt peak or 9.6 megawatt AC. The primary objective is to supply electricity to cement plants pf TPI polene, thereby supporting the increasing demand for renewable energy. It is anticipated to be completed, with electricity supplied to the distribution system by the end of 2024.

## 3. Solar Farm Project (Zone3)

The construction location is in Kaeng Khoi District, Saraburi Province, with an installed capacity of 11.9925 megawatts peak (9.6 MWac), designed to supply electricity to a cement factory and support the growing use of renewable energy. Currently under construction, the Company is also in the process of applying for the Factory Operation License (RorNgor.4). The Scheduled Commercial Operation Date (SCOD) is expected to be set for the third quarter of 2025.

## 4. Community Solid Waste Management and Handling Project in Ko Taeo Sub-district Municipality, Songkhla Province

Located in Mueang District, Songkhla Province, the project has the capacity to dispose of 500 tons of waste daily. Currently, it is in the process of installing a 9.95 megawatt generator with the intention of selling 7.92 megawatts of electricity to the Provincial Electricity Authority under a Power Purchase Agreement (PPA) already signed. The project has secured a construction permit and is currently under construction, with progress at approximately 65%. Anticipated completion is expected around the beginning of 2026, at which point electricity sales into the system will commence.

#### 5. Community Waste Fuel Power Plant at Mueang Mukdahan Municipality, Mukdahan Province

The Company participated in the bidding for a project to manage and process community waste into environmentally friendly, closed-system electrical energy in the city of Mukdahan, Mukdahan province. The project has an installed capacity of 9.9 megawatts and an electricity sales capacity of 8 megawatts. The Company was announced as the selected bidder and signed the project contract with the Mukdahan Municipality on December 21, 2023. Subsequently, on February 27, 2024, the Company successfully signed a power purchase agreement with the Provincial Electricity Authority, with progress at approximately 5%. Anticipated completion is expected around the beginning of 2026, at which point electricity sales into the system will commence.

#### 6. The Company participated in the bidding for a Community Waste Management Project

in Chiang Rai Province, converting waste into electricity, on October 25, 2024, with the highest offered electricity capacity of 8.00 megawatts. On November 20, 2024, the Company received a notification of the procurement result as the selected candidate, having met all qualifications and submitted a complete technical proposal. Additionally, the Company achieved the highest score for the community waste management and electricity generation project.

The Company has analyzed the operating results to find causes and solutions or improvements so that the Company can eliminate weaknesses in business operations as well as find opportunities to increase revenue and increase profitability by setting goals in each sub-unit, measuring effectiveness, and presenting information and communicating results to employees to stay informed and guidelines to operate in the same direction to be a mechanism for the implementation to achieve the Company's goals. It also looks for opportunities to expand according to the direction of Thailand's Power Development Plan (PDP) and seeks cooperation and business alliances to support the Company's growth.

# Performance in 2024 (GRI 201-1)

In 2024, the Company directly distributed economic value to stakeholder groups, creating a cumulative economic value of THB 743.94 million. The breakdown is as follows:

Economic Description	Million baht*
(A) Direct Economic Value Generated	
Revenues	10,747.32
(B) Direct Economic Value Distributed	
Operating costs	6,819.75
Employee wages and benefits	130.19
Payments to providers of capital	2,804.82
Payments to government	197.36
Community investments	51.26
Total	10,003.38
(C) Economic value retained (A-B)	743.94

Note : \* Based on the Company's separate financial statements

In this regard, the Company has established guidelines for operations related to the obligations of the benefit plans and employee retirement plans, who are key stakeholders and the main driving force of the organization  $^{(GRI\ 201-3)}$  consisting of :

- The Company contributes 3.0% of each employee's salary to the Provident Fund, and employees are required to contribute at least 3.0% of their salary. In May 2016, the Company started to contribute money to the Provident Fund and for the year ended December 31, 2024, the Company recognized expenses related to the Provident Fund in the amount of 10,062,603.50 baht, which covers 100% of employees who are subject to a contribution agreement.
- Retirement plan according to the work regulations of the Company, Section 9, Part 1, Clause 3) when the Company determines that employees who have reached the age of 60 and will retire from being an employee of the Company on January 1 of the next year while being employees with potential and wishing to continue their job, the Company may consider them to continue working with the approval of top executives. In 2024, there are 5 employees who have been considered from the employment-after-retirement program, working as permanent employees.
- At the end of 2024, the Company estimated employee benefit obligations and retirement plans of 137,724,886.20 baht and paid severance payments to employees under the Labor Protection Act B.E. 2541 and the Labor Protection Act (No. 7) B.E. 2562 in the total amount of 4,423,816 baht.

# Rights and benefits from investment promotion (GRI 201-4)

The Company has received investment promotion privileges under the Investment Promotion Act B.E. 2520 (as amended) from the Board of Investment under the conditions specified in the investment promotion certificate, power plants, waste fuel plants, and natural gas service stations (NGV), and received the key benefits from investment promotions as follows:

- Permission to own land to operate a business promoted as the Board of Investment deems appropriate;
- Exemption from import duty on machinery as approved by the Board of Investment;
- Exemption from corporate income tax from net profit derived from the promoted activity for 8 years from the first day the promoted business earns operating income;
- 50% reduction in the corporate income tax rate from the net profit from the regular rate for 5 years after the expiration date of the corporate income tax exemption period; and
- Exemption from withholding tax on dividends paid from the profit of the promoted business for 8 years.

As of December 31, 2024, the Company's investment promotion privileges for power plants, waste fuel plants, and natural gas (NGV) stations, with the total value of all support and promotion amounting to Baht 2,364 million, which can be summarized as follows:



Power Plants/Natural Gas Stations (NGV)	First month with earnings from the promoted business	End of full income tax exemption	50% reduction in the income tax rate has ended.
Waste-to-Energy Power Plant-60MW (TG5)	January 2015	January 2025	January 2030
Waste Heat Power Plant-30MW	January 2016	January 2024	None (1)
Waste-to-Energy Power Plant -70MW	May 2018	May 2026	None (1)
Coal-fired Power Plant-150MW	January 2019	January 2028	None (1)
Municipal Waste Power Plant, Songkhla Provincial 9.9 MW	being processed	-	-
Ground-mounted solar farm power plant project 61.226 MW zone 1&2	being processed	-	-
Ground-mounted solar farm power plant project 11.992 MW zone 3	being processed	-	-
solar roof power plant with a production capacit ofy 6.012 MW	being processed	-	-
Al-Driven Production Optimization Project	being processed	-	-
Machinery efficiency improvement project	August 2024	August 2027	-
Municipal Solid Waste Power Plant in Mukdahan Municipality 9.9 MW	Waiting Approval	-	-

Notes: (1) Not entitled to 50% reduction in the corporate income tax rate from the net profit from the regular rate for 5 years after the expiration of the corporate income tax exemption period.

In 2024, the Company received corporate tax exemption from BOI business in the amount of Baht 477.40 million.

# 2. Research and development( (GRI 3-3)

The Company has established a policy to support the creation of added value for municipal solid waste through waste-to-energy initiatives. However, the production of electricity from waste energy in Thailand still faces numerous limitations. Municipal waste in Thailand has different characteristics compared to countries that have successfully converted waste into energy. Additionally, challenges persist in waste management during the production process, as well as in the management of light ash and bottom ash generated from using garbage as fuel. These challenges aim to develop methods for reusing waste for maximum benefit, alongside research and development in other areas such as environmental management relevant to the communities surrounding the factory and the Company's stakeholders. Therefore, the Company continually prioritizes research and development of modern technology applicable in the context of Thailand to enhance efficiency in supplying stable electrical energy, promote sustainable development, reduce environmental impacts, and foster reliability within the surrounding community.

### **Operational Goals**

Short-term goals within 5 years		Long-term goals for more than 5 years
Develop machinery used in the power generation process	•	Encourage the use of research to bring economic, social,
• Develop utilization of heavy ash in power plants for		and environmental benefits
industrial and environmental utilization	•	Encourage the creation of both internal and external
• Research budget support for research agencies and		research units and outsources to increase both
educational institutes at least 2 projects per year		quantitatively and qualitatively

#### **Management Guidelines**

In addition, the Company has entered into a sales and service contract with TPI Polene PCL, thus receiving research and development services that enhance technology and expertise for the Company's personnel. TPI Polene Public Company Limited boasts a research and development team of more than 150 people.

The Company has jointly developed and supported research by assembling a team and hiring teachers from various universities in Thailand, including Chulalongkorn University, Suranaree University of Technology, and Kasetsart University. This support extends to research and development, product development, machinery development, and the advancement of various technologies for activities related to production and the environment, as well as providing training for the Company's personnel.

In addition, the Company provides funding to support research through the fund for community career development, environmental conservation, and rehabilitation projects. The aim is to encourage research conducted by researchers in educational institutions. This support serves as an extension and development of research results that can benefit both the Company and the public.

#### The Methodology for Monitoring the Effectiveness of Operations

The Company has followed up on the effectiveness of conducting research. The research report was submitted, and meetings were held with the research team to evaluate progress, acknowledge and participate in solving problems, as well as to plan continuous research to expand the scope or detail of the research. This ensures that various research efforts yield confident results at a level that can be used to expand into actual operations with relevant functions. It has been accepted as a practical guideline to use the research results obtained and methods to apply these results to the organization's policies, procedures, and the same industry.

# Performance (former EU8)

In 2024, the Company has supported research funding and dispatched its team members of the Company to participate in various research projects with the following topics.

#### • The Innovative Use of Bottom Ash Mixed Concrete on sea dome for Marine Habitat

The Innovative Use of Bottom Ash on Seadome for Marine Habitat of Prince of Songkla University by Asst. Prof. Payom Rattanamanee, research project leader and research team: The objectives are to study, analyze, and design details of the sea dome for the restoration of fishery resources as well as to study the utilization of the heavy ash residue from the power plant. Based on such research, the Company can sign a cooperation agreement with relevant public agencies such as the Department of Marine and Coastal Resources, Department of Fisheries, and

#### · A study on value addition of bottom ash and fly ash used as construction materials (TPI Cement Plant)

The study is conducted by Assistant Professor Dr. Weerachai Artharn, School of Engineering, Suranaree University of Technology, and the research team: The objectives are to use resources efficiently along with creating added value of by-products in the production process, reduce the use of resources, and conduct environmental preservation according to the Green Industrial Policy by studying the use of heavy ash and fly ash from waste fuels as construction materials and increasing the value of heavy ash and fly ash.

