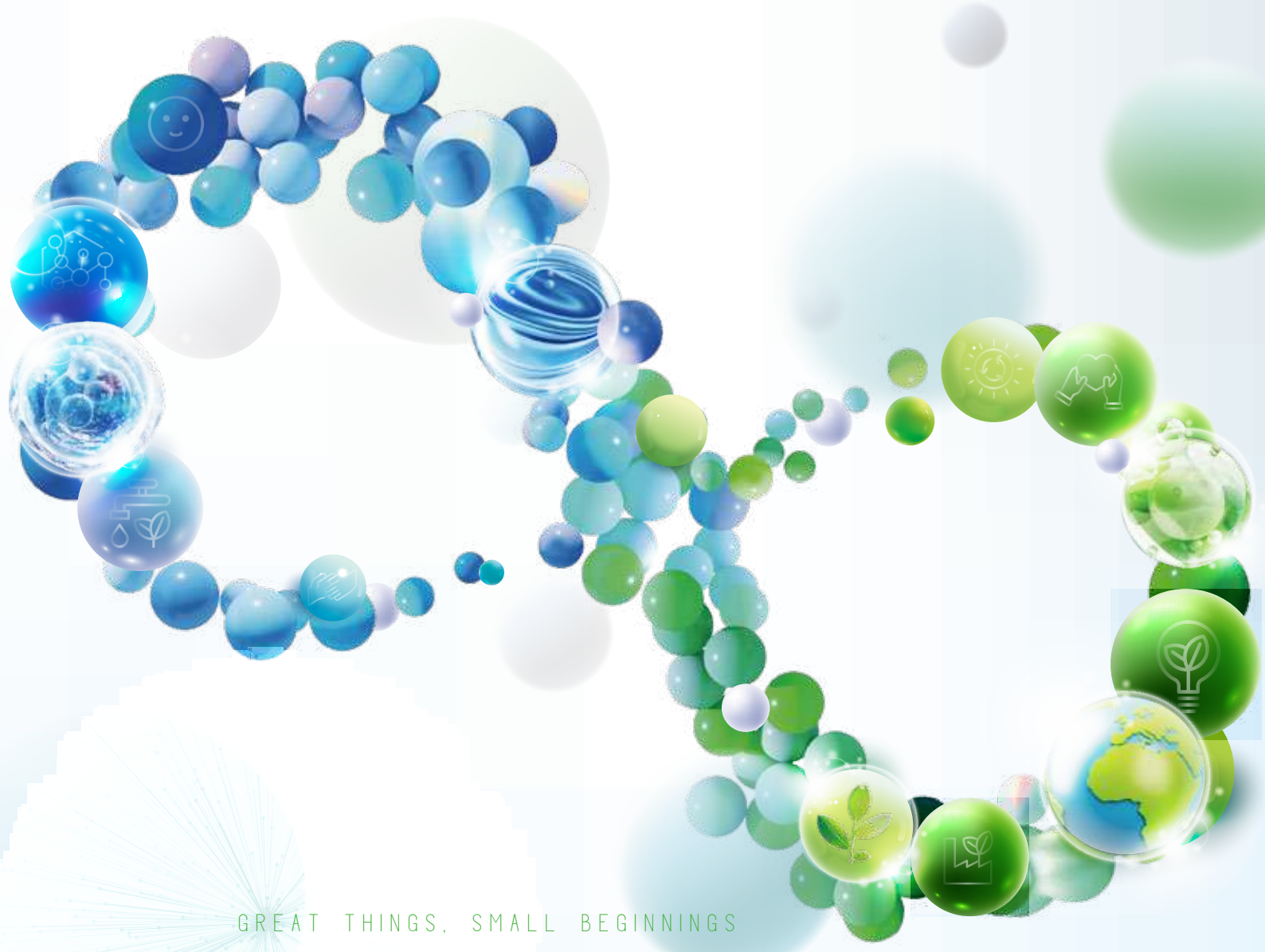
2023

Formosa Plastics Corporation

Sustainability Report



GREAT THINGS, SMALL BEGINNINGS

GREAT THINGS
SMALL BEGINNINGS

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About This Report

Report Overview

This Report was published pursuant to the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) 2021 issued by the Global Reporting Initiative (GRI). This Report provides an accurate and detailed introduction to the sustainability actions of Formosa Plastics Corporation (hereinafter referred to as "FPC") in areas including corporate governance, environmental sustainability, happy enterprise, safe workplace, and community co-prosperity.

Publication Overview

- First publication date: December 2015
- Previous publication date: May 2023
- Current version publication date: June 2024
- Next publication date: May 2025

Scope and Boundary of Reporting

2023 Financial Statements

The information recorded herein mainly focuses on FPC (please refer to 1.2.2 Company History for more details). Any other information with a different scope of the disclosure will be otherwise specified. The data quoted and reporting boundary used in the Report are identical to those in 2022.

The citation and reporting boundaries of the 2023 Sustainability Report data have not yet been aligned with the consolidated financial statements, excluding the subsidiaries.

The data and statistical information in this report are based on self-reported statistics and survey results from FPC. The information disclosure period is from January 1 to December 31, 2023. The source of the financial information is the public accountant-certified statement, while other statistics are generally quoted from information provided by government departments or relevant websites and will be presented normally. Any exceptions will be specified.

Report Guidelines

Issuing Organization	Frameworks/Standards
Global Sustainability Standards Board, GSSB	Universal Standards 2021 published by the Global Reporting Initiative (GRI) GRI Standards 2016, 2018 and 2020
International Sustainability Standards Board, ISSB	Task Force on Climate-related Financial Disclosures, TCFD
	Sustainability Accounting Standards Board, SASB (Chemicals)
Taiwan Stock Exchange	Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies Environmental, Social, and Corporate Governance (ESG) Information Disclosure Reporting Operations Environmental, Social, and Corporate Governance (ESG) Information Disclosure Application Correction Reporting Operations
AccountAbility	Materiality, Inclusivity, Responsiveness, and Impact of the AA1000 AccountAbility Principles Standard (APS)
United Nations	UN Sustainable Development Goals, SDGs

Verification and Assurance

Appendix V- Independent Assurance Opinion Statement

To strengthen performance comparison and report credibility, all information disclosed in this Report has been verified independently by the BSI, in accordance with the AA1000AS v3 TYPE I. The BSI Independent Assurance Opinion Statement is presented in the internationally accepted format. Any estimation will be specified in the relevant chapters.

Item	Standards	Verification / Assurance Organizations
Sustainability Report	AA1000AS v3 TYPE I Assurance	BSI
Financial Management	Regulations Governing Auditing and Attestation of Financial Statements by Certified Public Accountants and generally accepted auditing standards	KPMG Taiwan
Business and Customer Management	ISO 9001: 2015 Quality Management Systems	SGS Taiwan Ltd., AFNOR Group/ BellCERT Group Taiwan
Environmental Management	ISO 14001: 2015 Environmental Management Systems ISO 14064-1: 2018 Specification with guidance at the organization level for quantification and reporting of greenhouse gas emissions and removals	British Standards Institution (BSI), SGS Taiwan Ltd.
Industrial Safety Management	ISO 45001: 2018 Occupational Health and Safety Management Systems CNS 45001: 2018 Occupational Health and Safety Management Systems	SGS Taiwan Ltd.

Management of Sustainability Report

Internal Review

In accordance with the requirements set forth in the Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies, FPC formulates procedures for the preparation and verification of the sustainability report and incorporates them into the internal control system. This Report covers information on the economic, environmental, and social aspects.

The President's Office compiles the information provided by each unit, and the relevant data are reviewed and confirmed by the Sustainable Development Promotion Team of FPC to ensure compliance with the principles of integrity and transparency. The Office arranges annual verification and ensures the quality of the report through third-party verification. The report are then reviewed and approved by the FPC Sustainable Development Committee and submitted to the Board of Directors. It will be disclosed to the public by August 31, 2024, as required, and filed with the Market Observation Post System (MOPS).

External Assurance

This Report has been independently verified by the third-party, BSI and the verification results comply with the AA1000AS v3 TYPE I Assurance. Please refer to Appendix V for the Independent Assurance Opinion Statement. This Reports has been verified to comply with Materiality, Inclusivity, Responsiveness, and Impact of the AA1000 AccountAbility Principles Standard (APS).

September to December 2023

Internal Review

Identification of major topics and initiation meeting for the compilation of the sustainability report

February to April 2024

Internal Review

Compilation and data consolidation of the sustainability report

March to May 2024

External Assurance

Verification by third-party international organizations

May to June 2024

Internal Review

Sustainable Development Promotion Team reviewed and reported to the Sustainable Development Committee and the Board of Directors for final approval and publication

Contact Information

If you have any opinions or questions about the content of FPC's Sustainability Report, please feel free to submit your valuable recommendations via the following methods:

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Email: fpccsr@fpc.com.tw

Sustainable Development Website:
http://csr.fpc.com.tw/FPC_CSR/home.aspx

Key Sustainability Performance in 2023

Economic

NT$199.138 billion
Consolidated revenue

NT$6.996 billion
Net profit before tax

13%
Proportion of female directors on the Board of Directors

100%
Attendance rates of each committee

NT$1.26 billion
Estimated annual benefit of AI projects

NT$1.586 billion
Investment amount in Clean Tech

Environmental

All complexes passed the ISO 14001: 2015, ISO 45001: 2018, and CNS 45001: 2018 standards.

3.998 million liters/day
Average water saving

A
CDP Climate Change Score

629,705 tons CO_2e
GHG reduction compared to the base year (Scope 1 and Scope 2)

A
CDP Water Security Score

NT$242 million
Green procurement

100%
The proportion of relevant products undergoing hazard assessment

People (including human rights)

96.3%
Percentage of regular employees

4.0%
Employee turnover rate

60.57%
Percentage of local supervisors employed

75.9%
Percentage of employees joining labor unions

Progress of Sustainable Development

Response to the United Nations' Sustainable Development Goals (SDGs):

In 2023, FPC aligned nine SDGs and identified 20 targets. SDGs 3, 8, 9, 11, 12, and 13 were relevant to the core operations while SDGs 4, 6, and 7 were of secondary relevance.

Economic

SDGs

Targets

8.2 / 9.4 / 12.2 / 12.5

Short-term (1 to 3 years)

FPC's Objectives	Actions and Achievements in 2023
1. Improve the Company's operating performance and pursue complete production and sales.	For details of FPC's operating results for 2023, please refer to 2.1.1 Operating and Financial Performance.
2. Continue to promote production, marketing, and research operation strategies, develop new products and applications in collaboration with clients, learn about improve product quality, and enhance the added value of products.	For the actual R&D results of cooperation with customers in 2023, please refer to 2.3.2 Product R&D and Innovation for details.
3. Promote AI technology development and applications.	Enhance AI technology development and applications toward the five major pillars of development. Please refer to 2.3.3 Intelligent Management. As of 2023, **219** out of the **414** proposed AI technology development cases were completed. The remaining 195 AI technology development cases are currently ongoing with an expected annual benefit of **NT$1.26 billion**.
4. Expand operations at home and abroad and carry out debottlenecking projects.	Expand investments in home and abroad operating bases with the petrochemical industry as our core. For details, please refer to 2.1.2 Major Investment Projects.
5. Increase the sales volume of differentiated products by more than 6% compared to the previous year.	The sales volume of differentiated products in 2023 increased by **6.2%** compared to 2022, successfully reaching the original target.
6. Evaluation and establishment of other functional committees other than the Audit and Remuneration Committee.	To promote sustainable development efforts, FPC's Board of Directors has approved the establishment of the Sustainable Development Committee on May 10, 2022, which is composed of 4 independent directors. In 2023, a total of two meetings were held.
7. Strengthen the independence and supervision mechanism of the Board of Directors.	Based on the needs of operation management and in order to implement corporate governance practices and supervision separately, on March 10, 2023, the Board of Directors resolved to promote Senior Vice President Mr. Wen-Bee Kuo to President and relieve Chairman Mr. Jason Lin of the concurrent position of President to strengthen the independence of the Board of Directors.

Medium-term (3 to 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. Enhance R&D capabilities and strengthen collaboration among the industry, government, and academia.	✓ The R&D expenditure in 2023 was **NT$2.78 billion**. ✓ In order to fortify our R&D foundation and enhance our R&D capabilities, we continue to establish industry-academia collaboration with National Cheng Kung University (NCKU), Chung Yuan Christian University (CYCU), and Chang Gung University (CGU). Additionally, we have worked with National Tsing Hua University (NTHU) and established the FPC-NTHU Joint R&D Center.
2. Promote digital transformation.	✓ Continue to optimize the e-commerce platform and smart production and marketing system, and build a data management center to improve operation management efficiency.
3. Committed to the development of differentiated, high-value and customized products.	✓ In 2023, the revenue of differentiated products accounted for **24.3%**, an increase of **2.1%** compared to **22.2%** in 2022.
4. Promote the optimization of AI models and digitization of operations throughout all production plants, and move towards the goal of smart manufacturing.	✓ The **AI model** for plant optimization is being demonstrated at the Mailiao n-Butanol Plant (consisting of 4 process areas). As of 2023, advanced process control (APC) has been implemented in 3 of these areas. The completion of the plant optimization AI model is expected in 2024, and its development experience will be applied to other process plants. ✓ The **AI development and operation platform** and **no-code AI cloud development platform** were established in 2023. These platforms enable colleagues to develop AI models without the need to write code, thereby reducing the workload of AI development and post-launch maintenance.
5. Establish a dedicated unit to fully promote the Company's transition.	✓ In light of the global shift towards low-carbon transition and the emergence of AI and digital technology, combined with the substantial growth in petrochemical production capacity in mainland China, the future development of the global petrochemical industry will be significantly impacted. ✓ In January 2024, a Transition and Development Team was established, consisting of the Energy Transition Unit, Digital Transition Unit, and R&D Unit. This team is dedicated to the Company's transition and development in three major areas: energy transition, digital transition, and new product and business development, serving as the focus for future efforts.

Long-term (More than 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. Promote forward-looking technology and product R&D.	✓ For information about forward-looking technology and green circular innovation R&D, please refer to 2.3.2 Product R&D and Innovation for details. ✓ Taking inspiration from the operational strategies and thinking of international petrochemical industry leaders, this report aims to outline the company's future business direction and identify growth opportunities. It serves as a reference for investing in forward-looking technology and product R&D.
2. Decentralize sales markets.	✓ Decentralize markets based on the changes in international market conditions and supply-demand competition. The proportion of exports to South and Southeast Asia in 2023 was **36.1%**, a **3.9%** increase compared to 2022. Please refer to 2.3.1 Main Products and Brands for details.
3. Introduce the Large Language Model (LLM) as a group-wide knowledge management tool.	✓ The **Azure Open AI** service was introduced in 2023 to develop the FPC version of ChatGPT. Various functional regulations and chemical knowledge of Formosa Plastics Group will be imported to serve as an FPC internal knowledge query tool. ✓ In the future, we will continue to invest in the field of information, enabling AI to further enhance its influence on decision-making across five key areas and drive digital transition.

Reference Chapters: 2.1 Operation Overview, 2.2 Corporate Governance, 2.3 Innovative Sustainable Products

Environmental

SDGs

Targets

3.9 / 6.3 / 6.4 / 6.5 / 7.3 / 7.a / 8.4 / 8.8 / 9.4 / 11.5 / 11.6 / 12.2 / 12.4 / 12.5 / 13.1 / 13.3

Short-term (1 to 3 years)

FPC's Objectives	Actions and Achievements in 2023
1. Promote "circular economy" in each complex to implement reduction, reuse, and utilization of resources.	✓ The Mailiao Complex has set a goal of reducing waste by **3%** within three years (six-year average) to strengthen reuse and recycling. ✓ FPC's sandblasting waste was initially classified as hazardous industrial waste and primarily disposed of through solidification and burial methods. We have partnered with waste recycling companies (cement product companies) to obtain approval from the Industrial Development Administration, Ministry of Economic Affairs to reuse. This enables us to convert the sandblasting waste into a reusable resource that can be utilized as non-structural concrete material, which is expected to reduce the amount of landfill by about **100 metric tons** per year.
2. Promote the implementation of the best available control technology for air pollutant emissions in the cogeneration plant.	✓ All six cogeneration units owned by FPC consistently improve their air pollution control equipment to minimize the levels of particulate matter, sulfur oxides, and nitrogen oxides, which have achieved the goal of best available control technology. Improvements of two units have been completed by the end of 2023 and the remaining four are expected to be improved by December 2024.
3. The absolute reduction target of GHG Scope 1 and Scope 2 in 2023 was reduced by 12% compared with the base year (2020).	✓ In 2023, the inventory of GHG Scope 1 and Scope 2 was **8.005 million tons** of CO_2e, which was **630,000 tons** less than the absolute reduction target in 2020, with a reduction ratio of **7.3%**, and efforts will continue.
4. Promote the reuse of waste and reduce the amount of waste buried in landfills.	✓ The amount of waste landfill in 2023 was 9,672 metric tons, an 11.2% increase compared to 2020, mainly due to the increase in inorganic sludge waste as a result of increased production capacity at the Mailiao Caustic Soda Plant. ✓ FPC has worked with waste treatment companies to submit an application to the Ministry of Economic Affairs to reuse inorganic sludge. It is expected that by 2024, FPC will obtain permission from the Industrial Development Administration, Ministry of Economic Affairs to reuse the waste, which will reduce about **2,000 tons of waste** per month through reusing to reduce the impact on the environment.
5. Promote source reduction of wastewater.	✓ FPC continued 28 improvement plans for source reduction of wastewater. As of the end of 2023, all plans have been completed, with an achievement rate of **100%**.
6. Promote product carbon footprint inventory.	✓ FPC received the Product Carbon Footprint Verification Statement for a total of **81 products** as of February 2024.
7. By 2025, 100% of all administrative areas in all complexes will use renewable energy.	✓ FPC has installed its own solar power generation capacity, with **456 kW** already completed as of 2023.

Medium-term (3 to 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. Promote "circular economy" in each complex to implement reduction, reuse, and utilization of resources.	✓ FPC is committed to promoting waste recycling and reducing the amount of landfilling of waste, and aims to reduce the amount of direct disposal of non-hazardous waste by **10%** in 2025 compared with the base year of 2020. ✓ Our 2025 reduction targets for various air pollutants will be reduced by **5%** compared with 2020, and we will achieve the best feasible control efficiency for air pollution control in all our manufacturing processes.
2. The absolute reduction target of GHG (Scope 1 and Scope 2) in 2025 will be reduced by 20% compared with the base year.	✓ Promote the transition of coal burning to low (zero) carbon energy, energy-saving, carbon-reducing, and circular economy, increasing the use of renewable energy and other carbon reduction measures. Please refer to 3.2.2 Greenhouse Gases Management for more details.
3. Promote water and energy conservation and greenhouse gas (GHG) emission reduction.	✓ In 2023, a total of 613 energy-saving improvement cases were completed, with an estimated GHG reduction of **98,996 tons CO_2e/year**. ✓ A total of **167** water-saving improvement cases were completed, with saving of **3.998 million** liters of water in a single day. Please refer to 3.2.3 Energy Management and 3.3.3 Water Conservation Performance for complete data and statistics. ✓ CDP Climate Change Score in 2023: **A** ✓ CDP Water Security Score in 2023: **A**

Long-term (More than 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. The absolute reduction target of GHG (Scope 1 and Scope 2) in 2030 will be reduced by 40% compared with the base year, and aim to be carbon neutral by 2050.	✓ Promote the transition of coal burning to low (zero) carbon energy, energy-saving and carbon-reducing circular economy, increasing the use of renewable energy, and other carbon reduction measures in order to reach the goal of carbon neutral by 2050.
2. Achieve zero violation of environmental laws	✓ In 2023, FPC received a total of 5 environmental violation reports penalized by the environmental authorities. ✓ We will continue to strengthen independent inspections at plants, source reduction and management, process waste reduction, and end control. Also, we will install additional equipment with the best available control technology and improve the effectiveness of pollution prevention equipment through AI technology.
3. Continue to promote a "circular economy" and strive toward achieving the "zero waste" objective.	✓ FPC is committed to promoting waste recycling and reducing the amount of direct disposal of waste, and aims to reduce the amount of direct disposal of non-hazardous waste by **20%** in 2030 compared with the base year of 2020.
4. Perform overall inspection based on the cycles set by equipment risk level.	✓ Starting in 2022, a total of 960 people were dispatched to conduct the overall process inspection project. As of the end of December 2023, 32 inspections have been conducted at 17 plants. Improvements were made on **2,189** out of the 2,461 anomalies found in these inspections, demonstrating an overall completion rate of **88.9%**. We will continuously track the implementation of improvements in each unit to enhance the safety of workplace equipment and operations.

Reference Chapters: 3.1 Environmental Management Strategies, 3.2 Climate Change Issue Management, 3.3 Water Resources Management, 3.4 Air Pollutant Management, 3.5 Waste Management

People (including human rights)

SDGs

Targets

3.9 / 4.5 / 4.7 / 8.6 / 8.8 / 11.5

Short-term (1 to 3 years)

FPC's Objectives	Actions and Achievements in 2023
1. Continue to promote various neighborhood and social charity events	☑ We actively participate in various local activities, support local agricultural products, care for disadvantaged groups, provide nutritious breakfast, grant scholarships, and care for economically disadvantaged households. For details, please refer to 5.1 Local Community Development and Investment.
2. Actively care for employees and offer assistance in overcoming difficulties to ensure talent retention.	☑ FPC collaborated with the Teacher Chang Foundation by having Teacher Chang to provide regular consultations to employees at all complexes and to help solve employee problems at an early stage. ☑ In 2023, a total of **41** consultations were completed. Please refer to 4.2.3 Employee Communication and Care for details.
3. Employee disabling injury frequency (FR) reduced to 0.15, disabling injury severity rate (SR) reduced to 0.8.	☑ In 2023, the employee disabling injury frequency rate (FR) was 0.17, and the disabling injury severity rate (SR) was 0.8. Please refer to 4.3.1 Occupational Health and Safety for further details. ☑ Continued building safe equipment and facilities. ☑ Planed and implemented regular and automatic inspections of machinery and equipment.

Medium-term (3 to 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. Promote "Formosa LOHAS Circle".	☑ Together with NPC, FCFC and FPCC, we integrated various resources of FPG, and cooperated with stakeholders such as neighboring communities, manufacturers and local governments to jointly promote activities such as circular economy, environmental sustainability and social participation. Please refer to 5.2.2 Formosa LOHAS Circle for details.
2. Lower the work-related disability injury indicators by 10% annually.	☑ Promote total inspection in each complex and office, and conduct in-depth inspection and discovery of potential risks not identified in the operational procedures, including safety, health, process, SOP, machinery, electrical equipment and inspection. ☑ Added CCTVs for various operating areas to monitor construction activities in order to ensure safety. ☑ Strengthen the inspection and identification of the top ten risks among the middle-level personnel.
3. Promote paperless practices	☑ In 2023, the average paper consumption was 829,909 sheets, a decrease of 328,736 sheets (**28.4%**) compared to the average paper consumption of 1,158,645 sheets in 2022, with carbon reduction of **31.6 tons CO_2e**. ☑ Continued to review the use of written forms and go green with paperless solutions.
4. Promote the electrification of vehicles.	☑ In order to improve energy-saving benefits, the purchase or lease of official vehicles are based on energy-saving models such as hybrid electric vehicles or pure electric vehicles. In 2023, a total of 24 new/replacement official vehicles were purchased, reducing carbon emissions by **2.5 tons CO_2e** per year. ☑ In 2023, we subsidized employees to purchase or replace with 281 new electric scooters, reducing carbon emissions by **53.6 tons CO_2e**.

Long-term (More than 5 years)

FPC's Objectives	Actions and Achievements in 2023
1. Zero hazards	✓ The intelligent personnel positioning and personal protective equipment identification system was established. Please refer to 4.3.1 Occupational Health and Safety for more details.
2. Strengthen communication with local communities to enhance identification with FPC.	✓ FPC listened to opinions of the locals and actively promoted corporate policies to the communities, so as to enhance local residents' sense of identity with the company and strengthen the relationship between FPC and communities.
3. Encourage childbirth to help increase the fertility rate.	✓ In July 2022, we started offering incentives for childbirth, including **a childbirth cash gift of NT$20,000** for each employee (or spouse) after giving birth and **a monthly childcare subsidy of NT$2,000** until the age of 6. ✓ In 2023, childbirth cash gifts were given to a total of **123 newborns**, and childcare subsidies were provided for **157 people**.

Reference Chapters:

4.2.3 Employee Communication and Care, 4.3.1 Occupational Health and Safety, 4.3 Workplace Safety Management, 4.4 Supply Chain Management, 5.1 Local Community Development and Investment, 5.2 Community Engagement

Award-Wining Performance in 2023

Awarding Organization	Award	Awarded Department
CDP	• CDP Climate Change Score: A • CDP Water Security Score: A • Supply Chain Score: A	• FPC • FPC • FPC
Ministry of Environment	• 2023 Excellent Green Sustainable Remediation Unit • 2022 Outstanding Green Purchasing Unit of Private Enterprise and Organization • 2023 Taiwan Circular Economy Outstanding Enterprises Award - Silver	• Safety and Health Department and Mailiao VCM Plant • FPC • Carbide Division
Occupational Safety and Health Administration, Ministry of Labor	• Top 10% Outstanding Companies in the Active Evaluation of Occupational Health and Safety Indicators in the 2023 Corporate Sustainability Reports	• FPC
International Trade Administration	• 2023 International Trade Awards - Best Trade Contribution Award	• FPC
Yunlin County Government	• 2022 Five-Star Excellent Occupational Safety and Health Department Award • 2022 Excellent Occupational Safety and Health Department Award • 2022 Excellent Occupational Safety and Health Department Award • 2022 Excellent Occupational Safety and Health Department Personal Award • 2022 Excellent Occupational Safety and Health Department Personal Award	• Mailiao Haifeng Plant • Mailiao EVA Plant • Mailiao C4 Plant • Employee of Mailiao SAP Plant • Employee of Mailiao Maintenance Plant No. 3
Business Weekly	• 2023 Top 100 Carbon Competitiveness	• FPC
1111 Job Bank	• Happy Enterprise Gold Award	• FPC
PVC Association in Australia	• PVC Stewardship Excellence Award	• FPC

Received the 2023 Excellent Green Sustainable Remediation Unit from the Environmental Management Administration, Ministry of Environment on November 9, 2023.

On November 28, 2023, Vice President Ou Yun-Tsing of the Plastics Division accepted the "PVC Stewardship Excellence Award" from the Australian PVC Association in Australia

Special Action

AI Application Management and Energy Transition Practices Toward Carbon Neutrality

Transition of AI Application Management

FPC's AI R&D Center successfully developed the Forecaster Studio No Code AI platform in August 2023. The platform's main objective is to enhance the efficiency of machine learning development and operations (MLOps) and facilitate the management of the AI lifecycle. The features of Forecaster Studio are as follows:

Intuitive visualization of the AI development process

Enables users to graphically design and manage AI models, streamlining the AI development and operation process.

Overcoming technical threshold

Provides a built-in AI toolbox for users to develop AI processes without writing any code.

Promoting knowledge sharing and reuse

Supports cross-user AI process sharing to achieve the reuse of AI knowledge, which not only improves AI development efficiency but also contributes to the promotion of AI applications across departments.

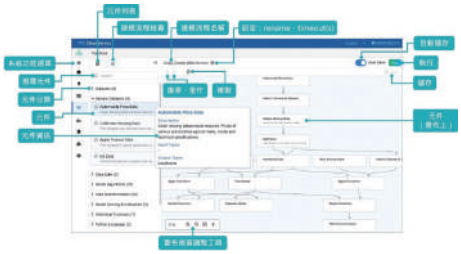
Integration of the enterprise data lake

Integrate existing functional data from various systems (such as sales, production, and quality control) to provide users with convenient access to a wealth of data resources. This will enable them to effectively utilize the data for training and optimizing AI models.

One-click deployment of AI model

AI model can be converted into on-site application services with a single click, dramatically simplifying the process of transferring AI models from the development stage to the production environment and providing a more flexible way of applying AI.

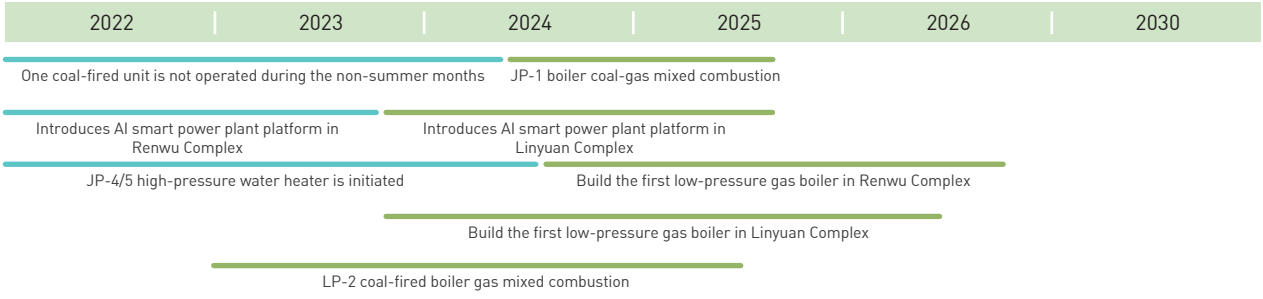
The No Code AI platform offers AI development tools for FPC's employees. By reducing technical thresholds and simplifying the development process, colleagues with no programming background can easily utilize AI technology to solve work-related issues, expanding the user base and achieving the objective of widespread AI adoption. As the platform expands to additional operational areas in the future, it is anticipated that AI technology will be further integrated into work processes to enhance operational efficiency and competitiveness.



Modeling Process Interface Introduction of Forecaster Studio

Energy Transition Practices

FPC is actively seeking opportunities for energy transition to mitigate the impact of climate change in response to the international carbon reduction trend and in accordance with the government's energy transition policy. FPC will plan the direction of coal and carbon reduction by improving boiler efficiency, optimizing unit operation and regulation, self-generation and self-consumption of steam and electricity, and multi-fuel operation.



FPC's Carbon Neutrality Vision

FPC is actively promoting clean technology and striving to achieve carbon neutrality through technological research and development. Currently, we are continuously developing low-energy hydrogen production technology through several latest power-saving projects. These include replacing high-performance membranes, optimizing electrolytic cells, introducing the latest high-efficiency and energy-saving membrane, and increasing the total electrolytic area of the electrolytic cell. These measures can reduce current density and electrolytic voltage, effectively lowering the energy consumption of ion exchange membrane electrolytic hydrogen production technology. Additionally, we have successfully achieved the co-combustion of hydrogen and natural gas in the cracking furnace of the Renwu VCM plant, resulting in reduced carbon emissions from combustion. Through our research and development of process technology, our goal is to establish a foundation for large-scale hydrogen production in future commercial transition.

ch.1

Builder of an Innovative and Sustainable Future

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Vision

FPC adheres to the core values of "Diligence, Perseverance, Frugality and Trustworthiness; To Aim at the Sovereign Good; Perpetual Business Operation; and Dedication to the Society." With a vision centered around corporate ethical management, environmental friendliness, and the common good of society, FPC is dedicated to improving operational performance, fulfilling social responsibilities, and actively meeting the expectations of stakeholders from all sectors. We aim to achieve sustainable business operations and development, creating a prosperous and sustainable future for society.

Policy and Commitment

The Company has formulated a stakeholder engagement policy to establish diverse and effective communication channels. Through regular dedicated communication, we are committed to reviewing engagement performance and organizing feedback annually, so as to fulfill responsible management philosophy

1.1 Message from the Chairman 2-22

Greetings to all our partners who have supported us throughout in the development of FPC and cared for its growth.

In 2023, major central banks in the US and Europe implemented continuous interest rate hikes and monetary tightening policies to curb high inflation. The US-China tech trade war, China's slow economic recovery after lifting lockdowns, and factors such as geopolitical tensions and supply chain restructuring led to a decline in global demand and a slowdown in economic growth momentum. Furthermore, international peers continuously expanded capacity, leading to a severe oversupply in the market and an intense price war. The petrochemical industry experienced an unprecedented downturn with decreased product demand, falling prices and spreads, significantly reducing the Company's annual operational performance compared to 2022. Fortunately, thanks to the courage and determination of all our colleagues, we have successfully overcome numerous challenges and managed to remain profitable even during an economic downturn.

In response to uncertainties in the international political and economic landscape, such as inflation, interest rate hikes, and geopolitical risks, as well as the impact of the sustainability wave and the downturn in the petrochemical industry, the Company is aligning with global supply chain shift trends. We are committed to diversifying our sales markets to India, Southeast Asia, New Zealand and Australia, Turkey, Africa, and South America, reducing dependence on a single market. Additionally, we are continuously deepening our AI and digital transition efforts, moving towards development in the technology and healthcare industries. Meanwhile, we have formed strategic alliances with both upstream and downstream supply chains to collaborate on developing new products and expanding into new application areas, enhancing the value of our products and fostering innovative comfortable living with fruitful achievements. Among them, the "Formosa anti-bacterial oyster shell powder" was awarded the Taiwan Circular Economy Outstanding Enterprises Award - Silver by the Ministry of Environment in 2023. Additionally, in collaboration with the Taiwan Textile Research Institute, we developed the world's first "Formosa Functional PP Fiber." This fiber is combined with eight PP material components, including breathable membranes, sewing threads, buttons, and zippers, to create a single-material PP Fully Recyclable Functional Jacket. This jacket won the 2024 iF Design Award in Germany and was showcased at the Frankfurt Textile Exhibition in April 2024. This not only seize business opportunities in high-performance functional clothing materials, it is also a major breakthrough in the realization of the clothing recycling cycle. We hope to showcase Taiwan's petrochemical industry's sustainability to the world.

The Company has long been committed to incorporating the United Nations SDGs into our core philosophy. We actively promote various sustainability initiatives, with a pledge to create a sustainable and better future for the planet. As of 2023, an accumulated investment of over NT$30 billion has been made in pollution prevention and control, energy conservation and waste reduction, greenhouse gas reduction, and improvement of industrial safety and fire protection. As a result, the treatment and emission of various pollutants were better than national regulatory standards. Regarding greenhouse gas inventory and reduction efforts, as of 2023, we have completed carbon footprint assessments for 76 major products. Greenhouse gas emissions (Scope 1 and Scope 2) for 2023, verified by an independent third party, totaled 8.005 million tons CO_2e/year. This represents an absolute reduction of 630,000 tons CO_2e compared to the baseline year of 2020, a decrease of 7.3%. The emission intensity is 5,324.22 tons CO_2e/NT$ 100 million, which is also lower than the baseline year's 6,205.40 tons CO_2e/NT$ 100 million, a decrease of 14.2%. Furthermore, according to the CDP, an international environmental assessment indicator, the Company achieved the highest rating of A in climate change, water security, and supply chain evaluation in the 2023. These three achievements not only demonstrate improvement compared to 2022 but also position us among the leading chemical companies worldwide. It is clear that our efforts in addressing climate change and promoting a circular economy have produced favorable outcomes.

After 70 years of establishment, FPC has not only strived for excellence in its business operations but has also consistently prioritized the well-being and care of its employees. In addition to annual salary adjustments and various welfare measures, we are dedicated to creating a work environment that promotes employee happiness and provides comprehensive support for their families. Due to our high regard for workplace safety and health, we utilize image recognition technology for continuous monitoring to assist in occupational safety management. We also promote chemical risk assessment and classification management, ensuring compliance with regulations for the storage of hazardous materials, and preventing occupational accidents. These efforts are aimed at establishing a healthy and friendly workplace environment. In 2023, FPC Haifeng Plant, Mailiao EVA Plant, and Mailiao C4 Plant were recognized and commended by several government agencies for their outstanding performance in occupational safety and health in Yunlin County. Among them, FPC Haifeng Plant received the prestigious Five-Star Award for three consecutive years. FPC has consistently been recognized as a Happy Enterprise for its commitment to improving salary and benefits, work-life balance, creating a healthy workplace, and promoting career development, all of which have earned accolades from numerous employees.

Looking ahead to the new year, to overcome the challenges posed by the economic downturn, all colleagues will continue the long-standing tradition of perseverance and hard work that has been upheld for 70 years. We will courageously embrace change and strive to facilitate the transition, with the primary objective of establishing a robust business foundation for future operations. In addition to focusing on the petrochemical industry, expanding our investment in domestic and overseas operating bases, and actively developing differentiated, high-value-added products, we are also drawing on the business strategies and thinking of major overseas petrochemical companies to determine our future business direction, promote forward-looking technology and product research and development, and restructure and launch new businesses and products in anticipation of becoming a key driving force in our sustained growth. We will deepen our investment in the comfort living innovation industry through strategic alliances with upstream and downstream industries, developing diversified applications to meet the needs of daily life and add value to our products. we will also implement market diversification and increase the proportion of sales of differentiated products to grasp the business opportunities at the time of the restructuring of the global industrial supply chain according to the changes in market conditions and the competitive situation of supply and demand in each region.

The Company will implement strict controls on capital expenditures, reduce the inventory of raw materials and finished products, continue to promote process safety measures such as general inspections at each plant, implement process inspections and hazard identification, and improve construction safety management to eliminate workplace safety hazards. This will ensure stable production with zero accidents in the plant. We will deepen AI development and digital transition, optimize the entire plant process and digitize operation management, move toward the goal of a smart factory, and apply ChatGPT to assist in operation management and enhance operational efficiency.

Furthermore, we aim to integrate the principles of sustainability into our business strategies. This includes promoting energy transition, circular economy, energy conservation, and carbon reduction. We are also committed to strengthening our risk management of climate change. We are also committed to research and development of environmentally friendly and medical-grade products, such as fully recycled plastics, anti-adhesive composite rubber particles, biodegradable and green plastics, working with our partners towards the goal of 2050 Carbon Neutrality. We hope to strengthen FPC's sustainable competitiveness through various sustainable and innovative business strategies, in order to seek opportunities to reverse the downturn in the business environment, and to contribute to the "Care for the Earth, Environmental Sustainability".

Formosa Plastics Corporation
Chairman

2024

1.2 About FPC

1.2.1 Management Philosophy 2-23

As a member of the Formosa Plastics Group (FPG), Formosa Plastics Corporation (FPC) has undergone 70 years of development based on the management philosophy of the late founders, Mr. Wang Yung-Ching and Mr. Wang Yung-Tsai, who always emphasized and demonstrated the spirit of "Diligence, Perseverance, Frugality and Trustworthiness; To Aim at the Sovereign Good; Perpetual Business Operation; and Dedication to the Society." For more information on the founders of FPG, please refer to FPG's official website.

FPG Website: About Our Founders

For more information on management philosophy, please refer to FPC's Sustainable Development website.

Sustainable Development Website: Business Philosophy

1.2.2 Company History 2-1 2-2

Formosa Plastics Corporation

Date of Founding	Date of Listing	Business
November 5, 1954	July 27, 1964	Plastics, fiber, chemicals and co-generation

Locations	Registered Company Address
Management Unit: Taipei Office Industrial Complexes: Renwu, Linyuan, Tungshan, Mailiao, Hsinkang, the 4th Complex	No. 100, Shuiguan Road, Renwu District, Kaohsiung City

Global Locations	Amount of Capital
Taiwan, Mainland China, U.S.A.	(NT$ thousand) 63,657,408

Subsidiaries	Consolidated Revenue in 2023
■ Formosa Plastics (Cayman) Ltd. ■ Formosa Industries (Hong Kong) Ltd. ■ Formosa Industries (Ningbo) Co., Ltd. ■ Formosa Electronics (Ningbo) Co., Ltd. ■ Formosa Industries Corporation	(NT$ thousand) 199,138,777
	Number of FPC Full-time Employees in 2023
	6,393

For more information on development over the years, please refer to "Memorabilia" on FPC's official website.

FPC Website: Memorabilia

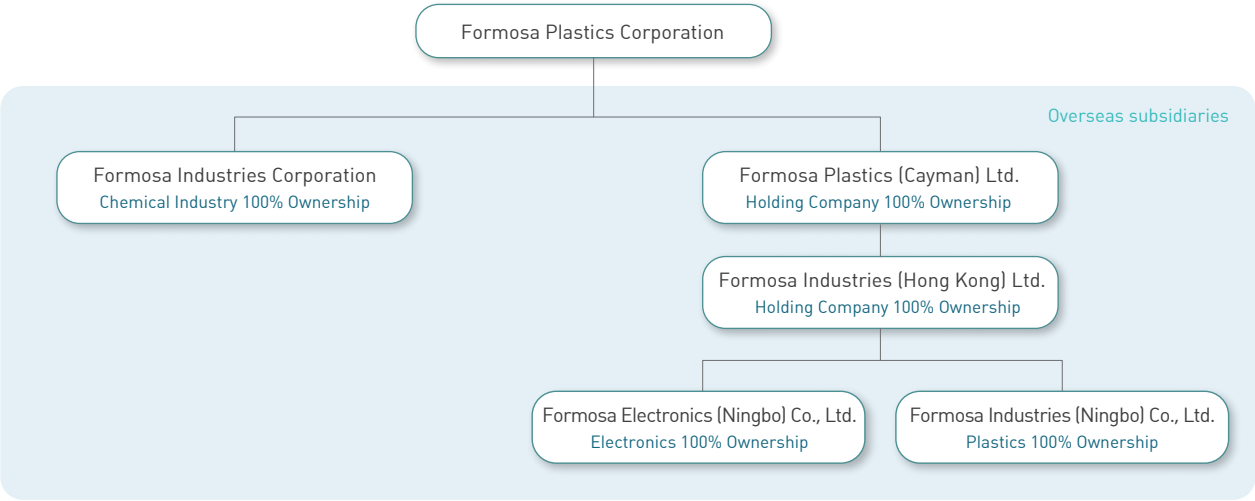
Corporate Logo

Among the companies of Formosa Plastics Group (FPG), the chain shape is used as a common symbol, representing FPC is a transformation of the Chinese character " 台 ," which is kept relatively similar to FPC's logo.

For the corporate logo, please refer to FPG's official website.

FPG Website: Corporate Logo

Organization Chart



1.3 Stakeholder Identification and Communication

2-12 2-29

Considering the experiences of the various departments and consulting the 5 major principles of the AA1000 Stakeholder Engagement Standard (SES) (Dependence, Accountability, Influence, Multiple Perspectives, and Degree of Concern). In 2023, FPC re-identified the 9 main stakeholder groups and established a variety of smooth communication channels with the stakeholders through workshops of core groups, according to the nature of each department to learn more about their issues of concern and obtain their feedback. In addition to providing the basis for the preparation of this Report, such feedback will also serve as an important reference for FPC when determining sustainable strategies and objectives in the future.

Customers

Importance to FPC

One of the most important strategies of FPC is to understand the needs of our customers, to provide high quality products, to meet customer expectations, to listen to customer feedback, to continuously improve our products and services, and to build long-term and stable customer relationships.

2023 Material Issues

- Air Pollutant Management
- Product R&D and Improvement
- Public Safety at All Complexes
- Energy Management
- Corporate Ethical Management
- Workplace Health and Safety
- Chemicals Safety

2023 Communication Channels, Response Methods, and Frequency

- Exhibitions/Product presentations - 2+ times/year
- Satisfaction surveys - once every year
- Providing market information and technical services - anytime
- Meetings - anytime
- Email/Telephone - anytime

Responsible Department

Sales departments at each division

Contact

Mr. Su
realman@fpc.com.tw

Employees

Importance to FPC

Employees are FPC's vital pillars. Their expertise, talent, and loyalty have a direct impact on the Company's competitiveness, innovation, and social image. Therefore, FPC values the needs of our employees and provides a good working environment and opportunities for professional development.

2023 Material Issues

- Air Pollutant Management
- Corporate Ethical Management
- Workplace Health and Safety
- Corporate Governance
- Greenhouse Gases Management
- Product R&D and Improvement
- Energy Management

2023 Communication Channels, Response Methods, and Frequency

- Departmental morning meetings - daily, President's Office meetings - weekly
- Labor-employee meetings - once every quarter
- Welfare Committee meetings - once every month
- Physical/Online suggestion mailboxes - anytime
- "799" employee feedback hotline - anytime
- FPG bimonthly magazines - once every two months
- Employee satisfaction surveys - 4+ times/year
- Employee counselors - anytime
- Face-to-face meetings between high-level executives and union representatives and employees - 4 to 6 times/year

Responsible Department

- President's Office
- President's Office at each complex
- Complex Management Division

Contact

Mr. Chang
kaihua@fpc.com.tw

Shareholders and Investors

Importance to FPC

Investors who hold shares of FPC can evaluate the future development potential and profitability of the Company from various perspectives and provide funding to support its sustainable operations.

2023 Material Issues

- Energy Management
- Operating and Financial Performance
- Public Safety at All Complexes
- Corporate Governance
- Air Pollutant Management

2023 Communication Channels, Response Methods, and Frequency

- Shareholders' meetings - once every year
- Performance review meetings - once every month
- Investor conferences - 48 times in 2023
- Email/Telephone - anytime

Responsible Department

President's Office

Contact

Mr. Liu
pjlau@fpc.com.tw

Government Agencies

Importance to FPC

Government agencies play a crucial role in FPC as they formulate regulations, oversee operations, provide infrastructure, and influence investment direction. Establishing a strong relationship with the government and adhering to regulations are conducive to stable business operations.

2023 Material Issues

- Air Pollutant Management
- Intelligent Management
- Legal Compliance
- Workplace Health and Safety
- Greenhouse Gases Management

2023 Communication Channels, Response Methods, and Frequency

- Meetings - irregular
- Email/Telephone/Official documentation - irregular

Responsible Department

President's Office

Contact

Ms. Hsiao
phoebe@fpc.com.tw

Residents in the Operation Area

Importance to FPC

The residents in the operation area are FPC's direct audience. We are committed to ensuring the safety of the surrounding environment of all our complexes and the physical and mental well-being of the residents in the operation area, aiming to build a strong relationship with the local community that is better than regulatory requirements.

2023 Material Issues

- Air Pollutant Management
- Intelligent Management
- Product R&D and Improvement
- Greenhouse Gases Management

2023 Communication Channels, Response Methods, and Frequency

- Interactions with the foreign affairs unit of Mailiao Administration Department - 10,500 times/year
- Interactions with the Renwu neighborhood relations team - 2,309 times/ year
- 2023 industry-academia collaboration/cooperative education, a total of 169 participants
- Email/Telephone - anytime

Responsible Department

- President's Office at each complex
- Complex Management Division

Contact

Mr. Lee
N000109487@fpc.com.tw

Suppliers and Contractors

Importance to FPC

FPC has established long-term partnerships with suppliers and contractors, requiring a stable supply of resources and high-quality products and services to improve supply chain efficiency.

2023 Material Issues

- Air Pollutant Management
- Corporate Ethical Management
- Workplace Health and Safety
- Corporate Governance
- Energy Management

2023 Communication Channels, Response Methods, and Frequency

- Contractor conferences, at least 3 times/year
- Electronic Client Service Center - anytime
- Meetings - 100+ times/year
- Signing rate of the Social Responsibility Commitment 97.6%
- Response rate of the Social Responsibility Questionnaire 96.8%
- Signing rate of the Integrity and Confidentiality Pledge 97.8%
- Email/Telephone - anytime

Responsible Department

President's Office

Contact

Mr. Lai
laipee@fpc.com.tw

Experts and Scholars

Importance to FPC

Experts and scholars offer a range of perspectives and suggestions to FPC, allowing us to consistently enhance and optimize our products in our specialized field through collaborations with academia, technology investments, and research and development.

2023 Material Issues

- Greenhouse Gases Management
- Product R&D and Improvement
- Public Safety at All Complexes
- Legal Compliance

2023 Communication Channels, Response Methods, and Frequency

- Meetings - irregular
- Email/Telephone/Official documentation - irregular

Responsible Department

- President's Office
- Safety and Health Department
- Research and Development Unit
- Technology Department
- Each Division

Contact

Mr. Yang
cyyang2@fpc.com.tw

Environmental Protection Organizations

Importance to FPC

In order to minimize the environmental impact of our business operations, FPC takes into consideration the feedback from environmental organizations and promotes environmentally-friendly practices to achieve our sustainable development goals.

2023 Material Issues

- Climate Change Mitigation and Adaptation
- Workplace Health and Safety
- Legal Compliance
- Energy Management

2023 Communication Channels, Response Methods, and Frequency

- Meetings - 20+ times/year
- Email/Telephone - anytime

Responsible Department

- President's Office
- Safety and Health Department

Contact

Mr. Lo
jtluo@fpc.com.tw

Media

Importance to FPC

FPC considers the media to be an essential partner in external communication. We maintain a strong relationship with the media by providing information and explanatory materials, as well as delivering our missions, philosophy and achievements.

2023 Material Issues

- Air Pollutant Management
- Corporate Governance
- Public Safety at All Complexes
- Product R&D and Improvement
- Operating and Financial Performance

2023 Communication Channels, Response Methods, and Frequency

- Performance review meetings - once every month
- Email/Telephone - anytime

Responsible Department

President's Office

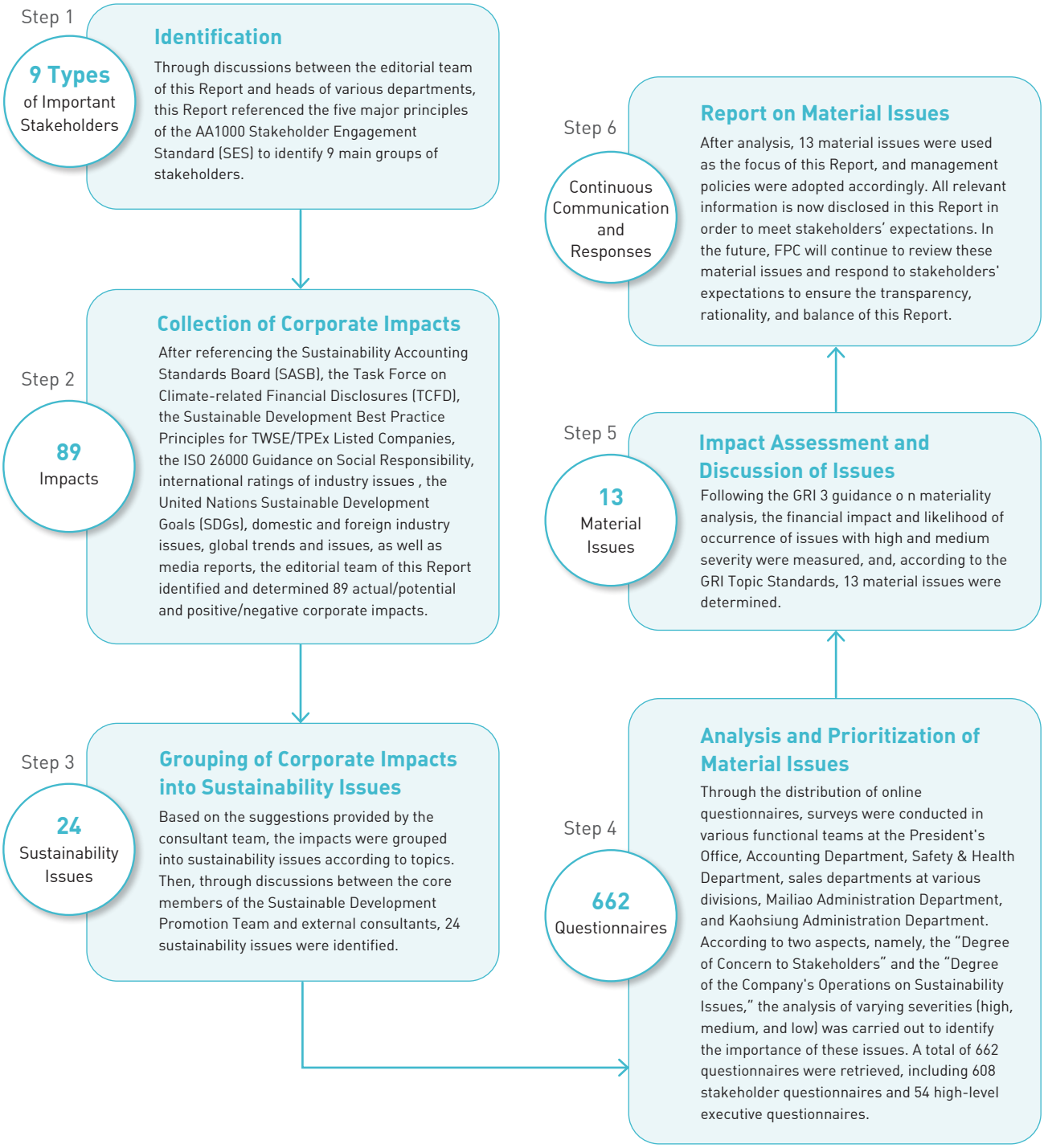
Contact

Ms. Kao
sandykao@fpc.com.tw

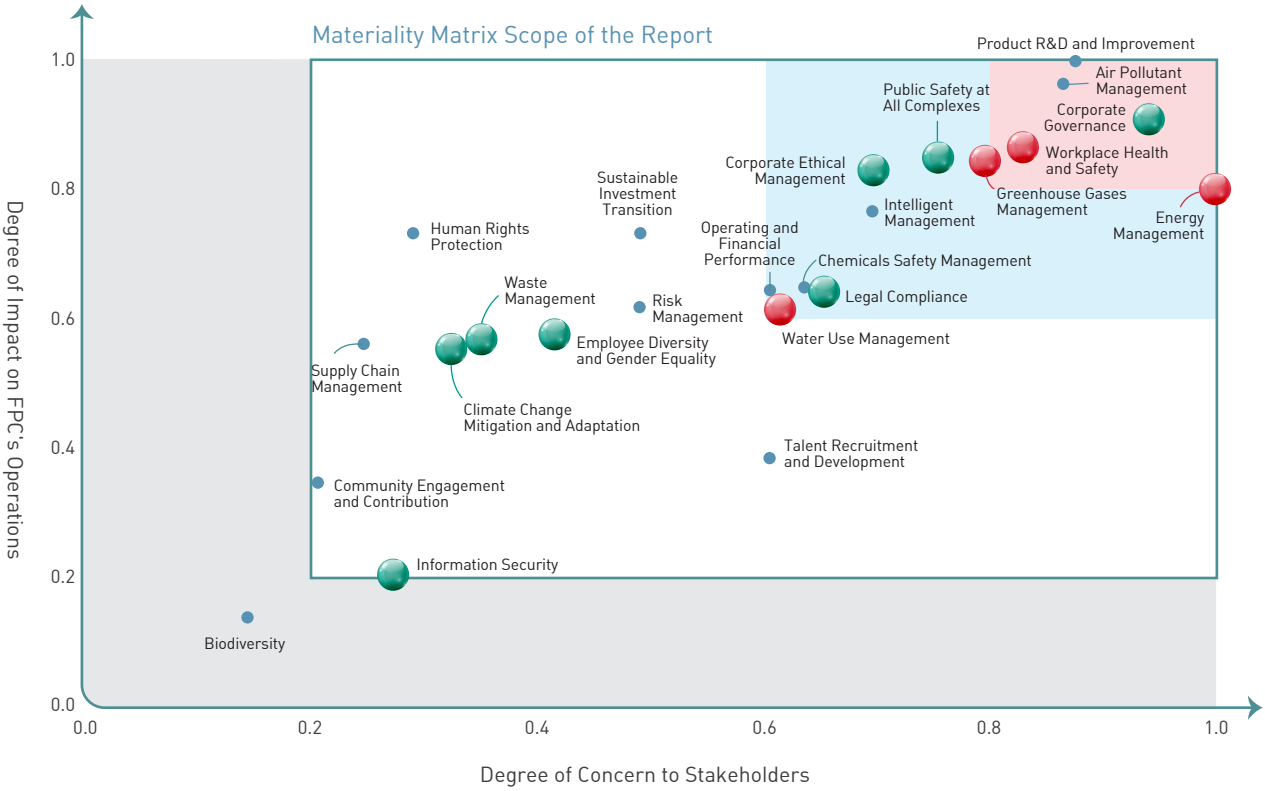
1.4 Identification of Material Issues

By analyzing material issues, FPC can understand the issues of concern to the stakeholders and evaluate the impact of these issues as a reference for the preparation of this Report.

