2020 CSR Report

台塑企業
FORMOSA PLASTICS GROUP

Formosa Plastics Corporation

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This Report was published pursuant to the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) issued by the Global Reporting Initiative (GRI) and compiled based on the guidelines and framework of the Core Options. 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.

Information Period

2020 (January 1, 2020 to December 31, 2020)

Scope and Boundary of Reporting

The information recorded herein mainly focuses on FPC and does not include its investment companies in Taiwan and the U.S and subsidiaries in China. Any other information with a different scope of the disclosure will be otherwise specified. The data quoted and reporting boundary used in the 2020 CSR Report are identical to those in 2019.

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.

Release Frequency

Annually. The 2019 CSR Report was issued on June 10, 2020, and this Report was issued in June 2021.

Report Guidelines

To strengthen performance comparison and report credibility, all information disclosed in this Report has been certified by the reputable British Standards Institution (BSI), disclosed in accordance with AA 1000AS v3 Type I and the disclosure requirements specified in GRI Standards. The BSI Independent Assurance Opinion Statement is included in the Appendix III and will be presented in the internationally accepted format. Any estimation will be specified in the relevant chapters.

Appendix III

1. Sustainability Reporting Standards of the Global Reporting Initiative (GRI Standards)
2. Chemicals - Sustainability Accounting Standard issued by the Sustainability Accounting Standards Board (SASB)
3. Recommendations on Climate-related Financial Disclosures from the Task Force on Climate-Related Financial Disclosures (TCFD)
4. Materiality, Inclusivity, Responsiveness, and Impact of AA 1000 Accountability Principle Standard (APS)
5. ISO 26000 Social Responsibility Guidelines
6. Rules Governing the Preparation and Filing of Corporate Social Responsibility Reports by TWSE-Listed Companies
7. Corporate Social Responsibility Best Practice Principles for TWSE/TPEx-Listed Companies
8. United Nations Global Compact
9. United Nations Sustainable Development Goals (SDGs)

Contact Information

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

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Progress of Sustainable Development Goals

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Response to the United Nations' Sustainable Development Goals (SDGs): In 2020, 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

Short-term (One to three years)

1. Expand operations at home and abroad and carry out debottlenecking projects

▶ **Actions and Achievements in 2020**

Please refer to the section "2.5 Response to Significant Economic Issues" for more details.

2. Promote AI technology development and applications

▶ **Actions and Achievements in 2020**

1. Enhance AI technology development and applications toward the five major pillars of development. Please refer to the section "2.3.2 (2) Develop Artificial Intelligence" for more details.
2. As of 2020, 78 out of the 156 proposed AI technology development cases were completed. The remaining 78 AI technology development cases are currently ongoing with an expected annual benefit of NT$350 million.

3. Increase the sales volume of differentiated products by more than 5% compared to 2019

▶ **Actions and Achievements in 2020**

In 2020, the sales volume of differentiated products increased by 7% compared to 2019. Continuous efforts will be made.

SDGs

Targets:

8.2 / 9.4 / 12.2 / 12.5

Reference chapters:

2.1.1 Operating and Financial Performance
2.3.1 Main Products and Brands
2.3.2 Product and AI Technology Development and Innovation
2.4.2 Customer Satisfaction Survey
2.5 Response to Significant Economic Issues

Medium-term (Three to five years)

1 Cultivate R&D talents to enhance R&D capabilities

▶ **Actions and Achievements in 2020**

1. There were 560 R&D employees in 2020 (accounting for 9.2% of total employees), an increase of 24 employees, or 4%, from 2019.
2. The R&D expenditure in 2020 was NT$2.3 billion, an increase of 5.6% from 2019, accounting for 1% of total revenue.

2 Promote "automation of pellet packaging"

▶ **Actions and Achievements in 2020**

As a demonstration plant, Mailiao PVC Plant began testing in December 2020 to streamline manpower and achieve the target of pellets off the ground. This initiative will be expanded to other production plants in parallel upon completion.

3 Continue to promote production, marketing, and research operation strategies, develop new products and applications in collaboration with clients, learn about customer needs, improve product quality, and enhance customer service

▶ **Actions and Achievements in 2020**

According to the customer satisfaction survey in 2020, FPC obtained improved scores in "Technical Service," "Brand Image," and "Product Delivery" compared to 2019. Please refer to the section "2.4.2 Customer Satisfaction Survey" for more details.

Long-term (More than five years)

1 Reduce the proportion of exports to a single market and expand into emerging markets

▶ **Actions and Achievements in 2020**

In 2020, the proportion of exports to Southeast Asia, Australia, and New Zealand increased by 1.4% compared to 2019. FPC will continuously diversify markets to reduce risks.

2 Strive to innovate and develop forward-looking and high-value materials and process technologies and move toward the development of specialty products

▶ **Actions and Achievements in 2020**

Please refer to the section "2.3.2 Product and AI Technology Development and Innovation" and FPC's 2020 Annual Report for more details on forward-looking and high-value materials and process technologies in 2020.

3 Continue to promote key performance indicators (KPIs) and understand the competitive advantages of benchmark peers to enhance business performance

▶ **Actions and Achievements in 2020**

FPC set 149 KPIs for 21 products. 5% of the KPIs were not met in 2020, compared to 11% in 2019, indicating a significant decrease in the number of KPIs not met. Countermeasures have been drafted for improvement.

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SDGs

Environmental

Short-term (One to three years)

1 Promote "circular economy" in each complex to implement reduction, reuse, and utilization of resources

▶ **Actions and Achievements in 2020**

1. The Mailiao Complex has set a goal of reducing waste by 3% within three years (six-year average) to strengthen reuse and recycling.
2. FPC's plans to reuse calcium fluoride sludge and desulfurization sludge (including trial plans) have been approved by the Ministry of Economic Affairs in July and September 2020, respectively. The trial procedures are scheduled to be completed by 2021.

2 Implement plans to eliminate white smoke visual pollution at the cogeneration plant

▶ **Actions and Achievements in 2020**

As of the end of 2020, improvements were made on white smoke visual pollution caused by four out of the six chimneys at the cogeneration plant. Improvements on the remaining two chimneys at Renwu Public Utilities Complex are scheduled to be completed by the end of 2021.

3 Promote source reduction of wastewater

▶ **Actions and Achievements in 2020**

FPC continued 28 improvement plans for source reduction of wastewater and expected to reduce wastewater discharge by 2,460 CMD. As of the end of 2020, 25 improvement plans have been completed, reducing wastewater discharge by 2,110 CMD (with an achievement rate of 85.8%). The remaining three improvement plans are currently ongoing.

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

Reference chapters:

3.3.2 Improvement in Energy Conservation
3.4.1 Water Resource Consumption and Reduction Management
3.4.2 Water Conservation Performance
3.4.3 Zero Wastewater Discharge
3.5.1 Air Pollution Monitoring and Assessment
3.5.2 Air Pollution Control Measures
3.7 Environmental Compliance

Medium-term (Three to five years)

1 Perform overall inspection of high-risk pipelines (hazardous fluid pipelines)

▶ **Actions and Achievements in 2020**

A total of 172 pipelines had to be replaced (including 66 pipelines requiring replacement upon overall inspection and 106 pipelines requiring material improvement upon self-assessment). 155 pipelines were replaced at the end of 2020, whereas the remaining 17 pipelines are scheduled to be replaced by the end of September 2022.

2 Promote water and energy conservation and greenhouse gas (GHG) emission reduction

▶ **Actions and Achievements in 2020**

Please refer to the sections "3.3.2 Improvement in Energy Conservation" and "3.4.2 Water Conservation Performance" for more details on FPC's performance in water and energy conservation and greenhouse gas emission reduction in 2020.

Long-term (More than five years)

1 Continue to promote a "circular economy" and strive toward achieving the "zero waste" objective

▶ **Actions and Achievements in 2020**

FPC has cooperated with National Cheng Kung University and ITRI to invest in the "Flue Gas CO_2 Capturing and Utilization Technology" project, which turns flue gas into green energy using innovative and forward-looking technologies. This project was shortlisted for the 2020 R&D 100 Awards. The project in Renwu Plant is scheduled to be completed and begin operations in the second half of 2021. Please refer to our CSR website for more details.

2 Perform overall inspection based on the cycles set by equipment risk level

▶ **Actions and Achievements in 2020**

Overall inspections are performed in process areas every year since 2014. As of the end of 2020, FPC has completed 403 overall inspections and made improvements on 1,501 out of the 1,527 anomalies found in these inspections, demonstrating an overall completion rate of 98.3%. Improvements on the remaining 26 anomalies are scheduled to be completed in the first half of 2021.

3 Achieve zero violation of environmental laws

▶ **Actions and Achievements in 2020**

1. FPC strengthened independent inspections at plants, source reduction and management, process waste reduction, and end control.
2. FPC installed equipment with the best available control technology.
3. FPC improved the effectiveness of pollution prevention equipment through AI technology.

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SDGs

Targets:

3.9 / 4.5 / 4.7 / 8.6 / 8.8 / 11.5

Social

Short-term (One to three years)

1. Integrate FPC's resources and seek active cooperation between the academic and industrial sectors to bolster employment opportunities

   ▶ **Actions and Achievements in 2020**

   Please refer to the section "6.2.1 Industry-Academia Cooperation Program" for more details.

2. Continue to promote various neighborhood and social charity events

   ▶ **Actions and Achievements in 2020**

   FPC invested NT$180 million in social welfare activities in 2020. Please refer to the section "6.1.1 Community Relations" and "6.1.2 Social Investment" for more details.

3. Actively care for employees and offer assistance in overcoming difficulties to ensure talent retention

   ▶ **Actions and Achievements in 2020**

   1. In 2020, FPC collaborated with the Teacher Chang Foundation by having Teacher Chang to provide regular consultations to employees at all complexes. Consultations were completed with 103 people in 2020 with hopes of uncovering employees' problems early and helping to solve them.
   2. In 2020, FPC organized 17 sessions of "Supervisor Care Sensitivity Training," which were attended by a total of 716 participants with a satisfaction rate of 98%. Please refer to the section "4.2.2 Employee Communication and Care" for more details.

Reference chapters:

2.2.2 Promotion of Corporate Sustainability
4.1.2 Employee Recruitment
4.2 Employee Rights, Benefits and Training
5.1.1 Occupational Health and Safety
6.1 Local Community Development and Investment
6.2 Community Engagement
6.3 Response to Local Community Issues

Medium-term (Three to five years)

1 Increase the proportion of people with disabilities employed

▶ **Actions and Achievements in 2020**

In 2020, 83 people with disabilities were employed, 32% more than the statutory requirements. Please refer to the section "4.1.2 Employee Recruitment" for more details.

2 Lower the work-related disability injury indicators year by year (20%)

▶ **Actions and Achievements in 2020**

CCTVs were installed at operation areas to ensure the complete and dynamic monitoring during construction.

Long-term (More than five years)

1 Achieve zero occupational disaster

▶ **Actions and Achievements in 2020**

The intelligent personnel positioning and face recognition system was established. Please refer to the section "5.1.1 Occupational Health and Safety" for more details.

2 Gradually improve the sustainability governance framework, and establish a designated organization to coordinate sustainability performance to advance progress

▶ **Actions and Achievements in 2020**

1. FPC has established the Sustainable Development Task Force to be in charge of implementing sustainability-related activities and disclosing related results.
2. On December 17, 2020, the Board of Directors approved the "Regulations Governing Risk Management" and formulated FPC's risk management policy. In addition, FPC conducts risk identification, risk measurement, risk control and supervision, risk reporting and disclosure, risk performance management and improvement, etc., with a view to moving toward corporate sustainability.

3 Strengthen communication with local communities to enhance identification with FPC

▶ **Actions and Achievements in 2020**

FPC listened to opinions of the locals and conveyed the business philosophy of perpetual business operation and dedication to the society by actively promoting corporate policies to the communities, so as to strengthen the relationship between FPC and communities.

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Economic

2020 Consolidated revenue:

NT$**185.8** billion

2020 Net profit before tax:

NT$**24.1** billion

Environmental

Social

All complexes obtained the following certificates:

ISO 14001

ISO 45001

CNS 15506

2020 Daily amount of water conserved:

4,043 tons

Cumulative amount of investment in pollution control, energy conservation, and carbon reduction:

NT$**25.4** billion

2020 Annual GHG reduction:

136,600 tons

2020 Amount of green procurement:

NT$**124.02** million

2020 Percentage of regular employees:

96.6%

2020 Employee turnover rate:

3.3%

2020 Percentage of local supervisors employed

59.6%

2020 Percentage of employees joining labor unions:

75.8%

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Award-Winning Performance in 2020

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Type	Awarding Organization	Award	Awarded Department
S	Ministry of Labor, Executive Yuan	Excellent Occupational Safety and Health Department	Mailiao Complex
S	Yunlin County Government	Five-Star Excellent Occupational Safety and Health Department Award	Mailiao LLDPE Plant
S	Yunlin County Government	Five-Star Excellent Occupational Safety and Health Department Award	Mailiao AN Plant
S	Yunlin County Government	Excellent Occupational Safety and Health Department	Mailiao ECH Plant
E	Department of Environmental Protection, Taipei City Government	Outstanding Green Procurement Enterprise	FPC
G	China Credit Information Service Ltd.	Legendary 50 Award	FPC

Note: "S" refers to social awards; "E" refers to environmental awards; and "G" refers to governance awards.

Awarding ceremony for the Excellent Occupational Safety and Health Department in December 2020

FPC received the Legendary 50 Award - Top 100 Companies by Revenue for 50 Consecutive Years from China Credit Information Service Ltd. in August 2020

Special Action / Response to the COVID-19 Pandemic

FPC's Epidemic Prevention Management Policy

The Coronavirus Disease 2019 (COVID-19) broke out in early 2020. Faced with the risk and impact of this sudden pandemic, FPC joined the national facial mask production team based on the spirit of altruism and gave full support in providing the raw materials required for the production of medical protection and sanitary products, thereby contributing to epidemic prevention in Taiwan and safeguarding people's health. In order to ensure unhampered supply of raw materials in the non-woven fabric and facial mask industry chains, FPC built an integrated marketing platform for non-woven fabric using blockchain technology, which was also expanded to the medical, automotive, shoe materials, and wind power industries, with the aim of connecting the upstream, midstream, and downstream sectors to form a global industry alliance and provide customers with a full range of services. In addition, FPC also drew up the COVID-19 Prevention and Emergency Response Plan to minimize the impact of this pandemic.

Response Actions and Achievements in 2020

Economic / Supply of epidemic prevention supplies to safeguard people's health

In response to the COVID-19 pandemic, FPC established the National Epidemic Prevention Supplies Team through cross-industry integration in line with government policies, in order to safeguard people's health.

With priority given to the supply of raw materials needed for the production of epidemic prevention supplies, FPC recorded sales of raw materials that could be used for producing 15.51 billion pieces of facial masks, 8.98 billion sets of medical gloves, 147,000 tons of bleach, and 300 million bottles of alcohol or plastic buckets for bleach in total. Please refer to the section "6.3 Response to Local Community Issues" for more details.

6.3 Response to Local Community Issues

Environmental / Epidemic prevention and control at all complexes to ensure personnel safety

Dining environment at all complexes: Cafeterias at all complexes stepped up disinfection efforts and temporarily suspended in-house dining while implementing "bento" takeaways only. In addition, tuck shops at all complexes were required to set up partitions to minimize contact between employees and disinfect the partitions with 75% alcohol after meals.

Shorten toolbox meeting time at all complexes: For toolbox meetings that are held at all complexes before operations begin each day, notices are sent in advance to suppliers and contractors, supervisors, and security personnel via e-mail or communication software to shorten meeting time. Moreover, the number of supplier and contractor personnel entering factory areas was also reduced.

Project classification: Except for urgent projects, projects that are not necessary, yet to begin, or easily causes people to gather (e.g., confined operations) were classified by importance into Levels A, B, and C, with Level A projects given priority for implementation.

Social / Comprehensive supporting measures to ensure that employees can work at ease

Personnel access control: Infrared temperature sensors were installed at important entries and exits of the Formosa Plastic Building and all complexes to monitor the body temperature of personnel entering and exiting these places. Personnel whose body temperature exceeds 37.5 degrees Celsius will be asked to take leave for medical treatment immediately and undergo follow-up monitoring subsequently.

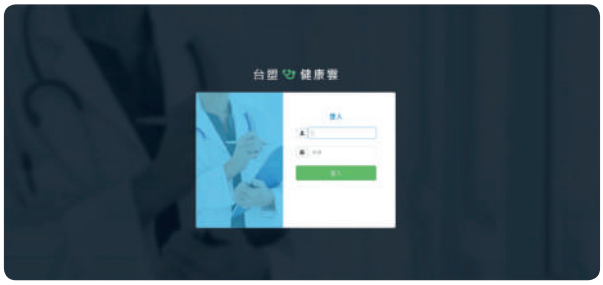
Employee activities: All large-scale activities and events (including FPG sports day) and welfare committee meetings were temporarily suspended. Various recreational facilities at all complexes (such as gymnasiums, KTV rooms, and reading rooms) were temporarily closed.

Social distancing and diversion of personnel movement: Division of office space and diversion of personnel movement were implemented at all complexes, where two to three types of walking lines were designed for personnel movement and curtains were set up in control rooms to reduce contact and droplet infection. Moreover, the frequency of large-scale meetings (comprising over 20 people) was reduced, with such meetings to be held via videoconferencing. Participants were required to stay one-seat apart in meetings to maintain social distancing.

Introduction of epidemic prevention leave categories: "Mandatory quarantine leave," "epidemic prevention leave," and "epidemic prevention care leave" were formulated according to isolation (e.g., home quarantine) and epidemic prevention requirements set forth by the Central Epidemic Command Center (CECC), so that FPC employees can take leave to comply with epidemic prevention measures in accordance with related regulations.

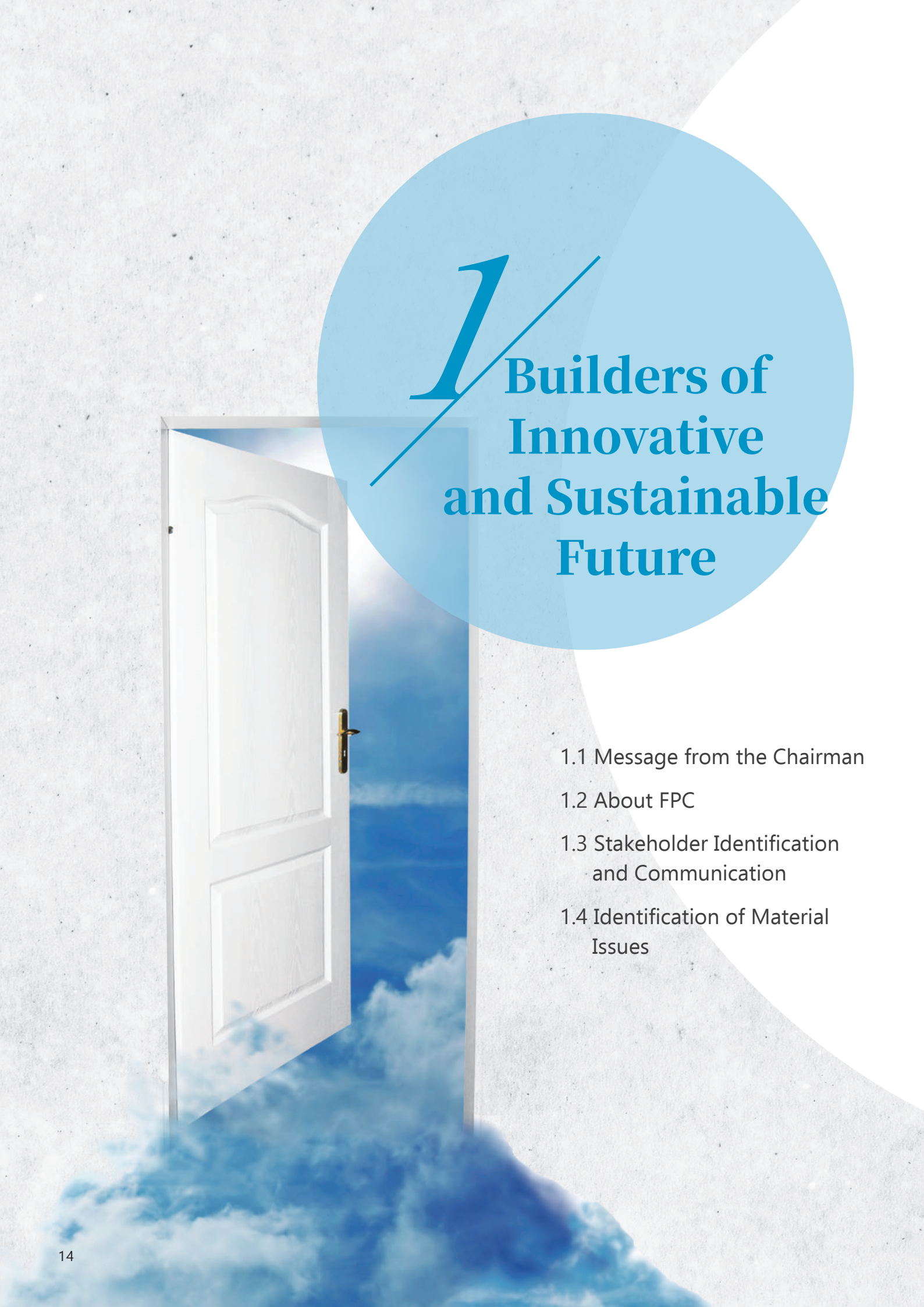
Simplified procurement process: In response to epidemic prevention needs, all departments were permitted to purchase epidemic prevention equipment and supplies, including facial masks of medical grade and above, ear or forehead thermometer and related consumables, alcohol (with a concentration of 75% and above), and hand sanitizers, on their own without having to go through centralized procurement.

Distribution of facial masks: Before the pandemic broke out, FPC has prepared an appropriate quantity of facial masks in advance, and actively distributed facial masks to employees when facial masks were severely out of stock between February and March 2020, so that employees can work at ease.



The FPC Health Cloud serves as an important tool to monitor employees' health status on a daily basis and record their contact history

FPC donated bleach to government agencies and schools for epidemic prevention purposes



1 Builders of Innovative and Sustainable Future

1.1 Message from the Chairman

1.2 About FPC

1.3 Stakeholder Identification and Communication

1.4 Identification of Material Issues

1.1 Message from the Chairman

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

Owing to the spread of the COVID-19 pandemic across the world, countries around the world began implementing lockdown measures starting March 2020, leading to sharply shrinking demand and supply chain disruptions while severely impacting production, consumption, and investment confidence. These developments have hit the global economy really hard, dragging down international crude oil, raw materials such as ethylene and propylene, and petrochemical products in the process. Despite declining product markets and narrowing interest rate spreads, the costs of raw materials dropped substantially at the same time, enabling FPC to continuously maintain profitability in the first half of 2020. Yet, FPC posted a consolidated loss after tax as a result of a significant decline in revenue at our investment companies, such as Formosa Petrochemical Corp. and Formosa Plastics Corporation, U.S.A. As countries began to open up gradually in the second half of 2020, demand for epidemic prevention supplies, home exercise equipment, construction materials, consumer electronics, and home appliances grew exponentially, thanks to the stay-at-home economy and explosive pent-up demand, thus paving the way to gradual global economic recovery. Furthermore, with countries around the world adopting monetary easing and fiscal stimulus policies in large quantities, the prices of petrochemical products have experienced a rebound and recovered to pre-pandemic levels at the end of 2020. Specifically, the prices of polyvinyl chloride (PVC) and polyethylene vinyl acetate (EVA) have reached new heights in nine years, enabling FPC to improve our annual performance and escape the spectre of losses.

As the saying goes, "Forewarned is forearmed." Looking back on 2020, FPC's active engagement and implementation of innovative R&D in the face of various management difficulties arising from the economic impact of the COVID-19 pandemic and oversupply of petrochemical products have seen our collaboration with ITRI on the development of "dye-sensitized batteries for smart home technology" honored with the R&D 100 Awards. Such an accomplishment demonstrates that FPC's innovative R&D and commercialization capabilities have earned recognition from the global technology community. At the same time, FPC has established the Artificial Intelligence Research & Development Center at Renwu Complex, in order to deepen the development and application of artificial intelligence (AI) in five areas, namely production and marketing optimization, quality assurance, smart maintenance, digital inspection, and cost reduction, thereby enhancing operating efficiency. On the other hand, FPC has built an integrated marketing platform for non-woven fabric using blockchain technology, which will be expanded to the medical, automotive, shoe materials, and wind power industries, with the aim of connecting the upstream, midstream, and downstream sectors to form a global industry alliance and provide customers with a full range of services. In addition, the FPC E-Business System has also been set up, with the intention of realizing customer-oriented digital transformation and moving toward the development of a smart production and sales system. FPC also conducted muti-faceted business promotion and communication with customers via remote marketing with hopes of creating a win-win situation during the COVID-19 pandemic. FPC spared no effort to implement the aforesaid management strategies and take corrective measures in the course of pursuing rationalization, so as to strengthen corporate management. While dealing with multiple challenges such as the COVID-19 pandemic, FPC was poised to maintain sustainable growth in acknowledgement of the support and encouragement from all of our shareholders, employees, and customers, as well as business partners.

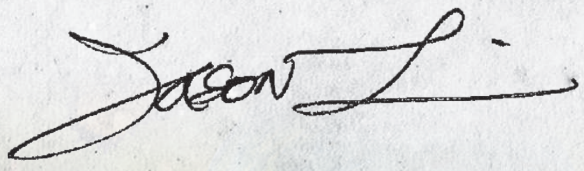
As a member of the global corporate citizenship, FPC has made great strides in five areas, namely corporate governance, environmental sustainability, employee welfare, workplace safety, and community co-prosperity, and is progressing toward nine of the United Nation's Sustainable Development Goals (SDGs), so as to realize the management philosophy of "Perpetual Business Operation and Dedication to the Society" upheld by our two founders. After years of implementation, not only has FPC been selected as a constituent of the TWSE Taiwan High Compensation 100 Index, Taiwan Employment 99 Index, and Corporate Governance 100 Index, but also became one of the only three companies in Taiwan to receive the Legendary 50 Award from China Credit Information Service Ltd. in 2020 for being ranked among the top 100 Companies by revenue for 50 consecutive years. Moreover, four departments received commendation and recognition from the competent authorities, thanks to their outstanding performance in occupational safety and health. Specifically, Mailiao Linear Low Density Polyethylene (LLDPE) Plant and Acrylonitrile (AN) Plant have been honored with the Five-Star Excellent Occupational Safety and Health Department Award by the Yunlin County Government for three consecutive years. It is even more gratifying to know that owing to FPC's success in epidemic prevention, our employees have been able to stay safe and healthy throughout a year ravaged by the COVID-19 pandemic. Based on the spirit of altruism, FPC joined the national facial mask production team and gave full support in providing the raw materials required for the production of medical protection and sanitary products, thereby contributing to epidemic prevention in Taiwan and safeguarding people's health.

FPC has been committed to creating an excellent living environment and a better and sustainable future for the Earth. As of 2020, we invested a total of NT$25.4 billion in pollution prevention, energy conservation and waste reduction, greenhouse gas (GHG) reduction, and industrial safety and fire protection. In 2020 alone, we conserved 4,043 tons of water per day and reduced an additional 137 thousand tons of GHG emissions per year. According to the 2020 assessment results announced by the Carbon Disclosure Project (CDP), an international environmental assessment index, FPC was given an A rating in climate change assessment and an A- rating in water resource assessment, both of which ranked among the best for internationally-renowned chemical companies. Such performance has confirmed FPC's significant results in energy conservation, emission reduction, and circular economy in response to climate change. Additionally, FPC has also carried out white smoke elimination and improvement at Renwu Plant and promoted zero wastewater discharge at all complexes in consideration of increasingly stringent environmental protection laws and regulations in Taiwan. At the same time, all complexes have implemented various measures, such as reducing sources of volatile organic compounds (VOCs), streamlining equipment components, and gradually replacing equipment components with low-leakage ones, supplemented with the application of infrared detectors (i.e. GasFinder) to enhance self-inspection, so as to create a friendly environment and promote mutual benefit with environmental sustainability.