## Research on Heavy Metals in Bottom Ash Concrete

by Associate Professor Dr. Thaniya Kasol, Department of Civil and Environmental Engineering, Faculty of Engineering, Prince of Songkhla University: The objective is to study and research-heavy metals in concrete for use in construction and civil engineering works. It is also a reuse of industrial waste without damaging the environment.

## The Company engaged in a collaborative research with the Faculty of Science at Prince of Songkla University under the project "Science for Industry: Sci-Fi."

project's objective is to create new industrial-based knowledge from scientific research and to innovate alternative technological solutions for industries and their products. This collaboration also focuses on technology transfer and the co-creation of innovations to support grassroots economic development. It also extends to designing measures to encourage investment and develop the economy based on an innovation-based economic framework (BCG Model), with a cooperation period of three years (December 15, 2023, to December 14, 2026).

# 3. Innovation Technology and Service (GRI 3-3)

Due to the growing needs of the international community, which increasingly favors green energy and renewable resources as sustainable alternatives amidst concerns over climate change, new rules, and regulations are compelling energy entrepreneurs to adapt their business models. They must find ways to mitigate energy loss and address innovative energy challenges. The constant invention of new technologies and the rapid development of various energy innovations are ongoing. Consequently, more entrepreneurs will emerge, focusing on leveraging technology and innovation to enter the energy sector. By integrating technology and innovation into their operations, these entrepreneurs will not only enhance production efficiency but also elevate the overall standard of business operations.

The Company's waste-fueled electricity production business has a policy to transition from using fossil fuels to becoming an electricity producer with alternative fuel, renewable energy, and clean energy in every form, aligning with the growth of the business. Consequently, there is a demand for using waste fuel to produce electricity in large quantities, which is continuously increasing. Moreover, processing waste into energy faces limitations due to the state of waste in Thailand, situated in the humid tropics with variability and very high humidity values. Consequently, machines cannot effectively separate waste with diverse characteristics. Hence, there's a need to research and improve machines suitable for waste separation in Thailand to obtain fuel with quality and standards close to or equal to fossil fuels. This effort contributes to the Company's goal of phasing out the use of fossil fuels without encountering any quality problems with alternative fuels.

## **Operational Goals**

#### Short-term goals within 5 years

- Use AI technology to increase production efficiency.
- Improve fuel production to reduce production costs.
- Develop technology for the business growth of a renewable energy power plant utilizing solar energy, wind energy, and including energy storage, in addition to waste power plants.

#### Long-term goals for more than 5 years

- Study technology to advance in the industry Renewable energy such as batteries (Energy Storage system ESS)
- Application of Carbon Capture Technology along with the electricity production utilizing clean energy.

### **Management Guidelines**

After all this time, the Company has developed and invented innovations to improve machinery, incorporating a production process suitable for actual working conditions to enable efficient waste separation with low operating and maintenance costs. This makes it adaptable for use in machinery installation locations within various waste sources. The aim is to expand operations beyond the Company's power plants, establish a raw material procurement network, reduce operating costs, and efficiently manage and resolve waste disposal issues across various areas of Thailand. The Company is dedicated to conducting business with a serious commitment to success, benefiting the economy, society, and the environment as a whole. Therefore, waste separation and efficient electricity production in all managed areas are crucial to fulfilling the Company's mission of operating with honesty, transparency, and ethical practices, which instill stakeholders' confidence in its operations. If the installed machine fails to run, it will cause problems such as residual waste and low-quality sorted waste, as well as high operating costs, which do not incentivize entrepreneurs to invest or suppliers to engage in the supply chain. To address this, the Company employs a win-win concept in the system to select good suppliers or joint ventures, ensuring the development

and maintenance of sustainability throughout the supply chain. Each waste source involved in the Company's projects must meet its goals in waste problem resolution and create additional value by processing waste into fuel for co-operators. In return, the Company receives quality raw materials in sufficient quantities to meet the increased demand in electricity production, ensuring good operating results for the Company.

- Installing waste sorting machines at approximately 16 locations across various waste sources in many provinces, with
  consideration given to continuously expanding them in the future. This initiative aims to consistently obtain quality
  raw materials, thereby adding value to waste sources. Additionally, it creates incentives for waste source managers to
  participate in procuring high-quality raw materials for delivery to the Company. These efforts contribute to sustainable
  solutions for waste disposal problems in various waste sources and surrounding communities.
- The Company's investment in waste separation machinery is being utilized by waste source operators who rent this equipment. Only high-quality sorted waste is directed to the Company's power plants. The operators will utilize income from waste fuel sales to repay the Company for the machine rental fee. This arrangement not only supports the capital needs of waste source operators but also fosters a mutually beneficial scenario through a win-win situation in the supply chain, in line with the ESG concept encompassing Environment, Social, and Governance factors.
- The Company has developed waste separation technology with a new design for the sorting process line, machinery improvements in collaboration with foreign machinery suppliers, and the development of machinery production within the country. It is continuously tested and improved, with a team of engineers arranged to coordinate and work with personnel at waste separation plants across various waste sources to understand and address problems. Additionally, problems are continuously analyzed, resolved, and improved upon, and the machinery is continuously developed. Furthermore, the Company sends information on various problems, including suggestions, to machinery manufacturers, both domestically and internationally, who are suppliers to the Company, in order to enhance technology and continuously create innovations.

The Company has the policy to support the use of technology and innovation for use in the Company's business, both innovation development from personnel within the organization or importing technology and innovation from manufacturers or experts, focusing on:

- Investment in machinery or new projects that use modern technology and can generate returns worth the investment.
- Technology that can reduce emissions or eliminate greenhouse gases.
- Technology that can reduce the impact on the environment such as reducing emissions or recycling waste from production.
- Implementation of combustion control technology within the boiler using an AI system to increase efficiency.
- Expansion of performance of technology and innovations that have been studied and developed for business use.
- Dissemination and transfer of technology and innovation to the supply chain or relevant stakeholders.



#### **Operational Plan**

- Sorting out the bottom ash obtained from the CFB Boiler (Recycle Bottom Ash from the CFB (Circulating Fluidized Bed) Boiler) for use as a material to replace sand or Bed in the boiler.
- Use newly developed and highly efficient solar panel technology.
- Study wind turbine power generation.
- Develop a fuel-feeding system to increase efficiency.
- Implement the expansion of successful innovations to be used in practice.
- Study of energy storage technology.
- Study on carbon storage technology.

#### **Performance**

- Installing a machine to sort out bottom ash obtained from CFB Boiler, resulting in cost savings of Baht 11,035,200 per year.
- Use solar panel technology in the project the first one in the country to use the new technology for maximum efficiency. It is planned to be installed in 2023-2024. The installation was completed, and electricity was supplied to the system in December 2024, with a plan for additional installations in 2025.
- Sign an agreement for the trial installation of a wind turbine as a pilot project, which will be able to carry out the test around the end of 2023.
- Develop metal sorting machinery in the waste fuel production process which increases efficiency and reduces metal problems in waste fuel, improves boiler performance and has been extended to Line 12, along with a plan to complete all lines by 2023.
- Implement the AI boiler combustion control system for trial at Boiler, which is expected to be completed by 2023, along with a plan to expand the system to another 4 boilers. The installation will be completed in December 2024.
- The innovations created by the Company lead to the development of skills, knowledge, and work performance among employees, who are stakeholders of the organization. This encourages Thai workers to enhance their potential, increase their knowledge, and foster creativity in developing equipment and machinery to match the capabilities of those in foreign countries. Additionally, it strengthens the concept of sustainable resource use in line with ESG principles

# 4. System Efficiency – Availability and Reliability (GRI 3-3)

The Company is a leader in the waste-to-energy power plant business and the largest renewable energy producer in Thailand. One key success factor in power plant business management is the efficiency of electricity production, which reduces the Company's electricity production costs and mitigates the release of various pollutants contributing to climate change problems.

After all this time, the Company has given importance to research and development of technology and new innovations, developing technology and innovation in the Green Manufacturing process that focuses on increasing the efficiency of using renewable energy and clean energy and continuously increasing the ability to use renewable energy. In addition, the Company has focused on planning to maximize the efficiency of electricity production with stability and safety for supporting people's demand for clean energy that is likely to increase in the future and has focused on reducing the consumption of energy from fossil fuels.

#### Operational Goals - Power System Efficiency

#### Short-term goals within 5 years

- Reduce steam consumption per unit of power generation by 1.42%
- Increase the efficiency of the water cooling system by changing the water distribution plate to reduce the cooling water temperature by 2 degrees Celsius, resulting in better • power generation efficiency.
- Use an AI system to control the combustion of the boiler to increase the steam production efficiency by 5%.
- Improve the fuel feed system to increase combustion efficiency reduces energy consumption by 2.5%.
- Improve the renewable fuel supply system to reduce the use of burning coal by 2.5%.
- Improve waste fuel quality to reduce moisture content from 46.5% to less than 45%.
- Reduce steam and heat loss from the boiler blowdown by changing the type of chemicals used.
- Reduce coolant usage by adjusting the pH value and increasing the number of cycles from 2.5 to 7.

#### Long-term goals for more than 5 years

- Stop using coal as fuel for power generation by 2025.
- Implement the plant efficiency continuous improvement with a plan to invest approximately 500 million baht within 5 years.

## Operational Goals - Availability and Reliability of the Electrical System

#### Short-term goals within 5 years

- operation in power plants (Availability A) averaged more than 90% per year.
- The increase in the overall operational capability of power plants (Performance - P) averaged more than 85% per year. • The decrease in the frequency of power plant shutdowns

## Long-term goals for more than 5 years

- The increase in the availability value of the machinery The increase in boiler production capacity aims to raise Availability and Performance above the target of 95%.
  - The increase in solar and wind power plants aims to enhance production capacity and stability of the system.
  - caused by issues in the electricity grid system to fewer than 2 times per year.

