



亞洲聚合股份有限公司
Asia Polymer Corporation

2022 ESG Report





**Asia Polymer Corporation
2022 ESG Report**

Table of Contents

Report profile	<u>03</u>
Message from the Chairman	<u>05</u>
2022 Sustainability Performance	<u>06</u>

Sustainable Development

CH1

1.1 Sustainable development visions and goals	<u>08</u>
1.2 Our value chain	<u>12</u>
1.3 Stakeholder engagement	<u>16</u>
1.4 Materiality analysis	<u>19</u>

Operations and Governance

CH2

2.1 Corporate governance	<u>25</u>
2.2 Economic performance	<u>35</u>
2.3 Risk management	<u>39</u>

Product Innovation and Supply Chain Management

CH3

3.1 Technology R&D	<u>46</u>
3.2 Customer service	<u>49</u>
3.3 Supply chain management	<u>52</u>

Eco-friendliness

CH4

4.1 Resources management	<u>60</u>
4.2 Climate change and energy management	<u>65</u>
4.3 Emissions management	<u>76</u>

Safe Workplace and Social Inclusion

CH5

5.1 Talents selection	<u>80</u>
5.2 Talent development	<u>88</u>
5.3 Healthy workplace	<u>92</u>
5.4 Social engagement	<u>106</u>

Appendices

CH6

6.1 GRI content index	<u>113</u>
6.2 SDGs content index	<u>119</u>
6.3 Chemical industry SASB index	<u>120</u>
6.4 Sustainability disclosure metrics — Plastics Industry	<u>122</u>
6.5 Climate-related financial disclosures	<u>123</u>
6.6 Independent Assurance Statement	<u>126</u>



0.1 Report Profile GRI 2-2, 2-5

This is the ninth report that we, Asia Polymer Corporation (APC), have published. By disclosing non-financial information, the information regarding the management and performance of material issues, and the results of action plans in relation to the UN Sustainable Development Goals (SDGs) in terms of the environmental, social, and governance (ESG) aspects, we aim to let concerned APC stakeholders and the general public understand our achievements and prospects in corporate sustainable operations.

Principles of report compilation

Author	In accordance with
Global Reporting Initiative (GRI)	GRI Standards 2021
Sustainability Accounting Standards Board (SASB)	SASB Standards
Financial Stability Board (FSB)	Recommendations of the Task Force on Climate-Related Financial GRI (TCFD)
Taiwan Stock Exchange (TWSE)	Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies
United Nations (UN)	Sustainable Development Goals (SDGs) United Nations Global Compact

Reporting period and boundaries GRI 2-2, 2-3, 2-4

This Report published annually covers all entities (including Taipei HQ and Kaohsiung Linyuan Plant) included in our consolidated financial statement and the USI Education Foundation for the period from 1 January 2022 to 31 December 2022. The report contents demonstrate our environmental, social, and governance (ESG) management and performance, and the financial information is consistent with the financial data certified by accountants. Some statistics are extracted from our annual report, government departments, and the open information of related websites. Information has been restated and reviewed in accordance with the GRI Standards 2021.

External assurance GRI 2-3, 2-5

This Report prepared in compliance with the GRI Standards 2021 has been verified and assured by third-party certification body AFNOR Asia Ltd. in accordance with the assurance standard of AA1000 V3 and the Moderate Assurance in Type 1 in the appendix to version 2018.

Report publication GRI 2-3



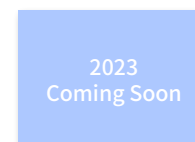
First issue:
December 2015



Previous issue:
June 2022



Current issue:
June 2023



Next issue:
June 2024

Processes of report compilation and management

1 Identification and Data Collection

- Compilation focus briefing in the kickoff meeting
- Identification of stakeholders and material issues
- Data collection by panel members
- Data review by the panel chief

2 Editing and Review

- Compilation and editing of the first draft by the editing panel.
- Review and revision of the panel members.
- Internal report review by the Predictive Maintenance & Environmental Risk Management Division (PdM & ERM Div.) of the USI Group (USIG)

3 External Assurance

- The third-party certification body verified and assured this Report in accordance with the assurance standard of AA1000 V3 and the Moderate Assurance in Type 1 in the appendix to version 2018.

4 Publication

- Review and finalization by the ESG Committee.
- Publication after approval by the chairman.

Report download

To support environmental protection and promote paperless operation, this report will be published over the “ESG” section on our corporate website for download by stakeholders and the general public at <https://www.apc.com.tw/ESG/zh-tw/ESG82.aspx>.

Contact Information GRI 2-3

Should you have any comment or suggestion for our report, please feel free to contact us.

ESG Committee, Asia Polymer Corporation

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0.2 Message from the Chairman GRI 2-22



In 2022 the impact of COVID-19 and the Russo-Ukrainian (Russia-Ukraine) War has caused a European energy crisis, which has also led to food supply disruption and global inflation. Additionally, the threats of climate change have also become a new global normal. Facing these risks, we uphold our vision to “create sustainable value for a sustainable society” and to be proactive in environmental, social, and governance (ESG), aiming to balance operational performance improvements and sustainable development practices at the same time.