Faced with international environmental, social, and corporate governance (ESG) trends in 2021, FPC, as a leading company in the petrochemical industry in Taiwan, will continue to fulfill our sustainability commitment to all stakeholders by deepening AI development and R&D, actively nurturing talents in AI, big data, and cloud computing, and speeding up the application of AI in various areas to optimize production and sales, improve quality and management performance, and reduce energy consumption, as well as carrying out pipeline inspections and leak detection to enhance safety, health, and environmental management. Furthermore, we strive to innovate and develop forward-looking and high-value materials and process technologies and move toward the development of specialty products in response to the emergence of the semiconductor, 5G, renewable energy, and medical and epidemic prevention industries, so as to enhance our competitiveness over the long run. While maintaining business development and environmental sustainability, FPC will continue to promote circular economy and energy saving and carbon reduction and build renewable energy, with the goal of becoming a leading enterprise that fulfills corporate social responsibility and creates sustainable value for all stakeholders.

Formosa Plastics Corporation

Chairman



2021

1.2 About FPC

1.2.1 Management Philosophy 102-16

As a member of the Formosa Plastics Group (FPG), Formosa Plastics Corporation (FPC) has undergone more than 60 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

CSR Website: Business Philosophy

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

1.2.2 Company History 102-1 102-3 102-4 102-5 102-6 102-7 102-45

Formosa Plastics Corporation

Date of Founding	November 5, 1954
Date of Listing	July 27, 1964
Business	Plastics, fiber, chemicals and co-generation
Location	Head Office: No. 100, Shuiguan Road, Renwu District, Kaohsiung City Taipei Office: 4th Floor, No. 201, Dunhua North Road, Songshan District, Taipei City
Global Location	Taiwan, Mainland China, U.S.A., and Vietnam
Amount of Capital (NT$ thousand)	63,657,408
Consolidated Revenue in 2020 (NT$ thousand)	185,813,405
Number of Taiwan Employees in 2020	6,311

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

FPC Website: Memorabilia

Corporate Logo

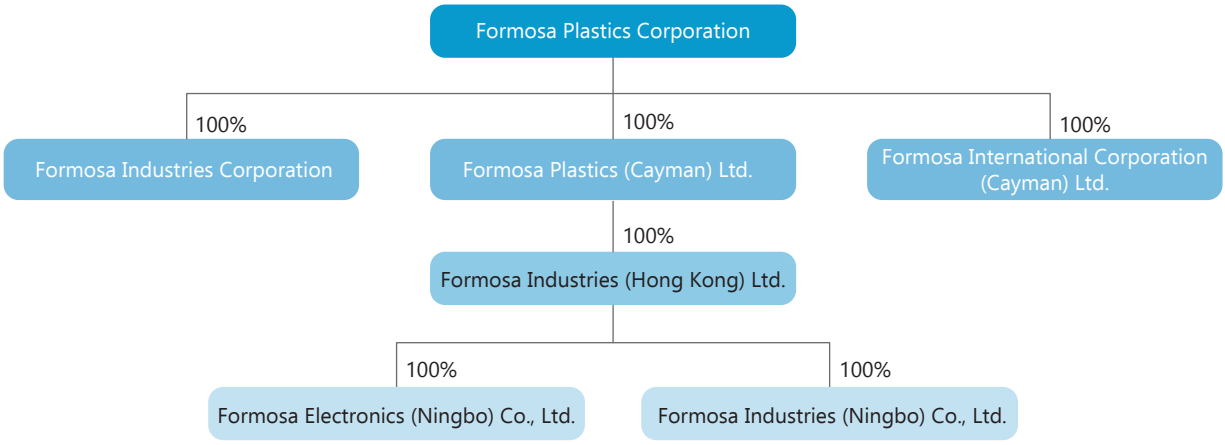
The relationship among the companies under FPG is shown in the logo of FPG as a chain of different companies.

The symbol representing the Company is a transformation of the Chinese character "台," which is kept relatively similar to FPC's logo.

FPG Website: Corporate Logo

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

Organization Chart



1.3 Stakeholder Identification and Communication

102-40 102-42 102-43 102-44

Considering the experiences of the various departments and consulting the five major principles of the AA1000 Stakeholder Engagement Standard (SES) (Dependence, Accountability, Influence, Multiple Perspectives, and Degree of Concern), FPC has identified the seven main stakeholder groups, and established a variety of smooth communication channels with the stakeholders 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 strategies and objectives in the future.

Main Stakeholder Groups

For more information on channels, frequency, and focus of communication with stakeholders, please refer to FPC's CSR Website.

CSR Website: Stakeholder Engagement & Materiality

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 Analysis Process for Material Issues

Step 1 Identification of Stakeholders

Through discussions between the editorial team of this Report and heads of various departments, this Report referenced the five major principles of the AA1000 Stakeholder Engagement Standard (SES) to identify seven main groups of stakeholders.

Step 2 Collection of Sustainability Issues

After referencing the GRI Standards published by the Global Reporting Initiatives (GRI), the Corporate Social Responsibility Best Practice Principles for TWSE/TPEx-listed Companies, the ISO 26000 Guidance on Social Responsibility, the ten principles of the United Nations Global Compact, and media reports, the editorial team of this Report held discussions to select **29** sustainability issues for identification.

Step 3 Analysis of Degree of Concern of Issues

Through the distribution of online questionnaires, surveys were conducted on **559** stakeholders from various functional teams at the President's Office, Accounting Department, Environment Safety & Health Department, sale departments at various divisions, Mailiao Administration Department, and Kaohsiung Administration Department. Furthermore, **27** questionnaires targeting high-level executives were retrieved to evaluate the degree of impact that these issues would have on FPC's operations.

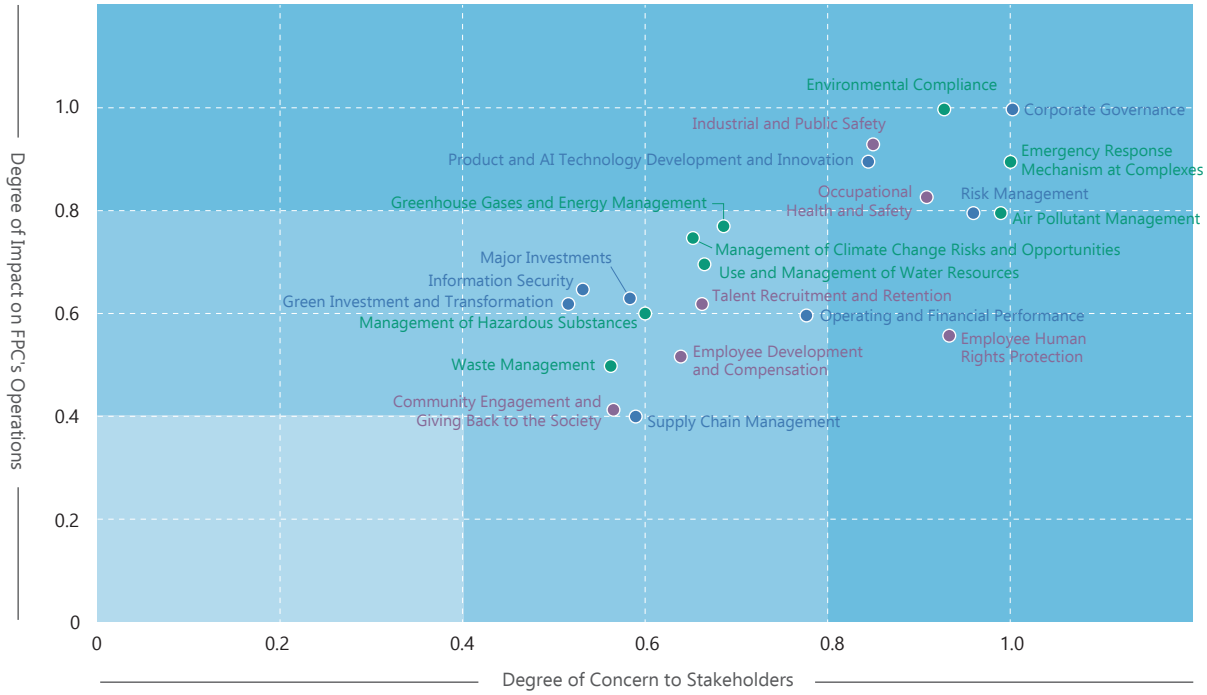
Step 4 Sorting of Material Issues

According to two aspects, namely, "Degree of Concern to Stakeholders" and "Degree of Impact on the Company's Operations," the analysis of varying intensities (high, medium, and low) was carried out to identify the importance of these issues and list their priority in order. A total of **13** material issues and **9** continuously tracked issues were identified.

Step 5 Review and Discussion

After analysis, **13** material issues were used as the focus of this Report, while relevant information is now disclosed in this Report in order to meet stakeholders' expectations. In the future, FPC will continue to review these material issues and take stakeholders' feedback on this Report into account to ensure the transparency, rationality, and balance of this Report.

1.4.2 Materiality Matrix 102-49



For material issues

Economic Issues	Environmental Issues	Social Issues
■ Product and AI Technology Development and Innovation ■ Corporate Governance ■ Risk Management ■ Operating and Financial Performance	■ Emergency Response Mechanism at Complexes ■ Environmental Compliance ■ Greenhouse Gases and Energy Management ■ Air Pollutant Management ■ Use and Management of Water Resources ■ Management of Climate Change Risks and Opportunities	■ Industrial and Public Safety ■ Occupational Health and Safety ■ Talent Recruitment and Retention

For continuously tracked issues

Economic Issues	Environmental Issues	Social Issues
■ Supply Chain Management ■ Major Investments ■ Green Investment and Transformation ■ Information Security	■ Waste Management ■ Management of Hazardous Substances	■ Employee Human Rights Protection ■ Community Engagement and Giving Back to the Society ■ Employee Development and Compensation

To more accurately focus on the issues of concern to stakeholders, the Social Responsibility Promotion Team reviewed the materiality analysis process this year by referencing industry trends at home and abroad, clarifying the significance of issues, and adjusting the scope of materiality as appropriate. Adjustments to issues this year are described below:

Aspect	For material issues	Adjustment Method	Adjustment Description
Economic	Risk Management	Issue title revised	As Operational Risk Management and Response involves risk assessment from the perspective of corporate risk management, the title of this issue was changed to Risk Management.
Environmental	Management of Climate Change Risks and Opportunities	Issue title revised	Climate Change Risk Management was changed to Management of Climate Change Risks and Opportunities based on international trends and the TCFD framework. Since this issue has received increased attention in the materiality analysis this year, continuous assessment will be carried out on the potential risks of this issue to FPC to realize effective management.
Social	Employee Development and Compensation	Issue modified and merged and issue title revised	Employee Benefits and Remuneration was merged with Career Development and Training, and its title was changed to Employee Development and Compensation.
		Listed as a continuously tracked issue	In the materiality analysis this year, Employee Benefits and Remuneration was merged, revised, and changed from a material issue in 2019 to a continuously tracked issue in 2020.
	Community Engagement and Giving Back to the Society	Listed as a continuously tracked issue	In the materiality analysis this year, this issue was changed from a material issue in 2019 to a continuously tracked issue in 2020.

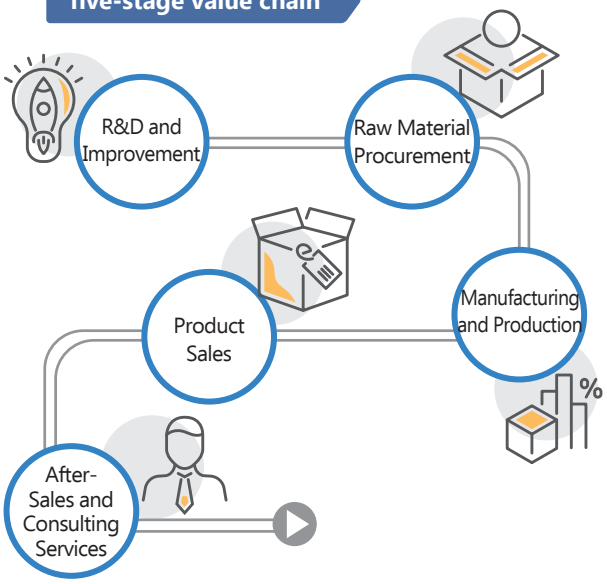
Note: In the materiality analysis this year, seven issues, namely Customer Health and Safety, Anti-corruption Measures, Product Transport Safety, Use of Raw Materials, Socioeconomic Compliance, Employee Diversity and Gender Equality, and Tax Governance, were excluded from the material issues and continuously tracked issues.

1.4.3 Identification of Material Issues and Value Chain 103-1

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 direct and indirect impacts based on the degree of involvement in hopes of having more efficient communication with the stakeholders.

seven main groups of stakeholders

five-stage value chain



Identification of FPC's Value Chain

Degree of Involvement: ★ Direct / ★ Indirect (Facilitator or Business Relationships)

Economic

For material issues: Operating and Financial Performance	For material issues: Corporate Governance
Stage of Value Chain 1. R&D and improvement 2. Raw material procurement 3. Manufacturing and production 4. Product sales 5. After-sales and consulting services	**Stage of Value Chain** 2. Raw material procurement 3. Manufacturing and production 4. Product sales 5. After-sales and consulting services
Entity of Impact — **Degree of Involvement** Customers ☆ Employees ★ Shareholders and Investors ★ Government Agencies ☆ Suppliers and Contractors ☆ Experts, Scholars, and Environmental Protection Organizations ☆	**Entity of Impact** — **Degree of Involvement** Customers ☆ Employees ★ Shareholders and Investors ★ Government Agencies ☆ Suppliers and Contractors ☆ Experts, Scholars, and Environmental Protection Organizations ☆
Corresponding Chapter 2.1.1 Operating and Financial Performance	**Corresponding Chapter** 2.2 Corporate Governance
Topic in GRI Standards 201 - Economic Performance	Custom topic

For material issues

Risk Management

Stage of Value Chain
1. R&D and improvement
2. Raw material procurement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Customers	★★★
Employees	★★★
Shareholders and Investors	★★★
Government Agencies	★★☆
Residents in the Operation Area	★★☆
Suppliers and Contractors	★★☆
Experts, Scholars, and Environmental Protection Organizations	★★☆

Stage of Value Chain
2.2.2 Promotion of Corporate Sustainability

Custom topic

For material issues

Product and AI Technology Development and Innovation

Stage of Value Chain
1. R&D and improvement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Customers	★★★
Employees	★★★
Suppliers and Contractors	★★☆

Stage of Value Chain
2.3.2 Product and AI Technology Development and Innovation

Custom topic

Environmental

For material issues

Use and Management of Water Resources

Stage of Value Chain
3. Manufacturing and production

Entity of Impact	Degree of Involvement
Employees	★★★
Government Agencies	★★★
Residents in the Operation Area	★★★
Experts, Scholars, and Environmental Protection Organizations	★★☆

Corresponding Chapter
3.4 Use and Management of Water Resources

Topic in GRI Standards:
303 - Water & 306 - Effluents and Waste

For material issues

Greenhouse Gases and Energy Management

Stage of Value Chain
3. Manufacturing and production

Entity of Impact	Degree of Involvement
Employees	★★★
Government Agencies	★★★
Residents in the Operation Area	★★★
Experts, Scholars, and Environmental Protection Organizations	★★☆

Corresponding Chapter
3.3 Greenhouse Gas and Energy Management

Topic in GRI Standards:
302 - Energy & 305 - Emissions

For material issues

Emergency Response Mechanism at Complexes

Stage of Value Chain
3. Manufacturing and production

Entity of Impact	Degree of Involvement
Employees	★★★
Government Agencies	★★★
Residents in the Operation Area	★★☆

Corresponding Chapter
5.1.2 Emergency Response Mechanism at Complexes

Custom topic

For material issues

Air Pollutant Management

Stage of Value Chain
2. Raw material procurement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Employees	★★★
Government Agencies	★★★
Residents in the Operation Area	★★★
Suppliers and Contractors	★★☆
Experts, Scholars, and Environmental Protection Organizations	★★☆

Corresponding Chapter
3.5 Air Pollutant Management

Topic in GRI Standards:
305 - Emissions

For material issues

Management of Climate Change Risks and Opportunities

Stage of Value Chain
1. R&D and improvement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Customers	★
Employees	☆
Shareholders and Investors	★
Government Agencies	★
Residents in the Operation Area	☆
Suppliers and Contractors	★
Experts, Scholars, and Environmental Protection Organizations	☆

Corresponding Chapter
3.2 Risks and Opportunities Arising from Climate Change

Topic in GRI Standards:
201-2 Financial Implications and Other Risks and Opportunities Due to Climate Change

For material issues

Environmental Compliance

Stage of Value Chain
1. R&D and improvement
2. Raw material procurement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Employees	★
Shareholders and Investors	☆
Government Agencies	★
Residents in the Operation Area	★
Experts, Scholars, and Environmental Protection Organizations	★

Corresponding Chapter
3.7 Environmental Compliance

Topic in GRI Standards:
307 - Environmental Compliance

Social

For material issues

Talent Recruitment and Retention

Stage of Value Chain
1. R&D and improvement
3. Manufacturing and production
4. Product sales
5. After-sales and consulting services

Entity of Impact	Degree of Involvement
Customers	☆
Employees	★
Shareholders and Investors	☆
Government Agencies	☆
Residents in the Operation Area	★
Suppliers and Contractors	☆
Experts, Scholars, and Environmental Protection Organizations	☆

Corresponding Chapter
4.2 Employee Rights, Benefits and Training

Topic in GRI Standards:
401 - Employment & 402 - Labor/Management Relations

For material issues

Industrial and Public Safety

Stage of Value Chain
2. Raw material procurement
3. Manufacturing and production
4. Product sales

Entity of Impact	Degree of Involvement
Employees	★
Government Agencies	★
Suppliers and Contractors	★
Experts, Scholars, and Environmental Protection Organizations	☆

Corresponding Chapter
5.2 Supply Chain Management

Custom topic

For material issues

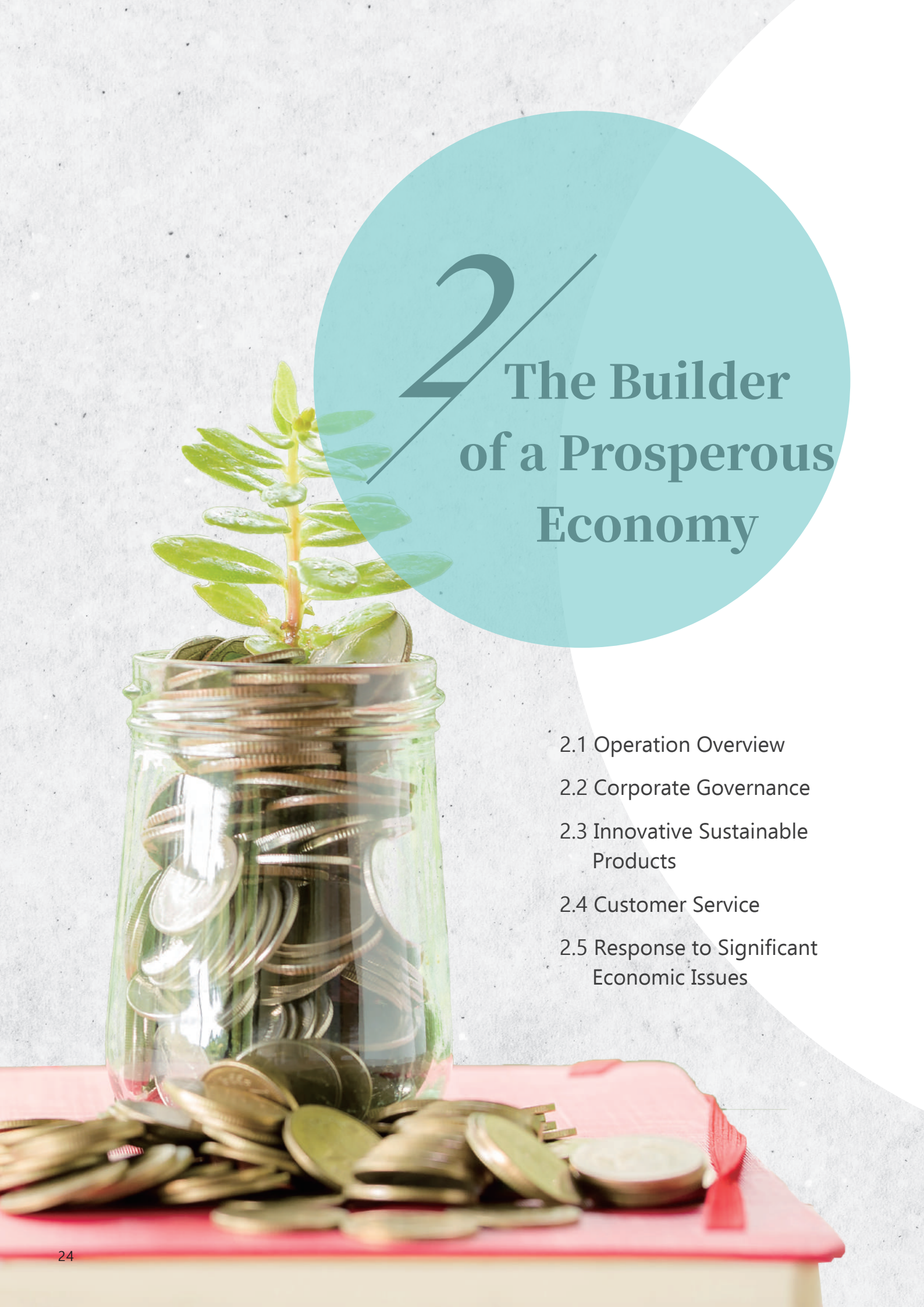
Occupational Health and Safety

Stage of Value Chain
3. Manufacturing and production

Entity of Impact	Degree of Involvement
Employees	★
Government Agencies	★
Suppliers and Contractors	★
Experts, Scholars, and Environmental Protection Organizations	☆

Corresponding Chapter
5.1 Workplace Safety Management

Topic in GRI Standards:
403 - Occupational Health and Safety



2 The Builder of a Prosperous Economy

2.1 Operation Overview

2.2 Corporate Governance

2.3 Innovative Sustainable Products

2.4 Customer Service

2.5 Response to Significant Economic Issues

2.1 Operation Overview

2.1.1 Operating and Financial Performance

102-7 103-2 103-3 201-1

Material Issue: Operating and Financial Performance

Management Approach

- **Goals and commitments:** Achieve perpetual business operation and maintain outstanding and sound financial performance
- **Policies and action plans:**
  1. Maintain healthy financial performance by reducing the debt ratio and increasing the current ratio and interest coverage ratio
  2. Continuously implement Industry 4.0 and introduce artificial intelligence (AI) to reduce operating costs and strengthen competitiveness while developing high value-added composite materials to increase profitability
- **Resources:** Actively recruit AI-related talents to speed up the introduction of AI at FPC, and actively develop differentiated and high-value products and master key technologies
- **Grievance mechanism:** Regularly hold investor conferences and communicate with investors so that they have an understanding of FPC's operations, and disclose the details of the IR Contact Person on FPC's website to maintain a smooth channel of communication
- **Performance evaluation methods and results:** Publish financial statements audited or reviewed by CPAs every quarter and every year and carry out credit rating every year; in 2020, FPC was given a long-term credit rating of twAA- and a short-term credit rating of twA-1+ with a stable outlook by Taiwan Ratings, as well as a credit rating of BBB+ by Standard & Poor's (S&P)
- **Specific actions:** Convene Board meetings every quarter to approve financial statements, and hold internal business meetings every quarter to regularly review business performance and propose future business operation strategies
- **Unit in charge:** President's Office

FPC Website: Financial Info

For more financial information, please visit "Investor Relations" on FPC's official website.

2020 consolidated revenue
NT$**185.8** billion

2020 profit before tax
NT$**24.1** billion

2020 earnings per share
NT$**3.15**/share

2020 total tax paid (excluding business tax)
NT$**2.951** billion

2020 profit-seeking enterprise income tax paid
NT$**2.505** billion

2020 return on equity
5.88%

2.1.2 Participation in External Associations

102-13

To help improve the overall management of industries in Taiwan, FPC actively participates in various industry associations. In 2020, FPC was a member of 17 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 CSR website.

CSR Website: Participation in External Associations

2.2 Corporate Governance

102-7 102-11 102-18 103-2 103-3

Material Issue: Corporate Governance

Management Approach

- **Goals and commitments:** Strengthen corporate governance to safeguard stakeholders' interests
- **Policies and action plans:**
  1. Ensure the transparent disclosure of business information and uphold ethical corporate management and compliance
  2. Comply with laws and regulations and work with the government to promote the sustainable development of the petrochemical industry
  3. Adopt thorough internal controls and search for approaches to value creation and risk mitigation to protect shareholders' equity
  4. Strengthen communication with stakeholders and strive to meet their expectations for corporate sustainability
- **Resources:** Appoint a chief corporate governance officer and corporate governance officers to take charge of Board meetings and shareholders' meetings and assist directors in exercising the due care of a good administrator, complying with laws and regulations, and handling corporate governance-related matters
- **Grievance mechanism:** 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.
- **Performance evaluation methods and results:** Regularly carry out self-assessment of the performance of Board of Directors and functional committees each year starting 2020, where the content and results of the assessment are reported to the Board of Directors and published in FPC's annual reports and on the Market Observation Post System (MOPS); the assessment results in 2020 were good.
- **Specific actions:** Convene Audit Committee meetings and Board meetings at least once every quarter, with the internal audit officer responsible for communicating with independent directors, reporting the internal audit status to the Board of Directors, and approving the audit plan for the following year at the end of each year
- **Unit in charge:** Board of Directors and President's Office

2.2.1 Corporate Governance Overview

102-22 102-23 102-24 102-25 102-36

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

FPC Website: Governance Structure

(1) Operations of the Board of Directors

At present, the Board of Directors consists of 15 directors, including three 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 more information on the Board members, please refer to "Management Team" on FPC's official website.

FPC Website: Management Team

FPC Website: Corporate Governance and Committee Operations

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

Number of Board meetings held in 2020
7

Number of Board members
15

Attendance rate (including attendance by proxy)
76 %

Directors' shareholding percentage as of 2020 (per FPC's capital, at least 2% as requested by the FSC)
14.93 %

Percentage of shares pledged by directors as of 2020
0.81 %

(2) Remuneration Committee

The Remuneration Committee is composed of three 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.

Number of meetings held in 2020	Number of committee members	Attendance rate (including attendance by proxy)
2	3	100 %

(3) Audit Committee

The Audit Committee is composed of three independent directors and holds at least 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.

Number of meetings held in 2020	Number of committee members	Attendance rate (including attendance by proxy)
6	3	100 %

(4) Shareholder Services

FPC has set up the "Investor Relations" section on our official website, which not only answers inquiries from investors and shareholders and discloses sustainable development strategies, but also provides timely disclosures of statistics and data, including information on corporate governance and risk controls on the MOPS.

FPC Website: Investor Relations Q&A

(5) Relations with Institutional Investors

FPC has appointed spokespersons who are charged with participating in investor forums organized by domestic or international organizations to provide the latest information on FPC's operations. FPC has also appointed an "IR Contact Person" as a channel of contact for public information release and communication.

FPC Website: IR Contact Person

Number of investor conferences held in 2020: 31

2.2.2 Promotion of Corporate Sustainability 102-22

FPC has appointed Chairman Mr. Jason Lin and Senior Vice President Mr. Jerry Lin to serve as convener and deputy convener, respectively, for corporate sustainability operations. They are responsible for developing corporate sustainability 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 2020 by the President's Office, Safety and Health Department, Accounting Department, Mailiao Administration Department, 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 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.

CSR Website: Sustainable Development Promotion

Sustainable Development Promotion Team at FPC

Risk Management 102-15 103-2 103-3

For each identified operational risk, FPC has designated a risk management unit in charge of assessing and reviewing the risk and developing relevant response measures in hopes of effectively strengthening the soundness of business operations. For more information, please refer to our CSR website.

CSR Website: Risk Management

Material Issue: Risk Management

Management Approach

- **Goals and commitments:** Keep abreast of uncertainties, such as the global economic situation and industrial development, and draw up development strategies and adjust business models in advance to ensure stable business performance
- **Policies and action plans:** On December 17, 2020, the Board of Directors approved the "Regulations Governing Risk Management" and formulated FPC's risk management policy. In response to various operational risks, FPC holds management meetings regularly or from time to time to review countermeasures and adjust operational directions to prevent these risks in advance.
- **Resources:** Various departments and functional teams adjust their short-, medium-, and long-term development goals and business strategies according to domestic and global economic situations.
- **Grievance mechanism:** The President's Office supervises each business division to keep abreast of operational risks and adjust business strategies and directions in due course.
- **Performance evaluation methods and results:** Report the implementation of risk management to the Board of Directors at least once every year, with the most recent reporting date being June 10, 2020, to ensure integrity, rationality, and optimal management in risk management.
- **Specific actions:** Hold business management meetings every month to regularly review business strategies and review potential risks and opportunities
- **Unit in charge:** Board of Directors and President's Office

Information Security Incident at FPG in May 2020

On May 5, 2020, the Information Department under the Group Administration Office found that some employees could not access their e-mail address. Once attack from external malware was identified as the cause of this incident upon investigation, employees at all companies under FPG were immediately notified and asked to shut down their computers and cut off access to the Internet.