#### **Management Guidelines**

The Company has implemented management guidelines aimed at enhancing the efficiency of its electrical systems throughout the organization. The focus is on continuous improvement, aligning with the economic principles of the BCG (Bio-Circular-Green) model for sustainability in the Company's business operations, as outlined below:

#### **Establishment of Policies and Plans**

The Company recognizes the importance of electricity production efficiency, aiming to develop the economy holistically through the BCG model as a guideline for operations. Targets have been set for operating the electricity business, becoming a Clean and Green Energy Producer, ceasing the use of coal fuel in electricity production, and investing more in renewable energy power plant projects. Additionally, there is a policy to increase the efficiency of waste fuel production plants and improve the power plants that are in operation. To further enhance efficiency, an investment plan has been established. Operational plans and goals for improving the factory align with the BCG economic policy to keep pace with changes in global energy trends, focusing on developing more clean energy. It is combined with the strengths of the Company and TPI Polene Group, both of which are prepared and possess expertise in developing electrical technology

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tailored to the circumstances of Thailand. This is complemented by detailed management, determined policies, and plans for the short, medium, and long term, aiming to create stability and sustainability in renewable energy power generation to help mitigate the issue of greenhouse gas emissions in Thailand.

#### Operation

In general, System Availability is measured as the percentage of time the power plant can supply voltage to customers in one year, while System Reliability is the average of the number of possible power outages per customer per year and the average total power outage time in minutes per customer per year. The Company has guidelines for managing the reliability and availability of the electrical system. These guidelines focus on the continuous improvement of power generation in power plants to ensure efficiency and stability, thereby maintaining availability and reliability within standard criteria, and continuously supplying voltage. The Company has studied the results of operations to analyze weaknesses and identify potential areas for improvement. It has adopted new technology to enhance the efficiency of the electrical system, thereby reducing problems, losses, and costs in various forms. These efforts are carried out by the Company's research team or external experts.

Operations are initiated by studying the original production or action data to modify and develop such as:

- Machinery improvement by replacing old machines with the new ones such as the fuel feed system into the boiler and the cooling tower
- 2. Major maintenance to replace machinery or machine parts with new designs such as replacing the boiler tube
- 3. Investment in the construction of a new plant for the existing power generation unit to increase production capacity and increase efficiency such as waste fuel production plants or backup boilers
- 4. Implementation of new projects to increase additional power generation capacity such as investing in a solar farm project
- 5. Investment in AI technology to control steam production for higher efficiency
- 6. Investing in the installation of a new boiler to enhance electricity production performance and planning major maintenance to increase machine availability.

#### • Process to monitor the effectiveness of operations

- 1. Follow up on the implementation plan to improve the construction of the short- and medium-term coal consumption adjustment projects to be in accordance with the specified plans.
- 2. Set a target for coal consumption and determine the index of coal consumption which must be controlled to decrease.
- 3. Determine fuel consumption index per unit of energy production of both boilers and turbine generators.
- 4. Determine the availability and performance index of each boiler, turbine, and generator. The Company has a project to invest in the installation of new boilers to increase the efficiency of power generation and to plan major maintenance to increase the availability of the machinery.
- 5. Determine the index to measure the total cost of power generation per unit.
- Collaborating with machinery manufacturers to seek solutions for problems and enhance efficiency, applying new and developed technology to existing machines, and extending successful improvements to other machines in the production process. Utilizing guidelines and results to improve the production system and employee operating procedures, fostering continuous improvement and innovation by encouraging the creation of innovations among personnel and experts.



Strategies for enhancing participation with relevant stakeholders concerning management directives or the reporting of
operational efficiency. Cooperation with waste producers and suppliers is essential for improving quality, reducing costs,
and ensuring adequate quantities of fuel for both present and future use, contributing to the sustainable growth of all
parties. This involves securing new sources of waste and investing in waste-to-fuel production facilities, both internally
within the Company and external waste suppliers.

# Operating Results (EU12)

- The efficiency of the water cooling system is enhanced by upgrading the blades, fans, and water spray system (Cooling Tower Filling) to improve heat transfer and reduce the cooling water temperature by 2–4 degrees Celsius, resulting in more efficient electricity generation. In 2024, the amount of steam used per unit of electricity generation was reduced by 2.02% compared to the base year of 2021.
- The AI system has been implemented to control the combustion of the boiler, enhancing efficiency. The installation was completed in December 2024.
- The improvement of the alternative fuel feed system makes the fuel dispersed, reduces blockages, and allows for quicker burning, resulting in increased combustion efficiency. This improvement reduced energy use in 2024 by 2.90% compared to 2023.
- The improvement of the alternative fuel feed system reduces coal usage, enabling greater utilization of alternative fuels, thereby causing the proportion of coal to alternative fuel usage in electricity production to decrease by 2.80% in 2024 compared to 2023.
- The improvement of waste fuel quality reduces moisture and enhances the water drainage system from the fuel pile. Currently, humidity has decreased from 44% -45% in 2023 to 40%-42%. In 2024
- The use of coal as a fuel for generating electricity has been discontinued, and the project of constructing boilers utilizing alternative fuels has commenced. Two boilers were installed in 2025, and another three boilers will be completed by 2026, enabling the Company to utilize alternative fuels for all electricity production by 2026. Additionally, investments will be made to enhance the production of alternative fuels to meet the increasing demand.
- The Company plans to maintain the boiler and improve or replace materials to extend its lifespan. This includes changing the Boiler Tube, which contributed to the 99.19% Availability (A) of the power plant as a whole in 2023.
- The Company has improved the fuel feeding system, enhanced combustion control with AI Completion December 2024, and upgraded the cooling system. These improvements help increase the efficiency of electricity production, resulting in 2024 the average overall operational capability of the power plant (Performance P) reaching 95.21% in 2023.
- The impact of shutting down power plants from the Electricity Authority's transmission system has been mitigated through coordination with the Electricity Authority to maintain transmission lines, thereby reducing power outages. This includes measures such as enhancing quick electricity resumption and improving systems within the power plant to enable immediate operation while awaiting power restoration.

# 5. Anti-Corruption (GRI 3-3)

Corruption is a major problem for the country's economic and social development in numerous areas such as injustice and lack of investor trust, causing damage to the country. The Company is aware of honesty and transparency and established an Anti-Fraud and Corruption policy to build trust and acceptance from the Company's stakeholders which leads to the creation of a good corporate culture in the future.

#### **Operational Goals**

## **Anti-Corruption**

- Employees will receive training courses on anti-corruption periodically every year.
- Business partners acknowledge the policies and guidelines of the anti-corruption of the organization every year.

#### **Management Guidelines**

The Company has established a policy that strictly prohibits board members, executives, and employees at all levels from accepting or being involved in any form of corruption, whether directly or indirectly. The policy mandates that all personnel adhere to anti-corruption guidelines, in alignment with the principles of good corporate governance, the Company's ethical code, regulations, and applicable laws.

The Company has defined the scope of stakeholders involved in the Anti-Fraud and Corruption policy into 2 categories as follows:

- 1) Internal organization consisting of directors, executives, and employees of the Company at all levels.
- 2) External organization consisting of customers or suppliers of goods or services, contractors, sub-contractors, partners, creditors, government agencies, and private agencies.

Additionally, the Company has specified the main roles and responsibilities of the Board of Directors, sub-committees, and agencies involved in anti-corruption operations as follows:

#### Chairman of the **Management Committee Board of Directors Audit Committee Internal Audit Supervisor** and members of the **Management Committee** Set policies and supervise Set up a system to Review the financial and · Examine and review to have a system that promote and support the accounting reporting the operation to ensure supports effective antianti-corruption policy. system. internal that it is in accordance corruption. to communicate to control system internal with the policy, practice employees and related audit system and risk guidelines, operational parties management system to authority regulations Review operations and be concise, appropriate, and laws, including modern and efficient policies to be in line regulatory body with various changing requirements. situations such as Report to the Audit Committee. business conditions, rules, regulations and requirements of various laws, etc.

# **Corporate Governance Principles**





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

# TPI Polene's Code of Conduc





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

# Fraud-Related Risk Assessment (GRI 205-1)

Work groups/ departments that have been assessed for fraud and corruption risks	Identify significant fraud and corruption risks	Number of operating units that have been assessed for fraud and corruption risks	Percentage of operational units assessed for fraud and corruption risks*
Procurement Department	Process related to cash	18 agencies have been	Departments have received
Groups/functions that have	Procurement process	assessed for fraud-related	a fraud and corruption risk
been assessed for risks linked	- Assess the risks of suppliers	risks.	assessment that account for
to corruption such as the	whether they participate		100%
accounting and finance	in anti-corruption both		
division, the management	inside and outside the		
division, the engineering	organization or not.		
division, the sales and	- Assessment of whether		
marketing division.	business partners have		
	codes of conduct or not.		
	- The Company's working		
	group for receiving		
	complaints for partners		
	and customers.		
Total number of operating units assessed for fraud related risks		18	100

<sup>\*</sup> Percentage of operating units assessed for fraud and corruption risks is based on the total number of operating units of the organization in the reporting period.

In addition, the Company has established guidelines for combating corruption to provide a framework for operations for employees at all levels. The aim is for all employees to work together to monitor and not neglect any instances of corruption. When observing actions considered corrupt, the Company will be fair and implement measures to protect complainants or those who cooperate in reporting instances of corruption. Furthermore, the Company aims to raise awareness among its employees through regular publications, communication, and training sessions to provide knowledge about the anti-corruption policy every year. This entails broadening the scope of anti-corruption policy implementation to encompass the Company's suppliers through campaigns aimed at fostering stakeholder understanding of corrupt behavior, performance duties, or omissions. Detailed information regarding measures, complaint channels, and penalties can be found in the 'Anti-Corruption' section of the Company's 2024 Annual Report (Form 56-1 One Report 2024). For more details, please refer to the Sustainability Report 2024 under the topic "Risk and Crisis Management" on page 138

## **Anti-Fraud and Corruption Policy**





http://www.tpipolenepower.co.th/index.php/th/th-aboutus/pdpa-2

#### **Personal Data Protection Policy**





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

# Supplier Code of Conduct in procurement and employment





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

#### **International Human Rights Policy**





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

SUSTAINABILITY REPORT 2024

# Performance (GRI 205-2)

In 2024, the Company's operating results are as follows:

- 1. Require all departments, especially those dealing with external parties, to assess risks linked to fraud and/or corruption, which 18 units were evaluated for risks linked to fraud accounting for 100%.
- 2. 4.61% of total of 1,151 employees attended the anti-corruption training courses and 100% of the employees acknowledged the Anti-Fraud and Corruption Policy
- 3. 97.85% of the total of 557 suppliers were aware of the organization's Anti-Fraud and Corruption Policy. (Excluding government agencies, local municipalities, and state enterprises that are subject to constraints on endorsing supplier codes of conduct.)
- 4. There were no lawsuits in which the organization has been sued for fraud and there were no corruption incidents with suppliers, or cooperation partners, including corruption incidents that occur within the organization. (GRI 205-3)
- 5. The Company has had no employees penalized or dismissed for failing to comply with the anti-corruption policy.
- 6. The Company provides training to employees on anti-corruption policies, covering components/types of corruption, including bribery, as detailed in the following table.