Deployment for active carbon reduction

In 2020, apart from establishing the Green Power Team to proactively address and make plans for the national net-zero policy, we also continued to build solar PV installations and combined with the local agricultural economy to bring more possibilities for combining green power and industry. In 2022, the accumulative on-grid connection of solar PV installations reached 5.9MW to generate over 7 GWh of green power in estimation. In 2025 and 2027 we will complete solar PV installations with an installed capacity of 15MW and 20MW, respectively. In response to the 27% reduction target for 2030, we have mapped out the carbon reduction path towards 2030 and set annual targets and plans to review accomplishments each year.

Enhancing ESG implementation and human rights risk assessment

ESG implementation is promoted by the ESG Committee chaired by independent directors. It reviews the Company’s ESG performance two times a year. The in-depth ESG engagement of directors can enhance the promotion of ESG goals. Human rights risk is also our concern. By reviewing the risk condition of human rights issues in this report, we aim to ensure the perfect maintenance of human rights.

Building a safe production environment

We request a high-standard of safety during production from all plants. Apart from continuously promoting the goal of safety and the environmental five zeros: zero pollution, zero emissions, zero occupational hazards, zero accidents, and zero failures, and implementing the process management system (PSM), we also hold plant technology exchange meetings and unannounced fire drills to optimize production environment safety so as to make all-round emergency responses and minimize hazards and damage.

Promoting ESG makes our operations more steady while bettering the overall environment and society at the same time. We progressively integrate ESG targets into business operations, set various project targets and goals, and achieve them systemically with artificial intelligence (AI). On the road to sustainability, we need new concepts, new technologies, and the full collaboration of all employees to ensure smooth implementation. We also intend to do things the right way before we can extend our experience to others for the common good of the whole industry, supply chain, and society.

APC ESG achievements 2022

2022 APC reduced GHG emissions by 4.5% over 2017 (base year). Ranked top 21-35% at the 9th Corporate Governance Evaluation and rated A in ESG ratings by Cathay Securities. Zero lost time due to disabling injury for 12 years or up to 5.32 million hours by 2022 in occupational safety and health.

Asia Polymer Corporation
Chairman, Quintin Wu

0.3 2022 Sustainability Performance



Governance

- ✓ Increased revenues by 2.6% to **NT\$9.815 billion**
- ✓ Net income after tax **NT\$1.447 billion**
- ✓ Total output **130,120MT**
- ✓ '**Gold Award**' of Corporate Sustainability Report Awards in traditional manufacturing industries at the 15th Taiwan Corporate Sustainability Awards (TCSA)
- ✓ Ranked **top 21-35%** at the 9th Corporate Governance Evaluation
- ✓ Rated **A** in ESG ratings by Cathay Securities



Social

- ✓ Employee turnover rate **2.14%**
- ✓ Zero lost time due to disabling injury for **5.32 million hours** (statistics period: 14 October 2010-31 December 2022)
- ✓ Sponsorship of **NT\$5 million** for the USI Education Foundation



Environment

- ✓ Reduced electricity consumption by **1.63%** on average each year during 2015-2022, better than the regulatory requirement of 1%.
- ✓ GHG emissions were 111,975tCO₂e, by **4.5%** less over 2017 (base year) in 2022.
- ✓ Reduced energy by **977GJ** or carbon by **138tCO₂e** in 2022.



Awards



The 15th Taiwan Corporate Sustainability Awards 2022 Gold Award of Corporate Sustainability Report Awards



2022 Kaohsiung City Environmental Protection Bureau "Cross-Sector GHG Reduction Program"



2022 Kaohsiung City Wang Gung Elementary School "Air Quality Purification Zone Adoption Program"

CH1 Sustainable Development

- Sustainability visions and goals (GRI 2-23 and 2-24) 08
- Our value chain (GRI 2-1, 2-6, 2-8, and 2-28) 12
- Stakeholder engagement (GRI 2-29) 16
- Materiality analysis (GRI 3-1 and 3-2) 19



1.1 Sustainability visions and goals GRI 2-23

USIG Vision: Create sustainable value for a sustainable society

We aim to continuously create sustainable value with our core competency to contribute to social sustainability.

Based on the sustainable vision, we have developed three core strategies: "R&D and innovation," "steady operations", and "social inclusion", hoping to create value with stakeholders together. We extend the contents of the core strategies into seven key topics as the foundation for honest and reasonable partners to build visions.



APC Sustainability Vision: Leader of Innovation and Sustainability

Sustainability Strategy and Principles:

Innovative Technology, Sustainable Development, Safety and Harmony

Sustainability Approach:

More economic benefits, good governance, higher production efficiency, environmental sustainability and survival, people-oriented management, CSR fulfillment

As a member of USIG, we have set our vision, strategy, principles, and approach of sustainable development based on the group's sustainability vision. We have also combined the key issues of USIG for the reference of realizing our sustainability visions and goals.



Response to UN SDGs GRI 2-24










Setting out from the core value of sustainable development, we combine the UN SDGs with the our sustainability approaches. Through the following three stages: “analysis and identification”, “goal setting”, and “response and disclosure”, we have identified the association between our sustainability approaches and the SDGs and set the relevant goals for operational management.