After a thorough examination of all systems, it was discovered that only the e-mail system could not run normally while the remaining systems were running normally. The malware was removed immediately from the system.

After experiencing this incident, the Information Department under the Group Administration Office has strengthened the Advanced Persistent Threat (APT) Prevention System and built layers of control and protection mechanisms to enhance information security. Specific details on these measures are explained as follows:

1. Build systems such as Intrusion Prevention System (IPS), malicious URL filtering, and APT Prevention
2. Establish mechanisms for physical access control, system login authentication, password control, access authorization and regular vulnerability scan
3. Conduct information security training and testing for employees every year to strengthen employees' awareness of cyber security risks
4. Review security measures and regulations annually, pay attention to security issues, and draw up response plans to ensure its appropriateness and effectiveness

2.2.3 Internal Control Mechanism 102-15 102-16

(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. No major deficiency was found in all 62 audit items in 2020.

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

FPC Website: Audit System

Number of internal auditors in 2020
15

Number of internal audit training hours in 2020
180 hours

Number of audit items in 2020
62

Completion rate in 2020
100 %

(2) Ethical Corporate Management and Anti-corruption

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.

FPC Website: Ethical Corporate Management & Conduct

2.3 Innovative Sustainable Products

2.3.1 Main Products and Brands

102-2 102-7 102-9

At present, FPC has successfully completed the vertical integration of upstream, midstream, and downstream industries in areas such as plastics, fiber, and chemicals, and also expanded production capacity to reduce production costs in order to satisfy customer needs and enhance market competitiveness. For more information on FPC's main products, please visit our official website.

FPC Website: Products Overview

Basic Raw Materials

- Caustic Soda
- Chlorine Gas
- Methyl Tert-Butyl Ether

Intermediate Monomers

- EDC→VCM
- Acrylonitrile
- Cyanic Acid
- Methyl Methacrylate
- N-butanol
- Acrylic Acid
- Epichlorohydrin

Plastic and Fiber Raw Materials

- Polyvinyl Chloride
- Linear Low Density Polyethylene
- High Density Polyethylene
- Ethylene Vinyl Acetate
- Polypropylene
- Carbon Fiber
- Acrylic Ester
- Super Absorbent Polymer

At present, FPC is one of the best in the global plastics, chemical, and fiber industries based on production capacity for our main products, ranking among the top ten manufacturers in the world by production capacity for 11 products, including polyvinyl chloride (PVC) and vinyl chloride (VCM). For more information on product applications, please refer to "Applications Overview" on FPC's official website.

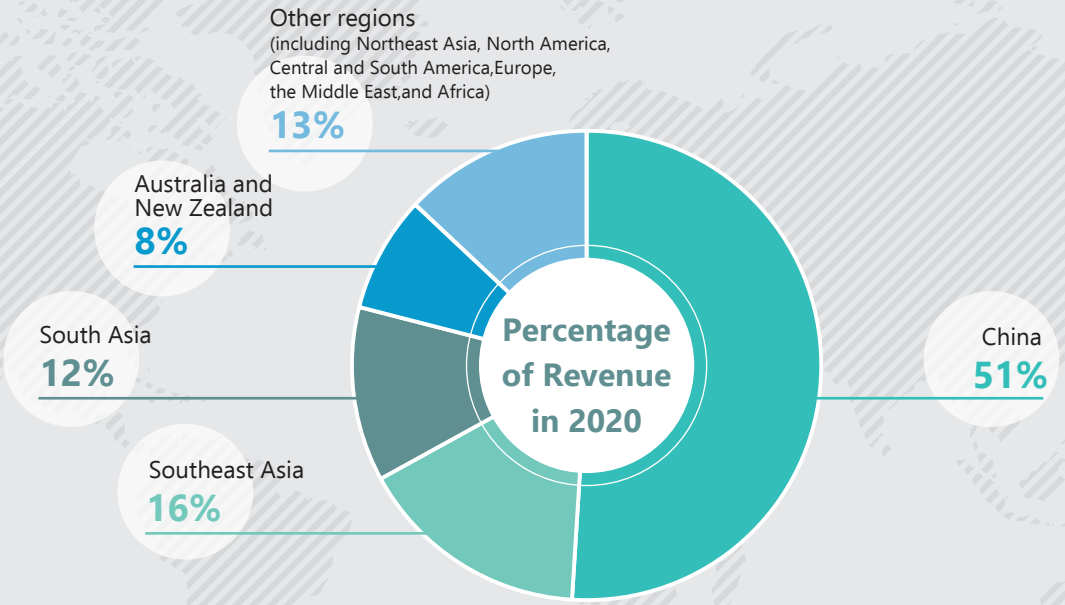
FPC Website: Applications Overview

Production Volume, Local Market Share and Global Capacity Ranking of Main Products in 2020

Product	Production volume in 2020 (Unit: metric tons)	Local Market Share	Global Capacity Ranking
Polyvinyl Chloride (PVC)	1,648,273	67%	3
Vinyl Chloride (VCM)	1,582,804	Self-supplied	2
Caustic Soda	1,491,167	69%	4
Acrylic Ester (AE)	529,650	88%	7
Epichlorohydrin (ECH)	94,687	65%	6
Carbon Fiber	6,787	38%	6
N-butanol (NBA)	217,382	93%	7
Super Absorbent Polymer (SAP)	184,412	58%	7
Acrylonitrile (AN)	261,246	43%	8
Methyl Methacrylate (MMA)	81,279	35%	9
Ethylene Vinyl Acetate (EVA)	284,740	25%	9

Note: FPC's production volume in 2020 includes that from Taiwan, Ningbo, and Formosa Industries Corporation. In addition, FPC ranked 11th in the global production capacity for HDPE, LLDPE, and PP.

The percentage of revenue in major regions of the world in 2020 is shown below.



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: Annual Report under AGM

2.3.2 Product and AI Technology Development and Innovation 102-15 103-2 103-3

Material Issue: Product and AI Technology Development and Innovation

Management Approach

- **Goals and commitments:**
  1. Deepen theoretical foundations and improve R&D capabilities to speed up the development of new products and technologies, such as differentiated, high-value, and green materials
  2. Assist customers in developing new products to grow together and create a win-win situation
  3. Develop localization of industries to supply specialty chemicals for downstream high-tech industries
  4. Establish a national industrial team through cross-industry integration in response to the COVID-19 pandemic and in line with government policies, so as to safeguard people's health
- **Policies and action plans:**
  1. Establish a R&D culture of "professional technical service"
  2. Implement "vertical integration" R&D management
  3. Encourage "innovative R&D" and commend the outstanding teams
- **Resources:**
  1. Merge R&D expenses and benefits for technology departments into the profit and loss of their respective divisions
  2. Subscribe to databases such as patent literature search engines and full-text journals for use by R&D personnel
  3. Establish an inspection center, an ASPEN process simulation team, and a chemical structure and polymer simulation and analysis team
  4. Encourage technology departments to set up joint R&D efforts with domestic and overseas research institutions
- **Grievance mechanism:** Should customers have any questions about product quality or technology, they can directly contact units such as the Sales Department, the Market Expansion Team, and the Technology Department.
- **Performance evaluation methods and results:**
  1. Benefits from new product development
  2. Number of patent applications: 22 valid patents, with 187 patents in total.
  3. Benefits from improvements on production process projects
  4. Results of exhibitions and competitions within and outside FPC
  5. Customers' satisfaction with technical service received a score of 4.4 points, which was considered "satisfied."
  6. The percentage of revenue from differentiated products was 23%.
  7. The percentage of profit from differentiated products was 26%.
- **Specific actions:** Establish a national industrial team and engage in localization of industries
- **Unit in charge:**
  1. President's Office: Internal integration and channel of contact at FPC
  2. Technology department at each division: Develop new products and improve processes at each division as well as assist in market expansion

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R&D expenditure in 2020
NT$**2.3** billion

Number of patents granted in 2020
22

Total number of patents
187

Total R&D bonuses issued in 2020 (including AI competitions)
NT$**995,000**

Percentage of revenue from differentiated products in 2020
23 %

Percentage of profit from differentiated products in 2020
26 %

(1) Develop Advanced and Green Materials

FPC continues to engage in the development of new products and technologies, such as differentiated, high-value, and green materials. Five of the differentiated and green material products developed in 2019 were commercialized in 2020, generating a revenue of NT$289,798 thousand in total. Product development projects in 2020, as listed below, are estimated to generate a total potential annual benefit of NT$183,095 thousand.

Product Development Projects at FPC in 2020

Type	Product Name	Performance and Application	Potential Annual Benefit (NT$ thousands)
Differentiated	Ultra high molecular weight foaming-grade PVC processing aid	Used in low-density PVC foams to achieve various features, such as light weight, energy saving, heat insulation, and sound absorption.	3,600
	HDPE for high gas barriers	Used in carbonated beverage bottle caps	2,300
	PP for antimicrobial luggage	Used in the outer casing of antimicrobial luggage	10,495
	High-crystal impact copolymer-grade PP	Used in the outer casing of home appliances	45,000
Green Materials	White EVA encapsulant material	Encapsulant material for solar panels	18,000
High-value	Dry-jet wet spinning process	It increases the strength of carbon fiber by 5.2% and the strength and physical properties of composite materials by 24%, and it can be applied to the area of green energy, such as hydrogen cylinders and cable cores for electric vehicles.	98,700
	PP for the meltblown layer of medical-grade face mask	Used in medical-grade face masks and filter materials	5,000

Use of high-crystal impact, impact-resistant PP material in coffee machines

Use of carbon fiber in hydrogen cylinders for electric vehicles

FPC constantly deepens theoretical foundations and improves R&D capabilities through industry-academia collaboration with domestic and overseas 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, develop and master key technologies, and apply for patents in Taiwan and abroad. 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, as well as green materials such as natural antimicrobial and cosmetic materials. FPC's major R&D achievements in the past three years are described as follows:

2018	2019	2020
■ Development of a better formula for increasing the PVC glass transition temperature	■ Simulation of a better ratio of PE/POE blends and better hydrophilic modification of PP ■ Identification of AN fouling materials	■ Development of PP meltblown material for reaction tanks ■ Development of dry-jet wet spinning process

In addition, FPC's "Flue Gas CO_2 Capturing and Utilization Technology" was approved by the Ministry of Economic Affairs under the A+ Industrial Innovative R&D Program in January 2019. This project, which turns flue gas into green energy using innovative and advanced technology, was selected as one of the 100 most technologically significant new products in the 2020 R&D 100 Awards.

The pilot plant is currently under construction and is scheduled to be put into trial operation in the second half of 2021.

Award plaque received from the 2020 R&D 100 Awards

(2) Develop Artificial Intelligence

To integrate available resources across the Company for the development of artificial intelligence (AI), FPC set up the "AI Promotion Team" in June 2018 and established the "AI R&D Center" at Renwu Complex to actively deepen the application of AI in chemical processes and progress toward five areas, namely production and marketing optimization, quality assurance, smart maintenance, industrial safety and environmental protection, and cost reduction. Moreover, FPC has also set up an AI proposal incentive system, in which employees will be granted incentives ranging from NT$600 to NT$30,000 for submitting AI proposals upon review and approval from the AI Review Team.

In the case of "Improvement of Refinery Distillation Quality Using Wet Ethylene Dichloride (EDC) Refinery Distillation Unit" at Mailiao VCM Plant, the main problems in previous process operations are explained as follows:

Weaknesses of previous processes

1. To ensure the quality target for EDC, production operations tend to be conservative while removing moisture and impurities in EDC often consumes more steam.
2. Excessively high impurity content in EDC may easily cause the formation of carbon in cracking furnace tubes. However, certain types of impurities are helpful to cracking. Hence, a certain level of impurity content has to be maintained, which makes it difficult to control the optimal conditions in the operation of distillation towers.

Development of AI

1. Sampling frequency in the past was once per day because sampling has to be carried out manually during quality inspection. To overcome the problem of too little quality data, sampling frequency is increased to six times per day.
2. With a view to collecting adequate data in a short period of time, FPC simulates and generates large quantities of data that conform to the principles of chemical engineering using professional chemical engineering simulation software. Then, an AI quality prediction model is developed using deep learning technology upon verification in combination with actual on-site production data, so that operators can be advised to respond in advance before deviations in production quality appear.

Benefits after going online

1. Cracking rate increases by 0.6%, while LPG and steam consumption in cracking furnaces can be reduced by 0.024 tons/hour and 0.088 tons/hour, respectively.
2. The reflux ratio of the refinery distillation system can be reduced appropriately. Steam consumption is reduced by 1.37 tons/hour after adjustment and optimization, which is estimated to generate an annual benefit of NT$15,756 thousand.

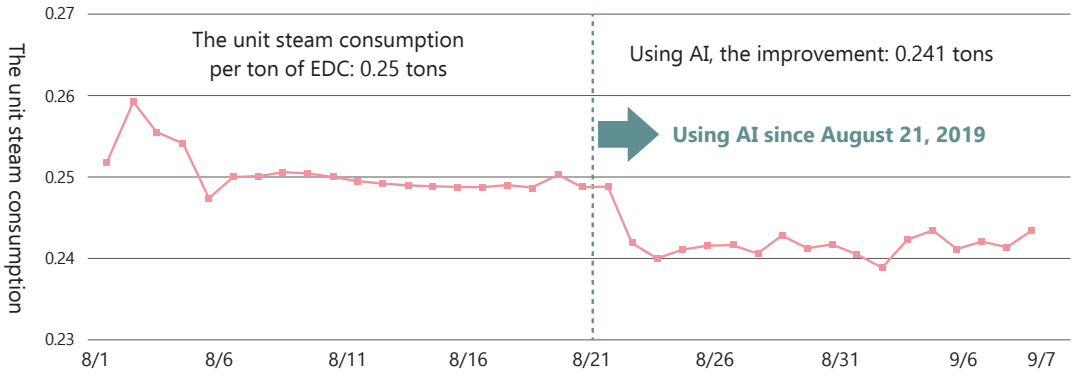
Number of AI projects in 2020
156

Estimated investment amount
NT$540 million

Estimated annual benefit
NT$350 million

The Case of "Reduction of Steam Consumption at High Boiling Towers"

Reflux ratio is reduced from 0.9 to 0.85. The unit steam consumption per ton of EDC purified before and after improvement using AI are 0.25 tons and 0.241 tons, respectively, thereby saving 1.13 tons of steam per hour (125 tons of EDC feed per hour) and generating an annual benefit of NT$8,787 thousand as calculated based on 8,000 hours of operation per year and NT$972 per ton of steam.



(3) Intellectual Property Management

To facilitate the management of R&D projects such as new products and new technologies, 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 FPC's 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.

2.3.3 Product Safety and Health Responsibility 416-1

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.

Green Energy

- Development and Application of Carbon Fiber

FPC is the only company with the advantage of vertically integrated production from crude oil to carbon fiber and the sixth largest carbon fiber manufacturer in the world. With a high modulus and excellent rigidity, the carbon fiber we produce is used in wind turbine blades as it is not easily deformed by rotation and has a long useful life with relatively high power generation efficiency. In line with the aggressive promotion of wind power generation in countries around the world including Taiwan, approximately 70% of the carbon fibers we sold in 2020 were used in wind power generation, where 30% of this amount were used by offshore wind turbine manufacturers and 70% were supplied to onshore wind turbine manufacturers.

An onshore wind turbine

Research and Development of Dye-sensitized Cells

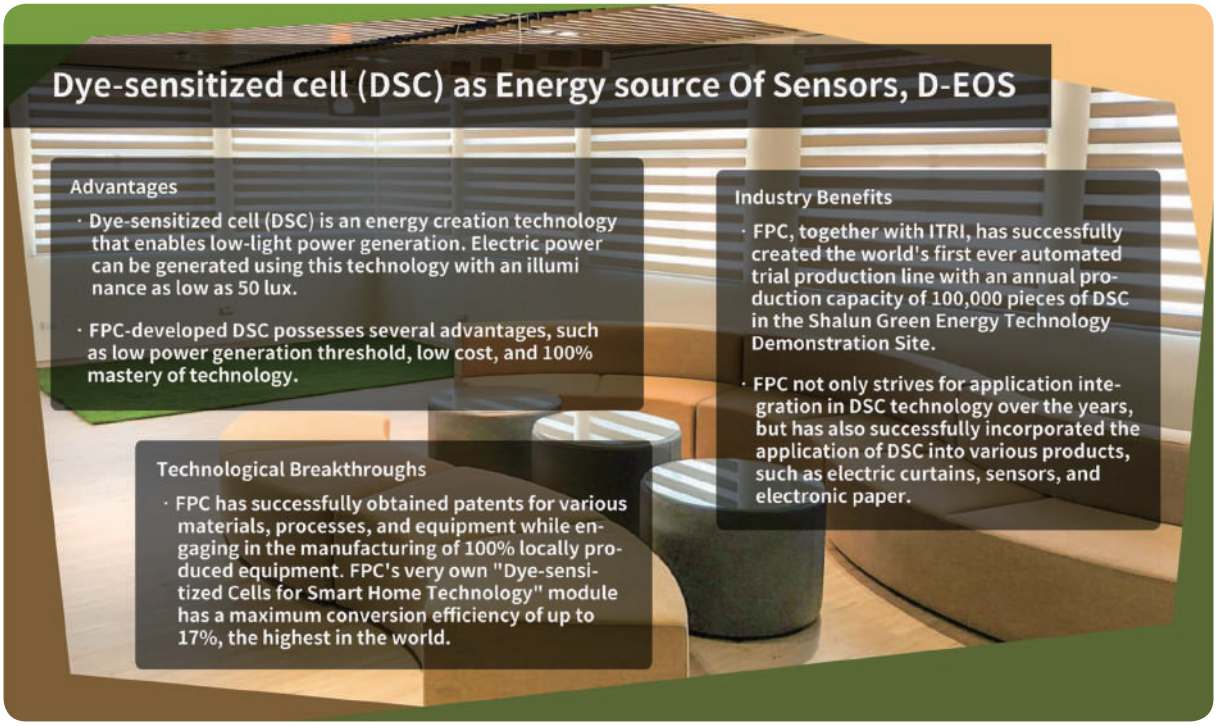
Gartner, an internationally renowned market research agency, predicts that between 2020 and 2025, a smart home will be equipped with about 500 sensors, covering temperature, humidity, air, water quality, and other sensing applications, whose power is often sourced from either dry batteries or mercury batteries. If homes can be equipped with energy storage batteries to capture ambient light sources at any time to provide a steady stream of electricity, not only can we reduce environmental pollution, but also generate more economic benefits.

Dye-sensitized cell (DSC) is a third-generation solar cell. Compared to other traditional solar cell technologies that require strong light to generate power, DSC's unique ability to generate power in low light can effectively convert indoor light energy into electrical energy via dye absorption, or in other words, there is power whenever there is light, thereby demonstrating its advantage in environmental protection and energy creation.

To cultivate renewable energy professionals, FPC has forged a strategic industry partnership with the ITRI to develop third-generation dye-sensitized batteries. Since January 2020, a small amount of dye-sensitized batteries has been produced from the pilot production line at Shalun Smart Green Energy Science City in Tainan. Furthermore, FPC received the 2020 R&D 100 Awards for this joint R&D initiative, thereby demonstrating that our innovative R&D and commercialization capabilities have earned recognition from the global technology community. In 2021, FPC plans to integrate DSC modules with Internet of Things (IoT) sensing elements and launch conceptual products with manufacturing partners to unveil concepts of green energy that are within reach.

The world's first ever automated trial production line for dye-sensitized cells

FPC received the R&D 100 Awards in October 2020

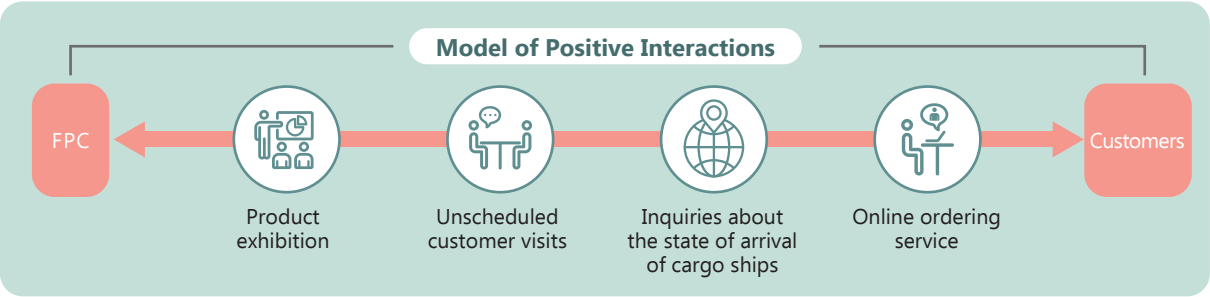


Application of dye-sensitized cells in smart home technology

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 418-1

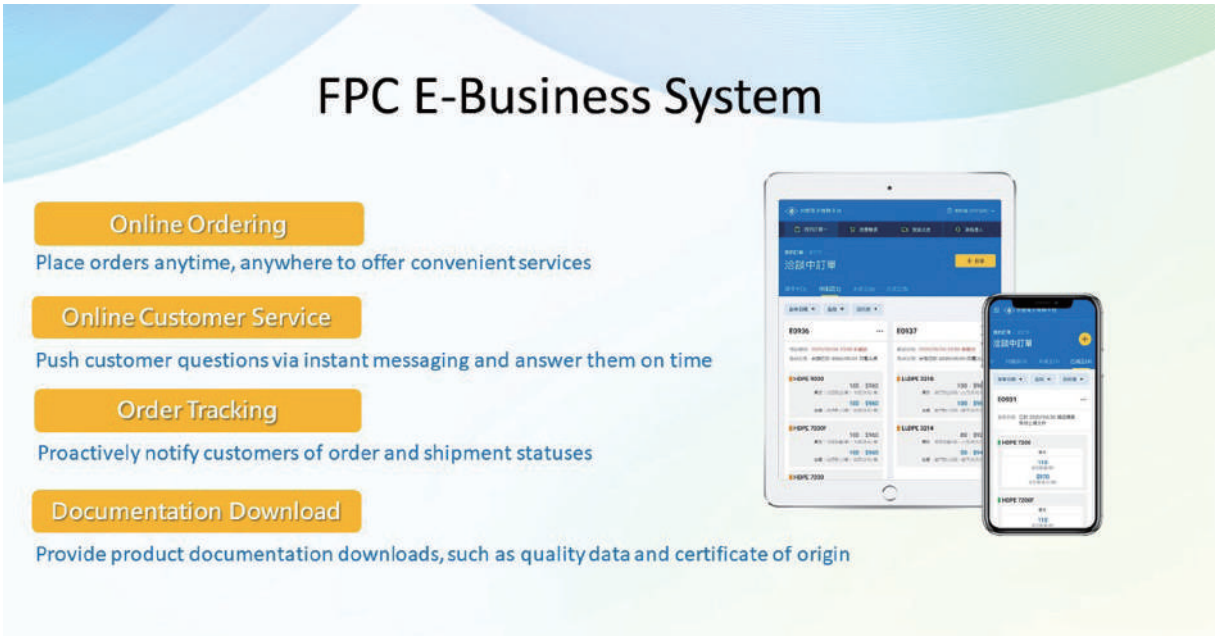


Taipei Innovative Textile Application Show in October 2020

Remote marketing in November 2020

E-Business Platform

With the intention of strengthening the relationship between sales executives and customers, FPC has set up the FPC E-Business System to establish a two-way channel of communication in a more real-time and effective manner.



Customer Feedback and Response

To solve customers' inquiries and needs in a timely manner, FPC has set up "Contact Us" on the official website. Customers may 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. A total of 17 customer complaints were received in 2020, with all of them already closed. FPC ensures immediate response to customers' opinions and feedback.

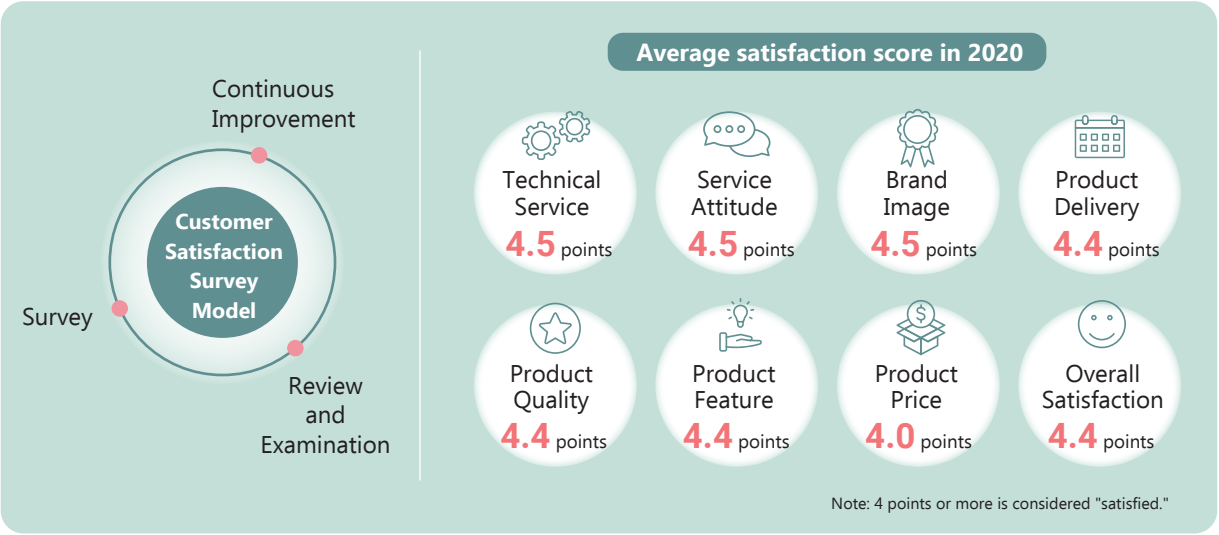
FPC Website: Contact Us

Information Protection

FPC has established the "Regulations Governing Personal Information Management," which requests all relevant 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 2020.

2.4.2 Customer Satisfaction Survey

To fulfill the requirements of ISO 9001 regarding quality commitment to customers and show FPC's focus on customer satisfaction, a satisfaction survey is conducted among FPC's domestic and foreign customers at least once a year. The survey questions are further modified based on the issues or areas of concern that customers have previously expressed.



According to the customer satisfaction survey in 2020, FPC's overall performance was 4.4 points, with only two items in "product price" falling short of customers' expectations. This was mainly due to the increase in costs of raw materials, which subsequently led to an increase in product prices, thus causing its score to be slightly lower than that of other indicators. The overall satisfaction scores from 2016 to 2020 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.

2.5 Response to Significant Economic Issues 102-44 102-47

1. FPC's Major Investment Plans

To enhance competitiveness, FPC is actively engaging in capacity expansion and debottlenecking projects.

The following projects were completed in 2020:

(1) The SAP debottlenecking project with an annual capacity of 10 thousand tons at Ningbo Complex: The production capacity will increase to 100 thousand tons.

(2) The PVC debottlenecking project with an annual capacity of 50 thousand tons at Linyuan Complex: The production capacity will increase to 1,315 thousand tons.

The ongoing projects include:

(1) The debottlenecking project with a total annual capacity of 100 thousand tons at PVC plants located in Renwu, Linyuan, and Mailiao complexes: The production capacity will increase to 1,415 thousand tons. This project is scheduled to be completed, with the plants beginning operation, at the end of 2022.

(2) Construction of the new propane dehydrogenation (PDH) plant with an annual production capacity of 600 thousand tons at Ningbo Complex: This project is scheduled to be completed in the third quarter of 2021.

(3) The EVA debottlenecking project with an annual capacity of 28 thousand tons at Ningbo Complex: The production capacity will increase to 100 thousand tons. This project is scheduled to be completed, with the complex beginning operation, in the first quarter of 2023.

Furthermore, the Dock Tank Complex in Qianzhen must be relocated to the petrochemical zone of Kaohsiung Intercontinental Container Terminal (ICT) Project Phase 2 in conjunction with urban development in Kaohsiung City. FPC has leased the petrochemical zone land and special dock with Port of Kaohsiung, Taiwan International Ports Corporation, Ltd. The Company will set up 12 storage tanks and one salt warehouse, which is scheduled to be completed in the first quarter of 2022. In response to the expansion needs of FPC's joint venture, Formosa Tokuyama Advanced Chemicals Co., Ltd., Linyuan AE Plant has suspended operations and undergone equipment removal in August 2020 during the Phase I acrylic acid (AA) project with an annual production capacity of 21 thousand tons, thus reducing its annual production capacity to 138 thousand tons while lowering its production capacity of AE from 268 thousand tons to 250 thousand tons.