1.4.1 Analytical Process for Material Issues 3-1



1.4.2 Materiality Analysis Results 3-2



Management Approach

4	High Intensity Material Issues	9	Medium Intensity Material Issues
10	Low Intensity Issues	1	Tracking Issues Outside the Matrix

Possibility of Occurrence

4	High Occurrence	8	Medium Occurrence
12	Low Occurrence	0	Zero Occurrence

Note 1: The red circle represents sustainability issues that are highly likely to occur, while the green circle represents sustainability issues that are moderately likely to occur.

Note 2: In terms of the levels of likelihood of occurrence, "high" refers to an occurrence rate of impact on the organization/enterprise ≧ 80%, "medium" refers to an occurrence rate of impact on the organization/enterprise ≧ 50%, and "low" refers to an occurrence rate of impact on the organization/ enterprise <50%.

Material Issues

Economic Issues	▪ Intelligent Management ▪ Corporate Ethical Management ▪ Operating and Financial Performance ▪ Corporate Governance ▪ Product R&D and Improvement ▪ Legal Compliance
Environmental Issues	▪ Greenhouse Gases Management ▪ Chemicals Safety Management ▪ Water Use Management ▪ Air Pollutant Management ▪ Energy Management
People (Including Human Rights) Issues	▪ Public Safety at All Complexes ▪ Occupational Health and Safety

Issues for Continuously Tracked

Economic Issues	▪ Supply Chain Management ▪ Sustainable Investment Transition ▪ Risk Management ▪ Information Security
Environmental Issues	▪ Waste Management ▪ Climate Change Mitigation and Adaptation
People (Including Human Rights) Issues	▪ Employee Diversity and Gender Equality ▪ Human Rights Protection ▪ Community Engagement and Giving Back to the Society ▪ Talent Recruitment and Development

Explanation on the adjustments of material issues disclosed in the current year

To focus on the issues of concern more accurately to stakeholders, the Sustainable Development Promotion Team of FPC reviewed the materiality analysis process in 2023 by referencing domestic and foreign industry trends, clarifying the significance of the sustainability issues, and adjusting the scope of materiality as appropriate. Adjustments to the material issues this year are described below:

2023 Questionnaire Topic	Topic Significance		Adjustment Description
	2023	2022	
Product R&D and Improvement	High	Medium	This is the top three important topic for the high-level executives and overall stakeholders of FPC. We will continue to develop high-value, differentiated, and green products to enhance market competitiveness and meet consumer demand for sustainable consumption.
Workplace Health and Safety	High	Medium	The level of concern among high-level executives and overall stakeholders at FPC has increased. We will actively manage and improve the management as a result, safeguarding workers' working environment and health.
Chemicals Safety Management	Medium	Low	To address the management issues that the plastic industry is currently prioritizing, FPC will increase its management awareness and enhance relevant management systems to ensure the safety of processes and products, in line with international market demands.
Legal Compliance	Medium	NA	FPC integrates past compliance situations in the economic, environmental, social, and people (including human rights) aspects. We conduct a comprehensive review of management effectiveness and enhance policy implementation's integrity to achieve zero violations of compliance.
Supply Chain Management	Low	Outside the Matrix	Stakeholders are highly concerned about the stability of raw material sources for FPC. FPC will continue to optimize its management mechanisms, stabilize the supply of raw materials, and comply with regulatory requirements.
Information Security	Low	Outside the Matrix	The concern of the issue is increased in response to global industry and intelligent management trends. FPC actively optimizes management practices to safeguard information privacy, as well as ensuring the security of management systems and procedures in response to trends.
Waste Management	Low	Outside the Matrix	Regarding the management, disposal, and reduction methods of waste generated in the operational process and value chain of FPC, the analysis results for this year indicate that it is of low importance. We will continue to monitor the impact of this issue.
Employee Diversity and Gender Equality	Low	Outside the Matrix	FPC assigns jobs based on the principle of matching talents to suitable positions. We believe that promoting employee diversity and gender equality contributes to friendly workplace. The analysis results for this year indicate a low level of significance for the issue. We will continue to monitor the impact of this issue.
Human Rights Protection	Low	Outside the Matrix	FPC's management mechanisms and actions to safeguard human rights. The analysis results for this year indicate a low level of significance for the issue. We will continue to monitor the impact of this issue.
Corporate Ethical Management	Medium	High	The level of concern among high-level executives and overall stakeholders at FPC has decreased. The Company remains committed to establishing and adhering to ethical standards and strengthening internal controls. We strictly prohibit activities such as corruption and anti-competitive behavior to enhance the credibility of our business ethics.
Public Safety at All Complexes	Medium	High	Both high-level executives and overall stakeholders of FPC are less concerned with the issue, but it is still an issue of moderate importance. FPC will ensure and enhance public safety in the offices and complexes by actively implementing management and maintenance measures.
Energy Management	Medium	High	The level of concern among high-level executives and overall stakeholders at FPC regarding the issue has slightly decreased. However, the issue remains an active concern of FPC, proactively managing and actively developing clean technology and alternative energy in response to energy issues.
Climate Change Mitigation and Adaptation	Low	Medium	Both high-level executives and overall stakeholders of FPC are less concerned with the issue, but it is still an issue of international sustainability trends. The management mechanism and actions will continue to be implemented to achieve the goal of 2050 carbon neutrality.

1.4.3 Identification of Impacts and Value Chain

3-3

Following the five-stage value chain identified in 2018, FPC has further analyzed the material issues corresponding to each stage of value chain and assessed the types of stakeholders affected. To identify and effectively manage the impacts caused by material issues, FPC divided them into "Cause", "Contribute To", and "Directly Linked To" impacts based on the degree of involvement in order to effectively manage the impact of major issues and improve the efficiency of communication with stakeholders.

Five-Stage Value Chain

Corporate Governance

Impact Description

The Board of Directors' quality assessment primarily considers aspects such as composition, independence, diversity, accountability, and experience. It should also have members with diverse backgrounds in terms of gender, professional perspectives, and experience, as well as industry and auditing experience. This not only enhances representativeness and financial performance but also contributes to strategy formulation and management oversight. The tenure of board members is a key indicator, as an appropriate term length can enhance company value.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
-	-	Chapter 2 Facilitator of a Prosperous Economy 2.2.1 Corporate Governance Overview

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●	✓	

Corporate Ethical Management

Impact Description

The UNGC serves as a crucial framework for investors to assess the sustainability performance of companies. Companies must endorse and adopt a systematic and incremental approach to implementation and oversight, actively combat corruption and bribery, refrain from engaging in anti-competitive behavior, and adhere to fair tax models. Furthermore, companies should strive to enhance the transparency of tax policy-related information to mitigate tax risks and uphold their reputation and market integrity.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
-	205 Anti-corruption 206 Anti-competitive Behavior	Chapter 2 Facilitator of a Prosperous Economy 2.2.4 Internal Control Mechanism

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●	✓	

Intelligent Management

Impact Description

FPC's development strategy includes deepening AI and digital transition, expanding the semiconductor and chemical industries, and entering the innovative industry of comfortable living. We are also continuously developing AI-specific models to improve operational performance and promote sustainable development goals, such as the circular economy and low-carbon energy transition.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium High	-	Chapter 2 Facilitator of a Prosperous Economy 2.3.3 Intelligent Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲		●		

Product R&D and Improvement

Impact Description

Enhancing competitiveness through R&D innovation involves the input and sharing of knowledge, experience, and creativity, as well as the revenue contribution of new products/services and the benefits of process innovation. Focusing on the latest R&D indicators in the industry development chain, analyzing how to reduce costs and improve efficiency, and thus increase operational efficiency.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium High	301 Materials	Chapter 2 Facilitator of a Prosperous Economy 2.3.2 Product R&D and Innovation

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲		✓	✓	✓

Operating and Financial Performance

Impact Description

By closely monitoring macroeconomic developments and market changes, we timely adjust our business strategies to maintain stable profitability. Regular internal performance review meetings are held to evaluate and improve the profitability of loss-making products. Changes in overall revenue directly affect the returns of stakeholders.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
-	201 Economic Performance	2.1.1 Operating and Financial Performance

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●		

Legal Compliance

Impact Description

Legal compliance is an important issue for businesses. FPC must meet regulatory requirements in the areas of emissions, water, chemicals and industrial safety, as well as the implementation of related policies such as anti-corruption and anti-competition. Companies with sustainable strategic management can anticipate and adapt to regulatory changes, avoid reputational and legal risks, and enhance brand value and competitiveness.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
-	-	Chapter 2 Facilitator of a Prosperous Economy 2.2.5 Legal Compliance

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲	▲	●	✓	

Energy Management

Impact Description

FPC has high energy procurement costs and needs to consider the pros and cons of various energy options such as self-generated energy, grid power, fossil fuels and renewable energy. It is also necessary to improve production efficiency, reduce material consumption and gas emissions, reduce costs and environmental burdens, and enhance competitiveness and legal compliance.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium High	302 Energy Management	3.2.3 Energy Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲	▲	●		

Air Pollutant Management

Impact Description

Due to fuel usage and raw material processing, FPC produces sulfur dioxide (SOx), nitrogen oxides (NOx), and hazardous air pollutants (HAP). Consequently, the Company incurs operational costs, compliance costs, penalties for regulatory violations, and expenses for managing emissions. Nevertheless, the enterprise can reduce regulatory costs and enhance brand value through technology process improvement or other management strategies

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium Low	305 Emissions	3.4 Air Pollutant Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●		

Greenhouse Gases Management

Impact Description

The enterprise should implement carbon reduction measures to enhance energy efficiency, adopt alternative fuels, leverage technology to optimize operations and financial performance, and mitigate the regulatory costs and risks associated with greenhouse gas emissions to improve corporate competitiveness. The enterprise should establish specific carbon reduction targets based on scientific objectives to enhance credibility. The Climate Change Response Act explicitly sets a target of net-zero greenhouse gas emissions by 2050. The government will impose carbon fees on major carbon emitters, and companies should prepare for this in advance.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium High	305 Emissions	3.2.2 Greenhouse Gases Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲	▲	●	✓	✓

Water Use Management

Impact Description

Some of FPC's production processes have a high demand for and impact on water resources, which may pose economic and environmental risks to the Company. The enterprise should disclose its net freshwater consumption and take appropriate measures to improve water resource efficiency. This can be achieved by utilizing alternative water sources and implementing water recycling and reuse practices. These actions will help reduce wastewater discharge and minimize the risk of legal violation.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium	303 Water Resources Management	3.3 Water Resources Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲		●		

Chemicals Safety Management

Impact Description

Some of FPC's processes involve the use of hazardous substances, which pose risks to product safety and the environment. These risks can have an impact on demand, revenue, and costs. The enterprise should develop innovative management strategies to mitigate regulatory risks, create less toxic alternative products, and improve competitiveness and brand value.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Medium	306 Waste	Chapter 3 Creator of a Sustainable Environment 4.3 Workplace Safety Management

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
▲	▲	●		▲

Public Safety at All Complexes

Impact Description

FPC brings economic benefits to the local community, but also faces environmental, health and safety challenges. Air and gas pollution can jeopardize the health of residents, while technical malfunctions or human errors can result in accidents such as explosions or leaks, posing a risk to the safety of communities and workers. These accidents have the potential to increase the company's operational, financial, legal, and reputational costs.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Low	413 Local Communities	Chapter 4 Guardian of a Happy Workplace 5.1.2 Complex Operations and Community Relations

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●		

Occupational Health and Safety

Impact Description

Some workers in complexes are exposed to health and safety risks due to their contact with heavy machinery, hazardous substances, high temperatures or pressures, and electrical hazards. The enterprise must prioritize occupational safety and emergency management to prevent accidents that could lead to operational disruptions, facility damage, reputational damage, healthcare and regulatory costs, etc. Poor occupational safety and health performance also affects labor costs, productivity, corporate reputation and employee morale.

Financial Impact (Note 1)	GRI Topic Standards	Corresponding Chapter
Low	403 Occupational Health and Safety	Chapter 4 Guardian of a Happy Workplace

Value Chain (Note 2)

Upstream		Operations	Downstream	
R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Services and Consulting Service
		●		

Note 1: Level of Financial Impact: "High" refers to a financial impact greater than NT$10 billion, "Medium High" refers to a financial impact between NT$1 billion and NT$10 billion, "Medium" refers to a financial impact between NT$100 million and NT$1 billion, "Medium Low" refers to a financial impact between NT$10 million and NT$100 million, and "Low" refers to a financial impact less than NT$10 million.

Note 2: "Cause ● " means that an organization causes an impact if its activities on their own result in the impact; "Contribute To ▲ " means that an organization contributes to a negative impact if its activities lead, facilitate, or incentivize another entity to cause the impact; "Directly Linked To ✓ " means that even if an organization does not cause or contribute to a negative impact, its operations, products, or services may be directly linked to a negative impact by its business relationships.

ch.2

Facilitator of a Prosperous Economy

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2.3 Innovative Sustainable Products 51
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Vision

FPC complies with laws and regulations, upholds the principle of integrity in business operations, and strives to meet the expectations of stakeholders. We aim to safeguard their rights and interests, strengthen corporate governance, and continuously improve research and development technology and efficiency. Our focus is on promoting the development of differentiated, high-value, and customized products to enhance market competitiveness and achieve sustainable development goals.

Policy and Commitment

Transparent corporate governance is crucial for ensuring shareholder rights and promoting transformation and innovation. To achieve this, we have established the Transition and Development Team. This team is responsible for "energy transition", "digital transition", "research and development of new products and businesses", and "circular economy". Our goal is to integrate company resources and drive transformative development to create sustainable competitiveness.

Material Topic: Operating and Financial Performance

International Framework and Indicators: GRI 201: Economic Performance

Impact Explanation

Definition: This report examines the financial performance of FPC, the impact of climate change on its finances, the Company's salary and benefits, and the financial subsidies it receives from the government.

Impact Explanation: By closely monitoring macroeconomic developments and market changes, we timely adjust our business strategies to maintain stable profitability. Regular internal performance review meetings are held to evaluate and improve the profitability of low-performing products. Changes in overall revenue directly affect the returns of stakeholders.

Actual | Potential | Positive | Negative

Management Approach

Production and Sales Meetings

2023 Performance Tracking

Monthly review of profit and loss, market conditions, and production and sales plans.

Achieved

Short-term Targets (1 to 3 years)

The main products are sold entirely after full production, with an expansion of the market presence both domestically and internationally in order to increase profitability.

Medium and long-term Targets (More than 3 years)

To ensure the Company's sustainable development, it is important to promote energy transition, digital transition, circular economy, and the development of new products and businesses.

Business Meetings

2023 Performance Tracking

Quarterly Review of Profit and Loss, Production and Sales Management, Water and Energy Conservation, and Research and Development

Achieved

Short-term Targets (1 to 3 years)

Increase profitability

Medium and long-term Targets (More than 3 years)

To ensure the Company's sustainable development, it is important to promote energy transition, digital transition, circular economy, and the development of new products and businesses.

Performance Management

2023 Performance Tracking

- Held the annual credit rating management meeting organized by Taiwan Ratings.
- FPC was given a long-term credit rating of twAA and a short-term credit rating of twA-1+ with a negative outlook by Taiwan Ratings, as well as a credit rating of BBB+ by Standard & Poor's (S&P).

Achieved

Short-term Targets (1 to 3 years), Medium and long-term Targets (More than 3 years)

To improve the Company's credit rating and boost investor confidence.

Stakeholder Groups

Shareholders and Investors

Engagement channels and effectiveness

- FPC holds performance review meetings and quarterly investor conferences as well as disclose monthly the Company's performance results and material information in both Chinese and English on the Market Observation Post System (MOPS) to help domestic and foreign investors understand our operations.
- Disclose the details of the IR Contact Person on FPC's official website to maintain a smooth channel of communication.

Media

Monthly performance review meetings are held, and press releases are issued to inform the media about FPC's operational status.

Material Topic: Corporate Governance

International Framework and Indicators: Self-designated Topics

Impact Explanation

Definition: FPC establishes management mechanisms within the organization, which encompass the composition and operation of the Board of Directors, as well as governance practices aimed at safeguarding the interests of external stakeholders.

Impact Explanation: The quality assessment of the Board of Directors primarily considers aspects such as composition, independence, diversity, accountability, and experience. It also takes into account diverse backgrounds in terms of gender, professional perspectives, and experience. FPC promotes sustainable operation by establishing a governance structure that includes members at all levels.

Actual | Potential | Positive | Negative

Management Approach

Internal Audit Management

2023 Performance Tracking

- Develop an annual audit plan, perform monthly audit items, monitored the improvement results of items that failed audits. Audits were conducted on 61 items, and the audit completion rate was 100%.
- Submit audit reports to independent directors for review every month.
- Convened Board meetings at least once every quarter to report the internal audit status to the Board of Directors, and approved the audit plan for the following year at the end of the year.
- The internal audit officer and independent directors communicated individually on the audit results of internal control, revisions of the internal control system, and audit plans at least once a year.

Achieved

Short-term Targets (1 to 3 years)

Continued internal audits have been held, and the audit results indicate no significant deficiencies.

Medium and long-term Targets (More than 3 years)

Through internal auditing, proactively identify abnormalities and make improvements.

Operations of the Board of Directors and Functional Committees

2023 Performance Tracking

- The number of independent directors was increased to 4, representing 27% of the total Board of Directors, in order to enhance diversity in governance.
- Regularly reported FPC's implementation of corporate ethical management to the Board of Directors.
- Reviewed the operations of the Board of Directors and functional committees and conducted performance assessment each year. The self-assessment results in 2023 were good, and the results have been published in the annual report and on the TSE Market Observation Post System (MOPS).

Achieved

Short-term Targets (1 to 3 years)

Enhancing Corporate Governance Diversification

Medium and long-term Targets (More than 3 years)

Establishing a diverse and sustainable board of directors to promote the Company's sustainable operations.

Stakeholder Groups

	Engagement channels and effectiveness
Employees	There is a "Code of Conduct" for compliance, and communication can be conducted through channels such as labor unions or internal platforms, including the Labor-Employee Meetings, Welfare Committee Meetings, and the "799" employee feedback hotline. Additionally, senior executives are scheduled to have face-to-face meetings between high-level executives and union representatives and employees at least 4 to 6 times a year.
Shareholders and Investors	FPC has established the "Standard Operating Procedures for Dealing with Directors' Requirements" to deal with and respond to questions raised by directors, and appointed an "IR Contact Person" to answer investors' inquiries.
Suppliers and Contractors	Adhering to the principles of sustainable development and fair trade, we actively encourage suppliers and contractors to comply with environmental protection, occupational safety, and human rights requirements.
Media	Periodically communicate with the media through phone calls, emails, messaging APPs, and other communication channels.

Material Topic: Corporate Ethical Management

International Framework and Indicators: GRI 205: Anti-corruption, GRI 206: Anti-competitive Behavior

Impact Explanation

Definition: FPC formulates and complies with the code of ethics and internal control as well as strictly prohibits corruption and competition. Additionally, in response to global justice of taxation, the Company has implemented a fair and transparent tax management mechanism.

Impact Explanation: FPC should take measures to prevent and address corruption or bribery, avoid engaging in anti-competitive behavior, and adhere to a fair tax framework. Additionally, it should improve transparency in tax policy-related information to minimize tax risks and maintain its reputation and market fairness. The Company has implemented an anti-corruption policy and regularly provides education and training to prevent similar incidents and safeguard the interests of the Company and its shareholders.

Actual | Potential | Positive | Negative

Management Approach

Implementation of Anti-Corruption Policy Promotion

2023 Performance Tracking

- All complexes have undergone corruption risk assessments and have been found to have no significant corruption risks.
- There were five reported cases related to anti-corruption policies, and there was one found to violate anticorruption policies after investigation.

Achieved

Short-term Targets (1 to 3 years)

Continuously promote the anti-corruption policy to ensure that all relevant personnel are aware of it.

Medium and long-term Targets (More than 3 years)

Zero incidents of corruption

Regularly hold anti-corruption education training

2023 Performance Tracking

- The Board of Directors consists of 14 directors, and the participation rate in education and training reaches 100%.
- A total of 5,057 employees participated in education and training, which accounts for 82.1% of the total workforce.

Achieved

Short-term Targets (1 to 3 years)

Continuously hold anti-corruption education training

Medium and long-term Targets (More than 3 years)

Strengthen employees' moral awareness through education and training.

Internal audit personnel are implementing the audit plan.

2023 Performance Tracking

- 17 internal auditors were designated to conduct audits on 61 items, and the audit completion rate was 100%.
- The audit results indicate no significant deficiencies.

Achieved

Short-term Targets (1 to 3 years)

Continued internal audits have been held, and the audit results indicate no significant deficiencies.

Medium and long-term Targets (More than 3 years)

Through internal auditing, proactively identify abnormalities and make improvements.

Stakeholder Groups

Suppliers and Contractors

Engagement channels and effectiveness

- Suppliers and contractors who conduct business with the Company are obligated to sign the "Integrity and Confidentiality Pledge". The signing rate for 2023 has reached 97.8%.
- Regularly visit suppliers and contractors, engage in face-to-face communication, and assess their comprehension and adherence to policies on anti-corruption, anti-competition, and other relevant matters.

Employees

FPC has established the Operational Key-points for Employee Complaints and the Reporting Procedure, which enable employees to submit complaint forms at any time in order to provide multiple reporting channels for employees to report any illegal or improper behavior.

Material Topic: Legal Compliance

International Framework and Indicators: SASB Management of the Legal & Regulatory Environment

Impact Explanation

Definition: FPC discloses any violations of regulations and provides explanations of the penalties imposed and the measures taken to improve compliance.

Impact Explanation: Compliance with laws and regulations is a crucial concern for the Company's operations. To prevent any potential environmental harm or human rights violations, FPC must strictly comply with regulatory requirements in areas such as emissions, water, chemicals, and industrial safety. This also entails the enforcement of policies pertaining to human rights labor standards, anti-corruption measures, and anti-competitive behavior regulations. The Company fully complies with the relevant laws and regulations set by the regulatory authorities. It promptly addresses any violations, rectifies non-compliant situations, and welcomes public scrutiny through transparent information.

Actual | Potential | Positive | Negative

Management Approach

Violation Situation Eliminated and Follow-up Improvement

2023 Performance Tracking

A total of 7 violation cases occurred, and each case was addressed by the respective management units according to the specific reasons. Improvement measures were implemented, and the effectiveness of these measures was monitored.

Achieved

Short-term Targets (1 to 3 years)

- Strengthening education and training in various areas, and increasing awareness of relevant regulations.
- Strengthening internal auditing, proactively identify abnormalities and make improvements.

Medium and long-term Targets (More than 3 years)

- Violation of High-Risk Situation Elimination
- Zero Violations

Conducting education and training, and regulatory policy promotion

2023 Performance Tracking

- Every year, education and training are conducted to enhance the promotion of related information on prevention of insider trading, procedures for handling material inside information, and relevant laws and regulations (G).
- The Safety and Health Department holds regular regulatory briefings to report on the results of investigations into violations and make revisions to relevant management systems. (E)
- Education and training on labor law and rights protection are held annually. (S)

Achieved

Short-term Targets (1 to 3 years)

Strengthen employees' regulatory knowledge through education and training.

Medium and long-term Targets (More than 3 years)

Zero violations

Stakeholder Groups

Engagement channels and effectiveness

Government Agencies

Closely monitor the amendments and progress of relevant regulations and actively engage in public hearings or submit legislative proposals through various industry associations.

Experts and Scholars

- By periodically implementing industry-academia collaboration projects, we invite scholars and experts to analyze foreign regulatory content and provide suggestions on the compliance of the Company's regulations. This serves as a reference for auditing and improvement purposes.
- FPC conducts two process overall inspections per month, inviting scholars and experts to oversee the Company's compliance with regulations in areas such as process safety, occupational safety, and environmental protection, and to provide optimization suggestions. The scholars are also given an overview of the actual process operations and, if needed, they can assist in discussing the reasonableness of government regulations.

Environmental Organizations

In addition to regularly reporting to the competent authority, also proactively discloses environmental monitoring information on the "Environmental Impact Assessment Website". Environmental organizations can contact the Company through the official website to discuss relevant issues.

Environmental Impact Assessment Website

Material Topic: Product R&D and Improvement

International Framework and Indicators:
SASB: Safety & Environmental Stewardship of Chemicals, SASB: Product Design for Use-phase Efficiency

Impact Explanation

Definition: FPC enhances its competitiveness through R&D innovation, generates profits, and ensures product safety.

Impact Explanation: In order to adapt to the fast-paced changes in global technology and markets, the Company is enhancing its operational capabilities through R&D innovation, investment, knowledge sharing, experiences sharing, and fostering creativity. This will result in increased revenue from new products and services, as well as the advantages of process innovation. The Company considers innovation to be a crucial factor in driving competitiveness and actively strengthens its research and development capabilities. Additionally, it fosters collaboration among industry, government, academia, and research institutions to enhance R&D efficiency and global competitiveness.

Actual | Potential | Positive | Negative

Management Approach

Established a national 5G material alliance team with the Industrial Technology Research Institute and downstream companies in related industries.

2023 Performance Tracking

- Development of Applications for Expanding 5G-Related Products
- The development of PP materials for 5G base station antennas has been completed, and O-RAN base station antenna modules have been produced.

Achieved

Short-term Targets (1 to 3 years)

Collaborate with downstream suppliers to continuously develop 5G-related products and enhance industry technology.

Medium and long-term Targets (More than 3 years)

Through industry alliances, our goal is to foster the independent development of domestic material technology and encourage local production of materials, thus establishing a strong industrial chain.

Development Project for Polyolefin Material Technology for 5G Base Stations

2023 Performance Tracking

- The O-RAN base station antenna module has successfully completed field verification testing. It is positioned 11 meters away from the base station and can achieve a signal transmission capacity of 400 Mbps.
- Successfully developed LDPE/POE high-tensile cables and completed the trial production of high-speed composite cables, surpassing the competition by far, as carried out by downstream manufacturers.

Achieved

Short-term Targets (1 to 3 years)

- Development of 5G antenna covers, antenna oscillators, and composite cables, including composite integration of radomes and antenna oscillators, O-RAN base station designs.
- Conducted assembly and communication verification through collaboration with downstream manufacturers.

Medium and long-term Targets (More than 3 years)

Collaborate with suppliers downstream to expand into new applications, such as low-Earth orbit satellite applications.

Stakeholder Groups

	Engagement channels and effectiveness
Customers	Should customers have any questions about product quality or technology, they can directly contact units such as the Sales Department, the Market Expansion Team, or the Technology Department. In 2023, a total of 16 customer complaints have been received, all of which have been properly handled and closed, with a response rate of 100%.
Employees	In collaboration with academic research units, we have been fostering the interdisciplinary research and development capabilities of our employees to meet the diverse market demands. As of 2023, we have successfully entered into 38 technical cooperation projects.
Experts and Scholars	Through regular or irregular collaboration and communication with experts and scholars from academic institutions, the development timeline of new products, technologies, and businesses is effectively shortened. This accelerates their application in the market and enhances product innovation and competitiveness. In 2023, we conducted collaborative projects with domestic and international universities, including National Taiwan University, Cheng Kung University, Tsing Hua University, Chung Yuan Christian University, Texas A&M University, and University of Toronto, on industry-academia cooperation. One of these projects focused on using specific algal microorganisms to enhance the quality of emulsified powder wastewater for reuse, and it has been successfully implemented in a large-scale pilot verification.
Government Agencies	By applying for government-funded large-scale industry-specific R&D projects, our goal is to secure industry research grants, expedite innovation and research investment, and strengthen the Company's technological innovation and application capabilities. In 2023, we completed two cases of the A+ Industrial Innovation R&D Program, which involves the R&D of melt-blown PP materials and polyolefin materials for 5G base stations. We have also provided guidance aligned with government industrial policy initiatives.

Material Topic: Intelligent Management

International Framework and Indicators: Self-designated Topics

Impact Explanation

Definition: FPC has implemented strategies, such as AI technology and digital transition, to reduce production costs and improve operational performance.

Impact Explanation: The Company's digital transition in recent years has made the use of AI technology crucial for enhancing operational efficiency and cutting production costs. FPC has implemented strategies such as investing in AI technology and digital transition. In the future, it will develop AI-specific models to improve product quality, reduce production costs, prevent occupational safety abnormalities, and enhance the internal operational environment. Additionally, FPC will promote goals of circular economy and low-carbon energy transition for sustainable development.

Actual | Potential | Positive | Negative

Management Approach

Implementation of AI Promotion Policy

2023 Performance Tracking

- An AI proposal incentive measure is currently in place, with monthly reviews. A total of 60 proposals were reviewed in 2023.
- Every six months, an evaluation of AI implementation KPIs is conducted, and the Mailiao VCM Plant achieves the highest performance.
- Every year, an AI online implementation audit is conducted, with 236 cases completed and a maintenance and usage rate of 100%.

Achieved

Short-term Targets (1 to 3 years)

- Tracking AI Implementation KPI Status.
- Enhance employees' comprehension of the Company's AI promotion policies at every stage and foster their sense of active engagement.

Medium and long-term Targets (More than 3 years)

Promoting AI technology and policies, as well as facilitating industrial digital transition.

Optimizing the Integration of AI Modules

2023 Performance Tracking

Each manufacturing plant has submitted at least one AI improvement case for every process area, and all of them are currently being implemented.

Achieved

Short-term Targets (1 to 3 years)

The Mailiao n-Butanol Plant is expected to function as a demonstration plant, with a focus on integrating multi-process units with AI modules. The integration is projected to be completed by the end of 2024, followed by online testing.

Medium and long-term Targets (More than 3 years)

The experience of integrating the multi-process unit AI module will also be extended to other process areas in parallel.

Introduction to Robotic Process Automation (RPA)

2023 Performance Tracking

Each business unit has proposed implementing RPA-assisted paperwork processing.

Achieved

Short-term Targets (1 to 3 years)

- Train personnel in the RPA process development technology of each business division, equipping them with the skills to utilize RPA tools.
- Establishment of performance KPI evaluation and incentive measures.

Medium and long-term Targets (More than 3 years)

To improve work efficiency and reduce human error rates, it is necessary to minimize the repetitive paperwork in each division.

Introduction to Large Language Model (LLM)

2023 Performance Tracking

FPC has developed an employee-use version of ChatGPT base on the Microsoft Azure platform.

Achieved

Short-term Targets (1 to 3 years)

In 2024, there are plans to reintroduce several corporate regulations for various functions and commonly used external websites from the petrochemical industry to enhance the practicality of FPC's ChatGPT.

Medium and long-term Targets (More than 3 years)

The FPC Cloud Virtual Assistant is being developed to manage in-house cloud services. It will utilize a Large Language Model (LLM).

Management Approach

FPC AI Cloud Service Development

2023 Performance Tracking

The AI Operations and no-code AI cloud development platform has been established. Achieved

Short-term Targets (1 to 3 years)

Promote AI specialists in each division and deploy models to edge computing servers.

Medium and long-term Targets (More than 3 years)

Promote our overseas complexes, as well as external companies.

Stakeholder Groups

	Engagement channels and effectiveness
Employees	▸ The AI Promotion Team meetings are held periodically as needed. The Counseling Team provides on-site guidance, facilitates direct communication, and resolves any related issues to support technical development. ▸ Departments can contact the Electronic Materials Division for discussion and feasibility assessment regarding any issues related to AI project development.
Suppliers and Contractors	Collaborate with foreign companies such as Microsoft, Amazon, and Nvidia to facilitate regular exchanges as needed, incorporate in-house AI technology, and support digital transition.
Experts and Scholars	▸ Established joint R&D centers with National Tsing Hua University, National Cheng Kung University, and Ming Chi University of Technology, among other universities. Periodically conducted industry-academia collaborations. 32 projects have been completed by 2023. ▸ Periodic exchange meetings were organized, and a total of 59 sessions were held to discuss topics related to AI with experts and scholars.

2.1 Operation Overview

2.1.1 Operating and Financial Performance

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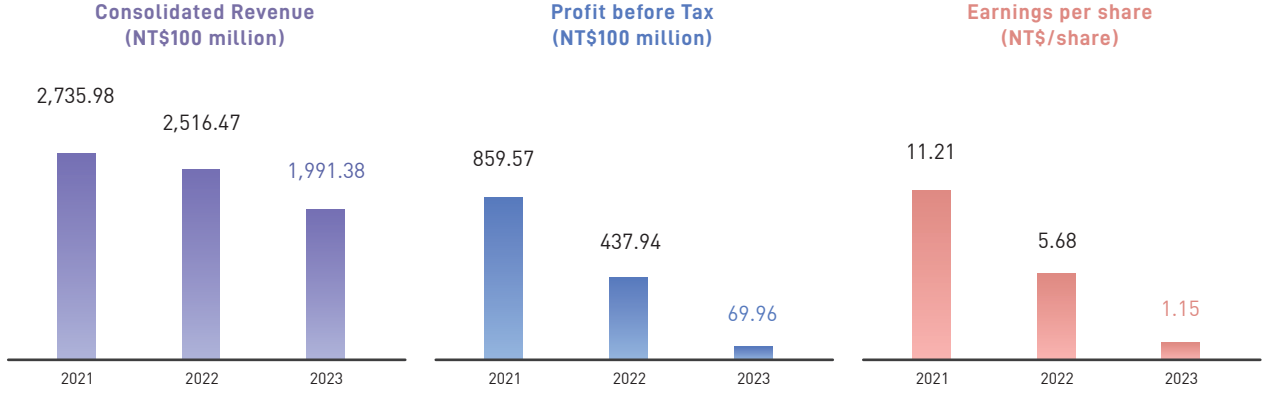
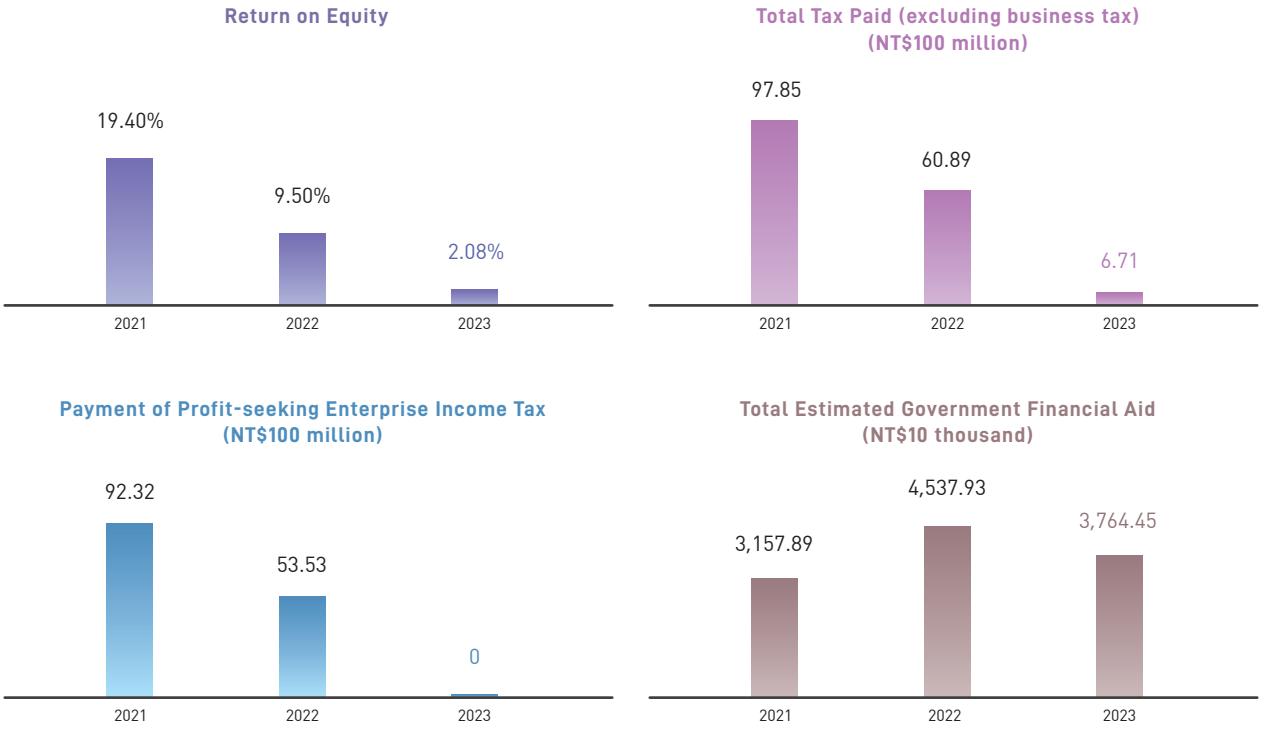
In 2023, FPC's consolidated revenue was NT$199,138,777 thousand, a decrease of 20.87% compared with 2022; the net profit before tax was NT$6,996,631 thousand, a decrease of 84.02% compared with the previous year. For more financial information, please visit "Investor Relations" on FPC's official website.

FPC Website: Financial Info

Operating and Financial Performance





2.1.2 Major Investment Plans

Capacity Expansion and De-Bottleneck Program

To enhance competitiveness, FPC is actively engaging in capacity expansion and de-bottlenecking projects. The Company is actively carrying out capacity expansion and de-bottlenecking projects in complexes at home and abroad. Ongoing projects in 2023 are as follows:

2023 Capacity Expansion and De-Bottleneck Program

Complex	Ongoing Projects		Scheduled Completion Time
Taiwan	Renwu	New Medical Materials Center	2024/7
		The de-bottlenecking project of Renwu, Linyuan and Mailiao PVC plants (annual production capacity increased by 60,000 tons)	2028/1
		New carbon fiber plant A (annual production capacity of 1,600 tons)	2025/4
	-	New Kaohsiung Intercontinental Phase II harbor zone	2025/6
Mainland China	Ningbo	New propane dehydrogenation (PDH) plant (annual propylene production capacity of 600,000 tons)	2023/12
U.S.A.	Texas	New 1-hexene plant (annual production capacity of 100,000 tons)	2025/12

Investment in Formosa Smart Energy Tech Corp.

In response to global carbon-reduction initiatives, the development of renewable energy and electric vehicles, and government investment in energy transition, in 2022, FPC, along with Nan Ya Plastics Corporation (NPC), Formosa Chemicals & Fibre Corporation (FCFC), Formosa Petrochemical Corporation (FPCC), and Formosa Biomedical Technology Corporation (FBC), jointly invested NT$7 billion to establish Formosa Smart Energy Tech Corp. The Company integrates existing resources and aims to promote key new energy technologies and industry layout in various fields.

In 2023, we will continue to promote the R&D of green energy technology. Our goal is to establish a comprehensive new energy ecosystem, fostering a smart life and a sustainable Earth, while also pioneering new models for industrial and economic development.

Item	2023 Phasic Results
Constructing the domestic battery industry supply chain	Establish the largest lithium iron phosphate battery cell and Major on Third in the Changhua Coastal Park with a capacity of 5GWh. The groundbreaking ceremony for the first phase, which will have a capacity of 2.1GWh, was held on April 12, 2023, and is expected to be completed in the second half of 2024. The objective of this project is to supply lithium iron phosphate battery cells for electric vehicles and energy storage systems, as well as to develop a comprehensive domestic battery industry chain.
Solid-State Battery Industry-Academia Collaboration	Ming Chi University of Technology's Battery Research Center of Green Energy has launched a four-year industry-academia collaboration to establish a pilot production line for solid-state batteries. Their goal is to develop key technologies for next-generation lithium batteries with high energy density, long battery life, and improved safety through the use of advanced materials and emerging technologies.
R&D of Modular Home Energy Storage	The product capacity can be customized according to individual electricity needs to ensure the continuous operation of important equipment, such as medical instruments, lighting, and internet, during power outages. Additionally, it incorporates solar power generation to promote clean energy. The system is equipped with built-in automatic power-off protection and fire-resistant metal materials. The battery has a cycle life of up to 3,600 times, combining safety and environmental protection principles.
Development of Microalgae Carbon Capture Technology	By investing in National Cheng Kung University's new venture of Microalgae Carbon Capture, we are at the forefront of pioneering a circular economy model for wastewater treatment. This innovative and environmentally friendly microalgae technology has already proven successful in industries such as livestock, petrochemicals, and food. Furthermore, we are harnessing the power of microalgae for crop cultivation, aquaculture feed, and animal feed additives, thereby optimizing agricultural and fisheries techniques.

Formosa Smart Energy Tech Corp. is actively expanding its presence in the energy storage sector. Its uninterruptible power supply (UPS) systems have gained significant traction across multiple industries, including electronics, petrochemicals, and hospitals, with a global sales volume exceeding 1,400 sets. In addition, as of the end of 2023, Taiwan has actively planned large-scale energy storage projects. The total capacity of completed and under construction energy storage projects in Taiwan is 138.1MW/372.97MWh. Among these projects, the Changhua Plant (1.2MW/1.3MWh), Tainan (5MW/5.3MWh), and Nantou (4.9MW/5.3MWh) have all been deployed for Taipower's Automatic Frequency Control (AFC) services.

Groundbreaking Ceremony for the Phase 1 Construction of Formosa Smart Energy Tech Corp.'s Changhua Coastal Battery Cell and Module Plant on April 12, 2023

2.1.3 Participation in External Associations 2-28

In order to assist the industry in resource exchange and integration, act as a bridge of communication with the government, and promote the sustainable development of the industry, FPC actively participates in various industry associations. In 2023, FPC was a member of 20 external associations and served as a director, supervisor, or representative of such associations; in particular, Chairman Mr. Jason Lin served as the chairman of Taiwan Synthetic Resins Manufacturers Association. For more information on FPC's participation in external associations, please refer to our Sustainable Development website.

Sustainable Development Website: Participation in External Associations

2.2 Corporate Governance

2.2.1 Corporate Governance Overview

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For more information on FPC's implementation of corporate governance and governance structure, please refer to FPC's official website.

FPC Website: Corporate Governance Officer

(1) Operations of the Board of Directors

The Board of Directors consists of 15 directors, including four independent directors and two female directors, who possess professional expertise and broad industrial experience. These directors will be able to provide the most appropriate strategic guidance for the future development of FPC.

For detailed information about the directors, please refer to "Management Team" and "Important Company Regulations" on FPC's official website. The important regulations of our company encompass the "Corporate Governance Best Practice Principles", "Director Election Rules", "Code of Business Conduct and Ethics for the Board of Directors and Managers", and the "Rules Governing the Scope of Powers of Independent Directors"

FPC Website: Management Team

FPC Website: Major Internal Policies

The Role of FPC's Board of Directors

The Purpose of the Board of Directors and the Vision of Sustainable Development

Guide FPC's long-term business strategy and supervise FPC to fulfill its management obligations to achieve sustainable operation.

ESG Risk Management Policies

- On December 17, 2020, the Board of Directors approved the "Regulations Governing Risk Management". Among them, the risk management categories focuses on three major topics: environment (E), society (S) and corporate governance (G). Risk items including strategy, operation, finance, hazard, information security, regulatory compliance, climate change, energy management, water resource management and so on are identified according to the three risk categories of preventable risk, strategic risk and external risk.
- Report the implementation of risk management to the Board of Directors at least once every year, with the most recent reporting date being May 30, 2023.

Operations of the Board of Directors in 2023

Board Composition

Number of Directors (including independent directors)	15		
Independent Directors Seats	4	Proportion	27%
Female Directors Seats	2	Proportion	13%

Board Operations Overview

Number of Meetings: 6	Percentage of shares pledged by directors as of 2023 (Note 2): 0.81%
Attendance rate (Note 1): 94.19%	Directors' shareholding percentage as of 2023: 14.91%

Note 1: The attendance rate of the Board of Directors does not include attendance by proxy. The attendance rate is 96.51% if attendance by proxy is included.

Note 2: Percentage of shares pledged by directors = number of shares pledged by directors/ (number of shares held by directors + number of shares under trust with discretion reserved)

Important Resolutions

Category	Content of Resolutions	Progress Overview
Majority Vote	Approved the 2022 financial statement and formulated the 2023 operating plan.	After the approval of the Board of Directors on March 10, 2023, the relevant financial information was reported and announced at the Market Observation Post System from the Taiwan Stock Exchange.
Majority Vote	Approval of increasing the investment in Formosa Resource Corporation by US$25 million.	FPC is conducting a cash capital increase for our reinvesting business, Taiwan Resources Corporation to expand our investment in mineral resources and enhance operational funds. FPC will maintain its original shareholding ratio of 25% and further increase the capital by US$25 million.
Majority Vote	Approval of increasing the investment in Formosa Plastics Construction Corporation by NT$500 million.	FPC's reinvesting business, Formosa Plastics Construction Corporation is conducting a cash capital increase to support the FPC Building Urban Renewal Project. The Company will increase its capital by an additional NT$500 million, while maintaining its original shareholding ratio of 33.33%.
Majority Vote	Determined the salary adjustment range for FPC's managers in 2023.	The salary adjustment for the company's executives in 2023 will be determined based on the performance evaluation of each individual employee, using the same criteria as the rest of the staff.
Majority Vote	Approval of the issuance of unsecured domestic corporate bonds.	The Company plans to raise long-term funds in 2024 by issuing unsecured corporate bonds within NT$15 billion.

Title	Name	Board Attendance Rate (%) (Note)	Basic Information				Note
			Age		Gender	FPC Employees	
			61~70 Years Old	Above 71 Years Old			
Chairman	Jason Lin	100%		✓	Male	No	
Managing Director of the Board	FCFC William Wong	100%		✓	Male	No	
Managing Director of the Board	NPC Susan Wang	83%	✓		Female	No	
Managing Director of the Board	FPCC Wilfred Wang	67%		✓	Male	No	
Managing Director of the Board (Independent Director)	Chi-Lin Wei	100%		✓	Male	No	
Independent Director	Ching-Ji Wu	100%		✓	Male	No	
Independent Director	Yen-Shiang Shih	100%		✓	Male	No	
Independent Director	Wen-Chyi Ong	100%	✓		Male	No	
Director	C. T. Lee	50%		✓	Male	No	Passed away on May 21, 2023 and, as a result, resigned from the position of Director.
Director	Cher Wang	100%	✓		Female	No	
Director	K. H. Wu	83%		✓	Male	No	
Director	Ralph Ho	100%		✓	Male	No	
Director	Sang-Chi Lin	100%	✓		Male	No	
Director	Jerry Lin	100%	✓		Male	Yes	
Director	Cheng-Chung Cheng	100%		✓	Male	No	

Note: The attendance rate of the Board of Directors does not include attendance by proxy.

For more information on corporate governance and committee operations, please refer FPC's official website.

FPC Website: Corporate Governance and Committee Implementation

Remuneration Policy for Directors and Managers of the Company

The remuneration of FPC's directors and managers are first submitted to the Remuneration Committee for resolution and then submitted to the Board of Directors for further discussion and approval. For the remuneration of directors, in accordance with Article 28 of the Company's Articles of Incorporation, the Board of Directors is authorized to make decisions based on the extent of the directors' participation in the Company's operations and the value of their contributions, and with reference to the usual level of payments in the industry. However, the independent directors and director Ralph Ho receive fixed monthly remuneration and travel expenses based on their actual attendance at the board meetings. The rest of the directors only receive travel expenses based on their actual attendance at the board meetings, and no variable compensation is paid. For information on directors' remuneration in 2023, please refer to "Remuneration of General Directors and Independent Directors" in the annual report.

The remuneration of the President and Vice President is paid in accordance with Article 36 of the Company's Articles of Association. The fixed monthly salary is based on the salary adjustment standard of all employees every year. The Chairman will assess and evaluate comprehensively the overall performance (including financial and non-financial indicators, see the table below) and the achievement of the "Annual Performance Targets" according to the responsibilities of each managerial position and then submit an adjustment proposal to the Remuneration Committee. For information on the managerial officers' remuneration in 2023, please refer to the "The President and Vice President's Remuneration Policy" in the annual report.

FPC's Remuneration Policy for Directors and Managers

Director (including Independent Director)	Managers (President, Vice President, etc.)	General Staff
Issuance Item	Issuance Item	Issuance Item
■ Fixed monthly salary (independent directors and director Ralph Ho only) ■ Travel expenses	■ Fixed monthly salary ■ diligence bonus, year-end bonus, supervisor bonus, monthly pension (including the old and new pension systems) and welfare benefits according to FPC's Pension Regulations ■ Pensions, severance pay, and survivor's benefits for managers under special circumstances	■ Fixed monthly salary ■ efficiency bonus, year-end bonus, supervisor bonus, holiday bonus, monthly pension (including the old and new pension systems) and welfare benefits according to FPC's Pension Regulations

FPC's Performance Evaluation Indicators for Managers

Financial

- Operating Profit/Loss/ EBITDA (Profit before interest, taxes, depreciation, and amortization)
- Achievement Rate of Operational Target
- Operating Growth Rate
- Profit Contribution

Non-financial

Environmental Protection

- Engagement in Environmental Sustainability
- Performance of Water and Energy Conservation
- Benefits of Circular Economy
- Achievement Rate of the Carbon Reduction Target

Social Responsibility

- Industrial Safety/ Occupational Accidents
- Product Development and Innovation
- Community Relations at the Plant site/ Protest Incident

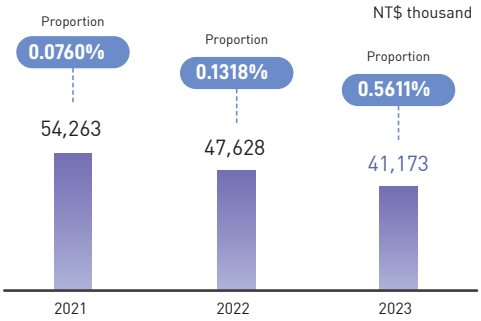
Corporate Governance

- Operational Management Capability
- AI Promotional Projects/Benefits
- Number of Fraud Cases

(2) Remuneration Committee

Since the establishment in 2011, the Remuneration Committee is composed of four independent directors and holds at least two meetings every year. During these meetings, remuneration policies and systems for directors and managerial officers are evaluated, and recommendations are submitted to the Board of Directors for deliberation, so as to prevent directors and managerial officers from engaging in conduct that exceeds the risk appetite of FPC due to remuneration policies.

Directors' remuneration as a percentage of net profit after tax



Meetings of the Remuneration Committee in 2023

Title	Name	Number of Meetings (A)	Actual Attendance (B)	Attendance by Proxy	Attendance Rate (B/A)
Independent Director	Chi-Lin Wei	2	2	0	100%
Independent Director	Ching-Ji Wu		2	0	100%
Independent Director	Yen-Shiang Shih		2	0	100%
Independent Director	Wen-Chyi Ong		2	0	100%

(3) Audit Committee

The Audit Committee is composed of four independent directors and holds two meetings every year. The main purpose of establishing this committee is to supervise the fair expression of financial statements, the appointment (dismissal), competence, independence and performance of CPAs, the effective implementation of internal control, compliance with the relevant laws and regulations, and the control of existing or potential risks to FPC.

Meetings of the Audit Committee in 2023

Title	Name	Number of Meetings (A)	Actual Attendance (B)	Attendance by Proxy	Attendance Rate (B/A)
Independent Director	Chi-Lin Wei	5	5	0	100%
Independent Director	Ching-Ji Wu		5	0	100%
Independent Director	Yen-Shiang Shih		5	0	100%
Independent Director	Wen-Chyi Ong		5	0	100%

(4) Sustainable Development Committee

FPC's Board of Directors has approved the establishment of the Sustainable Development Committee on May 10, 2022, which is composed of 4 independent directors and the convener and deputy convener of the sustainable development project. At least 1 committee meeting is convened each year. In 2023, two meetings were held on May 26 and December 14 respectively.

Meetings of Sustainable Development Committee in 2023

Title	Name	Number of Meetings (A)	Actual Attendance (B)	Attendance by Proxy	Attendance Rate (B/A)
Chairman	Jason Lin	2	2	0	100%
Director	Jerry Lin		2	0	100%
Independent Director	Chi-Lin Wei		2	0	100%
Independent Director	Ching-Ji Wu		2	0	100%
Independent Director	Yen-Shiang Shih		2	0	100%
Independent Director	Wen-Chyi Ong		2	0	100%

Operations of the Sustainable Development Committee in 2023

Main Authority

Please refer to "Corporate Governance" of FPC's Sustainable Development website.

Corporate Governance

Resolutions

- Prepared FPC's 2022 Sustainability Report.
- Reported on the 2022 greenhouse gas verification results.