Board of Directors	Total number of people who have communicated the anti-corruption policies and practices of the organization (persons)	Percentage
Board of Directors	15	100
Level		
TOP EXECUTIVE	4	100
AVP/ VP/ SVP	10	100
ASST.DEPT. MGR DEPT. MGR.)	18	100
ASST.SUP SECTION MGR.	171	100
OFFICER	948	100
Total	1,151	100
Classified by place of operation		
Head office	97	100
Saraburi Power Plant	1,054	100
Total	1,151	100
Business Partner		
Supplier / Contractor	577	96.05

Information of committees and employees who have completed anti-corruption training courses (GRI 205-2)

Туре	Number of persons who received training courses related to anti-corruption (persons)	Percentage of total employees
Board of Directors	15	100
Total number of employees 1,151 people		
Classified by employee group		
TOP EXECUTIVE	-	-
AVP/ VP/ SVP	-	-
ASST.DEPT MGR DEPT. MGR.	3	0.26
ASST.SUP. – SECTION MGR.	43	3.74
OFFICER	7	0.61
Total	53	4.61
Classified by place of operation		
Head office	20	1.74
Saraburi Plant	33	2.87
Total	53	4.61

### • Guidelines for Measuring Effectiveness against Established Targets

Training and assessments for the "Guidelines on Anti-Corruption in Organizations" course are scheduled to be conducted. New employees will receive this knowledge during orientation, while existing employees will undergo regular training each year. Additionally, executives and employees will be encouraged to download the manual via QR code, read it, and take the anti-corruption test at their convenience.

## Lessons Learned from Anti-corruption Operations

- Creating a corporate culture that upholds ethics and emphasizes transparency is key to preventing corruption.
  Honest disclosure of information builds trust among stakeholders, instills values of honesty, transparency, and responsibility, and helps reduce corruption within the organization.
- 2. Combating corruption requires participation from all functions and departments; it cannot be achieved by one party alone. It involves the active participation of all sectors, including executives, employees, organizations, business partners, and communities. Additionally, promoting awareness and understanding among personnel at all levels of the organization is essential, ensuring they are knowledgeable about their roles and responsibilities in the joint inspection and prevention process.

#### **Planning For Future Improvements**

#### 1. Encouraging Participation from Employees at All Levels

The Company provides employees at all levels with opportunities to express their opinions and contribute to the development and enhancement of the Anti-Corruption Policy, ensuring that the organization's practices are more stringent, transparent, and effective.

### 2. Participation and Exchange of Approaches with Anti-corruption Networks

The Company values participation in organizations or networks dedicated to anti-corruption, both nationally and internationally. This involvement enables the exchange of best practices, learning from various case studies, and adapting these insights to the organization's context, ultimately strengthening a corporate culture of honesty and transparency.

# 6. Procurement Practices (GRI 3-3)

In addition to the Company's commitment to social responsibility, it actively promotes ESG (Environmental, Social, and Governance) responsibility among its business partners. This effort extends ESG principles throughout the Company's value chain, creating positive impacts and effectively mitigating negative ones.

The Company primarily focuses on procuring machinery, raw materials, and services from domestic manufacturers and contractors, where appropriate, to reduce costs associated with importing machinery from abroad when it can be produced locally. Additionally, the main raw materials in the Company's electricity production process include waste fuel, which replaces coal and is derived from municipal waste, worn-out tires, and non-hazardous industrial waste with high thermal value. These materials are procured from operators at waste collection points nationwide, with consideration given to quality, quantity, delivery, and compliance with environmental laws. This ensures a continuous and sustainable supply of raw materials for production, helping to reduce the Company's production costs, enhance the stability and efficiency of electricity generation, support income distribution within communities, and promote overall economic growth.

The Company also upholds transparency and ethics by incorporating procurement practices into its Code of Conduct and aligning them with TPI Polene Public Company Limited's Announcement No. 120/2014 on Procurement and Treatment of Business Partners, as well as Announcement No. 109/2014 on Receiving and Giving Gifts, Property, or Other Benefits. These practices are designed to align with the Company's principles of transparency and ethical business operations.

#### **Operational Goals**

#### **Procurement Practices**

- Each year, more suppliers continuously acknowledge the Supplier Code of Conduct.
- The ESG (Environmental, Social, and Governance) Risk is assessed using a Self-Declaration form from the Company's suppliers.
- The Company requires an On-site ESG Audit to evaluate Tier 1 suppliers at least once every two years. This is done in order to review and summarize the suppliers for the monitoring plan and to conduct audits in the operating area.

#### **Management Guidelines**

The Company has established a purchasing policy in accordance with its Supplier Code of Conduct, which is to be followed by its suppliers. This policy is aimed at promoting transparency, preventing corruption and conflicts of interest, ensuring the transparency, fairness, and equality of the Company's business operations, avoiding discrimination, and fostering honesty in business dealings. These efforts also seek to strengthen good relationships with suppliers in line with principles of corporate governance under good corporate governance with the Company's Code of Conduct, related regulations and laws, aiming to develop into a sustainable organization. The details are as follows:

- Preparing the Supplier Code of Conduct in collaboration with suppliers, encompassing guidelines on purchasing, business ethics, business operations, safety and occupational health, labor and human rights, environmental impacts, and community and social impacts.
- 2. Establishing regulations and guidelines for recruiting and evaluating existing and new suppliers, while adhering to the Company's Supplier Code of Conduct and considering social, human rights, and environmental issues in procurement. The operational steps are as follows:
  - 2.1 Recruitment and selection of existing and new vendorsAll vendors must be approved and listed in the Approved Vender List (AVL) with the steps as follows:
    - New vendors can be recruited by searching for information from quotations, brochures, catalogs, the Yellow Pages (telephone directory), basic information from buyers, market information for the respective type of products or services, and other relevant sources, etc.
    - 2) Newly recruited vendors will be selected according to specified criteria, considering the following topics:

- Details of product or service standards desired
- Details of operations
- Payment terms or delivery conditions
- Convenience and speed in contacting and coordinating
- Survey of suppliers/subcontractors at the production site
- Environmental, social, and human rights issues, including refraining from using illegal labor such as child labor, slave labor, etc.
- Others as appropriate

The information for vendor selection is attached to the price screening sheet, and then it is requested for consideration and approval from an authorized person. Once approved, it will be recorded and listed in the

2.2 Listing vendors into the AVL

Existing and newly approved vendors will be listed on the AVL, categorized by product or service type, including:

- (1) List of approved vendors/subcontractors.
- (2) List of approved suppliers/subcontractors (general) and
- (3) List of approved suppliers/subcontractors (special)

All AVLs will be reviewed and revised whenever changes occur, or at least every 6 months.

2.3 Evaluation of approved vendors listed on AVL

Vendors are listed on the AVL upon meeting specific criteria, which are divided into:

- (1) Evaluation of delivery time and product condition during initial inspection;
- (2) Evaluation of product or service quality including the cooperation of vendors; and
- (3) Evaluation of services and cooperation in issues related to procurement or prices will be conducted. The Purchasing Department will collect evaluation results from all involved parties to summarize the outcomes of delivery/subcontracting. Any vendors whose evaluation score falls below 60 points continuously for two consecutive evaluations will be considered for cancellation and removal from the AVL if they fail to improve their performance.
- 2.4 Establishing a framework for evaluating vendors listed on the AVL

The vendors will be classified into groups. Vendors contacted and purchased by the Purchasing Department of the Head Office will be evaluated every year.

- 3. Establishing criteria for identifying Critical Tier 1 suppliers and Critical Non-Tier 1 suppliers is as follows:
  - 3.1 Critical Tier 1 suppliers refer to suppliers who directly produce or provide services to the Company, with an order value greater than or equal to Baht 16 million per year.
    - In 2024, there were 8 Critical Tier 1 suppliers, accounting for 1.44% of the total of 557 suppliers. which has a total order value of 0.12% of the total order value
  - 3.2 Critical Non-Tier 1 suppliers refer to suppliers who produce or provide services to Critical Tier 1 suppliers. The Company does not have any Critical Non-Tier 1 suppliers.
- 4. The Company has determined social and environmental issues as part of its procurement policies and practices, in line with the Supplier Code of Conduct. This includes compliance with environmental laws, reducing environmental impacts from the manufacturing process, upholding human rights and fair labor practices, and promoting transparency and sustainability throughout the supply chain.
- 5. Risk associated with Procurement

The Company's procurement risk management includes various processes, such as assessing economic risks in the procurement process that arise from trading partners. In the previous year, the Company assessed risks by identifying risk factors from trading partners and setting risk assessment criteria, which consist of two dimensions: the level of financial impact (Impact), or factors that affect reputation and image through various media, and the likelihood of the risk

1 Risk from dependence on a few partners: The Company has measures to reduce this risk by entering into contracts with primary and secondary partners.

- 2. Risk of receiving substandard products/services: The Company has measures to reduce the risk, such as:
  - There is a process for inspecting/randomly inspecting products during the product receiving process to be in accordance with the Company's regulations.
  - The quality conditions including penalty clauses are specified in the contract if the goods are not received as agreed in the contract.

6. The Company has assessed ESG Risks arising from its suppliers by specifying risk issues in all three areas as follows:

Environment	Society/ Human Rights	Corporate Governance
1) Compliance with environmental laws	1) Non-discrimination against suppliers	1) Business operations that are
including air pollution, water, energy	2) Use of illegal labor including child	not illegal / Business operations
and waste.	labor, coerced labor, forced labor,	according to the Code of Conduct
2) Promotion or improvement to reduce	and alien labor	2) Having policy against corruption
global warming	3) Management of hygiene and safety	3) Not disclosing business secrets
3) Handling of raw materials/hazardous	in the work place	
waste by authorized disposal		
operators.		