2. Develop Biodegradable Plastics

The need for biodegradable plastics has increased in response to global curbs on plastics and environmental trends. To achieve corporate social responsibility, the Board of Directors approved in June 2019 to acquire a 19.15% equity interest in Minima Technologies Co., Ltd., a leading manufacturer in biodegradable plastic processing in Taiwan.

Minima Technologies Co., Ltd. primarily produces disposable consumer products such as tableware, paper cups, straws, and other degradable plastic products. It is a leading manufacturer of biodegradable plastics in Taiwan. As the newly expanded Huwei Plant in Central Taiwan Science Park has begun operation in the fourth quarter of 2020, the production capacity of biodegradable compounds (particulate and colloidal) has increased from 4 thousand tons to 20 thousand tons. Benefiting from the gradual implementation of plastic restriction policies around the world as well as the gradually subsiding impact of the COVID-19 pandemic, the future prospects of such products are very promising.

Products of Minima Technologies Co., Ltd.

3 Builders of Sustainable Environment

3.1 Environmental Management Strategies

3.2 Risks and Opportunities Arising from Climate Change

3.3 Greenhouse Gas and Energy Management

3.4 Use and Management of Water Resources

3.5 Air Pollutant Management

3.6 Waste Management

3.7 Environmental Compliance

3.8 Response to Material Environmental Issues

3.1 Environmental Management Strategies

3.1.1 Environment, Health and Safety Management 403-4

The Safety and Health Department is responsible for issuing guidelines on overall safety, health, environment, and fire policies for the Company 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 centers have been established at each complex to promote safe, health, environment, and fire management.

In addition, FPC holds safety, health and environment review meetings, safety and environment performance review meetings, Occupational Health and Safety Committee meetings, and Safety and Health Coordination Organization meetings on a regular basis. Top management, plant management, plant supervisors, safety, health and environment personnel and other employees, and contractors participate in and conduct reviews in hopes of achieving zero hazard and zero pollution in the field of health and safety management and environmental protection.

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 2020 totaled NT$3,410 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$1,349 million, accounting for 39.6%. This indicates that FPC has attached great importance to environmental protection and strived to reduce indirect environmental impact and effects.

3.2 Risks and Opportunities Arising from Climate Change 103-2 103-3 201-2

Material Issue: Management of Climate Change Risks and Opportunities

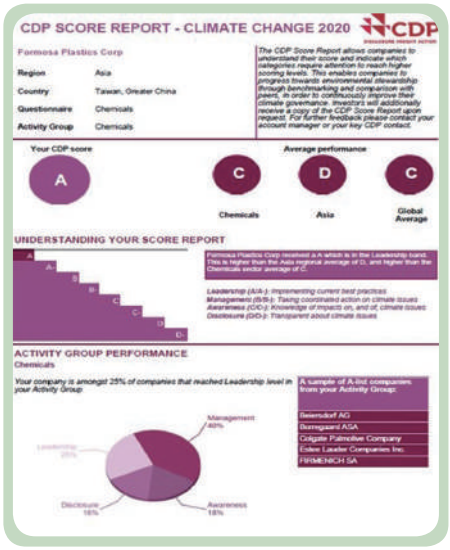
Management Approach

- **Goals and commitments:** Identify and manage risks and opportunities arising from climate change in advance on account of increasingly severe global climate change issues, with the intention of responding to changes in the international situation and national policies
- **Policies and action plans:** The Chairman convenes company-wide energy conservation and carbon reduction performance review meetings each quarter, and reports to the Board of Directors for the purpose of supervising the progress of implementation and achievement of targets concerning climate-related issues.
- **Resources:** Set up the Energy Conservation and Carbon Reduction Promotion Team, which is responsible for promoting response measures on climate-related issues and implementing various energy conservation, carbon reduction, and water conservation programs Promote "Improvement of Resource Integration Efficiency" across complexes and green product solutions
- **Grievance mechanism:** Contact details, including phone number and e-mail address, are provided in the "Stakeholder Services" section on FPC's official website, so that stakeholders can have access to channels of communication with FPC.
- **Performance evaluation methods and results:** Hold meetings each month to review the progress of implementation and achievement of targets concerning various energy conservation and carbon reduction projects
- **Specific actions:** Establish the regulations governing performance evaluation methods, rewards and punishment for energy conservation and carbon reduction, carry out performance evaluation for energy conservation and carbon reduction at all departments each month, and encourage employees at all complexes to propose improvements on water and energy conservation by means of IE improvement proposals, with incentives given based on improvement results after review
- **Unit in charge:** Safety and Health Department

FPC Website: Stakeholder Services

Among 8,598 companies that were invited by the Carbon Disclosure Project (CDP) to participate in the climate change projects in 2020, FPC was rated A (Leadership), better than the international average, C (Awareness). For more information, please visit the CDP website.

CDP Website



Climate Change Project Score in 2020: A

3.2.1 Identification of Climate Change Risks and Opportunities

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 to identify the types of risks with a greater impact on FPC and draw up subsequent countermeasures. In 2020, FPC drew up and implemented response and prevention measures in advance by referencing the Recommendations on Climate-related Financial Disclosures from the Task Force on Climate-Related Financial Disclosures (TCFD) issued by the Financial Stability Board (FSB), with a view to reducing the impact of climate change on FPC.

FPC's Climate Change Management Framework

Governance

The Chairman serves as the highest-ranking person in charge with the following responsibilities:

- Keep abreast of trends in sustainability initiatives on climate change in the international community
- Ensure the implementation of climate change-related strategies at FPC

At the same time, 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 President and the Energy Conservation and Carbon Reduction Promotion Team convene energy conservation and carbon reduction meetings to review the progress of implementation and achievement of targets concerning energy conservation and carbon reduction.

Strategy

To effectively realize energy conservation and carbon reduction, FPC sets short-, medium-, and long-term carbon emission reduction targets using 2017 as the base year. Furthermore, FPC analyzes the impact of GHG emissions on operations using GHG emissions in 2030 provided in the Intended Nationally Determined Contributions (INDC) based on a Business-as-Usual (BAU) scenario of 50% emission reduction, in order to study and formulate countermeasures in advance.

Risk management

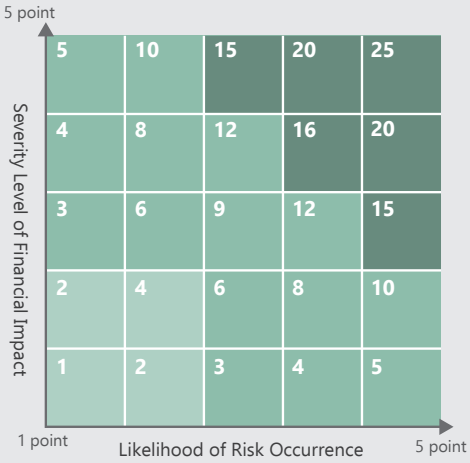
FPC uses a risk matrix to assess climate change risks and opportunities with substantial potential effects on finances or strategies based on the severity level of financial impact and the likelihood of risk occurrence.

Goals and targets

Having set absolute carbon emission reduction targets based on emissions in 2017 and begun reducing emissions in 2018, FPC is estimated to reduce emissions by 5% in 2027, which is our medium-term emission reduction target, compared to 2017, as well as reduce emissions by 10% in 2037, which is our long-term emission reduction target, compared to 2017.

Identification of Climate Change Risks and Opportunities

Risk Identification and Assessment Process



FPC draws a risk matrix (as shown on the left) to identify climate change risks according to the severity level of financial impact (vertical axis) and the likelihood of risk occurrence (horizontal axis), and classifies risks into major risk, medium risk, and low risk according to risk matrix score.

Management plans have to be included in regular supervision, so that the plans are integrated into FPC's environment-related risk management system.

Note 1: Financial impact is divided into five levels, with scores ranging from 1 to 5 points.

Note 2: Likelihood of risk occurrence is divided into five levels, with 5 points representing "definitely occur," 4 points representing "may occur multiple times in 10 years," 3 points representing "may occur more than once in 10 years," 2 points representing "do not occur in 10 years," and 1 point representing "never occur."

15 to 25 points: Major risks	5 to 14 points: Medium risks	1 to 4 points: Low risks
Response Method 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	**Response Method** No action is required at the moment, but continuous monitoring still has to be carried out	**Response Method** Acceptable risks
Name of Risk Identified in 2020 ■ Current regulations - Greenhouse Gas Reduction and Management Act	**Name of Risk Identified in 2020** ■ Current regulations - Renewable Energy Development Act in Taiwan, and market demand ■ Market - Requirements for green products	**Name of Risk Identified in 2020** ■ Chronic entities - Extreme weather and water shortage

Opportunity Identification and Assessment Process

Stage 1 assessment: Determine the materiality of an opportunity using benefit level and opportunity probability. Conduct the next stage of assessment with other relevant departments if the opportunity is found to be material upon assessment.

Stage 2 assessment: Include opportunity realization strategies and costs.

Stage 3 decision-making: Determine the level of approval according to the amount of costs required to realize the opportunity.

Climate Change Risks and Opportunities with Substantial Potential Effects on Finances or Strategies

Type		Scope of Impact	Major Potential Financial Impact	Level of Impact	Response Strategy/Case
Risks	Current regulations - Greenhouse Gas Reduction and Management Act	Company-wide	Significant increase in operating costs	High	Regularly monitor and manage energy and water consumption at each complex by maintaining communications with the government through industry associations and organizations
	Current regulations - Renewable Energy Development Act	Linyuan Complex (With a contracted power capacity of 25,000 kW, which is higher than 5,000 kW as required by the law)	Increase in indirect (operating) costs	Medium	Utilize wind power generation

Climate Change Risks and Opportunities with Substantial Potential Effects on Finances or Strategies

Type		Scope of Impact	Major Potential Financial Impact	Level of Impact	Response Strategy/Case
Risks	Market - Requirements for green products	Company-wide	Decrease in demand for products and services, thus resulting in revenue decline	Medium	■ All divisions regularly collect related topics derived from climate change in various countries ■ Develop low-carbon green products. For example, FPC has developed 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.
	Chronic entities - Extreme weather and water shortage	Renwu Complex (May face water shortages as rainfall decreases during the dry season in Taiwan)	Increase in direct costs	Low	■ Regularly monitor and manage energy and water consumption at complexes each month ■ Set up rainwater harvesting to collect rainwater for use at cooling towers to reduce water consumption ■ Transport water from other areas with abundant water resources to cope with water shortages
Opportunities	Products and services	Manufacturing operations	Increase in revenue due to growing demand for products and services	High	■ Lightweight materials produced by FPC are used in automobile parts as they can reduce vehicle weight, improve fuel efficiency, and reduce carbon dioxide emissions. Orders for these materials are estimated to increase in the future. ■ Carbon fiber materials produced by FPC are used in wind turbine blades. Orders for these materials are estimated to increase in the future.
	Resource efficiency	Plastics Division	Decrease in indirect (operating) costs	Medium-high	Improve process energy efficiency through zero-polar distance power consumption reduction schemes

3.2.2 Management of Climate Change Risks and Opportunities

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, as well as manages processes concerning climate-related opportunities.

Scenario analysis

With a view to assessing the possible impact of climate change on financial operations, FPC incorporates scenario analysis to respond to risks in advance.

- Method: Based on the INDC issued by Taiwan, a BAU scenario is set with the assumption of 50% reduction in GHG emissions by 2030.
- Time range: 2016 to 2030
- Forecast results: Economic growth 3.13%, average population growth -0.04%, energy consumption 1.8%, and electricity consumption 2.4%. It is expected that the government may introduce carbon pricing or carbon tax to suppress growth in energy and electricity consumption.

Impact and effects

FPC is a chemical raw material manufacturer that consumes large amounts of energy. Upon assessment, the government's introduction of carbon pricing or carbon tax will not only have a greater impact on the operations of FPC's complexes than other industries, but also incur cost burden.

Risks and opportunities

With the intention of responding to possible cost impact in advance, FPC has set short-, medium-, and long-term carbon emission reduction targets while placing R&D investment as the top priority in operations by leveraging FPC's advantage in R&D, with hopes of creating business opportunities for green products.

Response Method

Since 2018, FPC has been promoting green product solutions to create products covering eight aspects, namely energy efficiency, emission reduction, waste reduction, water conservation, toxicity, health, recycled products, and safety, aimed at prevention, assurance, and sustainability.

- FPC's n-Butanol Plant promotes "Improvement of Resource Integration Efficiency" across complexes to integrate resources (raw materials, waste, and water resources), improve energy utilization efficiency (steam), and realize integrated utilization of resources across companies (recycling and reuse of CO_2).

Climate Targets and Action Plan

2018-2020

Short-term: 0 to 3 years

Short-term reduction target:

3% reduction in GHG emissions compared to 2017

Target achieved in advance in 2019

Action Plan in 2020

- Re-coating and replacement of zero-polar distance electrolyzers: In 2020, improvements were made on 18 electrolyzers with a total investment of NT$433,402 thousand, saving 59,598,000 kWh of electricity and reducing 49,764 tons of GHG emissions in the process (as calculated based on the emission factor of Renwu Public Utilities Plant in 2019: 0.835 tons of CO_2/thousand kWh).
- Fireproof cotton used in cracking furnace was replaced with fireproof cotton bricks and then re-coated with energy-saving material to reduce fuel consumption.

2021-2027

Medium-term: 4 to 10 years

Medium-term reduction target:

5% reduction in GHG emissions by 2027 compared to 2017

Action Plan in 2020

- Introduction of green energy systems through the use of wind power generation: It is estimated that an installed capacity of 2,500kW will be used before the end of 2023, with the input cost to be calculated based on prices during that time.

2028-2037

Long-term: 11 to 20 years

Long-term reduction target:

10% reduction in GHG emissions by 2037 compared to 2017

Action Plan in 2020

- Installation of solar panels at complexes

Note: The targets were set using 2017 as the base year.

FPC will continuously replace high energy-consuming equipment and launch various water and energy conservation improvement projects to reduce GHG emissions while investing in green product R&D. For more information on green energy technology R&D, process waste reduction and improvement, and green product development, please refer to the section "2.3 Innovative Sustainable Products" in this Report.

2.3 Innovative Sustainable Products

3.3 Greenhouse Gas and Energy Management 103-2 103-3

Material Issue: Greenhouse Gas and Energy Management

Management Approach

- **Goals and commitments:** Revise 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
- **Policies and action plans:** Maximize the utilization of energy through energy and resource integration across complexes and companies based on the idea of circular economy to achieve GHG reductions; report the performance of GHG reductions to the Senior Vice President or above for confirmation on a regular basis and include it in the corporate social responsibility reports for the Board of Directors' approval
- **Resources:** FPC promotes energy conservation, emission reduction, and circular economy across complexes, develops green and low-carbon products, and promotes recycling of waste plastics to address environmental and ecological issues. At the same time, FPC develops green power and energy storage systems and advances low-carbon energy transition to achieve the goal of environmental sustainability.
- **Grievance mechanism:** Anyone is welcomed to contact FPC via phone or leave a comment on FPC's official website if there are any questions. FPC will assign designated personnel to answer them according to the type of question raised.
- **Performance evaluation methods and results:** FPC commissions third-party verification bodies (BSI and SGS) to carry out verification in accordance with ISO 14064-1:2006. Verification data are reported and registered on EPA's website before the end of August each year. In addition, environment protection bureaus in various counties and cities conduct on-site inspections between September and October each year.
- **Specific actions:** The Safety, Health and Environment Center under the Group Administration Office regularly organizes 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." The purpose of these events is 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.
- **Unit in charge:**
  1. Safety and Health Department
  2. Set and review the annual target of energy consumption: When formulating the budget for the following year, each complex/department sets the annual target of energy consumption, reviews the performance every month, and reports specific energy issues for improvement.
  3. Appoint the dedicated person in charge of process improvement: Each complex/department continuously improves material and energy consumption.
  4. Encourage creative proposals: FPC has offered incentives ranging from NT$300 to NT$30,000, based on the benefits of the proposals, for employees to make IE improvement proposals.

3.3.1 Greenhouse Gas Inventory and Emission Intensity 305-1 305-2 305-3 305-4

To meet our corporate social responsibility and future requirements for GHG reductions, FPC has set up and maintained a systematic inventory of GHG emissions since 2016 in accordance with ISO 14064-1:2006. Furthermore, the British Standards Institution (BSI) and SGS Taiwan are commissioned to conduct Scope 1 and Scope 2 GHG inventories in order to ensure that the inventory is accurate and can be used as a basis for future improvement in GHG reductions.

Scope 3 GHG inventory has been conducted since 2016. In 2019, we took a further step to commission the BSI and SGS Taiwan to conduct Scope 3 GHG inventories covering seven items, namely, fuel and energy activities, products and services purchased, upstream transportation and distribution, operating waste generated, business travel, employee commuting, and downstream transportation and distribution.

Greenhouse Gas Emissions in 2019 by Complex (Unit: tons CO_2-e)

Scope \ Complex	Renwu	Tungshan	Linyuan	Mailiao	Hsinkang	4th Complex	Total	Percentage (%)
Scope 1	2,391,270	136,882	548,676	573,258	9,499	319	3,659,904	42.4%
Scope 2	60,272	14,863	239,038	4,413,270	251,757	2,355	4,981,555	57.6%
Total	2,451,542	151,745	787,714	4,986,528	261,256	2,674	8,641,459	100.0%
Percentage (%)	28.4%	1.8%	9.1%	57.7%	3.0%	0.0%	100%	-

Source: 2019 GHG Verification Opinion Statement.
Note 1: The 2019 verification opinion statement has been obtained in August 2020.
Note 2: The types of GHG emissions in Scope 1 included carbon dioxide, methane, nitrous oxide, and hydrofluorocarbon. The types of GHG emissions in Scope 2 were those of FPCC's public utilities plant, FPC's public utilities plant, and Taiwan Power Company. GHG emissions were calculated based on emission factors after the boundaries had been determined using an operational control approach.
Note 3: According to EPA regulations, the second assessment report released by IPCC is used for inventory data before 2015 (inclusive), whereas the Global Warming Potential (GWP) of the fourth assessment report released by IPCC is used for inventory data starting from 2016. These data have already been certified by a third-party organization (BSI and SGS) while certification with reasonable assurance levels has been issued.

GHG Emissions at FPC from 2016 to 2019 (Unit: tons CO_2-e)

Year	Scope 1	Scope 2	Scope 3	Subtotal	Emission Intensity (tons CO_2e/NT$100 Million)
2016	4,061,443	4,871,848	6,765	8,940,056	5,968.29
2017	4,060,474	5,183,854	7,149	9,251,477	5,433.29
2018	3,836,493	5,008,477	11,402,744	20,247,714	10,699.13
2019	3,659,904	4,981,555	11,402,744	20,044,203	9,645.91

Source: GHG verification opinion statements and FPG Greenhouse Gas Inventory Database. The 2020 verification opinion statement is expected to be obtained in August 2021.
Note 1: FPC's Scope 3 GHG emissions in 2020 were disclosed according to the audit benchmark in 2019.
Note 2: The verification items in 2016 and 2017 included waste generated from operations, business travel, and employee commuting. Starting 2018, there have been seven verification items, namely fuel and energy activities, products and services purchased, upstream transportation and distribution, operating waste generated, business travel, employee commuting, and downstream transportation and distribution.

Renewable Energy - Solar Panels at Renwu Complex

In response to the government's renewable energy policy, 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 Renwu Complex. The total annual power supply reached 666,000 kWh. As of January 2021, the total power generation reached 1.528 million kWh, and the total CO_2e reduction reached 777 tons (based on the electricity factor of 0.509 kg CO_2e /kWh announced in 2019).

3.3.2 Improvement in Energy Conservation

302-3 302-4 305-5

Starting 2020, FPC compiles the annual energy consumption at each complex based on recommendations provided in the industry standards issued by the Sustainability Accounting Standards Board (SASB), in order to assess and improve energy utilization efficiency, thereby achieving the goal of energy conservation.

Energy Consumption at FPC by Complex in 2019

Total energy consumed	Percentage of grid electricity consumed	Total energy from self-generation
25,039 gigajoules (GJ)	71.7 %	7,096 gigajoules (GJ)

Note 1: As FPC's GHG inventory for 2020 is scheduled to be completed in August 2021, FPC proposed reporting our electricity consumption based on the 2019 annual report verified by SGS and BSI on account of the impartiality and accuracy of the published data.
Note 2: Among all the complexes, namely Mailiao Complex, Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex, Mailiao Complex uses inventory report data issued by BSI, whereas Hsinkang Complex, Tungshan Complex, the 4th Complex, Renwu Complex, and Linyuan Complex use inventory report data issued by SGS.
Note 3: Grid electricity includes electricity purchased from Taipower and FPG's other public utilities plants.
Note 4: FPC did not consume renewable energy in 2019.

Energy Conservation Performance at FPC in 2020

Item / Category	Amount Conserved	2020 Improvement Completed (Number of Cases)	2020 Investment (NT$ hundred millions)	Estimated Investment Benefit (NT$ hundred millions/year)	Estimated Greenhouse Gas Reduction (ten thousand tons CO_2e/year)	Energy Intensity (Product Unit Consumption)
Steam	36.8 tons/hour	139	3.24	2.17	7.96	0.53 tons/ton
Electricity	8,698 kWh/hour	423	6.46	1.48	5.51	291.38 kWh/ton
Fuel	0.073 tons/hour	2	0.20	0.06	0.19	-
Total	-	564	9.90	3.71	13.66	-

Source: FPG SHE Database.
Note 1: Scope 1 covered steam and fuel; Scope 2 covered electricity. The types of GHG emission reduction included carbon dioxide, methane, nitrous oxide, and hydrofluorocarbon.
Note 2: Owing to the impact of the COVID-19 pandemic in 2020, capacity utilization rate fell, resulting in an increase in product unit consumption from 2019.

Electricity Savings Completed in 2020

Type	Number of Cases	Electricity Savings (kWh/hour)	million joules
Energy management	50	207	5,961,600
Improvement of equipment efficiency	199	4,100	118,080,000
Energy consumption savings	172	4,390	126,432,000
Others	2	1	28,800
Total	423	8,698	250,502,400

Source: FPG SHE Database.
Note: 1 kWh = 360 million joules; annual production hours are calculated at 8,000 hours.

In 2021, there were a total of 563 improvement projects in progress, with an estimated amount of 37.83 tons/hour in steam savings, 14,639 kWh/hour in electricity savings, 0.25 tons/hour in fuel savings, and 170.1 thousand tons CO_2-e/year in GHG reductions. The total amount of investment is NT$1.854 billion, with an annual benefit of NT$489 million, where:

An estimated amount of **4,927** kWh/hour in electricity savings can be achieved through "Oxygen Workshop Process Supply from Oriental Union Chemical Corporation" at Linyuan Public Utilities Plant.

An estimated amount of **2.92** tons/hour in steam savings can be achieved through "Heat Recovery Improvement for VCM Quench Tower" at Mailiao PVC Plant.

An estimated amount of **0.23** ton/hour in fuel savings can be achieved through "Energy Conservation Improvement for Cracking Furnace B" at Mailiao VCM Plant.

3.4 Use and Management of Water Resources 103-2 103-3

Material Issue: Use and Management of Water Resources

Management Approach

- **Goals:** Set an annual product unit water consumption target of 5% less than the average of the previous year
- **Commitments:**
  1. Water consumption at Mailiao Complex should comply with the approved water consumption required by environmental impact assessment and should be reduced continuously.
  2. Use and management of water resources should strictly comply with regulatory requirements.
- **Policies and action plans:**
  1. 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 company's water conservation performance and formulate implementation approaches.
  2. Performance evaluation of energy conservation and carbon reduction: 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 2020, the best-performing complex/department was Mailiao C4 Plant, which received a bonus of NT$50,000.
  3. 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.
- **Resources:**
  1. Manpower:
     The President's Office and the President's Office at Complex oversee planning and management.
     The Manager's Office at each division and each complex have dedicated water conservation personnel in charge of implementing improvements.
  2. Finance:
     FPC continues to make improvements in water conservation each year. Water conservation improvement projects completed in the past three years (2018 to 2020) involved an average investment of NT$149,917 thousand per year.
  3. Technology:
     With circular economy as the starting point, FPC continues to incorporate various water conservation technologies, such as ion exchange membranes and rainwater harvesting.
- **Grievance mechanism:**
  1. Dedicated water conservation personnel at each complex can directly report problems to the President's Office at Complex and the President's Office.
  2. The Administration Department at each complex accepts and deals with feedback and responses from the public.
- **Performance evaluation methods and results:**
  1. Water footprint verification: FPC commissions third-party verification bodies (e.g., SGS and BSI) to verify our actual water withdrawal, water consumption, and water resource management each year.
  2. CDP Score Report - Water Security: FPC submits the questionnaire to CDP each year to assess our water resource management performance. In 2020, FPC was given an A- rating in this respect.
- **Specific actions:** Organize circular economy performance presentations each year
- **Unit in charge:**
  1. Safety and Health Department
  2. President's Office
  3. President's Office at Complex

3.4.1 Water Resource Consumption and Reduction Management

303-1 303-2 303-3 303-4 303-5 413-1

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.

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

Decontaminate water resources that can no longer be reused using treatment facilities and utilize end control methods to discharge such resources in compliance with regulatory standards, so as to minimize their impact on the environment

- 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
- Evaluate the performance of energy conservation and carbon reduction

To truly recognize the actual amount of water used in the production, FPC arranged for SGS to conduct the water footprint verification at Mailiao, Renwu, Linyuan, Hsinkang, and Tungshan Complexes from June to July 2020, covering verification items including source of water, water balance, and emissions. FPC successfully obtained the SGS Water Footprint Verification Opinion Statement on July 21, 2020.

According to the CDP Score Report - Water Security 2020, FPC was rated A- (Leadership), which was better than the average score of other major chemical companies (B). This shows that our water management approaches and results and countermeasures for water shortages, along with our endeavor to achieve corporate sustainability, were recognized by the world's top institutional investors. For more information, please visit the CDP website.

CDP Website


SGS

Water Footprint Verification Statement

The Inventory of Water Footprint of Organizational Level

which is calculated by

Formosa Plastics Corporation

Based on life cycle assessment verified as meeting the requirements of

ISO 14046:2014

Basis of Assessment

Cradle-to-Gate

Authorized by

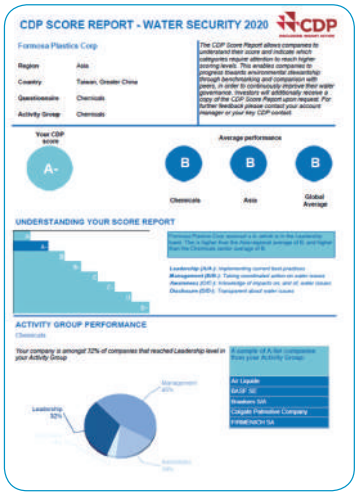
David Huang
Senior Director

Version 1

Issue Date: 21 July 2021

Valid Date: 21 July 2021

FPC received the SGS Water Footprint Verification Statement on July 21, 2020 (2019 Statement No.: TW20/00252WFP)


CDP SCORE REPORT - WATER SECURITY 2020

CDP

Formosa Plastics Corp

Region Asia

Country Taiwan, Greater China

Questionnaire Chemicals

Activity Group Chemicals

Your CDP score

A-

Average performance

B

Chemicals

B

Asia

B

Global Average

UNDERSTANDING YOUR SCORE REPORT

ACTIVITY GROUP PERFORMANCE

2020 CDP Score on Water Security: A-

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 four years (2017-2020) ranged from 175,073 to 572,887 megatons. The average of industrial water consumption accounted for 2.5% of the total water supply, while water consumption transferred from agricultural water usage only accounted for 1.5%. The relevant water consumption is shown in the following table.

Statistics of Water Supplied by Jiji Weir from 2017 to 2020 (Unit: ten thousand tons)

Year	Inflow from Jiji Weir (A)	Average Water Consumption for Agricultural Irrigation (B)	Industrial Consumption			
			Average Water Consumption (C)	Ratio of Water Consumption to Inflow (C)/(A)	Water Consumption for Agricultural Purposes (D)	Percentage of Water Consumption for Agricultural Purposes (D)/(B)
2017	572,887	186,163	10,138	1.8%	3,328	1.8%
2018	307,946	182,450	10,256	3.3%	3,618	2.0%
2019	510,006	189,778	9,840	1.9%	3,301	1.7%
2020	175,073	126,194	9,545	5.5%	0	0
Average	391,478	171,146	9,945	2.5%	2,562	1.5%

Source: Annual Report of the Jiji Weir Operations, Central Region Water Resources Office, Water Resources Agency, Ministry of Economic Affairs.