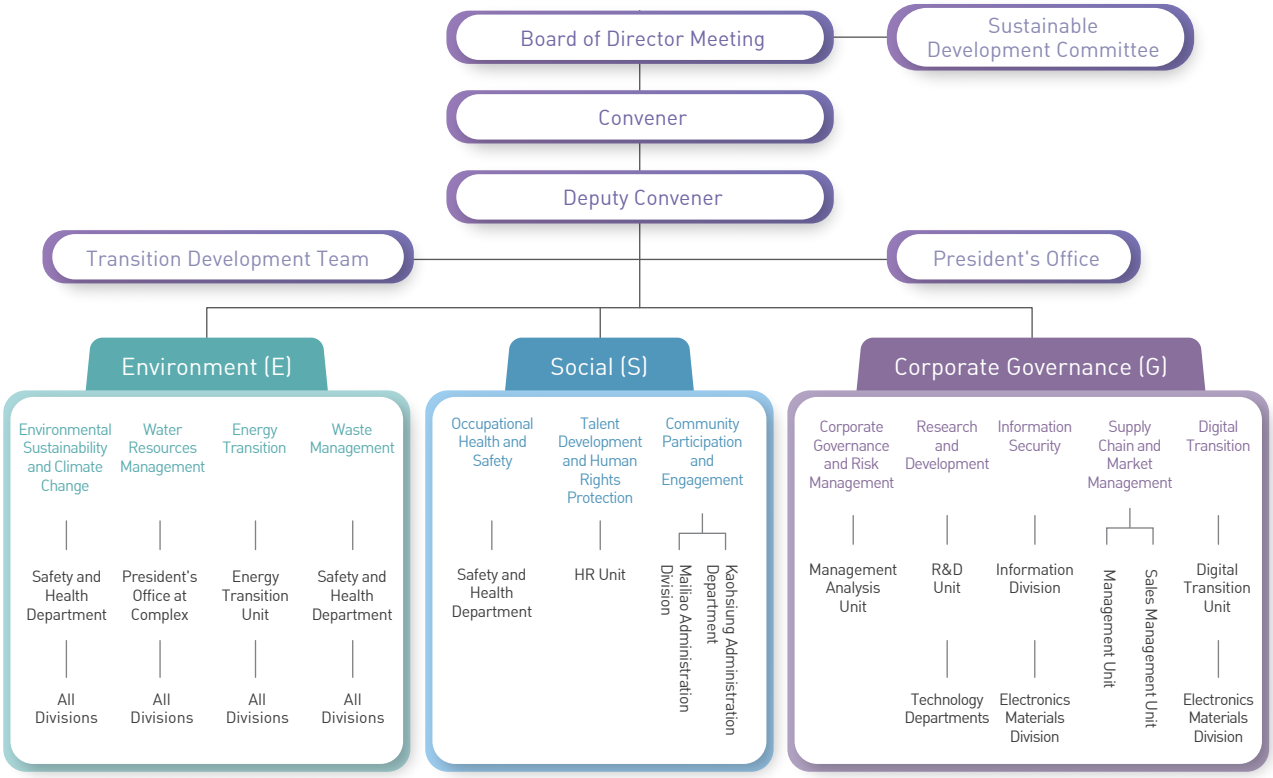
2.2.2 Promotion of Corporate Sustainability

2-9 2-13 2-14 2-24

FPC has appointed Chairman Mr. Jason Lin to serve as the convener as well as President Mr. Wen-Bee Kuo and Senior Vice President Mr. Jerry Lin to serve as the deputy conveners of the Sustainable Development Promotion Team. They are responsible for developing sustainable development strategies, supervising the performance of these strategies, and promoting operations such as social responsibility and risk management.

The order of the themes and issues of this Report were decided in a meeting at the beginning of 2023 by the President's Office, Safety and Health Department, Accounting Department, Mailiao Administration Division, Kaohsiung Administration Department, and members of the "Sustainable Development Promotion Task Force." The content of this Report was first compiled and submitted to the convener and the deputy convener before being reported to the Sustainable Development Committee and the Board of Directors at least once every year in order to ensure that the issues disclosed in this Report are in line with the needs of stakeholders.

Sustainable Development Promotion Structure at FPC



When implementing sustainable initiatives in various business operations, functional teams hold relevant meetings to discuss and make decisions. The awareness of sustainability is integrated into strategic management and operational thinking, and the progress and implementation of various tasks are reported to the Sustainable Development Committee. This ensures the concrete implementation of policy commitments. Furthermore, the Company communicates its sustainability policies to employees at different levels throughout different stages of operations, with the goal of achieving sustainable development through business practices and internalized thinking.

Sustainable Development Website: Sustainable Development

2.2.3 Risk Management

FPC has implemented "Regulations Governing Risk Management" and developed risk-related management systems in accordance with them. The Board of Directors is responsible for making high-level decisions and overseeing risk management, while the "Sustainable Development Promotion Team" has been established to supervise and promote risk management activities. Each year, strategies are formulated based on the level of risk and the probability of occurrence.

Regularly review operating conditions
Determine potential risks and opportunities

- Production and marketing meetings are held monthly
- Business performance meetings, safety and environmental performance meetings, energy conservation and emission reduction circular economy review meetings, project review meetings, and regular ESG implementation progress reports are held quarterly, in order to regularly review operating conditions.

Regular Risk Assessment
Implementing Risk Management Mechanism

- Annual multiple risk assessment operations are conducted.
- The implementation of risk management is reported to the Board of Directors and Sustainable Development Committee at least once every year.
- The report includes the focus of risk management, risk assessment and corresponding mitigation measures to ensure the integrity, rationality and optimization of risk management.

The risk management scope of FPC focuses on three dimensions: environment (E), society (S), and corporate governance (G). It identifies various risk items based on three risk categories, namely preventable risks, strategy risks, and external risks.

In 2023, 16 risk items were identified based on three major aspects, and corresponding management policies were formulated. The business execution departments assigned risk management responsible units to assess and closely monitor the dynamic of risks, in order to track the effectiveness of various management measures. For information regarding the management strategies and achievements of different risk projects, please consult FPC's Sustainable Development website.

E Environment

- Climate Change
- Water Resources Management
- Greenhouse Gases Management
- Energy Management
- Air Pollutant Management
- Waste Management

S Social

- Human Rights
- Talent Recruitment and Development
- Occupational Safety and Health

G Corporate Governance

- Professional Ethics
- Legal Compliance
- Information Security
- Raw Material Supply and Sales Risks
- Financial Risks
- Research and Development Projects
- Hazard Risks

Sustainable Development Website: Risk Management

2.2.4 Internal Control Mechanism

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(1) Professional and Independent Internal Auditing System

FPC has established the independent Audit Office under the Board of Directors. Each year, the Audit Office is responsible to carry out independent auditing and supervision of business functions to ensure their management efficiency, and reduce operating risks. No major deficiency was found in all 61 audit items in 2023.

For more information on internal control mechanism, please refer to our Sustainable Development website.

Sustainable Development Website: Internal Control Mechanism

FPC Website: Audit System

For more information on the internal audit organization and its operation, please refer to "Audit System" on FPC's official website.

(2) Ethical Corporate Management and Anti-Corruption Policies

FPC has implemented a stringent code of ethics to prevent trade secret leaks, misconduct, malpractice or misappropriation of funds, as well as behavior which violates gender equality at work. For more information on concrete measures, please refer to "Ethical Corporate Management & Conduct" on FPC's official website.

A comprehensive risk assessment was conducted for all operational sites in order to address the risk of corruption. In 2023, no significant corruption risks were identified.

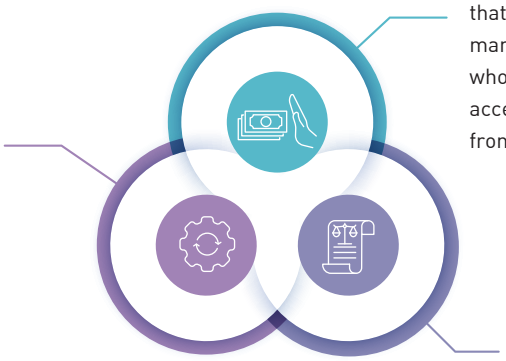
3 Major Aspects of the Code of Business Ethics

Anti-corruption

It is expressly stipulated in the internal system that no entertainment or material gifts from manufacturers shall be accepted, and those who commit fraud, embezzle public funds, accept bribes or commissions will be removed from office.

Prevent Malpractice

For those who hold positions such as sales, procurement, finished product storage, supervision, and budget, we will comprehensively promote regular rotations to avoid misconduct with manufacturers.



Stringent Discipline

For employees who violate the regulations, no leniency will be given once the verification is confirmed, and the direct supervisor will also impose joint sanctions depending on the circumstances to promote vigilance.

FPC Website: Ethical Corporate Management & Conduct

Overview of FPC's Implementation of Anti-Corruption Policy in the Past Three Years

Year	2021	2022	2023
The total number of reported cases	12	7	5
Number of reported cases related to anti-corruption policies	1	3	2
Number of cases found to violate anticorruption policies after investigation	0	0	1

Note: There is currently one ongoing anti-corruption case in 2023 that has not yet been resolved.

One case was identified in 2023 as violating the anti-corruption policy. It involved an employee receiving kickbacks from a vendor in order to win bids. The relevant personnel have been disciplined in accordance with the company's "Code of Conduct". The employee involved has been dismissed due to substantiated bribery allegations and is currently under investigation by the judicial authorities. Other supervisory managers and responsible individuals have also been disciplined based on the severity of their violations. The vendor involved in the bribery has been permanently blacklisted.

FPC is continuously reviewing its internal control mechanisms, strengthening education and training on anti-corruption policies, and improving acceptance and audit operations to optimize and prevent related incidents. Cases are filed and continuously monitored for improvement.

2023 FPC Communication and Training on Anti-corruption Policies and Procedures

Target	Communication Channel or Training	Results
Board of Directors	On September 23, 2023, the "Prevention of Insider Trading" training was held.	▪ Communication: **14** participants, accounting for **100**% of all Board members. ▪ Education and training: **14** participants, accounting for **100**% of all Board members.
Employees	1. Relevant information was released from time to time through announcement letters for all employees to know. 2. Education and training related to ethical corporate management was held annually. 3. On November 30, 2023, education and training on the "Prevention of Insider Trading" and the "Procedures for Handling Internal Material Information" was held.	▪ Communication: **6,162** participants, accounting for **100**% of all employees. ▪ Education and training: **5,057** participants, accounting for **82.1**% of all employees.
Suppliers/ Contractors	Suppliers were required to sign the Integrity and Confidentiality Pledge.	▪ **2,272** companies have signed, accounting for **97.8**% of all suppliers and contractors.

2.2.5 Legal Compliance

2-16 2-25 2-27 206

FPC adheres to the principles of honesty, trustworthiness, and compliance, ensuring strict adherence to laws, regulations, and policies in all aspects. The company actively promotes sound corporate governance, formulates policies in accordance with regulations, and implements corresponding management actions to comply with various standards. It has established the "Ethical Management and Guidelines", "Codes of Ethical Conduct", "Guidelines for Prevention of Insider Trading", and "Procedures for Reporting Illegal and Unethical Behavior" to provide specific channels for reporting any illegal or improper behavior. FPC also organizes education and training sessions and seminars related to regulatory compliance to ensure that employees understand and comply with regulations.

The Company defines significant events as those that result in fines exceeding NT$1 million. If a significant event occurs, a project team will be formed to conduct an investigation and report to the President. The team will also prepare a project report, which will include response measures, follow-up tracking, and improvement strategies. In recent years, there have been no significant events of this nature.

In 2023, FPC failed to comply with regulations. For information on how we addressed and improved the violations, please see the table below.

Environmental

- The Company is a significant emitter and is subject to primary inspections by both central and local environmental protection authorities.
- In 2023, environmental protection authorities at all levels conducted 363 on-site inspections, resulting in 5 cases of violations. A total of NT$1.206 million in fines were imposed, all of which were non-serious violations of regulations.

Violation of Regulations	Number of Cases	Summary of the Matter	Fine Amount	Response and Improvement Measures
Air Pollution Control Act	3	1. The concentration of equipment component leakage exceeds national standards.	NT$225 thousand	Enhance the autonomous management of equipment components and facilitate the reduction in their quantity.
		2. The odor from the emission pipeline exceeds national standards.	NT$195 thousand	Enhance the stability of control equipment operation, and incorporate warning values for operating parameters.
		3. The incinerator emitted a greater amount of waste gas than permitted without reporting it to the local regulatory authorities.	NT$150 thousand	Strengthen the awareness of business executives regarding the Air Pollution Control Act and its associated regulations
Water Pollution Control Act	1	The two pieces of equipment, the wastewater collection tank and the sludge dewatering machine, are not included in the storage permit.	NT$36 thousand	1. The case involves a deficiency that was discovered during an internal environmental audit and FPC received a penalty for voluntarily submitting a permit document change to the Environmental Protection Bureau. 2. Strengthen the awareness of business executives regarding the Water Pollution Control Act and its associated regulations
Environmental Impact Assessment Act	1	The construction of the new bridge for Yunlin did not fulfill the promised environmental impact assessment, which included the preservation of the surrounding natural environment and the existing windbreak forest plantation.	NT$600 thousand	Strengthen the awareness of business executives regarding the Environmental Impact Assessment Act and its associated regulations

Social

- In 2023, there were 2 cases of social violations. A total of NT$200 thousand in fines were imposed, all of which were non-serious violations of regulations.
- There are no violations of human rights, Labor Standards Act, or other relevant regulations.

Violation of Regulations	Number of Cases	Summary of the Matter	Fine Amount	Response and Improvement Measures
Violation of occupational safety and health regulations	2	1. The use of non-explosion-proof vacuum cleaners by employees led to burns and scalds.	NT$100 thousand	1. Comprehensive Investigation of the Usage Areas and Purposes of Non-Explosion-Proof Vacuum Cleaners 2. Review the standard operating procedure (SOP) for equipment cleaning in each plant. Prior to conducting inspections, measure the volatile organic compounds (VOCs) at the lowest point and clean the equipment using a water jet. In addition, vacuum cleaners, including explosion-proof ones, should not be used in the process area. 3. Before commencing the operation, it is necessary to capture photographs of the VOCs measurement and the donning of protective equipment. These photos should then be uploaded to the FPC's App to verify that the operators are properly equipped with protective gear.
		2. Accident caused by contractor's construction negligence: Sulfuric acid pipe rupture.	NT$100 thousand	1. In order to enhance pipeline protection measures within the construction scaffolding, a joint inspection is conducted by the process plant, engineering unit, and contracting party prior to construction. The objective is to verify the presence of any small-sized pipelines (including plastic pipes) or any interference caused by human or environmental factors within the work area. Measures such as marking, blocking, and collision prevention are implemented. 2. Each plant has already developed the "Checklist for Inspection before and after Scaffolding Construction" to prevent the recurrence of similar abnormalities.

Corporate Governance

- There are no cases of Corporate Governance Violation of Regulations and Fines in 2023.
- There are no violations of anti-corruption, anti-monopoly, anti-trust, and other regulations.

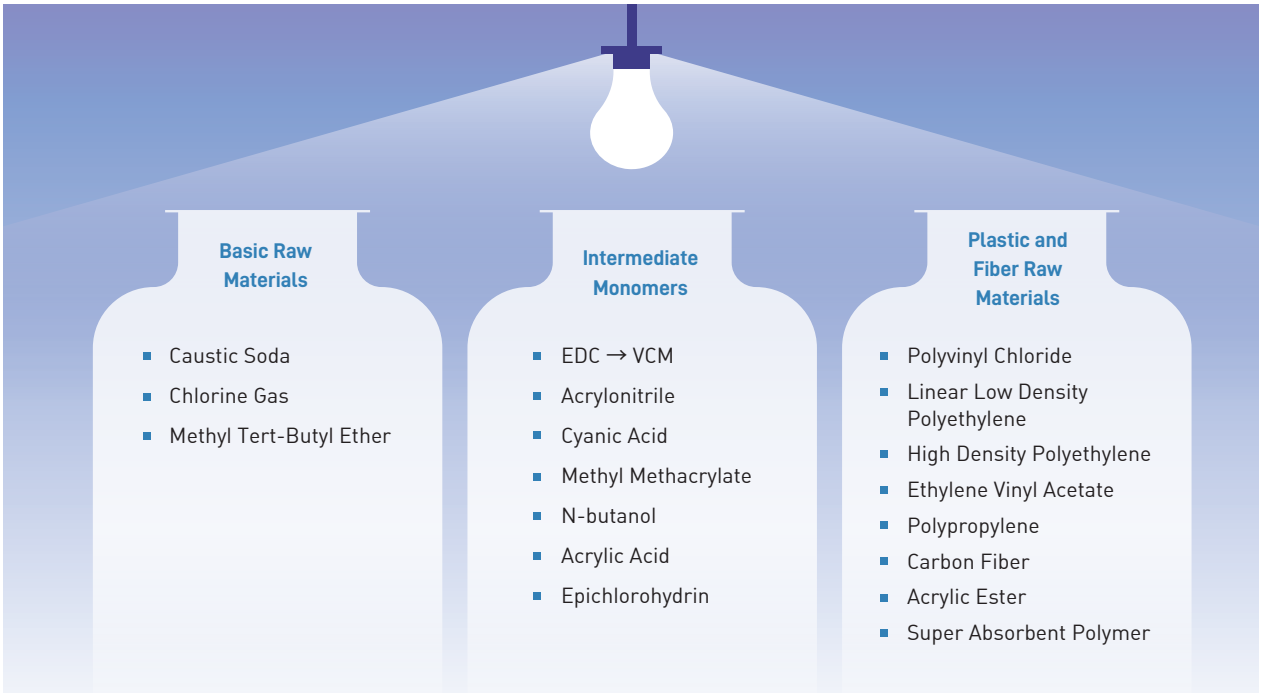
In order to gather opinions on regulatory compliance, we have an in-house legal department and also hire external legal consultants to provide professional advice. When we encounter regulatory challenges, we take proactive measures and implement improvement strategies to ensure that all aspects of our daily operations are in compliance.

2.3 Innovative Sustainable Products

2.3.1 Main Products and Brands 2-6

FPC has completed the vertical integration of upstream, mid-stream and downstream areas in the fields of plastics, fibers and chemicals. In addition to continuously expanding the scale of production capacity and reducing production costs, we also increase the added value of products through innovative research and development in order to commit to environmental sustainability, improve human living standards, and enhance social well-being. For more information on FPC's main products, please visit our official website.

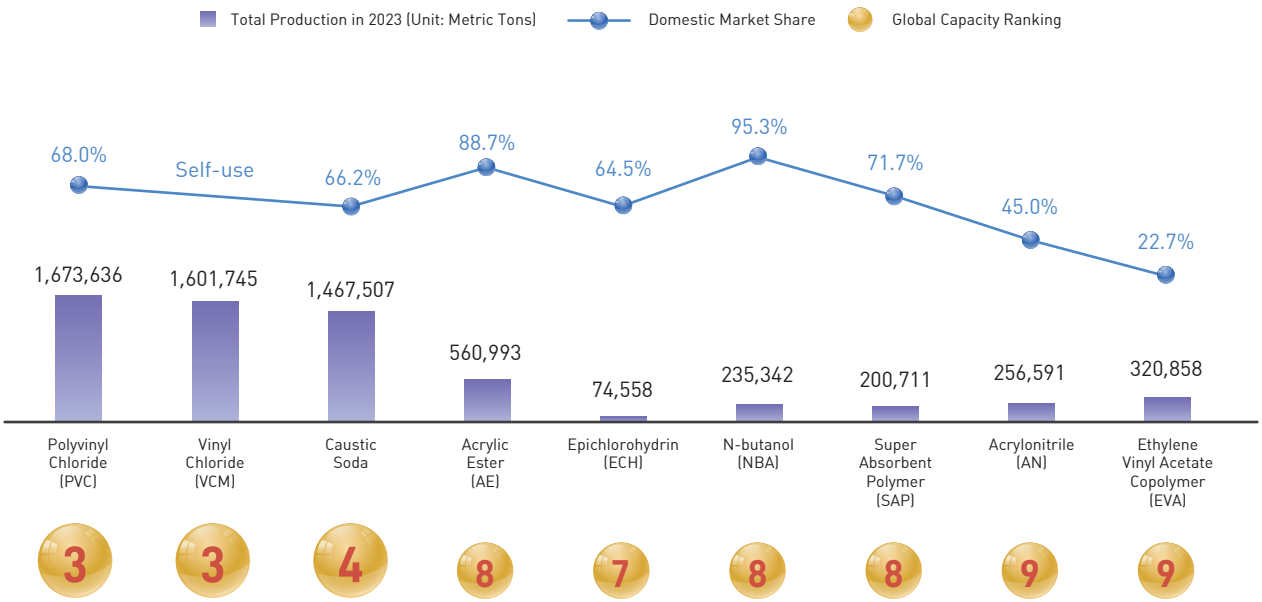
FPC Website: Products Overview



The production capacity of the Company's main products ranks among the top in the global plastics, chemicals and fiber industries, and the production capacity of 9 products such as polyvinyl chloride (PVC) and vinyl chloride (VCM) listed in the table below have reached the top ten in the world. For more information on product applications, please refer to "Applications Overview" on FPC's official website.

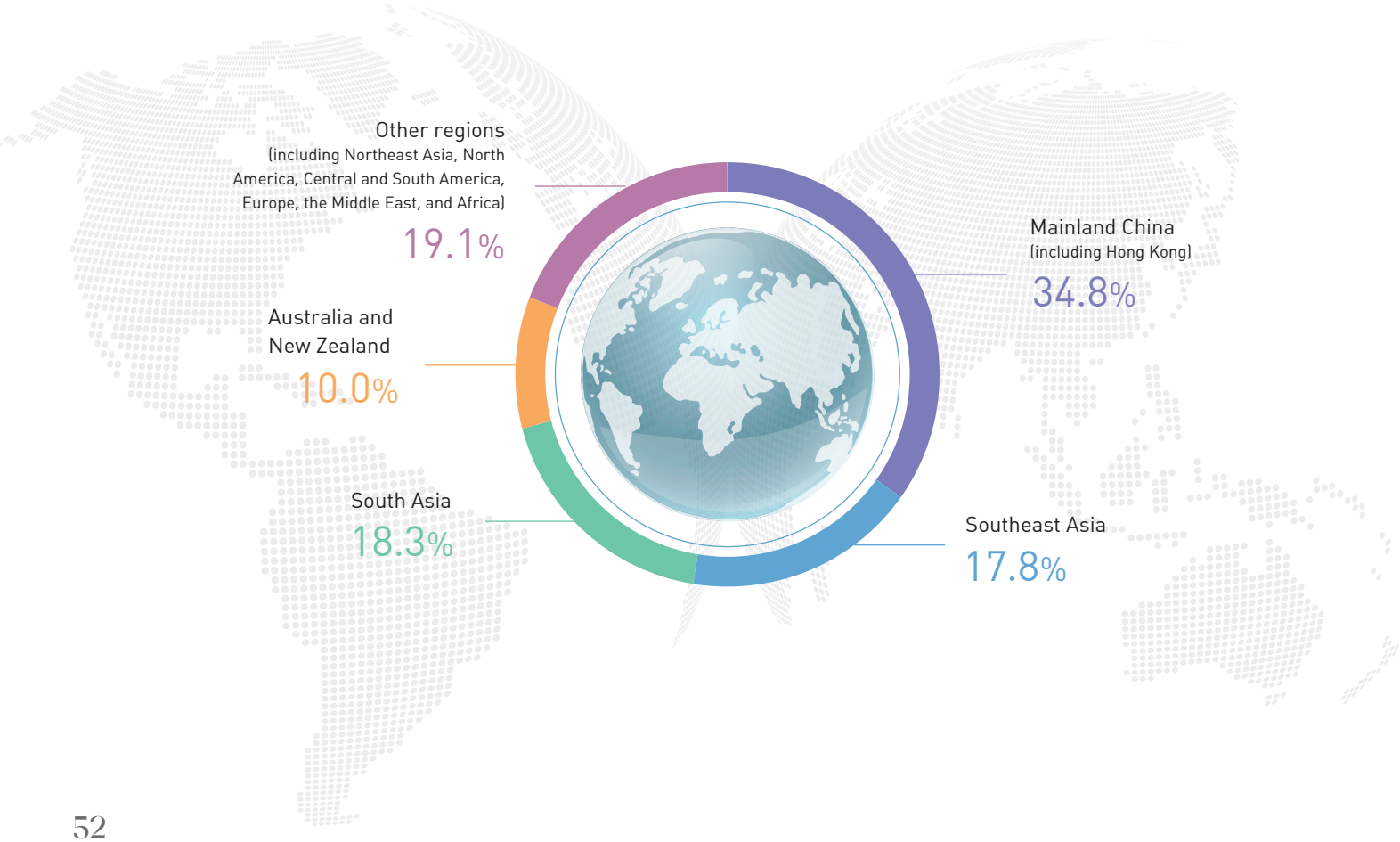
FPC Website: Applications Overview

Production, Domestic Market Share and The Ranking of Global Capacity of Major Products in 2023



Note: The total production in 2023 includes the sum from Taiwan, Ningbo and Formosa Industries Corporation (FIC). FPC's high-density polyethylene (HDPE), linear low-density polyethylene (LLDPE), and polypropylene (PP) rank 11th in global production, FPC's carbon fibers rank 15th and FPC's methyl methacrylate (MMA) ranks 17th.

The percentage of revenue of FPC in all major regions of the world in 2023



Main Brands of FPC

Main Brand	Product	Use
FORMOLON	Suspension PVC	Rubber, construction materials, water pipes, etc.
TAISOX	Polyethylene Ethylene Vinyl Acetate (EVA)	Shopping bags, packaging bags, agricultural films, shoe materials, etc.
YUNGSOX	Polypropylene	Toys, food containers, medical equipment, household supplies, etc.
FORMOCON	Polyacetal Resin	Electronic, electrical, automotive, transportation machines, general machinery, etc.
TAIRYFIL	Carbon Fiber	Aerospace, automotive, industrial applications, wind turbine blades, sports equipment, etc.
TAISAP	Super Absorbent Polymer	Diapers, urine pads, sanitary napkins, etc.
TAIRYSORB	Super Absorbent Polymer	Water-retaining agents for agriculture and gardening, soil modifiers, etc.
NANO CALMALON	Nano Calcium	Garbage bags, woven bags, injection molding products, extrudates, shopping bags, etc.

For more information on the supply of main raw materials, please refer to the Annual Report under "AGM" on FPC's official website.

FPC Website: AGM

2.3.2 Product Development and Innovation 2-25 416

(1) Technology Foresight Research and Development

R&D expenditure in 2023
NT$ 2.78 billion

Percentage of R&D personnel in 2023
6.5 %

Percentage of revenue from differentiated products in 2023
24.3 %

Number of patents granted in 2023
47

Total number of patents
301

Percentage of major product and service categories assessed to improve health and safety impacts in 2023
100 %

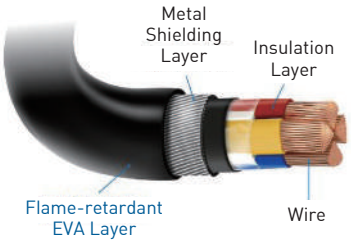
FPC continues to invest in the development of new and forward-looking, differentiated, and products and technologies with high value, and actively develops differentiated and green material products. A total of 39 new products were developed in 2023, with a potential annual benefit of NT$493,480 thousand. 12 of the new products were commercialized in 2023, generating a total revenue of NT$263,665 thousand.

FPC's product development cases in 2023

Development of 8-in-1 Single Material Polypropylene (PP) Fully Recycled Cold-Resistant Clothing

1. In accordance with our commitment to sustainability and company policies, we are making every effort to contribute to environmental protection. We are continuously researching and developing recyclable plastics for reuse. In collaboration with the Textile Industry Research Institute and domestic textile and garment manufacturers, we have jointly developed a fully recycled cold-resistant suit made from a single PP material. This suit consists of eight components: outer fabric, breathable waterproof film, lining fabric, zipper head, zipper teeth, zipper tape, sewing thread, and buttons, all made from PP. Our goal is to create a sustainable outdoor product that is made from the same material, has low energy consumption, low water consumption, low pollution, and is easy to recycle.
2. Received the TOP PRODUCT award at the OutDoor by ISPO in Munich, Germany in June 2023.
3. Received the 2024 iF Design Award from Germany in February 2024.

Potential annual benefits
NT$2,000 thousand



Development of High Voltage Flame Retardant EVA Cable Material

The growth of the electric vehicle industry has led to an increased demand for high-voltage wires. In addition to being able to withstand high voltage environments, high-voltage wires for electric vehicles also need to have properties such as abrasion resistance, insulation, and flame resistance. Currently, EVA is utilized as a flame retardant additive to achieve fire-resistant properties. Moreover, its exceptional flexibility makes it well-suited for application as the outer layer of cables. Additionally, the melt index (MI) is adjusted to improve tensile strength.

Potential annual benefits

NT$ 10,500 thousand

Development of High-flowability PE Fiber Material

Currently, most PE fibers in the market are composed of dual components, such as PE/PP or PE/PET. To meet the demands of Japanese customers and minimize environmental impact, we are actively developing single-component PE fibers. These fibers not only exhibit excellent processing fluidity and ease of processing and recycling, but also offer superior softness. They can be applied to the surface of diapers or masks, enhancing the comfort of the end products.

Potential annual benefits

NT$ 4,464 thousand

Development of New activated carbon recycling/ regeneration system

Activated carbon adsorption systems are often used in waste gas and wastewater treatment. However, once used, they are typically discarded as waste, which incurs significant expenses for transportation and disposal. Although it is possible to regenerate activated carbon at high temperatures (800 ℃), it requires a significant amount of energy and the adsorption capacity decreases after regeneration. FPC has successfully developed a low-temperature wet chemical regeneration technology that efficiently regenerates activated carbon with minimal energy consumption. This technology enables us to achieve the goal of reuse and reduce transportation costs, aligning with the principles of sustainability. Furthermore, in order to ensure technical feasibility, we have established a state-of-the-art testing facility to carry out extensive performance verification.

Potential annual benefits

NT$ 6,420 thousand

FPC applies for patents domestically and internationally to secure key technologies, and constantly deepens theoretical foundations and improves R&D capabilities through industry-academia collaboration with domestic and overseas academic institutions, as well as apply them in practice to process improvements, such as designing the expansion of production capacity and shortening product transfer time in order to enhance our competitiveness. Moreover, FPC has established the Precision Instrument Center, which combines virtual laboratories and process simulation talents, in order to accelerate the development of high-value and differentiated composite materials such as materials with scratch resistance, flame resistance, toughening, gas barrier, and dielectric properties. FPC continues to strengthen its collaboration with manufacturers to actively develop green products to reduce the impact on the environment and achieve sustainable development.

R&D Achievement in 2023

R&D Achievement	Application and Market Responses
A Study on Improving the Quality of Paste PVC Wastewater Reuse Using Specific Algal Microorganisms	1. Water is a shared resource. To effectively control and reduce the environmental impact of products, it is essential to enhance water recycling technology. We have evaluated the potential for recycling and reusing wastewater from the Mailiao emulsified powder production process. In collaboration with National Cheng Kung University, we have successfully developed a low-cost biological treatment module that utilizes specific bacterial strains to decompose substances that are challenging to break down in the wastewater from the emulsified powder production process. This achievement allows us to achieve the objective of wastewater reuse. 2. The technology is currently being implemented at the Mailiao PVC Plant, where the treated wastewater is recycled and used for cooling purposes in accordance with specified standards (e.g., COD < 30 ppm, PVA <1 ppm). This application has received recognition, including the National Innovation Award -Excelsior Award and the National Science Council's Excellent Award in the field of chemical materials for daily life. 
New SAP Product Development by an Internationally Renowned Manufacturer	1. In collaboration with a renowned international manufacturer that holds the largest market share in the global baby diaper market, we have successfully developed a new generation of SAP products. These products possess rapid absorption capabilities and exceptional liquid conductivity, ensuring a more comfortable user experience for consumers. Furthermore, this collaboration further solidifies FPC's dominant position in the global market for SAP. 2. FPC has successfully completed 220 tons of continuous production and has passed standard tests. Additionally, it has supplied 100 tons of SAP to the manufacturer's North American factory for ongoing on-machine testing.
Development and Application of Post-Consumer Recycled Plastics (PCR)	1. Adhering to our commitment to sustainability and the concept of a circular economy, we actively develop post-consumer recycled PP plastic (PCR), such as YUNGSOX RP3015 and other brands. These materials are primarily used in the production of everyday items, pallets, and automotive materials. 2. Currently, pallets made from PCR RP3015 have similar physical properties to those made from pure materials. Manufacturers have been gradually increasing their usage, which helps to reduce resource waste.
Development of Saltwater Electrolysis Combined with Carbon Dioxide Recycling System Technology	1. Actively developing carbon reduction technology to capture carbon dioxide (CO_2) from the flue gas of public plants. Additionally, we are introducing CO_2 conversion system technology to produce synthesis gas ($CO+H_2$), chlorine gas, and liquid alkali in line with the 2050 carbon neutrality goal. 2. In collaboration with National Taiwan University, we have been developing catalyst synthesis technology and have obtained a patent for a new CO_2 electrode in Taiwan. We have also applied for a patent in the United States.
Anti-adhesion Peritoneal Dialysis Silicone Catheters	1. To improve the quality of medical materials and enhance product value, we utilize double-ion anti-adhesion to perform silicone blending processing. This allows us to produce anti-adhesion peritoneal dialysis silicone catheters as medical equipment, which reduce the risk of patient infection and lower medical costs. 2. The silicone tube has currently undergone in vitro and animal tests and will continue to collaborate with Cheng Kung University Hospital for the human clinical trial (IRB) phase. It is expected to have widespread applications in silicone-based medical materials in the future.

(2) Green Circular Innovation

2023 Highlights

Product Safety and Health Responsibility

1. The products PVC, Caustic Soda, methylene chloride, HDPE, LLDPE, AE (BA, MA), etc. have been certified by the Bureau of Indian Standards (BIS).
2. Caustic soda solid obtains Kosher Certification

Green Materials

FPC's low-carbon Bio EVA can reduce carbon emissions by 50% compared to standard foamed EVA specifications.

Product Safety and Health Responsibility

Non-Toxic Safety Product Certification

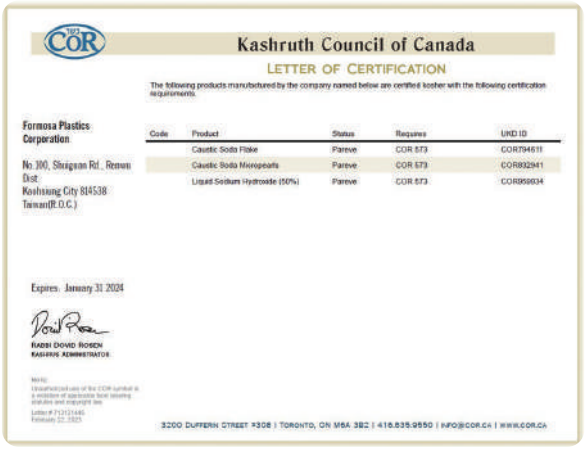
FPC is committed to reducing hazardous formulas, improving waste reduction in processes, and developing green products. With our products registered and certified in accordance with relevant laws and regulations, we are moving toward a manufacturer of non-toxic, eco-friendly products and renewable energy.

Among them, India is a significant export market for our company. In order to comply with the local government's initiatives to standardize chemical quality and protect consumer health and rights, imported chemicals and plastic raw materials are gradually being incorporated into the certification requirements of the Bureau of Indian Standards (BIS). Products that have not obtained BIS certification will not be permitted for importation. FPC's products PVC, Caustic Soda, methylene chloride, HDPE, LLDPE, AE (BA, MA), etc. have been certified one after another from May to September in 2023.

In addition, the caustic soda used in food processing has obtained certification from the National Sanitation Foundation (NSF) and the Taiwan Halal Certification in 2021. Furthermore, the caustic soda solid has also obtained Kosher certification in 2023. Kosher certification refers to the certification of food, ingredients, additives, packaging, fine chemicals, pharmaceuticals, and machinery production enterprises in accordance with Jewish dietary regulations.


BUREAU OF INDIAN STANDARDS

Indian BIS Certificate


Kashruth Council of Canada

LETTER OF CERTIFICATION

Formosa Plastics Corporation

No. 300, Shinguan Rd., Renwu Dist.
Kaohsiung City 814538
Taiwan(R.O.C.)

Code	Product	Status	Requires	UKD ID
	Caustic Soda Flake	Pareve	COR 573	COR794611
	Caustic Soda Micropearls	Pareve	COR 573	COR892941
	Liquid Sodium Hydroxide (50%)	Pareve	COR 573	COR959934

Expires: January 31 2024

RABBI DOVID ROSEN
KASHRUS ADMINISTRATOR

3200 DUFFERIN STREET #308 | TORONTO, ON M6A 3B2 | 416.635.9550 | INFO@COR.CA | WWW.COR.CA

Caustic Soda Solid's Kosher Certification in 2023

Green Materials

Low Carbon Biomass Bio EVA

In response to the global focus on environmental sustainability, international brand manufacturers have been presenting carbon reduction plans for 2025 and 2030. These plans aim to achieve carbon reduction goals by utilizing low-carbon raw materials and producing green materials using renewable energy. Furthermore, with the upcoming implementation of the EU carbon border tax, the growth potential of low-carbon green products will become even more significant.

Therefore, FPC produces low-carbon Bio EVA using biomass ethylene through the Mass Balance method, which reduces carbon emissions by 50% compared to regular foam-grade EVA. This makes it the optimal choice for low-carbon foam shoe materials. Since September 2023, we have obtained international certifications for our shoe factory and have achieved successful sales.

FPC's Low Carbon Biomass Bio EVA (7470MB)

The Use of FPC's Bio EVA in Shoe

Obtained ISCC+ International Biomass Certification in March 2023

2.3.3 Intelligent Management

Number of AI projects in 2023
414

Estimated investment amount
NT$ 1.33 billion

Estimated annual benefit
NT$ 1.26 billion

Total AI competitions bonuses issued in 2023
NT$ 200 thousand

Estimated Annual Reduction of Carbon Emissions
112,458 tons of CO_2e

FPC established the "AI Promotion Team" in June 2018 and the "Artificial Intelligence R&D Center" in Renwu Complex in 2020 to accelerate the development of AI technology. AI educational training and competitions are held internally, and an AI exchange platform, AI proposal reward system (after being approved by the AI review team, the proposer will be given a proposal bonus ranging from NT$600 to 30,000), as well as rules governing the evaluation of AI performance were set up. Relevant AI technologies are introduced externally, seeking AI technology resources from major international manufacturers, and cross-field technical exchanges are held.

The AI development mainly focuses on the five major aspects of "production and sales optimization, quality assurance, process optimization, intelligent maintenance, and industrial safety and environmental protection" in order to achieve the goals of ensuring customer delivery, improving product quality, reducing production costs, avoiding process abnormalities, and improving the working environment in the plant.

Starting in 2023, the single-process unit AI module will gradually transition into a multi-process unit AI module, with the aim of becoming an intelligent factory. Currently, the plan is to establish a third-generation data center that integrates the company's digital data and computing resources, and to create an AI operations platform. The platform will have functions such as performance management, automatic retraining, and automatic redeployment of AI models, which will significantly reduce the maintenance cost of AI. Additionally, a no code AI cloud development platform will be set up, allowing AI specialists from different departments to develop AI models without the need for coding, thus reducing the programming workload for AI engineers. The future development plan is outlined in the table below.

Optimizing the Integration of AI Modules of All Plants	Introduction to Robotic Process Automation (RPA)	Introduce the Large Language Model (LLM) as a group-wide knowledge management tool	FPC AI Cloud Service Development
In order to maximize plant efficiency, the current sporadic unit AI optimization by various process plants is gradually evolving into integrated AI across the entire plant, with the aim of enhancing the overall efficiency of AI operations.	After reviewing the current operational procedures, we recommend using RPA tools to replace highly repetitive document tasks. This will reduce the occurrence of human errors and improve work efficiency.	Integrating the internal knowledge base of LLM and important external information can help employees quickly consolidate information for decision-making reference.	In collaboration with FPC's third-generation data center, the development of their AI cloud services incorporates "Cloud Native Technology". This technology encompasses AI model development, model maintenance, and intelligent maintenance, thereby improving system stability and optimizing hardware resource utilization.

2023 Representative Case

Process Optimization: Applying AI to Reduce Heptane and Steam Loss in Polypropylene (PP) Distillation System

Existing operational defects

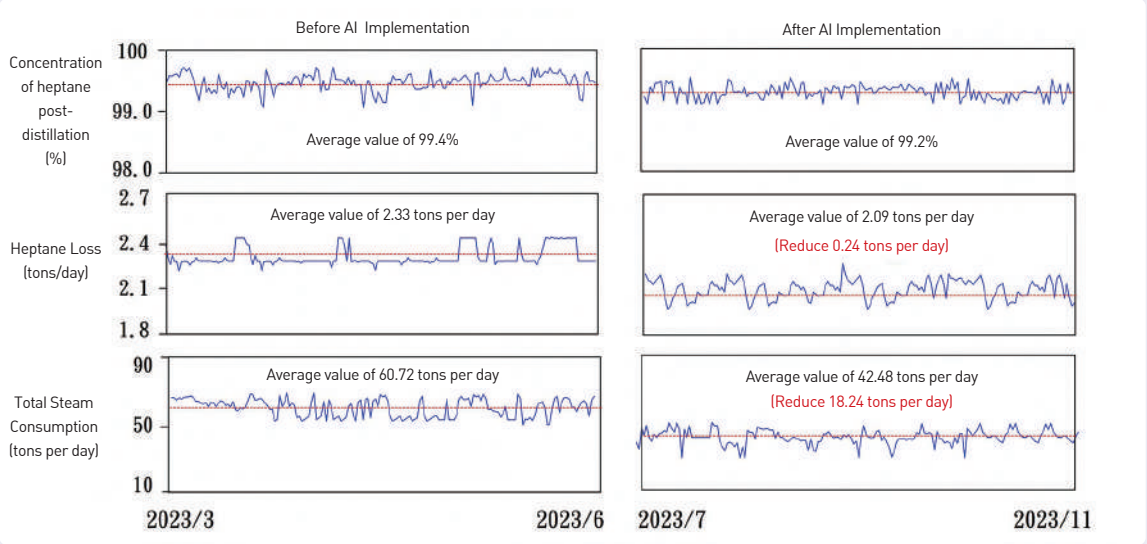
1. There are 37 types of PP, and the production plant changes different types approximately every 2-3 days. The distillation system experiences significant variations in feed rate and composition due to the different formulations of secondary materials for each product type and the varying proportion of recycled heptane.
2. Process personnel adjust the operating conditions of the distillation system based on a single set of inspection data each day. If the adjustment range is too wide, it may lead to a deviation in the quality of purified heptane. Therefore, the adjustments are made more cautiously, which results in the loss of heptane along with heavy boiling substances and increased steam consumption.

Development of AI

Traditional chemical plants aim to achieve process stability, which leads to low variability in data. To expand the data on wide-area operating conditions, process simulation technology is utilized. Subsequently, AI algorithms are employed to develop three quality prediction models and offer feedback on relevant control parameters. This feedback serves as a reference for process personnel in their operations.

Benefits after going online

- After reducing the stabilization time for the change in concentration of distilled heptane from 2-3 days to 3-4 hours, the average concentration value of approximately **99.2**% still meets regulatory standards.
- The emission loss of heptane has decreased by 0.24 tons per day, the total steam consumption has decreased by 18.24 tons per day, and the carbon emissions have decreased by **1,399** tons of CO_2e per year.



Environmental Management - Application of AI for Optimizing the Scheduling of Public Utility Steam Power

Existing Operational Defects

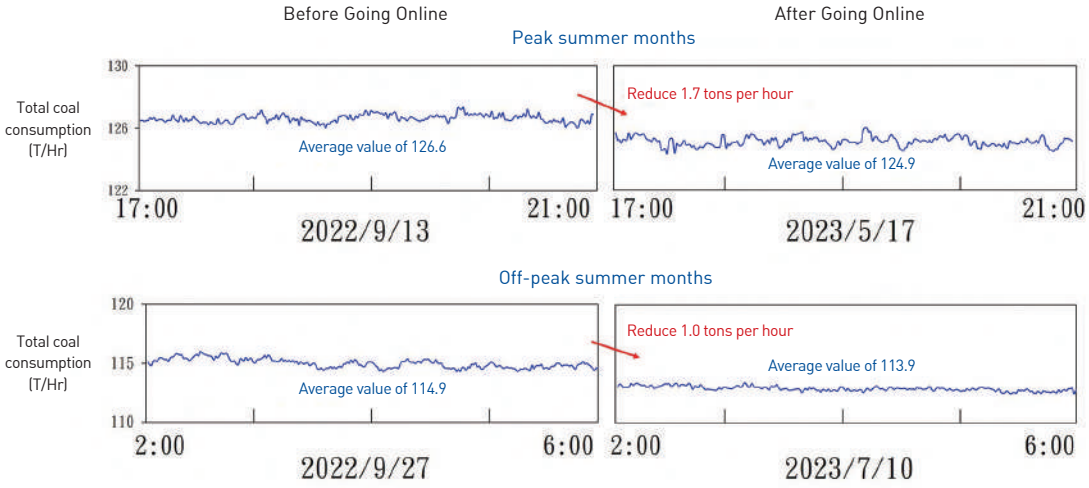
1. The previous method of adjusting the load of each unit by relying on past operational experience to regulate steam and power manually was unable to achieve optimal operation.
2. Some of the equipment is outdated and does not have instrumentation data, which makes it impossible to make real-time adjustments based on the efficiency and load of each department's steam turbine power generation.

Development of AI

1. A coal consumption prediction model is established using power plant simulation software. This model is based on different load conditions and is used to predict the real-time coal consumption of each unit.
2. A steam and power dispatch model is established, taking into account coal prices, electricity prices, peak electricity consumption, and the load restrictions of each unit. Real-time feedback is provided every 3 minutes to calculate the load combination that minimizes coal consumption, serving as a reference for optimization dispatch.

Benefits after going online

- Actual coal consumption has been reduced by 7,973 tons, and an annual carbon emissions decrease of 19,038 tons of CO_2e.



Intellectual Property Management

Sustainable Development Website: Intellectual Property Management

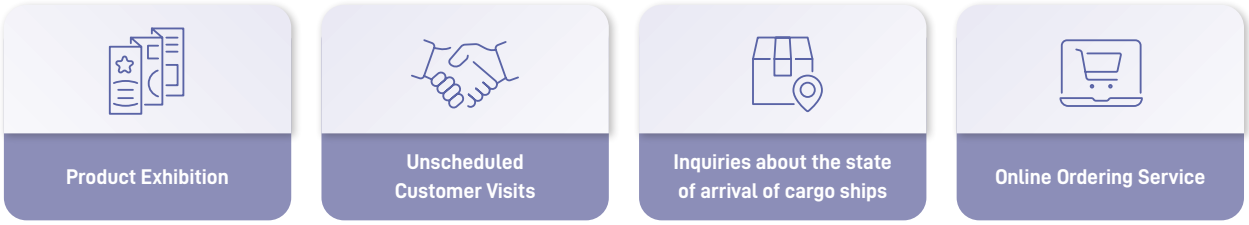
FPC has established the "Regulations Governing Research and Development Management" and set up related computer operations; in addition, FPC has specified incentives for R&D and patent authorization concerning key products in the "Regulations Governing Incentives for Research and Development Achievements Among R&D Personnel," with the aim of encouraging R&D personnel to engage in innovative development and actively conduct research, thereby enhancing our competitiveness. On the other hand, FPC requires all employees to submit the "Statement of Respect for Intellectual Property Rights" and conducts training on laws and regulations related to intellectual property rights, so as to enhance employees' awareness of intellectual property rights. In 2023, the number of valid patent certificates granted was 47, making the cumulative number of valid patents 301. For more information, please refer to "Intellectual Property Management" on our sustainable development website.

2.4 Customer Service

Maintaining good customer relations based on mutual growth is not only the responsibility of sales departments, but also the aim of all FPC's employees. By doing so, we expect to form a virtuous cycle and create a win-win situation for FPC and our customers.

2.4.1 Customer Relations and Privacy Protection 2-25

Model of Positive Interactions

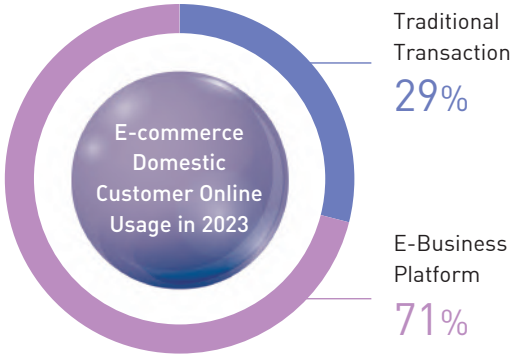


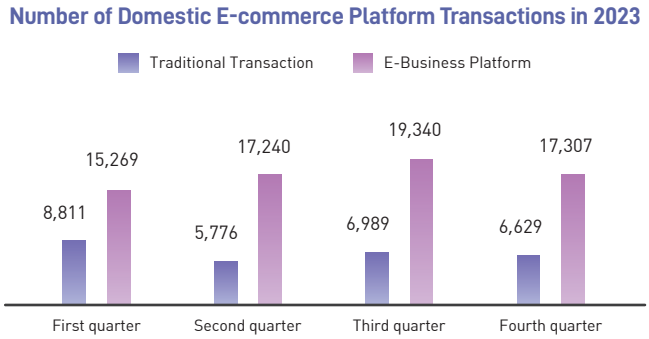
Visit to Chinese Solar Panel Film Customer in September 2023

Exhibition Booth and Customer Interaction at the China Shenzhen Exhibition in April 2023

E-Business Platform

In order to strengthen customer relationships, FPC has launched an English version of the export e-commerce platform in 2021. Additionally, the domestic e-commerce platform was also launched in 2022 in order to establish a two-way communication and sales channel in a more immediate and efficient way.





Customer Feedback and Response

FPC Website: Contact Us

To solve customers' inquiries and needs in a timely manner, FPC has set up "Contact Us" on the official website. Customers may also make inquiries or comments by calling us or writing to an e-mail address listed on the official website. In case of return of goods and refunds, customers may express their feedback to sales representatives. The sales representatives will then fill out the "Customer Complaint Form" to handle the cases and process return of goods, allowances or refunds. In 2023, a total of 16 customer complaints have been received, primarily concerning quality and packaging issues. All cases have been properly handled and closed, and customers' opinions were responded to in a timely manner.

Information Protection

FPC has established the "Regulations Governing Personal Information Management," which requests all departments to list personal data management as a self-inspection item. Only authorized personnel are allowed to check employee or customer information. Any personnel intending to get access to such information due to business needs must sign the "Application Form for Personal Information Collection, Processing and Use," while verification has to be carried out to ensure that such an application complies with the regulations before the personnel can access such information. Moreover, the method of using such information is also strictly regulated. No violations related to information privacy were reported by clients in 2023.

Number of customer privacy violations in 2023

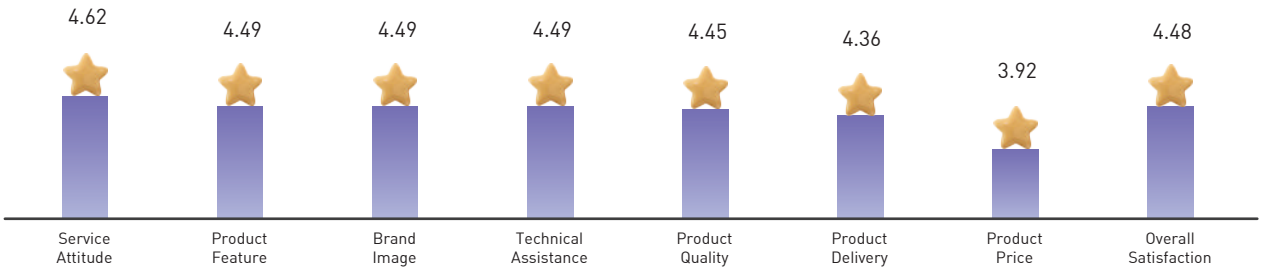
0 Cases

Note: The statistical period is from January 1, 2023 to December 31, 2023.

2.4.2 Customer Satisfaction Survey

The Company is dedicated to maintaining product quality and adheres to the ISO 9001:2015 quality management requirements. It has successfully obtained the relevant certification. Additionally, we prioritize customer satisfaction by conducting a satisfaction survey at least once a year. The survey questions are further modified based on the issues or areas of concern that customers have previously expressed.

Average satisfaction score



Customer Satisfaction Survey Model

Survey → Review and Examination → Continuous Improvement

Note 1: The scoring of the survey is as follows: "5 points (very satisfied)", "4 points (satisfied)", "3 points (no opinion)", "2 points (dissatisfied)", and "1 point (very dissatisfied)". 4 points or more is considered "satisfied."

Note 2: The statistical period is from January 1, 2023 to December 31, 2023.

According to the customer satisfaction survey in 2023, FPC's overall performance was 4.48 points. Due to market fluctuations in raw material prices, our product price is affected, preventing us from aligning our prices with the market. As a result, our customer satisfaction score for this aspect is slightly lower compared to other survey items. The overall satisfaction scores from 2016 to 2023 were higher than the benchmark of "satisfied" (4 points). FPC incorporates customer feedback and suggestions into the operation policies, and strives to continuously improve the professional competencies and service attitude of the sales representatives and technicians to better meet customer expectations.

ch.3

Creator of a Sustainable Environment

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Vision

FPC adheres to the business philosophy of "safety, health, environmental, and economy". The Company is dedicated to enhancing pollution prevention measures and addressing energy conservation, carbon reduction, and industrial waste reduction. It also strives to implement circular economy practices and promote energy transition and other sustainable strategies. The objective is to safeguard our precious Earth and contribute to the creation of a sustainable environment.

Policy and Commitment

FPC has established a "SHE Policy", and all decision-making and operational management implementation must comply with government regulations and closely monitor international development trends. We actively engage in environmental control, energy conservation, and carbon reduction, while maintaining effective communication and interaction with stake-holders. This demonstrates our commitment and efforts in ensuring safety, environmental protection, and health. At the same time, we are committed to dedicated management and optimization, strengthening our control of climate change risks, and regularly tracking the progress of various sustainability strategies. We will collaborate with partners to work towards the long-term goal of achieving carbon neutrality by 2050, in order to promote the company's sustainable development.

Material Topic: Greenhouse Gases Management

International Framework and Indicators: GRI 305 Emissions, SASB: GHG emissions

Impact Explanation

Definition: During the operation process, FPC manages and takes action on GHG emissions.

Impact Explanation: Excessive GHG emissions can have a significant impact on climate change, leading to potential flooding in the complex areas and resulting in losses from production shutdowns. Furthermore, there is a growing demand from customers to reduce the carbon footprint of products and increase the use of renewable energy in the production process. If FPC does not prioritize the promotion of GHG inventory and implement various reduction measures, we run the risk of losing product orders in the future. This could have a significant impact on our operations and financial performance.

Actual | Potential | Positive | Negative

Management Approach

A systematic inventory of GHG emissions should be conducted in accordance with ISO 14064-1:2006 every year to provide an understanding of the organization's emissions situation.

2023 Performance Tracking

- The emission data for 2023 has been verified.
- The inventory for Scope 1 and Scope 2 GHG emissions of subsidiaries have been implemented.

Achieved

Short-term Targets (1 to 3 years)

- A systematic inventory and verification should be implemented in accordance with ISO 14064-1:2006.
- The subsidiary conducts an annual inventory and verification of GHG emissions and establishes strategies for reducing carbon emissions.