The risk management process under the Company's policy is utilized, adopting the criteria of The Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management (COSO-ERM) as a guideline for the Company's risk management. More details is available in the Section "Risk Assessment Process" on Page 139

- 7. The On-site ESG Audit establishes criteria for selecting suppliers that must be assessed with the On-site ESG Audit as follows:
  - 7.1 Critical Tier 1 suppliers refer to suppliers who produce or directly provide services to the Company. They will be sent the assessment form for self-assessment at least once every 2 years in order to review and summarize the suppliers for the monitoring plan and continue to conduct audits in the operating area.
  - 7.2 Critical Non-Tier 1 suppliers refer to suppliers who produce or directly provide services to Critical Tier 1 suppliers.

    The Company does not have any Critical Non-Tier 1 suppliers.
- 8. The Company has careful and strict payment procedures for suppliers, in accordance with the terms of payment agreed upon with suppliers. The Company has a robust internal control system that can be transparently verified and includes a review process. The payment period is specified at 30 60 days after the Company receives the product or service, depending on the agreement made with each supplier, and the Company will not default on payments to suppliers. In 2024, The Company's debt payment period was 20 days.

#### Performance in 2024

- 100% of all new suppliers to the Company must meet criteria for recruiting and selecting new customers, taking into account social, human rights, and environmental issues in procurement, as well as signing the Supplier Code of Conduct.
- 97.85% of the total 557 suppliers signed the Supplier Code of Conduct.
- The assessment of economic risks arising from the Company's suppliers, such as risks from reliance on a limited number
  of suppliers, and risks from receipt of poor-quality products or services. In 2024, it was found that there were no economic
  risks caused by suppliers, as the risk level was deemed moderate and acceptable.
- The assessment of ESG Risk using a Self-Declaration is sent to suppliers for their self-evaluation, aimed at appropriately managing suppliers' business operations in line with the Company's ESG policy. In 2024, 8 Critical Tier 1 suppliers were assessed for ESG Risk, accounting for 1.44% of the total 557 suppliers, and no risks from suppliers were identified.
- The On-site ESG Audit follows completion of self-declaration forms by suppliers. For Critical Tier 1 suppliers, the Company
  has a plan to continue monitoring and conducting audits in the operating areas at least once every 2 years. In 2024, 8
  Critical Tier 1 suppliers must undergo on-site ESG audits, accounting for 1.44% of the total 557 suppliers, and no risks
  from suppliers were identified.

• In 2024, there were no complaints received from suppliers regarding procurement.

#### **Procurement Budget Paid to Local Suppliers**

Unit: Million Baht

Types of Products and Services Locally Procured	2022	2023	2024
Purchase of Local Products and Services	2618.29	1,675.68	1,915.58
Proportion of Local Product and Service Purchase (%)	60.60	71.96	52.79

Note: Local suppliers are suppliers that provide raw materials, products, or services to the Company, operating with offices located in Thailand, trading in Baht currency, and complying with VAT payment regulations.

Furthermore, in 2024, the Company purchased community waste from waste collection points in the country, which are managed by government agencies and local municipalities. The total amount of raw materials entering the production process was 2.92 million tons, valued at approximately Baht 1,484.18 million. Additionally, the Company received approximately 4,973.71 tons of non-hazardous industrial waste, which was used as fuel in the electricity production process.

#### **Guidelines for Measuring Effectiveness Against Established Goals**

In 2024, the Company has set a goal for 100% of suppliers to sign an acknowledgment of the Supplier Code of Conduct. This aims to facilitate communication and ensure suppliers are aware of and adhere to the Company's procurement guidelines. In 2024, 97.85% of business partners signed the Supplier Code of Conduct for Procurement, Sourcing and Hiring, which reflects the closeness to the set target and is a measure of the effectiveness in implementing the set target.

#### **Lessons Learned from the Implementation of Procurement Practices**

- **Business partners that are government agencies or state enterprises:** While these business partners are aware of the Supplier Code of Conduct, they were unable to sign the document, highlighting the challenge of ensuring that all parties fully understand and formally comply with its requirements.
- **Large listed companies:** They have signed the Supplier Code of Conduct and fully comply with procurement requirements, demonstrating their commitment to maintaining ethical standards and transparency in business operations.

In summary, the lessons learned from the implementation highlight the importance of communication and compliance with supplier requirements, understanding the diverse constraints and contexts of different business partners, and ensuring that procurement processes are effectively aligned with ethical policies.

#### **Engagement with Stakeholders in Procurement Practices**

- The Company aims to have all suppliers sign the Supplier Code of Conduct. To ensure ethical standards and transparency in conducting business with partners.
- The Company has sent a Self-Declaration to 1.44% of key suppliers for use in recruiting new suppliers according to the criteria set by the Company. This helps strengthen the selection of quality trading partners who can comply with the Company's policies.
- The Company conducts On-site ESG Audit with key suppliers to ensure that their business operations comply with the Company's sustainable procurement policy. which promotes compliance with environmental, social and governance (ESG) standards.
- The Company has established communication channels for receiving complaints among the Company, suppliers, and contractors, such as the Company's website. So that stakeholders can contact and express their opinions about procurement practices conveniently and transparently.

# 7. Risk and Crisis Management (GRI3-3)

The Company places great importance on risk and crisis management, ensuring effective and systematic risk management throughout the organization. Continuous development is carried out while considering the balance between risks, returns, and mutual benefits of stakeholders. It increases the likelihood of achieving the organization's goals, sustainably creates added value, and reduces potential risks that may lead to damage, including minimizing the extent and severity of damage. The Company has established a risk management framework and guidelines, incorporating systematic, efficient, and effective monitoring and processes to manage potential risks across the organization. Additionally, the Company has a system in place to monitor both internal and external factors, allowing for the identification of new risks that may arise in the future.

In 2024, the Company will continue to focus on managing sustainability risks, specifically "ESG Risks" related to environmental, social, and governance issues. The Company recognizes the importance of human rights for its long-term sustainability and has therefore established a foundation of respect for human rights as a core corporate practice. Additionally, the Company acknowledges the significance of corporate governance risks and has implemented an anti-fraud and anticorruption policy to ensure consistency across the organization and alignment with the overall risk management process.

In addition, the Company emphasizes promoting a risk management culture throughout the organization. The goal is to establish a foundation for systematic risk management in both short tem and long term while instilling risk management awareness among all executives and employees. This approach aims to create a culture of risk management, encouraging awareness and proactive practices, ultimately leading to success in alignment with the Company's sustainable development goals, as follows:

- The Company monitors and reviews the risks of all units within the organization on an annual basis. Risk Management Department collects the risk reviews from all units, analyzes and evaluates them, and summarizes the findings into a risk management report. This report is then submitted to Risk Management Committee (RMC) and the Board of Directors annually.
- The Company organizes trainings and disseminates knowledge on risks and systematic risk management to all levels of personnel, including directors, senior executives, and employees, through the "Organizational Risk Management" course, held at least twice a year.

## **Operational Goals**

#### Short-term Goals within 5 years

- Preparing a plan to assess and manage risks that arise Seeking opportunities to produce renewable energy from both internal and external factors.
- readiness, and reviewing plans and systems.
- Implementing climate change risk management by replacing coal with waste fuel entirely by 2025.
- Managing the risk of shortages in key production inputs to prevent business interruptions.
- Implementing financial liquidity management to support business operations or invest in various new projects.

#### Long-term Goals for more than 5 years

- without using fuel, such as wind and solar energy.
- Preparing emergency plans for various scenarios, ensuring Increasing the production of alternative fuels, such as energy trees or Napier Grass, to partially replace waste fuel.
  - Becoming a direct contract party with the government sector to receive waste.
  - Seeking additional contract parties for procuring waste.
  - · Achieving carbon neutrality by 2037.

#### **Administrative and Managerial Operations**

The Company conducts risk management and reviews risks by considering the changing environment factors along with business operations on the basis of sustainable development in economic, social, and environmental dimensions. The Company has established a risk management policy as follows:

- Establish processes, guidelines, and measures for risk management that are internationally appropriate and adequate, including identification, analysis, assessment, prioritization, management, control, monitoring, reporting, evaluation, and ongoing and consistent information about risks, and practices throughout the Company.
- Measure the risks in terms of quality, such as reputation, image of the Company and quantitative, such as loss results, decrease in income, cost increase by considering the potential opportunities and impacts.
- Set a risk limit for the damage that may occur to be within the level that the Company can accept and specify events or risk levels that are warning signs for operators to take certain actions in order not to exceed the specified risk limit.
- · Have written operating regulations for executives and practitioners practice which is a risk control from operations.
- Promote a risk management culture throughout the organization to create understanding, awareness, and shared
  responsibility for managing, controlling, and mitigating risks. This includes coordinating operations between all riskowning departments and Risk Management Department to monitor, review, and assess potential significant risks.