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 Withdrawal, Discharge and Consumption at FPC by Complex (Unit: million liters (1,000M^3))

Water Consumption at FPC by Complex		Renwu	Linyuan	Tungshan	4th Complex	Mailiao	Hsinkang
Water withdrawal	Surface water	434.21	215.49	0	0	17,758.75	1,399.97
	Groundwater	10,542.44	0	334.81	0	0	0
	Third-party water	1,946.65	5,429.41	2.12	24.04	62.99	6.25
	Subtotal	12,923.30	5,644.90	336.93	24.04	17,821.74	1,406.22
	Total	38,157.13					
Water consumption	Water consumption	8,734.38	3,153.70	41.95	12.27	11,039.20	847.42
	Total	23,828.91					
Water discharge (by destination)	Surface water	4,188.92	0	294.99	0	0	558.80
	Seawater	0	0	0	11.77	0	0
	Third-party water	0	2,491.20	0	0	6,782.54	0
	Subtotal	4,188.92	2,491.20	294.99	11.77	6,782.54	558.80
	Total	14,328.22					

Note 1: As FPC's water footprint inventory for 2020 is scheduled to be completed in the third quarter of 2021, FPC proposed obtaining and reporting statistics on our water footprint based on the 2019 water footprint data verified by SGS in 2020 on account of the impartiality and accuracy of published data.
Note 2: 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 3: According to the results of water risk assessment, no data showed that our complexes were located in an area with water stress. In readiness for potential risks arising from water resources, FPC identified Mailiao Complex as a complex with water stress whose third-party water came from surface water.
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.
Note 6: Due to weather-related factors, Tungshan Complex collected run-off for treatment based on water pollution prevention measures and permit; therefore, the amount discharged was greater than the amount consumed.

3.4.2 Water Conservation Performance 303-1

The water sources used in FPC's complexes mainly consist of surface water and groundwater. Under the condition of limited water resources, FPC not only implements various improvement measures, such as reducing water use in production processes, engaging in water conservation, and reducing evaporation loss, but also requires all departments to set annual targets for unit water consumption based on the principle that the water consumption target for a particular year should be 5% less than the average in the previous year.

1. If the department's water consumption rate of the previous year is equal to or more than 100%, the annual target should be the department's net consumption of the previous year × 95%.
2. If the department's water consumption rate of the previous year is less than 95%, the annual target should be the department's net consumption of the previous year.
3. If the department's water consumption rate of the previous year is equal to or more than 95% but less than 100%, the annual target should be the department's net consumption of the previous year × 95% or the target of 2019, whichever is lower.

Water Conservation Performance at FPC (2017 to 2021)

Item \ Year	Completed in 2020	Completed from 2017 to 2020 (A)	Ongoing in Early 2021	Total (A+B)
Number of improvement projects	189	548	154	702
Volume of water conserved (tons/day)	4,043	17,120	4,158	21,278
Investment (NT$ hundred millions)	1.63	5.43	4.00	9.43
Benefit (NT$ hundred millions/year)	0.19	0.87	0.20	1.07

Source: FPG's SHE Database.

With water consumption at Mailiao Complex strictly regulated by environmental impact assessment, FPC delivered water consumption performance that was worse in 2020 than in 2019 mainly due to a decline in capacity utilization rate caused by the COVID-19 pandemic.

Annual Production, Water Consumption and Unit Water Consumption at FPC's Mailiao Complex (2017 to 2020)

Item \ Year	2017	2018	2019	2020
Average capacity (tons/day)	15,531	15,344	15,345	14,749
Average water consumption (tons/day)	44,264	44,374	43,445	42,619
Unit water consumption (tons/ton)	2.85	2.89	2.83	2.89

To improve water efficiency, Mailiao Complex continues to strengthen 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 amount of rainwater harvested in 2020 was 3,545 tons/day, which was 790 tons/day more than 2,755 tons/day from 2017 to 2019.

Rainwater harvesting rate at Mailiao Complex in 2020 (Note)
123.2 %

Amount of rainwater harvested in 2020
3,545 tons/day

Note:
Rainwater harvesting rate = Actual amount harvested / Theoretical amount harvested.
Theoretical amount harvested = Rainfall x (Permeable layer area x 0.8 + Impermeable layer area x 0.2).
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), the runoff coefficient for permeable layer is 0.8, whereas the runoff coefficient for impermeable layer is 0.2.

Rainwater Amount Harvested and Harvesting Rate at FPC's Mailiao Complex (2017 to 2020)

Item \ Year	2017	2018	2019	2020
Amount of rainwater harvested (tons/day)	2,605	2,376	3,285	3,545
Harvesting rate (%)	79.8	98.1	110.2	123.2

Note: Rainwater harvesting rates in 2019 and 2020 exceeded 100% mainly because the actual amount harvested exceeded the theoretical amount harvested due to various improvements, such as installation of rainwater accumulation bricks and addition of rainwater harvesting pumps.

3.4.3 Zero Wastewater Discharge 303-1 303-2

To progress toward the ideal goal of zero wastewater discharge, the President's Office is tasked to promote wastewater treatment technologies company-wide, develop and promote on-site wastewater treatment, and improve internal technologies.

For example, Renwu Complex is expected to invest NT$1.2 billion in the zero wastewater discharge plan, which is divided into four stages, namely, source reduction, cooling water recycling, effluent recycling, and zero discharge of concentrated wastewater, with a view to achieving zero wastewater discharge. The situation at each stage is described as follows:

Four Stages of Source Reduction

Source reduction

As of the end of 2020, there were 28 source reduction projects in total, primarily including recycling and reuse of reclaimed wastewater from resin towers, improvement in reuse of wastewater in centrifuges, increase in exhaust gas concentration and recycling and reuse of exhaust gas, etc. 25 projects have been completed at present, with three projects yet to be completed and currently undergoing continuous improvement.

Cooling water recycling

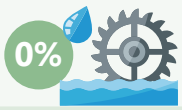
Cooling tower is the main source of water discharge. For recycling of water discharge from cooling towers at Renwu Complex, UF/RO membranes are prone to clogging due to water quality characteristics. Therefore, FPC developed a patent that enables water quality to meet the UF/RO water quality standards upon pre-treatment. At present, the planned and designed treatment capacity is 1,680 CMD, which is estimated to recycle 1,100 CMD.

Effluent recycling

Recycling and reuse of effluent is divided into three stages, namely (1) laboratory test, (2) simulated field test, and (3) physical construction. Laboratory test is currently in progress to analyze the water quality of effluent, test dosing bottles and cups, test coagulation and sedimentation, etc., so as to facilitate subsequent planning of wastewater treatment and recycling units as well as the implementation of simulated field test in the second stage.

Zero discharge of concentrated wastewater

To realize zero discharge of concentrated wastewater, 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.



Water Pollution Prevention Measures 303-2 306-1

To maximize the effect of water pollution prevention, it is necessary to classify wastewater for management from the source. For instance, Renwu Complex has six wastewater treatment plants in place for organic and inorganic wastewater treatment to deal with different types of wastewater, and has also set up five monitoring systems to connect with local authorities in real time. The water quality monitoring results have been better than the statutory standards for six consecutive years.

In line with the Kaohsiung City Government's policy to build the Houjing River Park, FPC invested NT$110 million in building 4.8 km of sea discharge pipelines in 2019 to discharge all sources of discharge at the Renda Industrial Park into the sea.

Effluent Quality Control by Complex at FPC in 2020

Complex	Water Volume (CMD)		pH			COD (mg/L)			SS (mg/L)		
	Permissible Volume	Amount Discharged	Statutory Standard	Internal Control Value	Mean	Statutory Standard	Internal Control Value	Mean	Statutory Standard	Internal Control Value	Mean
Renwu	44,744	11,604.94	6~9	6.5~8.5	8.2	100	90	32.5	30	25	12.6
Linyuan	12,050	7123.91	6~9	7.0~8.2	7.3	100	70	46.0	30	20	7.2
Hsinkang	3,176	1,843	6~9	7.6~8.6	8.6	100	80	42.0	30	20	4.0
Tungshan	1,468	662.82	6~9	6.5~8.5	8.1	100	90	1.9	30	25	4.9
4th Complex	475	18.1	6~9	6.5~8.5	8.4	100	90	36.7	30	20	3.8

Note: 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.

3.5 Air Pollutant Management

103-2 103-3

Material Issue: Air Pollutant Management

Management Approach

- **Goals and commitments:** Implement air pollution controls and improvements to prevent air pollution incidents, in hopes of achieving the annual goal of zero pollution
- **Policies and action plans:** Upholding the business philosophy of balancing safety, health, and environment and economic development, FPC implements various environmental initiatives in line with the Safety, Health and Environment Policy approved by the Chairman, and demonstrates our commitment to a safe and healthy environment to neighboring residents, so as to earn the public's trust and support.

FPC Website: Environmental Policy

- **Resources:** FPC's various pollution control measures aim to pursue the lowest pollution emissions using the best available control technology. While conforming to process safety and stable production, not only does FPC design and plan our own control equipment, but the Safety and Health Department and various complexes and departments also engage in pollution control measures by learning from the success cases of other companies.
- **Grievance mechanism:** FPC has put in place an environmental protection and pollution whistleblower system in accordance with the Regulations Governing Supervision and Management of Environmental Protection and rewards employees for reporting violations of environmental protection regulations, environmental pollution, etc. FPC has set up the "Contact Us" page on our official website, enabling stakeholders to leave comments and file complaints.

FPC Website: Contact Us

- **Performance evaluation methods and results:** In 2020, environmental protection authorities conducted 439 on-site inspections at our complexes, identifying eight anomalies upon audit (1.8% anomaly rate) in the process. FPC will continue to implement our own environmental protection inspections at various complexes and departments and supervise each complex to prevent similar anomalies in the future.
- **Specific actions:** 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.
- **Unit in charge:** As commitment to environmental protection compliance is the responsibility of all employees, FPC has included "environmental protection" as one of the items in the evaluation of efficiency bonus. Should an environmental violation be found, the Safety and Health Department shall issue a notice to the complex committing the violation and include the complex involved in the evaluation of bonus reduction. Anyone who is found to have committed violations of environmental protection regulations by the competent authorities shall receive severe punishment or even be dismissed from FPC in severe cases.

3.5.1 Air Pollution Monitoring and Assessment 305-7 413-2

(1) 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 quickly, thereby ensuring local air quality. For more information on air pollution management and prevention, please refer to our CSR website.

CSR Website: Air Pollutant Management

(2) Air quality impact analysis

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

Number of anomalies detected in 2020
22

Improvement rate
100 %

Stationed FTIR (Xucuo Branch)

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

3.5.2 Air Pollution Control Measures 305-5 305-7

FPC strives to reduce air pollution by adopting the best available technology and air pollution control equipment, and appointing two employees (better than the statutory requirements) to be in charge of air pollution control (including one proxy) at each unit. Air pollution control personnel are required to pass national examinations to ensure the effectiveness of air pollution control measures at each complex. At present, FPC's pollution control results have surpassed national standards and are on a par with the performance of global optimization standards.

Replacement of old control equipment with new ones

Improvements in Exhaust Emissions

Replacement of old control equipment with new ones

Replacement of old equipment that has been in operation for a long time with new ones can improve the situation of exhaust emissions.

Improvement in Visual Pollution

A medium gas-gas heater (MGGH) is used for heating tail gas of a chimney to eliminate white smoke and reduce PM2.5 emissions. Out of the six cogeneration units owned by FPC, improvements have been made on four of them in 2020, while improvements on the remaining two units are scheduled to be completed by the end of 2022.

Air Pollution Reduction

In addition to ensuring that various pollutants comply with environmental protection regulations, FPC also continues to promote air pollution reduction projects.

Air Pollutant Emissions at FPC in 2020 (Unit: tons/year)

Air Pollutant	Complex						Total
	Renwu	Linyuan	Mailiao	Hsinkang	Tungshan	4th Complex	
Sulfur oxides (SOx)	498.171	181.438	305.57	0.749	1.222	0	987.15
Nitrogen oxides (NOx)	1008.029	330.128	261.488	0.484	126.516	0	1,726.645
Volatile organic compounds (VOC)	24.318	99.924	234.476	25.225	7.362	10.143	401.448
Total suspended particles (TSP)	127.138	114.514	37.766	1.038	12.165	0	292.621

Source: EPA Air Pollution, Wastewater and Waste Declaration Website.
Note: For information on hazardous air pollutants (HAPs) emissions, current draft national regulations only stipulate the emission limits, standard control values, and ambient standards for emission pipelines but do not specify emission calculations. FPC will calculate and disclose our HAPs emissions in accordance with national regulations in the future.

Improvements on Air Pollutant Emissions in 2020

Mailiao EVA Plant

Improvement

The current control equipment was replaced with new ones as it has been put in use for about 20 years since the construction of the complex was completed. (Application for change is currently in progress)

Type of Reduced Air Pollutant

VOC

Renwu Public Utilities Complex

Improvement

Improvements on the MGGH of one cogeneration unit and the wet electrostatic precipitator of the control equipment have been completed, thus enabling effective reduction of particulate pollutant emissions.

Type of Reduced Air Pollutant

TSP

3.6 Waste Management

306-1 306-2 306-3 306-4 306-5

3.6.1 Waste Disposal and Management

Following the principles of source management, waste reduction during product processes, and end control, FPC minimizes waste output and maximizes resource recovery. Taking the waste thermal insulation cotton at Mailiao Complex as an example, FPC commissioned the recycling company to produce recycled pellets for trench backfilling, reducing 204 tons of landfill in 2020.

In 2020, FPC generated 213,344 tons of industrial waste, among which 24,554 tons were general industrial waste that could be incinerated or buried, while 3,325 tons were hazardous industrial waste. After waste classification, recycling, and reuse, 185,453 tons were recovered as resources, accounting for 86.9% of the total waste generated. The ways of treatment of industrial waste are as follows:

Waste Classification by Composition at FPC in 2020 (Unit: metric tons)

	Waste Generation	Waste Diverted from Disposal	Waste Directed to Disposal
Waste composition			
Toxic hazardous industrial waste (Class B)	740	0	740
Hazardous industrial waste determined by hazardous characteristics (Class C)	2,597	12	2,585
General industrial waste (Class D)	43,294	18,740	24,554
Waste to be recycled or reused upon announcement (Class R)	166,713	166,713	0
Total waste	213,344	185,465	27,879

Note: FPC's waste composition was compiled based on waste statistics reported to EPA in 2020 and classified based on the categories set forth by EPA.

Waste Diverted from Disposal by Recycling Operation at FPC in 2020 (Unit: metric tons)

	On-site (In-house Treatment)	Off-site (Outsourced Treatment)	Total
Hazardous waste			
Other recycling operations	0	12	12
Total	0	12	12
Non-hazardous waste			
Preparation for reuse	0	18,740	18,740
Recycling and reuse	0	166,713	166,713
Total	0	185,453	185,453

Note 1: FPC diverted waste from disposal according to recycling operation. Outsourced treatment was adopted for all such waste, where non-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 2: FPC did not prevent waste generation in 2020.

Waste Directed to Disposal by Disposal Operation at FPC in 2020 (Unit: metric tons)			
	On-site (In-house Treatment)	Off-site (Outsourced Treatment)	Total
Hazardous waste			
Incineration (including energy recovery)	0	1,232	1,232
Incineration (excluding energy recovery)	0	1,286	1,286
Other disposal operations	0	807	807
Total	0	3,325	3,325
Non-hazardous waste			
Incineration (including energy recovery)	7,405	8,451	15,856
Landfill	0	8,698	8,698
Other disposal operations	7,405	17,149	24,554

Note: 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.

3.6.2 Disposal and Management of Hazardous Substances

To manage hazardous substances at each complex (including EPA's controlled chemical substances and hazardous chemical substances), FPC strictly requires that all management personnel obtain professional and technical licenses and that all complexes are equipped with detection and alarm systems. Unused EPA's controlled chemical substances are managed as hazardous industrial waste and properly treated after being declared as waste in accordance with the law.

In 2020, FPC worked with six qualified waste disposal contractors and four treatment contractors and conducted inspections and visits on an irregular basis to ensure that hazardous industrial waste was properly treated.

Number of waste disposal contractor inspections in 2020
167

Number of treatment contractor inspections in 2020
26

For EPA's controlled chemical substances (toxic chemicals), FPC has appointed more professional management personnel (holding valid licenses) than the statutory requirements at each complex.

Complex	Statutory Number of Professional Management Personnel		Number of Registered Professional Management Personnel at FPC in 2020
Mailiao	Grade A	2	8
	Grade B	1	2
Hsinkang	Grade A	1	1
Renwu	Grade A	1	12
	Grade B	1	-
Linyuan	Grade A	1	4
	Grade B	1	-
4th Complex	Grade A	1	2

According to amendments to the Regulations of New and Existing Chemical Substances Registration on March 11, 2019, 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 will complete the registration process in accordance with the relevant laws and regulations.

3.7 Environmental Compliance

103-2 103-3

Material Topic: Environmental Compliance

Management Approach

- **Goals and commitments:** Environmental protection and pollution prevention are the responsibilities of every company. FPC strictly abides by environmental laws and regulations to achieve the goal of zero penalty within five years, thereby pursuing our vision of corporate sustainability.
- **Policies and action plans:** Upholding the business philosophy of balancing safety, health, and environment and economic development, FPC implements the Safety, Health and Environment Policy approved by the Chairman and strengthens communication with nearby residents. For the Safety, Health and Environment Policy, please refer to FPC's official website.

FPC Website: Environmental Policy

- **Resources:** FPC's various pollution control measures aim to pursue the lowest pollution emissions using the best available control technology. While conforming to process safety and stable production, not only does FPC design and plan our own control equipment, but the Safety and Health Department and various complexes and departments also engage in pollution control measures by learning from the success cases of other companies.
- **Grievance mechanism:** FPC has put in place an environmental protection and pollution whistleblower system in accordance with the Regulations Governing Supervision and Management of Environmental Protection and rewards employees for reporting violations of environmental protection regulations, environmental pollution, etc. FPC has set up the "Contact Us" page on our official website, enabling stakeholders to leave comments and file complaints.

FPC Website: Contact Us

- **Performance evaluation methods and results:** FPC evaluates performance related to compliance with major environmental protection regulations based on the results of audit conducted by environmental protection authorities at all levels. External ISO 14001 and ISO 45001 audits also serve as a supplementary means to assist FPC in improving compliance with environmental protection regulations.
- **Specific actions:** 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.
- **Unit in charge:** As commitment to environmental protection compliance is the responsibility of all employees, FPC has included "environmental protection" as one of the items in the evaluation of efficiency bonus. Should an environmental violation be found, the Safety and Health Department shall issue a notice to the complex committing the violation and include the complex involved in the evaluation of bonus reduction. Anyone who is found to have committed violations of environmental protection regulations by the competent authorities shall receive severe punishment or even be dismissed from FPC in severe cases.

3.7.1 Penalties for Violation of Environmental Regulations

307-1

Belonging to the petrochemical industry, FPC is one of the primary inspection targets of both central and local environmental protection authorities. In 2020, FPC committed eight environmental violations, with no major environmental violation (major violations are defined as single events penalized with a fine of NT$1 million or more). In view of various environmental protection regulations and standards as well as increasingly stringent penalties for violations, FPC will continue to propose improvement measures in safety, health, and environmental management in the future, with hopes of further reducing the number of environmental violations and the amount of fines in the future.

Number of Environmental Violation Cases and Penalty Amounts at FPC from 2017 to 2020
(Unit: cases, NT$ ten thousands)

Type of Environmental Violation \ Year	2017		2018		2019		2020	
	Number of Cases	Amount	Number of Cases	Amount	Number of Cases	Amount	Number of Cases	Amount
Air pollution	11	115	6	80	13	215	8	220
Water pollution	0	0	1	204.6	0	0	0	0
Waste pollution	1	6	3	7.2	0	0	0	0
EPA's controlled chemical substances	0	0	0	0	0	0	0	0
Soil and groundwater (Note)	0	0	1	20	1	1,601.5	0	0
Total	12	121	11	311.8	14	1,816.5	8	220

Note: After groundwater pollution was found at Renwu Complex by environmental protection authorities in 2009, the Environmental Protection Bureau of the Kaohsiung City Government imposed a fine of approximately NT$80.83 million in 2011 on FPC for delaying remediation in consideration of illegal gains. FPC found the penalty inappropriate as emergency response and remediation measures were swiftly taken once pollution was identified. Following FPC's administrative lawsuit, the Kaohsiung High Administrative Court revoked the penalty in 2014. In 2019, the Kaohsiung City Government imposed a fine of approximately NT$16.01 million once again. In response, FPC filed another administrative lawsuit on October 22, 2019. The case is currently being tried by the Kaohsiung High Administrative Court.

3.8 Response to Material Environmental Issues

102-44

(1) Leakage from the discharge nozzle of the liquid caustic soda tank at Linyuan VCM Plant in Kaohsiung City

On April 1, 2020, FPC's Linyuan VCM Plant reported an incident involving VCM leakage from the upper discharge nozzle of the liquid caustic soda tank. It was found upon investigation that deficiencies in the construction improvement method resulted in uneven forces exerted on the heat-affected zone under the weld run on the discharge nozzle flange, which in turn caused the nozzle to bear a transverse stress, thereby accelerating the formation of cracks in the pinhole within the heat-affected zone under the weld run. This led to complete fracture and eventually resulted in leakage.

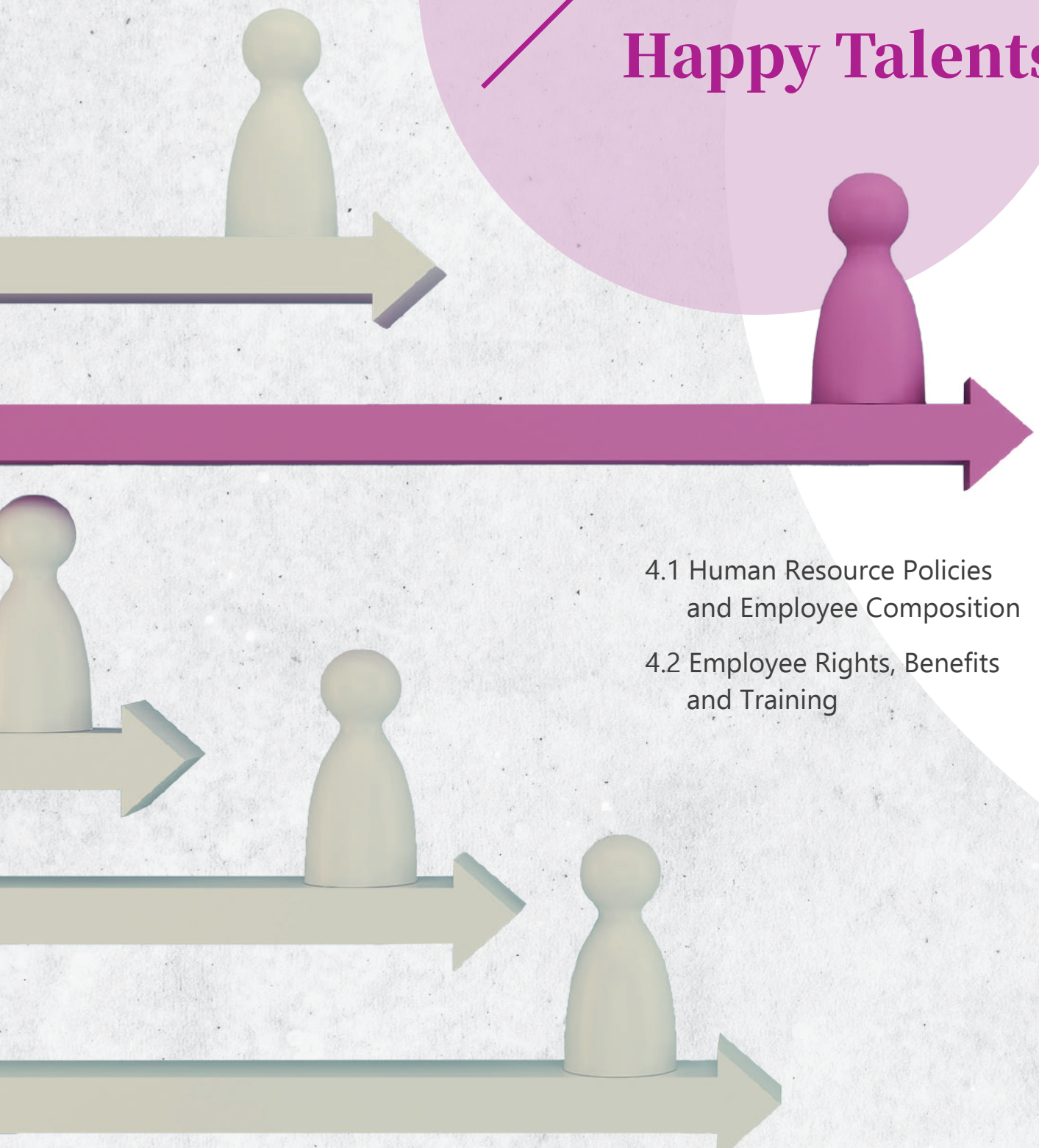
On the day of the incident, the Environmental Protection Bureau of the Kaohsiung City Government and EPA's Toxic Chemical Disaster Center immediately sent their personnel to conduct on-site investigations. It was found that the VCM leakage had no effect on residents outside the industrial zone and our own employees. Having caused uneasiness among the public, FPC has conducted a thorough review on the cause of the incident and made improvements immediately to prevent such incidents in the future.

(2) Emission of black smoke caused by ignition in the pellet storage tank at Linyuan PP Plant in Kaohsiung City

On May 15, 2020, FPC's Linyuan PP Plant reported an incident involving the emission of black smoke caused by ignition in the pellet storage tank. It was found upon investigation that high outside temperature on that day and a clogged exhaust pipe led to the volatilization of PP pellets and the accumulation of flammable gas in the tank; such flammable gas was then ignited by static electricity produced by pellets during transportation, which in turn caused the top of the tank to rupture and ignite, thus resulting in the emission of black smoke.

As this incident was caused by deficiencies in process hazard analysis, FPC will strengthen hazard analysis training for our personnel, collect related incident information, and increase our personnel's sensitivity to risks, thereby preventing such incidents in the future.

4 Builders of Happy Talents



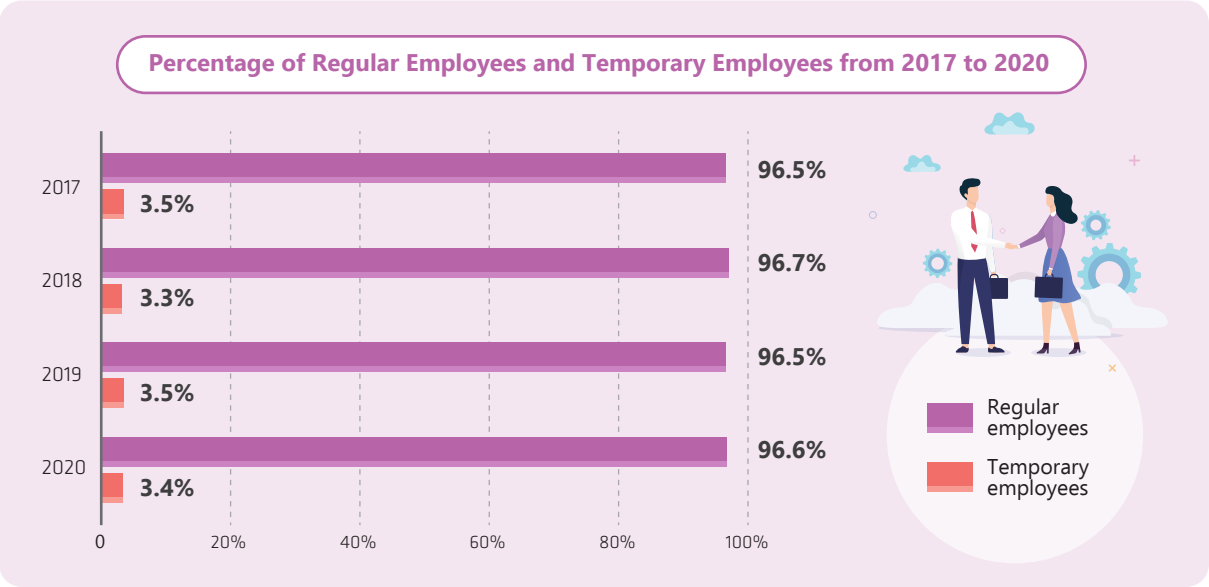
4.1 Human Resource Policies and Employee Composition

4.2 Employee Rights, Benefits and Training

4.1 Human Resource Policies and Employee Composition 102-8

4.1.1 Manpower Structure 401-1

In 2020, there were 6,311 regular employees at FPC, accounting for 96.6% of 6,533 employees in total. On the other hand, there were 222 temporary employees such as consultants, contract employees, and part-time student workers, constituting 3.4% of the total number of employees. Over the past four years, the annual percentage of regular employees has remained above 95%, while 100% of them were local employees.