Promotion of Energy-Saving and Carbon Reduction

2023 Performance Tracking

- The emission reduced to 8.005 million tons.
- Important promotions, such as "Energy-saving improvement for refrigerators" and "Heat recovery improvement for sudden cooling towers in the VCM plant".
- Establish the regulations governing performance evaluation methods, rewards and punishment for energy conservation and carbon reduction, and carry out performance evaluation each month.

In progress

Short-term Targets (1 to 3 years)

- The target is to reduce 100,000 tons of CO_2e per year by implementing projects that focus on energy-saving and carbon reduction improvements.
- The GHG reduction target is expected to be achieved by 2025, with a 20% reduction compared to the base year (reduced to 6.908 million tons).

Promote the adoption of in-house internal carbon pricing by integrating it into the profit and loss statement of each plant

2023 Performance Tracking

- The Company's internal carbon pricing is set at NT$100/ton of CO_2e.
- Each month, the GHG emissions and energy-saving carbon reduction achievements of each complex are reviewed, and all complexes have successfully met their goals.

Achieved

Short-term Targets (1 to 3 years)

By implementing an internal carbon pricing mechanism, the carbon costs are included in the profit and loss statement of each complex in order to implement carbon reduction targets.

Medium and Long-term Targets (More than 3 years)

- Effectively track the GHG emissions of the organization to achieve the goals of the carbon neutrality strategy.
- "Based on the year 2020 as the base year, 20% reduction in 2025 compared with the base year, 40% reduction in 2030 compared with the base year, and achievement of carbon neutrality by 2050."

Management Approach

Progressive Promotion of Energy Transition

2023 Performance Tracking

- A coal-fired power plant at the Renwu Complex has stopped operating during the non-summer month.
- Initiate modification of boiler burner (gas and coal co-combustion)

In progress

The Linyuan Complex has successfully completed the conversion of one unit to gas and coal co-combustion.

Short-term Targets (1 to 3 years)

- Two sets of natural gas boilers (95 T/H) were installed in the Linyuan and Renwu Complex respectively. Additionally, energy transition projects were undertaken, including the conversion of coal-fired boiler burners to gas and coal co-combustion.
- After the anticipated promotion of energy transition, GHG emissions will be reduced by 863 thousand tons of CO_2e compared to the base year.

Medium and Long-term Targets (More than 3 years)

Considering the current national supply and demand of natural gas and electricity, we will gradually facilitate the transition from coal-fired boilers to low-carbon boilers.

Promoting the reuse of low-level energy within the factory

2023 Performance Tracking

The Linyuan Complex newly installed a steam pressure reduction generator.

In progress

The expected annual reduction in GHG emissions is 770 tons of CO_2e.

Short-term Targets (1 to 3 years)

Promote the reuse of low-level energy, such as waste heat and steam pressure reduction for power generation.

Medium and Long-term Targets (More than 3 years)

Low-level energy, regional heat integration, steam recovery and reuse.

Stakeholder Engagement

Engagement channels and effectiveness

Government Agencies

- Regularly register on the Ministry of Environment's "Business GHG Emissions Information Platform" to provide public access to relevant data.
- Periodically report the performance of GHG management to the Ministry of Environmental Protection, the Environmental Protection Bureau, and the Industrial Development Administration.

Suppliers and Contractors

- Regularly visit suppliers and contractors to gain an understanding of their practices for managing GHG emissions.
- In response to the energy transition policy, we will engage in regular and intensified engagements with relevant suppliers to address trends and solutions, and explore additional sources of natural gas and ensure a stable power supply.

Employees

- Regular monthly meetings are conducted to assess the effectiveness of water and energy conservation efforts, with the aim of collectively enhancing energy efficiency in production plants.
- Announce the management policies and the effectiveness from time to time. Set up the employee feedback mailbox to encourage employees to make suggestions at any time, so as to optimize the management operation.

Material Topic: Energy Management

International Framework and Indicators: GRI 302 Energy, SASB: Energy Management

Impact Explanation

Definition: During the operation process, FPC manages and takes action on energy.

Impact Explanation: The production process requires a substantial amount of energy. However, international energy prices have been steadily increasing over the years. Inefficient management that leads to excessive energy consumption will significantly raise operating costs. Moreover, Taiwan relies on energy imports, so any challenges in purchasing energy or adverse weather conditions that hinder imports could have a severe impact on production, resulting in significant downtime losses.

Actual | Potential | Positive | Negative

Management Approach

Energy Conservation Indicator Monitoring

2023 Performance Tracking

- Review the implementation progress of various energy-saving improvement projects and the performance appraisal of target achievement on a monthly basis.
- Every year, the energy usage of each complex is compiled and the energy efficiency is assessed. A decrease of 4.9% in electricity consumption in 2023 compared to 2022.

Not achieved

However, we will ensure compliance with company policy by incorporating carbon costs into our procurement options. Additionally, we will continue to actively promote the replacement of high-energy-consuming equipment.

Short-term Targets (1 to 3 years)

The energy consumption per unit of output value decreased by 5% compared to the previous year.

Medium and Long-term Targets (More than 3 years)

Aligned with the goals of carbon neutrality strategy.

Increase the proportion of renewable energy usage

2023 Performance Tracking

- In 2023, the electricity consumption of the administrative areas was 4,519 kilowatt-hours.
- FPC has installed its own solar power generation capacity, with 456 kW already completed as of 2023. Additionally, we have jointly installed wind power generation with Formosa Heavy Industries Corp. (FHI) which has a capacity of 12.6 MW. Starting from 2025, we will also be utilizing wind power of 2,250 kW (5,625 kWh).
- In 2023, a total of 499 kilowatt-hours of solar power were generated. An application has been submitted to Taipower to switch to self-use, providing power for the administrative areas of the complex.

Ongoing

Short-term Targets (1 to 3 years)

- By 2025, 100% of all administrative areas in all complexes will use renewable energy.
- The expected usage of renewable energy can reach 6,124 kWh.
- Based on the electricity consumption of 4,519 kWh in the administrative areas in 2023, it is projected that renewable energy consumption in each complex area will exceed 135% of the electricity consumption in the administrative areas.

Medium and Long-term Targets (More than 3 years)

Aligned with the goals of carbon neutrality strategy.

With the idea of circular economy, we aim to promote energy and resource integration across complexes and companies through the application of AI energy saving.

2023 Performance Tracking

- Developing AI technology for resource scheduling in all complexes.
- Regularly report the promotion results to the top management and include it in the sustainability reports to report to the Board of Directors.

Ongoing

Short-term Targets (1 to 3 years)

Introduction of AI technology to assist with resource scheduling in various complexes and the establishment of a cross-complex resource integration system.

Medium and Long-term Targets (More than 3 years)

Promote the integration of resources across complexes and companies to maximize energy efficiency.

Management Approach

Internal Energy Conservation Efforts

2023 Performance Tracking

- Through large-scale events, such as "Energy Conservation, Emission Reduction and Circular Economy Performance Presentation" and "Observation Tour at Complexes and Departments with Outstanding Performance in Environmental Protection Management, and Selection and Presentation of Improvement Projects" , we hope to stimulate employees' creativity in proposing water conservation, energy conservation, carbon reduction, and circular economy improvement projects, so that all units can observe and learn from each other, and thus work hand in hand to promote energy conservation, emission reduction, and circular economy. In 2023, a total of two events were held, with over 500 participants.
- Each department has appointed the dedicated person in charge of process improvement, with the objective of reducing material usage and minimizing energy consumption. In 2023, we assisted in promoting 201 process energy-saving improvement projects.
- Encourage creative proposals: IE improvement proposal award system has been implemented. Depending on the content of the proposal and the level of effectiveness, a proposal bonus ranging from NT$300 to NT$30,000 will be given. A total of 40 proposals were submitted in 2023.

Ongoing

Short-term Targets (1 to 3 years)

To achieve various energy conservation indicator, it is important to promote energy conservation awareness in daily operations.

Medium and Long-term Targets (More than 3 years)

Continuing to promote empowerment activities and deepening awareness of energy conservation.

Stakeholder Engagement

	Engagement channels and effectiveness
Customers	Hold customer meetings from time to time to exchange energy management techniques.
Employees	▸ Review performance appraisal of target achievement monthly, and promote improvement by water saving and energy saving unit from each plant. ▸ Announce the management policies and the effectiveness from time to time. Set up the employee feedback mailbox to encourage employees to make suggestions at any time, so as to optimize the management operation.
Shareholders and Investors	FPC communicates its energy management policies to investors through various channels, including the annual shareholders' meeting and quarterly corporate briefings.
Environmental Organizations	Through industry-academia collaboration, we engage with scholars and experts to investigate issues pertaining to new energy sources.

Material Topic: Water Resources Management

International Framework and Indicators: GRI 303 Water and Effluents, SASB: Water Resources Management, MSCI: Water Resources

Impact Explanation

Definition: The management of water resources by FPC includes activities such as extraction, discharge, consumption, and recycling.

Impact Explanation: In recent years, as climate change has intensified and rainy seasons have become more concentrated while dry seasons have lengthened in Taiwan, the authorities have implemented measures such as pressure reduction, water conservation, and zone-based water supply for large water consumers in response to water resource shortages. The Company has a significant demand for water resources. To address the water pressure in the county where our complex is situated, we will implement water-saving measures, including reducing water consumption per unit and implementing recycling practices. These initiatives will enhance the efficiency of water resource usage and enable proactive management of water resources to minimize consumption.

Actual | Potential | Positive | Negative

Management Approach

Conduct annual water footprint verification to monitor water resource management.

2023 Performance Tracking

FPC commissions third-party institutions (SGS) to verify our actual water withdrawal, water consumption, and water resource management each year. The data for 2023 was verified in May 2024.

Achieved

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

Water footprint verification is conducted annually, and review the effectiveness of water conservation.

Improvement in water and energy conservation

2023 Performance Tracking

- The water consumption of the main product units decreased by 2.2% in 2023 compared to the average value in 2022.
- The President's Office and the President's Office at the Complexes regularly conduct review meetings with the Safety, Health and Environment Center under the Group Administration Office.

Not achieved

The Follow-up will continue to promote cross-complex water resource and steam integration projects, wastewater recycling and reuse, and rainwater harvesting, as well as other water-saving initiatives. A guidance team consisting of water-saving experts from various complexes will be formed to conduct audits and provide guidance to complexes with low water-saving efficiency, with the aim of improving water-saving efficiency.

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

Water consumption per unit of main products (total water consumption output) needs to be reduced by 5% compared with the average of the previous year.

Performance Evaluation of Water Resources Management

2023 Performance Tracking

- The President's Office at the Complexes reviews the monthly the performance appraisal of target achievement and rewards the complexes that perform the best.
- 2023 CDP (Carbon Disclosure Project) - Results of Water Security Questionnaire "A".

Achieved

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

Maintaining CDP - Water Security Score of "A-" or above.

Annual Circular Economy Presentations

2023 Performance Tracking

- An award ceremony was held by the Safety, Health and Environment Center to recognize the departments with outstanding performance in energy conservation, emission reduction, and circular economy. In addition to promoting the objectives of sustainable development, we also reviewed our short, medium, and long term carbon reduction goals, strategies, and effectiveness.
- In 2023, a total of 250 people participated, with the Mailiao AN plant standing out.

Achieved

held annually in the second half of each year

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

Continuously hold press conferences to promote sustainable policies and commend exceptional departments.

Stakeholder Engagement

	Engagement channels and effectiveness
Employees	▸ Review performance appraisal of target achievement monthly, and promote improvement by water saving and energy saving unit from each complex. ▸ Announce the management policies and the effectiveness from time to time. Set up the employee feedback mailbox to encourage employees to make suggestions at any time, so as to optimize the management operation.
Residents in the Operation Area	Periodically visit residents in the operational areas to communicate issues related to water resources.
Experts and Scholars	Through industry-academia collaboration, we engage with scholars and experts to investigate issues pertaining to new energy sources.
Environmental Organizations	Periodically engage in communication with environmental organizations to clearly articulate the company's energy policy.

Material Topic: Air Pollutant Management

International Framework and Indicators: GRI 305 Emissions, SASB: Air Quality, MSCI: Toxic Emissions and Waste

Impact Explanation

Definition: Hazardous air pollutants, such as sulfur oxides (SOx), nitrogen oxides (NOx), and volatile organic compounds (VOCs), are generated during the management of production processes by FPC.

Impact Explanation: During the production process, it inevitably generates pollutants such as sulfur dioxide (SOx), nitrogen oxides (NOx), and hazardous air pollutants (HAPs) due to the use of fuel and process reactions. If not managed properly, this could lead to environmental pollution. If the public files complaints, reports, or initiates administrative litigation, there is a risk that the competent authority may request a shutdown for maintenance and conduct a thorough review of our future environmental permit applications. This could lead to higher operating costs and have an impact on our financial performance and employee job opportunities. Through technological advancements and process improvement measures, FPC has implemented management actions to minimize harmful substance emissions and reduce environmental impact. These actions include setting and monitoring reduction targets, conducting regular health risk assessments, reducing equipment components, and improving SCR catalyst efficiency.

Actual | Potential | Positive | Negative

Management Approach

Monitoring Air Pollution Reduction Targets

2023 Performance Tracking

- The total amount of air pollutants emitted is 2,279.6 tons per year, which is a reduction of 33.1% compared to the base year. This reduction successfully achieves the target set for 2025.
- The process area is equipped with gas detectors and Fourier Transform Infrared Spectroscopy (FTIR). Monitoring centers have been established in the Mailiao and Renwu complexes.
- The department has established principles for pollution control and performance evaluation, departmental self-management, inspection operations, and reward and punishment.

Achieved

Short-term Targets (1 to 3 years)

- In 2025, there will be a 10% reduction compared to the base year of 2020.
- All emissions control for process air pollutants must achieve the highest possible control efficiency.

Medium and Long-term Targets (More than 3 years)

- By 2030, there will be a 20% reduction compared to the base year, and by 2050, there will be a 40% reduction compared to the base year.
- Continue to plan for investment in air pollution control equipment and set out absolute emission reduction targets.

Regularly conduct health risk assessment simulations to simulate the dispersion of emissions in highly sensitive and densely populated areas

2023 Performance Tracking

- Regularly conduct health risk assessment simulations and review and improve emission sources.
- Based on the simulation results, two improvement plans will be implemented for equipment component emissions and the acrolein project.

Ongoing

Short-term Targets (1 to 3 years)

Continued Conduct of Perimeter Environmental Emission Diffusion Simulation.

Medium and Long-term Targets (More than 3 years)

- Preventive emission control measures are implemented to safeguard the surrounding environment.
- Zero Air Pollution Ticket

Reduction in the number of equipment components

2023 Performance Tracking

- By streamlining pipelines and reducing the number of equipment components, thereby lowering the emissions of volatile organic compounds from equipment components.
- In 2023, a total of 28,377 equipment components were streamlined, resulting in a reduction of 3.582 tons/year of VOCs emissions.

Ongoing

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

After conducting a process safety risk assessment, it was determined that updates can only be made when the process is stopped. Therefore, the equipment component simplification work will be included during regular maintenance shutdowns.

Management Approach

Improved SCR Catalyst Efficiency, Reduces Nitrogen Oxide (NOx) Emissions

2023 Performance Tracking

- Linyuan public utilities plant introduced an extra catalyst to improve the efficiency of catalytic denitrification.
- The catalytic denitration efficiency of the Renwu public utilities plant has been optimized to 92%, resulting in a reduction of the NOx concentration to 24 PPM.

Ongoing

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

The coal-fired boiler has implemented the most effective control technology, resulting in a NOx concentration of less than 30 PPM.

Stakeholder Engagement

	Engagement channels and effectiveness
Employees	▸ Monthly Occupational Safety and Environmental Protection Meetings and SHE Reports are conducted to communicate government and company environmental policies to each factory and share examples of improvements for simultaneous implementation. ▸ The President's Office, the Safety and Health Department, and the Manager's Offices of each division conduct regular internal audits to support air pollution policies and discuss measures for improvement.
Experts and Scholars	▸ Invite external scholars and experts to participate in two comprehensive process inspection monthly, and provide a report on the progress in mitigating air pollution. ▸ Through industry-academia collaboration, we invite scholars and experts to assist FPC in optimizing the prevention and control equipment.
Government Agencies	▸ Through regularly submit air pollution detection reports, air pollution emission data, and air pollution prevention fees to the environmental protection authorities every quarter, we are allowed to report on the efficiency of our pollution control equipment and our self-management practices. ▸ Communicate with government agencies about the progress and achievements of the Company's air pollution management through legal discussions, advocacy meetings, and other opportunities.
Residents in the Operation Area	▸ Every year, the President's Office at the complexes organizes a symposium to provide a report on the Company's efforts to reduce air pollution to the village chiefs in the surrounding area. ▸ The President's Office at the complexes organizes activities periodically to update the local residents on the progress of air pollution prevention.

Material Topic: Hazardous Chemical Safety Management

International Framework and Indicators: GRI 306 Waste, SASB: Safety & Environmental Stewardship of Chemicals

Impact Explanation

Definition: FPC oversees the utilization and safety of chemical substances, progressively substituting dangerous substances and developing alternative strategies. In order to mitigate the risks associated with the improper use or management of chemicals, a thorough risk assessment will be carried out, and comprehensive training on emergency response and disaster prevention will be provided.

Impact Explanation: The improper use of hazardous chemicals can pose risks to human health, product safety, and environmental pollution for the Company. In addition to potential penalties from regulatory authorities, there is also the possibility of having to suspend operations for improvement, which would impact our business and financial performance. In addition, if chemical substances pose a threat to the physical and mental health of the public, it can also subject the Company to long-term legal action and civil compensation, as well as potential increases in management and monitoring costs.

Actual | Potential | Positive | Negative

Management Approach

Chemical Risk Assessment

2023 Performance Tracking

- The "Process Safety Analysis Team" conducted a risk assessment and improvement work on the process characteristics, taking into account potential hazards such as fire, explosion, and leakage of toxic or flammable chemical substances.
- All products was 100% conducted chemical risk assessment.

Achieved

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

- Risk assessment management and improvement are conducted for various potential hazards.
- Conduct a Life Cycle Assessment.

Establishment of Complex Environmental Monitoring Center

2023 Performance Tracking

The monitoring management of each production plant in the Taiwan factory includes fixed gas detectors, CEMs, CWMs, Flare, FTIR monitoring, and high-altitude image surveillance.

Achieved

Short-term Targets (1 to 3 years)

Incorporate the Formosa Industries (Ningbo) Co., Ltd. Complex into the management of the monitoring center.

Medium and Long-term Targets (More than 3 years)

Incorporate the Formosa Industries Corporation Complex into the management of the monitoring center.

Emergency Response and Disaster Prevention Training at Complexes

2023 Performance Tracking

- Conduct semi-annual fire rescue and emergency response drills in various scenarios.
- Two emergency response drills were conducted in 2023, and the results of the drills were compliant with the relevant procedures and standards.

Achieved

Short-term Targets (1 to 3 years), Medium and Long-term Targets (More than 3 years)

Continuously conduct simulated exercises in various scenarios, considering relevant domestic and international cases.

Stakeholder Engagement

Engagement channels and effectiveness

Government Agencies

- Annual reporting of the amount of toxic substance releases and monthly reporting of toxic and hazardous chemical operation records.
- Communicate with government agencies about the progress and achievements of the Company's chemical management through legal discussions, advocacy meetings, and other opportunities.

Employees

- Monthly Occupational Safety and Environmental Protection Meetings and SHE Reports are conducted to communicate government and company environmental policies to each factory and share examples of improvements for simultaneous implementation.
- The President's Office, the Safety and Health Department, and the Manager's Offices of each business unit conduct regular internal audits to support chemical management policies and discuss measures for improvement.

3.1 Environmental Management Strategies

FPC's Long-term Objectives	Link with Environmental Goals			Base Year 2020	2023 Performance and Achievements
	Short-term Targets (By 2025)	Medium-term Targets (2030)	Long-term Targets (2050)		
Increased production of high value, differentiated products and green plastics	Continue to develop green plastics			-	In October 2023, the exhibition featured the FPC New Functional PP Fiber and unveiled the world's first 8-in-1 Single PP Material Cold-Resistant Suit made from PP fibers and fabric components. The production of PP material fibers and fabrics requires a low processing temperature, leading to reduced carbon emissions during the manufacturing process. The carbon emissions of each kilogram of finished PP fiber are approximately 3.097 kilograms of CO_2e, which represents a reduction of 40% to 60% compared to other commonly used fibers.
Reduction of GHG	FPC has set absolute short, medium, and long term targets for GHG emission reduction with 2020 as the base year.			8.635 million tons of CO_2e	▪ In 2023, the inventory of GHG was 8.005 million tons of carbon dioxide equivalent, which was 630 thousand tons less than in 2020, with a reduction ratio of 7.3%. ▪ Management measures such as low (zero) carbon energy transition improvements, water and energy conservation, and increasing renewable energy sources will continue to be implemented.
	20% reduction	40% reduction	Reaching carbon neutrality		
Proportion of renewable energy usage	By 2025, 100% of all administrative areas in all complexes will use renewable energy.	—	—	0% (In 2020, solar power generation reached 666 thousand kWh, all of which were sold to Taipower and not used for self-consumption.)	0% of all administrative areas in all complexes use renewable energy. In 2023, solar power generation reached 499 thousand kWh. An application has been submitted to switch to self-use due to the sale to Taipowe. Each complex area can accommodate a capacity of approximately 4,000 kW, resulting in an annual power generation of 5.296 million kWh. It is anticipated that this will enable the achievement of the goal of 100% renewable energy usage in all administrative areas in all complexes by 2025.
Water Resources Management	The annual product unit water consumption is 5% less than the average of the previous year.			—	▪ Reduced by 2.2% in 2023 compared to 2022 The main reason is that some complexes have reduced their production capacity in accordance with the production and sales plan, leading to a decrease in overall water consumption. ▪ As of December 2023, there were still 164 water-saving improvement projects in progress, which will further reduce the water consumption per unit of product.
Zero Wastewater Discharge	Reduce by 10%, Renwu Complex total has been discharging into the sea in 2023.	Reduce by 15%.	Reduce by 20%.	40,229 CMD (metric tons/day)	▪ The wastewater discharge in 2023 was 35,832 CMD (metric tons/day), which represents a decrease of 10.9% compared to the baseline year. While the 2025 target has been achieved, this reduction was primarily achieved by adjusting production volume in line with the production and sales plan. Moving forward, we will continue to prioritize planning and investment in wastewater reduction projects. ▪ After continuous improvement and reconstruction of the wastewater treatment plants in Renwu Complex, zero river discharge of wastewater has been achieved since January 2023, with a discharge rate into the sea of 95.4%.
Air Pollutants Reduction (Including toxic/hazardous emissions)	Reduce by 10%.	Reduce by 20%.	Reduce by 50%.	3,407.9 tons/year	▪ In 2023, the total amount of air pollutant emissions was 2,279.6 tons/year, a decrease of 33.1% compared with the base year. Although the target set for 2025 was achieved, this was not only the result of a relative reduction in production volume in line with our production and marketing plans, the absolute reduction in 2023 can be attributed to the improved efficiency of desulfurization and denitrification prevention equipment at the Renwu and Linyuan public utilities complexes. ▪ Going forward, we will continue to plan for investment in air pollution control equipment and set out absolute emission reduction targets.
Promote the reuse of waste and reduce the amount of waste buried in landfills.	FPC is committed to promoting the reuse of waste, reducing the amount of waste in landfill, and, compared with the base year (2020), the reduction target of direct disposal:			8,698 metric tons	▪ The amount of waste landfill in 2023 was 9,672 metric tons, representing an 11.2% increase compared to 2020. This increase can be attributed to the expansion of the repair facility in line with the production and sales plan, leading to a rise in non-process-related waste. ▪ FPC has partnered with waste disposal operators to jointly apply to the Ministry of Economic Affairs for the reuse of inorganic sludge. If approved, this initiative has the potential to reduce approximately 2,000 tons of waste per month.
	Reduce by 10%	Reduce by 20%	Reduce by 50%		

Note: The environmental objectives mentioned here are specific to FPC in Taiwan. However, we are actively working on developing similar objectives for our overseas operations and subsidiaries.

3.1.1 Environment, Health and Safety Organization and Management 403

FPC has established the Safety and Health Department to be responsible for issuing guidelines on overall safety, health, environment, and fire policies for FPC and implementing external operations. It is supervised and assessed by the Safety, Health and Environment Center under the Group Administration Office. Furthermore, safety and health departments have been established at each complex to promote safe, health, environment, and fire management.

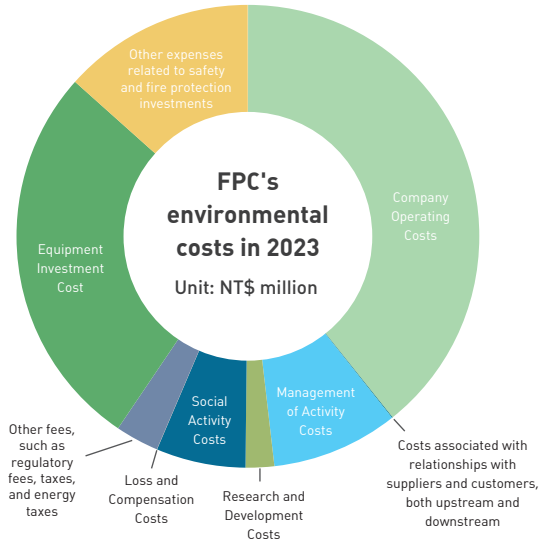
In addition, we hold regular safety, health and environmental review meetings every year to achieve the goal of zero disaster in safety, health and health management and zero pollution in environmental protection.

Safety and Health Department 2023 Related Meetings

Meeting Category	Safety/Health/ Environmental (SHE) Management Review Meeting	Safety and Environmental Performance Review Meeting	Occupational Health and Safety Committee	Safety and Health Coordination Organization
Meeting Purpose	Promote SHE management practices to achieve SHE policies and goals	Reflect on the past year's SHE abnormalities events, and look forward to the future year's SHE implementation plan	Compliance with regulatory requirements	Compliance with regulatory requirements
Meeting Frequency	Annually	Annually	Quarterly	Monthly
Meeting Participants	SHE Management Representatives and Executioners	Supervisors, Plant Directors, and PSM Specialists	Security personnel, on-site medical staff and labor representatives	In-plant SHE supervisor and contractor
Decision Making Level	Plant operation supervisor	Chairman	Complex operation supervisor	Division supervisor
2023 Major Decision Items	FPC is committed to reducing Scope 1 and Scope 2 GHG emissions by 40% by 2030, compared to the base year of 2020.	To achieve the objectives of zero disasters, zero accidents, and safe production, it is essential to evaluate the implementation of a technology disaster prevention system that can assist on-site personnel in effectively managing operations.	Units that have a deadline approaching for Class A (Class C) workplaces should complete the re-filing (re-evaluation update) process within the specified deadline as mandated.	Enhance the construction safety control of bidding projects to ensure the safety of personnel engaged in work at heights and lifting operations.

3.1.2 Environmental Accounting

FPG is the first enterprise in Taiwan to directly include environmental benefits into the environmental accounting system. Our environmental costs in 2023 totaled NT$3,700 million, where the costs of green procurement, recycling and re-manufacturing of products produced or sold, and products and services derived from environmental protection initiatives amounted to NT$1,453 million, accounting for 39.3%. This indicates that FPC has attached great importance to environmental protection and strived to reduce direct (indirect) environmental effects.



Total Environmental Costs NT$ 3,700.0 million

Company Operating Costs	1,453.0
Costs associated with relationships with suppliers and customers, both upstream and downstream	1.9
Management of Activity Costs	327.8
Research and Development Costs	73.4
Social Activity Costs	231.6
Loss and Compensation Costs	0.2
Other fees, such as regulatory fees, taxes, and energy taxes	112.4
Equipment Investment Cost	1,004.3
Other expenses related to safety and fire protection investments	495.4

For more information on FPC's environmental costs over the years, please refer to our Sustainable Development website.

Sustainable Development Website: Environmental Accounting

3.1.3 Biodiversity

FPC attaches great importance to its impact on the surrounding environment and ecology during operation at the complexes and is committed to taking care of the surrounding environment and ecology. FPC has taken a series of progressive measures, including promoting greening and beautification projects at the complexes, planting trees and protecting forests outside the complexes, investigating and maintaining diverse biological environments, etc. Notable achievements are as follows:

Greening and beautification evaluation at the complexes

Since the establishment of each complex location, where there were no natural trees around, FPC has developed overall plans to not only create green spaces and plant trees and flowers but also establish safe and green working environments through an adoption and evaluation program. Annual greening and beautification evaluation is performed at each complex to reward units with outstanding achievements, so as to encourage each complex to move towards a park-like working environment.

Committed to protecting the biodiversity of the Zhuoshui River

Since 2022, FPC has been collaborating with the Global Change Biology Research Center at National Chung Hsing University to conduct an ecological survey of the Zhuoshui River and a conservation project for the Taiwanese endemic species, the Taiwanese fiddler crab. The investigation has revealed that the Zhuoshui River beach is the habitat of the Taiwanese fiddler crab, which accounts for 90% of the total population in Taiwan. Although there are numerous Taiwanese fiddler crabs in the Zhuoshui River estuary, they are still in the juvenile stage and their population status is not yet stable. Hence, it is imperative to promptly remove the mangroves to mitigate the factors that pose a threat to their habitat and hinder their growth process.

To protect the biodiversity of the Zhuoshui River estuary, our company collaborated with the Fourth River Management Office of the Ministry of Economic Affairs, Yunlin County Government, Wilderness Conservation Association, Maizailiao Cultural Association, Yunlin Bird Society, National Chung Hsing University, and Chang Jung Christian University from July to December 2023 to conduct six mangrove thinning operations. The number of participants exceeded 400, and a total area of approximately 9 hectares was cleared, removing about 2 metric tons. We hope that our initiative will inspire various sectors to join us in preserving the ecology of the Zhuoshui River estuary and enabling the Taiwanese fiddler crabs to flourish.

The first thinning of mangroves conducted on September 7, 2023


Taiwanese Endemic Species: Close-up Photographs of Taiwanese Fiddler Crab
(Provided by Professor Hsi-Te Shih from National Chung Hsing University)

Investigation and maintenance of diverse biological environments

In order to ensure the water quality and ecological environment of the sea area around the Mailiao complex, a water quality and ecological survey of the sea area is conducted every quarter. A total of four surveys were completed in 2023, among which the water quality survey included 35 water quality parameters such as water temperature, salinity, dissolved oxygen, biochemical oxygen demand, pH, chlorophyll A, and nutrients; the ecological survey included assessment of sediment particles diameter, total organic carbon and heavy metal elements, biological heavy metal elements, phytoplankton, zooplankton, benthos, fish caught by gillnets, mammals, etc. Since the second quarter of 2009, a total of 58 surveys have been conducted to study Chinese white dolphins, out of which 31 have successfully observed these dolphins. The overall sighting rate stands at 53%.

In order to assess the ecological changes and environmental impacts on the animal population in the area during the construction period of the fourth phase expansion project of the Sixth Naphtha Cracker Complex, we conducted on-site investigations in selected areas and analyzed various factors such as species composition, population dynamics, and quantity changes. The objective of this study was to evaluate the current status of animal ecology, migratory bird surveys, and plant ecology within the investigation area. A total of 89 species from 45 families of wild animals were surveyed this year, which is an increase compared to the 82 species recorded during the same period last year.

Sampling of sea water quality and ecological monitoring


Photograph of Chinese White Dolphin Sightings in July 2023

Bird Survey

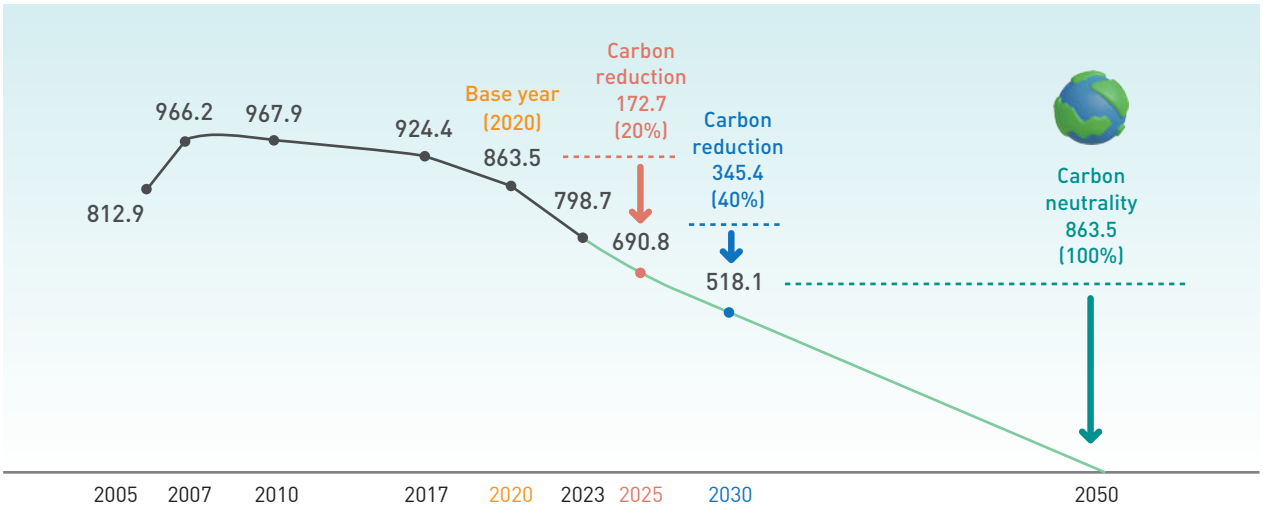

Cattle Egret

3.2 Climate Change Issue Management

FPC has established short-term, medium-term, and long-term targets for reducing GHG emissions. These targets are based on the 2020 emissions (8.635 million tons) as the baseline year. By 2025 (short-term), the company aims to reduce emissions by 20% compared to the base year (6.908 million tons). By 2030 (medium-term), the goal is to reduce emissions by 40% compared to the base year. Ultimately, the company plans to achieve carbon neutrality by 2050 (long-term).

FPC's total GHG emissions in Scope 1 and Scope 2 for the year 2023 were 8.005 million metric tons, which is a decrease of 630 thousand metric tons or 7.3% compared to 2020. This reduction represents progress towards the short-term goal of reducing emissions by 20% by 2025.

FPC Pathway Planning for Carbon Reduction

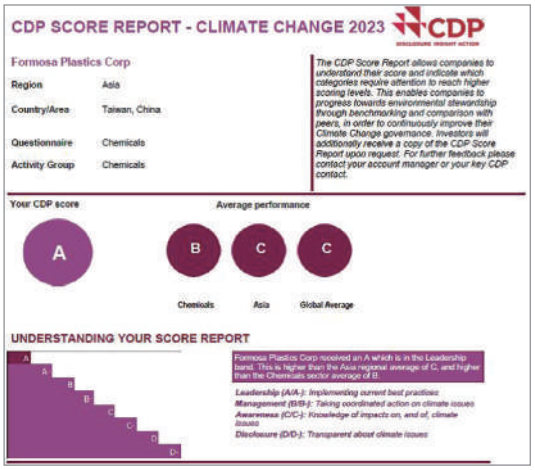


Note: The 2023 verification opinion statement covers all the complexes within Taiwan, except for the Taipei Office and subsidiaries.

In the 2023 Carbon Disclosure Project (CDP), FPC was awarded an "A" leadership rating for its climate change project. For more information, please visit the official CDP website.

CDP Website

FPC successfully completed the SBTi review in January 2023, making it the first petrochemical company in Taiwan to pass the official review of the SBTi Science-Based Targets initiative.



Climate Change Project Score in 2023: A

SBTi Approved Review Document

3.2.1 Identification of and Response to Climate Change Opportunities 201-2

In response to the possible risks and impact of climate change, FPC regularly convenes meetings to review risks and opportunities arising from climate change each year. FPC also draws up and implements response and prevention measures in advance by referencing the Task Force on Climate-Related Financial Disclosures (TCFD) issued by the Financial Stability Board with a view to reducing the impact of climate change on FPC.

Sustainable Development Website: 2023 TCFD Report

Governance

Management Strategy and Action Plan

- The Board of Directors shall be the highest decision-making and supervisory unit of the Company in response to climate change, and the Chairman of the Board of Directors shall be the highest manager responsible for supervising issues and matters related to climate change.
- Report the Company's climate change related affairs to the Board of Directors as an important reference for the formulation of sustainable policies.
- FPC has established the Energy Conservation and Carbon Reduction Promotion Team, which is responsible for promoting and implementing response measures on climate change-related issues. The Chairman convenes a monthly energy-saving and carbon-reduction team meeting to review the progress of energy-saving and carbon-reducing implementation and target achievement.

Implementation

In 2023, two Sustainable Development Committees were convened. Important resolutions are as follows:

- Accelerate the implementation of the major equipment replacement project, with a priority given to upgrading those that can achieve a 15% reduction in carbon emissions after replacement.
- Promoting the reuse of low-level energy within the factory.

Strategy

Management Strategy and Action Plan

- Coal-fired transition to low (zero) carbon energy: promotion of coal-to-gas conversion, elimination of outdated coal-fired boilers, carbon capture and reuse, promotion of low-energy hydrogen production technologies.
- Energy-saving and carbon-reducing circular economy: Introduce artificial intelligence (AI) technology for energy-saving, equipment upgrade/process optimization, and research and development of low-energy consumption catalysts.
- Increase the use of renewable energy: Build solar panel power generation equipment, and use the Formosa Heavy Industries wind power.
- Other carbon reduction measures: use of biomass ethylene to produce PE, develop recycled products, expand the application of lightweight products and material application of renewable energy equipment.

Implementation

- For the implementation and progress of individual strategies, please refer to FPC's 2023 TCFD Report.
- For the energy transition plan, please refer to section 3.2.3 Energy Management.
- Introduction of artificial intelligence (AI) technology to develop AI models to predict the heat release of the reaction, automatically correct the catalyst efficiency parameters, as well as calculate the optimal catalyst combination and addition time points, so as to improve the overall reaction rate, maximize the heat removal capacity of the polymerization tank, shorten the reaction time, and increase PVC volume while preventing unnecessary energy consumption.

Risk Management

Management Strategy and Action Plan

- Every six months, FPC collects, analyzes, and compiles information on climate change and energy risks and opportunities. Also, FPC formulates the Risk Management Procedures by referring to the principles, framework, and requirements of ISO 22301 to identify and assess climate change risks and opportunities.
- The risk matrix is used to determine significant risks and opportunities. The evaluation indicators include the degree of financial impact and the probability of occurrence of risks and opportunities.

Implementation

Please refer to Section 3.2.1 Identification of and Response to Climate Change Opportunities, as well as FPC's 2023 TCFD Report.

Goals and Targets

Management Strategy and Action Plan

FPC has set an absolute target for carbon emission reduction with 2020 as the base year, of which:

- Short-term reduction target: 20% reduction in 2025 compared to the base year
- Medium-term reduction target: 40% reduction in 2030 compared to the base year
- Long-term reduction target: Reaching carbon neutrality by 2050

Implementation

In 2023, the inventory of GHG was 8.005 million tons of carbon dioxide equivalent, which was 630 thousand tons less than in 2020, with a reduction ratio of 7.3%. In 2023, several energy transition projects are planned and being actively promoted, aiming to achieve an estimated carbon reduction of 863,000 metric tons compared to the base year of 2020.

- Coal-fired transition to low (zero) carbon energy
- Energy-saving and carbon-reducing circular economy
- Increase the use of renewable energy
- Other carbon reduction measures

Identification of Climate Change Risks and Opportunities

Climate Change Issue Management Process

Plan & Do

Step 1

Background Information Collection

- Collection period: Jan 1, 2023 ~ Dec 31, 2023
- Each functional group in the President's Office (Sales Management Unit, Management Unit, Management Analysis Unit and R&D Unit), the Safety and Health Department, and each business division (Management Office, Technology Departments, Sales Departments, and Production Plants) will be responsible to collect, analyze, and organize information on climate change and energy risks and opportunities.

Step 2

Risk and Operational Assessment

- The scope of assessment includes the upstream and downstream of the value chain.
- The organizational boundaries include the Renwu Complex, Linyuan Complex, Taipei Office, Tungshan Complex, Hsinkang Complex, Mailiao Complex and the 4th Complex.

Step 3

Risk and Operational Impact Analysis

- Use the matrix diagram of financial impact degree and risk (1~5 points) and chance occurrence probability (1~5 points) to determine the degree of risk and opportunity impact
- Identification criteria for the degree of risk/opportunity impact:
  15 to 25 points: Major risks/opportunities
  6 to 14 points: Medium risks/opportunities
  1 to 5 points: Low risks/opportunities

Check & Action

Step 4

Control Measures and Target

- FPC has set an absolute target for GHG emission reduction with 2020 as the base year, of which:
  Short-term reduction target: 20% reduction in 2025 compared to the base year
  Medium-term reduction target: 40% reduction in 2030 compared to the base year
  Long-term reduction target: Reaching carbon neutrality by 2050
- Strategy:
  (1) Promote coal-fired transition to low (zero) carbon energy
  (2) Energy-saving and carbon-reducing circular economy
  (3) Increase the use of renewable energy
  (4) Other carbon reduction strategies

Step 5

Optimization Inspection

- Meetings are held every 6 months to review the risks and opportunities of climate change.

Risk and Opportunity Identification Results

FPC draws a risk and opportunity matrix (as shown below) to identify climate change risks and opportunities according to the level of climate-related financial impact (vertical axis) and the likelihood of occurrence (horizontal axis). According to the risk and opportunity matrix scores, the climate-related risks and opportunities are classified into major risks/opportunities, medium risks/opportunities, and low risks/ opportunities. All climate change management programs are incorporated into our environment-related risk management system and regularly monitored.

FPC's Risk and Opportunity Matrix for Climate Change

Risk Opportunities

Level of Financial Impact	Occurrence Rate				
	Almost None (1 point)	Unlikely (2 points)	Likely (3 points)	Very Likely (4 points)	Almost Certain (5 points)
	Never occurred	No occurrence within a period of time (e.g. 10 years)	May occur more than once within a period of time (e.g.10 years)	May occur many times within a period of time (e.g.10 years)	Will certainly occur
High (5 points) Greater than NT$10 billion					
Medium High (4 points) NT$1 billion to less than NT$10 billion				8 10	
Medium (3 points) NT$100 million to less than NT$1 billion				7 9 11 12	1 4 5
Medium Low (2 points) NT$10 million to less than NT$100 million					2 3 6
Low (1 point) Less than NT$10 million					

FPC's Climate Change Risk Management Principles

1~5 Points Low Risks/ Opportunities	Acceptable risks	15~25 Points Major Risks/ Opportunities	Relevant units must establish corresponding management plans to reduce losses caused by risks, such as reducing the number of occurrences, reducing financial impact, risk shifting, and risk aversion.
6~14 Points Medium Risks/ Opportunities	No action is required at the moment, but continuous monitoring still has to be carried out		

1. Transition Risk/Policy and Legal/Carbon Fee Collection
2. Transition Risk/Policy and Legal/Renewable Energy Development Act - Setting Up Green Energy
3. Transition Risk/Policy and Legal/Water Consumption Fee Collection
4. Transition Risk/Policy and Legal/Kaohsiung City Coal-reduction Policy
5. Transition Risk/Market/Customer Requests for Carbon Reduction
6. Transition Risk/ Reputation
7. Physical Risk/ Acute/ Flooding
8. Physical Risk/ Chronic/ Water Scarcity
9. Opportunities/ Products and Services/ Circular Economy
10. Opportunities/ Products and Services/ Carbon Reduction Products
11. Opportunities/ Products and Services/ Renewable Energy Supply Chain
12. Opportunities/ Products and Services/ Biomass Materials

Analysis of Climate Change Issues and Response Strategies

1. Carbon Fee Collection — Transition Risk/Policy and Legal — Major Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- The "National Climate Change Action Guidelines" and "Climate Change Response Act" specify our long-term greenhouse gas reduction targets, and establish the total greenhouse gas emission control and allocation method for manufacturing departments.
- The "Climate Change Response Act" will include major carbon emitters in the manufacturing industry with greenhouse gas emissions of more than 25,000 tons of carbon dioxide equivalent (CO_2e) as the target for carbon fees, resulting in an increase in expenditure costs. When the product price does not fully reflect carbon costs due to supply and demand conditions, it can have a negative impact on competitiveness and result in significant financial impact.
- The European Union is expected to impose a carbon border tax starting 2026, which is expected to have an impact on FPC's vinyl chloride (VCM) and polyvinyl chloride (PVC).

Response Strategy and Target

- Communicates with the government through industry associations (or societies) every year to develop a reasonable and feasible carbon emissions trading mechanism and related ordinances in order to create a win-win solution.
- Coal-fired transformation towards low (zero) carbon energy: promote boiler fuel from coal to gas, eliminate old coal-fired boilers, and use low-carbon sources of electricity.
- Energy-saving and carbon-reducing circular economy: Introducing smart plants (aided by AI technology, improving the conversion rate of raw materials, and reducing unit consumption), equipment upgrade/process optimization, research and development of low-energy-consumption catalysts in the process, and setting up a carbon fixation pilot plant to convert CO_2 in exhaust gas into methane (fuel).
- Since 2022, we have established an internal carbon pricing mechanism. It is calculated based on the carbon fee of the Climate Change Response Act and the price increase of carbon emissions exceeding the target value. The relevant carbon costs are included in our internal profit and loss statements as the basis for implementing carbon risk management. In addition to continuously formulating greenhouse gas emission reduction measures, relevant information is also an important indicator for performance evaluations, product operations, investment assessments, etc.
- Target: Set GHG reduction absolute targets with 2020 as the base year to reduce by 20% in 2025 compared with the base year, reduce by 40% in 2030 compared with the base year, and achieve carbon neutrality by 2050.

Case Example

The energy consumption, water consumption and carbon dioxide emissions of each plant must be reported to the head of the water saving and energy saving unit on a monthly basis.

It is estimated that by 2030, there will be a total investment of NT$6.98 billion in water-saving and energy-saving improvement projects, of which:

(1) Promote coal-fired transition to low (zero) carbon energy: NT$1.37 billion

(2) Energy saving and carbon reduction circular economy: NT$2.49 billion

(3) Increase the amount of renewable energy: NT$2.18 billion

(4) Other carbon reduction measures: NT$940 million

2. Renewable Energy Development Act - Setting Up Green Energy — Transition Risk/Policy and Legal — Medium Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

The amendment to the "Renewable Energy Development Act" was legally passed in April 2019. Since the contracted capacity of our Linyuan Complex in the amount of 25,000 kW is larger than the 5,000 kW required by law, FPC is required to install 10% of the contracted capacity of renewable energy equipment, energy storage equipment, or purchase renewable energy certificates within 5 years, or else we must pay a payment in lieu.

Response Strategy and Target

- In order to comply with regulatory requirements, the Public Works Section has proposed to set up a demonstration site for renewable energy and has conducted a preliminary assessment of the site and type of renewable energy to be installed. Since the main plants are located in the south-central part of Taiwan with strong sunlight, they are suitable for installing solar power generation equipment. After evaluation, over 5,000 kW of solar photovoltaics will be installed to meet the requirements of regulations.
- Intends to purchase wind power and green power certificates from Formosa Heavy Industries Corp. (FHI) to ensure that the use of renewable energy is safe and in compliance with laws and regulations.
- Target: By 2025, 100% of all administrative areas in all complexes will use renewable energy.

Case Example

- The Renwu Complex has installed solar power generation facilities in order to increase the amount of renewable energy produced. As of 2023, a total capacity of 456 kW has been installed, resulting in the generation of 499 kWh of electricity. An application has been submitted to Taipower to transition to self-consumption, supplying power to the administrative areas in all complexes. In addition, starting in 2025, we will purchase wind power from FHI.
- After assessment, the Renwu carbon fiber plant is set up as a renewable energy demonstration site with 4,000 kW solar modules to generate 5.296 million kWh of power annually and to reduce 4,443 tons of carbon annually. The construction cost is about NT$240,000 thousand.

3. Water Consumption Fee Collection | Transition Risk/Policy and Legal | Medium Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- Considering the impact of water shortages due to climate change, in order to stabilize water supply and boost economic and social development in Taiwan, the Ministry of Economic Affairs has started imposing water consumption fees in 2023. For drought seasons (January to April and November to December), an additional water consumption fee is imposed on users with water consumption greater than 9,000 M^3 in a single month.
- Currently, the monthly water consumption of the Mailiao and Renwu complexes is more than 9,000 M^3, and the collection of water consumption fees will increase operating costs.

Response Strategy and Target

- In order to reduce the use of water resources, FPC reduces demand for water resources through source management as well as enhances reuse of water resources and accelerates the recycling treatment process at the end.
- Target: Promote the reduction of water consumption per unit of product by 5% compared with the average of the previous year.

Case Example

For recycling of water discharge from cooling towers at the Renwu Complex, UF/ RO membranes are prone to clogging due to water quality characteristics. Therefore, FPC developed a patent that enables water quality to meet the UF/RO water quality standards upon treatment. The plan is to adaptively reuse the existing canal water treatment facilities that are underutilized. We are conducting dosing tests and re-programming of physical equipment for the current survey.

4. Kaohsiung City Coal-reduction Policy | Transition Risk/Policy and Legal | Major Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- In order to achieve the goal of net zero emissions by 2050, the Kaohsiung City Government has passed the net zero city management autonomous regulations in October 2022. Furthermore, the Kaohsiung City Government is planning to establish targeted schedules for future coal reduction and replacement projects, gradually moving towards a coal-free city.
- As our Renwu and Linyuan complex generate electricity for coal-fired boilers for self-use and sells excess electricity to Taipower, should the competent authority decided to ban coal burning in the future, we may see a decrease in our revenue.

Response Strategy and Target

Coal-fired transformation towards low (zero) carbon energy: promote boiler fuel from coal to gas, eliminate old coal-fired boilers, and use low-carbon sources of electricity.

Case Example

Please refer to section 3.2.3 Energy Management - FPC Energy Transition Plan

5. Customer Requests for Carbon Reduction | Transition Risk/Market | Major Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

In recent years, customers who purchase plastic products have been influenced by the Paris Agreement and the Carbon Disclosure Project (CDP) to start the transition and develop low-carbon green products, hoping that the raw materials in the supply chain can also reduce carbon emissions, and gradually reduce the sales volume of non-low-carbon energy-efficient products.

Response Strategy and Target

- Since 2018, FPC has started promoting green product solutions and constructed green products in eight aspects, including energy efficiency, emission reduction, waste reduction, water saving, non-toxicity, health, recycled products, and safety. And from these eight aspects, we invest in R&D, develop differentiated and high-value forwardlooking green products, and accelerate the commercialization process, so as to turn climate change issues into business opportunities to improve corporate value.
- PP post-consumer recycled pellets are developed for plastic woven bag packaging to reduce the use of new materials and carbon emissions by more than 30%. Also, sugarcane and corn are used as raw materials of biomass ethylene to produce PE, which can reduce carbon footprint. FPC is committed to promoting the innovation and development of green products, so as to address environmental problems more effectively and achieve sustainable development.

Case Example

- A compounding center has been established in 2017 and has continued to develop Polypropylene (PP) green products (emission reduction) since 2023, such as expanded polypropylene (EPP) foam, which is used in dashboards, panels, headlight inner shells, and bumpers on vehicles. This material can effectively reduce vehicle weight, energy consumption, and GHG emissions.
- The Polyolefin Division has developed post-consumer recycled products made from PE. These products can be applied in various markets, including HDPE laundry detergent bottles and LLDPE stretch films.

6. Company Reputation | Transition Risk/ Reputation | Medium Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- In response to the boom in ESG in recent years, domestic and global financial institutions will evaluate clients' ESG performance when deciding to invest and grant loans. If the sustainability requirements cannot be met, in addition to the negative impact on the company's reputation, financial institutions may increase the borrowing rate, and in severe cases will not loan to high-carbon industries.
- At the COP26 summit, 40 countries pledged to phase out coal burning. FPC assessed that continued burning of coal may have an immediate impact on "reputation".

Response Strategy and Target

- Actively participating in domestic and international ESG assessments and initiatives, such as the Carbon Disclosure Project (CDP), TCFD initiative and the Science-Based Target (SBTi) initiative, demonstrating our determination to promote ESG and effectiveness in reducing carbon emissions.
- In addition, we are actively transforming towards low (zero)-carbon energy. In the future, waste gas will be introduced into coal-fired boilers to reduce fuel use.
- Target: Continue to participate in the initiatives launched by domestic and international climate change mitigation organizations.

Case Example

The coal-fired and oil-fired boilers of the Renwu and Linyuan public utilities plants are to be replaced by gas-fired boilers, with an estimated investment of NT$1.37 billion.

7. Changes in Rainfall Patterns - Flooding | Physical Risk/ Acute | Medium Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

Due to the strong wind or typhoon impact caused by abnormal climate, the complex needs to be stopped safely to avoid process hazards; the impact of heavy rainfall/flood which causes the plant to stop due to flooding will result in revenue loss.

Response Strategy and Target

- FPC regularly monitors and manages the energy and water consumption of each plant on a monthly basis, and develops climate change countermeasure plans to mitigate the risks brought about by climate change.
- Target: 0 day of shutdown due to flooding in a year.

Case Example

- The Renwu Complex is equipped with a flood control pump, which is regularly inspected, repaired and maintained to enable normal operation and to reduce the chance of flooding during heavy rainfall/flooding. To maintain normal operation of the flood control equipment, the annual maintenance and inspection cost of the flood control pump is about NT$1,622 thousand.
- The Mailiao Complex carries out largescale sand discharge and dredging operations annually, with expenses of about NT$3,708 thousand annually, to reduce the probability of flooding in the plant area caused by heavy rainfall/flood.

8. Changes in Rainfall Patterns - Water Scarcity | Physical Risk/ Chronic | Major Risks

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

Loss of turnover due to water shortage or drought caused by abnormal weather.

Response Strategy and Target

- FPC regularly monitors and manages the energy and water consumption of each plant on a monthly basis, and develops climate change countermeasure plans to mitigate the risks brought about by climate change.
- Target: 0 day of shutdown due to water scarcity in a year

Case Example

- In response to the potential risk of shutdown due to water shortage or drought, the Linyuan Complex has dug 2 drought-resistant wells, which can increase the water supply by 2,300 M^3 per day.
- Working with the public sector to source the underflow water of Donggang River and Gaoping River to stabilize the water supply. In addition, we will evaluate and develop wastewater treatment for high ammonia nitrogen in the Huliao River, and then exchange water for water to obtain water rights.

9. Circular Economy | Opportunities/ Products and services | Medium Opportunities

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

Considering product life cycle and value chain, we invested NT$2.78 billion in 2023 to research and develop low-carbon products by reducing the use of raw materials, improving manufacturing processes, and reducing transportation in the supply chain. At the same time, FPC introduced circular economy by recycling waste gas and waste generated in the manufacturing process to reduce production costs and promote the sustainable use of resources.