Correspondence and Actions Between SDGs and Sustainability Approaches

SDGs	Sustainability Approaches	SDGs	Sustainability Approaches
3 Good health and well-being Provide employees with high-quality healthcare service through a well-established welfare system and reduce casualties and accidents through management of highly hazardous chemicals.	People-oriented management	9 Industry, innovation and infrastructure Provide R&D resources and engage in product innovation and R&D to increase product added value.	More economic benefits
4 Quality education Support and sponsor education and sustainable development in remote townships to ensure equal opportunity of education for vulnerable children.	CSR fulfillment	11 Sustainable cities and communities Reduce air pollutant emissions and improve waste management to reduce the production of hazardous substances and enhance environmental quality.	Environmental sustainability and survival
6 Clean water and sanitation Enhance water efficiency and reduce impacts on water and ecosystems through the quality control, recycling, and reuse of effluents.	Environmental sustainability and survival	12 Responsible consumption and production Enhance materials efficiency, recycling, and reuse to reduce waste generation and practice sustainable resource management.	Enhance production efficiency
7 Affordable and clean energy Enhance energy efficiency and develop renewables for environmental sustainability through clean production and green manufacturing.	Enhance production efficiency	13 Climate action Assess risks and opportunities due to climate change and plan countermeasures to lower the environmental impact brought by climate change.	Environmental sustainability and survival
8 Decent work and economic growth Improve economic performance, provide a safe workplace environment, ban child labor, and ensure remuneration equality to maintain human rights and the right to work for workers.	More economic benefits Good governance		




Note: (X) represents unachieved targets; currency: NTD

SDGs	Goals	2022 Performance	Response	
	<ul style="list-style-type: none"> Insurance/healthcare benefits Implementing process safety management (PSM) 	<ul style="list-style-type: none"> Employee group medical insurance Birth allowance for 10 persons, NT\$10,000 each Four sessions of health checkups, 210 persons in total 	<ul style="list-style-type: none"> Inhouse service of contracted physicians for 6 times Promoting the process safety management system 	<ul style="list-style-type: none"> 5.2 Talent development 5.3 Healthy workplace
	<ul style="list-style-type: none"> Scholarships and grants Practicing education for remote townships 	<ul style="list-style-type: none"> Sponsoring NT\$5 millions for USI Education Foundation 		<ul style="list-style-type: none"> 5.4 Social engagement
	<ul style="list-style-type: none"> Water reclamation (reuse) rate >95.0% Water consumption per unit product: <4.1 m3/MT Effluent water quality, COD <50 mg/L 	<ul style="list-style-type: none"> Water reclamation rate: 99.2 % Water consumption per unit product: 3.8 m3/MT Effluent COD 40.72 mg/L 		<ul style="list-style-type: none"> 4.1 Resources management
	<ul style="list-style-type: none"> Energy efficiency monitoring Set energy conservation target: Electricity conservation rate 1.0% Build green power (solar PV) installations 	<ul style="list-style-type: none"> Electricity consumption per unit product: 1.477 MWh/MT Electricity conservation rate 0.68 % (X) (Note 1) Plan and implement green power strategies within the group: Linyuan Plant will use green power (solar PV) of about 2.5GWh in 2025 by law. 		<ul style="list-style-type: none"> 4.2 Climate change and energy management
	<ul style="list-style-type: none"> Maintain corporate growth through sustainable investment Ban child labor and ensure remuneration equality Zero occupational accidents 	<ul style="list-style-type: none"> Net income after tax: NT\$1.447 billions Ratio of basic salary and remuneration of women to men: Intermediate and junior officers 1.08:1 and general employees 0.88:1. Employee injury rate: 0 		<ul style="list-style-type: none"> 2.2 Economic performance 5.2 Talent development 5.3 Healthy workplace
	<ul style="list-style-type: none"> Product development or quality improvement: At least one product each year Proportion of R&D funds in total revenues >0.6% 	<ul style="list-style-type: none"> Product development: 2 products R&D funds: NT\$54,214 thousand, accounting for 0.55% (X) of the total revenues (Note 2) 		<ul style="list-style-type: none"> 3.1 Technology R&D
	<ul style="list-style-type: none"> Air pollutant emissions monitoring and improvement Waste management 	<ul style="list-style-type: none"> Equipment and component leakage tour inspection: 280 spots/month Complying with the recognized target emissions for air pollution of Gaoping Phase I. Commissioning waste disposal to qualified contractors in accordance with the regulations of the Environmental Protection Administration 		<ul style="list-style-type: none"> 4.3 Emissions management
	<ul style="list-style-type: none"> Ethylene efficiency \leq 1.100 Flexible intermediate bulk container (FIBC) recovery rate >78% Circular economy, waste metal recovery 	<ul style="list-style-type: none"> Ethylene efficiency: 1.0041 FIBC recovery rate: 78.2% Waste metal recovery: 72.3MT 		<ul style="list-style-type: none"> 4.1 Resources management 4.3 Emissions management
	<ul style="list-style-type: none"> Climate change risk management Establish the carbon reduction commitment to reduce emissions by 27% over 2017 by 2030. 	<ul style="list-style-type: none"> Analyze climate-related risks and opportunities and assess their potential financial impacts based on the TCFD recommendations Establish the ISO 50001 energy management system (EnMS) and monitor energy efficiency indicators. The 2022 emissions reduced by 4.5% over 2017 		<ul style="list-style-type: none"> 4.2 Climate change and energy management

Note 1: The target for electricity conservation in 2022 was unachieved because some improvement projects were postponed due to COVID-19, reducing their contribution to electricity conservation and leading to the unachieved target.