#### **Risk Assessment Process**

The Company has a risk management process under its policy and has additionally embraced the principles of the Committee of Sponsoring Organizations of the Treadway Commission - Enterprise Risk Management (COSO-ERM) as a framework of business operation guidelines to ensure that its business operations are in line with sustainable development goals. The COSO-ERM criteria encompass 8 elements:



- 1. Internal Environment
- 2. Objective Setting
- 3. Event Identification
- 4. Risk Assessment
- 5. Risk Response
- 6. Control Activities
- 7. Information & Communication
- 8. Monitoring

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# Follow-up and Review

In 2024, the Company reviewed significant risk issues by classifying them into 7 types as follows:

Type of Risk	Overall Risk Assessment Results	Risk Control Measures
Strategic Risk is the risk that arises from the inability to operate the business according to established plans, in compliance with internal and external factors.	Medium	<ol> <li>Risk management of using waste fuel to replace coal for reducing production costs involves managing the quantity and cost of waste procurement, including factors such as the moisture properties of the garbage, etc.</li> <li>Investment in environmentally friendly projects Managing the use of waste fuel for electricity production to increase according to the target.</li> <li>Monitoring and analyzing changes in government policy and technological progress. Including business competition conditions that may have an impact on the business, regularly.</li> <li>Plan operations development and management in the organization To increase the potential and efficiency of operations Leads to success according to the stated objectives and goals.</li> </ol>
Operational Risk is the risk rekated to operations caused by internal operating processes or external factors that impact revenue and operating costs.	Medium	The Company has controlled risks from internal or external factors that affect business operations to a level acceptable to the organization, such as  (1) Cost control and ensuring that the procurement of raw materials is both sufficient and within the allocated budget.  (2) Procuring sufficient key inputs for production to prevent business interruption  (3) Control of document operations, recording information in the system correctly and efficiently
Financial Risk is the risk arising from a lack of liquidity or available funds for conducting business or investing in various projects.	Medium	<ol> <li>Carefully implementing financial policies within the specified budget to ensure appropriate remuneration and sufficient cash flow for effective business operations.</li> <li>Monitoring and managing financial risks, such as risks from exchange rate fluctuations, interest rate.</li> <li>Managing liquidity or funding sources to ensure they are sufficient for business operations, such as providing a revolving line of credit, long-term loans, and issuing bonds, in response to the changing trends in the exchange rate market, money market, and capital market.</li> </ol>
Compliance Risk is the risk of not being able to comply with laws and rules, regulations, or policies of Company.	Medium	<ol> <li>The Company has established a unit to control the compliance with regulations and policies of the government sector.</li> <li>Supervising and controlling the operations to be consistent with the regulations of the Office of the Securities and Exchange Commission and the Stock Exchange of Thailand</li> </ol>

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Type of Risk	Overall Risk Assessment Results	Risk Control Measures
Environment Risk is the risk arising from pollutant emissions during the production process, leading to adverse impacts on the environment.	Medium	<ol> <li>The Company implements a Net Zero Greenhouse Gas Emission policy, ensuring that the production process does not generate dust, chemical residues, or wastewater that could adversely affect the community's environment.</li> <li>The Company has prioritized managing climate change risks, with its main goal being to replace coal with 100% waste fuel in the production process by 2024 and achieve carbon neutrality by 2037.</li> </ol>
social Risk is the risk in managing human resources, labor, occupational health and safety in the work environment violation of human rights Including public health risks such as epidemics, contagious diseases, etc.	Medium	<ol> <li>The Company has provided all employees with a Business Continuity Plan (BCP) and a safety operating manual, both in accordance with industry standards.</li> <li>The Company has established a policy to respect human rights principles (in accordance with Announcement No. 006/2559 on International Human Rights Policy), ensuring fairness and equality while preventing human rights violations within the organization.</li> <li>The Company provides a complaint channel and ensures protection for complainants, maintaining confidentiality throughout the process.</li> <li>In 2024, the Company had no incidents of human rights violations, no use of child labor, and no cases of involuntary or forced labor.</li> </ol>
Governance Risk is the risk related to image, reputation, corporate governance and business ethics. and corruption	Medium	<ul> <li>(1) The Company has a policy to oversee the operations of all units to ensure compliance with corporate governance principles, its ethics and code of conduct. Additionally, it strictly enforces anti-corruption measures within the organization by formally announcing the following policy:         <ul> <li>Announcement No. 001/2559 on Anti-Corruption Policy</li> <li>Announcement No. 013/2559 on the Company's Code of Conduct</li> <li>Announcement No. 015/2559 on Corporate Governance Policy</li> </ul> </li> <li>(2) The Company has established whistleblowing and complaint channels for cases of corruption related to its activities that violate its policies. These channels allow employees and external parties involved in the business to report misconduct or file complaints.</li> </ul>

Note: Risk scores are divided into 4 levels as follows:

Overall Risk Level	Score	Definition
Low	1-2	Acceptable level: No need to control risks or additional management
Moderate	3-6	Acceptable level: It must be controlled to prevent the risk from turning to unacceptable levels.
High	7-12	Unacceptable level: It needs to manage the risk to remain at an acceptable level.
Very High	13-25	Unacceptable level: It needs to be urgently managed to reach an acceptable level immediately.

#### **Emerging Risk**

The Company has identified emerging risks expected to arise in 2025, along with corresponding measures for managing them, as follows:

# (1) Increased cost risk from investing in green-based energy production technology in accordance with government policy measures

In 2025, the government has implemented a policy to increase the proportion of clean energy by drafting a new Power Development Plan (PDP2024). By 2037, the proportion of natural gas in power generation is expected to decrease to 41%, while the proportion of clean energy will increase to 51%. This shift aligns with the global focus on climate change, as countries set clear targets to reduce greenhouse gas emissions. Consequently, organizations involved in electricity generation must adopt technologies that facilitate clean energy production, such as solar power and wind power, to ensure sufficient electricity supply in the future.

The Company has established guidelines and plans for managing such risks by continuously prioritizing electricity generation from clean energy and studying and implementing technologies that enhance the efficiency of clean energy generation. The Company currently has 80 MW of solar power plant projects, wind power plant projects, and solar rooftop projects. For each project, the Company conducts feasibility studies, analyzes returns, and systematically manages costs in line with budgets to ensure efficient and sustainable operations.

#### (2) Risk arising from adapting to natural disaster crises

Natural disasters resulting from climate change, such as floods and droughts, are increasingly becoming more severe. If the Company fails to adapt adequately to address these challenges, it may suffer serious damage.

The Company Group is aware of the potential for natural disaster crises and has prepared to address such situations by practicing emergency plans aimed at ensuring business continuity across various scenarios. Through these practices, executives and related employees acknowledge their roles, responsibilities, and any shortcomings that may arise during operations. This preparation allows for the implementation of various backup measures to address these issues proactively, mitigating the impact before a real disaster occurs.



#### (3) Risk arising from rapid change and the use of advanced technology

Currently, technology, including digital technology, is developing rapidly and continuously, affecting changes in marketing, product development, business models, business opportunities and challenges. The exponential growth of automated machinery, artificial intelligence technology, and robot technology enhances the efficiency of business operations. However, it also poses challenges for infrastructure and personnel development to keep pace with technological advancements. Rapid analysis of Big Data may also create risks related to human rights and ethics.

Companies under TPI Polene Group recognize advancements in technology. Therefore, they have established risk management guidelines and plans that include upgrading innovation processes, introducing new technologies to modernize factories, and developing Smart Plants to enhance competitiveness. The Company Group focuses on business operations that enhance competitiveness and address stakeholder needs, strengthen cyber threat management, and develop personnel knowledge to align with new technologies.

For details on risk management, please refer to the Company's Form 56-1 One Report 2024, specifically the section titled "Risk Management" on page .........

Further details are also available at





http://www.tpipolenepower.co.th/index.php/th/th-investment/ar/ar-h/category/94-annual-report-form-56-1 and Scan QR Code

#### **Crisis Management**

The Company has a Business Continuity Plan (BCP) to address significant risks and public health risks that may arise such as epidemics and contagious diseases in epidemic situations that may occur, ensuring the smooth operation of the Company's business. Guidelines and plans for potential risk management are established, covering various areas as follows:

- Identification of important risks and public health risks in epidemic situations, including fires, storms, floods, and terrorism. riot protest Cyber threats chemical spill Boiler explosions, epidemics and contagious diseases
- Important activities/work of departments
- Events, situations or problems that may arise due to significant risks
- Impacts occurred
- Activities and problem-solving methods
- Supporting plan and troubleshooting steps
- Responsible person and coordinator

The central working group and relevant departments will cooperate in regularly monitoring the performance of the Business Continuity Plan (BCP). The plan will be thoroughly reviewed for content and details, with its effectiveness and appropriateness assessed annually to ensure it can effectively address emergencies or unexpected events. The monitoring, review, and evaluation process will consider changes in the business environment, potential risks, and the development of management practices that align with the organization's long-term needs and expectations.

## Information Security (GRI 3-3)

The Company is well aware of current cyber threats caused by malicious people or hackers through methods and tools to cause damage to information systems or data theft in forms becoming more and more complicated day by day. Lack of efficient operations may cause widespread impact and damage to the Company, its affiliates, business partners, including agencies that contact the Company and its affiliates, both in terms of trade information, important information about the Company, and related persons including the reputation of the Company and its affiliates.

Information security is one of the most important issues in power business operations as information in the Company's information system is commercially sensitive. It is of great importance in determining the Company's commercial strategy. Leakage of information will seriously affect Company's reputation, credibility, income, as well as important stakeholders of the Company.

## **Operational Goals**

#### **Data Security**

- Preventing or reducing damage caused by cyber threats involves implementing prevention and surveillance measures to minimize the chance of occurrence.
- Establishing Cyber Security Awareness among employees at all levels (100%) to enhance their understanding and knowledge of various forms of cyber threats, thereby reducing the risk of cyber threats in the Company's operations and the daily lives of employees.

### **Management Guidelines**

The Company has established a security policy for its information systems and those of its subsidiaries (IT Security). This policy mandates regular reviews of the cyber threat prevention system, which includes the development and improvement of cyber protection systems. It ensures that the Company and its subsidiaries stay up to date with cyber threats, which are continually evolving in both methods and seriousness concerning threats to information systems. The details are as follows:

#### 1. Communication systems and networks outside the Company and its subsidiaries

The Company has installed a firewall to segregate the external and internal network systems of both the Company and its affiliates. This measure is designed to thwart potential attacks from malicious individuals or hackers targeting the information systems of the Company and its affiliates from outside sources.

#### 2. Host computer and client computers

- 2.1 The Company closes vulnerabilities in the Cyber Security Patching for the Computer Operating System.
- 2.2 The Company has installed Endpoint Security to protect against threats from computer viruses and various malware programs.

## Connecting to the information systems of the Company and its subsidiaries from the branch offices of the Company and its subsidiaries or outside agencies

The Company mandates the use of a Virtual Private Network (VPN) for connecting to its work systems and those of its affiliates. This measure ensures the secure transmission of data between branch offices or external agencies and the Company's information systems, including its subsidiaries.

#### Knowledge Base

- 4.1 The information system administrator team regularly studies cybersecurity.
- 4.2 General employees are provided with basic Cyber Security Awareness Training as a guideline for operating and using information systems to stay safe from cyber threats.

#### 5. Review of Information Systems by External Auditors

The Company undergoes annual reviews of its information system by external auditors, following standards or frameworks such as ITIL, ISO27001, etc. These reviews identify deficiencies, which the Company then addresses by making improvements to ensure the security of its information systems.