Response Strategy and Target

- We have introduced circular economy and developed PCR (post-consumer recycled resin) post-consumer recycled materials, plastic composite materials made from recycled waste oyster shells, and scrap recycling to effectively reduce oil exploration, production of plasticized raw materials, and carbon emissions from products.
- Target: Increase revenue by NT$6,000 thousand/year by 2025 with circular economy products; newly developed PP recycled material will be used in PCR woven bags, with estimated production and sales of 1,620 tons/year by 2025.

Case Example

- In 2021, FPC started planning to establish a medical material production center at the Renwu complex, which has a monthly production capacity of 5 tons of antibacterial shell powder. Equipment installation and testing are estimated to start in July 2024 By converting discarded oyster shells into "Antibacterial Shell Powder", we can not only recycle fishing industry waste but also combine it with plastics like PVC, PE, and PP to create natural antibacterial plastic composites. These materials can be used to produce everyday consumer products, enhancing household hygiene and improving social well-being.
- In 2023, the sales volume of antibacterial shell powder products was 8.8 tons, generating a profit of NT$1,234 thousand.

10. Carbon Reduction Products | Opportunities/ Products and services | Major Opportunities

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- As is subject to the EU emission standards for new vehicles, by 2030, the average CO_2 emissions of new cars and vans will need to be reduced by 1/3 compared to the 2021 emissions.
- Lightweight PP materials produced by FPC can be used in automobile parts to reduce vehicle weight, improve fuel efficiency, and reduce carbon dioxide emissions. Orders for these materials are estimated to increase in the future.

Response Strategy and Target

The Polypropylene Division has developed lightweight PP environment friendly automotive materials that can be used in dashboards, panels, headlight inner shells, and bumpers on vehicles. These materials can effectively reduce vehicle weight, energy consumption, and GHG emissions.

Case Example

The estimated sales volume of the lightweight PP material is 61,313 tons/year, which can increase revenue by NT$2,262,449 thousand/ year.

11. Renewable Energy Supply Chain | Opportunities/ Products and services | Medium Opportunities

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

- On December 12, 2015, the United Nations Framework Convention on Climate Change adopted the Paris Agreement, and countries around the world responded to voluntarily reduce greenhouse gas emissions. The world is in a critical era of energy transformation, and issues related to renewable energy will be the new engine to drive economic development in the future.
- Since the products produced by FPC (carbon fiber, EVA, HDPE, etc.) can be used in wind power or solar power generation, it is estimated that the revenue of the products will increase in the future.

Response Strategy and Target

- In line with international trends, we continue to develop products such as carbon fiber used in wind power blades, EVA packaging film for solar power generation, and HDPE pipes for solar water platforms.
- Target: The sales volume of EVA packaging film for solar power is estimated to increase by 630 tons/month in 2024 compared to 2023; the sales volume of HDPE pipes will increase by 290 tons/month in 2024 compared to 2023; the sales volume of carbon fiber is estimated to be 150 tons/month in 2024.

Case Example

In order to meet the growing demand for wind power, we have enhanced the production process of the large-tow carbon fiber. Additionally, we are planning to expand the Renwu carbon fiber plant, which will enable us to increase our annual production capacity to 1,600 tons of carbon fiber. The estimated investment cost for this expansion is NT$3.69 billion.

12. Biomass Materials | Opportunities/ Resilience | Medium Opportunities

Analysis of Current Risks and Opportunities (Potential Impact on the Company)

Considering that the price of raw materials will increase due to climate change, to strengthen the resilience of the supply chain, FPC examines the types of raw materials that can be replaced and estimates that the demand of biomass raw materials will very likely to increase.

Response Strategy and Target

Ethylene is the main raw material for polyethylene (PE) and ethylene vinyl acetate copolymer (EVA). Biomass ethylene will be used in the future to replace traditional petrochemical ethylene.

Case Example

- Plan to produce 500 tons of biomass PE with biomass ethylene
- Plan to produce 5,920 tons of biomass EVA with biomass ethylene

Climate Change Scenario Analysis

Every six months, FPC collects, analyzes, and compiles information on climate change and energy risks and opportunities. FPC identifies and assesses climate change-related risks and opportunities according to risk identification procedures, and mitigation and adaptation strategies are formulated accordingly.

Transition Risk

Scenario
IEA WEO 450 Scenario, Intended Nationally Determined Contribution Report

Description
Based on current development trends, it is estimated that there will be a 50% reduction in GHG emissions by 2030.

Physical Risk

Scenario
TCCIP, National Science & Technology Center for Disaster Reduction (SSP1-2.6, SSP2-4.5, SSP3-7.0, SSP5-8.5)

Description
Estimating the severity levels of flooding, drought, and heatwave disasters from 2021 to 2100

Note: The Shared Socioeconomic Pathway (SSP) takes into account socioeconomic development and is divided into five scenarios (SSP1-SSP5) based on various assumptions, including economic growth, globalization level, land use change, technological development, and educational opportunities. The corresponding challenges for adaptation and mitigation are identified.

Climate Scenario Analysis

Complex Locations		Scenario	Climate Disasters		
			Flooding	Drought *	High temperature
FPC-1	Taipei Office	SSP1-2.6	Medium High	No data	Low
		SSP2-4.5	Medium High	No data	Low
		SSP3-7.0	Medium High	No data	Medium Low
		SSP5-8.5	Medium High	High	Medium Low
FPC-2	Tungshan	SSP1-2.6	Low	No data	Low
		SSP2-4.5	Medium Low	No data	Low
		SSP3-7.0	Low	No data	Low
		SSP5-8.5	Medium Low	High	Low

Complex Locations		Scenario	Climate Disasters		
			Flooding	Drought *	High temperature
FPC-3	Mailiao	SSP1-2.6	Medium High	No data	Low
		SSP2-4.5	High	No data	Low
		SSP3-7.0	High	No data	Low
		SSP5-8.5	High	High	Low
FPC-4	Hsinkang	SSP1-2.6	High	No data	Low
		SSP2-4.5	High	No data	Low
		SSP3-7.0	High	No data	Low
		SSP5-8.5	High	Low	Medium Low
FPC-5	Renwu	SSP1-2.6	Low	No data	Low
		SSP2-4.5	High	No data	Low
		SSP3-7.0	High	No data	Medium Low
		SSP5-8.5	High	Low	Medium Low
FPC-6	Linyuan	SSP1-2.6	Low	No data	Low
		SSP2-4.5	Low	No data	Low
		SSP3-7.0	Low	No data	Low
		SSP5-8.5	Low	High	Medium Low
FPC-7	4th Complex	SSP1-2.6	High	No data	Low
		SSP2-4.5	High	No data	Medium Low
		SSP3-7.0	High	No data	Medium Low
		SSP5-8.5	High	High	Medium Low

* : Analysis of Drought Risk Only at the End of the Century in the RCP-8.5 Scenario

Scenario analysis: Changes in Rainfall Patterns - Flooding

Contingency Model: SSP5~8.5 and SSP3~7.0

- **Impact and Effects**

  Based on the individual turnover of NT$150.36 billion in 2023, the estimated loss will be NT$411,945 thousand when the work is stopped for 1 day due to heavy rainfall, or flooding.

- **Risks and Opportunities**

  Due to the strong wind or typhoon impact caused by abnormal climate, the complex needs to be stopped safely to avoid process hazards; however, the shutdown will result in revenue loss.

- **Action Plan**

  In response to the potential risks caused by strong winds or typhoons causing flooding in the complex areas, FPC strengthens the inspection, repair, and maintenance of drainage ditches, sluice gates, and pumping equipment. In 2023, we invested a total of NT$5,330.5 thousand in response measures, strengthened the alert mechanism for water level monitoring, and established an emergency response plan.

  1. There are a total of 17 flood control pumps in the Renwu and Linyuan Complexes, providing a pumping capacity of 49,390 M^3/ hour to reduce the probability of flooding in the factory area caused by heavy rainfall.
  2. The Mailiao Complex carries out large-scale sand discharge and dredging operations annually to reduce the probability of flooding in the plant area caused by heavy rainfall.

Scenario analysis: Changes in Rainfall Patterns - Water Scarcity

Contingency Model: SSP5~8.5 and SSP3~7.0

- **Impact and Effects**

  Based on the individual turnover of NT$150.36 billion in 2023, the estimated loss will be NT$1,235,835 thousand when the work is stopped for 3 days due to water shortages or droughts.

- **Risks and Opportunities**

  In recent years, due to the impact of global climate change, there have been changes in the wet season and precipitation in Taiwan. The start of the wet season has been delayed from May to June, and the length of the wet season has become shorter, resulting in decreased rainfall during the dry season as well as possible water shortages. Therefore, it is necessary to secure additional water supply from other sources. If the complexes are shut down due to water shortages, we will experience a turnover loss.

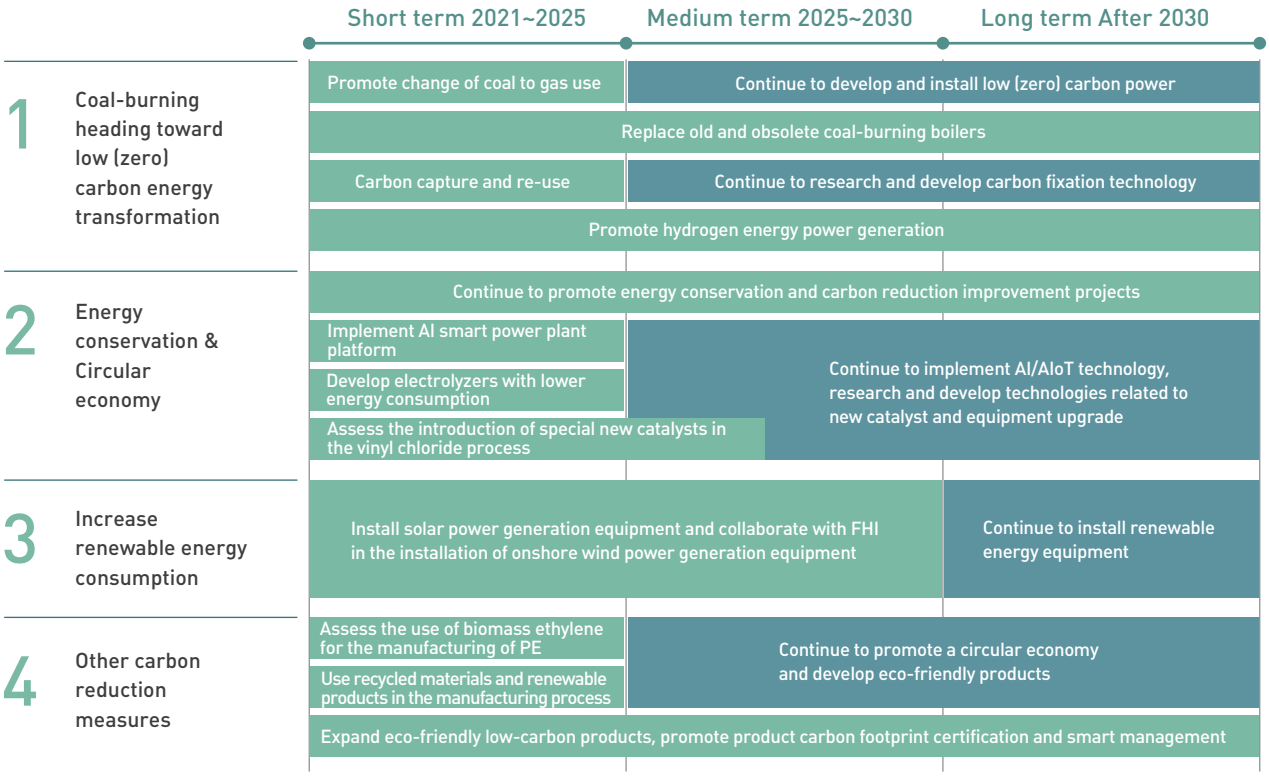
- **Action Plan**

  1. In addition to utilizing tap water, the Renwu Complex also has access to the underflow water of Gaoping River as a secondary water source.
  2. In response to the potential risk of plant shutdown due to water shortage or drought, the Linyuan Complex has dug two drought-resistant wells which can increase water supply of 2,300 M^3/day. Additionally, there are plans to install a drought-resistant water well that can increase the daily water supply by 1,800 M^3/day.
  3. Taking 2% of the total water consumption in 2023 as the base level of water scarcity, in order to secure additional water supply from other sources, a basic contract fee of NT$100,000 will incur, with NT$10,000 per 30 M^3 of water and NT$12 per M^3 of water. The total expenditure is estimated to be NT$229,804 thousand.

Climate Change Mitigation and Adaptation Strategy

In order to mitigate climate change, FPC has formulated short-, medium- and long-term response strategies for the period after 2023. In the future, we will achieve the goal of progressive carbon reduction through the transformation of coal burning to low (zero) carbon energy, energy-saving and carbon-reducing circular economy, increasing the use of renewable energy, and other carbon reduction measures. The promotion schedule of the carbon reduction strategy is shown in the figure below:

FPC's Strategy for Promoting Carbon Neutrality



For more information on climate change issues, please refer to the "2023 FPC TCFD Report" issued in June 2024.

Sustainable Development Website: 2023 TCFD Report

3.2.2 Greenhouse Gases Management 2-25 305

In order to fulfill our corporate responsibility and to meet the requirements of future greenhouse gas reduction, FPC has maintained a systematic inventory and verification of GHG emissions in our complexes in Taiwan since 2006. In order to enhance the management of GHG emissions by its subsidiary and comply with the regulations of FSC, the Company has taken proactive measures to include the investigation and verification scope within the subsidiary ahead of schedule, starting from 2022.

GHG Management Timetable

2006
Taiwan Complex
- Verification of Scope 1 and 2
- Establishment of the "Energy Conservation and Emissions Reduction Promotion Team"

2010
Taiwan Complex
- Highest Amount Discharged of 9.679 million tons CO_2e

2016
Taiwan Complex
- Scope 3 Inventory

2019
Taiwan Complex
- CDP Disclosure

2020
Taiwan Complex
- 8.635 million tons CO_2e
- Scope 3 Verification (Note)

2021
Taiwan Complex
- 8.604 million tons CO_2e
- Announcement of Taiwan complex to achieve carbon neutrality by 2050
- TCFD Report

2022
Taiwan Complex
- 7.943 million tons CO_2e
- "Investment" is added to Scope 3 verification
- Implementation of Internal Carbon Pricing and implementing cost of carbon emissions into equipment procurement

Subsidiaries
- Formosa Industries Corporation: 107 thousand tons of CO_2e
  Formosa Industries (Ningbo): 713 thousand tons of CO_2e
  Formosa Electronics (Ningbo): 321 tons of CO_2e
- GHG Inventory and Verification of Subsidiaries

2023
Taiwan Complex
- 8.005 million tons CO_2e
- Passed the SBTi review

Subsidiaries
- Formosa Industries (Ningbo): 702 thousand tons of CO_2e
  Formosa Electronics (Ningbo): 327 tons of CO_2e

Note: The scope 3 verification does not include leased assets upstream and downstream, chain/franchise distribution and investments.

Internal Carbon Pricing

- Costs of greenhouse gas carbon emissions (including excess carbon emission costs) are incorporated into our business performance assessment every month.
- 2023 internal carbon pricing is NT$100/ton.
- Encourage all complexes to actively promote energy conservation and carbon reduction. Implementation in 2023 are:
  - The Renwu and Linyuan complex each converted one coal-fired unit to a dual fuel system that combines fuel gas and coal combustion.
  - Renwu public complex high-pressure water heater has put into operation.

Implementing cost of carbon emissions into equipment procurement

- Accelerate the implementation of the major equipment replacement project, with a priority given to those that can achieve a 15% reduction in carbon emissions after replacement.
- In 2023, 19 equipment replacement projects were completed across various complexes, resulting in a reduction of 35,000 metric tons of CO_2e.

Greenhouse Gases Management Status

GHG Emissions at FPC for the recent 3 years

Unit: tons CO_2e

Year	2020	2021	2022	2023
Scope 1	3,966,548	3,918,988	3,338,612	3,542,116
Scope 2	4,668,706	4,685,085	4,605,137	4,463,433
Scope 3	11,332,873	10,445,602	11,298,608	11,845,359
Subtotal	19,968,127	19,049,675	19,242,357	19,850,908
Emission Intensity (ton CO_2e/NT$ million)	62.0540	40.8404	40.7190	53.2422

Source: GHG Verification Opinion Statement

Note 1: The 2023 assured verification opinion statement covers all the complexes within Taiwan, except for the Taipei Office.

Note 2: The types of GHG emissions in Scope 1 included carbon dioxide, methane, nitrous oxide, hydrofluorocarbon, and sulfur hexafluoride. The types of GHG emissions in Scope 2 were those of FPCC's public utilities plant, FCFC's public utilities plants, and TaiwanPower Company. GHG emissions were calculated based on emission factors after the boundaries had been determined using an operational control approach.

Note 3: FPC's Scope 1 and Scope 2 Greenhouse Gas Emissions is verified based on principles such as the ISO 14064-1: 2006, the Regulations for Gas Emission Inventory Registration and Inspection Management by Ministry of Environment of Executive Yuan, and guidelines for GHG emissions inventory inspection.

Note 4: According to the regulations of the Ministry of Environment, the assessment report utilizes the Global Warming Potential (GWP) values from the fifth assessment report released by IPCC. These values have been verified by third-party organizations such as BSI and SGS, and the verification process have been conducted in accordance with the verification criteria. There have been no breaches of the substantial difference threshold, and the assessment results satisfy the reasonable assurance level acknowledged by the regulatory authority with a certificate of reasonable assurance level has been issued.

Note 5: Emission intensity= (Scope 1 + Scope 2)/revenue of individual financial report for the current year (NT$ million)

Greenhouse Gas Emissions in 2023 by Complex

Greenhouse Gas		Renwu	Linyuan	Tungshan	4th Complex	Mailiao	Hsinkang	Total
Scope 1	Amount Discharged (tons of CO_2e)	2,256,560	610,324	115,857	12	550,190	9,173	3,542,116
	Proportion (%)	63.7	17.2	3.3	0.0	15.5	0.3	100.0
Scope 2	Amount Discharged (tons of CO_2e)	71,351	109,254	11,396	2,407	4,014,185	254,840	4,463,433
	Proportion (%)	1.6	2.4	0.3	0.1	89.9	5.7	100.0

Summary Table of FPC's 2023 Greenhouse Gas Scope 3 emissions

Unit: tons CO_2e

Category	Amount Discharged	Category	Amount Discharged
Purchased goods and services	3,594,345	Employee commuting - transportation vehicles	6,454
Capital goods	32,596	Downstream shipping and distribution	1,131,031
Fuel and energy related activities	1,125,563	Processing of products sold	2,436,730
Upstream transportation and distribution	6,961	Final disposition of products sold	5,252
Waste generated during operation - disposal	3,301	Investment	3,498,585
Business travel - air transport	4,541		
Total		11,845,359	

Note: The FPC's GHG emissions in 2023 were verified based on the relevant verification standards of ISO 14064-1:2006 and the GHG Protocol - Corporate Value Chain (Scope 3) Accounting and Reporting Standard.

GHG Emissions at subsidiaries in 2022

Unit: tons CO_2-e

Year	Formosa Industries Corporation (Note 1)	Formosa Industries (Ningbo) Co. (Note 2)	Formosa Electronics (Ningbo) Co. (Note 3)
Scope 1	18,021	202,872	0
Scope 2	89,181	510,463	321
Scope 3	-	-	-
Subtotal	107,202	713,335	321
Emission Intensity (ton CO_2e / NT$ million)	8.21	12.71	0.34

Source: GHG Verification Opinion Statement and Report

Note 1: Formosa Industries Corporation uses the Global Warming Potential (GWP) values provided by IPCC. The GHG emissions for the year 2022 have been verified by SGS do Brasil Ltda, an independent third-party organization, and a certificate of reasonable assurance has been issued.

Note 2: The Global Warming Potential (GWP) values provided by IPCC is used for inventory data of Formosa Industries (Ningbo). It has been verified by CCSC, an independent third-party organization, and a certificate of reasonable assurance has been issued. The Annual Formosa Industries (Ningbo) GHG Emission Verification Report for 2023 is expected to be obtained in the fourth quarter of 2024.

Note 3: Formosa Electronics (Ningbo) conducted an inventory using the Global Warming Potential (GWP) values provided by IPCC.

Note 4: The types of GHG emissions in Scope 1 included carbon dioxide, methane, nitrous oxide, hydrofluorocarbon, sulfur hexafluoride, and nitrogen trifluoride. The types of GHG emissions in Scope 2 were types of GHG emitted from purchased electricity and steam, which were calculated based on emission factors after the boundaries had been determined using an operational control approach.

Note 5: Emission intensity = (Scope 1 + Scope 2) / revenue of individual financial report for the current year (NT$ million, calculated using the 2022 average exchange rates of US$1 to NT$29.8517 and CNY 1 to NT$4.4382.)


台塑工业（宁波）有限公司
2022 年度
温室气体排放核查报告

Formosa Industries (Ningbo) GHG Emission Verification Report

FPC Carbon Reduction Implementation Plans

Plan	Description	Annual Reduction Results	Future Plans
Renewable Energy - Solar Panels at Renwu Complex	FPC invested NT$43.87 million in building two sets of solar power systems with a total of 1,669 solar panels on the rooftops of the welfare building and the parking building, respectively, at the Renwu Complex.	Solar power generation systems for self-use have been installed in each complex, with a combined capacity of 456kW. In 2023, the annual power generation is 499 thousand kWh, and a carbon reduction of 406.75 tons of CO_2e	1. Promote the use of renewable energy, the following measures will be implemented: a. We will keep looking for suitable locations where renewable energy can be developed and expand our solar power generation systems for self-use. The estimated installation capacity of each complex is about 4,000 kW, with an annual power generation of 5.296 million kWh and an annual carbon reduction of 4,443 tons of CO_2e. b. Established a 12.6MW wind power project in collaboration with FHI. c. Purchase green electricity certificates from green energy trading platform operators. 2. 2025 Target: 100% of all administrative areas in all complexes will use renewable energy.
Promote Product Carbon Footprint Inventory	FPC has not only set carbon reduction targets, but also obtained product lifecycle assessment certificates from TUV Rheinland since 2019. Through the carbon footprint inventory, we hope to understand the carbon dioxide emissions generated directly (indirectly) during the life cycle of our products, so that our customers can grasp the carbon footprint of their end products and apply for carbon footprint labels.	As of the end of February 2024, a total of 81 products obtained the Carbon Footprint Verification Opinion Statement.	By requesting carbon reduction or carbon footprint verification of raw materials and implementing carbon reduction projects during the manufacturing stage, we are actively working to reduce the carbon footprint of our products.
Verified by International Sustainability and Carbon Certification (ISCC Plus)	ISCC certification adopts the Mass Balance accounting standard to ensure the accurate calculation and usage of renewable/bio-based feedstocks in the production process. This ensures traceability from raw materials to the final product in the supply chain and establishes a globally applicable standard for product sustainability.	Taiwan has a total of 4 complexes, 11 production plants, 6 types of input materials, and 12 types of output products certified by ISCC plus.	FPC manufactures bio-plastics by biomass raw materials instead of petrochemical raw materials. Bio-plastics not only have the same performance as petrochemical plastics but also help reduce carbon emissions. Future production will be made based on customers' demand and order placement
Promote low-carbon energy transformation	Renwu complex suspends one coal-fired unit and purchases electricity from Taipower during non-summer months and introduced an AI smart power plant management platform. Linyuan complex operates at a reduced capacity and schedules annual maintenance during non-summer months.	Reduced 356 thousand tons of CO_2e in 2023.	Promote the transformation of Renwu and Linyuan public complexes from coal-fired boilers to low-carbon energy transition and carbon reduction processes, several measures will be implemented. These include high pressure water heater in operation, conversion of coal-fired boiler burners to gas-mixed burners, and installing low pressure gas-fired boilers.

The International Sustainability & Carbon Certification (ISCC) is a global verification system that ensures the sustainability of raw materials and products, the traceability of supply chains, and the determination of GHG emissions and reduction levels. ISCC Plus is a certification system based on the ISCC verification system, specifically designed for the technical chemical field, such as the application of bioplastics. Given the growing demand for biomass materials and environmentally friendly products, FPC has already obtained ISCC Plus certification for 6 types of feedstock and 12 types of products in 2023.

Mailiao carbon fiber plant carbon footprint verification opinion statement

Mailiao Complex ISCC PLUS verification opinion statement

Guide the clients to conduct greenhouse gases management

FPC comprises a maintenance center, various business unit, and the safety and health department, forming a counseling team. We offer advice and consulting services to customers in the areas of occupational safety and environmental protection, energy conservation and carbon reduction, and GHG management. Our objective is to collaborate towards achieving 2050 Carbon Neutrality and to complete counseling work for 18 customers by 2023.

Customer Support

"Carbon Inventory Counseling Team" Appointment Letter

In addition, FPC also serves as a consultant for the Carbon Inventory Guidance Team of the Environmental Protection Bureau Kaohsiung City Government. We assist the government in guiding businesses within its jurisdiction to promote carbon inventory work.

3.2.3 Energy Management 302

Energy Usage

Some of the Company's products require petrochemical processes, and the necessary electricity and steam for these processes are primarily provided by cogeneration units. These cogeneration units primarily use coal as the main fuel. The Renwu and Linyuan complexes are supplied by their own public utilities, while the Mailiao and Hsinkang complexes use cogeneration units from FCFC and FPCC. The remaining plants acquire additional electricity through external purchases to supplement any shortages.

Energy Consumption at FPC for the most recent three years

Unit: gigajoules (GJ)

Year			2021	2022	2023
Energy Consumption	Non-renewable energy source	Electricity	26,638,682	24,496,157	24,101,059
		Steam	41,717,166	35,972,717	37,856,760
		Fuel (Note 3)	8,512,560	7,567,464	8,434,441
		Subtotal	76,868,408	68,036,338	70,392,260
Energy Sales		Electricity	1,126,392	688,111	1,374,880
		Steam	4,400,432	3,249,068	4,316,769
		Subtotal	5,526,824	3,937,179	5,691,649
Energy consumption within the organization (Note 4)			82,395,232	71,973,517	76,083,909
Energy consumption intensity (Gigajoules/ NT$ million) (Note 5)			391.1	368.9	506.0

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: Total energy consumption within the organization = non-renewable energy source consumed + renewable energy consumed + consumption of purchased electricity, heating, cooling, and steam + the production of electricity, heating, cooling, and steam that was not consumed - the quantity of electricity, heating, cooling, and steam sold.

Note 3: The fuel includes non-cogeneration power plant fuels such as coal, fuel oil, natural gas, diesel, LPG, and hydrogen.

Note 4: The overall energy consumption does not use renewable energy.

Note 5: Energy Intensity (GJ/NT$ million) = Total Energy Consumption within the Organization (GJ) / Annual Individual Financial Revenue (NT$ million).

Electricity Consumption at FPC for the recent three years

Unit: gigajoules (GJ)

Year	2021	2022	2023
Total energy consumed	26,638,682	24,496,157	24,101,059
Energy consumption within the organization	25,954,813	24,224,794	23,112,053
Percentage of grid electricity consumed (%)	70%	74%	69%
Total energy from self-generation	7,981,752	6,475,778	6,729,163

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: Grid electricity includes electricity purchased from Taipower and FPG's other public utilities plants.

Note 3: FPC did not consume renewable energy from 2021 to 2023.

Note 4: Percentage of grid electricity consumption = grid electricity consumption /total electricity consumption×100%.

Note 5: Energy consumption within the organization = total energy consumed - electricity sold to Taipower.

Note 6: Total self-generated energy = total energy consumed - total grid electricity consumed.

Improvement in Energy Conservation

Energy Conservation Performance at FPC in 2023

Item	Amount Conserved		2023		Estimated Investment Benefit (NT$ hundred millions/year)	Estimated GHG Reduction (tons CO_2e/year)
			Improvement Completed (Number of Cases)	Investment (NT$ hundred millions)		
Steam	21.83 tons/ hour	65.66 GJ/ hour	109	1.02	1.88	47,510
Electricity	4,973 kW/ hour	17.90 GJ/ hour	501	7.10	1.33	31,228
Fuel	1 tons/ hour	-	3	1.21	0.73	20,258
Total	-	83.56 GJ/ hour	613	9.33	3.94	98,996

Source: FPG SHE Database.

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: Scope 1 covered fuel; Scope 2 covered purchased electricity and steam. The types of GHG emission reduction included carbon dioxide, methane, nitrous oxide, and hydrofluorocarbon

Note 3: 1 ton of steam ≒ 3.008 gigajoules; 1 kilowatt-hour ≒ $3.6*10^{-3}$ gigajoules.

FPC's Power Reduction Status in 2023

Type	Number of Cases	Electricity Savings (kWh/hour)	gigajoules (GJ)
Energy Management Optimization	39	433	1.560
Improvement of equipment efficiency	324	2,987	10.755
Energy consumption savings	138	1,552	5.586
Total	501	4,972	17.901

Source: FPG SHE Database.

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: 1 kWh = $3.6*10^{-3}$ Gigajoule; annual production hours are calculated at 8,000 hours.

In 2024, there were a total of 801 improvement projects in progress (not included overseas subsidiaries), with an estimated amount of 38.92 tons/hour in steam savings, 15,271 kWh/hour in electricity savings, 5.758 tons/hour in fuel savings, and 289.0 thousand tons CO_2e/year in GHG reductions. The total amount of investment is NT$2.77 billion, with an annual benefit of NT$1.22 billion, where:

Mailiao AN Plant
"Improving Energy Efficiency of Refrigerating Machines"
Expected to save electricity by **1,343** kilowatt/hours.

Renwu PVC Plant
"Improving Heat Recovery in the Rapid Cooling Tower of the VCM Plant"
Expected to save steam by **8** tons/hour

Energy Efficiency of Products and Services

The PA processing aid produced by FPC can accelerate the gelation time required for PVC processing and enhance the shear ability during high-temperature processing, thereby expanding the scope of PVC processing. According to statistics, the gelation time of PVC without the addition of PA processing aids is approximately 215 seconds. However, by adding just 10 kilograms of PA product per ton of PVC, the gelation time can be reduced to 90 seconds. This reduction in gelation time leads to a decrease of 125 seconds in energy loss for the processing machine. Based on a production volume of 7,762 tons of PA processing aids in 2023, it can be used to assist in processing 776,200 tons of PVC. The specific heat capacity of PVC is 0.9 KJ/kg/K. Overall, it can reduce energy loss for downstream processors during PVC processing by approximately 1,453 GJ.

FPC Energy Transition Plan

In response to the global trend of carbon reduction, FPC is actively pursuing opportunities for energy transition in alignment with the government's energy transition policy and the growing supply of natural gas. This is aimed at mitigating the impact of climate change. In 2023, several energy transition projects are planned and being actively promoted, aiming to achieve an estimated carbon reduction of 863 thousand tons compared to the base year of 2020.

Item No.	Transition Strategy	2023 Progress Report	Expected completion date
1	A gas-fired power plant at the Renwu Complex has stopped operating during the non-summer month.	Completed	—
2	The Linyuan complex operates at a reduced capacity during non-summer months and undergoes annual maintenance.	Completed	—
3	Renwu complex introduced AI intelligent power plant management platform	Completed	—
4	Renwu complex JP-4/5 high-pressure water heater is initiated.	Under Design Commission	2024/6
5	Linyuan complex introduced AI intelligent power plant management platform	Under Design Commission	2024/7
6	modification of Linyuan LP-2 boiler burner (gas and coal co-combustion)	Equipment Manufacturing	2024/12
7	The Linyuan complex installs a new 95T/H gas-fired waste boiler. (Converting the existing boiler to standby)	Under Construction	2025/6
8	The Renwu complex installs a new 95T/H gas-fired boiler. (Converting the JP-3 coal-fired boiler to standby)	Under Design Commission	2026/6

In addition to actively implementing energy-saving and carbon reduction improvements, FPC has switched the main fuel for the exhaust gas incinerator and wastewater incinerator from fuel oil to natural gas or low-carbon process gas. This switch has resulted in a reduction of approximately 87,000 tons of CO_2e. In addition, the proportion of gas boilers will be increased as necessary, depending on the availability of natural gas. We will also closely monitor energy transition strategies in both domestic and international markets and introduce zero-carbon applications as needed to achieve our long-term goal of 2050 carbon neutrality.

3.3 Water Resources Management

3.3.1 Water Resources Risk Management

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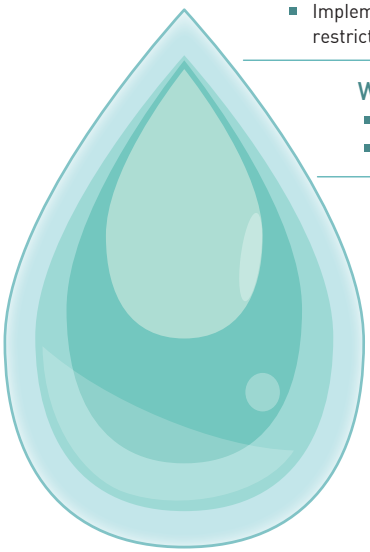


Water Pressure Test

- Implement relevant countermeasures in response to water restrictions to minimize the impact of water restrictions

Water Use Management

- Continuous water saving improvement and circular economy initiatives
- 5% reduction in unit target water consumption per year

Improvements in Water Conservation Performance

- 167 cases on water conservation improvement were completed in 2023, which saved 3.998 million liters per day, with an investment amount of NT$179 million and improvement benefits of NT$28 million per year.
- 164 cases on water conservation improvement are in progress in 2024, which saved 3.832 million liters per day, with an investment amount of NT$240 million and improvement benefits of NT$24 million per year.

Moving towards Zero Wastewater Discharge

- In 2030, there will be a 15% reduction compared to the base year of 2020.
- Zero Wastewater Discharge in 2050

Water Contingency Measures

Water Signal	Water Contingency Measures at FPC	Occurrence in 2023
Normal water supply	Normal operation and continuous implementation of water conservation improvement programs	Normal water supply
Tight water conditions	Enhance water control, scheduling, and development of response measures	▪ The water signal in Kaohsiung City changed from blue to green on February 7. ▪ The water signal in Kaohsiung City changed from blue to yellow on March 8. Reduced water pressure does not affect the internal water supply.
Reduced water pressure	1. Reduce pipe pressure in the water supply in administrative areas during off-peak and specific time periods. 2. Stop supplying non-urgent or non-essential water to the administrative area such as fountain, watering, washing external walls, streets and gutters.	
Reduced water supply	In addition to strengthening the above contingency measures and actively implementing water conservation programs, specific measures taken at each complex are as follows: 1. Mailiao Complex: Each plant continues to increase rainwater recovery and improvement, prevent use of unnecessary or non-production water, and increase the concentration of cooling towers or turn off certain process operations. Each plant continues to strengthen waste water recycling and other improvements. 2. Renwu Complex: Reduce domestic water consumption in the complex area and increase the concentration of cooling towers. 3. Linyuan Complex: Reduce domestic water consumption in the complex area and increase the concentration of cooling towers.	▪ The water signal in Kaohsiung City changed from yellow to orange light of reduced water supply on April 1. The Renwu and Linyuan complexes have made production and sales adjustments and have implemented water-saving measures. As a result, the decrease in water supply has not impacted the Company. ▪ The water signal in Kaohsiung City changed from orange to green on June 12.
Fixed water supply at specific zones and locations	If the water supply is reduced by more than 30%, some or more than half of the process will be unable to operate. Since the Mailiao Park is a petrochemical park which is integrated upstream and downstream, the FPG Administration Office convened all companies to coordinate and prioritize the reduction (stop) production of complexes with high water consumption or poor market demand.	No such occurrence

Source: Water Resources Agency website

Water Resources Agency website

3.3.2 Water Usage 303

FPC sources water from surface water (rainwater, river water, and tap water) and groundwater, and uses it in production as raw materials or solvents, cooling water for equipment during the process, and domestic water at complexes.

In response to the government's environmental policy, each complex continues to implement circular economy by reducing water consumption or reusing water resources, or taking other measures such as improving the steam piping system to reduce wastewater, installing rainwater storage tanks to increase the amount of rainwater collected, improving the cooling system to reduce evaporation, and recycling cooling water to reuse wastewater. We are committed to reusing precious water resources when possible. At the Mailiao Park, a drop of water was used 7.3 times in 2015. After years of continuous promotion, a drop of water could be used 11.4 times in 2023.

Water Resources Management Measures

Source Management

Reduce demand for water resources, enhance reuse of water resources, and accelerate the recycling treatment process

Waste Reduction during Production Process

Implement waste reduction during production processes to reduce load on treatment facilities

End Control

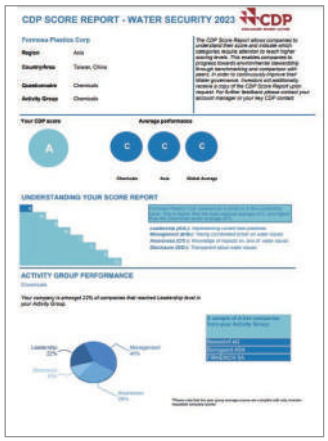
After the water resources that cannot be reused are detoxified by the treatment facilities, the end-of-pipe method is used to determine the discharge in compliance with regulations and standards, and the environmental impact is minimized.

- Hold water and energy conservation meetings every month to review the performance of water and energy conservation at each complex
- Appoint the dedicated person in charge of water conservation at each business unit and complex; set the targets of water consumption and rainwater harvest
- Set up a water conservation case sharing platform; arrange on-site tours
- Performance of Water and Energy Conservation

To truly recognize the actual amount of water used in the production, since 2017, FPC has arranged for third-party impartial institutions to conduct the water footprint verification at Mailiao, Renwu, Linyuan, Hsinkang, and Tungshan Complexes, covering verification items including source of water, water balance, and effluent emissions. The SGS water footprint for 2023 has been verified, and we expect to obtain the Water Footprint Verification Opinion Statement in July 2024.

According to the CDP Score Report - Water Security 2023, FPC was rated A (Leadership). This demonstrates that the Company's approach to water management, the effectiveness of its promotion, and the measures taken in response to water shortages have been recognized and acknowledged by mainstream international investment institutions.

For more information about the Water Footprint Verification Opinion Statement and the CDP Score Report results, please refer to our Sustainable Development website or the CDP website.



2023 CDP Score on Water Security: "A"

Sustainable Development Website: Water Resource Management

CDP Website

According to the Jiji Weir Industrial and Public Water Supply Monthly Report issued by the Industrial Development Bureau, Ministry of Economic Affairs, the annual water supply of Jiji Weir in the past three years (2021~2023) ranged from 265,000 to 365,000 ten thousand tons. The average of industrial water consumption accounted for 2.95% of the total water supply, while water consumption transferred from agricultural water usage only accounted for 1.97%.

Statistics of Water Supplied by Jiji Weir in the Past Three Years

Year		2021	2022	2023	Average
Jiji Weir	Inflow (ten thousand tons) (A)	284,714	266,056	364,015	304,928
Agricultural Irrigation	Average Water Consumption (ten thousand tons) (B)	135,989	169,917	153,449	153,118
Industrial Consumption	Average Water Consumption (ten thousand tons) (C)	9,726	8,860	8,393	8,993
	Water Supply Ratio (%) (C) / (A)	3.42%	3.33%	2.31%	2.95%
	Water Consumption for Agricultural Purposes (ten thousand tons) (D)	3,282	3,031	2,748	3,020
	Percentage of Water Consumption for Agricultural Purposes (%) (D)/(B)	2.41%	1.78%	1.79%	1.97%

Although water consumption at Mailiao Complex does not supplant other industries and result in competition for water with farmers, in order to effectively utilize Taiwan's precious water resources, FPC not only strives for process improvement, enhancement of equipment effectiveness, optimization of operating conditions, and recycling and reuse of wastewater to increase water use efficiency, but also promotes recycling and reuse of rainwater at the same time.

Water Consumption at FPC by Complex in 2023

Unit: million liters (1,000 M^3)

Complex		Renwu	Linyuan	Tungshan	4th Complex	Mailiao	Hsinkang	Total
Water withdrawal (A)	Surface water	215.636	324.347	17.714	-	15,662.767	110.551	16,331.015
	Groundwater	10,516.734	-	227.445	-	-	-	10,744.179
	Third-party water	1,769.447	4,827.123	2.282	22.734	102.991	2,020.350	8,744.927
	Total	12,501.817	5,151.470	247.441	22.734	15,765.758	2,130.901	35,820.121
Water discharge (B)	Surface water	4,038.017	-	197.830	15.038	-	583.332	4,834.217
	Seawater	-	-	-	-	-	-	-
	Third-party water	-	2,284.408	-	-	5,960.085	-	8,244.493
	Total	4,038.017	2,284.408	197.830	15.038	5,960.085	583.332	13,078.710
Water Consumption (A-B)		8,463.800	2,867.062	49.611	7.696	9,805.673	1,547.569	22,741.411

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: FPC proposed obtaining and reporting statistics on our water footprint based on the 2023 water footprint data verified by SGS in 2024 on account of the impartiality and accuracy of published data.

Note 3: Third-party water came from tap water, while no seawater or produced water was withdrawn. The source of water withdrawal was all fresh water with total dissolved solids (TDS) of 1,000 mg/L or less.

Note 4: Groundwater was not included in the destination of water discharge at each complex.

Note 5: The category of surface water discharge refers to fresh water with TDS equal to or less than 1,000 mg/L; the category of third-party water discharge includes other water with TDS greater than 1,000 mg/L and fresh water with TDS equal to or less than 1,000 mg/L that are disposed of by third parties in accordance with the law.

Summary Table of FPC's Water Consumption in the Past Three Years

Unit: million liters (1,000M^3)

Year	2021	2022	2023
Total Water Withdrawal	39,466.26	35,590.66	35,820.12
Water Consumption	24,997.56	21,089.78	22,741.41
Water Discharge	14,468.70	14,500.88	13,078.71
Water Consumption Intensity	118.65	108.10	151.25

Note 1: The scope includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: Water consumption intensity= Water consumption (metric tons)/Individual financial report revenue for the year (NT$ million)

Note 3: FPC proposed obtaining and reporting statistics on our water footprint based on the 2023 water footprint data verified by SGS in 2024 on account of the impartiality and accuracy of published data.

Statistics of FPC's Average Water Consumption and Unit Product Water Consumption in the Past Three Years

Year	2021	2022	2023
Average Water Consumption (million liters/day)	72.01	67.39	65.38
Unit product water consumption (million liters/NT$ million)	0.1248	0.1261	0.1587

Source: FPG's SHE Database

Note: Unit product water consumption = total water consumption of major products/revenue of individual financial report for the current year (NT$ million)

3.3.3 Improvements in Water Conservation Performance

Water Conservation Performance at FPC in the past three years

Item \ Year	Completed in 2023	Completed from 2021 to 2023 (A)	Ongoing in Early 2024 (B)	Total (A+B)
Number of improvement projects	167	491	164	655
Volume of water conserved (million liters/day)	3.998	8.562	3.832	12.394
Investment (NT$ hundred millions)	1.79	3.7	2.4	6.1
Benefits of improvement (NT$ hundred millions/year)	0.28	0.55	0.24	0.79

Source: FPG's SHE Database

To improve water efficiency, Mailiao Complex has long been strengthening rainwater harvesting. Rainwater is effectively stored and reused through various methods such as increasing the rainwater collection surface area and modifying rainwater storage tank pipelines.

The total rainwater recovery in 2023 was 4,320 tons per day, and the total rainwater recovery rate was 96%. For the Mailiao complex particularly, its rainwater recycling amount was 2,606 tons/day, and its rainwater recycling rate was 127.3%. Compared with the average rainwater recycling amount of 3,216 tons/day and rainwater recycling rate of 125.2% from 2021 to 2023, the rainwater recycling rate reduced by 610 tons/day, while the rainwater recovery rate increased by 2.1%.

Total Amount of Rainwater Harvested and Harvesting Rate at Mailiao Complex in the past three years

Year	2021	2022	2023
Amount of rainwater harvested (tons/day)	3,867	3,175	2,606
Rainwater harvesting rate (%)	120.9	127.5	127.3

Note 1: Rainwater harvesting rate = Actual amount harvested / Theoretical amount harvested.

Note 2: Theoretical amount harvested = Rainfall x (Permeable layer area x 0.8 + Impermeable layer area x 0.2).

Note 3: According to the requirements for runoff coefficient stipulated in the Design Specifications of the Construction and Planning Agency, Ministry of the Interior (https:// myway.cpami.gov.tw/wiki/wikiSession/1114)

Note 4: The amount and rate of rainwater harvested in the Mailiao complex decreased in 2023 compared to 2022. This decrease can be attributed to the lower rainfall in 2023 (62.8mm/month) as compared to 2022 (83.3mm/month).

3.3.4 Zero Wastewater Discharge

To progress toward the ideal goal of zero wastewater discharge, the President's Office is tasked to promote the development of wastewater treatment technologies company-wide and assist each complex in improving internal wastewater treatment technologies. For example, the Renwu Complex is expected to invest NT$1.2 billion in the zero wastewater discharge plan, which is divided into three stages, namely, source reduction, effluent recycling, and zero discharge of concentrated wastewater, to achieve the goal of zero wastewater discharge. The situation at each stage is described as follows:

Source reduction

Implementation

Strengthen the source control of production wastewater discharge, such as: improve the production process, reduce the amount of water used, reduce abnormal, mass, or highly-concentrated wastewater into wastewater treatment facilities, reuse waste water, etc., to reduce wastewater discharge.

Results in 2023

- Since 2022, a total of 28 source reduction have been initiated and successfully completed by the end of 2023.
- The Renwu Complex is planning to install additional gas-fired boilers in order to gradually replace the existing coal-fired boilers. This will increase the operating rate and reduce the use of wet flue gas desulfurization equipment, resulting in a decrease in the amount of wastewater generated.
- The alkaline wastewater produced during the resin tower regeneration process at the Renwu Alkali Plant is collected in a wastewater recycling tank and then transferred to the brine reaction tank for reuse. This process helps to reduce wastewater by 26 tons per day.

Effluent recycling

Implementation

To enhance the efficiency of the wastewater treatment plant, it is recommended to gradually replace outdated equipment and implement a smart centralized control system for real-time management. Additionally, automation should be introduced to adjust the operating parameters of the wastewater treatment equipment in response to changes in upstream processes. This will help increase the amount of effluent recycling and promote resource recycling.

Results in 2023

The second pressurized flotation system of the Renwu biochemical wastewater treatment plant is being replaced. The original carbon steel material is being replaced with a seamless PE heat-fused lining material that offers superior corrosion resistance. Furthermore, the motor of the mixer has been upgraded from 5 hp to 20 hp to improve the mixing efficiency. Following the treatment, the concentration of suspended solids (SS) in the wastewater can be maintained below the internal limit of 25PPM, which complies with the regulatory standard of 100PPM.

Zero discharge of concentrated wastewater

Implementation

FPC continues to assess concentrated wastewater discharged from RO as well as re-concentrate, recycle, and reuse concentrated wastewater, so as to achieve the goal of zero discharge.

Results in 2023

After the testing of the effluent recycling technology is completed, we will then establish plans for the recovery and reuse of highly concentrated wastewater.

Water Pollution Prevention Measures

To maximize the effect of water pollution prevention, it is necessary to classify wastewater for management from the source. For instance, the Renwu Complex has 6 wastewater treatment plants in place for organic and inorganic wastewater treatment to deal with different types of wastewater, and has also set up 5 monitoring systems. In addition, in compliance with the total ammonia nitrogen control regulations in Kaohsiung City, ammonia nitrogen monitoring facilities have been incorporated into the monitoring system. The water quality monitoring results have been better than the statutory standards.

The sea discharge rate of the Renwu complex in 2023 was 95.4%, falling short of the target of 100%. This was primarily attributed to the ongoing functional testing of the environmental protection wastewater treatment plant, necessary repairs to the leaking pipelines at the discharge center, and the occurrence of excessive discharge due to heavy rainfall surpassing the approved discharge limit.

Effluent Quality Control by Complex at FPC in 2023

Complex		Renwu	Linyuan	Tungshan	4th Complex	Mailiao	Hsinkang
Daily wastewater volume (CMD)	Permissible Volume	43,408	12,050	1,468	90	35,306	3,150
	Amount Discharged	11,063	6,259	542	41	16,329	1,598
pH	Statutory Standard	6~9	6~9	6~9	6~9	6~9	6~9
	Internal Control Value	6.5~8.5	6.5~8.5	6.5~8.5	6.5~8.5	6.5~8.5	6.5~8.5
	Mean	7.8	8.3	7.5	8.5	7.9	8.4
COD (mg/L)	Statutory Standard	280	90	100	100	100	100
	Internal Control Value	90	80	80	80	80	80
	Mean	17.8	18.3	5.0	22.4	23.2	27.3
SS(mg/L)	Statutory Standard	100	25	30	30	20	30
	Internal Control Value	25	20	25	20	16	20
	Mean	14.4	2.6	11.0	3.7	7.9	4.3

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: According to the Water Pollution Control Act, only Renwu Complex and Hsinkang Complex were required to set up the continuous water monitoring system (CWMS); however, CWMS was also set up at some of our other complexes for autonomous management or as requested by the Linyuan Industrial Park Service Center, Ministry of Economic Affairs.

3.4 Air Pollutant Management

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3.4.1 Air Pollution Monitoring and Assessment

Air quality

To keep abreast of various environmental indicators in real time at Mailiao Complex, FPC sets out to establish a comprehensive environmental monitoring network comprising eight layers of intensive monitoring control by referencing local prevailing wind directions. This allows us to track emission sources in real-time, thereby ensuring the air quality around the complex areas. For more information on air pollution management and prevention, please refer to our Sustainable Development website.

Sustainable Development Website: Air Pollutant Management

Air quality impact analysis

To monitor the air quality, FPC purchased 6 sets of Fourier-transform infrared spectroscopy (FTIR), 3 of which were stationed at Mailiao, Renwu, and Linyuan Complexes; the other 3 sets are mobile, which can effectively and immediately detect air quality anomalies for improvement at the complexes.

Air Quality Monitoring in 2023

Anomalies detected	Explanation of Abnormal Events	Improvement Achievement Rate
1 Item	The air inlet of the waste gas incinerator at the Renwu VCM complex was blocked, causing most of the waste gas to enter through the bottom inlet and preventing immediate incineration and treatment by the main burner. Consequently, the waste gas was not completely eliminated for approximately 50 minutes. The issue was resolved promptly after cleaning.	100%

Fixed FTIR Station

Mobile FTIR (e.g., turnaround and anomaly detection)

3.4.2 Air Pollution Control Measures

FPC strives to prevent and reduce air pollution. Each unit utilizes the most effective technology and control measures to implement pollution prevention equipment and ensure the efficient operation of air pollution prevention measures. At present, FPC's pollution control results have surpassed national standards and are on a par with the performance of global optimization standards.

Our 2025 reduction targets for various air pollutants will be reduced by 10% compared with 2020. These reduction targets will be achieved by adding additional pollution prevention equipment, improving the efficiency of the prevention equipment, and by tightening regulations and voluntary reduction of air pollutants.

Improvements in Exhaust Emissions

Improvements in Exhaust Emissions at FPC

Additional installation of pollution prevention equipment

Description

In order to improve the storage tanks VOCs exhaust gas emission, a regenerative incinerator was added at the end of the process to reduce the emission of VOCs.

Results in 2023

A direct-fired thermal oxidizer has been installed at the new wharf slot area of Kaohsiung Port Intercontinental Phase II to treat the exhaust gases generated from the handling and inspection of bulk cargo and storage tanks. This system replaces the previously inefficient outsourced treatment.

Enhance the efficiency of NOx removal in the SCR denitrification

Description

Linyuan and Renwu complexes are increasing the SCR catalysts and developing methods to enhance catalyst efficiency.

Results in 2023

- The Linyuan complex has increased SCR catalysts from 84 m^3 to 101 m^3, thereby improving the reaction rate of the catalyst. As a result, the outlet NOx concentration now meets the more stringent emission regulations in Kaohsiung City, with levels below 30 PPM.
- The Renwu Complex already has an SCR denitrification ammonia injection system. However, the ammonia gas atomization effect is affected due to insufficient wind temperature and dilution air volume, resulting in an incomplete reduction reaction and poor denitrification efficiency. After (1) modifying and diluting the air heater to increase the air temperature, (2) enlarging the dilution fan and air duct, and (3) renovating the ammonia grid to improve the mixing efficiency, the denitrification efficiency has been increased from 86% to 92%. The NOx concentration at the outlet now complies with the stricter emission regulations in Kaohsiung City (less than 30 PPM).

Air Pollutant Self Management

Description	Results in 2023
1. Streamlining of the components of petrochemical process equipment: By streamlining pipelines inventory and reducing the number of equipment components, thereby lowering the emissions of volatile organic compounds from equipment components.	In 2023, 28,377 units were streamlined, reducing VOCs emissions by 3.582 tons/year as well as saving inspection costs of NT$1,589 thousand/year and air pollution fees of NT$126 thousand/ year, with a total cost reduction of NT$1,715 thousand/year.
2. When operating the fixed top groove vacuum pressure regulating valve, VOCs in the groove will be directly discharged into the atmosphere. Although FPC complies with regulatory requirements by setting the operating pressure of the vacuum pressure regulating valve to be above 90% of the maximum allowable operating pressure, there is still exhaust gas being discharged into the atmosphere when the regulating valve is in operation.	All of the company's VOCs fixed roof tanks are equipped with vacuum pressure regulating valves in compliance with regulations. The pipes are connected to air pollution control equipment to prevent the release of untreated exhaust gases into the atmosphere during valve operation, thereby safeguarding air quality. The upgrade of all tanks was finalized in 2023.
3. If a tube rupture occurs in the petrochemical process heat exchanger, the volatile organic compounds (VOCs) within the heat exchanger may be carried by the cooling water to the cooling water tower and subsequently released into the atmosphere.	In 2023, we will implement a self-monitoring system for cooling towers. This will involve the installation of real-time monitors and regular sampling of the water quality in the cooling towers for analysis of individual species. If any abnormal monitoring data is detected, we will promptly halt operations and conduct equipment inspections. All monitoring and testing data for the 36 cooling towers in 2023 is normal.

The Linyuan Public Utility Plant has incorporated SCR catalysts

Air Monitor Next to Cooling Tower

Intercontinental Slot Area Equipped with a Direct Fired Incinerator

Low-leakage valves and simplified component valves

Air Pollutant Emissions at FPC in 2023

Unit: tons/year

Air Pollutant	Complex						Total
	Renwu	Linyuan	Tungshan	4th Complex	Mailiao	Hsinkang	
Total suspended particles (TSP)	95.478	52.520	9.614	-	28.296	1.711	187.619
Sulfur oxides (SOx)	216.792	120.032	3.452	-	186.460	0.406	527.142
Nitrogen oxides (NOx)	491.447	227.410	120.900	-	236.309	0.289	1,076.355
Volatile organic compounds (VOCs)	22.872	88.661	5.694	8.261	250.983	22.359	398.830
Hazardous air pollutants (HAPs)	4.050	11.542	0.000	1.900	72.113	0.000	89.605

Source: Website of the Integrated Management System for Air Pollution Fees and Emission Reporting, Ministry of Environment

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.