Note 2: The 2022 R&D funds were NT\$54,214 thousand, equivalent to that of 2021. Due to the heat market demand, product sales maintained at a high level, increasing revenues by about 2.61%. The product R&D funds accounted for 0.55% of the total revenues, below the target value (0.6%).

The short-term action plan and long-term planning for the SDG-linked sustainability approaches are as follows:

Sustainability Approaches	Short-term Action Plan (2022-2023)	Long-term Planning (2024-2025)
 Governance	<p>More economic benefits Good governance</p> <ul style="list-style-type: none"> • Kaohsiung Intercontinental Container Terminal (ICT) • Project Phase II: Enhance materials dispatch flexibility • Gulei Project: Build the own ethylene supply system • Assess debottlenecking of production lines 	<ul style="list-style-type: none"> • Build EVA production facilities in the Gulei Petrochemical Complex • Integrate product and production lines to enhance market influence • Assess new production line construction
 Environmental	<p>Enhance production efficiency Environmental sustainability and survival</p> <ul style="list-style-type: none"> • Enhance resource efficiency and reduce effluents and waste • Enhance equipment availability for energy conservation and carbon reduction • Plan green power construction 	<ul style="list-style-type: none"> • Plan renewables • Promote clean production and green manufacturing • Response to climate change and extreme weather events
 Social	<p>People-oriented management CSR fulfillment</p> <ul style="list-style-type: none"> • Implement PSM • Zero occupational accidents • Sponsor social welfare and engage in educational activities 	<ul style="list-style-type: none"> • Successor training • Enhance industrial safety checks for zero accident. • Continuously sponsor charitable activities to enhance social service capacity

1.2 Our value chain

About APC

Established on 25 January 1977, Asia Polymer Corporation (stock code: 1308) is headquartered in Taipei. In response to the government’s investment incentivization policy, we built a polyethylene plant in the Linyuan Petrochemical Industrial Park in Kaohsiung City to develop, manufacture, and sell low-density polyethylene (LDPE) and ethylene vinyl acetate copolymer resin (EVA).

After two production line expansions in May 1984 and September 2015, the current capacity is 145,000MT/year.

In response to the “Kaohsiung City Existing Industrial Pipelines Self-Governance Ordinance”, we relocated the head office to the Linyuan Plant in Kaohsiung in June 2016.

Operational Deployment

Become the leader of EVA manufacturing by keeping R&D in Taiwan, developing higher-valued products and high-end applications, deploying the Greater China market, enhancing global market competitiveness, re-investing in the “Gulei Integrated Refinery Project” in Zhangzhou, Fujian, through a third area, vertically integrating steam cracking, petrochemical intermediate materials, and plastic products, reducing transportation costs, and enhancing competitive niche.

Locations

All major operational locations are in Taiwan, including the Taipei HQ and Linyuan Plant.

Taipei HQ takes charge of product sales, and the Linyuan Plant engages in product manufacturing and R&D.

Basic data GRI 2-1、2-8

Name of Company	Asia Polymer Corporation		
Date of establishment	25 January 1977	Industry	Plastics industry
Chairman	Quintin Wu	President	Pei-Chi Wu
Capital	NT\$5.93 billion	Numbers of employees	234 persons (by 31 December 2022)
Head Office	No.3, Industrial 1st Rd., Linyuan Dist., Kaohsiung, Taiwan, 832 ROC	Taipei HQ	12F, No. 37, Jihu Road, Neihu District, Taipei City
Revenues	NT\$9.815 billion	Total Production	130,120MT
Major Products	Low Density Polyethylene (LDPE) Ethylene Vinyl Acetate Copolymer Resin (EVA)		



Taipei HQ



Head Office, Linyuan Plant



Corporate History

1986

- Publicly offered on the Taiwan Stock Exchange (TWSE)
- Australian BTR NYLEX invested in APC and acquired 51% of our shares and transferred the shares to its subsidiary BTRN Asia in the same year.

1984

- The 3rd production line was constructed and started mass production.

2022

- Completed the ISO 14064-1 GHG inventory and verification of APC Linyuan Plant

2021

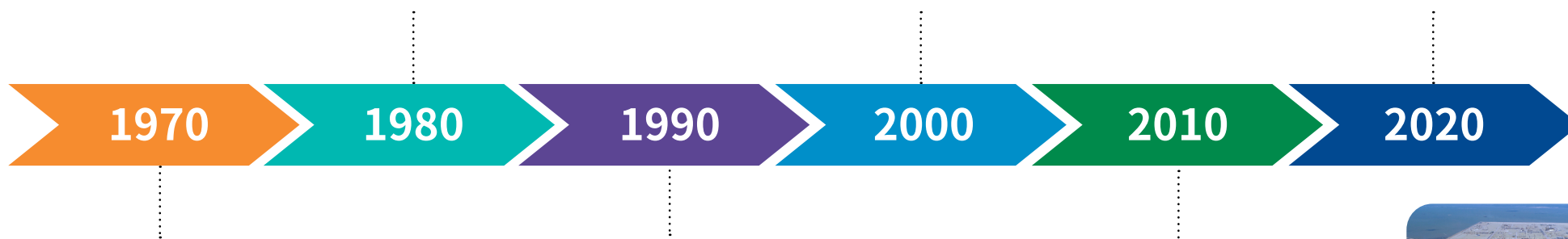
- Implemented the process safety management (PSM) system.