The Company is well aware of the importance of keeping internal information safe and preventing any leakage that could lead to significant damage at various levels. Therefore, the Company's directors, executives, and employees at all levels must adhere to the Company's practices for maintaining internal information. Additionally, the Company established a Personal Data Protection Policy in 2021 as a guideline for employees at all levels to follow in handling the personal data of customers, suppliers, employees, and related parties. Data must be used strictly in accordance with the Personal Data Protection Act, covering the processes of storing, collecting, and disclosing information securely. This includes granting the data subject the right to access, check, and withdraw consent to their information at any time. Violations of the Company's policies and practices will be thoroughly investigated and punished accordingly, with measures including prosecution and full compensation for damages as specified by law.

## Performance in 2024 (GRI418-1)

The development of an information security system requires significant technological involvement and the formation of a team to prevent cyber threats, necessitating time for information study and a relatively high investment budget. Therefore, it is essential to thoroughly assess the information and evaluate its worthiness and appropriateness for use within the organization before requesting budget approval.

During the year 2024, the Information Technology Department conducted a study on guidelines for developing information security by inviting a team of experts in cyber threat prevention. The purpose was to seek basic knowledge and advice on developing and enhancing cybersecurity protection systems, including:

- National Telecom Public Company Limited
- The Practical Solution Public Company Limited
- Advanced Info Service Public Company Limited
- Distributors of cyber protection equipment and systems, both domestically and internationally, especially the products and services of the following brands such as Palo Alto Networks, Check Point, Fortinet, McAfee, Cisco, etc.

Based on the information provided by the service providers mentioned above, the Company has evaluated the cybersecurity system enhancement plan in phases as follows:-

- 1. Phase 0: Through evaluating the current cybersecurity system, the Company assesses its capability to protect against cyber threats.
- 2. Following the receipt of the test results during Phase 0, the service provider will compile a report assessing the Company's cyber threat protection capabilities and offering recommendations for enhancing cybersecurity systems. This comprehensive report will be structured into three distinct phases for clarity and coherence.
  - 1) Phase I
    - To safeguard against highly severe threats that may compromise the Company's operational systems. In the event of such an occurrence, the Company may experience disruptions in normal operations and incur significant financial losses.
  - 2) Phase II
    - To safeguard against medium-level threats that may target the Company's operational systems. In the event of an incident, the impact may not be as severe as outlined in Phase 1. The Company's operations can still continue, albeit with potential temporary disruptions, and there may be some financial losses incurred.
  - 3) Phase III
    - To safeguard the Company's work systems against potential minor threats. While these threats may not initially pose severe impacts, they could accumulate damage and escalate in severity over time.

3. The establishment of a cyber threat prevention team by the Company is comparable to recruiting specialized doctors. Presently, there remains a shortage of personnel in this field—individuals with specialized expertise in cyber security who necessitate dedicated hours for work in this specific domain. High wages are typically Generally, hiring external team is required to monitor cyber security.

The Cyber Danger Surveillance Team will continuously analyze data traffic flow through Data Traffic Log Analysis, requiring the processing of a significant volume of data at all times. Should any suspicious activity be detected, the team will promptly implement preventive or corrective measures according to the agreed scope outlined in the service contract and will promptly notify the Company's designated personnel.

## Operating results for the year 2024

Times of Data Looks	Management Mathada and Calutiana	Number of Leaks			
Types of Data Leaks	Management Methods and Solutions	2022	2023	2024	
Unlawful access to information in	Regularly review information systems by	0	0	0	
information systems from unauthorized	external information system auditors every				
persons	year.				
Access to information in the	Protected by information devices such as	0	0	0	
information system by hackers	Firewall/IPS and Endpoint Security at the server				
	and user machines and regularly renew the				
	service agreement.				

#### Note

- 1. For investment in cyber defense, it cannot be a one-time investment. The Company needs to make regular investments to develop a system capable of combating cyber threats that evolve with the times and technology. This is particularly crucial today, as hackers are also leveraging AI to enhance their cyber attack capabilities. If the Company invests only once, it will only acquire technology at the time of purchasing cyber protection equipment and systems, rendering it unable to prevent future threats.
- 2. After the service provider has completed all steps, the plan or proposal, along with a budget, will be summarized and presented to senior executives or the Board of Directors for selection and approval of the next budget.

In 2024, the Company received no complaints or reports of personal data violations. No incidents were found that affected the privacy of customers, suppliers, or other stakeholders.

#### **Planning for Future Improvements**

- 1. The Company will conduct a cybersecurity review for itself and its subsidiaries through a Cybersecurity Assessment to identify vulnerabilities. Additionally, it will continue exploring ways to enhance and develop additional cyber defense systems based on existing ones.
- 2. The Company will develop a knowledge base system regarding cyber threats and guidelines for prevention to be used to disseminate knowledge to users of the Company's and subsidiaries 'information systems.
- 3. The Company will establish a Cyber Security Operations Team for 24-hour surveillance and establish a Cyber Security Operations Center (CSOC) to act as a unit to monitor cyber threats.

#### **Guidelines for Measuring Effectiveness against Established Targets**

The Data Protection Officer Committee and Information Technology Department took clear actions to educate and monitor personal data of the Board of Directors, employees, and business partners. As a result, in 2024, no damage was found in the above-mentioned important data.

### **Lessons Learned from Data Security and Customer Privacy Operations**

The Data Protection Officer Committee and Information Technology Department recognize the significant impact of personal data breaches and the evolving threats of cybersecurity attacks. In the era of Artificial Intelligence (AI), where cyber threats are rapidly and severely advancing, continuous monitoring and research are essential. This ongoing effort enables the dissemination of relevant knowledge to related parties and facilitates the swift prevention of basic cyber threats. Additionally, the Company is preparing to procure or develop enhanced cybersecurity defense solutions in the near future.

## Stakeholder Engagement in Managing Customer Data Security and Privacy

Information Technology Department, in collaboration with Human Resources Department, has been training new employees to raise cybersecurity awareness and regularly providing additional knowledge on the Personal Data Protection Act. This training serves as a knowledge base for the Company's operations, ensuring protection against cybersecurity attacks and promoting security in daily digital activities. In 2025, additional Cybersecurity Awareness training will be conducted alongside the regular training provided to new employees.





TPI Polene Power Public Company Limited has prepared the Sustainability Report for the year 2024 based on the reporting disclosure principles in accordance with GRI International Reporting Standards or GRI Standards 2021 to disclose management guidelines and sustainability performance covering economic, environmental, social, and the human rights dimensions. The details of the Sustainability Report are as follows:

Level of information disclosed	TPIPP has reported in accordance with the GRI Standards for the period from 1 January 2024 – 31 December 2024
Reporting cycle	Yearly
Reporting scope (2-2)	Disclosure of information in this report is within the scope of reporting only within TPI Polene Power Public Company Limited, excluding its subsidiaries and associated companies.
Providing assurance (2-5)	TPI Polene Power Public Company Limited does not have a policy to procure a third party for assurance.
Previous report	The Sustainability Report 2023 of TPI Polene Power Public Company Limited





Statement of	use	TPIPP has repor	ported in accordance with the GRI Standards for the period from			
		1 January 2024	24 – 31 December 2024			
GRI 1 used GRI 1: F			Foundation 2021			
Applicable G	RI Sector Standard(s)	N/A				
GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	OMISSION REASON	EXPLANATION	GRI SECTOR STANDARD REF. NO.
General disclosur	es					
GRI 2: General	2-1 Organizational details	22				
Disclosures 2021	2-2 Entities included in the organization's sustainability reporting	150				
	2-3 Reporting period, frequency and contact point	70,150	A orange cell indica disclosure or that a			
	2-4 Restatements of information	No any restatements of information				
	2-5 External assurance	No external assurance				
	2-6 Activities, value chain and other business relationships	25-33				
	2-7 Employees	32				
	2-8 Workers who are not employees	32				
	2-9 Governance structure and composition	35-41				
	2-10 Nomination and selection of the highest governance body	56-1 One Report 2024: 7.2.4 Nomination and appointment of directors and sub-directors and presidents				
	2-11 Chair of the highest governance body	56-1 One Report 2024: Roles and Responsibilities of the Chairman of the Board of Directors				
	2-12 Role of the highest governance body in overseeing the management of impacts	45,37-38				
	2-13 Delegation of responsibility for managing impacts	37				
	2-14 Role of the highest governance body in sustainability reporting	37,70				
	2-15 Conflicts of interest	38				
	2-16 Communication of critical concerns	64-66				