Note 2: Hazardous Air Pollutants (HAPs) are reported as emissions for individual categories in accordance with the Regulations Governing the Collection of Air Pollution Control Fee issued by the Environmental Protection Administration.

Note 3: FPC does not use or produce ozone-depleting substances. The original Renwu CFC plant stopped production in 1996, and it does not use CFC-11e.

Case Explanation on Air Pollution Improvement: Optimizing boiler SCR equipment

Current Situation Explanation:

1. The Kaohsiung City Government has implemented a two-stage regulation to tighten air emissions for power facilities. Operators are now required to achieve a NOx emission concentration of less than 30 PPM by December 2024.
2. The coal-fired boiler at our Renwu Complex is equipped with a Mitsubishi boiler, and the original boiler's NOx design value is less than 300 PPM. Despite the installation of a SCR system and the addition of a catalyst to increase the reaction area and improve denitrification efficiency, the NOx level in the flue gas after the denitrification system is reduced to about 40 PPM, which still falls short of meeting the more stringent air pollutant emission standards in Kaohsiung City.
3. An SCR denitrification ammonia injection system. However, the ammonia gas atomization effect is affected due to insufficient wind temperature and dilution air volume, resulting in an incomplete reduction reaction and poor denitrification efficiency, unable to comply.

Improvement Explanation:

1. Improvement Focus:
   - Improving the air temperature by modifying the dilution air heater.
   - Magnify dilution windmill and wind duct.
   - Ammonia injection grid transformation for improved mixing efficiency
2. The investment amount for this boiler improvement project is approximately NT$60 million. The SCR efficiency has increased from 86% to 92%, and the NOx concentration at the outlet has been reduced to 24 PPM, in accordance with the more stringent emission regulations established by the Kaohsiung City Government.

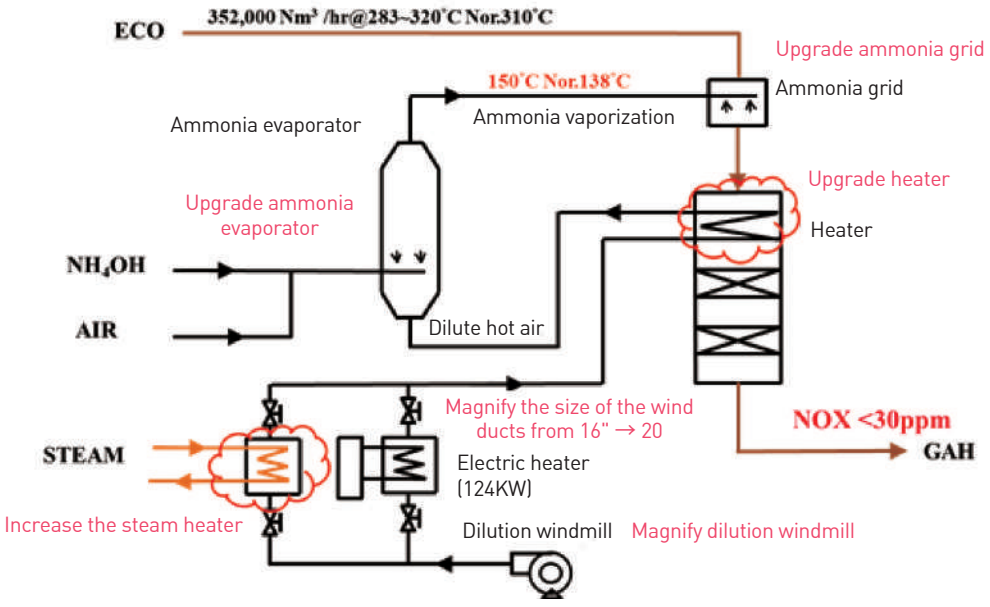


Illustration of Improved boiler SCR equipment

3.5 Waste Management

3.5.1 Waste Impact Identification 306

FPC carries out waste reduction through three major measures, including source management, process reduction and end-of-pipe disposal, so the waste buried is the actual waste. In addition, we are committed to promoting the reuse of waste and reducing the amount of landfills.

In order to reduce the amount of waste in landfill, a target of 10% reduction in the amount of waste in landfill in 2025 compared to 2020 (base year) and 20% reduction in 2030 compared to the base year has been set. In 2023, the waste in landfill was 9,672 tons, a slight increase from 8,698 tons in 2020 and 9,613 tons in 2022. This increase can be attributed to the expansion of the repair facility in line with the production and sales plan, leading to a rise in non-process-related waste. FPC will continue to promote the resource recovery and reuse of waste to reduce landfill volumes.

In 2023, FPC engaged the services of 78 certified waste transportation companies and 100 processing companies. We conducted 136 random inspections at different facilities and conducted 263 follow-up visits. We mandated all processing operators, whether dealing with recyclable or non-recyclable waste, to submit records of their waste management practices to ensure the appropriate handling of hazardous industrial waste, including hazardous chemicals. No deficiencies were identified during the inspections conducted in 2023.

FPC Waste Impact Identification

Upstream	Self-operation	Downstream
Actual or potential impact If the supply of upstream raw materials is of poor quality, FPC will need to spend more energy resources which generates more waste. Excessive waste may exceed the permitted amount for environmental protection, and production needs to be reduced in severe cases.	**Actual or potential impact** If there is an increase in the amount of waste or abnormal quality, the waste treatment or recycling industry cannot process or reuse it. In severe cases, it may be necessary to reduce (or stop) production in order to reduce (or stop) the production of waste.	**Actual or potential impact** If the waste disposal company is unable to accept waste due to violation of environmental protection laws and regulations or for any reason, and our waste has to be temporarily stored or piled up in the factory, and cannot be disposed of in time, we need to consult other qualified companies urgently. If the treatment is not successful in a timely manner, it may be necessary to reduce (or stop) production to reduce (or stop) waste production in severe cases.
Causes The poor quality of upstream raw material supply causes FPC to spend more energy (resources) to purify the raw materials, resulting in excess waste.	**Causes** When there is an abnormality in the process operation, it will cause abnormality in the quality or the waste produced by the process will increase.	**Causes** Outsourced waste disposal manufacturers cannot accept our waste due to abnormal production processes, violations of laws and regulations, or abnormal disposal of waste (including reuse).

FPC's Waste Management System

	Source Management	Waste Reduction during Production Process	End Disposal
Processing Method	-	Process improvement to reduce output and reuse process materials	Selling the by-product and recycle waste
Setting the Reduction Target	▪ The volume of waste in landfill in 2025 will be reduced by 10% compared to 2020 (base year). ▪ The volume of waste in landfill in 2030 will be reduced by 20% compared to base year.		
Results in 2023	For pipelines or equipment with low thermal insulation requirements in the process, they are replaced by spraying thermal insulation paint to reduce the waste of thermal insulation or cold insulation materials during maintenance of pipelines or equipment.	FPC promotes the complete usage of post-recycling waste in the industrial sector. We recycle leftover materials and scraps from industries and sell them to customers who transform them into plastic products, effectively reducing waste production.	The proposal to promote the recycling of waste sandblasting resources has been approved, which will result in a reduction of 100 tons of landfill waste per year.

3.5.2 Waste Management Performance

In 2023, FPC generated 216,944 tons of industrial waste. After waste classification, recycling, and reuse, 193,314 tons were recovered as resources, accounting for 89.1% of the total waste generated. Among which 20,642 tons were general industrial waste that could be incinerated or buried, while 2,988 tons were hazardous industrial waste. The statistics of different treatment methods for each type of waste are as follows:

Summary Table of FPC's Total Waste Disposal in the Past Three Years

Year	2021	2022	2023
Total Quantity (Unit: Tons)	238,447	200,274	216,944
Waste Intensity	1.1318	1.0266	1.4428

Note 1: Covers all the complexes within Taiwan, except for the Taipei Office.
Note 2: Waste intensity= Waste/Individual financial statement revenue for the year (NT$ million)

Statistical table of various types of waste disposal by FPC in 2023

unit: tons

Waste Composition	Production	Disposal Transfer Volume	Direct Disposal Volume
Toxic hazardous industrial waste (Class B)	564	0	564
Hazardous industrial waste determined by hazardous characteristics (Class C)	2,424	0	2,424
General industrial waste (Class D)	35,058	15,229	19,829
Waste to be recycled or reused upon announcement (Class R)	178,898	178,898	0
Total waste	216,944	194,127	22,817

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.
Note 2: Waste composition are classified based on the categories set forth by EPA.
Note 3: The quantity of waste to be disposed is based on the quantity of waste to be reported to EPA in 2023.

Waste disposal of FPC in 2023

Item			Non-hazardous waste		Hazardous waste	
			Production (tons)	Percentage	Production (tons)	Percentage
Recycled waste 193,314 tons (89.1%)	Preparation for reuse (Outsourced Treatment)		14,416	7.5%	0	0
	Recycling and reuse (Outsourced Treatment)		178,898	92.5%	0	0
	Subtotal		193,314	100%	0	0
Non-recyclable waste 23,630 tons (10.9%)	Incineration (including energy recovery)	Off-site (Outsourced Treatment)	5,140	24.9%	2,988	100%
		On-site (Self Treatment)	5,830	28.2%	0	0
	Incineration (excluding energy recovery)	Off-site (Outsourced Treatment)	0	0	0	0
	Landfill		9,672	46.9%	0	0
	Subtotal		20,642	100%	2,988	100%

Note 1: The data boundary includes Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, excluding the Taipei Office.
Note 2: FPC diverted waste from disposal according to recycling operation. Outsourced treatment was adopted for all such waste, where hazardous waste was not treated through preparation for reuse and recycling and reuse, while non-hazardous waste was treated through either preparation for reuse or recycling and reuse.
Note 3: FPC directed waste to disposal according to disposal operation, where hazardous waste was treated through incineration or solidification, while non-hazardous waste was treated through various methods, such as landfill, incineration, heat treatment, physical treatment, chemical treatment or cleaning/washing treatment.

3.5.3 Waste Reuse and Utilization of Resources

FPC is actively promoting waste reusing by offering guidance to downstream businesses on how to transform waste into reusable resources. This initiative aims to reduce the incineration or burial of waste.

2023 Successful Case: Reuse of Sandblasting Waste

Before removing rust and painting, it is necessary to eliminate the corroded surface, which produces waste materials from sandblasting. These waste materials from sandblasting are categorized as hazardous industrial waste and are usually managed through solidification or landfill methods for final disposal. After collaborating with waste recycling companies, we have obtained approval from Industrial Development Administration, Ministry of Economic Affairs for a case of reuse. This enables us to convert waste sandblasting materials into non-structural concrete materials, resulting in an estimated annual reduction of approximately 100 tons of landfill.

2024 Case in Progress: Promoting the Reuse of Inorganic Sludge (Salt Sludge)

In the salt refining process at FPC's caustic soda plant, the inorganic sludge (salt sludge) that is produced after removing impurities like calcium and magnesium is typically disposed of through landfill. This is because the sludge has a low combustible content and a high chloride content. After collaborating with waste recycling companies, we conducted an experiment using solid recovered fuel as the primary source of fuel. Through a high-temperature pyrolysis process at temperatures exceeding 900° C, the sludge is converted into recycled fine aggregate. This aggregate has a chlorine content of less than 0.012% and can be utilized as a non-structural material in concrete production. The case is currently being reviewed by the Industrial Development Administration, Ministry of Economic Affairs. If the individual case reuse permit can be obtained, it is estimated that the annual landfill volume can be reduced by 24,000 tons.

3.6 Management of Hazardous Substances

3.6.1 Hazardous Substance Management Measures

Hazardous Substance Management Strategy

Through raw material selection, assessment of chemical safety and product hazard, FPC reduces the harmful substances used in the production process and in products to protect the health of employees and consumers.

Raw Material Selection — Responsible Department: Technology departments at each division and each plant

Implementation

Develop alternatives to reduce the use of hazardous substances.

Results in 2023

- The Renwu Technical Department has discontinued the use of hazardous chemicals, including hydrazine (95~100%), formamide (95~100%), chlorobenzene (95~100%), maleic anhydride (95~100%), potassium cyanide (95~100%), and potassium dichromate (95~100%).
- The concentration of sodium sulfide in the Linyuan Complex has been reduced from 50% to 38%.

Chemical Safety — Responsible Department: Each plant, Safety and Health Department

Implementation

- Ensure the safety of workplaces of hazardous substances.
- The responsible personnel are required to obtain technical licenses.
- Install detection and alarm equipment systems in the factory.

Results in 2023

In addition to the current monitoring center at the The Sixth Naphtha Cracking Project, a Southern Monitoring Center has been established at the Renwu Complex in 2023. This center will provide real-time monitoring of gas detectors in all areas of the plant and promptly respond to any abnormalities.

Product Hazard Assessment — Responsible Department: Each plant, Safety and Health Department

Implementation

Hazard assessment for all products

Results in 2023

Chemical Risk Assessment Implementation Rate: 100%.

Regulation on the Management of Chemical Substance Use

Each complex of FPC use a total of 58 chemical substances regulated by the Environmental Department. Of these, 47 are used in small quantities or have low toxicity for laboratory research, testing, catalysts, or intermediate products. To ensure the safe management of production, use, storage, and transportation operations, as well as the normal operation of facilities and locations where controlled chemical substances are used, the complexes have obtained approval from the competent authority in accordance with regulations. In addition to the required reporting procedures and pipeline labeling, these departments have included them as self-inspection items and implemented management measures to ensure compliance, reduce operational risks, and respond to disasters.

Management of Public Hazardous Materials

Public Hazardous Materials Inventory Control

- Excessive Storage Warning
- Source of Purchase Management
- Contractors Cooperation in Delivery
- Storage Facility Management: There are 41 general storage facilities and 30 dedicated storage facilities.

Fire Safety Equipment Maintenance and Management in Public Hazardous Premises

- According to the legal regulations regarding position, structure, and performance inspection standards, it is necessary to conduct monthly PDA inspections of fire equipment at the 55 plants and departments.
- In light of previous domestic fire accidents, the Organic Peroxide Project Inspection was implemented in 2023. A total of 139 deficiencies were identified, resulting in a 100% improvement rate.

Implementing Safety Inspections for Hazardous Material Storage Areas

- Incorporated into computer control
- Supervision of premises and self-inspection conducted by security supervisors and inspectors.
- The fire authority conducted 97 on-site audits, and the audit results indicated that the fire equipment and inventory control were in compliance with legal regulations.

Chemical Risk Assessment

To analyze and uncover significant potential hazards within various systems (units) in the workplace, each complex establishes "Process Safety Analysis Team". These teams conduct hazard analysis, risk assessment, and process safety management tailored to different scenarios such as fire, explosion, toxic chemical release, or flammable substance leaks based on the process characteristics.

Preliminary Hazard Analysis

Analysis of potential hazards, including fire, explosion, long-term carcinogenic effects, and poisoning, caused by the leakage of all chemical substances.

Significant Hazard Analysis

To identify potential hazards in the workplace, assess their impact, causes, and evolution, and establish contingency handling principles and improvement measures.

Hazard Risk Assessment

For risk levels classified as Level 1 significant hazard or Level 2 highly hazard, they are considered unacceptably high risks and require equipment improvement during the manufacturing process. For those classified as level 3 moderate hazard or level 4 low hazard, improvements will be implemented using management methods.

Establishment of Complex Environmental Monitoring Center

FPC has set up environmental monitoring centers at its Renwu and Mailiao complexes. These centers are equipped with fixed gas detectors, continuous emission monitoring systems (CEMs), continuous water monitoring systems (CWMs), flare monitoring, Fourier transform infrared spectrometers (FTIR) for monitoring, and high-altitude image surveillance within the complex. They constantly monitor the complexes' impact on the surrounding environment and can quickly report and address any abnormalities.

Renwu Complex Environmental Monitoring Center

Mailiao Complex Environmental Monitoring Center

The gas detectors for flammable and toxic gases, as well as the Fourier Transform Infrared Spectrometer (FTIR), are installed in both the process area and the perimeter of each complex. These devices are connected to the Environmental Monitoring Center. In the event of a leak alarm, the Environmental Monitoring Center can promptly determine the specific process area, detector locations, and concentration levels affected. This information can then be verified by on-site inspection personnel. In 2023, a total of 193 anomalies were identified, and all of them were successfully addressed.

Safety of Hazardous Chemicals

To manage hazardous substances at each complex (including Ministry of Environment's controlled chemical substances and hazardous chemical substances), FPC strictly requires that all management personnel should not only obtain professional and technical licenses and that all complexes are equipped with detection and alarm, but the related products undergo hazard assessment in accordance with the law. Unused Ministry of Environment's controlled chemical substances are managed as hazardous industrial waste and properly treated after being declared as waste in accordance with the law.

Each complex has appointed professional technical managers and professional emergency response personnel, who are required to obtain the necessary licenses, to handle the toxic and hazardous chemicals regulated by the Ministry of Environment. The number of personnel exceeds the regulatory requirements. Furthermore, all personnel have completed on-the-job training and registration by October 2023.

According to the "Regulations of New and Existing Chemical Substances Registration", standard registration should be carried out on 106 chemical substances, where information such as manufacturing or import situation, category and labeling, and toxicology and ecotoxicity has to be registered on EPA's Chemical Substances Register. FPC have completed the registration of acrylic acid and sulfuric acid in 2022 and 2023, and the registration of other substances is still being processed, and is expected to be completed by the end of 2024.

3.6.2 Development Strategy for Substitutes

In response to the global sustainability initiatives, FPC has reduced the environmental cost of its products. Since 2019, it has adopted three strategies, namely "sustainability", "prevention", and "assurance", and gradually developed alternatives that are less harmful to the human body and the environment. FPC continues to enhance the safety of chemicals and chemical reaction processes in order to replace the use of hazardous substances or to eliminate or reduce the impact of hazardous substances on the environment as much as possible.

Case Example: Alternative Product Development in 2023

The Renwu Carbon Fiber Plant is replacing dimethylformamide (DMF) with dimethyl sulfoxide (DMSO)

The Renwu Carbon Fiber Plant initially utilized dimethylformamide (DMF), which is classified as a Class 2 toxic substance. However, it has now transitioned to using dimethyl sulfoxide (DMSO), which is a non-toxic substance.The silk spinning process system was changed from wet-jet wet spinning to dry-jet wet spinning in order to switch to dimethyl sulfoxide (DMSO).

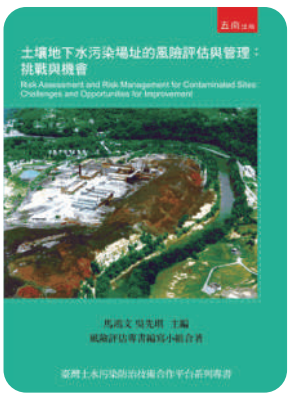
3.7 Soil and Groundwater Renovation

3.7.1 Soil and groundwater management and renovation result

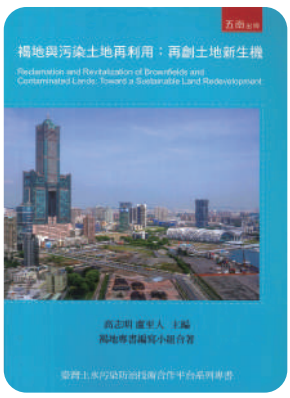
FPC has implemented the "Soil and Groundwater Pollution Remediation Act" to ensure swift response in the event of a pollution leakage incident. In the pollution treatment section, physical, chemical, and biological remediation methods are implemented based on the hydrogeological data and pollution characteristics of the case. FPC has completed soil or groundwater remediation operations at the Qianzhen Complex, Linyuan Complex, Renwu Complex (FHI and NPC), and Chishanyan site.

3.7.2 Soil and Groundwater Pollution Prevention Platform and Technical Publication

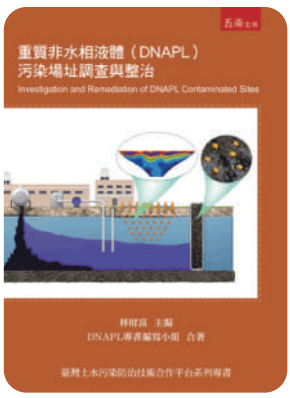
FPC has primarily focused on monitoring, investigating, and remediating soil and groundwater. We have implemented measures to prevent pollution by ensuring that water does not come into contact with the ground. In recent years, we have increased our investment in sponsorship and in 2013, we established the Taiwan Soil and Water Pollution Prevention and Control Technology Cooperation Platform through collaboration among industry, government, and academia. Additionally, we have published three technical books on soil and groundwater, with the contribution of 20 to 30 domestic and foreign experts and scholars in each book.



"Risk Assessment and Risk Management for Contaminated Sites: Challenges and Opportunities for Improvement", published in September 2016



"Reclamation and Revitalization of Brownfields and Contaminated Lands: Toward a Sustainable Land Redevelopment", published in May 2017



"Investigation and Remediation of DNAPL Contaminated Sites", published in March 2023

3.7.3 Selected as an Excellent Unit for Green and Sustainable Remediation by the Ministry of Environment.

FPC's Mailiao VCM plant was awarded the "2023 Excellent Unit for Green and Sustainable Remediation" on November 8, 2023, by Deputy Minister Shen Chih-Hsiu of the Ministry of Environment.

The use of the underground water circulation well remediation system in the Mailiao VCM plant, along with the chemical oxidation method and soil thermal enhancement method in specific areas, allows for the improvement of soil and groundwater quality. This treatment method achieves regional groundwater circulation and enhances groundwater quality through an internal closed-loop system, while minimizing the production of secondary pollutants or waste.

FPC was awarded the "2023 Excellent Unit for Green and Sustainable Remediation" by the Ministry of Environment.

ch.4

Guardian of a Happy Workplace

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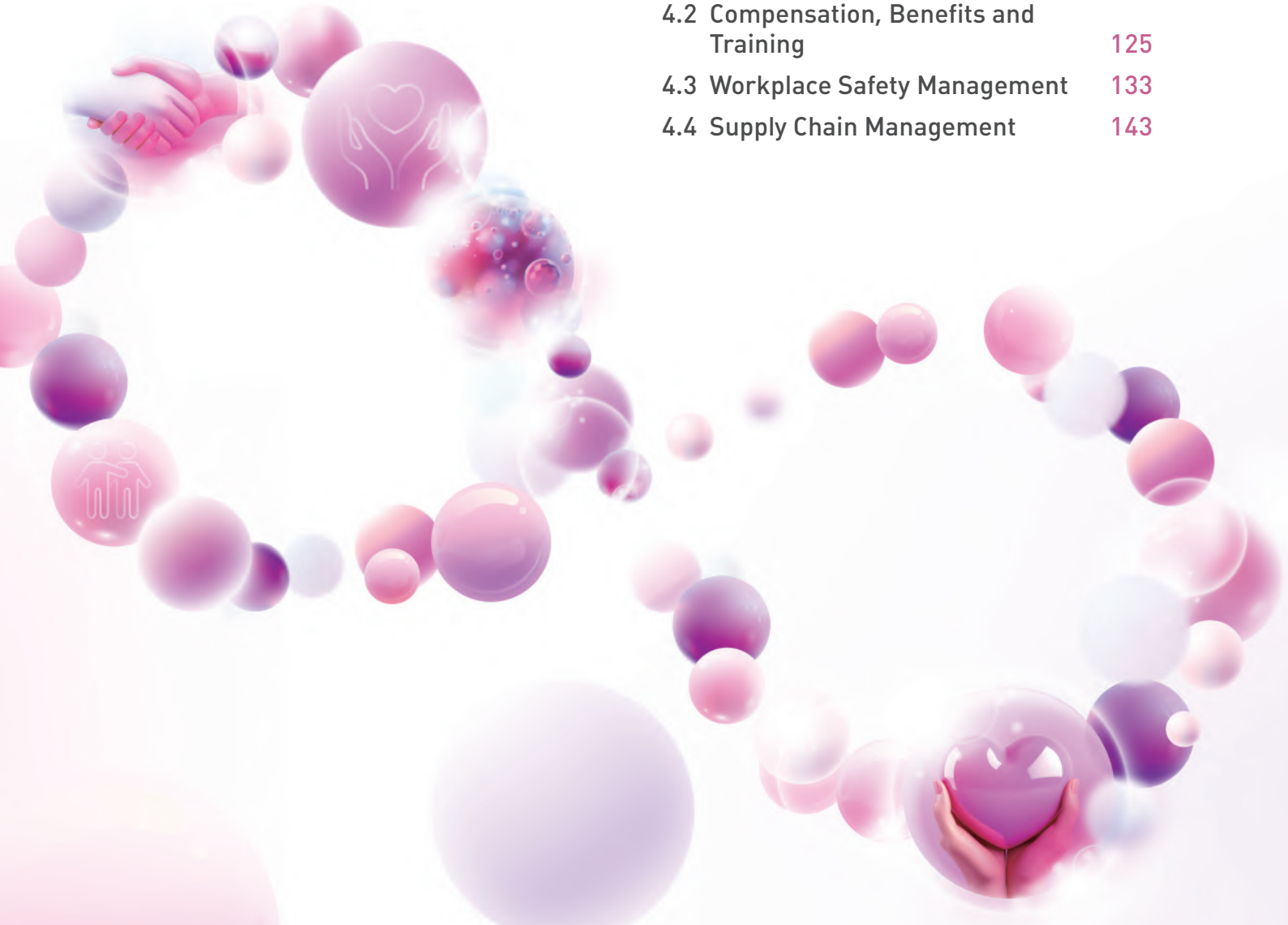


Vision

"Diligence, Perseverance, Frugality and Trustworthiness; To Aim at the Sovereign Good; Perpetual Business Operation; and Dedication to the Society" have been the core spirits of FPC since its establishment. We are committed to sustainable operations and strive for balanced development in areas such as sound salaries and benefits, work-life balance, a healthy work environment, and career planning for our employees. Our goal is to create a safe and enjoyable workplace, promote diversity, and foster a mutually beneficial relationship between labor and management.

Policy and Commitment

FPC has formulated a Safety/Health/Environment Policy with the objective of creating a safe and healthy workplace that prioritizes the well-being of its employees. The policy aims to prevent occupational accidents, ensure the safety and health of workers, and ultimately achieve the goal of zero accidents. The Chairman of FPC signed the new Human Rights Policy in August 2019, and the Diversity and Inclusion Policy and Modern Slavery Statement in March 2023. We are committed to never engaging in forced labor, prohibiting child labor and illegal labor, and preventing discrimination and workplace bullying. We respect different perspectives and values and strive to create an environment where diverse talents can unleash their potential, thereby enhancing our advantages.

Material Topic: Occupational Health and Safety

International Framework and Indicators: GRI 403 Employee Health and Safety, SASB: Workforce Health & Safety, Operational Safety, Emergency Preparedness & Response

Impact Explanation

Definition: Management of worker environment and health at FPC

Impact Explanation: Chemical manufacturing workers are susceptible to a variety of health and safety hazards due to exposure to heavy machinery or hazardous substances. FPC prioritizes workplace health and safety management, including preventing occupational accidents, ensuring the health and safety of workers, and enhancing emergency response capabilities. These measures aim to minimize operational disruptions, facility damage, reputation damage, costs of healthcare and regulatory violations.

Actual | Potential | Positive | Negative

Management Approach

Organize periodic tracking checks of the occupational safety and health management system

2023 Performance Tracking

- All complexes in Taiwan have completed the verification process for the ISO 45001:2018 and CNS 45001:2018 occupational health and safety management systems.
- Formulate a plan for occupational safety and health management, and implement safety and health management through documented procedures and PDCA systematization annually.
- Review 7 safety and health management performance indicators annually, with an average performance of 94.77 points.

Achieved

Short-term Targets (1 to 3 years)

- Continuously conduct periodic tracking checks of the occupational safety and health management system to ensure its effectiveness.
- Review 7 safety and health management performance indicators annually.

Medium and Long-term Targets (More than 3 years)

Zero occupational accidents and hazards

Tracking and improvement of occupational safety and health violations

2023 Performance Tracking

- A total of 1,447 cases were filed for investigation, and related improvement measures were proposed, such as rewarding instead of disciplining contractors for workplace safety incentives, supervisor inspections for high-risk or non-routine operations, independent inspections and double-checks of fire safety equipment, and the organization of parallel inspection projects (e.g., air safety management for instruments, and safety management of organic peroxide storage facilities, etc.), resulting in an improvement rate of 100%.
- Quarterly meetings of the Occupational Safety and Health Committee are held in each complex to oversee the management and enhancement of occupational safety incidents.

Ongoing

Short-term Targets (1 to 3 years)

Quarterly meetings of the Occupational Safety and Health Committee are held in each complex to continuously track the improvement of non-compliance cases until the relevant risks are eliminated.

Medium and Long-term Targets (More than 3 years)

Zero occupational accidents and hazards

Prevention of occupational diseases

2023 Performance Tracking

- Special health hazard operation is divided into four levels, with a total of 40 personnel undergoing health monitoring. The personnel inspection rate has reached 100%.
- According to the on-site assessment, there are no high-risk workplaces with suspected human-caused hazards in FPC's complexes.
- Occupational medical specialists have been arranged to assess health risks for pregnant, lactating, and postpartum female colleagues. Currently, there are 14 individuals under care, all of whom are classified as low-risk.

Achieved

Short-term Targets (1 to 3 years)

- Ensure that the on-site working environment complies with regulatory requirements and inform employees of the test results. Conduct an occupational disease hazard assessment every three years.
- Arrange for professional doctors to visit the site and gain a practical understanding of the work environment, employee work habits, and safety protocols.
- No cases of occupational diseases occurred.

Medium and Long-term Targets (More than 3 years)

No cases of occupational diseases occurred

Management Approach

Sound health examination and cloud system

2023 Performance Tracking

- Arrange employee health checks annually, with a completion rate of 94%.
- Four additional items for health checks, including α-fetoprotein, carcinoembryonic antigen, oral cancer screening, and resting electrocardiogram, are paid for by the Company.
- Set up a cloud health management system named FPC Health Cloud.

Achieved

Short-term Targets (1 to 3 years)

- Arrange employee health checks annually.
- Ensure that employees have convenient access to preliminary medical treatment and health consultation services.

Medium and Long-term Targets (More than 3 years)

- Ensure that employees have convenient access to health-related information.
- Continuously enhance the functionality of the cloud-based health management system and integrate multiple check items.

Strengthen health promotion and awareness through seminars

2023 Performance Tracking

Actively promote weight loss and smoking cessation programs, and enhance the promotion of healthy eating and chronic disease education. A total of 56 sessions were conducted.

Achieved

Short-term Targets (1 to 3 years)

Provide employees with a variety of health information and organize diverse health seminars by inviting physicians from Chang Gung Hospital, local health centers, lecturers from Chang Gung Biotechnology, and occupational physicians.

Medium and Long-term Targets (More than 3 years)

- Provide employees with health care knowledge to sustain a healthy lifestyle.
- Reduce the risk of chronic diseases such as metabolic syndrome.

Stakeholder Groups

Employees

Engagement channels and effectiveness

- Announce the management policies and the promotion effectiveness of occupational health and safety from time to time. Set up the employee feedback mailbox to encourage employees to make suggestions at any time, so as to optimize the management operation.
- Provide health checks information through the FPC Health Cloud app and track the results of special checkups for the prevention of occupational diseases to protect the health of employees.

Material Topic: Public Safety at All Complexes

International Framework and Indicators: GRI 413 Local Communities, SASB: Community Relations, Operational Safety, Emergency Preparedness & Response

Impact Explanation

Definition: FPC aims to improve industrial safety by effectively managing and maintaining the safety of offices, complexes, surrounding communities, and public safety.

Impact Explanation: Complexes brings economic benefits to the community, but also faces environmental, health and safety challenges. Environmental pollution can jeopardize the health of residents, while technical malfunctions or human errors can result in accidents such as explosions or leaks, posing a risk to the safety of surrounding communities and people. FPC formulates daily management and contingency mechanisms for complexes. We also take measures to prevent unsafe actions and behaviors by personnel and strengthen the inspection and checkpoints of mechanical equipment to minimize the impact of abnormal incidents on operations, finances, legal matters, and reputation.

Actual	Potential	Positive	Negative

Management Approach

Top 10 high-risk operations management

2023 Performance Tracking

- Executives of each complex conduct monthly autonomous inspections from time to time. In 2023, a total of 21,339 abnormal cases were identified during these inspections.
- Fines of NT$140 thousand and NT$8,280 thousand were levied against non-compliant employees and contractors, respectively, in order to ensure that all construction and operations were carried out in accordance with the regulations.

Achieved

Short-term Targets (1 to 3 years)

- Conduct autonomous inspections and follow up on any abnormal cases for improvement from time to time.
- Executives at all levels must check whether employees and contractors are carrying out the work in accordance with the established SOP and JSA for high-risk hazardous operations and areas on the construction site.

Medium and Long-term Targets (More than 3 years)

Identify areas of concern in work safety management, mitigate risks, and prevent work safety accidents by analyzing inspections of high-risk operations.

Installation of pipe rack inspection walkways

2023 Performance Tracking

To ensure the safety of pipeline inspection personnel, inspection walkways are being installed in 239 sections of the pipe rack. Currently, 185 sections have been completed, covering a total length of 12,644 meters.

Achieved

Short-term Targets (1 to 3 years)

The remaining 54 sections are expected to be established by the end of 2025.

Medium and Long-term Targets (More than 3 years)

By establishing inspection walkways and implementing pipeline inspection operations, the potential for pipeline leaks and hazards during the inspection process can be minimized.

Process hazard analysis

2023 Performance Tracking

A Process Hazard Analysis (PHA) is conducted to enhance hazard recognition capability in each complex to identify process errors.

Achieved

Short-term Targets (1 to 3 years)

Implementation of start/stop procedures, normal operations (e.g., absorber regeneration, filter changeover), and loading/unloading of the first three major process hazards inspection.

Medium and Long-term Targets (More than 3 years)

Analyze possible process hazards and review and revise operating procedures to improve site operation safety.

Management Approach

Emergency response and disaster drill in complexes

2023 Performance Tracking

- Each complex has an emergency response mechanism and conducts 144 emergency response drills every six months, covering various scenarios.
- Collaborated with the EPA to conduct 136 no-warning test drills on controlled chemicals.

Achieved

Short-term Targets (1 to 3 years)

- Conduct semi-annual fire rescue and emergency response drills.
- Conduct no-warning test drills on controlled chemicals from time to time
- Ensure that all personnel are familiar with the plant's emergency response mechanism and implementation.

Medium and Long-term Targets (More than 3 years)

Ensure that all personnel are familiar with the plant's emergency response mechanism and implementation.

Stakeholder Groups

Shareholders and Investors

Engagement channels and effectiveness

- The annual shareholders' meeting took place on May 30, 2023, to provide a report on the Company's operational safety management and address any related concerns.
- Regular monthly performance presentation meetings are held.
- Four investor conferences were held in February, May, August, and November 2023 to disclose the overall operational status.

Experts and Scholars

Communicate plant safety improvement issues and consult on innovative process technologies as reference for plant improvement through meetings and e-mails from time to time. In 2023, we have mainly communicated more on engineering practical techniques (e.g. construction framing and inspection guidelines), AI techniques in work areas or workplaces, etc., with a view to optimizing the techniques and ensuring public safety in complexes.

Residents in the Operation Area

The President's Office at Complex and the Administration Division are responsible for regularly communicating with residents, with a frequency of approximately 12,000 times per year or more.

4.1 Employee Profile

4.1.1 Manpower Structure 2-7 2-8

FPC had a total of 6,393 employees in 2023 who were all full-time employees, of whom 6,162 were permanent employees, accounting for 96.4% of the total number of employees, and 231 (3.6% of total employees) were temporary employees such as consultants, contract employees, and part-time students workers, which was the same as the number of 6,379 last year. Due to the characteristics of the industries to which FPC belongs, the ratio of male to female employees is approximately 9.2:1. Meanwhile, the average age of employees is 44.3 years old, while the average length of service is 18.3 years. Our employees are mostly in the 40 to 49 years old age group, indicating that our colleagues put their trust in FPC and have developed a sense of belonging at FPC.

FPC Employee Information (Note 6)

Category	2022							2023						
	Gender			Location				Gender			Location			
	Female	Male	Total	Northern Taiwan	Central Taiwan	Southern Taiwan	Eastern Taiwan	Female	Male	Total	Northern Taiwan	Central Taiwan	Southern Taiwan	Eastern Taiwan
Number of Employees	634	5,745	6,379	678	2,696	2,867	138	667	5,726	6,393	717	2,675	2,868	133
Number of Permanent Employees (Note 1)	591	5,605	6,196	643	2,614	2,803	136	602	5,560	6,162	675	2,586	2,769	132
Number of Temporary Employees (Note 2)	43	140	183	35	82	64	2	65	166	231	42	89	99	1
Number of Full-Time Employees (Note 3)	634	5,745	6,379	678	2,696	2,867	138	667	5,726	6,393	717	2,675	2,868	133
Number of Part-Time Employees (Note 4)	0	0	0	0	0	0	0	0	0	0	0	0	0	0
Non-Guaranteed Hours Employees (Note 5)	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Note 1: Permanent employee: employee with a contract for an indeterminate period (i.e., indefinite contract) for full-time or part-time work.

Note 2: Temporary employee: employee with a contract for a limited period (i.e., fixed term contract). The contract ends when the specific time period expires, or when the specific task or event that has an attached time estimate is completed (e.g., the end of a project or return of replaced employees).

Note 3: Full-time employee: employees whose working hours per week, month, or year are defined according to national law or practice regarding working time.

Note 4: Part-time employee: employee whose working hours per week, month, or year are less than the number of working hours for full-time employees.

Note 5: Non-guaranteed hours employee: employee who is not guaranteed a minimum or fixed number of working hours per day, week, or month, but who may need to make themselves available for work as required.

Note 6: FPC's employee information was adjusted in 2022 due to the amendment of GRI 2021, so the information collection period was 2022 to 2023.

Note 7: As of December 31, 2023, FPC has a total of 6,162 permanent employees. The average monthly total number of permanent employees remained stable at 6,179 with no significant fluctuations.

The non-employees of FPC are contractors, who are also part of the workers, and participate in the type of work mainly to assist the Company's environmental cleaning, electrical and mechanical engineering maintenance and other operations. The total number of contractors was 5,315, and the ratio of employees to contractors was 54.6%:45.4%.

In 2023, a total of 248 regular employees resigned from FPC, including 68 employees (27.4%) who retired early and 60 employees (24.2%) who officially retired. Over the past three years, the annual employee turnover rate has remained below 4.2%, and the overall turnover rate after deducting all retirees has been about 2.9%.

Age and Area Distribution of Resigned Employees in 2023

Category	Group	Female		Male	
		Number of Persons	Percentage (%)	Number of Persons	Percentage (%)
Age	29 and below	7	0.11%	35	0.57%
	30 to 49	15	0.24%	65	1.05%
	50 and above	2	0.04%	64	1.04%
	Retirement	5	0.08%	55	0.89%
Area	Northern Taiwan	12	0.19%	31	0.50%
	Central Taiwan	6	0.10%	73	1.18%
	Southern Taiwan	11	0.18%	109	1.77%
	Eastern Taiwan	-	-	6	0.10%
Total		29	0.47%	219	3.55%
Percentage of employee turnover by gender		11.69%		88.31%	

Note 1: Turnover rate (%) = number of employee turnover of each group/ total number of regular employees as of the year. (The total number of regular employees as of 2023 is 6,162.)

Note 2: Percentage of employee turnover by gender (%) = number of employee turnover by gender / total number of employees

Employee Turnover at FPC in the Last 3 Years (Note)

2021 3.2%

2022 4.2%

2023 4.0%

Note: Annual average turnover rate (%) = (retirement + death + severance + other turnover factors)/total number of employees as of the year (the total number of regular employees as of 2023 is 6,162).

4.1.2 Talent Recruitment 202

FPC's new employees for 2023 totaled 135, of which 116 (85.9%) were under the age of 30.

FPC New Employees of Regular Employees by Age and Region in 2023

Category	Group	Female		Male	
		Number of Persons	Percentage (%)	Number of Persons	Percentage (%)
Age	29 and below	26	0.42%	84	1.36%
	30 to 49	4	0.07%	21	0.34%
	50 and above	0	0.00%	0	0.00%
Area	Northern Taiwan	18	0.29%	19	0.31%
	Central Taiwan	6	0.10%	52	0.83%
	Southern Taiwan	6	0.10%	33	0.54%
	Eastern Taiwan	-	0.00%	1	0.02%
Total		30	0.49%	105	1.70%
Percentage of new employees by gender [Note 1]		22.22%		77.78%	

Note 1: Percentage of new employees (%) = number of new employees of each group/ total number of regular employees as of the year. (The total number of regular employees as of 2023 is 6,162.)

Note 2: Percentage of new employees by gender (%) = number of new employees by gender / total number of employees

Diversified Composition

FPC expands talent enrollment sources through multiple channels, and candidates are selected with equal treatment for all regardless of factors, such as age, ethnicity, gender, sexual orientation, religion, partisanship, birthplace, marriage, appearance, or physical and mental disabilities. The number of violations of human rights or discrimination in 2023 was zero. For the description of FPC's diversified composition of employees and performance results, please refer to the following table:

Diversity	Description	2023 Performance Results
Age	Although FPC is in a traditional industry, we actively introduce artificial intelligence and continue to implement R&D innovation. In order to boost enthusiasm and energy, we are recruiting more employees under the age of 30 (accounting for about 85.9% of the new recruits) to add new blood to our workforce and strengthen our business foundation, which is conducive to the long-term development of FPC and serves as the backbone of sustainable development.	FPC recruited 135 new employees, with 116 new employees aged under 30 years old, accounting for 85.9% of the total number of new employees
Disability	FPC not only employs more people with physical and mental disabilities than as required by the law, but also provides them with benefits that are the same as those of new employees in the same position, so as to protect their rights and interests.	FPC employs 61 people with physical and mental disabilities, which equivalent to 80 people actually recruited according to standard calculation. This figure is higher than that required by the law.
Gender	FPC attaches importance to gender equality. Although the proportion of male employees is higher than that of female employees due to industrial attributes, promotion channels have been institutionalized and we continue to pay attention to the performance of female employees. Therefore, the number and proportion of female supervisors in management level 2 and above have increased year by year, demonstrating the company's efforts in gender equality.	The number of female supervisors in the FPC's management level 2 and above was 115, accounting for 7.8% of total supervisors in the management level 2 and above.
Local Residents	FPC gives priority to local residents in the recruitment of new employees. In addition, FPC also actively nurtures outstanding local supervisors.	The percentage of local residents at FPC's senior management level has remained above 60% over the past three years.

FPC's Diverse Manpower Structure in 2023

Category	Group	Female		Male		Total
		Number of Persons	Percentage within the Group (%)	Number of Persons	Percentage within the Group (%)	
Position	Management supervisor and above	1	0.2%	44	0.7%	45
	Management levels 1 and 2	114	18.9%	1,312	23.6%	1,426
	First-line supervisor level	121	20.1%	1,571	28.3%	1,692
	Assistant and staff level	366	60.8%	2,633	47.4%	2,999
	Total	602	100.0%	5,560	100.0%	6,162
Age	29 and below	78	13.0%	494	8.9%	572
	30 to 49	347	57.6%	3,267	58.7%	3,614
	50 and above	177	29.4%	1,799	32.4%	1,976
	Total	602	100.0%	5,560	100.0%	6,162
Length of Service	Less than 10 years	194	32.2%	1,725	31.1%	1,919
	11 to 30 years	273	45.3%	3,132	56.3%	3,405
	More than 30 years	135	22.5%	703	12.6%	838
	Total	602	100.0%	5,560	100.0%	6,162
Education	Doctoral degree	6	1.0%	32	0.6%	38
	Master's degree	119	19.8%	852	15.3%	971
	Bachelor's degree	70	11.6%	891	16.0%	961
	Others	407	67.6%	3,785	68.1%	4,192
	Total	602	100.0%	5,560	100.0%	6,162

Description of FPC's positions:

Management supervisor and above	President, Executive Vice President, Senior Vice President, Vice President, Assistant Vice President, etc.
Management level 1	Plant Manager (Department Manager), Deputy Plant Manager (Deputy Department Manager), Senior Engineer (Senior Administrator), etc.
Management level 2	Section Chief, Deputy Section Chief, Engineer (Administrator), etc.
First-line supervisor level	Shift Supervisor, Junior Engineer (Junior Administrator), Foreman, etc.
Assistant and staff level	Staff and clerks whose titles are fixed according to their appointments

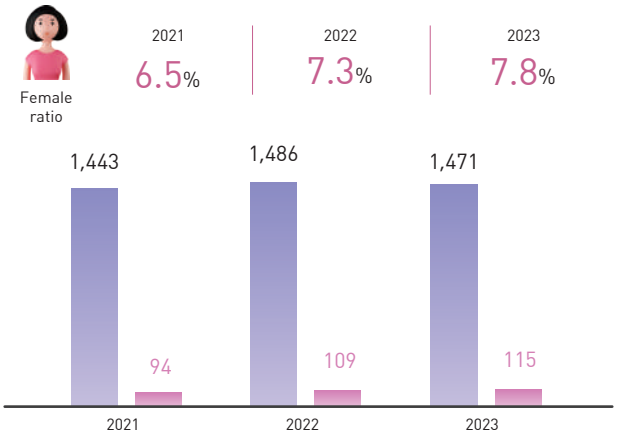
Number of Employees with Disabilities at FPC in 2023

Number of People with Disabilities Employed As Required by the Law (A)	Actual Number of People with Disabilities Employed by FPC (B)				Excess or Insufficiency (B-A)
	Mild	Moderate	Severe or Above	Total	
61	36	14	30	80	19

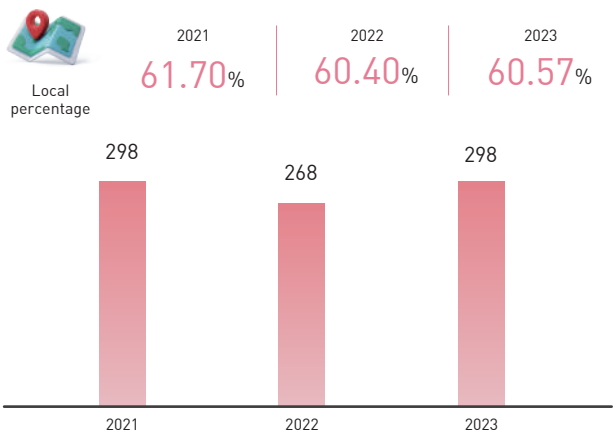
Note 1: According to Article 38 of the People with Disabilities Rights Protection Act, any company whose total number of employees is no less than 67 shall employ people with disabilities with capability to work, and the number of employees with disabilities shall be no less than 1 percent of the total number of the employees (under labor insurance), and no less than 1 person.

Note 2: The People with Disabilities Rights Protection Act stipulates that when a company employs people with severe disabilities, one person with severe disabilities shall be counted as two persons.

Number and Proportion of Female Supervisors in the Management Level 2 and Above at FPC



Number and Percentage of Local Residents Employed as Senior Executives at FPC



Note: Senior executives are defined as the proportion of first-level executives or above whose household registration is in the same county or city as the complex.

Talent Recruitment Channels

In order to actively recruit diverse talents to enhance FPC's workforce, we take the initiative in sending invitations to new graduates from public and private colleges and universities to apply for the jobs we have available through campus recruitments, job banks, and other channels. Meanwhile, job vacancies are simultaneously announced at FPC and posted on our official talent recruitment website. After the pandemic restrictions were lifted in 2023, there was a decrease in the demand for industry manpower compared to 2022. This was primarily due to the uncertain economic conditions, which resulted in a temporary postponement of hiring.

FPC Talent Recruitment Website

In order to increase exposure and diversify talent recruitment channels, FPC has set up a talent recruitment website to provide easily accessible information about job opportunities and requirements. Talents who are interested in FPC and have great ambitions are welcome to apply and join us to create a better future together.

FPC Talent Recruitment

4.2 Compensation, Benefits and Training

4.2.1 Compensation and Benefits 202 401

In order to attract outstanding talents from different sectors, FPC provides competitive remuneration packages. The salary of employees includes basic salary, efficiency bonus, various allowances, three-festival bonus and supervisor bonus, etc. According to operational performance and personal performance, yearend bonuses ranging from 3 to 7 months will be issued every year. The actual employment cost in 2023 was NT$ 1,545.8 thousand per person on average, and the total employment cost was over NT$9.55 billion.

FPC Employment Cost in 2023

Gender	Number of employees	Employment cost per person in 2023 (NT$ Thousand/ person)	Total employment cost in 2023 (NT$ Thousand)	Average employment cost in 2023 (NT$ Thousand/ person)
Male	5,560	1,582.2	8,797,032	
Female	602	1,210.6	728,781	1,545.8
Total	6,162	-	9,525,813	

In 2023, the overall female-to-male salary ratio was 1:1.26. This is due to the majority of on-site manufacturing workers being male, which results in slightly higher salaries for men in the same positions. However, for managerial positions and above, the female-to-male salary ratio was 1:0.53, indicating that female salaries were higher than those of their male counterparts. The salary of FPC mainly depends on the professional ability of colleagues, and there is no inequality between men and women.

Remuneration Ratio of Male to Female Employees in Similar Positions and on Similar Ranks at FPC

Year	—	2021	2022	2023
Gender	Female	Male	Male	Male
Management supervisor and above	1	0.59	0.56	0.53
Management levels 1 and 2	1	1.29	1.30	1.29
First-line supervisor level	1	1.21	1.24	1.31
Assistant and staff level	1	1.16	1.16	1.15

The ratio of the minimum monthly salary to the statutory minimum basic wage for FPC's new recruits in 2023 was 103.2%, and the ratio of the average monthly salary to the statutory minimum basic wage was 164%. The actual salary will be adjusted according to the education and work experience of individual employees.

Average Monthly Salary and the Statutory Minimum Basic Wage for FPC's New Recruits in 2023

Unit: NT$

Monthly minimum wage in 2023 announced by the Ministry of Labor

26,400

100 %

Average monthly salary of newly recruited staff

Female 43,308 Male 43,252

164 %

Based on the overall business operation, FPC sets the same standards for year-end bonus and salary adjustment for all regular employees in order to encourage them to bring potential and professional abilities into full play, so as to improve our operational performance. Comparisons on the number of non-supervisory regular employees and their average annual salary and median annual salary are listed below:

Average and Median Annual Salaries of Employees at FPC

Item	2021	2022(A)	2023(B)	Ratio (C=B/A)
Non-supervisory regular employees (people)	6,293	6,428	6,367	99%
Average annual salary (NT$)	1,506,068	1,398,250	1,363,737	98%
Median annual salary (NT$)	1,402,801	1,270,433	1,237,783	97%

Note: FPC reports information on the number of employees whose length of service is six months or more and their salaries in accordance with the regulations set forth by TWSE.

The annual total compensation ratio for 2023 is 14.47, representing a slight increase compared to 2022. The percentage increase in the annual total compensation ratio is 46.8%, which is a significant rise of 86.93% compared to 2022, marking a shift from negative growth to positive growth. This change can be attributed to the reduction in the distribution period for year-end bonuses, which decreased from 7 months in 2021 to 4.06 months in 2022, resulting in negative growth in the total compensation ratio. However, in 2023, the year-end bonus was distributed for 3 months, slightly lower than the 1.06 months in 2022, leading to a shift from negative growth to positive growth.

Annual total compensation ratio of FPC

	2021	2022	2023
Annual total compensation ratio (Note 1)	12.45	14.27	14.47
Percentage increase in annual total compensation ratio (Note 2)	60.10%	-40.13%	46.80%

Note 1: Annual total compensation ratio = ratio of annual total compensation of the highest paid individual / median annual total compensation of other employees

Note 2: Percentage increase in annual total compensation rate = percentage increase in annual total compensation of the highest paid individual / percentage increase in annual total median compensation of all employees (excluding the highest paid individual)

To take care of its employees, FPC provides a wide range of employee benefits and pays for various expenses such as labor insurance, health insurance, and pension (including 6% of the new system) in accordance with the law. The total employee benefit expenses in 2023 amounted to NT$10,443,397 thousand.

FPC's Total benefit and welfare expenses in 2023
NT$ 10,443,397 thousand

Note: The disclosure is based on our 2023 parent company only financial statements.

To implement the concept of a happy workplace, FPC has not only established breastfeeding rooms at each complex, but also promoted the unpaid parental leave program to provide parental leave, enabling the eligible employees to apply based on their needs. These measures are not only a part of fulfilling corporate social responsibility, but also fulfilling our commitment to employee happiness and family harmony. We firmly believe that through such measures, employees can better balance work and life, thereby enhancing company performance and value.

In 2023, 14 employees applied for unpaid parental leave and 4 employees were actually reinstated in the year, while the other 10 employees are still on parental leave without pay. In addition, 8 employees were reinstated in 2022, of which a total of six were retained for more than one year by the end of 2023, representing a 75% retention rate.

Unpaid Parental Leave Applications and Reinstatement Rates at FPC in Recent Three Years

Item	2021			2022			2023		
	Female	Male	Total	Female	Male	Total	Female	Male	Total
Number of applications for unpaid parental leave by eligible employees	27	249	276	36	423	459	29	402	431
Actual number of applications for unpaid parental leave	7	8	15	5	1	6	9	5	14
Number of employees reinstated in the current year (A)	4	4	8	6	3	9	6	1	7
Number of employees who applied for reinstatement in the current year (B)	4	4	8	5	3	8	6	1	7
Reinstatement rate (%) (B/A)	100%	100%	100%	83.3%	100%	88.9%	100%	100%	100%
Total number of employees on parental leave who are still employed twelve months after returning to work	3	1	4	3	4	7	3	3	6
Retention rate (%) [Note 2]	75%	100%	80%	75%	100%	87.5%	60%	100%	75%

Note 1: Reinstatement rate (%) = number of employees who applied for reinstatement in the current year (B) / number of employees reinstated in the current year (A) In 2023, 7 employees were expected to be reinstated, and all 7 were actually reinstated, of which 4 were employees who applied for leave without pay in 2023 and were reinstated in the same year, representing a reinstatement rate of 100%.

Note 2: "Retention rate" indicates the rate of employees who remain at FPC for more than one year after taking unpaid parental leave. A total of 8 employees were reinstated in 2022, and as of the end of 2023, a total of 6 employees retained for more than one year, representing a 75% retention rate.

Note 3: There was an error in the reinstatement statistics for 2022, which is corrected in the 2023 Report.