2009

- Passed SONY GP certification

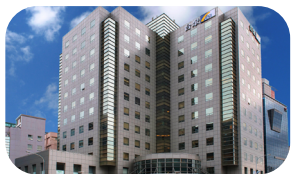
2001

- Passed OHSAS 18001 certification



1977

- APC company establishment
- Constructed a polyethylene plant in Linyuan Petrochemical Industrial Park in Kaohsiung



1998

- Passed ISO 14001 certification

1997

- BTRN Asia transferred 51% of its shares to Bermuda Belgravia One Limited co-invested by USI and UPC Technology Corporation.

1994

- Passed ISO 9002 certification

2019

- The Board passed the investment in the Kaohsiung Intercontinental Container Terminal Project Phase II.
- Passed ISO 50001 certification
- Passed ISO 45001 certification

2017

- Started the construction of the Gulei Project

2016

- Relocated the head office to Linyuan Plant in Kaohsiung
- Completed and started the commercial operation of the 4th EVA production line

2011

- The Board passed the construction of a 45,000MT EVA production line in Linyuan Plant



Products GRI 2-6

We mainly produce the following two types of resins: low density polyethylene (LDPE) and ethylene vinyl acetate copolymer resin (EVA).

LDPE can be divided by application into film grade, injection grade, and lamination grade.

- Films:** Various packaging films and extruded tubes made by blowing or casting.
- Injection:** Artificial flowers and plastic household products made through injection molding, and insulated boxes, bicycle cargo racks/baskets, and other processing products such as foam nets and ultrafine fiber made through powder coating.
- Lamination:** Packaging materials for processed foods/beverages and release paper made through lamination/coating.

2022 LDPE output: 33,651MT.

EVA can be divided by application into foaming grade, PV grade, and lamination grade

- Foaming:** Shoe insole materials made through injection molding or compression molding.
- PV:** PV battery module packaging film made through extrusion molding.
- Lamination:** Printing or packaging products such as pre-coating, card laminate made by coating on base materials such as BOPP and PET.

2022 EVA output: 96,469MT

LDPE Application



Packaging films



Medical extrusion tubes



Colored lamination



Artificial flowers

EVA Application



Card laminate



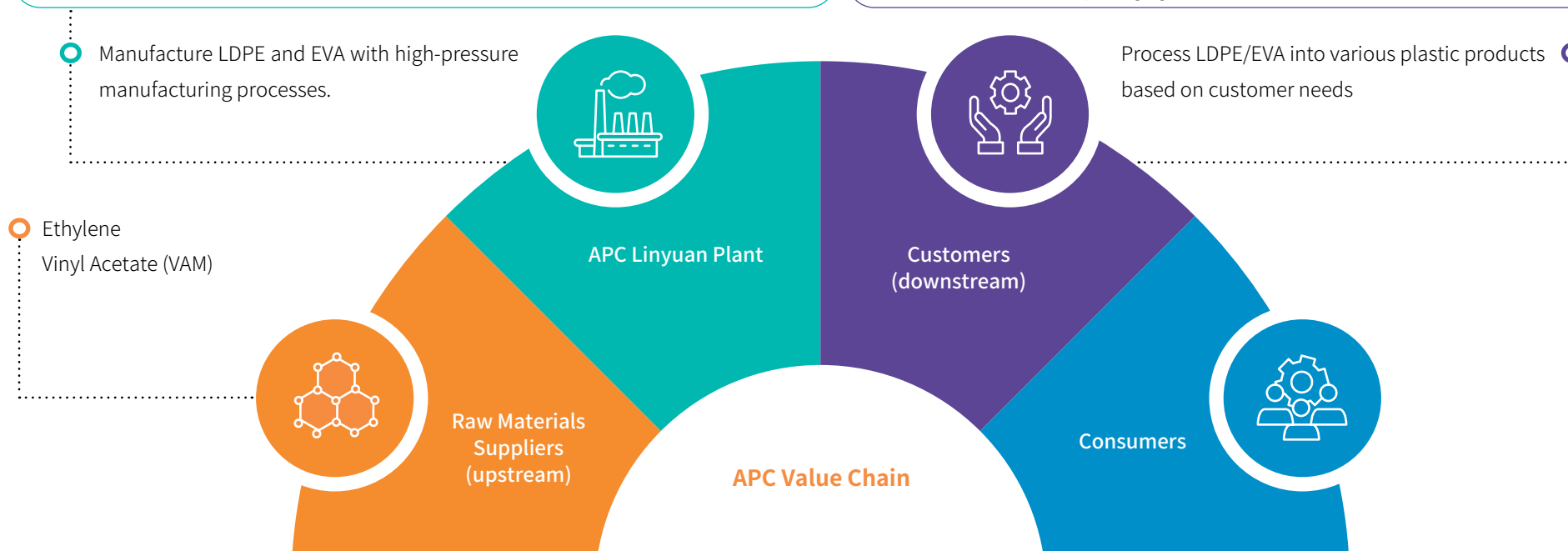
PV module packaging film



Foamed shoe materials



Pre-coating



Business Philosophy and Goals

As a member of USIG, we uphold USIG’s business philosophy: “solid operations, professional management, seeking excellence, and serving society” to pursue operational excellence and sustainable development. Through investment in upstream material ethylene and continual product innovation and R&D, we stabilize raw materials supply and fulfill the product customization of customers to create economic benefits and enhance production efficiency to achieve the vision of corporate sustainable operations and CSR.