Due to the characteristics of the industries to which FPC belongs, the ratio of male to female employees is approximately 9.8:1. Meanwhile, the average age of employees is 43.2 years old, while the average length of service is 17.27 years. Our employees are mostly in the 30 to 49 years old age group, indicating that our colleagues put their trust in FPC and have developed a sense of belonging at FPC. Our senior colleagues also play the role of mentors for new recruits in order to vitalize our operations.

Manpower Structure at FPC in 2020 (Unit: persons)

Category	Group	Female		Male		Total
		Number of People	Percentage	Number of People	Percentage	
Employee Contract	Regular employees	586	93.91%	5,725	96.89%	6,311
	Temporary employees	38	6.09%	184	3.11%	222
	Total	624	100.0%	5,909	100.0%	6,533
Position	Management level and above	3	0.51%	49	0.86%	52
	Management Levels 1 and 2	86	14.68%	1,315	22.97%	1,401
	First-line supervisor level	114	19.45%	1,629	28.45%	1,743
	Assistant and staff level	383	65.36%	2,732	47.72%	3,115
	Total	586	100.0%	5,725	100.0%	6,311

Manpower Structure at FPC in 2020 (Unit: persons)

Category	Group	Female		Male		Total
		Number of People	Percentage	Number of People	Percentage	
Location	Northern Taiwan	201	34.30%	456	8.00%	657
	Central Taiwan	143	24.40%	2,492	43.50%	2,635
	Southern Taiwan	235	40.10%	2,646	46.20%	2,881
	Eastern Taiwan	7	1.20%	131	2.30%	138
	Total	586	100.00%	5,725	100.00%	6,311
Age	29 and below	73	12.50%	663	11.60%	736
	30 to 49	360	61.40%	3,516	61.40%	3,876
	50 and above	153	26.10%	1,546	27.00%	1,699
	Total	586	100.00%	5,725	100.00%	6,311
Length of Service	Less than 10 years	189	32.25%	2,224	38.85%	2,413
	11 to 30 years	257	43.86%	2,730	47.68%	2,987
	More than 30 years	140	23.89%	771	13.47%	911
	Total	586	100.0%	5,725	100.00%	6,311
Education	Doctoral degree	6	1.02%	36	0.63%	42
	Master's degree	98	16.72%	839	14.65%	937
	Bachelor's degree	91	15.53%	977	17.07%	1,068
	Others	391	66.73%	3,873	67.65%	4,264
	Total	586	100.0%	5,725	100.0%	6,311

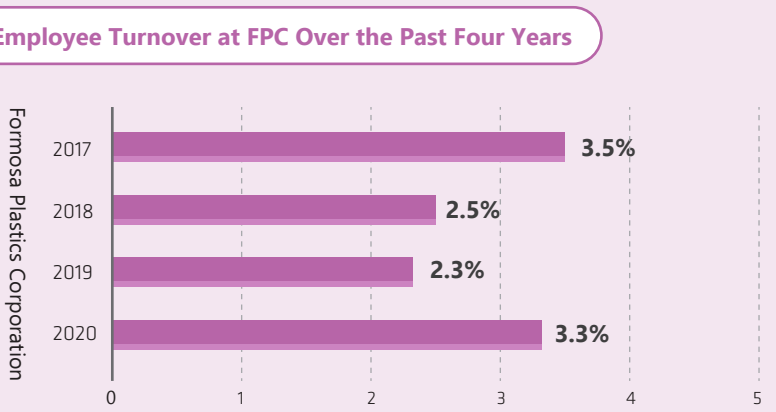
Description of Positions

Management level and above	Management Level 1	Management Level 2	First-line supervisor level	Assistant and staff level
President, Executive Vice President, Senior Vice President, Vice President, Assistant Vice President, etc.	Plant Manager (Department Manager), Deputy Plant Manager (Deputy Department Manager), Senior Engineer (Senior Administrator), etc.	Section Chief, Deputy Section Chief, Engineer (Administrator), etc.	Shift Supervisor, Junior Engineer (Junior Administrator), Foreman, etc.	Staff and clerks whose titles are fixed according to their appointments

In 2020, a total of 207 regular employees resigned from FPC, including 70 employees (33.8%) who retired early and 39 employees (18.8%) who officially retired. Over the past four years, the annual employee turnover rate has remained below 4%, and the overall turnover rate after deducting all retirees has been about 1.6%.

Age and Area Distribution of Resigned Employees at FPC in 2020 (Unit: persons)

Category	Group	Female		Male	
		Number of People	Percentage	Number of People	Percentage
Age	29 and below	7	0.11%	37	0.59%
	30 to 49	8	0.13%	47	0.74%
	50 and above	6	0.10%	63	1.00%
	Retirement	5	0.08%	34	0.54%
Area	Northern Taiwan	14	0.22%	23	0.36%
	Central Taiwan	3	0.05%	50	0.79%
	Southern Taiwan	8	0.13%	104	1.65%
	Eastern Taiwan	1	0.02%	4	0.06%
Total		26	0.41%	181	2.87%
Percentage of resigned employees by gender		12.56%		87.44%	



Note: Turnover rate = (Retired + Deaths + Layoffs + Others) / Total number of employees at the end of the year.

4.1.2 Employee Recruitment

202-2 401-1

FPC expands 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. In 2020, a total of 241 new employees were recruited, with 196 new employees aged under 30 years old, accounting for 81% of the total number of new employees.

Number of violations of human rights or discrimination in 2020

0

Age and Area Distribution of New Employees in 2020 (Unit: persons)

Category	Group	Female		Male	
		Number of People	Percentage	Number of People	Percentage
Age	Below 30	16	0.25%	180	2.85%
	30 to 49	5	0.08%	40	0.63%
	50 and above	0	0.00%	0	0.00%
Area	Northern Taiwan	7	0.11%	21	0.33%
	Central Taiwan	7	0.11%	78	1.24%
	Southern Taiwan	7	0.11%	120	1.90%
	Eastern Taiwan	0	0.00%	1	0.02%
Total		21	0.33%	220	3.49%
Percentage by Gender		8.71%		91.29%	

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. In 2020, FPC employed 63 people with physical and mental disabilities, which equivalent to 83 people actually recruited according to standard calculation. This figure is significantly higher than that required by the law.

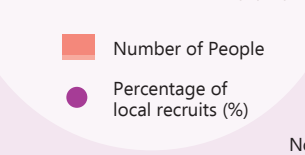
Employees with Disabilities at FPC

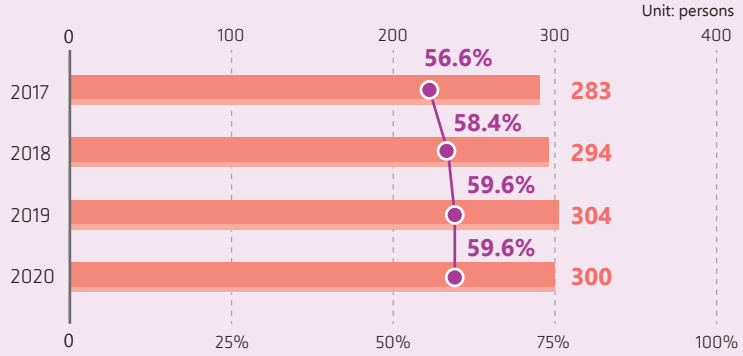
Year	Number of People with Disabilities Employed As Required by the Law (A)	Actual Number of People with Disabilities Employed by FPC (B)				Excess or Insufficiency (B-A)
		Mild	Moderate	Severe or Above	Total	
2020	63	42	9	16	83	+20

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.

FPC gives priority to local residents in the recruitment of new employees. In addition, FPC also actively nurtures outstanding local supervisors. Hence, the percentage of local residents at senior management level has remained above 55% over the past four years.

Percentage of Local Residents at Senior Management Level over the Past Four Years





Note: Senior executives refer to the percentage of personnel with positions at Management Level 1 and above having household registration in the same county/city in which the complex is located.

4.2 Employee Rights, Benefits and Training

103-2 103-3 201-1 401-2

Material Topic: Employee Benefits and Remuneration

Management Approach

- **Goals and commitments:** FPC continues to attract and recruit outstanding talents based on the principles of fairness, impartiality, and openness while strengthening training on new knowledge and new technologies to develop a diverse range of professional skills. FPC also takes care of employees' well-being and health care, so that employees can showcase their abilities in their positions at ease.
- **Policies and action plans:**
  1. Select candidates with equal treatment for all regardless of age, gender, sexual orientation, and political ideology in compliance with human rights policies
  2. Offer stable and good salaries and benefits that are superior to those required by the law, and conduct negotiations on salary adjustments every year
  3. Enhance employees' professional competence and put in place a robust promotion mechanism and a sound career development system
  4. Formulate training courses corresponding to job categories to constantly enhance job-related skills and competencies
  5. Provide smooth care communication channels and incorporate professional consulting services
  6. Implement a diverse range of welfare measures to enrich employees' family life
  7. Provide all our employees and their dependents with medical treatment at discounted rates in Chang Gung Memorial Hospital to take care of their health and well-being
- **Resources:** Salary adjustments are implemented each year based on the operating performance of FPC (FPG) and consumer price changes. Furthermore, FPC organizes various welfare activities in cooperation with welfare communities at complexes, Chang Gung Memorial Hospital or local organizations.
- **Grievance mechanism:** Grievances can be lodged not only through communication with supervisors, but also via labor unions, counselors, dedicated phone lines or the comment system on FPC's official website.
- **Performance evaluation methods and results:** Carry out assessment and review based on various corporate systems, conduct satisfaction survey and collect suggestions for improvements on a regular basis, and make amendments to our rules and regulations where necessary to improve employees' well-being
- **Specific actions:**
  1. Grievance Investigation Team: Any grievance lodged by employees or outsiders is investigated in order to safeguard the rights and interests of FPC and our employees.
  2. Epidemic Prevention Team in conjunction with the COVID-19 pandemic: For personnel entering our complexes or returning from abroad who are required to undergo quarantine or isolation in accordance with the regulations set forth by the Central Epidemic Control Center (CECC), the Epidemic Prevention Team tracks their physical conditions to ensure that they are safe and healthy.
- **Unit in charge:** HR Unit, President's Office

4.2.1 Employee Development and Compensation

202-1 401-2 401-3 404-1 404-3

Remuneration Ratio of Male to Female Employees in Similar Positions and on Similar Ranks at FPC over the Past Four Years

Year	-	2017	2018	2019	2020
Gender	Female	Male	Male	Male	Male
Management level and above	1	0.73	0.73	0.77	0.67
Management Levels 1 and 2	1	1.41	1.36	1.33	1.32
First-line supervisor level	1	1.19	1.19	1.18	1.21
Assistant and staff level	1	1.19	1.17	1.18	1.17

To recruit outstanding talent, FPC offers competitive remuneration packages. The ratio of the minimum monthly salary to the statutory minimum basic salary for the newly recruited staff is 120%, and the salary may be adjusted based on education and work experience.

Minimum wage in 2020 announced by the Ministry of Labor **100%**

Average monthly salary of newly recruited staff in 2020 **160%**

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 the staff to continuously work professionally, with a view to improving business performance. Comparisons on the number of regular employees other than managerial officers and their average annual salary and median annual salary over the past two years are listed below.

Average and Median Annual Salary

Item	2019 (A)	2020 (B)	Percentage (C=B/A)
Number of regular employees other than managerial officers	6,005	6,358	106%
Average annual salary (NT$)	1,397,418	1,305,837	93%
Median annual salary (NT$)	1,272,362	1,185,946	93%

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. Both the average annual salary and median annual salary in 2020 were slightly lower than those in 2019, due chiefly to the decrease in sales revenue, bonuses, and salary adjustments compared to the previous year as a result of the COVID-19 pandemic.

With the purpose of implementing 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, so that our employees who meet the requirements of the program can adjust their working hours based on their needs. In 2020, one employee applied for unpaid parental leave and five employees were actually reinstated in the year, indicating a reinstatement rate of 100%. In addition, 10 employees were reinstated between 2019 and 2020, with all of them remaining at FPC for more than one year, representing a 100% retention rate.

Unpaid Parental Leave Applications and Reinstatement Rates at FPC Over the Past Four Years (Unit: persons)

Item	2017			2018			2019			2020		
	Female	Male	Total	Female	Male	Total	Female	Male	Total	Female	Male	Total
Number of applications for unpaid parental leave by eligible employees	17	298	315	18	276	294	18	290	308	21	264	285
Actual number of applications for unpaid parental leave	2	1	3	9	0	9	3	1	4	1	0	1
Number of employees reinstated in the current year (A)	2	0	2	3	0	3	9	0	9	4	1	5
Number of employees who applied for reinstatement in the current year (B)	2	0	2	2	0	2	8	0	8	4	1	5
Reinstatement rate (B/A)	100%	-	100%	66.7%	-	66.7%	88.9%	-	88.9%	100%	100%	100%
Retention rate (%)	100%	100%	100%	100%	-	100%	100%	-	100%	100%	-	-

Note: "Retention rate1 indicates the rate of employees who remain at FPC for more than one year, after taking unpaid parental leave. The nine employees reinstated in 2019 and the only employee reinstated in 2020 remained at FPC for more than one year.

Diversified Training and Performance Management

The scope of performance appraisal includes all regular employees. Work performance is regularly assessed every month, which is then used as the benchmark for efficiency bonus. On the other hand, work performance is compiled at the end of the year as a reference for managers to carry out year-end performance appraisal of employees in order to ensure the objectivity of such appraisal. In addition to regular promotion evaluation, 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 of FPC (FPG) and individual employee performance appraisal. Through performance management, FPC links individual goals 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.

Total number of training hours in 2020
262,515

Completion rate of introduction training for new staff in 2020
100 %

Completion rate of basic training in 2020
95.7 %

Completion rate of professional training in 2020
100 %

Completion rate of management associate training in 2020
100 %

With the rapid development of AI and big data application technologies, FPC has actively incorporated the application 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. However, FPC cut the number of training batches and restricted the number of participants due to the COVID-19 pandemic, resulting in lower number of participants and training hours compared to 2019.

Number of participants in AI training in 2020
388

Total number of AI training hours in 2020
8,177

Course Category	Basic AI Course	Practical AI Course	Taiwan AI Academy Leadership Program	AI Project Implementation Course	AI Seminar
Standard Hours	8	168	408	128	1.5
Number of Participants Completing Training	159	24	6	1	198
Total Hours	1,272	4,032	2,448	128	297

Note: Demand for AI training declined in 2020 as the basic AI course was expanded in 2018 and 2019.

Employee Training Hours at FPC over the Past Four Years (Unit: hours/person)

Year	Position	Management Levels 1 and 2	First-line supervisor level	Staff Level	Company-Wide Average Hours
2017	Female	13.9	23.2	18.0	18.6
	Male	25.9	46.9	59.8	48.6
	Total	25.3	45.5	54.5	45.8
2018	Female	15.3	32.5	19.4	21.3
	Male	26.3	47.5	56.7	47.2
	Total	25.7	46.6	52.0	44.8
2019	Female	47.5	46.8	27.0	33.3
	Male	44.2	66.2	58.6	57.4
	Total	44.3	64.9	54.6	55.1
2020	Female	10.6	26.1	23.2	21.9
	Male	18.9	43.4	53.7	42.7
	Total	18.4	42.3	50.0	40.8

Note 1: Since FPC falls into the petrochemical material manufacturing industry 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 2: In 2019, FPC further organized the basic AI course, the practical AI course, practical AI training courses and AI project seminars, as well as external courses for managerial officers and employees conducted by the Taiwan AI Academy; thus, there was an increase in overall training hours.
Note 3: Owing to the COVID-19 pandemic, FPC reduced the number of classes and batches for various training programs, such as external training, the basic AI course, and practical AI training courses. FPC also cut the number of classes for basic training, resulting in lower overall training hours compared to 2019.

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. However, due to the decrease in number of training batches or postponement of training caused by the COVID-19 pandemic, the number of managerial training hours totaled 3,858 in 2020.

Statistics on Training for Management Levels 1 and 2 Officers at FPC in 2020

Item	Batch	Hours per Batch	Number of Participants	Training Hours
Management Level 1	8	24	37	888
Management Level 2	11	30	99	2,970

Note: 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.

4.2.2 Employee Communication and Care

FPC announces the status of our operations on a regular basis in accordance with the relevant laws and regulations, so that employees can keep track of our development. In case of special needs (e.g., significant operational changes), employees will be informed in advance within the prescribed time limit, so as to enhance labor-management communication. For more information, please refer to FPC's official website.

FPC Website: Monthly Sales Revenue

FPC Website: Financial Statements

To establish harmonious labor-management relations, FPC provides multiple channels of communication and encourages employees to come up with innovative ideas. Employees can make recommendations for better living conditions to FPC through labor unions, welfare committees, and labor-management meetings.

Number of labor-management meetings held in 2020
22

Number of participants in 2020
916

Furthermore, FPC has appointed counselors for newly recruited reserve supervisors or personnel who are under special conditions to regularly provide concerns and help them overcome work and life-related difficulties in order to allow them progress with stability and reduce the rate of staff turnover.

A total of 4,783 employees at FPC have joined labor unions as of 2020. Even if regular employees do not join a labor union, their rights such as salary adjustments and year-end bonuses are protected by the agreement signed between FPC and the employees. For more information, please refer to our CSR website.

CSR Website: Benefits and Care

Number of labor unions as of the end of 2020
6

Percentage of employees joining labor unions in 2020
75.8

Human Rights Management

FPC never uses child labor or illegal labor. In 2020, 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 human rights policy in August 2019. 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 CSR website.

Number of human rights training sessions held in 2020
20

CSR Website: Human Rights Policy

Training Courses Conducted at FPC's Complexes in 2020

Complex	Number of Sessions	Theme	Hours	Number of Participants	Total Hours
Mailiao	16	Protection of Labor Rights During Occupational Accidents	4	1,631	6,524
Hsinkang	1	Overview of the Labor Incident Act and Case Studies on Traffic Safety	8	35	280
Linyuan	3	Labor Rights and Health Seminar	8	533	4,264
Total	20		-	2,199	11,068

Teacher Chang Foundation

With a view to improving the effectiveness of our counselor program, FPC collaborated with the Teacher Chang Foundation by having Teacher Chang to provide regular consultations to employees at all complexes in 2020. Moreover, FPC set up an electronic consultation reservation platform so that employees can make reservations for one-on-one consultations according to their needs. This initiative not only enhances care for employees' mental health, but also protects personal privacy. Consultations were completed with 103 people in 2020, earning great reviews in the process.

Number of people receiving consultation in 2020	Satisfaction-Recognition for such a form of service provided by FPC (out of 5 points)	Satisfaction-Improvement on problems after consultation (out of 10 points)
103	4.85	7.34

To enhance the ability of supervisors at all levels to actively care for employee and identify potential problems that employees may face through daily interactions with employees in the workplace or observations of employees' work and life behavior, FPC specially invited the Teacher Chang Foundation to conduct the "Supervisor Care Sensitivity Training" course. In 2020, FPC organized 17 sessions of "Supervisor Care Sensitivity Training," which were attended by a total of 716 participants with a satisfaction rate of 98%. In the near future, FPC will add the introduction of symptoms of physical and mental illnesses such as depression to the course, so as to enhance supervisors' sensitivity to employee care.

Number of training batches in 2020	Number of participants in 2020	Course satisfaction
17	716	98 %

5 Builders of a Safe and Healthy Workplace

5.1 Workplace Safety Management

5.2 Supply Chain Management

5.3 Response to Material Industrial Safety Issues

5.1 Workplace Safety Management

103-2 103-3 403-1 403-2 403-3
403-4 403-5 403-6 403-7

Material Topic: Occupational Health and Safety

Management Approach

- **Goals and commitments:** Create a people-oriented safe culture that ensure workers' safety and health, and build a safe and hygienic workplace to reduce the frequency-severity indicator by 20% every year, with zero disaster as the ultimate goal
- **Policies and action plans:**
  1. Building safe equipment and facilities
  2. Obtain the certification of occupational health and safety management system at each complex
  3. Implement standard operating procedures (SOP) and safety operation standards
  4. Promote occupational safety and health management regulations and plans, and enhance the management (including risk assessment) of process safety events (PSE) and near-misses
  5. Promote chemical exposure assessment and health classification management among employees
- **Resources:**
  1. SOP and safety operation standards on the cloud platform
  2. Risk management platform
  3. The Chemical Control Banding platform provided by the Occupational Safety and Health Administration, Ministry of Labor
- **Grievance mechanism:** Any occupational safety and health-related problem can be reported to the Safety and Health Department at each complex via phone (Phone No.: 05-6816523).
- **Performance evaluation methods and results:**
  1. Review the implementation of KPIs for process safety management every six months, and examine and assess the achievement of goals and the applicability of indicators each year
  2. Evaluate industrial safety and environmental protection performance at various departments on a regular basis , where departments with outstanding performance are rewarded with bonuses, while the three departments with the worst performance, after three consecutive evaluations, are required to report their improvement measures to the Business Management Committee meeting and undergo training arranged for them as needed
- **Specific actions:** Incorporate the ISO 45001 standard, commission third-party verification bodies to carry out external audits regularly each year, and perform certification renewal every three years
- **Unit in charge:** Safety and Health Department, and all employees

5.1.1 Occupational Health and Safety

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FPC has set up a dedicated organization tasked with different responsibilities for occupational health and safety management, including setting up safety, health, and environment targets and rules, process safety management, and care for employee health. Moreover, an occupational health and safety management system is also in place in accordance with the law to implement occupational health and safety management using a risk-based approach under the PDCA model.

In addition, FPC integrates AI into occupational health and safety management and keeps track of its performance based on the safety and health performance indicators in hopes of shaping a safety culture, thereby building the safest work environment.

(1) Hazard Identification and Risk Assessment

FPC uses organized or systematic analysis techniques to conduct workplace hazard and risk assessments and takes preventive measures accordingly to prevent any unsafe environment or behavior during operation. In the event that employees identify any potential hazards and risks in the workplace, they can notify their supervisors and are encouraged to report near-misses by filling out the "Near-Miss Report Form" for further action by the investigation team, which then carries out investigations before recording the incidents or conditions they identify and inputting them into the computer for filing and control. In addition, rewards are issued to encourage employees to actively identify potential hazards and make improvements. A total of 319 near-misses were reported at FPC in 2020.

Risk Matrix

Severity Level	Likelihood (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: Extremely unlikely
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: Nearly no risk
Level 5: Ignorable	Level 3: Moderate risk	Level 4: Low risk	Level 4: Low risk	Level 5: Nearly no risk	Level 5: Nearly no risk

Consequence

Personnel safety
- Severity Level **Level 1**
- Likelihood **Level 5**
- Risk Level **Level 3: Moderate risk**

Public safety/ environmental impact
- Severity Level **Level 1**
- Likelihood **Level 5**
- Risk Level **Level 3: Moderate risk**

Equipment/ facility loss
- Severity Level **Level 2**
- Likelihood **Level 5**
- Risk Level **Level 4: Low risk**

Discontinued days
- Severity Level **Level 1**
- Likelihood **Level 5**
- Risk Level **Level 3: Moderate risk**

Hazard Identification and Risk Assessment Process

Help identify
- process weaknesses
- Safe operations
- Causes of accidents

(2) Occupational Health and Safety Management

To enhance the integrity of large-scale flammable liquid storage tanks with a volume of over 1,000 cubic meters, FPC proactively performs inspections on tank walls, base plates, and weld runs by opening all storage tanks, in order to prevent leaks arising from anomalies related to industrial safety and environmental protection and ensure the safety of storage tanks.

On the other hand, FPC continues to improve the management of process interlock safety measures, where deputy complex managers are tasked to keep the passwords for interlocks, so as to prevent employees from opening the interlocks without risk assessment and carrying out production and operations without protection.

In addition, elevated fire turrets were installed at each complex (including 76 sets at present and 119 sets to be installed) to effectively extinguish fire caused by gas explosion or explosion in high places. The regulations governing cases that require emergency shutdown are also in place. For instance, if a leak cannot be effectively turned off, isolated, or stopped immediately, emergency shutdown is required.

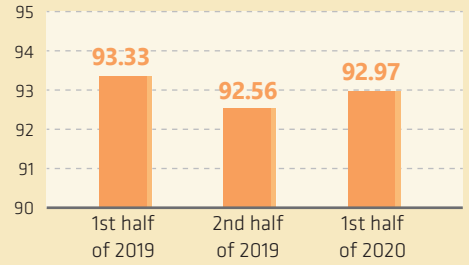
(3) Safety and Health Performance Indicators

To monitor and measure the safety and health performance of each department, FPC requires each department to report 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 and diagnose the safety and health management weaknesses for improvement.

Passive Indicators	Proactive Indicators
Accident Statistics	Number of internal safety and health training courses (including emergency response drills)
Audit Statistics (safety, health, and environment)	Number of improvements on anomalies (including safety and health improvement proposals)
-	Internal safety and health audits
-	Risk assessment
-	Hazard prevention

1. The performance of each department in the first half of 2020 averaged 92.97 points, where the scores for "accident statistics" and "audit statistics" were lower than those in the same period last year. Continuous improvement will be made in the future.
2. In 2020, FPC recorded a total of four process safety events (PSE) and a process safety event rate (PSER) of 0.06 (where PSER = Total number of events / Total working hours) within a total of 12,447,128 working hours.

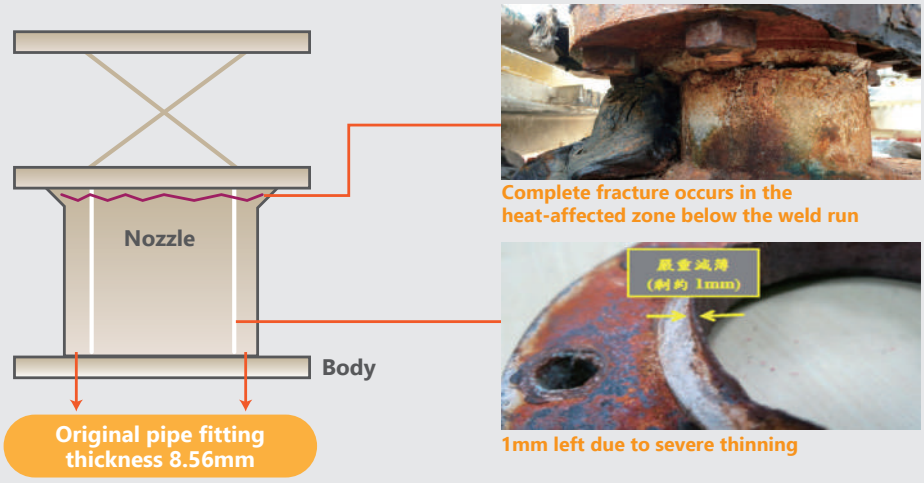
Average Score of Safety and Health Performance Indicators



Note: Performance results in the second half of 2020 are scheduled to be announced in July 2021.

Description of PSE

When using a fixture to stop leaks from liquid caustic soda tanks, complete fracture occurs due to the position of the forced exerted by the fixture (the heat-affected zone below the weld run of the nozzle) that causes VCM leak. According to metallographic analysis, it is mainly resulted from uniform corrosion and severe thinning (about 1mm left) inside the pipe fitting, which in turn causes inadequate bearing capacity of the pipe wall, thus leading to a pipe break.



Response Measures

- Inspection and assessment should be carried out on thickness measurement in the front, middle, and rear sections of the pipeline using the upper fixture to determine whether the pipeline is strong enough.