In addition, in order to encourage employees to have children, FPC has started offering incentives for childbirth since July 2022, including delicate lucky gift bags for employees or their spouses who are pregnant or giving birth, a cash gift of NT$20,000 for each newborn, and a monthly childcare allowance of NT$2,000 for each baby until the age of 6, so as to express blessings and support for new life.

In 2023, a total of 123 FPC babies benefited from the incentive program, with a total of NT$2,460 thousand in childbirth cash gifts. Also, 157 employees applied for childcare subsidies, with a total of NT$ 2,088 thousand issued. We hope that these incentives can further improve the happiness and productivity of employees as well as make meaningful contributions to society.

4.2.2 Training and Performance Management 404

The scope of performance evaluation includes all regular employees. Individual employee performance is regularly assessed every month, which is then used as the benchmark for efficiency bonus. On the other hand, the evaluation results are compiled at the end of the year as a reference for managers to carry out year-end performance evaluation of employees in order to ensure the objectivity of such evaluation. In 2023, the proportion of employees of all genders and ranks in FPC's regular evaluation was more than 99%.

Proportion of Employees Regularly Evaluated in Recent Three Years

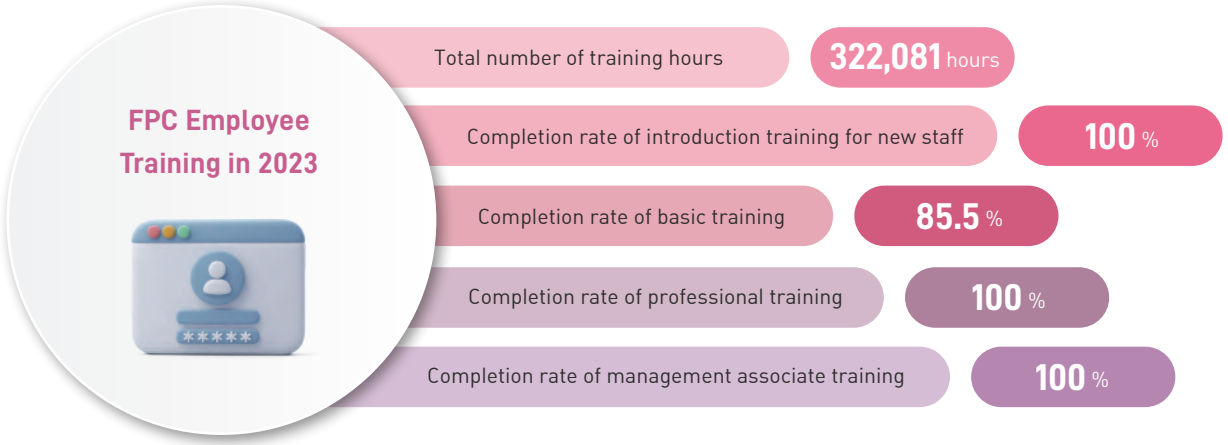
Unit: %

Year	2021			2022			2023		
Position	Female	Male	Total	Female	Male	Total	Female	Male	Total
Management levels 1 and 2	1.5%	20.8%	22.3%	1.7%	21.1%	22.8%	1.9%	21.3%	23.2%
First-line supervisor level	1.8%	25.5%	27.3%	1.8%	25.1%	26.9%	2.0%	25.5%	27.5%
Staff level	6.0%	43.5%	49.5%	6.0%	43.5%	49.5%	5.9%	42.7%	48.6%
Total	9.3%	89.8%	99.1%	9.5%	89.7%	99.2%	9.8%	89.5%	99.3%

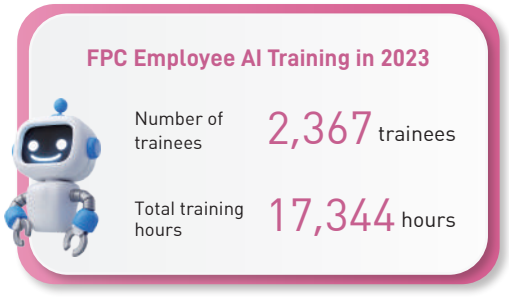
Note: Proportion of employees regularly evaluated (%) = Number of employees evaluated (persons)/total number of employees (persons)

Employees with outstanding performance are not only provided with opportunities and channels for promotion and salary increment, but also awarded year-end bonuses based on the business performance and individual employee performance evaluation. Through the aforementioned performance management and encouragement, FPC closely links employee performance and company goals, creating a win-win situation for both FPC and employees.

FPC has developed a set of comprehensive training programs and recorded relevant training data through the electronic training platform in order to implement the objective of providing all-round training for employees.



With the rapid development of AI and big data, FPC has actively incorporated relevant applications of such technologies in recent years to improve operating performance. FPC has assigned employees to participate in the training courses organized by Taiwan AI Academy established by Academia Sinica and Taiwan Data Science Foundation since 2018, so as to keep abreast of the latest trends and applications as well as cultivate AI talents. The number of participants in AI training in 2023 reached 2,367, we expect our trainees to apply the relevant technology, fostering our AI policy.



FPC AI Trainings and Seminars in 2023

	Practical AI Course	Taiwan AI Academy Leadership Program	AI Seminar
Standard Hours	180	360	-
Number of Participants Completing Training	54	7	2,306
Total Hours	9,720	2,520	5,104

To achieve carbon neutrality goals and strive for net zero carbon emissions, each complex has formed a team of green-collar workers. These workers are responsible for carbon management, energy transition, environmental protection, water conservation, and energy efficiency. Our green-collar talents receive ongoing internal and external training to continuously enhance their professional skills.

FPC Green-collar Talent Training in 2023

Greenhouse gas inventory and internal audit

Number of trainees: 63 trainees

Total training hours: 882 hours

FPC Employee Training Hours in Recent Three Years

Unit: hours

Year	2021			2022			2023		
Position	Female	Male	Total	Female	Male	Total	Female	Male	Total
Management levels 1 and 2	11.5	18.4	17.9	7.1	19.0	18.1	16.3	43.5	21.0
First-line supervisor level	27.2	44.8	43.7	22.5	54.1	52.1	36.5	65.4	55.9
Staff level	18.7	58.1	53.3	14.2	50.2	45.9	17.4	56.4	52.5
Company-wide average hours [Note 1]	19.2	45.2	42.7	14.5	44.0	41.1	41.4	63.4	51.6

Note 1: Company-wide average hours = total training hours by rank / company-wide headcount

Note 2: Since FPC's manufacturing process involves the production of petrochemical raw materials, and due to the complicated nature of production equipment and considerations for industrial safety, operators have higher training hours. On-site operations are mainly conducted by male employees, so male employees have clocked more training hours than female employees.

Note 3: In 2022, due to the severity of the COVID-19 pandemic, pandemic prevention measures were strengthened, and therefore the number of training courses was reduced, resulting in a slight decrease in the overall training hours compared with 2021. In 2023, training returned to normal following the lifting of COVID-19 restrictions, leading to an overall increase in training hours compared to 2022.

In addition to basic training, managerial training is organized annually for employees who will soon meet the qualifications for promotion to management levels 1 and 2. In 2023, FPC organized managerial training for a total of 6,240 hours.

Statistics on Training for Management Levels 1 and 2 Officers at FPC in the Past Three Years

Year	2021		2022		2023	
Item	Management level 1	Management level 2	Management level 1	Management level 2	Management level 1	Management level 2
Batch	3	2	2	2	9	19
Hours per batch	32	40	32	32	32	32
Number of participants	23	14	0	10	72	123
Training hours	736	560	0	320	2,304	3,936

Note 1: Training hours (hours) = Hours per batch * Number of participants

Note 2: To strengthen management trainees' in-depth knowledge of FPC's operations and future developments, FPC added required courses such as enterprise competitiveness, international economic analysis, and AI.

Note 3: In 2023, training returned to normal following the lifting of COVID-19 restrictions, leading to an overall increase in training hours compared to 2022.

4.2.3 Employee Communication and Care 2-30 201

FPC complies with the provisions of the Labor Standards Act and other relevant laws and regulations to implement a complete notification procedure and ensure that employees understand their rights and interests in advance. Moreover, we are committed to providing multiple channels of communication, encouraging employees to actively propose innovative ideas, and strengthening communication between employees and management. Employees can make suggestions for better working or living conditions to FPC through organizations such as welfare committees, labor-management meetings, labor unions, and occupational safety and health committees, as well as report problems through complaint channels.

Number of people counseled in 2023
814

We are well aware of the importance of employee work experience and skills in the development of a company. Therefore, through regular care and consultation provided by our employee counselors, we ensure that newly recruited management associates or personnel who are under special conditions can adapt to the working environment promptly, understand the company culture, and be familiar with job requirements. At the same time, we also help employees overcome work and life related difficulties in order to improve job satisfaction, increase employee loyalty, and reduce employee turnover. We believe that these measures will help establish a healthy, stable, and efficient working environment as well as further enhance trust and communication between employees and FPC.

In 2023, FPC had a total of 4,679 employees who were members of the labor union. Even employees who were not union members were still protected by a mutual agreement between labor and management in terms of salary adjustments, year-end bonuses, and other benefits.

Due to the large number of complexes and unions, it is difficult to establish collective agreements for each union. However, the relevant department executives must attend the regular directors and labor-management meetings held by each union. Written demands and suggestions are also regularly reviewed and explained. On material labor issues, the company prioritizes listening to union opinions, with top-level management engaging in discussions and negotiations with the unions to reach a consensus. This practice ensures the implementation of the spirit of the Collective Agreement Act, which mandates that both labor and management conduct collective bargaining based on the good faith principle, thereby protecting employees' rights to collective bargaining. Consequently, the unions have not requested collective negotiations.

Labor-Management Agreement and Employee Unionization Status in 2023

Labor-management meeting	Percentage of employees joining labor unions	Number of labor unions as of the end of 2023
23 sessions	75.9%	5

Human Rights Management

FPC never uses forced labor and prohibits child labor or illegal labor. In 2023, there were no incidents of discrimination based on the race, gender, religion, political party, or sexual orientation, sexual harassment, or bullying in the workplace at FPC. In addition, Chairman Jason Lin signed the new human rights policy in August 2019 and signed FPC's Diversity and Inclusion Policy and Modern Slavery Statement in March 2023.

Diversity and Inclusion Policy

FPC firmly believes in the value of diverse and inclusive workplaces, respects diverse differences, and ensures that equal opportunities are provided to all employees regardless of race, nationality, age, gender, sexual orientation, marriage status, political affiliation, religion, blood type, zodiac sign, and so forth in an effort to create an environment where diverse talents can thrive.

Furthermore, we will continue to consider the current social situation, commit to promoting diversity and inclusion, strengthen multifaceted management and employee profile, as well as support and respond appropriately to different perspectives, values, and needs, so as to enhance our competitive advantage.

Modern Slavery Statement

FPC is committed to combating all forms of modern slavery. In addition to promising not to force employees to work or participate in any other activities, FPC does not impose any restrictions on freedom or any form of exploitation. We comply with the local labor laws and regulations at all operating locations to ensure employee rights and proper working conditions as well as strive to create a working environment that satisfies and respects employees.

We provide equal employment opportunities and firmly oppose discrimination, harassment, and unfair treatment. At the same time, we also respect employee privacy and freedom of association. Additionally, FPC has implemented a number of measures to ensure that all suppliers and contractors comply with modern slavery statement requirements.

We believe that only when employees are treated with respect and fairness can they realize their full potential and make valuable contributions to the company. Therefore, we regularly collect opinions and feedback from employees to understand their needs and views and take measures to improve the working environment and welfare benefits to the best we can.

FPC's Human Rights Education in 2023
44 sessions

Human Rights-related Education and Training Courses in 2023

Complex	Mailiao		Linyuan	Renwu		Hsinkang	Total
Session	18	14	3	4	4	1	44
Topic	How Pensions are calculated and protected	What is AI and how will it impact labor?	What is AI and how will it impact labor?	Introduction to workplace and labor laws	From the Mingyang fire and the RCA case: Examining Taiwan's occupational safety initiatives	Freedom of association from the Labor Union Act, Act for Settlement of Labor-Management Disputes	-
Hours	4	4	8	4	4	2	-
Number of Participants	1,750	1,710	540	937	987	37	5,961
Total Hours	7,000	6,840	4,320	3,748	3,948	74	25,930

For more information on the channels of communication for employees and FPC's human rights policy, items of concern, as well as specific practices and their effectiveness, please refer to our Sustainable Development website.

Sustainable Development Website: Human Rights Policy

Employee Care

Teacher Chang Foundation

In order to improve the mental health and happiness of employees, we collaborate with the Teacher Chang Foundation to arrange for professional counselors to come to the complexes and provide consultations. Employees can make appointments and have one-on-one consultations on the e-interview appointment platform of the "FPC Mobile" app according to their needs, which enhances the psychological care of employees and protects their privacy. A total of 41 interviews were completed in 2023, which was positively received by employees for four consecutive years. We will continue to improve and optimize the existing counseling program according to the needs and feedback of employees.

Number of people receiving consultation in 2023	41
Satisfaction-Recognition for such a form of service provided by FPC (out of 5 points)	4.8
Satisfaction-Improvement on problems after consultation (out of 5 points)	4.7

Employee Retirement Plan

In addition to the labor pension and labor insurance old-age benefits, FPC or the employee welfare committee will also award employees with incentives or medals according to their positions to express thanks for their contributions over the years. For more information on retirement measures, please refer to our website.

In order to appreciate retired employees' contributions to the company, "FPG Retirement Association" was established in 2013, including six branches in Taipei, Yilan, North Taoyuan, Changhua, Chiayi and Kaohsiung, providing retired employees with a platform to participate in leisure activities, communication and making friends to enrich their lives.

In addition to networking activities, retired employees can also become corporate policy advocates, corporate image defenders, and participants in corporate social responsibility feedback to enhance corporate image. According to statistics in 2023, a total of 705 retired employees participated, with a total annual allocation of NT$705,000 (NT$1,000 per person per year).

FPC has implemented a retirement pension system for our employees in compliance with the Labor Standards Act and the Labor Pension Act in Taiwan. Apart from making mandatory contributions to the pensions, FPC also safeguards employees' right to receive pensions in the future by conducting professional retirement pension actuarial calculations and ensuring full coverage.

Item	Labor Pension	
	Old System	New System
Legal Basis	Labor Standards Act	Labor Pension Act
Contribution Ratio	Employers shall appropriate labor pension reserve funds ranging between 2% and 15% of the total monthly wages of their employees and deposit such amount in a designated account of the Bank of Taiwan. When employees meet the requirements for retirement and apply for pensions from their employers, the employers can make payments from the employees' pension reserve accounts.	Employers shall contribute no less than 6% of the employee's monthly wages to the pension on a monthly basis, which is deposited into the employee's individual labor pension account established by the Bureau of Labor Insurance. The ownership of this account belongs to the employee. When the employee reaches the age of 60, they can apply to the Bureau of Labor Insurance to withdraw the accumulated principal and earnings from their individual account.
Employee Contribution Ratio	19.2%	80.8%
Claiming Conditions	I. Application for Retirement: ▪ Where the worker attains the age of fifty-five and has worked for fifteen years. ▪ Where the worker has worked for more than twenty-five years. ▪ Where the worker attains the age of sixty and has worked for ten years. II. Forced Retirement: ▪ Where the worker attains the age of sixty-five. ▪ Where the worker is unable to perform his/her duties due to disability.	The eligibility age is sixty, regardless of seniority. Where the worker attains the age of sixty and whose seniority is less than fifteen years shall claim for a lump-sum pension payment; whose seniority exceeds fifteen years may choose to receive either monthly pension payments or a lump-sum pension payment.
Contribution Status for 2023	Accumulated contribution of NT$110,231,000	—
Item	**Retirement Incentive Plan**	
Bonus	FPC provides retirement souvenirs. Additionally, based on the resolution of the welfare committee in each complex, gift vouchers ranging from a few NT$ hundred to a few NT$ thousand are given to retired employees in the complex.	

Note 1: The new system was implemented on July 1, 2005. Until June 30, 2010, our FPC provided employees with the option to choose between the new and old labor retirement systems. However, individuals who joined after July 1, 2005 are required to be enrolled in the new system.

Note 2: Approximately 33.6% of our employees choose to participate in the retirement plan on a voluntary basis.

FPC Website: Employee Welfare

4.3 Workplace Safety Management

4.3.1 Occupational Health and Safety

2-25 403

FPC has set up an organizational structure with division of responsibilities and powers and established occupational safety and health management system according to law. Meanwhile, FPC also promotes occupational health and safety management through formulating safety and health objectives, management regulations and plans, process safety management implementation, and employee health care services as well as using a risk-based approach, in an effort to provide a healthy and safe working environment for all factory employees.

To this end, all complexes have passed the ISO 45001: 2018 and CNS 45001: 2018 Occupational Safety and Health Management System Certification. In 2023, we will also continue to perform regular follow-up inspections of the occupational safety and health management system to ensure the effectiveness and continuous improvement of our management system.

The workers defined by the Occupational Safety and Health Management System (OSHMS) include our employees and contractors, of which the number of employees accounts for about 54.6% and the number of contractors accounts for about 45.4%. The management scope covers all workplaces and commuting routes for employees. At workplaces, contractors receive instructions from employers (or those acting on behalf of employers) to handle labor-related matters.

Each department at FPC formulates an annual occupational health and safety management plan, and implements health and safety management based on the documented procedures and a PDCA model.

In recent years, FPC has been progressively integrating AI into occupational health and safety management and keeping track of its performance with the safety and health performance indicators in hopes of shaping a safety culture, thereby building the safest work environment in order to achieve the goal of "Zero public injury, Zero disaster".

Hazard Identification and Risk Assessment

FPC uses organizational and systematic analytical techniques to conduct workplace hazard and risk assessments and takes preventive measures accordingly to prevent and improve any unsafe environment or behavior during operation.

Employees	▸ If any potential hazards or risks are identified in the workplace, employees should report them to their supervisor or submit them through the close call report form to address the relevant occupational safety and health concerns. ▸ When an accident is discovered or occurs, the employee who reports it in accordance with regulations will not be penalized. Those who conceal or fail to report it will be dealt with according to the Operation Measures for Occupational Safety Rewards and Punishments.
Investigation Team	▸ Case investigation ▸ Review the degree of impact and likelihood of occurrence, and determine the risk level of major potential hazards. ▸ Identify the direct, indirect, and root causes.
Operations Management Unit	▸ Feedback on revising standard operating procedures (SOPs), process conditions, distributed control system (DCS) parameters, and other process and operational improvements. ▸ Enhance the inherent safety of equipment, pipelines, and other facilities within the plant or implement additional protective measures and strengthen management practices (e.g. incorporating into the key items of plant self-inspection, key points of supervisor's inspection, and producing teaching materials for training, etc.).

In 2023, FPC's each department reported a total of 322 close call incidents. All of these incidents have been recorded in our computer system for case management and prompt improvement. Additionally, incentive rewards have been given to employees to encourage them to proactively identify potential hazards. Moreover, if employees find themselves in a situation where harm has occurred or may occur, they have the right to assess the situation and choose to retreat in order to ensure their own safety. This right is not subject to any disciplinary actions.

Hazard Identification and Risk Assessment Process

Risk Matrix

Severity Level	Likelihood of Occurrence (times/year)				
	$p > 10^{-1}$	$10^{-1} \geqq p > 10^{-2}$	$10^{-2} \geqq p > 10^{-3}$	$10^{-3} \geqq p > 10^{-4}$	$p \leqq 10^{-4}$
	Level 1: Very frequent	Level 2: Very likely	Level 3: Unlikely	Level 4: Very Unlikely	Level 5: Never
Level 1: Large scale	Level 1: Very High Risk	Level 1: Very High Risk	Level 2: High Risk	Level 2: High Risk	Level 3: Moderate Risk
Level 2: Serious	Level 1: Very High Risk	Level 2: High Risk	Level 2: High Risk	Level 3: Moderate Risk	Level 4: Low Risk
Level 3: Material	Level 2: High Risk	Level 2: High Risk	Level 3: Moderate Risk	Level 4: Low Risk	Level 4: Low Risk
Level 4: Critical	Level 2: High Risk	Level 3: Moderate Risk	Level 4: Low Risk	Level 4: Low Risk	Level 5: No Risk
Level 5: Ignorable	Level 3: Moderate Risk	Level 4: Low Risk	Level 4: Low Risk	Level 5: No Risk	Level 5: No Risk

Type	Consequence			
	Personnel safety	Public safety/ environmental impact	Equipment/ facility loss	Discontinued days
Severity Level	Level 1	Level 1	Level 2	Level 1
Likelihood of Occurrence	Level 5	Level 5	Level 5	Level 5
Risk Level	Level 3: Moderate Risk	Level 3: Moderate Risk	Level 4: Low Risk	Level 3: Moderate Risk

The team leaders of each unit which are responsible for performing process hazard analysis (PHA), job safety analysis (JSA) and other hazard analysis operations have been trained and certified by the Technical Training Center of the Group Administration Office. In addition, some process complexes are Class A or Class C hazardous workplaces, and their team leaders have not only passed the aforementioned training certification but also obtained the legal process safety assessor certificate and received regular retraining.

Accident Investigation

FPC has established a complete accident investigation process that involves tracking accidents immediately, identifying and assessing them during the investigation, and providing assistance and support afterward to understand reasons for the occurrence and prevent reoccurrence. To improve the professional capabilities of accident investigation, each business division assigns employees to receive professional training in major investigation management. If a major anomaly investigation needs to be conducted across companies or complexes, suitable personnel can be assigned to assist in the investigation based on the specific circumstances.

Accident Occurred	An accident investigation team was formed within 32 hours of the accident to conduct an investigation, in accordance with the scale of the incident.
Investigation Team	▸ Interview relevant personnel and gather information. ▸ Review the degree of impact and likelihood of occurrence, and determine the risk level of major potential hazards. ▸ Different types of failure analysis, such as fault tree analysis (FTA) and failure mode and effects analysis (FMEA), are used to determine the direct, indirect, and root causes.
Hierarchy of Controls	▸ Classify the case according to its severity. ▸ Level 1 major occupational accidents and incidents, Level 2 non-major occupational accidents and incidents
President's Office	The investigation results and improvement measures are reported to the President's Office to ensure such an accident does not reoccur.
Each Business Division	▸ Assign employees to receive professional training in major investigation management to improve investigation skills. ▸ In the event where a cross-company (cross-plant) accident investigation needs to be conducted, appropriate manpower can be assigned to assist in the investigation according to the actual situation.

4.3.2 Occupational Health and Safety Management

FPC Occupational Health and Safety Committee					
Complex	Mailiao	Hsinkang	Renwu/ 4th Complex	Linyuan	Tungshan
Number of Committee Members	75	11	22	27	11
Labor Representation Ratio	48.0%	36.4%	36.4%	40.7%	36.4%
Frequency of Meetings	Quarterly				
Discussion Topics in 2023	1. 12 statutory items that should be reviewed, coordinated, and recommended action by the Occupational Health and Safety Committee 2. Internal and external guidance on industrial safety and environmental protection accidents 3. Implementation of the company's occupational safety and health management policy				

Improvement of Plant Safety Practices

Identification of Top Ten Risks

- In order to strengthen the construction safety of contractors, every day, each complex comprehensively screens for top ten high-risk operations and areas with potential hazards such as confinement, open flames, elevation (high altitude), water jets, high-temperature contact, electricity, lifting and hanging, maintenance and process operations, and equipment, and independent inspections are performed by the mid-level managers. In addition, for high-risk operations and areas with potential hazards, supervisors at all levels should go to the construction site to check whether employees and contractors are performing operations in accordance with the established standard operating procedures (SOP) and job safety analysis (JSA).
- In 2023, a total of 19,869 abnormal cases were checked independently, and fines of NT$130,000 and NT$7,860,000 were imposed on employees and contractors, respectively, who violated the regulations and were required to comply with regulations of construction operations.

Installation of Pipe Rack Inspection Walkways

- In order to ensure the safety of pipeline inspection personnel, we have planned to install inspection walkways in 239 sections of the pipe racks, 185 of which (total 12,644 meters in length) have already been completed, and the remaining 54 are expected to be improved and completed by the end of December 2025.

Process Hazard Analysis (PHA)

- In order to strengthen the ability of each complex to identify the hazards of miss operation of the process, the process hazard analysis (PHA) was carried out. The top three hazards were the start/stop process, normal operations (such as: absorption tower regeneration, filter switching) and loading/unloading. In response to the analysis results, the operating procedures have been reviewed and revised to improve the safety of on-site operations.

Organizational Meeting of Agreements

- Each complex conducts a monthly joint operation agreement meeting with contractors, where occupational safety and health promotion is carried out. During these meetings, contractors are informed about the hazards and operational risks in the plant. Workers are encouraged to raise any issues that require coordination with the Company or their co-workers to ensure a safe and efficient operation process.

Safety and Health Performance Indicators

To monitor and evaluate the safety and health performance of FPC, each department is required to submit a report on the implementation of seven safety and health performance indicators every six months. Based on the reports, FPC is able to evaluate the safety climate in the entire company and each department, diagnose the safety and health management weaknesses, and take corresponding improvement measures.

Passive Indicators	▶▶▶	Accident statistics, audit statistics (safety, health, and environment)
Proactive Indicators	▶▶▶	Number of internal safety and health training courses (including emergency response drills), number of improvements on anomalies (including safety and health improvement proposals), safety and health audits, risk assessment, hazard prevention

FPC Occupational Safety and Health Education and Training in 2023

Course Category	Initial training course for legal certificates	Retraining course for legal certificates	Internal employee training course
Standard Hours	Mandatory training hours	Mandatory training hours	Demand-based training hours
Number of participants completing training	861	2,022	12,889
Total Hours	16,790	17,742	55,737

Before FPC contractors enter the complex, they are required to conduct pre-entry training, which includes the Company's entry and exit management regulations and general occupational safety education and training. In 2023, all contractors completed the complex occupational safety education and training in accordance with the regulations before entering the complex for related operations.

FPC Average Score of Safety and Health Performance Indicators

2021	2022	2023
93.36	95.43	94.77

Note: The safety and health management performance scores of each unit in 2023 decreased by 0.66 points compared to 2022. This decrease can be attributed to an increase in deductions for internal Class A fixtures and internal audit abnormalities, as well as a slower rate of improvement in self-inspection abnormalities. The scores for the Audit Statistics and Improvement of Self-Inspection Abnormalities indicators were lower. Continuous improvement will be made in the future.

Process safety data statistics of FPC in recent three years

Year	2021	2022	2023
Total Working Hours	12,267,248	11,204,120	12,044,928
Number of Process Safety Events (PSE) (Number of Cases)	2	1	1
Process Safety Event Rate (PSTIR) (%)	0.033	0.018	0.017
Process Safety Incident Severity Rate (PSISR) (%)	0.065	0.071	0.050

Note 1: Process Safety Incident Rate (PSTIR) = (Total Incidents / Total Working Hours) × 200,000

Note 2: Process Safety Incident Severity Rate (PSISR) = (Sum of first-level Process Safety Incident Severity Scores / Total Work Hours) × 200,000.

Note 3: The PSISR decreased by 29.6% in 2023 compared to 2022. This improvement can be attributed to the implementation of safety measures such as process chain bypass safety control, high-risk process construction safety management, equipment preventive maintenance, and internal PSM audits. Additionally, external professional organizations (Safety and Health Technology Center, Pressure Vessel Association) were engaged to conduct third-party PSM audits, which helped identify areas for management improvement and enhance overall PSM performance.

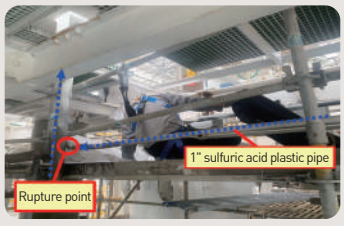
Description of a PSE Case

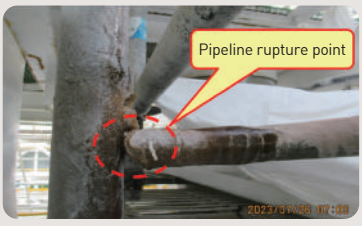
The contractor inadvertently broke a plastic sulfuric acid pipe, leading to the spill of sulfuric acid and causing injuries to one employee and one contractor operator.

Operation workflow

In preparation for typhoon prevention, the contractor inadvertently broke a 1-inch plastic pipe while organizing the area and tidying up the fire blankets on the scaffolding. This resulted in sulfuric acid spraying and causing burns. The injured individual was promptly taken to the hospital for treatment.

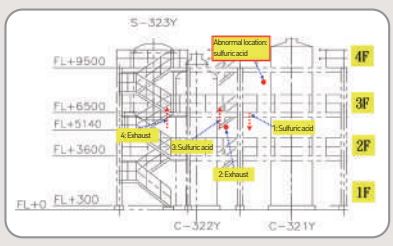
Accident reconstruction drawing

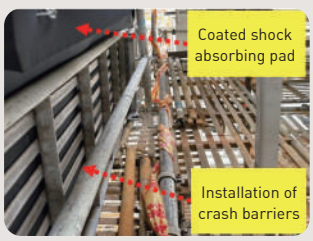




Improvement measures

1. For the small-diameter plastic pipeline that fractured this time, we have added temporary anti-collision measures (including collision cushions). Four other locations with similar conditions were identified during a parallel inspection, and improvements have been made.
2. The management practices for enhancing the protection of construction scaffolding pipelines have been revised and integrated into the corporate construction scaffolding engineering regulations to improve management.

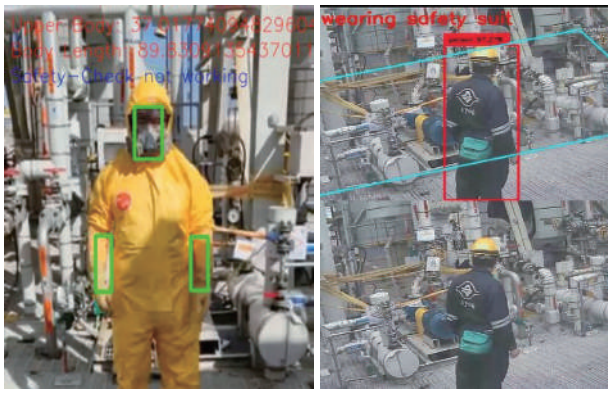




Application of AI in Industrial Safety Management

Our Electronic Materials Division has developed an industrial safety management system for expanded construction areas based on image recognition technology, which can be applied in a variety of operational scenarios, including production processes, warehouses, and construction sites. The recognition model for the wear and use of protective equipment was developed in 2023, along with an electronic fence, which can allow for the real-time transmission of warning messages to the control room and supervisory personnel via cameras, assisting in the management of occupational safety and health within the plant. In addition, the Renwu PVC Plant serves as a demonstration site for planning and implementing a personnel positioning system. This system enables the immediate determination of the exact location of personnel in any area of the complex, allowing for prompt dispatch of assistance and ensuring optimum time for rescue.

To protect the safety of personnel working in the complex, we have planned to build a personnel positioning system, so that when personnel need support at any location in the complex (such as physical discomfort, emergency calls for help, or even loss of consciousness), we can confirm the location of the person who is seeking help and send staff to help promptly within the optimum time for rescue.



Develop a recognition model for the wear and use of protective equipment and electronic fence system. If personnel enter the restricted area without wearing protective equipment, an alarm will sound and notify the control room, immediately informing the individual and their coworkers to stop work.

For the pallet truck operations in the shipping area, it is necessary to monitor whether the operators are wearing fall protection devices to prevent fall accidents.

Monitor whether crossbars are installed after grooving in the operating area. If a grooving slot is found without crossbars installed and no personnel is present, an immediate message is sent to the supervisor for timely correction to prevent industrial safety accidents.

Care for Employee Health

FPC provides comprehensive health management that includes employee health promotion, health check-ups, care and support, and occupational disease prevention. We manage work environment and personnel health risks, promoting excellent work-life balance. FPC hires professional medical personnel, which includes seven nurses, three night nurses, and one therapist. Additionally, a specialized occupational physician is appointed to provide on-site services.

Comprehensive Health Management

Care and Support

- **3,020** employees received nurse health care
- Provide services, including psychological, legal, and career counseling, to a total of **42** employees
- Health care services provide to contractors during the turnaround period

Health Checks

- Annual regular health check for **2,370** employees
- Special hazardous operation health check for **2,847** employees
- Particular physical examination for **75** new hires
- Offer advanced health check benefits to employees and senior executives

Health Risk Management

- Tracking of general and special operation health check reports for **1,641** employees with abnormalities
- Provision of occupational physician services for **1,282** employees
- Tracking **509** employees with metabolic syndrome
- Physiological assessment of respiratory protection for **2,437** employees
- Maternal health protection management for **14** employees
- Assessment of Injuries, sick Leave, and return-to-work for **11** Employees

Health Promotion

- Organized the weight Loss Competition and blood donation campaign with **831** participants
- Organized health expert seminars to share topics on exercise/smoking cessation/nutrition and provide individual counseling, with a total of **1,417** participants
- Vaccinations were administered on-site to **724** employees by the Public Health Center
- Provide employees with access to a fitness center, a table tennis room, and a multipurpose sports field, both indoor and outdoor

Prevention of Occupational Diseases

- Ergonomic musculoskeletal disorder prevention and management of **277** employees were conducted
- Special operation classification management and tracking of **1,010** employees
- Overload and high risk management of **122** employees
- Work-related brain and cardiovascular diseases, high-risk employees totaling **122**
- Occupational disease health checks rate of **100%**

Prevention of Occupational Diseases

FPC attaches great importance to the occupational health of employees and includes health management, abnormality tracking, disease prevention, and hazard assessment for special operations into preventive management. Relevant health examinations and personal information are handled confidentially, and access is restricted to designated healthcare personnel only. We also properly explain this to employees to protect their rights and interests. In addition, professional physicians are arranged to gain a firsthand understanding of the work environment, employee work habits, and safety protection operations on-site. They provide improvement suggestions and offer related medical consultation services to ensure the health of employees. To date, there have been no reported cases of occupational diseases.

100% Inspection Rate

Special Operation Health Management

- According to the Tasks with Special Health Hazards described in the Labor Health Protection Regulations, FPC has established 12 hazard management items according to the industry process conditions, and workplaces
- For the 40 fourth-level personnel on the health management list, manage them through Health Classification Management Reminder Form

Abnormality Tracking

Re-examination of abnormalities in the physical examination and care for the metabolic syndrome

The "Health Care Reminder Form" is sent to employees with metabolic syndrome. If the blood lipids and blood glucose of the current year's health checkup reaches the standard of medication, we will arrange for repeat checkups and refer them to the clinic or medical institution for treatment.

Hazard Assessment

Hazard Assessment and Management of Human Factors

A questionnaire on musculoskeletal symptoms is conducted for all employees every three years. In 2023, 6% of the employees who participated in the questionnaire scored 3 points or above. Safety and health personnel visited the site to assess the operating conditions. Occupational health specialists were appointed to provide health education and advice on rehabilitation exercises as well as assess the working conditions on site together with safety and health management personnel when necessary.

Prevention of Diseases

Prevention of work-related cerebrovascular diseases

Formulate the "Abnormal Workload-Promoted Disease Prevention Program". Employees can fill in the scale of their loading through the online or mobile APP. Based on the physical examination data and questionnaire survey results, we determine risk levels and track high-risk individuals. Through one-on-one consultation and health education provided by occupational health specialists, appropriate adjustments are made to work patterns as needed.

2023 FPC Occupational Disease Prevention Management Performances

Hazard Assessment and Management of Human Factors
None of our complexes have workplaces with high risks of human-caused hazards. For employees who scored 3 points or above in the questionnaire, it was due to musculoskeletal discomfort caused by injury or disease, which was not work-related.
Prevention of Work-related Cerebrovascular Diseases
In 2023, a total of 122 employees were determined to be high-risk. Continuous case management and health promotion activities have been conducted to reduce the risk of cerebrovascular disease of employees.

Cloud health management system app: FPC Health Cloud

Overseas Emergency Medical Personnel Education and Training

Speech: Steering Wheel of Emotion

Vaccination

Occupational Injury Statistics and Descriptions

In 2023, no major occupational accidents occurred at FPC. The disabling injury frequency rate among employees and contractors were 0.17 and 0.09, respectively. Both rates have decreased compared to 2022, primarily due to a decrease in the number of occupational accidents in 2023 compared to 2022. After analyzing the types of occupational injuries, burns and falls are the major ones, which are caused by personnel's lack of safety awareness or violation of SOPs.

With a view to ensuring that employees pay serious attention to the risks of occupational hazards, FPC has set relevant penalties for SOP violations to ensure compliance with operational safety rules for various operations among employees. Moreover, FPC promotes non-routine safety management, where supervisors will lead operators to conduct actual simulations of non-process operations with irregular cycles and intervals of more than six months according to SOP in order to ensure operational safety.

FPC Occupational Accidents of Employees and Contractors in 2023

Total Number of Cases	Occupational accidents of employees	Occupational accidents of contractor
3	Falls 1 Burns 1	Burns 1

FPC's Occupational Injury Indicators in Recent Three Years

Category	2021		2022		2023	
	Employees	Contractors	Employees	Contractors	Employees	Contractors
Working hours	12,267,248	8,006,069	11,204,120	8,060,681	12,044,928	10,545,517
Number of deaths	1	0	0	0	0	0
Number of disabling injuries	3	2	2	1	2	1
Fatality rate of occupational injuries (Note 1)	0.08	0	0	0	0	0
Disabling injury severity rate (Note 2)	496	3	4	1	1	15
Disabling injury frequency rate (Note 3)	0.33	0.25	0.18	0.35	0.17	0.09
Recordable occupational injury rate (Note 4)	0.33	0.25	0.18	0.35	0.17	0.09

Note 1: The fatality caused by occupational injuries is the number of deaths per million hours worked, and the formula is: Number of deaths caused by occupational injuries × 1,000,000 ÷ Hours worked

Note 2: Disabling Injury Severity Rate (SR) is the number of days of disability (including death) per million hours worked, and the formula is: total lost days × 1,000,000 ÷ hours worked

Note 3: Disability frequency (FR), which is the number of times of disability (including death) per million working hours, the formula is: total number of lost persons × 1,000,000 ÷ number of working hours

Note 4: Recordable occupational injury rate: It is the number of recordable occupational injuries that occurred within one million working hours, including the number of deaths and the number of disability injuries. The formula is: Number of recordable occupational injuries × 1,000,000 ÷ number of working hours

Note 5: FPC started to compile data on the "severity of disability injuries" of subcontractors in 2021.

Note 6: There were no cases of major occupational accidents or occupational diseases in 2023.

Transportation Accident

Number of transportation accidents in 2023

0 Case

1. FPC regularly conducts the transportation contractor road transportation safety quality assessment system (SQAS) evaluation, and evaluates the transportation contractor's carrying quality, safety management and emergency response handling capabilities. Those who fail the evaluation shall not undertake our transportation business. In 2023, we conducted on-site inspections of transportation and audited a total of 38 vehicles of transportation contractors. As a result, 11 abnormalities were found, mainly due to the lack of written documents and on-board equipment. Upon our request, the transportation contractors have completed the required improvement.
2. Each plant has professional emergency response personnel, and has set up sufficient emergency response equipment and vehicles. In addition, for the transportation of Class 1~3 toxic chemical substances, all members of the national joint defense organization shall participate in the National Joint Defense Organization in accordance with the provisions of the Toxic and Concerned Chemical Substances Control Act. All members of the organization are equipped with emergency response equipment, which can respond to emergencies in different transportation routes.
3. In order to strengthen the capability to respond to transportation emergencies and accidents, FPC requires all of its complexes and transportation contractors to purchase additional tank moving equipment and incorporate tank moving operations into the annual transportation drills, so as to increase personnel's familiarity with tank-moving equipment and operating procedures.

4.3.3 Emergency Response Mechanism at Complexes 2-25

Emergency Response and Disaster Prevention Training at Complexes

A. Emergency Response Mechanism

FPC divides its emergency response mechanism into three stages. In the event of an accident, it will be reported immediately according to the reporting procedure, followed by the activation of the emergency response mechanism. An emergency commander is assigned at each stage. The regional defense organization within the complex may be launched as needed to support disaster relief at plants in the vicinity. Any accidents are reported to the competent authority within the statutory time limit.

Emergency Response Mechanisms

Stage 1	Stage 2	Stage 3
A small amount of leakage, fire alarms, pollution or other accidents at a complex can be handled by the emergency response organization.	Large-scale leaks, fire alarms, explosions, or accidents that tend to expand after immediate response at a complex are handled by the emergency response organization at the complex.	Accidents that have spread outside the complex and posed a serious threat to the residents should be handled by the emergency response organization and the competent authorities.

Incident Reporting Procedures

Telephone

- Notify the complex manager immediately and launch the emergency response mechanism.
- Notify the relevant competent authorities, including the local EPA, the Occupational Safety and Health Center, and the Industrial Development Bureau within the statutory time limit.

Text Message

- Notify senior executives via text message within 10 minutes.
- Notify the chiefs of villages (neighborhoods) or townships and villager representatives in the vicinity of the complex.

Office Automation (OA) Reporting

- Report the occurrence and handling of the accident via the office automation system (OA) through email within one hour.
- Follow up the accident via the computer system until the investigation is completed and the case is closed.

B. Results of the Drills at Each Complex

To enhance fire safety and disaster relief capabilities, each complex arranges fire and rescue emergency response drills in different scenarios every six months. Additionally, each complex also carries out overall and no-warning test drills on EPA's controlled chemicals, including complexes and transportation. Among them, the Taiwan complex conducted a large-scale drill named the "Mailiao EVA Plant Public Pipe Rack (Line) Emergency Response Drill" on December 22, 2023.

Results of the 2023 Emergency Response Drills

- Hazardous substance prevention and emergency response drills: 136 sessions, 1,732 Participants
- Fire and rescue emergency response drills: 144 sessions, 2,051 Participants

Mailiao EVA Plant Public Pipe Rack (Line) Emergency Response Drill on December 22, 2023


Establishment of Emergency Response Center


Mobile Turret Set Up by Firefighting Team for Waterline Rescue

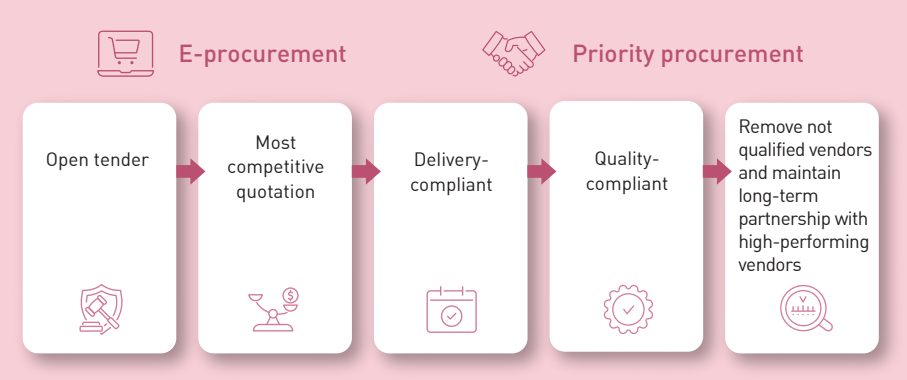

Ambulance Team Transporting Injured for Medical Treatment

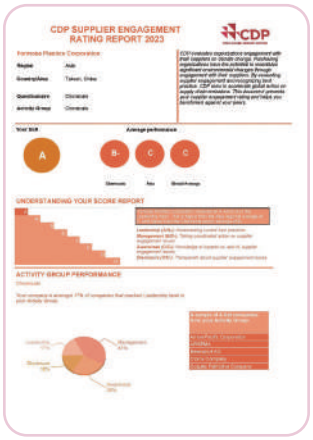

Chemical Treatment Team Operating Pollution Removal

Starting in 2022, professional emergency response personnel will be dispatched for training in accordance with the Regulations on the Management of Emergency Responders of the Toxic and Concerned Chemical Substances. The training will be based on the assessment results of the controlled chemical categories and the daily maximum operating quantities for each process. In 2023, a total of 133 persons (29 experts, 29 commanders, 59 technicians, 15 operators and 1 generalist) have been verified on the EPA website, which can replenish the vacancies of professional contingency manpower in a timely manner.

4.4 Supply Chain Management

4.4.1 Supplier/Contractor Management





2023 Supply Chain Project Score: A

Supplier/Contractor Management

Upholding the spirit of sustainable development and the principle of fair trade, FPC urges that all suppliers and contractors should meet the requirements for environmental protection, industrial safety, and human rights. In accordance with the provisions of the social responsibility commitment in the contracts and agreements with suppliers and contractors, employers are required to provide and maintain a healthy and safe working environment. They must also provide personal protective equipment related to the work and appropriate health and safety education and training. Furthermore, employers should encourage workers to participate and make suggestions regarding workplace health and safety to ensure the well-being of all. In addition, FPC mandates that contractors submit reports on the health conditions of their employees and maintain a management list. It is also necessary for construction workers to avoid tasks that surpass their capabilities. During toolbox meetings, we aid contractors in measuring employees' blood pressure and evaluating their fitness for working at heights.

In 2023, a total of 2,322 suppliers and contractors transacted with FPC. Among them, the response rate for signing the Social Responsibility Commitments reached 97.6%, while the response rate for filling out the Social Responsibility Questionnaires was 96.8%. Also, to ensure that our suppliers follow our procurement and contracting regulations and to prevent misconduct such as bid-rigging, bribery, and corruption, the signing rate of the 2023 Supplier Integrity and Confidentiality Pledge reached 97.8%, showing that suppliers are gradually gaining understanding and increasingly valuing our FPC's policies and related regulations.

FPC Suppliers/Contractors-Response rate of supplier/contractor social responsibility pledge, social responsibility questionnaire, integrity and confidentiality pledge

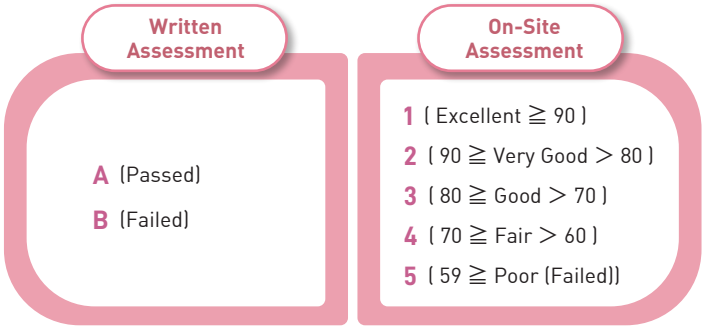
Year	2021	2022	2023
Signing rate of the Social Responsibility Commitment	90%	99.4%	97.6%
Response rate of the Social Responsibility Questionnaire	87%	95.9%	96.8%
Response rate of the Integrity and Confidentiality Pledge	79%	99.1%	97.8%

Supplier/Contractor Evaluation and Category Management

FPC conducts rating assessments for material suppliers and conducts manufacturer evaluations as needed to ensure that suppliers are able to meet our requirements to fulfill corporate sustainability responsibilities. In 2023, a total of 3,608 suppliers received rating assessments. Among them, 3,608 suppliers (rated A to D) are determined to be sustainable, accounting for 100%. There were no suppliers that have ceased trading (F) due to failure to meet the assessment standards.

Supplier Assessment:

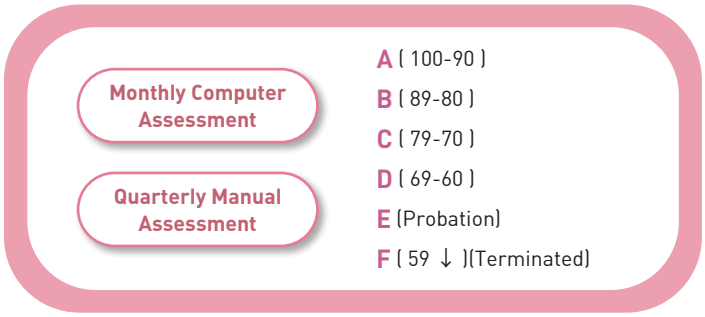
FPC evaluates major suppliers of various materials. The procurement department and material department work together to collect relevant information, including manufacturing scale, production capacity, sales amount, and quality certification, as well as require manufacturers to abide by relevant regulations such as environmental protection, industrial safety, and human rights. Meanwhile, we work with the material department to establish assessment items and rating standards and conduct written and on-site factory assessments for suppliers:



1. When conducting price inquiries, for qualified manufacturers, the computer system will make a note on the price comparison form to be used as a reference for procurement.
2. For unqualified manufacturers, the computer system will not allow any more price inquiries.

Supplier Rating:

We collect the quotation data and delivery records of manufacturers in the past two years every month to calculate rating. Every quarter, each material department determines the levels of manufacturers based on not only the quality, durability, and after-sales service of important materials but also the implementation of the manufacturers in terms of environmental protection, industrial safety, and human rights protection, so as to provide reference for pricing comparison and procurement decision making:



FPC has also established the incentive system for suppliers/contractors. Besides from ensuring that all manufacturers can abide to company regulations, by turning penalties into rewards, FPC evaluates the safety and health management performance of contractors on a regular basis and grants rewards based on the results of the evaluation to encourage contractors' self-initiated management on industrial safety and to raise their safety awareness.

For more information on supplier/contractor evaluation and grading management, please refer to FPC's Sustainable Development website.

Sustainable Development Website:
Supplier & Contractor Management

4.4.2 Supplier/Contractor Injury Indicators

To improve the workplace safety of the supply chain, FPC also requires that all suppliers and contractors should report relevant data on occupational injuries. In 2023, the total number of people included in the statistics was 5,315, and no major occupational disaster occurred. The occupational injuries that occurred over the years were mainly pinches, scalds, and splashes of hazardous materials. We have reminded all suppliers and contractors to pay attention to work safety rules and comply with workplace safety regulations to reduce the risk of occupational hazards.

Injury indicators for suppliers and contractors in 2023 are described as follows, with a significant increase in the number of lost days and severity of disabling injuries due to a burn injury on the job at the contractor, but a significant decrease in the frequency of disabling injuries of 74% since only that work-related injury occurred for the entire year.

FPC's Supplier/Contractor Injury Indicators in Recent Three Years

Category	2021	2022	2023
Total working hours	8,006,069	8,060,681	10,545,517
Disabling injury severity rate (Note 1)	3	1	15
Disabling injury frequency rate (Note 2)	0.25	0.35	0.09
Frequency-severity indicator (Note 3)	0.02	0.01	0.03
Lost work time (days)	25	15	159

Note 1: Disabling injury severity rate (SR) = (Total lost work time in days × 10^6) ÷ Total working hours.

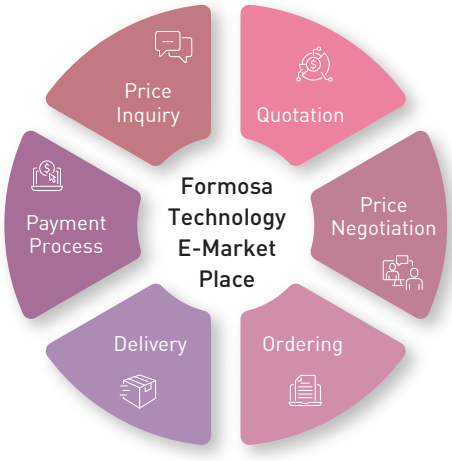
Note 2: Disabling injury frequency rate (FR) = (Total number of injuries × 10^6) ÷ Total working hours.

Note 3: Frequency-severity indicator=$\sqrt{(FR \times SR) / 1000}$.

Note 4: The statistics are mainly based on the important statistical indicators of disabling injuries announced by the Ministry of Labor, including disabling injury frequency rate (FR) and disabling injury severity rate (SR) (excluding traffic accidents outside the complexes).

4.4.3 Procurement Policy 204

FPC adopts an "open tender" approach and implements it via the Formosa Technology E-Market Place, which enables both suppliers and contractors to carry out various operations, such as price quotation, inquiry, and negotiation. Regular meetings with contractors and suppliers are also organized to encourage and enhance two-way communication.



Procurement Performance in 2023

Percentage of e-centralized delivery
99.83%

To reduce carbon emissions from delivery vehicles, FPC has collaborated with Kerry TJ Logistics to promote the "Supplier Collaboration E-System".

Percentage of e-invoices issued
88.10%

To further reduce invoice costs and increase the efficiency of invoice management, electronic invoices have been promoted to comprehensively replace traditional paper invoices.

Percentage of local procurement
79%

The procurement and outsourcing policies mainly revolve around local procurement and outsourcing based on operational locations. FPC only sources goods from overseas and allows bidding from abroad when local suppliers are unable to meet the needs.

Amount of green procurement
NT$242 million

FPC actively promotes green procurement and has cooperated with the Taipei City Government to sign its green procurement commitment, mainly purchasing green products including plastic pallets, energy-saving lamps, green building materials, etc.

ch.5

Initiator of Shared Development

5.1 Local Community Development and Investment 148

5.2 Community Engagement in the Operation Area 154

Vision

Based on the core value of "what is taken from the society, what is used for the society", FPC, while pursuing development, does not forget to give back to the society and benefit the people, and fulfills its excellent corporate social responsibility, hoping to coexist with the local community, enjoy the fruits of development and move toward a sustainable future.

Policy and Commitment

FPC utilizes the resources of Formosa Plastics Group, demonstrates continuous commitment to the local environment and society, cooperates with both governmental and non-governmental organizations, actively engages with the local community, and conducts annual effectiveness reviews. It progressively expands its impact based on local circumstances to realize its vision of "contributing to society and benefiting society".

5.1 Local Community Development and Investment 203

5.1.1 Community Relations

As a responsible corporate citizen, FPC is committed to active involvement in the local community. We are pleased to assist neighboring towns, government agencies, and private organizations in coordinating a range of local and charitable initiatives. Our goal is to maintain a harmonious and mutually beneficial relationship between the factory and the community. After the pandemic in 2023, our Company gradually resumed the implementation of relevant projects, while remaining committed to fostering friendly relations and contributing to the community. For information on other local activities in which our company participates, please visit the Latest News section of our Sustainable Development website.

Sustainable Development Website: Latest News in FPC

2023 Event to Give Back to the Community

Participation in Local Activities — **Yuzu Keep Safe - FPG Cheers for Yunlin Products**

Purpose

In doing so, we aimed to help farmers promote the purchase of local agricultural products of Yunlin.

Event Description

FPC supports local farmers in Yunlin and took the initiative to purchase Douliu Wendan (pomelos), which not only helped the farmers solve the problem of overproduction, but also helped them promote Yunlin's quality products throughout Taiwan.

Event Results

- Been held consecutively for **four** years since 2020
- In 2023, **48,000** catties of Yunlin's Liangpin Douliu Pomelos were sold out.