APC Sustainability Strategy

Innovative Technology Through continual improvement of product quality and new product development, we aim to lead the market.

Sustainable Development Through continual process improvement, energy conservation, and waste reduction, we promote environmental sustainability and survival.

Safety and Harmony Through building a safe and harmonious workplace environment and public welfare participation, we fulfill our corporate social responsibility.

Membership associations GRI 2-28

Industry intelligence exchange is a drive for corporate growth. We actively participate in various professional groups and enhance influence by combining with external powers. Through this interaction and business association, we share and promote the professional technologies and competencies in various fields. We also sponsor associations to publish journals and organize activities so as to promote industry development.

Membership in Major Associations in 2022

Name of Organization	Petrochemical Industry Association of Taiwan	Taiwan Synthetic Resins Manufacturers Association	Taiwan Responsible Care Association (TRCA)	Industrial Safety and Health Association of the ROC	Kaohsiung County Industrial
Member	✓	✓	✓	✓	✓
Supervisor/Director	✓		✓		

1.3 Stakeholder engagement GRI 2-29

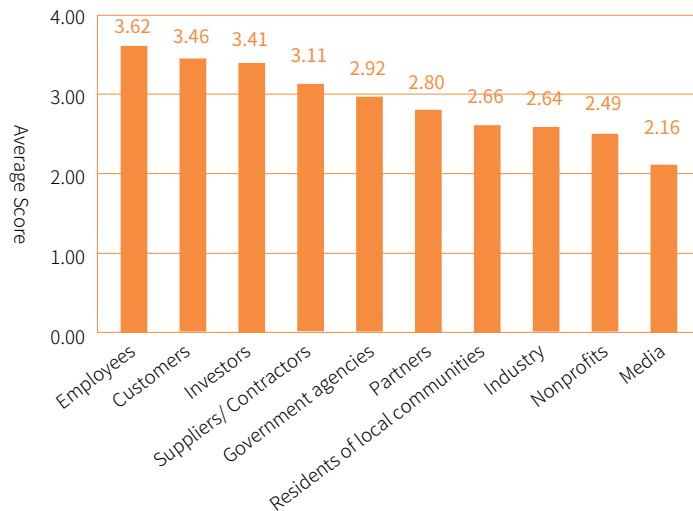
Identification of stakeholders

Every year the “ESG Committee Working Team” of representatives from 18 APC units evaluates and surveys stakeholders once. Each team member lists the stakeholders with close contacts and influence by business, such as employees, investors, customers, suppliers/contractors, community residents, government agencies, nonprofits, industry, partner, and the media.

Based on the five attributes of stakeholders as specified in the AA 1000 Stakeholder Engagement Standard (SES 2015): responsibility, influence, dependency, diverse perspectives, and tension, we scored each stakeholder group from 0-4 marks by the intensity of relationship to identify and evaluate stakeholders. The results, sorted by the average score, are diagrammed below:

After discussing the results of stakeholder identification and evaluation, based on the evaluation score the project secretary and three team leaders of the ESG Committee determined the following five major stakeholder groups: employees, customers, investors, suppliers/contractors, and government agencies. Additionally, “community residents” was also selected as a major stakeholder group in consideration of their close interaction with the Company, which requires our response. Then, the results of stakeholder engagement, including the identification of stakeholders, the issues that concern them, communication channels, and method of address, were submitted to the ESG Committee for approval and reported to the Board.

Prioritization of APC Stakeholders 2022






Based on the stakeholder attributes in AA 1000 SES (2015): Responsibility, influence, dependency, diverse perspectives, and tension