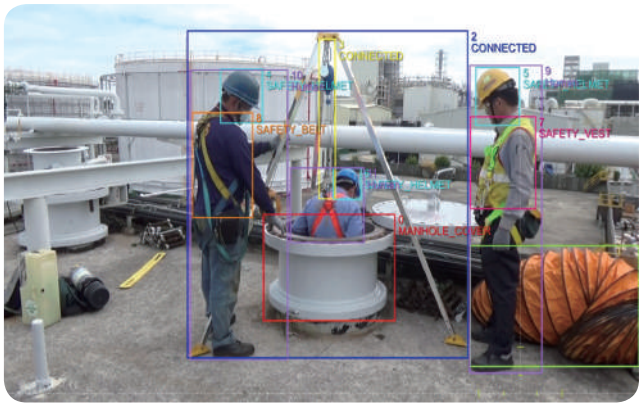
- Leakage stoppage assessment should be included in the SOP for shutdown due to leakage. If the corrosion mechanism is unknown or the corrosion depth exceeds 60% or more, shutdown should be implemented for repair.

Item No.	Matters concerning the prohibition of use of leakage-stopping fixtures on pipelines and equipment (Clause 1.2 in the Leakage Stoppage Guidelines for Company Pipelines and Equipment)
1	Pipelines and equipment for toxic substances with Class I toxicity (e.g., hydrofluoric acid)
2	Leakage areas caused by cracks that grow due to vibration or over time, such as stress corrosion or stress concentration areas
3	Uniform corrosion and thinning, where the average thickness has been lower than 60% of the nominal thickness.
4	Pure oxygen fluids.

Year	Total Working Hours	Number of Process Safety Events	Process Safety Event Rate (PSER)	Process Safety Incident Severity Rate (PSISR)
2020	12,447,128	4	0.064	0.096
2019	11,070,532	5	0.090	0.162
2018	10,541,337	1	0.019	0.056

(4) Application of AI in Industrial Safety Management

[Intelligent Supervision] In collaboration with professional AI vendors, FPC's Mailiao VCM Plant has adopted image recognition technology, which involves the use of images as control standards for confined space operations in manholes to confirm that on-site safety protection measures, rescue equipment, and personal protective equipment are complete, and that safety supervisors and industrial safety personnel are in place. In the second stage, FPC plans to incorporate personnel behavior analysis and standard operating procedures, after collecting large quantities of operation-related image data, to further confirm whether the personnel are carrying out operations in accordance with the relevant rules and regulations, thereby achieving the goal of intelligent supervision.



Imaging recognition system for confined space operations in manholes

[Smart Recognition] As far as important equipment and pipelines are concerned, each complex designates dedicated personnel to carry out inspections on schedule; however, inspections on certain pipelines are restricted by environmental conditions, such as inaccessible locations and inadequate space between pipe flanges, which may affect operational safety and efficiency. As human factors such as long-term inspections or work experience are prone to misjudgments, FPC, along with professional AI vendors, has developed a computer vision-based recognition system for difficult-to-inspect pipelines and insulation materials (object recognition models to identify signs such as pipeline corrosion, damage to insulation materials, and even leaks), which is equipped with rotatable smart cameras, using AI technology in hopes of realizing full-time monitoring, real-time discovery, and complex-wide coverage.

Image recognition of defects in process pipe flanges and pipelines

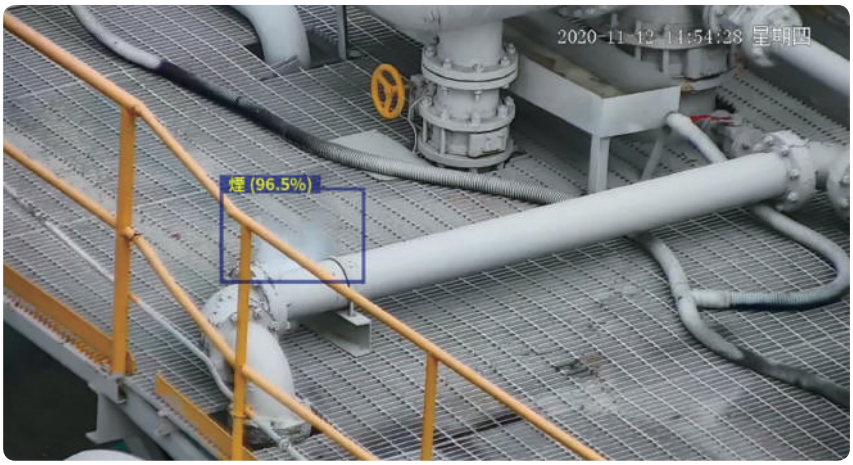


Image detection and recognition of pipeline leaks (simulation)

(5) Care for Employee Health

- Building a Sound Health Examination and Cloud System

To take care of employees' health, FPC appoints Chang Gung Memorial Hospital to conduct on-site health examination for employees at various complexes every year. FPC also includes four types of tests, namely "α-fetoprotein test," "carcinoembryonic antigen test," "oral cancer screening," and "high-density lipoprotein cholesterol test," which is superior to that required by the law.

Percentage of employees completing health examinations at complexes
98.9 %

With the intention of encouraging employees to perform health management and improving their physical and mental health, FPC has also set up a cloud health management system named "FPC Health Cloud," which comes in the form of an app and the i-Health Instrument to effectively manage and track employees' health examination results and health improvement status.

- Strengthening Health Promotion and Awareness through Seminars

In view of the fact that metabolic syndrome accounts for most of the abnormal health conditions facing employees in recent years, FPC not only has nurses stationed at complexes issue letter of care for metabolic syndrome and notice of follow-up examination to employees according to their health examination status, but also promotes weight loss and Tabata exercises, raises awareness of healthy diet and enhances health education on chronic diseases, and invites doctors from Chang Gung Memorial Hospital, the Mailiao Public Health Center, and occupational doctors to give health talks at FPC.

- Establishing a Female Health Protection Program

To ensure that female employees can work at FPC without worries before getting pregnant, during pregnancy or even one year after giving birth, FPC organizes health care-related seminars each year to provide health services and spread health-related knowledge while assisting female employees in achieving work-life balance.


Female health care seminar in July 2020

Female health care seminar

Number of sessions held in 2020
2

Number of participants in 2020
135


Training for AED administrators in November 2020

Training for AED administrators

Number of sessions held in 2020
14

Number of participants in 2020
414

In 2020, the disabling injury frequency rate among employees was 0.32 (0.35 for males and 0 for females) and the disabling injury severity rate was 494 (542 for males and 0 for females); while no cases of occupational diseases were recorded at FPC. One major occupation disaster occurred among employees at Renwu Complex in 2020, resulting in relatively high lost work time and high values of various industrial safety indicators (For more information, please refer to the section "5.3 Response to Material Industrial Safety Issues"). Occupational injuries that occurred over the years were mainly bruises (knocks), which were resulted from lack of safety awareness or SOP violations among employees.

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. Employee injury indicators in 2020 are as follows:

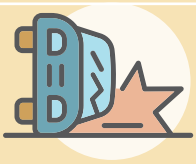
Employee Injury Indicators at FPC in 2020

Item \ Complex	Mailiao		Renwu		Hsinkang		Linyuan		Tungshan		4th Complex		Company-wide	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Disabling injury frequency rate (FR)	0	0	1.13	0	0	0	0	0	0	0	0	0	0.35	0
Disabling injury severity rate (SR)	0	0	1,726	0	0	0	0	0	0	0	0	0	542	0
Frequency-severity indicator (FSI)	0	0	1.4	0	0	0	0	0	0	0	0	0	0.44	0
Lost work time	0	0	6,105	0	0	0	0	0	0	0	0	0	14	0
Absentee rate (%)	0.32	0.16	0.21	0.48	0.47	0.01	0.17	0.23	0.59	0	0.22	0	0.28	0.29
Working hours.	4,778,968	360,032	3,536,872	405,600	394,600	25,416	1,582,408	69,792	260,464	14,008	134,120	3,936	11,349,048	1,098,080

Note 1: Statistics on employee injuries and fatalities cover regular employees and temporary employees.
Note 2: FR = (Total number of injuries × 10^6) / Total working hours.
Note 3: SR = (Total lost work time x 10^6) / Total working hours.
Note 4: FSI = $\sqrt{(FR \times SR)} / 1000$.
Note 5: The statistics are mainly based on the important statistical indicators of disabling injuries announced by the Ministry of Labor and GRI Standards, including disabling injury frequency rate (FR), disabling injury severity rate (SR), and absentee rate (AR) (excluding traffic accidents outside the complexes).
Note 6: AR (%) = Lost work time due to absence / (Scheduled working days × Number of employees) × 100% (including sick leave, official leave, and injury leave only).

Transportation Accident

Number of transportation accidents in 2020 1



Formosa Plastics Corporation Response and handling measures

1. On November 3, a tank truck from Jui Hai Transportation Co., Ltd., FPC's transport vendor, which was on its way back to the transportation company after being filled with 18 tons of methyl acrylate (MA) from Linyuan AE Plant, overturned when turning left into Taiwan County Highway 188 from Section 2, Heti Road along Taiwan Highway 29 in Daliao District.
2. FPC immediately sent our personnel to the accident scene and discovered slight leaks from the safety (breathing) valve and manhole of the tank truck. After tightening the valve and closing the hole to stop the leaks, the tank truck was towed back to Linyuan AE Plant for unloading.
3. On the next day (November 4), the Safety and Health Department immediately gathered the relevant units to conduct an investigation and visit the accident scene to investigate the cause of the accident. Four improvement measures were proposed, requiring improvements to be made on transportation vehicles.
   (1) A high liquid level of over 75% is required for tank truck transportation in the future.
   (2) All transportation vehicles should be equipped with lifting pulleys and vehicle straps.
   (3) When transporting materials that may have a strong peculiar odor, air freshener should be made available and sprayed at the accident scene, or the accident scene should be covered with canvas.
   (4) Drivers are required to travel at a speed of less than 30 km/h when making a turn, and stop the vehicle first before driving when making a 90-degree turn at a junction without traffic lights.

5.1.2 Emergency Response Mechanism at Complexes 103-2 103-3

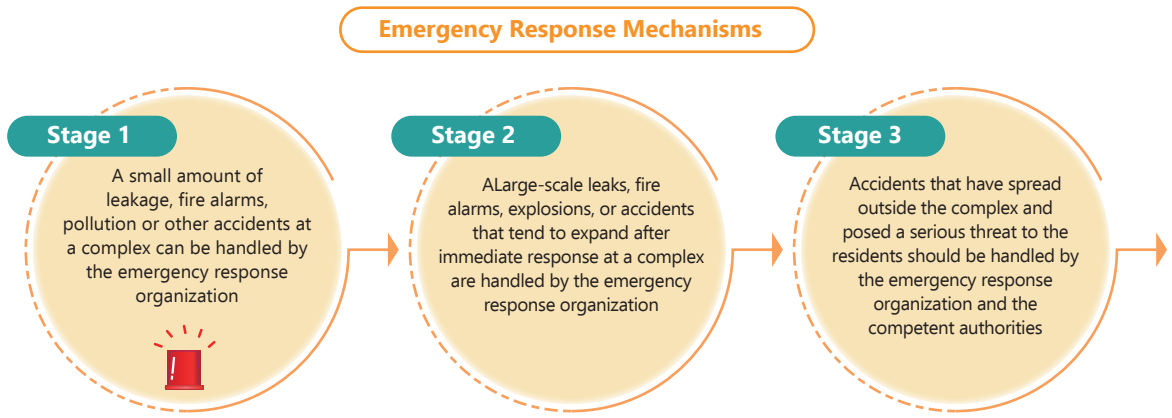
Material Topic: Emergency Response Mechanism at Complexes

Management Approach

- **Goals and commitments:** Achieve the goal of zero accident at complexes within five years, where, in the event of an abnormal event, every effort should be made to reduce its impact externally, so as to protect the health and safety of stakeholders
- **Policies and action plans:**
  1. Enhance the management of emergency response and personnel training at complexes (departments)
  2. Implement emergency response drills and training to cope with accidents promptly
  3. Assess emergency response measures in the early stage of accidents and revise emergency rescue regulations
  4. Assess fire safety and rescue capacity, and add fire safety equipment every year
  5. Organize joint exercises with the competent authorities on a regular basis
- **Resources:** Details on the name and quantity of emergency response equipment that can be deployed by each complex are recorded and stored in FPC's enterprise resource planning (ERP) system, so that the emergency commander at each complex can coordinate and utilize such information when necessary.
- **Grievance mechanism:** Each complex regularly convenes Occupational Safety and Health Committee meetings each quarter. Proposal on matters involving emergency response that require handling and coordination can be raised in these meetings, and the head of the President's Office at Complex (i.e. the chairperson of the committee) will make decisions on the relevant solutions in these meetings. Each unit can personally notify the Safety and Health Department of other aperiodic cases for further action.
- **Performance evaluation methods and results:** Each complex regularly organizes emergency response drills every six months. The Safety and Health Center and the Manager's Office of various divisions at each complex will immediately convene a meeting to review related deficiencies after each drill to revise emergency response regulations and establish SOP.
- **Specific actions:** Conduct joint emergency response drills in cooperation with local competent authorities to get familiar with each other's duties and responsibilities
- **Unit in charge:** The Environment Safety and Health Department reviews the emergency response plans and drills of each complex on a regular basis and helps set up the pre-plan of standard procedures for disaster relief.

(1) Emergency Response Mechanisms

FPC divides emergency response mechanisms into three stages. In the event of an accident, it will be reported immediately, followed by the emergency response mechanisms. 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.



Incident Reporting Procedures

Telephone

- Notify the plant manager immediately and launch the emergency response organization
- Notify the relevant competent authorities, including 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)

- Report the occurrence and handling of the accident via the office automation system (OA) within one hour and follow up the accident via the computer system until the investigation is completed and the case is closed

(2) Drills at Complexes

Each complex arranges fire and rescue emergency response drills in different scenarios every six months to enhance its fire safety and disaster relief capabilities. Each complex also carries out overall and no-warning test drills on EPA's controlled chemicals (including complexes and transportation). The "2020 Kaohsiung City Toxic Chemical Vinyl Chloride Tank Truck Disaster Prevention and Rescue Drill" was held in cooperation with the Kaohsiung City Government.

2020 Number of hazardous substance prevention and emergency response drills

65 Number of participants **1,028**

2020 Number of fire and rescue emergency response drills in 2020

94 Number of participants **1,001**

Hydrogen Leak-driven Fire Drill at C4 Plant Process Area, Mailiao Complex on July 27

Gas Leak-driven Fire Drill at Linyuan VCM Plant Process Area on April 29

Scenes during the "2020 Kaohsiung City Toxic Chemical Vinyl Chloride Tank Truck Disaster Prevention and Rescue Drill"

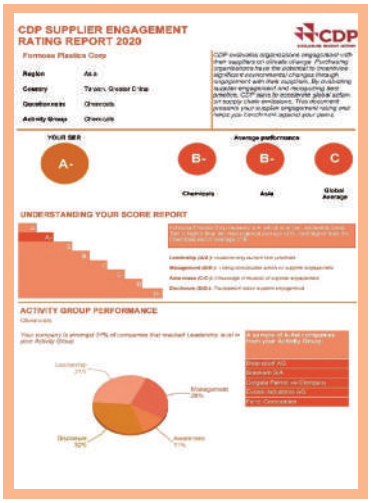
5.2 Supply Chain Management

103-2 103-3

Material Topic: Industrial and Public Safety

Management Approach

- **Goals and commitments:** Comply with the Occupational Safety and Health Act, domestic laws and regulations relating to fire services and hazardous goods in plants, and related regulations on process safety management; and take responsibility for hazardous workplace management, in order to achieve the goal of zero disasters and minimize business risks
- **Policies and action plans:**
  1. Pay attention to hazard prevention, implement accident investigation and analysis, and raise awareness of such accidents to prevent similar accidents in the future
  2. Strengthen the management of process pipeline and equipment integrity
  3. Promote process safety management (PSM), process safety assessment, management of change (MOC), and pre-trip inspection; and implement SOP to enhance risk management and reduce the likelihood of hazard occurrence
  4. Implement working environment and employee health management to reduce workplace risks and protect employees' safety and health
  5. Actively engage in innovation and continuous improvement in the spirit of "Diligence, Perseverance, Frugality and Trustworthiness, and To Aim at the Sovereign Good," so as to ensure perpetual business operation
- **Resources:**
  1. Each complex has appointed process safety management personnel to guide and supervise the implementation of risk management and improvement among all employees.
  2. Each complex has designated pipeline inspectors to verify the integrity of process pipelines each quarter and formulate improvement plans.
  3. Safety and health expenses are paid based on actual needs, with no upper limit imposed on such expenses.
- **Grievance mechanism:** Anyone is welcomed to contact FPC's offices and complexes via phone or leave a comment on FPC's official website if there are any questions. FPC will assign dedicated unit or personnel to answer them according to the type of question raised.
- **Performance evaluation methods and results:**
  1. From 2018 to 2020, the Industrial Development Bureau, Ministry of Economic Affairs invited various competent authorities, experts, and scholars to conduct 14 overall inspections at FPC's Mailiao Complex without issuing any fine for anomalies and offer 513 suggestions for improvement on process safety, all of which were adopted and implemented by FPC.
  2. FPC has set up an inspection team comprising safety and health, production, and maintenance units, which conducted nine overall inspections at Renwu and Linyuan Complexes and identified 1,188 items for improvement, where improvement has been made on all the aforesaid items.
  3. FPC was rated A- (Leadership) by CDP in supply chain projects, which was better than the international average, B- (Management).



2020 Supply Chain Project Score: A-

- **Specific actions:**
  1. Schedule regular reviews and audits of process safety assessments and the implementation of SOP every three years
  2. Implement full participation in SOP among employees and provide guidance to employees in all shifts, so as to ensure that all on-site operators comply with SOP
- **Unit in charge:** Safety and Health Department

5.2.1 Safety and Health Management System 403-8

To provide a healthy and safe environment for workers at all complexes, FPC has set up an occupational safety and health management system. In 2020, all our complexes successfully obtained the OHSAS 18001 and CNS 45001 Occupational Safety and Health Management System certifications. In response to the international trend where ISO 18001 was replaced with ISO 45001, FPC also passed the ISO 45001 Occupational Safety and Health Management System certification process and successfully obtained the certification in March 2021.

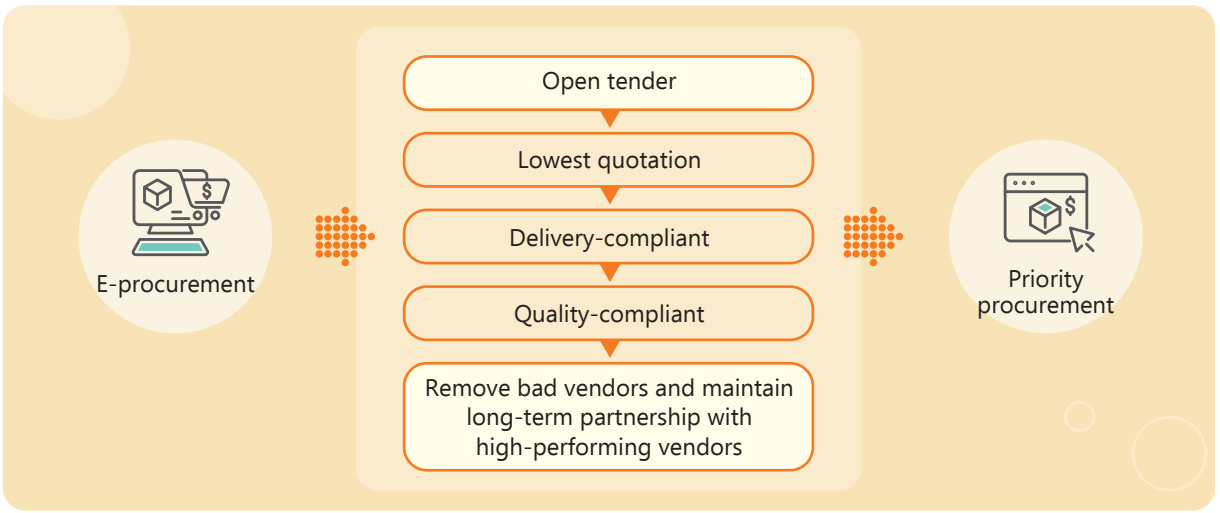
In addition to building an occupational safety and health management system, each department at FPC formulates an annual occupational health and safety management plan, along with the safety and health management system, and implements health and safety management based on the documented procedures and a PDCA model.

Mailiao Complex
ISO 45001:2018

Linyuan Complex
CNS 45001

Renwu Complex
ISO 45001:2018

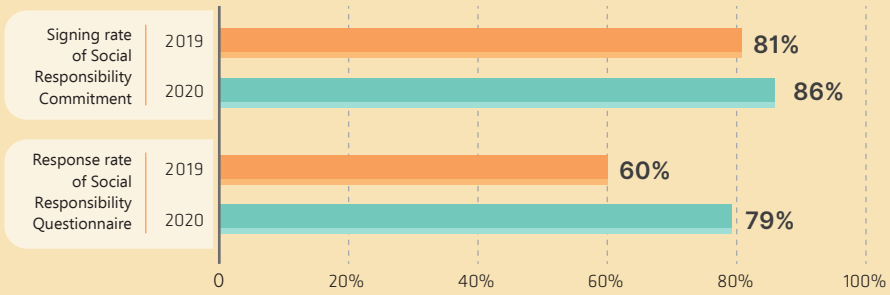
5.2.2 Supplier and Contractor Management 102-9 403-9 403-10



(1) Supplier/Contractor Corporate Social Responsibility

Upholding the spirit of sustainable development and the principle of fair trade, FPC requires that all suppliers and contractors should meet the requirements for environmental protection, industrial safety, and human rights. Since October 2019, FPC has added the Supplier/Contractor Social Responsibility Commitment and the Supplier/Contractor Social Responsibility Questionnaire, requesting suppliers and contractors to sign and respond to the aforesaid commitment and questionnaire upon signing in to the Formosa Technology E-Market Place or ordering.

Signing/Response Rate of Social Responsibility Commitment/Questionnaire



(2) Supplier/Contractor Evaluation and Category Management

FPC reviews the responses from suppliers and contractors and arranges evaluations as needed to ensure that all suppliers and contractors fulfill their corporate social responsibilities as required by FPC.

FPC has also established the incentive system for contractors. 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' independent industrial safety management and to raise their safety awareness.

For more information on supplier/contractor evaluation and grading management, please refer to our CSR website.

CSR Website: Supplier & Contractor Management

Number of award-winning contractors in 2020
79

Amount of bonuses distributed in 2020
NT$**2.14** million

Distribution of bonuses to contractors with outstanding performance on January 21, 2021.

(3) Supplier/Contractor Injury Indicators

To improve the workplace safety of FPC's supply chain, FPC also requires that all suppliers and contractors should report relevant data on occupational injuries. In 2020, Mailiao Complex reported one major occupational accident among contractors, resulting in relatively high lost work time and high values of various industrial safety indicators (For more information, please refer to the section "5.3 Response to Material Industrial Safety Issues"). The occupational injuries that occurred over the years were mainly pinches, scalds, and splashes of hazardous materials. Suppliers and contractors have been required 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 2020 are described as follows:

Supplier/Contractor Injury Indicators in 2020

Total working hours	Disabling frequency rate (FR)	Disabling severity rate (SR)	Frequency-severity indicator (FSI)	Lost work time
8,250,888	0.61	744	0.67	6,141

Note 1: FR = (Total number of injuries × 10^6) / Total working hours.
Note 2: SR = (Total lost work time x 10^6) / Total working hours.
Note 3: FSI = $\sqrt{(FR \times SR) / 1000}$.
Note 4: The statistics are mainly based on the important statistical indicators of disabling injuries announced by the Ministry of Labor and GRI Standards, including disabling injury frequency rate (FR) and disabling injury severity rate (SR) (excluding traffic accidents outside the complexes).

5.2.3 Procurement Policy

102-12 204-1

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.

FPC was awarded the Green Procurement Outstanding Enterprise by the Department of Environmental Protection, Taipei City Government on December 17, 2020.

Procurement Performance in 2020

Percentage of e-centralized delivery
99.86%

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
86.84%

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
77%

The procurement and outsourcing policies mainly revolve around local procurement and outsourcing. 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$124.02 million

FPC has actively promoted green procurement and entered into a commitment to green procurement with Taipei City Government and Kaohsiung City Government. FPC primarily purchases green products such as personal computers, plastic pallets, and carbon cartridges.

5.3 Response to Material Industrial Safety Issues

102-44

Overall Inspection Conducted by the Industrial Development Bureau, Ministry of Economic Affairs at Mailiao Complex

The Industrial Development Bureau, Ministry of Economic Affairs initiated a three-year overall inspection program from 2018 to 2020. In this program, the Industrial Development Bureau invited the competent authorities, experts, and scholars to form a joint inspection team, which carried out overall inspections on 55 plants and departments at Mailiao Complex and offered 939 recommendations and 3,169 items for FPC's reference to implement optimization. Having promised to adopt all the items raised by the inspection team, FPC organized senior executive seminars and invited the overall inspection committee members and the competent authorities for discussions to confirm that all indicators have met the three-year targets set initially.

In the future, FPC will continue to adopt and carry out the overall inspection approach implemented by the Industrial Development Bureau every three years to re-establish baselines and formulate targets. Moreover, FPC will regularly review the achievement of targets at all complexes and include 37 baseline indicators into computer control. FPC will also commission third-party verification bodies to carry out verification.

Description of Major Occupational Disasters in 2020

Two major occupational disasters took place at FPC in 2020. Details on these events are described as follows:

1. In September 2020, employees of our contractor opened the manhole of a storage tank without permission, thus resulting in a fall accident. To prevent such accidents in the future, FPC has required all contractors to carry out examination and confirmation according to the operating items listed in the work safety permit before entering a storage tank, and to put on personal protective equipment such as safety belts and ensure that all emergency rescue equipment are readily available under the supervision of FPC's safety supervisors on site before carrying out any operations.
2. In March 2020, an employee suffered a pinch injury after going inside a packaging machine to pick up packaging bags without turning off the machine. At that time, the automated packaging machine experienced an anomaly, where packaging bags were falling off the machine, when the employee was carrying out packaging operations. With a view to enhancing safety measures, FPC has strengthened employee training, conducted simulation exercises on machinery and equipment troubleshooting, and added a second safety interlock device, in order to prevent such tragedies in the future.

6 Builders of Shared Development

6.1 Local Community Development and Investment

6.2 Community Engagement

6.3 Response to Local Community Issues

6.1 Local Community Development and Investment

203-1

6.1.1 Community Relations

FPC is willing to assist neighboring groups and organizations around our complexes to organize various types of local activities or social welfare activities. Owing to the COVID-19 pandemic in 2020, FPC suspended large-scale community activities in line with government policy on preventing gathering, but remained committed to giving back to the community.

(1) Participating in Local Events and Giving Back to the Community

The green architecture in Shejiao Village, Dashu District won the Yuan Ye Award

Built during the Japanese Occupation, the teachers' dormitory of Dashu Elementary School located in Shejiao Village, Dashu District, Kaohsiung City worn out and collapsed for years without repair, affecting the safety of teachers, students, and parents. The Shejiao Community Development Association initiated a reconstruction project, which gathered the strength of the Urban Development Bureau of the Kaohsiung City Government, community volunteers, and students, as well as sponsorship from FPC, to restore the Japanese-style courtyard landscape in this location, which was given the name "Green New Shejiao." This architecture won the 2020 Yuan Ye Award in the community cultural landscape construction category and was honored with the Gold Award by the Kaohsiung City Government.

On May 30, 2020, the Dashu District Office organized the 2020 Kaohsiung Pineapple and Litchi Festival at the Old Railway Bridge Wetland Park in Dashu District, and the organizer offered pineapples and litchis for charity auction. The fruits were awarded to FPC for NT$66,000 and the proceeds went to the Dashu District Elderly Food Delivery Love Fund, while all the fruits were donated to the elderly living in Dashu District for use after having their healthy lunch meal. Furthermore, FPC also bought 20 boxes of litchis and donated them to the Swan Garden under the Children Are Us Foundation in conjunction with litchi donation to remote areas, so that the children there can enjoy the sweetness of litchis.

2020 Kaohsiung Pineapple and Litchi Festival

Purchase of bananas in October 2020

Affected by the COVID-19 pandemic, Yunlin County suffered a decline in export sales and faced an oversupply of its bananas, thus causing a significant drop in banana prices. With a view to helping local farmers and responding to the call of the Yunlin County Government, FPC bought 10,500 kilograms of bananas and distributed them to employees and contractors at our complexes when they got off work, in hopes of helping the farmers tide over these difficult times together.

For more local events, please refer to the "Latest News in FPC" on our CSR website.

CSR Website: Latest News in FPC

Amount of aid provided in 2020
NT$12.12 million

Number of low-income households benefiting from FPC's aid
4,880

(2) Caring for Vulnerable Groups and Spreading Love During Major Festivals

With the intention of enabling low-income households to enjoy the festivities during major festivals, FPC has been distributing red packets and gifts to low-income households during major festivals each year since 2011, in hopes of spreading our love and care to each vulnerable group.