Stakeholder Feedback

County Magistrate Li-Shan Chang emphasized that Yunlin County is an important agricultural county known for its high-quality agricultural products grown by hardworking farmers. These products are distributed directly from the source to various regions across the country, ensuring that people have access to high-quality fruits and vegetables. We are grateful for FPG's continued support in promoting Yunlin's exceptional products. Our goal is to achieve mutual prosperity and coexistence with Yunlin.

Participation in Local Activities — **Beach Cleanup: Protecting the Coastline**

Purpose

Beach cleanups not only preserve the marine environment and reduce marine pollution, but also help promote the concept of ocean and environmental protection to participating employees and the public through cleaning activities.

Event Description

In response to the International Coastal Cleanup Day, we participated in a beach cleanup in cooperation with the Yunlin Offshore Industrial Zone Service Center of the Ministry of Economic Affairs, the Environmental Protection Bureau of Yunlin County, the Mailiao Township Office, the Central Branch of the Fourth Coast Guard Fleet of the Coast Guard Administration, and local communities. We also encouraged our employees and partner companies in the Mailiao complex area to volunteer for environmental initiatives and encouraged the residents of Yunlin County to actively join us in protecting the marine environment.

Event Results

- Been held consecutively for **five** years since 2019
- In 2023, **12** beach cleaning activities were held, with a total of **500** participants, and a total of **95,815** kilograms of garbage was removed.

Stakeholder Feedback

Chien-Liang Tsai, Acting Vice President of the Mailiao Administration Division, said that marine debris has always been a significant factor affecting the marine environment. Despite annual beach cleanup efforts by numerous organizations, the situation has shown no signs of improvement. To demonstrate corporate responsibility and implement environmental measures, FPG not only conducts regular beach cleanups, but also collaborates with partner factories to send personnel to the coast twice a month to collect trash and large waste items. Recently, the frequency of these cleanups has been increased to three times a week. By protecting the marine environment, we aim to demonstrate to the public its commitment and efforts to the environment surrounding the plant.

Participation in Local Activities **Scholarships for Students from Mailiao and Taihsi Townships**

Purpose

We hoped to make students from Mailiao and Taihsi Townships who are awarded and their parents feel valued and empowered and to motivate students to learn and achieve academic success.

Event Description

In order to encourage outstanding students from Mailiao and Taihsi Townships in their pursuit of educational goals, FPC has sponsored scholarships, and applications are open every March and October to high school and university students.

Event Results

- Scholarships have been continuously awarded since 2004 for a period of **20** years.
- In 2023, a total of **2,336** outstanding students were awarded scholarships, with a cumulative grant amount of about **NT$6.36 million**.

Stakeholder Feedback

"Thank you, FPC, for helping our kids in attending college!" An economically disadvantaged parent in Mailiao Township gratefully accepted a scholarship on behalf of his child. They mentioned that their son is currently studying at a university in Chiayi. Although tuition is waived, the cost of food and housing is still a significant burden. He works hard so that his child can go to school without worrying. Fortunately, his child is also responsible and thrifty. Since entering high school, the child has been dedicated to her studies. Each year, we provide scholarships to deserving students, which not only eases the financial burden on the family, but also brings great joy to the father. He is grateful for FPC's continued support and guidance and hopes that his child will continue to study diligently and develop the ability to contribute to society.

Participation in Local Activities **Delicious and Nutritious Breakfast**

Purpose

With the Delicious and Nutritious Breakfast subsidy, schoolchildren can access healthy and nutritious meals and improve their concentration and learning ability.

Event Description

In view of the fact that some junior high school and elementary school students are unable to eat breakfast every day due to family economic circumstances, we have established the Delicious and Nutritious Breakfast program and have since been providing delicious and nutritious breakfast for students from disadvantaged backgrounds to enjoy.

Event Results

- Been held consecutively for **thirteen** years since 2011
- In 2023, a total of **1,156** students benefited from the program, with a subsidy amount of about **NT$4.16 million**.

Stakeholder Feedback

A third grade student expressed her gratitude for FPC's support, which allows her and her sister to eat a nutritious breakfast every day. My younger sister, who is currently in second grade, exclaimed happily as she received her breakfast, "I always look forward to breakfast at school. Sometimes it's rice balls, sometimes egg pancakes, and the hamburgers are really delicious."

Participation in Local Activities **4th Dashu Bitter Melon Quality Evaluation**

Purpose

We helped promote local agricultural specialties of Dashu District and encourage farmers to move towards precision agriculture.

Event Description

Through collaboration with the Dashu District Farmers' Association of Kaohsiung City, we held the 4th Dashu Bitter Melon Quality Evaluation.

Event Results

- Been held consecutively for **four** years since 2020
- The event was held once in 2023 with a sponsorship of **NT$30,000**.

Stakeholder Feedback

"Bitter-Sweet - Dashu Bitter Melon Festival" The Dashu District's unique bitter melon season and water conservation promotion event was held at the Gushan Warehouse Industrial and Cultural Park on December 9. FPC's assistant vice president, Tsai Chi-Lin, led his colleagues from the Kaohsiung Administration Department to attend the event, where they promoted Dashu's exceptional agricultural products and aimed to increase farmers' income.

Participation in Local Activities | **Kaohsiung Seasonal Pineapple and Yuherbau Lychee Auction**

Purpose

Assisting in marketing local agricultural specialties and showing care for vulnerable groups

Event Description

The charity auction was hosted by Mayor Chen Chi-Mai of Kaohsiung City, and FPC participated by donating all the proceeds to provide fruit after meals for elderly people living alone.

Event Results

- The event was held once in 2023 with a sponsorship of **NT$68,000**.

Stakeholder Feedback

The Kaohsiung Pineapple and Lychee Season kicked off on May 27th at the Gushan Warehouse in Dashu District. In addition to the award ceremony for farmers, an auction of pineapple and jade purses was held. The event was presided over by Mayor Chen Chi-Mai, and FPC won the auction with a bid of NT$68,000. This will strengthen the competitiveness of Dashu's recreational agriculture and promote the development of local tourism.

Participation in Local Activities | **Sponsors Renwu High School to Fund Mural Painting.**

Purpose

Participate in local campus activities and thrive alongside the local community.

Event Description

Students and teachers collaborate to paint the school walls, leaving behind children's creativity and ingenuity. This effort rejuvenates the walls, and Renwu High School, selected as a "Three Great School Campus" for many years, emphasizes its distinctive features through the practice of "promoting kindness, doing good deeds, and having good intentions."

Event Results

- Sponsorship of NT$ **178,000** in 2023

Stakeholder Feedback

Renwu High School in Kaohsiung City held its 60th anniversary sports day, carnival and fundraising dinner on October 27, 2023. We would like to thank FPG for sponsoring the event, which allowed our students and teachers to showcase their creativity and ingenuity. They had the opportunity to decorate the school walls with vibrant murals, revitalizing the environment and creating treasured memories for the children.

Gift Giving During Major Festivals | **Renwu Mid- Autumn Festival Reunion**

Purpose

We did our best to show our compassion and care for the elderly and vulnerable residents in the community.

Event Description

Through the collaboration with Tzu Hui Volunteer Association from Renwu District of Kaohsiung City, we invited elderly volunteers from age 70 to 90 and new residents in the community to make moon cakes and snow cakes together and then distribute them to low and middle income households and elders living alone.

Event Results

- The event was held once in 2023, with **50** volunteers participating.
- Sponsorship fee: NT$**49,000**

Stakeholder Feedback

Under the guidance of the Kaohsiung City Social Affairs Bureau and sponsored by FPC, Renwu Tzu Hui Volunteer Association of Kaohsiung City organized the "Celebrating Mid-Autumn Festival, Spreading Care to the Needy" event. At the event, new immigrants, community elders, and volunteers from Renwu District made mooncakes and muffins by hand, which were then distributed to elderly people living alone and economically disadvantaged households. This early celebration of the Mid-Autumn Festival conveyed the company's care and blessings.

Gift Giving During Major Festivals

Distribution of Supplies in the Cold Winter in Renwu and Dashu District of Kaohsiung City

Purpose

We did our best to show our compassion for the disadvantaged and to build close friendships with local residents as a good neighbor.

Event Description

In response to the "Love in the World - Warm in Winter" event organized by the Renwu District Office and Dashu District Office of Kaohsiung City, we collaborated with local businesses, temples, charitable organizations, and volunteers to distribute consolation money and supplies. Haircuts for charity were also provided, in the hope of helping disadvantaged families welcome the new year with a fresh spirit.

Event Results

- Been held consecutively for **ten** years since 2014
- The event was held twice in 2023, with about **500** benefiting families.
- Sponsorship fee: **NT$430,000**

Stakeholder Feedback

To enable disadvantaged families to experience the festive atmosphere, the Renwu and Dashu District Offices partnered with local charitable organizations, businesses, and government agencies to hold the "Love in the World - Warm in Winter" event at various locations. FPC generously provided premium gift boxes manufactured by Formosa Biomedical Technology Corp. that were distributed to economically disadvantaged households by volunteers from the Southern Region.

Gift Giving During Major Festivals

Welfare and Support Activities for Economically Disadvantaged Households in Mailiao Township, Yunlin County

Purpose

To allow economically disadvantaged families to experience the festive atmosphere, we prepare red envelopes and gifts every year during the major festivals, distributing them to each household. We hope to convey the care and warm intentions to disadvantaged families.

Event Description

Every year, on the eve of Lunar New Year, Dragon Boat Festival and Mid-Autumn Festival, FPC distributes cash and gifts to economically disadvantaged households registered by the government as economically disadvantaged families.

Event Results

- Been held consecutively for **thirteen** years since 2011
- In 2023, a total of **3,963** individuals received gifts and red envelopes, with a total amount of approximately **NT$13.72 million**.

Stakeholder Feedback

Elderly economically disadvantaged households aged 90 expressed their anticipation of seeing personnel from FPG and the Red Cross during holidays to catch up and chat. The red envelopes given before each holiday are especially cherished and appreciated by economically disadvantaged families, allowing them to have a good holiday. They are truly grateful for this care.

Science Express Delivery Project

Formosa Scientific Exploration Camp, Teacher Study Camp,School-based Science Education Curriculum, Science Club, Science Carnival (Science Expo)

Purpose

To strengthen the promotion of science education and popularize it among national and high school students, we have long focused on local education. As part of our efforts since 2019, we have partnered with National Formosa University to improve the quality of teaching materials and facilitate experience exchanges. Our goal is to emphasize the importance of science education.

Event Description

In cooperation with National Formosa University, we promote science popularization in Yunlin County. Our efforts include workshops, science experiments, science camps, and science fairs, all aimed at increasing the exposure of middle and high school students in Yunlin County to science education. Our goal is to stimulate students' interest in science, develop their logical and critical thinking skills, and improve the quality of science education.

Event Results

- Been held consecutively for **five** years since 2019
- In 2023, a total of **35** events were held, with a combined participation of **2,773** people.

Stakeholder Feedback

A student's parent expressed that the coastal areas of Yunlin lacked resources. In response, FPG organized a science camp at Mailiao High School this year. The camp was a rare experience for the children, who praised the company's involvement. The curriculum was comprehensive, covering topics such as magnetism, aerodynamics, mechanics and biology. It approached science from the perspective of everyday life, making it lively, interesting and easier to understand.

5.1.2 Complex Operations and Community Relations 201 413

Operational Impact Management

Water Usage

Impact Identification

- According to the "Jiji Weir Industrial and Public Water Supply Monthly Report" issued by the Industrial Development Bureau, Ministry of Economic Affairs, the annual water supply of Jiji Weir from 2021 to 2023 ranged from 265,000 to 365,000 megatons. The average industrial water use accounts for 2.95% of the average total water supply; the average agricultural water transfer accounts for only 1.97% of the average total agricultural water use, indicating that the water consumption at the Mailiao Park does not supplant other industries nor result in competition for water with farmers.
- For the statistics of water supplied by Jiji Weir from 2021 - 2023, please refer to 3.3 Water Resources Management

Community Engagement

- The Safety, Health and Environment Center conducts public presentations every year to showcase the excellent water-saving improvement cases within FPG. The continuous exchange of water-saving technologies and professional knowledge is not only beneficial for companies in the Group to learn from each other, but also to the external departments and residents participating in the meeting.
- Residents can directly report various issues related to water resources management to the complex management department.

Air Pollution

Impact Identification

- According to the 2021 air pollutant emissions data inventory from the Taiwan Emissions Data System (TEDs) 12 version released by the Environmental Protection Administration (EPA), for example, the total amount of air pollutant emissions for all of FPC's Kaohsiung complexes in 2021 accounted for 0.32% to 4.52% of the total amount of air pollutants in Kaohsiung City, showing that the air pollutant emissions of FPC's complexes are not a significant source of the city's overall emissions.

2021	Total suspended particles	Sulfur oxides	Nitrogen oxides	Volatile organic compounds
Kaohsiung City	25,718	13,148	44,254	45,963
Total of FPC complexes in Kaohsiung City	256	594	1,342	146
FPC emission ratio	0.99%	4.52%	3.03%	0.32%

Note: As of December 2023, the latest data released by the EPA is 2021, and therefore 2021 is set as the base year for comparison. For more information, please go to the EPA's Air Quality Protection Web.

EPA: Air Quality Protection Web

Community Engagement

- An air quality monitoring board has been installed at the entrance of the Renwu Complex to display real-time air quality data through continuous and automatic monitoring for the public to view. Additionally, a detailed explanation of the reasons for using the gas flare is available on FPG's Air Pollution Incident Control Website.
- Our air quality monitoring results inside and outside the complex are regularly submitted to the village head office for inspection. We also visit other village heads of nearby areas from time to time to report the progress and results of recent improvements in environmental protection (including air pollution). In January 2023, the Chairman and supervisors at all levels reported the management achievements and performance to the local village heads and residents in the factory area.
- Residents can directly report various issues related to air pollution management to the Safety and Health Department/Office at the complexes or via FPC's official website.
- In 2023, no reports or complaints about air pollution from residents or organizations have been received.

FPG's Air Pollution Incident Control Website

Public Safety at All Complexes

Impact Identification

- In view of the fact that major fire accidents across the world are all related to storage management of public hazardous materials, in order to ensure the safety management of the storage areas of public hazardous materials (including storage location for organic peroxides) at each unit, we have performed inspections for 202 controlled areas.
- In accordance with the Fire Services Act Amendment Bill, for outdoor storage tanks of liquid hazardous materials reaching 1,000 kiloliter, an internal inspection is required every five years.
- In order to prevent continuous leakage of flammable, explosive toxic substance pipelines or equipment, non-preventive or preventive materials or devices are used to prevent leakage.

Community Engagement

- Depending on the circumstances, the Mailiao Administration Division may send a "safety text message" to inform local residents on behalf of the Mailiao Complex.
- Depending on the circumstances, complexes other than Mailiao may make notification by telephone first and then by fax.
- Residents outside FPC can directly report various issues related to public safety to the Administration Department at each complex.

Public Welfare Engagement

To have an in-depth understanding of social needs, FPC actively cooperates with the public and private sectors to invest human resources and funds in promoting local developments and philanthropic activities, including community activities, road maintenance, education, care for the elderly, cultural promotion, charities, temple activities and more.

To promote the growth of domestic culture, an amount of NT$93.67 million will be allocated to support cultural and artistic activities in 2023. This allocation will include donations to various initiatives such as the Formosa Wang Brothers Park, the Yunlin Philharmonic Indoor Choir Musical Performance, the Yilan International Children's Festival, the Dance Sports Championship, and the Pulp Art and Culture Festival.

On December 5, 2018, the "Formosa Wang Brothers Park" was officially registered as a cultural heritage site by the Kaohsiung City Government. FPC, in cooperation with NPC, FCFC and FPCC, established the "Kaohsiung City Wang Yung-Ching & Wang Yung-Tsai Brotherhood Park Foundation", a public foundation, to support the restoration and preservation of cultural assets and promote the reuse of the park.

In order to promote culture and urban tourism, a Cultural Heritage Party Week was held on April 15-16, 2023. The event has featured a variety of cultural performances. On December 16, 2023, the Ming Hwa Yuan Arts & Cultural Group was invited to perform the classic play "Liu-Chuan, Melon Ambassador to Hell". There was also the Small Universe Creative Learning Studio Music Interactive Theater and Butter Zoom Market, which showcase the various businesses in the park and provide the public with a rich cultural and leisure experience.

In addition, the Brothers Seminar is held regularly every quarter, inviting scholars, experts, and professionals from various fields to give special lectures. Theme markets are also held irregularly on weekends, with street performances by artists and creative workshops. These events contribute to the unique cultural and aesthetic life of the industrial heritage site.

While strolling under the shade of ancient trees and immersing themselves in the cultural heritage, visitors can not only enjoy the eagerly awaited exhibition tour by the two founders, but also get a glimpse of the historical context of the plastics industry. The original dormitories for dependents have been revitalized and now house a variety of industries, offering unique light snacks, merchandise sales and handicraft classes. This park has everything you could want, creating an exclusive cultural and creative brand for the Formosa Wang Brothers Park!

FPC's Social Investment Expenses for 2023

NT$ 310 million

During the Formosa Wang Brothers Park Cultural Heritage Party Week in April 2023, Chairman William Wong of FPG (second from left), Mayor Chi-Mai Chen of Kaohsiung City (second from right), Speaker Yu-Cheng Kang (first from left), and Legislator Chih-Chieh Hsu (first from right) held FPC PVC packaging bags to commemorate the historical significance of Taiwan's petrochemical industry during the era of American aid.

On April 15, 2023, the public enthusiastically participated in the market event at Formosa Wang Brothers Park. Children listened attentively as the teacher told stories, and the park was transformed into a vibrant center of arts and culture at night.

The Yunlin Philharmonic Chamber Choir hosted the "2023 Drama of Life Music Concert" on July 1, 2023.

The Yunlin Philharmonic Chamber Choir hosted a concert on September 24, 2023.

On December 16, 2023, the Ming Hwa Yuan Arts & Cultural Group was invited to perform at Formosa Wang Brothers Park. The venue was filled to capacity with a large audience.

For more information on FPG's social investments and expenditures, please visit FPG's official website.

Formosa Wang Brothers Park official website

FPG Website

5.2 Community Engagement in the Operation Area 201 203

5.2.1 Industry-Academia Cooperation Program

FPC actively establishes industry-academia collaboration with various universities and colleges and arranges students to work and undergo practical training at our complexes and departments, with a view to supporting local education, enhancing students' practical work experience, and helping students' employment competitiveness. The situation of industry-academia collaboration in 2023 are described below.

Industry-Academia Collaboration in 2023

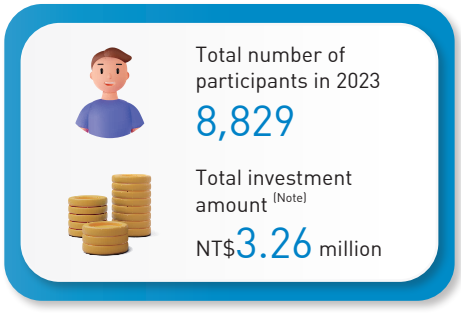
Category	School	Number of Students	Period
Industry-academia collaboration	Ming Chi University of Technology	73	2023~2024
	Kaohsiung Municipal Renwu Senior High School Petrochemical Industry Specialization Program	90 Freshmen 30 Sophomores 30 Juniors 30	2020~2025 (3-term, 5-year)
	National Yunlin University of Science and Technology, and National Formosa University	3	2023~2024
Education cooperation	Night School, National Siluo Agricultural Industrial High School	6	2023~2024
Total	-	172	-

Note: The Kaohsiung Petrochemical Industry Specialization Program is a 5-year, 3-term industry-academia collaboration (new contract signed in 2020); the contract for the cooperative education program at the Night School of National Siluo Agricultural Industrial High School renews annually.

5.2.2 Formosa LOHAS Circle

Formosa LOHAS Circle activities are mainly held in Yilan, Taoyuan, Yunlin, Changhua, and Kaohsiung. Focusing on environmental sustainability and social engagement, FPC has promoted the Formosa LOHAS Circle in cooperation with local communities, vendors, small farmers, and local governments around the complexes. For more information, please refer to the website of Formosa LOHAS Circle.

Formosa LOHAS Circle Website



Note: The cost of Formosa LOHAS Circle is shared by FPC, NPC, FCFC and FPCC.

5.2.3 Other Feedback Actions

Mailiao Social Education Park

FPG settled in Mailiao Township, Yunlin County in 1994. At that time, Mailiao was mainly engaged in wheat farming, pig farming and fish pond aquaculture. In the spirit of contributing to society, FPG invested resources to help the local community complete various infrastructure projects. They not only brought in professional teams to support agriculture and fisheries, but also stimulated local development and increased employment opportunities. As a result, the standard of living and social welfare of the residents has improved significantly, leading to a steady increase in the population growth rate of Mailiao Township. As a result, Mailiao has become the third largest township in Yunlin County, after Douliu City and Huwei Village.

The increasing population growth rate has led to the economic prosperity of rural towns, but it has also gradually exposed the inadequacy of public facilities. In 2017, Victor Hsu Zoom Design Atelier/ Chao Chien-Ming Architects & Planners was commissioned to collaborate on the design of the Mailiao Social Education Park. The goal was to build iconic libraries and aesthetically pleasing community halls in the coastal areas of Yunlin County. These facilities will benefit not only the residents of Mailiao Township, but also the neighboring coastal towns.

FPG has invested a total of NT$479 million in a construction project covering an area of 3,229 ping. The project started in February 2018, and has faced challenges such as the COVID-19 pandemic and the rising cost of construction materials. It was completed by the end of 2023 and transferred to the Mailiao Township Office in April 2024 for further development of internal software facilities.

The Mailiao Social Education Park is equipped with facilities such as the Library, the Hall of Life Aesthetics, and the Plaza of Aesthetic Incubation. It is a diverse space that combines literature and art, social education and leisure aesthetics. The architectural design incorporates traditional Mailiao cultural elements and modern aesthetics, along with environmentally friendly green building design. The goal is to provide a high quality cultural and recreational space for local residents, which can also become a prominent new landmark of Mailiao.

Mailiao Social Education Park Snapshots

Appendix

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V. Independent Assurance Opinion Statement 172

I. COMPARISON TABLE FOR GLOBAL SUSTAINABILITY REPORTING INITIATIVE

Statement of Use	FPC has prepared the report from January 1, 2023 to December 31, 2023 in accordance with the GRI Standards.
Use of GRI1	GRI1: Foundation (2021)
Applicable GRI Sector Standards	NA

GRI 2: GENERAL DISCLOSURES

Disclosure Indicator	Reference Report Chapter	Omission/Note
2-1 Organizational details	About This Report 1.2.2 Company History	
2-2 Entities included in the organization's sustainability reporting	About This Report 1.2.2 Company History	
2-3 Reporting period, frequency and contact point	About This Report	
2-4 Restatements of information	4.2.1 Compensation and Benefits	Correction of the number of employees on unpaid parental leave for raising children and their return to work in 2022
2-5 External assurance	About This Report V. Independent Assurance Opinion Statement	
2-6 Activities, value chain and other business relationships	2.3.1 Main Products and Brands	
2-7 Employees	4.1.1 Manpower Structure	
2-8 Workers who are not employees	4.1.1 Manpower Structure	
2-9 Governance structure and composition	2.2.1 Corporate Governance Overview 2.2.2 Promotion of Corporate Sustainability	
2-10 Nomination and selection of the highest governance body	2.2.1 Corporate Governance Overview	
2-11 Chair of the highest governance body	2.2.1 Corporate Governance Overview	
2-12 Role of the highest governance body in overseeing the management of impacts	1.3 Stakeholder Identification and Communication 2.2.1 Corporate Governance Overview	
2-13 Delegation of responsibility for managing impacts	2.2.2 Promotion of Corporate Sustainability	
2-14 Role of the highest governance body in sustainability reporting	About This Report 2.2.2 Promotion of Corporate Sustainability	
2-15 Conflicts of interest	2.2.1 Corporate Governance Overview	
2-16 Communication of critical concerns	2.2.1 Corporate Governance Overview 2.2.5 Legal Compliance	

Disclosure Indicator	Reference Report Chapter	Omission/Note
2-17 Collective knowledge of the highest governance body	2.2.1 Corporate Governance Overview	
2-18 Evaluation of the performance of the highest governance body	2.2.1 Corporate Governance Overview	
2-19 Remuneration policies	2.2.1 Corporate Governance Overview	
2-20 Process to determine remuneration	2.2.1 Corporate Governance Overview	
2-21 Annual total compensation ratio	4.2.1 Compensation and Benefits	
2-22 Statement on sustainable development strategy	1.1 Message from the Chairman	
2-23 Policy commitments	1.2.1 Management Philosophy ch.1 Builder of Innovative and Sustainable Future ch.2 Facilitator of a Prosperous Economy ch.3 Creator of a Sustainable Environment ch.4 Guardian of a Happy Workplace ch.5 Initiator of Shared Development	
2-24 Embedding policy commitments	2.2.2 Promotion of Corporate Sustainability ch.1 Builder of Innovative and Sustainable Future ch.2 Facilitator of a Prosperous Economy ch.3 Creator of a Sustainable Environment ch.4 Guardian of a Happy Workplace ch.5 Initiator of Shared Development	
2-25 Processes to remediate negative impacts	ch.2 Facilitator of a Prosperous Economy ch.3 Creator of a Sustainable Environment ch.4 Guardian of a Happy Workplace 2.2.5 Legal Compliance 3.2.2 Greenhouse Gases Management 3.2.3 Energy Management 3.4 Air Pollutant Management 3.6 Management of Hazardous Substances 4.3.1 Occupational Health and Safety 4.3.3 Emergency Response Mechanism at Complexes	
2-26 Mechanisms for seeking advice and raising concerns	2.2.4 Internal Control Mechanism	
2-27 Compliance with laws and regulations	2.2.5 Legal Compliance	
2-28 Membership associations	2.1.3 Participation in External Associations	
2-29 Approach to stakeholder engagement	1.3 Stakeholder Identification and Communication	
2-30 Collective bargaining agreements	4.2.3 Employee Communication and Care	

GRI TOPIC STANDARDS

Topic	GRI Index	Reference Report Chapter	Omission/Note
Management Approach	3-1 Process to determine material topics	1.4.1 Analytical Process for Material Issues	
	3-2 List of material topics	1.4.2 Materiality Analysis Results	
Material Topics: Operating and Financial Performance			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	
201: Economic Performance	201-1 Direct economic value generated and distributed	2.1.1 Operating and Financial Performance 5.1.2 Complex Operations and Community Relations 5.2 Community Engagement in the Operation Area	
	201-2 Financial implications and other risks and opportunities due to climate change	3.2.1 Identification of and Response to Climate Change Opportunities	
	201-3 Defined benefit plan obligations and other retirement plans	4.2.3 Employee Communication and Care	
	201-4 Financial assistance received from government	2.1.1 Operating and Financial Performance	
Material Topic: Corporate Governance			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	
Material Topic: Corporate Ethical Management			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	
205: Anti-corruption	205-1 Operations assessed for risks related to corruption	2.2.4 Internal Control Mechanism	
	205-2 Communication and training about anti-corruption policies and procedures	2.2.4 Internal Control Mechanism	
	205-3 Confirmed incidents of corruption and actions taken	2.2.4 Internal Control Mechanism	
206: Anti-competitive Behavior	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	2.2.4 Internal Control Mechanism 2.2.5 Legal Compliance	
Material Topic: Legal compliance			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	
Material Topic: Product R&D and Improvement			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	
Material Topic: Intelligent Management			
Management Approach	3-3 Management of material topics	ch.2 Facilitator of a Prosperous Economy	

Topic	GRI Index	Reference Report Chapter	Omission/Note
Material Topics: Greenhouse Gases Management			
Management Approach	3-3 Management of material topics	ch.3 Creator of a Sustainable Environment	
305: Emissions	305-1 Direct (Scope 1) GHG emissions	3.2.2 Greenhouse Gases Management	
	305-2 Energy indirect (Scope 2) GHG emissions	3.2.2 Greenhouse Gases Management	
	305-3 Other indirect (Scope 3) GHG emissions	3.2.2 Greenhouse Gases Management	
	305-4 GHG emissions intensity	3.2.2 Greenhouse Gases Management	
	305-5 Reduction of GHG emissions	3.2.2 Greenhouse Gases Management	
Material Topic: Energy Management			
Management Approach	3-3 Management of material topics	ch.3 Creator of a Sustainable Environment	
302: Energy	302-1 Energy consumption within the organization	3.2.3 Energy Management	
	302-3 Energy intensity	3.2.3 Energy Management	
	302-4 Reduction of energy consumption	3.2.3 Energy Management	
	302-5 Reduction in energy requirements of products and service	3.2.3 Energy Management	
Material Topic: Water Use Management			
Management Approach	3-3 Management of material topics	ch.3 Creator of a Sustainable Environment	
303: Water and Effluents	303-1 Interactions with water as a shared resource	3.3.1 Water Resources Risk Management 3.3.2 Water Usage 3.3.3 Improvements in Water Conservation Performance	
	303-2 Management of water discharge-related impacts	3.3.4 Zero Wastewater Discharge	
	303-3 Water withdrawal	3.3.2 Water Usage	
	303-4 Water discharge	3.3.2 Water Usage	
	303-5 Water consumption	3.3.2 Water Usage	
Material Topic: Air Pollutant Management			
Management Approach	3-3 Management of material topics	ch.3 Creator of a Sustainable Environment	
305: Emissions	305-6 Emissions of ozone-depleting substances (ODS)	-	No such emissions
	305-7 Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.4.2 Air Pollution Control Measures	
Material Topic: Hazardous Chemical Safety Management			
Management Approach	3-3 Management of material topics	ch.3 Creator of a Sustainable Environment	

Topic	GRI Index	Reference Report Chapter	Omission/Note
306: Waste	306-1 Waste generation and significant waste-related impacts	3.5.1 Waste Impact Identification	
	306-2 Management of significant waste-related impacts	3.5.1 Waste Impact Identification 3.5.2 Waste Management Performance	
	306-3 Waste generated	3.5.2 Waste Management Performance	
	306-4 Waste diverted from disposal	3.5.2 Waste Management Performance	
	306-5 Waste directed to disposal	3.5.2 Waste Management Performance	
Material Topic: Occupational Health and Safety			
Management Approach	3-3 Management of material topics	ch.4 Guardian of a Happy Workplace	
403: Occupational Health and Safety	403-1 Occupational health and safety management system	4.3.1 Occupational Health and Safety	
	403-2 Hazard identification, risk assessment, and incident investigation	4.3.1 Occupational Health and Safety	
	403-3 Occupational health services	4.3.2 Occupational Health and Safety Management	
	403-4 Worker participation, consultation, and communication on occupational health and safety	4.3.2 Occupational Health and Safety Management	
	403-5 Worker training on occupational health and safety	4.3.2 Occupational Health and Safety Management 4.3.3 Emergency Response Mechanism at Complexes	
	403-6 Promotion of worker health	4.3.2 Occupational Health and Safety Management	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.3.2 Occupational Health and Safety Management	
	403-8 Workers covered by an occupational health and safety management system	4.3.1 Occupational Health and Safety	
	403-9 Work-related injuries	4.3.2 Occupational Health and Safety Management 4.4.2 Supplier/Contractor Injury Indicators	
	403-10 Work-related ill health	4.3.2 Occupational Health and Safety Management 4.4.2 Supplier/Contractor Injury Indicators	
Material Topic: Public Safety at All Complexes			
Management Approach	3-3 Management of material topics	ch.4 Guardian of a Happy Workplace	
413 Local Communities	413-2 Operations with significant actual and potential negative impacts on local communities	5.1.2 Complex Operations and Community Relations	

II. COMPARISON TABLE FOR SUSTAINABILITY ACCOUNTING STANDARDS BOARD (SASB)

Disclosure Topic	Greenhouse Gas Emissions				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-110a.1	Total Emissions of Scope 1 (Unit: ton CO_2e)	3,918,988	3,338,613	3,542,116	3.2.2 Greenhouse Gases Management
	Percentage of Scope 1 emissions that are limited by laws and regulations (Unit: %)	100%	100%	100%	
		Note: In 2023, in accordance with the Greenhouse Gas Reduction and Management Act, 100% of the emission data of the complexes in Tungshan, Mailiao, Linyuan, and Renwu were disclosed.			
RT-CH-110a.2	Long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	▪ Revises short-, medium-, and long-term GHG reduction targets in accordance with the Greenhouse Gas Reduction and Management Act and the Regulations for Periodic Regulatory Goals and Approaches of the Greenhouse Gas Emissions. ▪ FPC has completed 501 power reduction improvement projects in 2023, saving 4,972 kWh (17.901 gigajoules/hour) of electricity, approximately a reduction of 47,510 tons of CO_2e.			

Disclosure Topic	Air Quality				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-120a.1	Air emissions of the following pollutants (Unit: metric tons)	-	-	-	3.4.2 Air Pollution Control Measures
	NOx (excluding N_2O)	1,763	1,509	1,076	
	SOx	845	693	527	
	Volatile organic compounds (VOCs)	389	377	399	
	Hazardous air pollutants (HAPs)	44	48	90	

Disclosure Topic	Energy Management				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-130a.1	Total amount of energy consumed (Unit: GJ)	26,638,682	24,496,157	24,101,059	3.2.3 Energy Management
	Percentage of grid electricity consumed (Unit: %)	70	74	69	
	Percentage of renewable energy consumed (Unit: %)	0	0	0	
	Total energy from self-generation (Unit: GJ)	7,981,752	6,475,778	6,729,163	

Disclosure Topic	Water Management					
Indicator Code	Disclosure Indicator		Comparison Disclosure			Reference Chapter
			2021	2022	2023	
RT-CH-140a.1	Total amount of water used (Unit: 1,000m^3)		39,466.26	35,590.66	35,820.12	3.3 Water Resources Management
	Proportion of water Management withdrawal in areas with high or very high baseline water pressure (unit: %)		0	0	0	
	Total water consumption (Unit: 1000m^3)		24,997.56	21,089.78	22,741.41	
	Proportion of water consumption in areas with high or very high baseline water pressure (unit: %)		0	0	0	
RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Water pollution	1	0	1	
		Soil and groundwater	0	0	0	
RT-CH-140a.3	Description of water resource management risks and discussion of strategies and practices to mitigate the risks.		▪ Improvement in water and energy conservation: The President's Office and the President's Office at Complex regularly conduct review with the Safety, Health and Environment Center under the Group Administration Office to keep track of each complexes' water conservation performance and formulate implementation approaches. ▪ Performance evaluation of water resources management: The President's Office at various complexes conducts the performance evaluation of energy conservation and carbon reduction every month to reward the best complex/department. In 2023, the best-performing complex/department was Mailiao Carbon Fiber Plant, which received a bonus of NT$50,000. ▪ Circular economy performance presentation: The Safety, Health and Environment Center organizes public presentations each year to showcase outstanding water conservation improvement projects at each company under FPG and exchange water conservation technologies and related professional knowledge.			

Disclosure Topic	Hazardous Waste Management				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-150a.1	Total Hazardous Waste Generation (Unit: metric tons)	2,928	3,251	2,988	3.5.2 Waste Management Performance
	Hazardous waste recycling Management Percentage (Unit: %)	0%	0%	0%	

Disclosure Topic	Community Relations		
Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-210a.1	Discussion and Engagement Process for Managing Risks and Opportunities Associated with Community Benefits	▪ The use and management of various water resources shall strictly comply with legal requirements. ▪ The Safety, Health and Environment Center conducts public presentations every year to showcase the excellent water-saving improvement cases in the enterprise (all companies must present their information). The continuous exchange of water-saving technologies and professional knowledge is not only beneficial to the company, but also to the external departments and residents participating in the meeting. ▪ Residents outside the Company can directly report various issues related to water resources management to the plant management department.	3.3 Water Resources Management 5.1.2 Complex Operations and Community Relations

Disclosure Topic	Community Relations		
Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-210a.1	Discussion and Engagement Process for Managing Risks and Opportunities Associated with Community Benefits	▪ According to the data given by the Ministry of Economic Affairs, annual water supply of Jiji Weir in the past three years (2021-2023) ranged from 265,000 to 365,000 megatons. The average of industrial water consumption accounted for 2.95% of the total water supply, while water consumption transferred from agricultural water usage only accounted for 1.97%, demonstrating that the water for the Mailiao Park does not compete with the farmers for water. In order to effectively utilize Taiwan's precious water resources, FPC not only strives for process improvement, enhancement of equipment effectiveness, optimization of operating conditions, and recycling and reuse of wastewater to increase water use efficiency, but also promotes recycling and reuse of rainwater at the same time.	3.3 Water Resources Management 5.1.2 Complex Operations and Community Relations

Disclosure Topic	Workforce Health & Safety					
Indicator Code	Disclosure Indicator		Comparison Disclosure			Reference Chapter
			2021	2022	2023	
RT-CH-320a.1	Total recordable incident rate (TRIR) and fatality rate for direct employees. (Unit: %) Note: FPC's statistics on employee injuries and fatalities include direct employees and contract employees. These statistics were calculated according to important indicators of disabling injuries announced by the Ministry of Labor, i.e. fatality rate (FR) whose formula is as follows: FR = (Total number of injuries 10^4) / Total working hours).	Recordable incident rate	496	4	1	4.3.2 Occupational Health and Safety Management
		Fatality rate	0.08	0	0	
	Total recordable incident rate (TRIR) and fatality rate for contract employees. (Unit: %)	Recordable incident rate	0	0	0	
		Fatality rate	0	0	0	
RT-CH-320a.2	Explanation of the assessment, monitoring, and reduction of measures taken to minimize long-term health risks for employees and contract employees.		▪ Set relevant penalties for SOP violations to ensure compliance with operational safety rules for various operations among employees ▪ Promote non-routine safety management, where supervisors will lead operators to conduct actual simulations of non-process operations with irregular cycles and intervals of more than six months according to SOP in order to ensure operational safety			

Disclosure Topic	Product Design for Use-phase Efficiency		
Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-410a.1	Revenue from products designed for use-phase resource efficiency (Unit: NT$)	▪ FPC continues to invest in the development of new and forward-looking, differentiated, and products and technologies with high value, and actively develops differentiated and green material products. ▪ A total of 39 new products were developed, with a potential annual benefit of NT$ 493,480 thousand. ▪ Among them, 12 items have been commercialized, generating a total revenue of NT$263,665 thousand.	2.3.2 Product Development and Innovation

Disclosure Topic	Safety & Environmental Stewardship of Chemicals				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-410b.1	Product contains GHS hazards classified as health and environmental hazards, and the proportion of product revenue of chemical substances classified as Class 1 and Class 2 (Unit: % based on revenue)	45%	47%	44%	3.6 Management of Hazardous Substances
	Percentage of the above products that have undergone hazard assessment (unit: percentage)	100%	100%	100%	
RT-CH-410b.2	Describe the management strategy for chemicals	▪ Ensure the safety of workplaces of hazardous substances (including chemical substances and hazardous chemical substances listed by the Environmental Protection Agency). In addition to requiring the responsible personnel to obtain technical licenses and to install detection and alarm equipment systems in the plant; for the unused chemical substances listed by the Environmental Protection Agency, after declaring their disposal according to the law, they will be treated as hazardous industrial wastes and managed properly.			
	Describe strategies for developing alternatives with reduced impact on humans and/ or the environment	▪ Adjust the freezing temperature of the process and change to the low-hazard refrigerant: Originally, the ODS refrigerant such as CFC-11/12/22 was in use, after the improvement of the process, the freezing temperature of the process is being adjusted and the refrigerant material to non-toxic propylene, R134a and other low-hazard refrigerants are adopted. ▪ Turn off the processes with high greenhouse gas: such as closing the production NF_3 process. ▪ Adjust the catalyst solvent in the process: if the original catalyst solvent is heptane (a dangerous article), replace it with low-hazard white oil. ▪ Develop toxic solvent substitutes: During the production of carbon fibers, DMSO solvents is used to replace DMF solvents.			

Disclosure Topic	Genetically Modified Organisms		
Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-410c.1	Percentage of products containing genetically modified organisms (Unit: % based on revenue)	The Company does not manufacture products containing genetically modified organisms.	-

Disclosure Topic	Management of the Legal & Regulatory Environment		
Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	▪ FPC has established the "Regulations Governing Supervision and Management of Environmental Protection", which stipulates that employees at all levels shall fulfill environmental protection related duties, and that the Safety and Health Department, the Safety and Health Team at each division, and environmental protection personnel at each complex and department shall conduct environmental protection compliance audits on a regular and irregular basis. In 2023, FPC received 5 environmental violation tickets, but there was no major environmental violation. ▪ When government agencies invite experts, scholars, and environmental protection organizations to conduct general inspections of industrial safety and environmental protection, FPC discusses and responds to the review opinions of experts, scholars, and environmental protection organizations. ▪ FPC is an active member of the Chinese National Federation of Industries (CNFI). FPC is also a member of the Sustainability Committee and the Environmental Protection Committee of the Petrochemical Industry Association of Taiwan (PIAT), representing the Petrochemical Industry Association of Taiwan (PIAT) to participate in various conferences on safety, health, environment, and sustainability and to seek recognition of experts, scholars, and environmental organizations for the petrochemical industry.	2.1.3 Participation in External Associations 2.2.5 Legal Compliance

Disclosure Topic	Operational Safety, Emergency Preparedness & Response				
Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2021	2022	2023	
RT-CH-540a.1	Process Safety Incidents Count (PSIC)	2	1	1	4.3.2 Occupational Health and Safety Management
	Process Safety Total Incident Rate (PSTIR) (Note: The statistical method of the occurrence rate of process safety incidents of FPC refers to SASB, the calculation method is = (total incidents / total working hours) x 200,000)	0.033	0.018	0.017	
	Process Safety Incident Severity Rate (PSISR)	0.065	0.071	0.050	
RT-CH-540a.2	Number of transport incidents	0	1	0	

Activity Metric	Production by reportable segment					
Indicator Code	Disclosure Indicator		Comparison Disclosure			Reference Chapter
			2021	2022	2023	
RT-CH-000.A	Production by reportable segment (Unit: Metric Tons)	Polyvinyl Chloride (PVC)	1,682,211	1,606,843	1,673,636	2.3.1 Main Products and Brands
		Vinyl Chloride (VCM)	1,619,025	1,586,535	1,601,745	
		Caustic Soda	1,686,385	1,593,709	1,467,507	
		Acrylic Ester (AE)	609,521	556,131	560,993	
		Epichlorohydrin (ECH)	97,707	85,822	74,558	
		N-butanol (NBA)	198,178	224,295	235,342	
		Super Absorbent Polymer (SAP)	164,758	191,589	200,711	
		Acrylonitrile (AN)	277,001	197,613	256,591	
		Ethylene Vinyl Acetate Copolymer (EVA)	302,895	287,184	320,858	

III. CORPORATE GOVERNANCE - CORPORATE ESG INFORMATION DISCLOSURE

ESG INFORMATION

Topic	Indicator Items	Indicator Description	Results Data in 2023	Remarks
		Environmental Issues		
GHG Emissions	Direct (Scope 1) GHG Emissions	Tons CO_2e	3,542,116	FPC has obtained the GHG verification statement for the 2023 in June 2024.
	Indirect Energy (Scope 2) GHG Emissions	Tons CO_2e	4,463,433	
	Other Indirect (Scope 3) GHG emissions	Tons CO_2e	11,845,359	
	GHG emissions intensity	Tons CO_2e/ NT$ million revenue	53.2422	GHG Emission intensity= (Scope 1 emission + Scope 2 emission)/ revenue of individual financial report for the current year (NT$ million)
	Strategies, methods and goals of greenhouse gas management	Qualitative narrative	FPC has set an absolute target for GHG emission reduction with the base year of 2020 (8.635 million tons CO_2e). In particular, GHG emissions will be reduced by 20% in 2025 compared to the base year, and by 40% in 2030 compared to the base year, with the goal of achieving carbon neutrality by 2050.	
Energy Management	Usage of Renewable Energy	Renewable energy/ total energy	0	FPC, in partnership with Formosa Heavy Industries Corporation, is currently developing onshore wind power projects to build three new 4,200 KW turbine models. The first turbine is scheduled to be completed and operational by the end of August 2024, with the remaining two turbines expected to be completed by December 2024 at the latest.
	Energy Efficiency	Qualitative narrative	Electricity/steam consumption per unit product (Total electricity/ steam consumption of main products output of main products) needs to be reduced by 5% compared with the average of the previous year.	
	Policy of the use of recycled materials	Qualitative narrative	Post-consumer recycled PP pellets (RP1040) with 30% post-consumer recycled (PCR) PP obtained a certificate of conformity from the Plastics Industry Development Center (PIDC) on July 28, 2022. A total of 160.5 tons were sold in 2023 to produce FPC's recycled PP woven bags.	
Water Resources	Water Usage	Metric Tons	22,741,411	Water Intensity = Water Consumption (metric tons) / Revenue of Individual Financial Report for the Year (NT$ million).
	Water Intensity	Water consumption per unit of product, service or turnover in NT$ million	151.25	

Topic	Indicator Items	Indicator Description	Results Data in 2023	Remarks
Water Resources	Water Resources Management or reduction targets	Qualitative narrative	Water consumption per unit of product (total water consumption of main products output of main products) needs to be reduced by 5% compared with the average of the previous year.	Water Intensity = Water Consumption (metric tons) / Revenue of Individual Financial Report for the Year (NT$ million).
Waste	Volume of Hazardous Wastes	metric tons	2,988	Including toxic and hazardous industrial waste (Class B) and waste with hazardous properties (Class C)
	Amount of non-hazardous waste	metric tons	213,956	Including general business waste (Class D) and waste that should be recycled or reused (Class R)
	Gross weight (Hazardous+Non-hazardous)	metric tons	216,944	
	Waste Intensity	Amount of waste per unit of product, service or turnover in NT$ million	1.4428	Waste intensity= total waste/ revenue of individual financial report for the year (NT$ million)
	Waste Management or reduction targets	Qualitative narrative	FPC is committed to promoting the reuse of waste, reducing the amount of waste in landfill, and the reduction target of direct disposal: 10% reduction in 2025 compared to the base year (2020) 20% reduction in 2030 compared to the base year (2020)	
Social Issues				
Manpower Development	Average employee salary	NTD/person	1,362,000	According to the 2023 parent company only financial statements
	Average number of employee benefits	NTD/person	1,545,000	According to the 2023 parent company only financial statements
	Average salary of full-time employees who are not in supervisory positions	NTD/person	1,363,737	
	Median salary of fulltime employees in nonsupervisory positions	NTD/person	1,237,783	
	Proportion of female supervisors in management positions	Ratio	7.8%	Calculated based on Management Level 2 supervisors or above
	Number of Occupational Accidents	Number of Persons	2	
	The ratio of occupational accidents	Ratio	0.17	Disabling frequency rate (FR)
Governance Issues				
Board of Directors	Number of directors	Number	15	
	Number of independent directors	Number	4	
	Proportion of female directors	Ratio	13%	
	Directors present at the Board of Directors attendance rate	Ratio	94.19%	96.51% if including attendance by proxy
	The number of training hours for directors and supervisors is in line with the ratio of training specifications	Ratio	85.71%	
Investor Communication	Number of investor conferences	Sessions	4	

IV. TAIWAN STOCK EXCHANGE CORPORATION RULES GOVERNING THE PREPARATION AND FILING OF SUSTAINABILITY REPORTS BY TWSE LISTED COMPANIES

INDUSTRY SPECIFIC INDICATOR DISCLOSURES - PLASTICS INDUSTRY

Number	Indicator	Indicator Type	Annual Disclosure		Unit	Note
1	Total energy consumed	Quantification	24,101,059		Gigajoule (GJ)	
	Percentage of Purchased Electricity	Quantification	69		Percentage (%)	
	Usage of Renewable Energy	Quantification	0		Percentage (%)	
	Total self-generated and self-consumed energy (Note 1)	Quantification	6,729,163		Gigajoule (GJ)	
2	Total Water Withdrawal	Quantification	35,820.12		Thousand cubic meters (1000m^3)	
	Total water consumed	Quantification	22,741.41		Thousand cubic meters (1000m^3)	
3	Weight and Recycling Percentage of Generated Hazardous Waste	Quantification	2,988		metric tons (t)	
	Percentage of hazardous waste recycled	Quantification	0.0		Percentage (%)	
4	Explanation of Number of Occupational Accidents	Quantification	2		Number	
	Explanation of the ratio of occupational accidents	Quantification	0.17		Ratio (%)	Disabling frequency rate (FR)
5	Main product output by product category	Quantification	Polyvinyl Chloride (PVC)	1,673,636	metric tons (t)	
			Vinyl Chloride (VCM)	1,601,745		
			Caustic Soda	1,467,507		
			Acrylic Ester (AE)	560,993		
			Epichlorohydrin (ECH)	74,558		
			N-butanol (NBA)	235,342		
			Super Absorbent Polymer (SAP)	200,711		
			Acrylonitrile (AN)	256,591		
			Ethylene Vinyl Acetate Copolymer (EVA)	320,858		

Note: Total self-generated and self-consumed energy is defined by the Renewable Energy Development Act, the Implementation Regulations Governing Renewable Energy Certificates, or relevant bylaws.

CLIMATE-RELATED INFORMATION OF LISTED AND OTC COMPANIES

	Risks and Opportunities of Climate Change on the Company and the Company's Response Measures	Reference Chapter
1	Supervision and Governance of Climate-Related Risks and Opportunities by the Board of Directors and Management	3.2.1 Identification of and Response to Climate Change Opportunities
2	Describe how the identified climate risks and opportunities affect the Company's business, strategy, and financials (short-term, medium-term, and long-term)	3.2.1 Identification of and Response to Climate Change Opportunities
3	Describe the Impact of Extreme Climate Events and Transition Actions on Finance	3.2.1 Identification of and Response to Climate Change Opportunities
4	Describe the integration of the process for identifying, assessing, and managing climate risks into the overall risk management system.	3.2.1 Identification of and Response to Climate Change Opportunities
5	When assessing resilience to climate change risks using scenario analysis, it is essential to provide a clear explanation of the scenario, parameters, assumptions, analysis factors, and significant financial impacts.	3.2.1 Identification of and Response to Climate Change Opportunities
6	If there is a transition plan in place to address climate-related risks, please provide the details of the plan, including the indicators and objectives used to identify and manage physical risks and transition risks.	3.2.1 Identification of and Response to Climate Change Opportunities
7	If internal carbon pricing is used as a planning tool, the basis for determining the price should be explained.	3.2.2 Greenhouse Gases Management
8	When setting climate-related goals, it is important to provide a clear explanation of the activities that will be covered, the scope of greenhouse gas emissions, the planning schedule, and the annual progress. If carbon offsetting or renewable energy certificates (RECs) are utilized to achieve these goals, it is necessary to specify the source and quantity of carbon offset or the quantity of RECs.	3.2.1 Identification of and Response to Climate Change Opportunities
9	Greenhouse gas inventory and assurance	Please refer to tables 1-1-1 and 1-1-2.
	Inventory Reduction Targets, Strategies, and Specific Action Plans for Greenhouse Gas Emissions	3.2 Climate Change Issue Management 3.2.2 Greenhouse Gases Management

1.1 Greenhouse gas inventory and assurance in the past two years

1-1-1 Greenhouse Gas Inventory Information

Scope 1	Year	Total Emissions (metric tons of CO_2e)	Intensity (Metric Tons of CO_2e / NT$ million)	Scope of Data
FPC	2022	3,338,612	17.1135	Covers all complexes in Taiwan, except for the Taipei Office.
	2023	3,542,116	23.5574	Covers all complexes in Taiwan, except for the Taipei Office.
Scope 2	**Year**	**Total Emissions (metric tons of CO_2e)**	**Intensity (Metric Tons of CO_2e / NT$ million)**	**Scope of Data**
FPC	2022	4,605,137	23.6056	Covers all complexes in Taiwan, except for the Taipei Office.
	2023	4,463,433	29.6848	Covers all complexes in Taiwan, except for the Taipei Office.

Note 1: The 2023 GHG verification opinion statement has been obtained in June 2024, and it covers all the complexes within Taiwan, except for the Taipei Office and subsidiaries.

Note 2: FPC conducted an inventory using the ISO 14064-1:2006 Greenhouse Gas Inventory Standard. The inventory data was based on the Global Warming Potential (GWP) values published in the Fourth Assessment Report (2007) by the Intergovernmental Panel on Climate Change (IPCC).

1-1-2 Greenhouse Gas Assurance Information

	Year	Scope of Assurance	Assurance Organizations	Standards on Assurance Engagements	Explanation of Assurance
FPC	2022	Covers all complexes in Taiwan, except for the Taipei Office.	SGS Taiwan Ltd. British Standards Institution (BSI)	ISO 14064-3	In 2023, in accordance with the"Climate Change Response Act", 100% of the emission data of the complexes in Tungshan, Mailiao, Linyuan, and Renwu were disclosed.
	2023	Covers all complexes in Taiwan, except for the Taipei Office.	SGS Taiwan Ltd. British Standards Institution (BSI)	ISO 14064-3	FPC has disclosed a total of 8,005,549 metric tons of CO_2 of its greenhouse gas emissions. This figure has been independently assured in accordance with the ISO 14064-3 standard by assurance institution. The assurance opinion provides reasonable assurance.

V. INDEPENDENT ASSURANCE OPINION STATEMENT 2-5

INDEPENDENT ASSURANCE OPINION STATEMENT

Formosa Plastics Corporation 2023 Sustainability Report

The British Standards Institution is independent to Formosa Plastics Corporation (hereafter referred to as FPC in this statement) and has no financial interest in the operation of FPC other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of FPC only for the purpose of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by FPC. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to FPC only.

Scope

The scope of engagement agreed upon with FPC includes the followings:

1. The assurance scope is consistent with the description of Formosa Plastics Corporation 2023 Sustainability Report.
2. The evaluation of the nature and extent of the FPC's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the Formosa Plastics Corporation 2023 Sustainability Report provides a fair view of the FPC sustainability programmes and performances during 2023. The sustainability report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the FPC and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate FPC's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurors in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that FPC's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a review of issues raised by external parties that could be relevant to FPC's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 10 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness, and Impact as described in the AA1000AP (2018).

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness, and Impact of AA1000AP (2018) and GRI Standards is set out below:

Inclusivity

This report has reflected a fact that FPC has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the FPC's inclusivity issues.

Materiality

FPC publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of FPC and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the FPC's management and performance. In our professional opinion the report covers the FPC's material issues.

Responsiveness

FPC has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for FPC is developed and continually provides the opportunity to further enhance FPC's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the FPC's responsiveness issues.

Impact

FPC has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. FPC has established processes to monitor, measure, evaluate, and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the FPC's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

FPC provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported, or omitted. In our professional opinion the self-declaration covers the FPC's sustainability topics.

Assurance level

The moderate level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

The sustainability report is the responsibility of the FPC's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064, and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:

Peter Pu, Managing Director BSI Taiwan

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