Major APC Stakeholder Groups 2022



Concerned issues and response

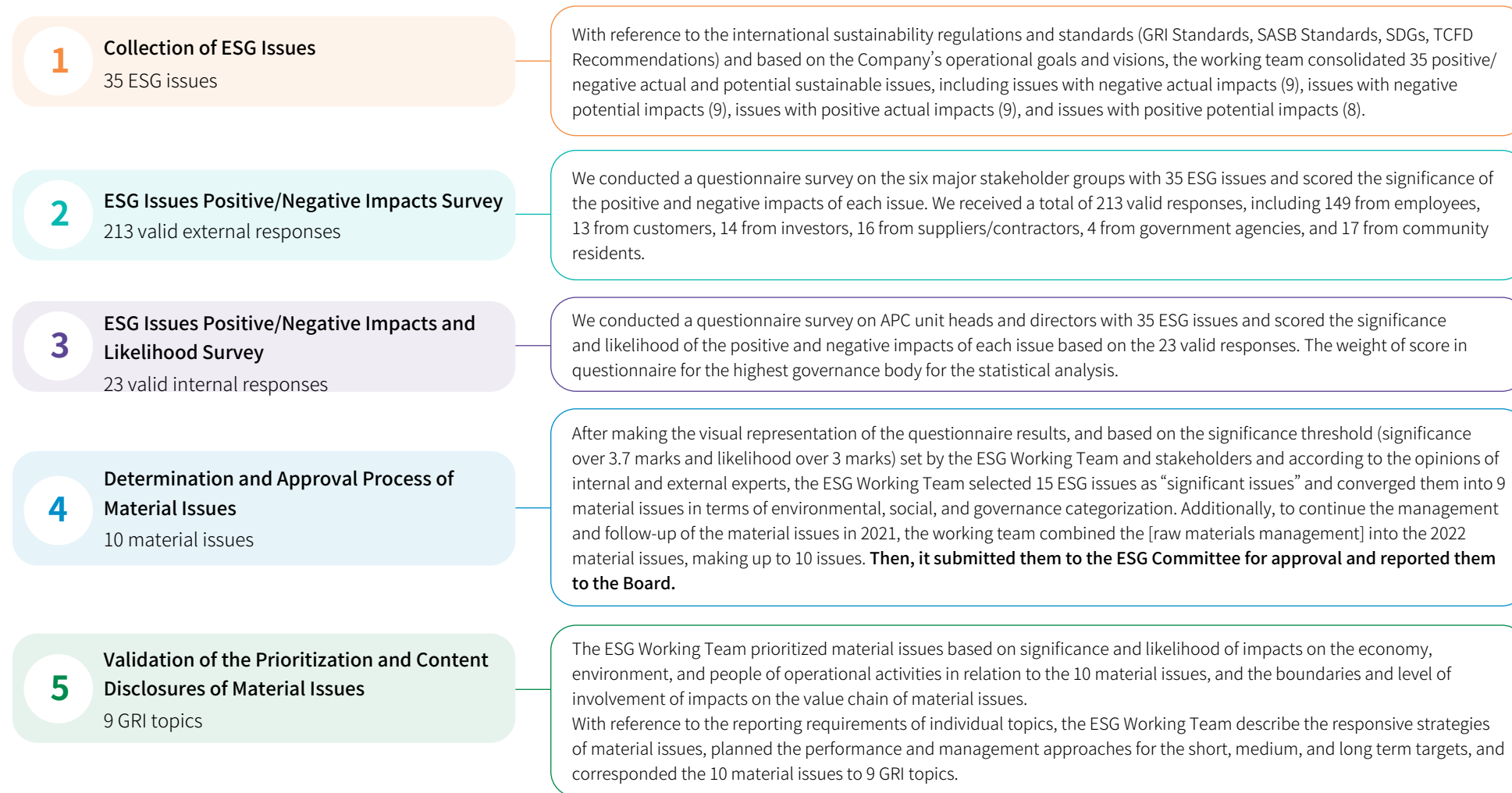
Through the external business communication in routine operations, the ESG Committee Working Team collected the “concerned issues and major communication channels” of the six major stakeholder groups and addressed the issues that concerned them and the status of implementation. The concerned issues, communication channels, and responses of major stakeholder groups in 2022 are tabulated below:

Major stakeholders	Materiality	Concerned Topic	Communication Channels and Frequency	APC’s Response	Status of Implementation	Response
 Employees	Employees are an important asset. Through well-structured salaries, welfare system, and education and training, we cohere employee engagement, enrich and enhance their professional knowledge and skills, and promote to mutual existence and mutual prosperity through sustainable development together with the Company.	<ul style="list-style-type: none"> Climate Change and Energy Management OH&S Talent attraction and retention 	<ul style="list-style-type: none"> Performance interviews (once a year) Employee welfare committee (thrice a year) Occupational Safety & Health Committee meeting (once a quarter) Employee health checkup (once a year) Education/training (as planned) Labor union general meeting (once a year) Labor union board meeting (four times a year) Pension Reserve Supervisory Committee meeting (twice a year) 	<ul style="list-style-type: none"> USI Green Energy Corporation (USIGE), a USIG business, will discuss the green power purchase contract with all USIG businesses in 2024. We arrange occupational safety education and training and emergency response drills for employees to achieve zero accidents. We offer appropriate remuneration, develop a well-structured welfare system, give a raise to employees based on their annual performance, and plan complete duty-based education and training to achieve talents development and retention. 	<ul style="list-style-type: none"> Annual performance evaluation and salary raise 3 Employee Welfare Committee meetings 4 OH&S Committee meetings 2 Pension Reserve Supervisory Committee meetings 4 sessions of employee health checkups 5,188 hours of employee education and training 6 sessions of health services by contracted physicians 	4.2 Climate change and energy management 5.1 Talent selection 5.2 Talent development 5.3 Healthy workplace
 Customers	Customers are the important partners of our operations and development. Through technological cooperation and product improvement, we provide customers with satisfactory products and services.	<ul style="list-style-type: none"> Climate Change and Energy Management Technology R&D SCM 	<ul style="list-style-type: none"> Sales visit (monthly) Customer satisfaction survey (at least once a year) Market survey (irregularly) Handling of customer feedback and customer complaints (irregularly) 	<ul style="list-style-type: none"> Set targets for energy conservation and carbon reduction and identify financial implications and other risks and opportunities due to climate change. Request all suppliers to supply raw materials that do not contain restricted or limited substances so as to comply with the regulations for sustainable materials. Request suppliers to sign the Supplier Commitment, conduct onsite supplier audits, and provide guidance for or request improvement from suppliers that fail the APC social and environmental assessments. 	<ul style="list-style-type: none"> Sales representatives visited customers 83 times/month on average. Technical service for 78 customers throughout the year. Overall customer satisfaction: 98% Completion rate of customer feedback handling: 100% 	3.1 Technology R&D 3.3 Supply chain management 4.2 Climate change and energy management
 Investors	Investors are the important supporters of our survival and development. Through capital investment and governance oversight, they enable the Company’s sustainable survival and development.	<ul style="list-style-type: none"> Economic Performance OH&S Climate Change and Energy Management 	<ul style="list-style-type: none"> Annual general meeting of shareholders (annually) Market Observation Post System (as prescribed by law) Publication of financial statements and annual reports (as prescribed by law) Contact information of spokespersons (irregularly) “Investor Service” section on the corporate website (irregularly) USIG Stock Home website on the corporate website (irregularly) Publication of the ESG report (annually) Audit Committee Email (irregularly) Investment conference (annually, minimum) 	<ul style="list-style-type: none"> We hold investor conferences for investors to understand the Company’s status of operations and future prospects. Publication of financial statements and annual reports as prescribed by law. Real-time publication of material information. Establish the “USIG Safety Incentives Regulations) to achieve OH&S the policy goal of “zero accident”. Electricity reduction by 1% each year through suggestions for process energy reduction and process improvement. USI Green Energy Corporation (USIGE), a USIG business, will discuss the green power purchase contract with all USIG businesses in 2024. 	<ul style="list-style-type: none"> Annual general meeting of shareholders (27 May 2022) Publication of financial statements and annual reports as prescribed by law. 2022 Corporate Governance Evaluation One investor conference in 2022 	2.2 Economic performance 4.2 Climate change and energy management 5.3 Healthy workplace