Spreading love to Dashu District, Kaohsiung City in January 2020

Spreading love to Baozhong Township, Yunlin County in December 2020

6.1.2 Social Investment 201-1 203-1

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, charities, temple activities and more. For more information on FPG's social investments and expenditures, please visit FPG's official website.

Investment in Community Relations in 2020
NT$180 million

FPG Website

6.2 Community Engagement

102-44 201-1 203-1

6.2.1 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 reducing brain drain. The situation of industry-academia collaboration in 2020 are described below.

Industry-Academia Collaboration in 2020

Category	School	Number of Students	Period
Industry-academia collaboration	Ming Chi University of Technology	94	One year
	Special Renda Class for the Petrochemical Industry in Kaohsiung	30	One year
Education cooperation	Night School, National Siluo Agricultural Industrial High School	7	One year
Total	-	131	-

6.2.2 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

Number of Formosa LOHAS Circle activities held in 2020
67

Total number of participants
88,890

Total investment amount (Note)
NT$5.62 million

Note: The cost of Formosa LOHAS Circle is shared by FPC, NPC, FCFC, and FPCC equally.

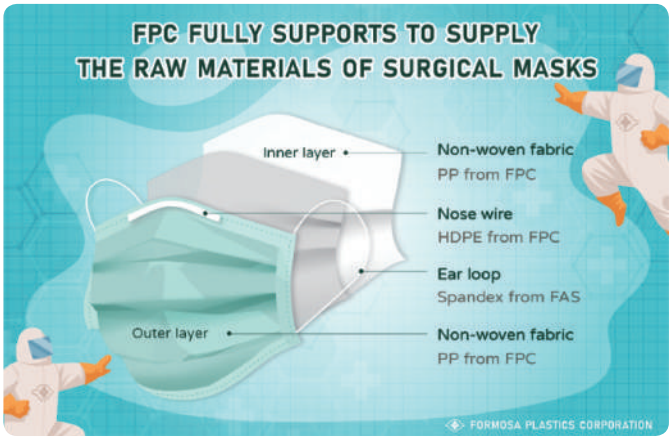
6.3 Response to Local Community Issues

102-44

Social Engagement - Combating the COVID-19 Pandemic

COVID-19 poses a significant threat to human health and has an adverse impact on the global economy. Practicing social distancing, implementing good hand hygiene practice, and wearing face mask have become the basic requirements for epidemic prevention. As a COVID-19 virus, whose diameter is approximately 120 nm, is extremely small, natural fiber fabrics (e.g., cotton, linen, wool, and silk) are unable to stop this virus effectively. Therefore, medical face masks must be made using synthetic petrochemical fiber, where ear loops and nose wires are made of elastic fiber and HDPE, respectively, while the most important part of face mask, i.e. the mask body, is made of non-woven PP fabric.

To assist in epidemic prevention, FPC prioritizes efforts to supply raw materials required for manufacturing epidemic prevention supplies in Taiwan, including PVC blood transfusion bags, drip bags, medical gloves, PP drip bottles, syringes, and medicine bottles required by medical institutions, as well as raw materials required for manufacturing personal protective equipment and medical face masks required for the COVID-19 outbreak, including non-woven PP fabric, eco-friendly and recyclable HDPE for nose wires, elastic fiber for ear loops, and even bleach (sodium hypochlorite) for disinfection and HDPE used in plastic cans/containers. Supply of raw materials for epidemic prevention supplies at FPC in 2020 is listed as follows:



Epidemic Prevention Products Supplied by FPC	For Epidemic Prevention	Sales Volume in 2020 (Unit: tons)	
		Total Sales Including Domestic and Export Sales	Amount Made Available for Manufacturing Epidemic Prevention Supplies
Emulsified powder	Medical gloves	44,939	8.98 billion pairs (Note 1)
Sodium hypochlorite (10%)	Bleach	735	147,000 tons of bleach (Note 2)
HDPE	Nose wire	1,531	7.65 billion pieces of medical face mask (Note 3)
PP (1352F)	Non-woven fabric for mask (spunbond layer)	19,307	4.82 billion pieces of medical face mask (Note 3)
PP (1990)	Non-woven fabric for mask (meltblown layer)	5,340	2.13 billion pieces of medical face mask (Note 3)
PP (1990R)	Non-woven fabric for mask (meltblown layer)	33	10 million pieces of medical face mask (Note 3)
Spandex	Ear loops	36	900 million pieces of medical face mask (Note 3)
HDPE	100 ml bottle or plastic container for filling bleach	9,387	300 million pieces (Note 4)
Total		81,308	

Note 1: 1 ton of emulsified powder can be used to produce 200,000 pairs of medical gloves.

Note 2: Bleach and disinfectant made of sodium thiosulfate (10%) have to be diluted in a 1:200 ratio. Sales volume for this product does not include donations to government agencies, schools at all levels, medical institutions, and Taiwan Fund for Children and Families (TFCF) centers.

Note 3: 1 piece of medical-grade face mask is primarily composed of three layers of non-woven fabric (PP), a nose clip (HDPE), and a pair of ear loops (spandex), where 1 ton of PP (1352F) can be used to produce spunbonded non-woven fabrics for 250,000 pieces of medical face masks; 1 ton of PP (1990 and 1990R) can be used to produce meltblown non-woven fabrics for 400,000 pieces of medical face masks; 1 ton of HDPE can be used to produce 5 million pieces of nose clip (0.2g/piece); and 1 ton of elastic fiber can be used to produce 25 million pairs of ear loops (0.04g/pair).

Note 4: The unit dosage for a disinfectant bottle depends on the size of the container. For instance, a 100ml alcohol bottle is equivalent to about 66,000 bottles/ton (15g/bottle) and a 5,000ml large barrel is equivalent to about 3,500 bottles/ton (280g/bottle).

As the COVID-19 pandemic continues to ravage the world, FPC does our best to ensure uninterrupted supply of epidemic prevention supplies such as medical face masks. FPC has also proven that the petrochemical industry is closely connected to the livelihood of the people and the medical and health care industries. In the future, FPC will continue to work hard in hopes of providing strong support to ensure a happy society and safeguard the safety and health of the people.

Appendix

I. Global Reporting Initiative

II. Sustainability Accounting Standards Board (SASB) Standards

III. Independent Assurance Opinion Statement

I. Global Reporting Initiative 102-54 102-55

The following indicators refer to the content of this Report in accordance with the 2016 Global Reporting Initiative (GRI) Sustainability Reporting Standards. As indicated in the external audit statement, relevant information has been audited and found to be in compliance with the requirements of GRI Standards with regard to external checklist:

Disclosure Item		Description	Reference Chapter	Note
GRI 102: General Disclosures				
Organizational Profile (2016 Edition)	102-1	Name of the organization	1.2.2 Company History	
	102-2	Activities, brands, products, and services	2.3.1 Main Products and Brands	
	102-3	Location of headquarters	1.2.2 Company History	
	102-4	Location of operations	1.2.2 Company History	
	102-5	Ownership and legal form	1.2.2 Company History	
	102-6	Markets served	1.2.2 Company History	
	102-7	Scale of the organization	1.2.2 Company History 2.1.1 Operating and Financial Performance 2.2 Corporate Governance 2.3.1 Main Products and Brands	
	102-8	Information on employees and other workers	4.1 Human Resource Policies and Employee Composition	
	102-9	Supply chain	2.3.1 Main Products and Brands 5.2.2 Supplier and Contractor Management	
	102-10	Significant changes to the organization and its supply chain	-	No significant change in 2020
	102-11	Precautionary Principle or approaches	2.2 Corporate Governance	
	102-12	External initiatives	1.1 Message from the Chairman 2020 CSR Highlights 5.1.1 Occupational Health and Safety 5.2.3 Procurement Policy	
	102-13	Membership of associations	2.1.2 Participation in External Associations	
Strategy (2016 Edition)	102-14	Statement from senior decision-maker	1.1 Message from the Chairman	
	102-15	Key impacts, risks, and opportunities	Progress of Sustainable Development Goals 2.2.2 Promotion of Corporate Sustainability 2.2.3 Internal Control Mechanism 2.3.2 Product and AI Technology Development and Innovation 3.2 Risks and Opportunities Arising from Climate Change	
Ethics and Integrity (2016 Edition)	102-16	Values, principles, standards, and norms of behavior	1.2.1 Management Philosophy 2.2.3 Internal Control Mechanism	

Disclosure Item		Description	Reference Chapter	Note
Material Topic: Corporate Governance				
Governance (2016 Edition)	102-18	Governance structure	2.2 Corporate Governance	
	102-22	Composition of the highest governance body and its committees	2.2.1 Corporate Governance Overview 2.2.2 Promotion of Corporate Sustainability	
	102-23	Chair of the highest governance body	2.2.1 Corporate Governance Overview	
	102-24	Nominating and selecting the highest governance body	2.2.1 Corporate Governance Overview	
	102-25	Conflicts of interest	2.2.1 Corporate Governance Overview	
	102-36	Process for determining remuneration	2.2.1 Corporate Governance Overview	
Management Approach (2016 Edition)	103-2	The management approach and its components	2.2 Corporate Governance	
	103-3	Evaluation of the management approach	2.2 Corporate Governance	
Stakeholder Engagement (2016 Edition)	102-40	List of stakeholder groups	1.3 Stakeholder Identification and Communication	
	102-41	Collective bargaining agreements	-	No collective agreement signed with the labor union
	102-42	Identifying and selecting stakeholders	1.3 Stakeholder Identification and Communication	
	102-43	Approach to stakeholder engagement	1.3 Stakeholder Identification and Communication	
	102-44	Key topics and concerns raised	1.3 Stakeholder Identification and Communication 2.5 Response to Significant Economic Issues 3.8 Response to Material Environmental Issues 5.3 Response to Material Industrial Safety Issues 6.2 Community Engagement 6.3 Response to Local Community Issues	
Reporting Practice (2016 Edition)	102-45	Entities included in the consolidated financial statements	Report Overview 1.2.2 Company History	
	102-46	Defining report content and topic Boundaries	Report Overview	
	102-47	List of material topics	2.5 Response to Significant Economic Issues	
	102-48	Restatements of information	Report Overview	No restatement of information
	102-49	Changes in reporting	Report Overview 1.4.2 Materiality Matrix	
	102-50	Reporting period	Report Overview	
	102-51	Date of most recent report	Report Overview	
	102-52	Reporting cycle	Report Overview	
	102-53	Contact point for questions regarding the report	Report Overview	
	102-54	Claims of reporting in accordance with the GRI Standards	Appendix I.	
	102-55	GRI content index	Appendix I.	
	102-56	External assurance	Appendix III.	

Disclosure Item		Description	Reference Chapter	Note
GRI 103: Management Approach				
Management Approach (2016 Edition)	103-1	Explanation of the material topic and its boundary	1.4.3 Identification of Material Issues and Value Chain	
GRI 200: Topic-specific Disclosures—Economic Topics				
Material Topic: Operating and Financial Performance				
Economic Performance (2016 Edition)	201-1	Direct economic value generated and distributed by the organization	2.1.1 Operating and Financial Performance 4.2 Employee Rights, Benefits and Training 6.1.2 Social Investment 6.2 Community Engagement	
Management Approach (2016 Edition)	103-2	The management approach and its components	2.1.1 Operating and Financial Performance	
	103-3	Evaluation of the management approach	2.1.1 Operating and Financial Performance	
Economic Performance (2016 Edition)	201-2	Financial implications and other risks and opportunities due to climate change	3.2 Risks and Opportunities Arising from Climate Change	
Market Presence (2016 Edition)	202-1	Ratios of standard entry level wage by gender compared to local minimum wage	4.2.1 Employee Development and Compensation	
	202-2	Proportion of senior management hired from the local community	4.1.2 Employee Recruitment	
Indirect Economic Impacts (2016 Edition)	203-1	Development and impact of Infrastructure investments and services supported	6.1 Local Community Development and Investment 6.1.2 Social Investment 6.2 Community Engagement in the Operation Area	
Procurement Practices (2016 Edition)	204-1	Proportion of spending on local suppliers	5.2.3 Procurement Policy	
Anti-corruption (2016 Edition)	205-3	Confirmed incidents of corruption and actions taken	-	No corruption incidents reported in 2020
GRI 300: Topic-specific Disclosures—Environmental Topics				
Material Topic: Greenhouse Gas and Energy Management				
Energy (2016 Edition)	302-3	Energy intensity	3.3.2 Improvement in Energy Conservation	
	302-4	Reduction of energy consumption	3.3.2 Improvement in Energy Conservation	
Emissions (2016 Edition)	305-1	Direct (Scope 1) GHG emissions	3.3.1 Greenhouse Gas Inventory and Emission Intensity	
	305-2	Energy indirect (Scope 2) GHG emissions	3.3.1 Greenhouse Gas Inventory and Emission Intensity	
	305-3	Other indirect (Scope 3) GHG emissions	3.3.1 Greenhouse Gas Inventory and Emission Intensity	
	305-4	GHG emissions intensity	3.3.1 Greenhouse Gas Inventory and Emission Intensity	
	305-5	Reduction of GHG emissions	3.3.2 Improvement in Energy Conservation 3.5.2 Air Pollution Control Measures	
Management Approach (2016 Edition)	103-2	The management approach and its components	3.3 Greenhouse Gas and Energy Management	
	103-3	Evaluation of the management approach	3.3 Greenhouse Gas and Energy Management	

Disclosure Item		Description	Reference Chapter	Note
Material Topic: Use and Management of Water Resources				
Water and Effluents (2018 Edition)	303-1	Interactions with water as a shared resource	3.4.1 Water Resource Consumption and Reduction Management 3.4.2 Water Conservation Performance 3.4.3 Zero Wastewater Discharge	
	303-2	Management of water discharge-related impacts	3.4.1 Water Resource Consumption and Reduction Management 3.4.3 Zero Wastewater Discharge	
	303-3	Water withdrawal	3.4.1 Water Resource Consumption and Reduction Management	
	303-4	Water discharge	3.4.1 Water Resource Consumption and Reduction Management	
	303-5	Water consumption	3.4.1 Water Resource Consumption and Reduction Management	
Management Approach (2016 Edition)	103-2	The management approach and its components	3.4 Use and Management of Water Resources	
	103-3	Evaluation of the management approach	3.4 Use and Management of Water Resources	
Material Topic: Air Pollutant Management				
Emissions (2016 Edition)	305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	3.5.1 Air Pollution Monitoring and Assessment 3.5.2 Air Pollution Control Measures	
Management Approach (2016 Edition)	103-2	The management approach and its components	3.5 Air Pollutant Manage	
	103-3	Evaluation of the management approach	3.5 Air Pollutant Manage	
Material Topic: Environmental Regulatory Compliance				
Environmental Compliance (2016 Edition)	307-1	Non-compliance with environmental laws and regulations	3.7.1 Penalties for Violation of Environmental Regulations	
Management Approach (2016 Edition)	103-2	The management approach and its components	3.7 Environmental Compliance	
	103-3	Evaluation of the management approach	3.7 Environmental Compliance	
Waste (2020 Edition)	306-1	Waste generation and significant waste-related impacts	3.6 Waste Management	
	306-2	Management of significant waste-related impacts	3.6 Waste Management	
	306-3	Waste generated	3.6 Waste Management	
	306-4	Waste diverted from disposal	3.6 Waste Management	
	306-5	Waste directed to disposal	3.6 Waste Management	
GRI 400: Topic-specific Disclosures—Social Topics				
Employment (2016 Edition)	401-1	New employee hires and employee turnover	4.1.1 Manpower Structure 4.1.2 Employee Recruitment	
	401-2	Benefits provided to full-time employees (not including temporary or part-time employees)	4.2 Employee Rights, Benefits and Training 4.2.1 Employee Development and Compensation	
	401-3	Parental leave	4.2.1 Employee Development and Compensation	

Disclosure Item		Description	Reference Chapter	Note
Material Topic: Occupational Health and Safety				
Occupational Health and Safety (2018 Edition)	403-1	Occupational safety and health management system	5.1 Workplace Safety Management	
	403-2	Hazard identification, risk assessment, and incident investigation	5.1 Workplace Safety Management	
	403-3	Occupational health services	5.1 Workplace Safety Management	
	403-4	Worker participation, consultation, and communication on occupational health and safety	3.1.1 Environment, Health and Safety Organization and Management 5.1 Workplace Safety Management	
	403-5	Worker training on occupational health and safety	5.1 Workplace Safety Management	
	403-6	Promotion of worker health	5.1 Workplace Safety Management	
	403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	5.1 Workplace Safety Management	
	403-8	Workers covered by an occupational health and safety management system	5.2.1 Health and Safety Management System	
	403-9	Work-related injuries	5.1.1 Occupational Health and Safety 5.2.2 Supplier and Contractor Management	
	403-10	Work-related ill health	5.1.1 Occupational Health and Safety 5.2.2 Supplier and Contractor Management	
Management Approach (2016 Edition)	103-2	The management approach and its components	5.1 Workplace Safety Management	
	103-3	Evaluation of the management approach	5.1 Workplace Safety Management	
Material Topic: Talent Recruitment and Retention				
Training and Education (2016 Edition)	404-1	Average hours of training per year per employee.	4.2.1 Employee Development and Compensation	
	404-3	Percentage of employees receiving regular performance and career development reviews.	4.2.1 Employee Development and Compensation	
Management Approach (2016 Edition)	103-2	The management approach and its components	4.2 Employee Rights, Benefits and Training	
	103-3	Evaluation of the management approach	4.2 Employee Rights, Benefits and Training	
Local Communities (2016 Edition)	413-2	Operations with significant actual and potential negative impacts on local communities	3.4.1 Water Resource Consumption and Reduction Management 3.5.1 Air Pollution Monitoring and Assessment	
Customer Health and Safety (2016 Edition)	416-1	Assessment of the health and safety impacts of product and service categories	2.3.3 Product Safety and Health Responsibility	
	416-2	Incidents of non-compliance concerning the health and safety impacts of products and services	-	No incident of non-compliance concerning the health and safety impacts of products and services in 2020

Disclosure Item		Description	Reference Chapter	Note
Marketing and Labeling (2016 Edition)	417-2	Incidents of non-compliance concerning product and service information and labeling	-	No incident of non-compliance concerning product and service information and labeling in 2020
Customer Privacy (2016 Edition)	418-1	Substantiated complaints regarding breaches of customer privacy and losses of customer data	2.4.1 Customer Relations and Privacy Protection	No breach of customer privacy or loss of customer data in 2020
Socioeconomic Compliance (2016 Edition)	419-1	Non-compliance with laws and regulations in the social and economic area	-	No incident of non-compliance with laws and regulations in the social and economic area in 2020
FPC and Industry Issues				
Material Topic: Product and AI Technology Development and Innovation				
Management Approach (2016 Edition)	103-2	The management approach and its components	2.3.2 Product and AI Technology Development and Innovation	
	103-3	Evaluation of the management approach	2.3.2 Product and AI Technology Development and Innovation	
Material Issue: Management of Climate Change Risks and Opportunities				
Management Approach (2016 Edition)	103-2	The management approach and its components	3.2 Risks and Opportunities Arising from Climate Change	
	103-3	Evaluation of the management approach	3.2 Risks and Opportunities Arising from Climate Change	
Material Topic: Emergency Response Mechanism at Complexes				
Management Approach (2016 Edition)	103-2	The management approach and its components	5.1.2 Emergency Response Mechanism at Complexes	
	103-3	Evaluation of the management approach	5.1.2 Emergency Response Mechanism at Complexes	
Material Topic: Industrial and Public Safety				
Management Approach (2016 Edition)	103-2	The management approach and its components	5.2 Supply Chain Management	
	103-3	Evaluation of the management approach	5.2 Supply Chain Management	
Material Topic: Operational Risk Management				
Management Approach (2016 Edition)	103-2	The management approach and its components	2.2.2 Promotion of Corporate Sustainability	
	103-3	Evaluation of the management approach	2.2.2 Promotion of Corporate Sustainability	

II. Sustainability Accounting Standards Board (SASB) Standards

Disclosure Topic: Greenhouse Gas Emissions

Indicator Code	Disclosure Indicator	Comparison Disclosure				Reference Chapter
		2017	2018	2019	2020	
RT-CH-110a.1	Total Scope 1 greenhouse gas (GHG) emissions (Unit: tons CO_2e)	4,061,443	4,060,474	3,836,493	3,659,904	3.3 Greenhouse Gas and Energy Management
	Percentage of emissions that are covered under an emissions-limiting regulation or program that is intended to directly limit or reduce emissions (Unit: %)	▪ FPC's complexes conduct carbon inventory in accordance with the relevant laws and regulations.				
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	▪ FPC 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 423 power reduction improvement projects in 2020, saving 8,698 kWh of electricity.				

Disclosure Topic: Air Quality

Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-120a.1	Air emissions of the following pollutants (Unit: metric tons/year) ▪ Nitrogen oxides (NOx) (excluding N_2O) ▪ Sulfur oxides (SOx) ▪ Volatile organic compounds (VOCs) ▪ Hazardous air pollutants (HAPs)	Air pollutant emissions at FPC in 2020 ▪ Nitrogen oxides (NOx): 987.15 ▪ Sulfur oxides (SOx): 1,726.645 ▪ Volatile organic compounds (VOC): 401.448 ▪ Hazardous air pollutants (HAPs): Current draft national regulations only stipulate the emission limits, standard control values, and ambient standards for emission pipelines but do not specify emission calculations. FPC will calculate and disclose our HAP emissions in accordance with national regulations in the future.	3.5 Air Pollutant Management

Disclosure Topic: Energy Management

Indicator Code	Disclosure Indicator	Comparison Disclosure (Note: As FPC's GHG inventory for 2020 is scheduled to be completed in August 2021, FPC proposed disclosing the following data based on the 2019 annual report verified by SGS and BSI on account of the impartiality and accuracy of the published data.)	Reference Chapter
RT-CH-130a.1	Total amount of energy consumed (Unit: gigajoules, GJ)	25,039	3.3 Greenhouse Gas and Energy Management
	Percentage of grid electricity consumed (Unit: %)	71.7	
	Percentage of renewable energy consumed (Unit: %)	FPC did not consume renewable energy in 2019.	
	Total amount of energy self-generated by FPC (Unit: GJ)	7,096	

Disclosure Topic: Water Management

Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-140a.1	Total amount of water withdrawn (including in regions with high or extremely high baseline water stress) (Unit: 1,000m^3) (As FPC's water footprint inventory for 2020 is scheduled to be completed in the third quarter of 2021, FPC proposed obtaining and reporting statistics on our water footprint based on the 2019 water footprint data verified by SGS in 2020 on account of the impartiality and accuracy of published data.)	38,157.13	3.4 Use and Management of Water Resources
	Total amount of water consumed (including in regions with high or extremely high baseline water stress) (Unit: %)	The total amount of water consumed accounted for 62% of the total amount of water withdrawn.	
RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Environmental violations related to water pollution from 2017 to 2020 Unit: cases	3.7 Environmental Compliance

Type of Violation \ Year	2017	2018	2019	2020
Water pollution	0	1	0	0
Soil and groundwater	0	1	1	0

RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those 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 company's water conservation performance and formulate implementation approaches. ■ Performance evaluation of energy conservation and carbon reduction: 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 2020, the best-performing complex/department was Mailiao C4 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.	3.4 Use and Management of Water Resources

Disclosure Topic: Workforce Health & Safety

Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-320a.1	Total recordable incident rate (TRIR) and fatality rate for direct employees and contract employees (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 × 10^6) / Total working hours.)	■ Disabling injury frequency rate among employees in 2020: 0.32 (0.35 for males and 0 for females) ■ One major occupation disaster occurred among employees at Renwu Complex in 2020. This incident was reported by FPC in accordance with the law. To enhance safety measures, FPC has further strengthened employee training, conducted simulation drills for removing anomalies in machinery and equipment, and added a second safety interlock device to prevent such unfortunate incidents.	5.1.1 Occupational Health and Safety 5.3 Response to Material Industrial Safety Issues
RT-CH-320a.2	Efforts to reduce exposure of employees to occupational health risks	■ 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 such as green materials with low levels of pollution, low energy consumption, high energy efficiency, and low carbon emissions	■ Five of the differentiated and green material products developed in 2019 were commercialized in 2020, generating a revenue of NT$289,798 thousand in total.	2.3.2 Product and AI Technology Development and Innovation

Disclosure Topic: Management of the Legal & Regulatory Environment

Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-530a.1	Risks and opportunities related to environmental/social regulations identified by the organization and their impact on finances	■ Belonging to the petrochemical industry, FPC is one of the primary inspection targets of both central and local environmental protection authorities. In view of various environmental protection regulations and standards as well as increasingly stringent penalties for violations, FPC will continue to propose improvement measures in safety, health, and environmental management in the future, with hopes of further reducing the number of environmental violations and the amount of fines in the future.	3.7 Environmental Compliance

Disclosure Topic: Operational Safety, Emergency Preparedness & Response

Indicator Code	Disclosure Indicator	Comparison Disclosure			Reference Chapter
		2018	2019	2020	
RT-CH-540a.1	Process Safety Incidents Count (PSIC)	1	5	4	5.1.1 Occupational Health and Safety 5.2 Supply Chain Management
	Process Safety Total Incident Rate (PSTIR) (Note: FPC's process safety event rate (PSER) is calculated based on GRI Standards, where PSER = (Total number of events / Total working hours) x 200,000)	0.019	0.090	0.064	
	Process Safety Incident Severity Rate (PSISR)	0.056	0.162	0.096	
RT-CH-540a.2	Number of transport incidents	Number of transport incidents in 2020: 1 Response and handling measures: I. On November 3, a tank truck from Jui Hai Transportation Co., Ltd., FPC's transport vendor, which was on its way back to the transportation company after being filled with 18 tons of methyl acrylate (MA) from Linyuan AE Plant, overturned when turning left into Taiwan County Highway 188 from Section 2, Heti Road along Taiwan Highway 29 in Daliao District. II. FPC immediately sent our personnel to the accident scene and discovered slight leaks from the safety (breathing) valve and manhole of the tank truck. After tightening the valve and closing the hole to stop the leaks, the tank truck was towed back to Linyuan AE Plant for unloading. III. On the next day (November 4), the Safety and Health Department immediately gathered the relevant units to conduct an investigation and visit the accident scene to investigate the cause of the accident. Four improvement measures were proposed, requiring improvements to be made on transportation vehicles. (I) A high liquid level of over 75% is required for tank truck transportation in the future. (II) All transportation vehicles should be equipped with lifting pulleys and vehicle straps. (III) When transporting materials that may have a strong peculiar odor, air freshener should be made available and sprayed at the accident scene, or the accident scene should be covered with canvas. (IV) Drivers are required to travel at a speed of less than 30 km/h when making a turn, and stop the vehicle first before driving when making a 90-degree turn at a junction without traffic lights.			

Disclosure Topic: Production by Reportable Segment

Indicator Code	Disclosure Indicator	Comparison Disclosure	Reference Chapter
RT-CH-000.A	Products produced by the organization (Unit: metric tons)	Unit: metric tons Product / Production volume in 2020 Polyvinyl Chloride (PVC) 1,648,273 Vinyl Chloride (VCM) 1,582,804 Caustic Soda 1,491,167 Acrylic Ester (AE) 529,650 Epichlorohydrin (ECH) 94,687 Carbon Fiber 6,787 N-butanol (NBA) 217,382 Superabsorbent Polymer (SAP) 184,412 Acrylonitrile (AN) 261,246 Methyl Methacrylate (MMA) 81,279 Ethylene Vinyl Acetate (EVA) 284,740	2.3.1 Main Products and Brands

III. Independent Assurance Opinion Statement

102-56

By Royal Charter

INDEPENDENT ASSURANCE OPINION STATEMENT

Formosa Plastics Corporation 2020 Corporate Social Responsibility 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 purposes of assuring its statements relating to its corporate social responsibility (CSR), 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 2020 Corporate Social Responsibility 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 2020 Corporate Social Responsibility Report provides a fair view of the FPC CSR programmes and performances during 2020. The CSR 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 2020 economic, social and environmental performance information are fairly represented. The CSR performance information disclosed in the report demonstrate FPC's efforts recognized by its stakeholders.

Our work was carried out by a team of CSR 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: Core option 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.
- 4 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 economic, social and environmental information 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: Core option (For each material topic covered by a topic-specific GRI Standard, comply with all reporting requirements for at least one topic-specific disclosure). Based on our review, we confirm that social responsibility and 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 social responsibility and 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 CSR 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 Lead 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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Statement No: SRA-TW-2020050

2021-04-26

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