Citable   Disclosure   Disclo					OMICOION		
Incodesions 2012   Incodesion of the highest governance of the performance of the perfo		DISCLOSURE	LOCATION			EXPLANATION	STANDARD REF.
Performance of the injunction process to injunction process to determine remuneration   38   2-20 Process to determine remuneration   38   2-22 Process to compensation ratio   38   2-22 Process to compensation ratio   3-22 Statement on sustainable development strategy   3-22 Processes to conceive the process to conceive		knowledge of the highest	38-39				
policies  2-20 Process to determine remuneration  2-21 Annual total compensation ratio  2-22 Statement on sustainable development strategy  2-23 Statement on sustainable development strategy  2-23 Policy commitments  46-48  2-24 Embodding policy de-4-47 commitments  2-25 Processes to romadise negative impacts  impacts  2-26 Mechanisms for seeking advice and regulations  2-26 Mechanisms for seeking advice and regulations  2-27 Compliance with lass and regulations  2-28 Membership de-3 See-4 See		performance of the	39				
determine remuneration			38				
Cunder 2-21			38				
Sustainable development strategy   1			-	•	Confidential		
Part		sustainable development	6-8				
Commitments		2-23 Policy commitments	46-48				
remediate negative impacts  2-26 Mechanisms for seeking advice and raising concerns  2-27 Compliance with laws and regulations  2-28 Membership and regulations  2-29 Approach to stakeholder engagement sharping agreements bargaining agreements bargaining agreements Page 98  **Material topics**  GRI 3: Material Topics 2021 and a state of the material topics and regulations are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  **Economic performance**  GRI 3: Material Topics 3 34 Management of material topics and the material topi		J. ,	46-47				
Seeking advice and raising concerns 2-27 Compliance with laws and regulations 2-28 Membership associations 2-29 Approach to stakeholder engagement 56-64 stakeholder engagement 2-6-64 stakeholder engagement 2-7-00 pag-98  Material topics GRI 3: Material Topics 2021 and the material topics 70 around 2-7-00 pag-98  Fectoromic performance  GRI 3: Material Topics 2021 and the material topics 70 and available.  Fectoromic performance  GRI 3: Material Topics 2021 and the material topics 70 available.  Fectoromic performance  GRI 3: Material Topics 2021 and the material topics 70 available.  Fectoromic performance  GRI 3: Material Topics 2021 and the material topics 70 available.  Fectoromic performance  Fectoromic performance  GRI 201: 201-1 Direct economic alternation and obstrained distributed 201-2 Financial miglications and other risks and opportunities due to climate change 201-3 Defined benefit plan obligations and 201-4 Financial assistance received from 201-23-124 assistance received fr		remediate negative	64-66				
Laws and regulations   2-28 Membership associations   2-29 Approach to stakeholder engagement   56-64   2-30 Collective bargaining agreements   56-61 One Report 2024: bargaining agreements   7-70		seeking advice and	64-66				
associations  2-29 Approach to stakeholder engagement  2-30 Collective bargaining agreements  56-1 One Report 2024: Page 98   Material topics  GRI 3: Material opics  GRI 3: Material opics  3-2 List of material topics  70  Economic performance  GRI 3: Material opics  3-3 Management of material topics  CRI 201: 201-1 Direct economic value generated and distributed  2016  201-2 Financial implications and other risks and opportunities due to climate change  2013 Defined benefit plan obligations and other retirement plans  2014 Financial assistance received from  2014 Financial assistance received from  2024: Page 98  A orange cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  A orange cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  3-2 List of material topics  70  4 Orange cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  201-1 Direct economic alizo-124  201-2 Direct economic addistributed  201-2 Financial implications and other risks and opportunities due to climate change  201-3 Defined benefit plan obligations and other retirement plans			67				
Stakeholder engagement  2-30 Collective bargaining agreements Page 98  Material topics  GRI 3: Material 70pics 2021 Topics 202		•	41				
Material topics  GRI 3: Material ropics 2021 and the distributed and distributed 201-2 Financial implications and other risks and opportunities due to climate change 201-3 Defined benefit plan obligations and other retirement plans 201-4 Financial assistance received from assistance received from a serial topics 2021 and 201-4 Financial assistance received from a serial topics 201-4 Oracle A orange cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  A orange cell indicates that reasons for omission are not permitted for the disclosure or that a GRI Sector Standard reference number is not available.  20-12 Economic Performance 201-1 Direct economic value generated and distributed 201-2 Financial implications and other risks and opportunities due to climate change 201-3 Defined benefit plan obligations and other retirement plans 201-4 Financial assistance received from 201-2 Financial 201-2			56-64				
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201-2 Financial 73-81 implications and other risks and opportunities due to climate change  201-3 Defined benefit 123 plan obligations and other retirement plans  201-4 Financial 123-124 assistance received from	Economic Performance	value generated and	122-123				
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assistance received from		plan obligations and	123				
		assistance received from	123-124				

			OMISSION			GRI SECTOR	
GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	
Indirect economic	c impacts						
GRI 3: Material Topics 2021	3-3 Management of material topics	120-124					
GRI 203: Indirect Economic Impacts 2016	203-1 Infrastructure investments and services supported	25, 120-123					
	203-2 Significant indirect economic impacts	25, 120-123					
Anti-corruption							
GRI 3: Material Topics 2021	3-3 Management of material topics	131-135					
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	133					
	205-2 Communication and training about anti-corruption policies and procedures	134-135					
	205-3 Confirmed incidents of corruption and actions taken	134					
Procurement Prac	ctice						
GRI 3: Material Topics 2021	3-3 Management of material topics	136-139					
GRI204 Procurement Practice 2016	204-1 Procurement Practice	139					
Research and Dev	relopment						
GRI 3: Material Topics 2021 Research and Development	3-3 Management of material topics	124-126					
GRI G4 Sector Disclosure: Electric Utilities- Specific Information Disclosure of Electric Utilities Sector according To GRI (Research and Development)	Research and development activity and expenditure aimed at providing reliable electricity and promoting sustainable development (Former EU8)	125-126					
Innovation Techn	ology and Services						
GRI 3: Material Topics 2021	3-3 Management of material topics	126-128					
System Efficiency	,						
GRI 3: Material Topics 2021	3-3 Management of material topics	128-131					
GRI G4 Sector Disclosure: Electric Utilities- Specific Information Disclosure of Electric Utilities Sector according To GRI (System Efficiency)	EU12 : Transmission and Distribution losses as a percentage of total energy	131					

			OMISSION			GRI SECTOR	
GRI STANDARD/ OTHER SOURCE	DISCLOSURE	LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.	
Availability and R	eliability						
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Energy							
GRI 3: Material Topics 2021	3-3 Management of material topics	89-92					
GRI 302: Energy 2016	302-1 Energy consumption within the organization	90					
	302-3 Energy intensity	90-91					
	302-4 Reduction of energy consumption	92					
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	303-2 Management of water discharge-related impacts	94					
	303-3 Water withdrawal	95-96					
	303-4 Water discharge	97-98					
	303-5 Water consumption	98					
Emissions							
GRI 3: Material Topics 2021	3-3 Management of material topics	72-89					
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG emissions	84-85					
	305-2 Energy indirect (Scope 2) GHG emissions	84-85					
	305-3 Other indirect (Scope 3) GHG emissions	84-85					
	305-4 GHG emissions intensity	86					
	305-5 Reduction of GHG emissions	82-84					
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	85					
Waste							
GRI 3: Material Topics 2021	3-3 Management of material topics	100-101					
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	100					
	306-2 Management of significant waste-related impacts	100					
	306-3 Waste generated	101					
	306-4 Waste diverted from disposal	101					
	306-5 Waste directed to disposal	101					
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	DISCLOSURE		OMISSION			GRI SECTOR
GRI STANDARD/ OTHER SOURCE		LOCATION	REQUIREMENT(S) OMITTED	REASON	EXPLANATION	STANDARD REF. NO.
Occupational hea	lth and safety					
GRI 3: Material Topics 2021	3-3 Management of material topics	104-114				
GRI 403: Occupational Health and	403-1 Occupational health and safety management system	104-113				
Safety 2018	403-2 Hazard identification, risk assessment, and incident investigation	105				
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	403-4 Worker participation, consultation, and communication on occupational health and safety	106-107				
	403-5 Worker training on occupational health and safety	108				
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	403-9 Work-related injuries	110-113				
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GRI 3: Material Topics 2021	3-3 Management of material topics	115-118				
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GRI 3: Material Topics 2021	3-3 Management of material topics	146-149				
GRI 418: Customer Privacy 2016	418-1 Substantiated complaints concerning breaches of customer privacy and losses of customer data	147-149				



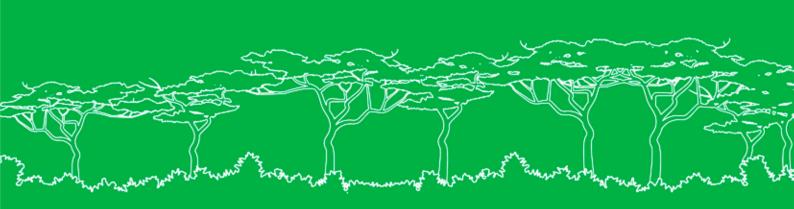
## **Reader Survey Form**

We kindly ask for your kind cooperation in responding to reader surveys by scanning QR Codes or sending this survey form back to TPI Polene Plc, at the address specified at the end of this report or by email to: chayutd@tpipolene.co.th / ooy@tpipolene.co.th

1. Personal information	tion				
Gender	O Male	Female			
Age	O Under 30 years old	○ 30-50 years	O 30-50	years	
Occupation, please sp	pecify				
2. As a reader, pleas	e specify from which point	of view you are reading:			
Customer	O Employee	O Regulatory Authority	O Educati	ional Institutions/Res	search Agencies
O General public	<ul> <li>Entrepreneur</li> </ul>	O Public agency	O Financ	ial Institutions	
Others, please spec	cify				
3. From what source	es did you receive/read the	• Company's Sustainability	Report?		
O www.tpipolene.co.t	th	O Employees of TPI Pole	ne Public Cor	mpany Limited	
Office/Plant/Subside	diary	Others, please specify			
4. The purpose of re	eading this Sustainability R	eport:			
O To get to know the	Company	<ul> <li>To find out about</li> </ul>	the decision to	o use the Company's p	oroducts/services
O To study projects t	hat benefit society and envi	ronment. O To research an	d study susta	inability practices.	
Others, please spec	cify				
5. What is your opin	ion on the Company's Sust	tainability Report?			
•	• •	es that you are interested in	: O Hiah	Moderate	OLow
Beauty of the design		<b>,</b>	O High	Moderate	OLow
_	tent and presentation style		O High	Moderate	OLow
	ess to understand, not conf	usina	O High	Moderate	OLow
Satisfaction with the		3	O High	O Moderate	O Low
6. What part of the	Sustainability Report inter	ests you the most?			
O About TPI Polene	•	ne and its Sustainability	O Environme	ental Impact Mana	gement
		Operation under Good Corp			gernene
-	Products and Service Develo	·		ent of Environmen	tal Impacts
• Responsibility for t	Toddets and Service Deveto	priidit	Wanagem	ient of Environmen	tat impacts
	the content of this Report	t fully contains all the topic		terest?	
O Yes		O No, more information i			
, ,		ou wish to contain in the Con		·	,
sustainability operati	ons?	Polene Power Public Compai			
9. Comments or oth Sustainability Report	ner additional suggestions	for further development of	TPI Polene	Power Public Com	npany Limited's

TPI Polene Public Company Limited would like to thank you for your kind cooperation. Information from your opinion survey on this Sustainability Report will be used to improve and develop the Company's Sustainability Report.









# บริษัท ทีพีไอ โพลีน เพาเวอร์ จำกัด (มหาชน) TPI POLENE POWER Public Company Limited

26/56 ถนนจันทน์ตัดใหม่ แขวงทุ่งมหาเมฆ เขตสาทร กรุงเทพฯ 10120 26/56 Chan Tat Mai Rd., Thungmahamek, Sathorn, Bangkok 10120



0-2285-5090, 0-2213-1039



0-2678-7068



webmasters@tpipolenepower.co.th