Major stakeholders	Materiality	Concerned Topic	Communication Channels and Frequency	APC's Response	Status of Implementation	Response
 Suppliers/ Contractors	Suppliers are the important partners that manufacture and supply raw materials and equipment to us. They affect our production, operations, and product quality.	<ul style="list-style-type: none"> SCM PSM OH&S 	<ul style="list-style-type: none"> Procurement procedures (on-demand) Supplier questionnaire survey (annually/new supplier) Performance review meeting (on-demand) Face-to-face review meeting (by product category) Purchaser visit (irregularly) Market survey (weekly) Contractor consultative organization meeting (irregularly) 	<ul style="list-style-type: none"> Request suppliers to sign the Supplier Commitment, conduct onsite supplier audits, and provide guidance for or request improvement from suppliers that fail the APC social and environmental assessments. Implement the 14 items required by PSM based on regulatory requirements and reduce process risk through USIG audits. Establish the "USIG Safety Incentives Regulations) to achieve OH&S the policy goal of "zero accident". 	<ul style="list-style-type: none"> Survey on issues that concern suppliers, Once Secondary Material Purchasing Planning Meeting, irregularly Market survey report, weekly Purchaser visits, irregularly 	3.3 Supply chain management 5.3 Healthy workplace
 Government agencies	Government agencies are an important indicator and direction for business development and market cultivation. Addressing the legal compliance of government agencies is the basic concept and principle for business survival and development.	<ul style="list-style-type: none"> PSM OH&S Water resources management 	<ul style="list-style-type: none"> Exchange of official documents and report of material information and data (as prescribed by law) Participation in law and regulation outreach activities or public hearings. (as prescribed by law) Participation in forums, seminars, or annual conferences (as prescribed by law) Onsite investigation (as prescribed by law) Market Observation Post System (as prescribed by law) 	<ul style="list-style-type: none"> Implement the 14 items required by PSM based on regulatory requirements and reduce process risk through USIG audits. Abide by the laws and regulations of government agencies and achieve the OH&S policy goal of "zero accident" based on the "USIG Safety Incentives Regulations). Establish the 3-stage water conservation measures to save water consumption by 10%, and fill insufficiencies through water purchase with water tankers. 	<ul style="list-style-type: none"> Exchange of official documents with government agencies: 10 documents/month on average Legal outreach: 5 sessions/month on average Forums or seminars: 3 sessions/month on average Onsite inspection: 41 times/year 	4.1 Resources management 5.3 Healthy workplace
 Residents of local communities	Community residents are our close partners. Apart from being one of the main workforce sources, they are the supervisor of our operations, industrial safety, and environmental protection.	<ul style="list-style-type: none"> Social engagement OH&S Air pollution control Underground pipeline transportation 	<ul style="list-style-type: none"> Participation in community activities (irregularly) Organization of the tennis friendship competition (annually) Establishment of scholarships and promotion of talent development (annually) Onsite sampling inspection (daily) Community visit (irregularly) Engagement in educational activities (irregularly) Prevention of third-party damage (irregularly) 	<ul style="list-style-type: none"> Establish sound interactive relationships with community residents through participation in community activities and community visits for them to understand plant operations and prevent misunderstandings. Abide by the laws and regulations of government agencies and achieve the OH&S policy goal of "zero accident" based on the "USIG Safety Incentives Regulations). Implement VOCs leakage tests periodically through internal and external units to ensure the health and safety of the workplace environment and community residents. Explain the status of pipeline operation and related issues to community residents during pipeline construction inspections and residency. 	<ul style="list-style-type: none"> Visited village and neighborhood heads irregularly. Adopted the "Air Quality Purification Zone Adoption Program" for Wang Gung Elementary School Implemented the Wang Gung Elementary School GHG Emissions Matching Plan Participated in the activities of the Kaohsiung Environmental Protection Bureau. Organized the USIG Cup Tennis Competition Sponsored the charitable activities organized by the USI Education Foundation. Conducted pipeline construction residency and inspections to prevent third-party damage. 	4.3 Emissions management 5.3 Healthy workplace 5.4 Social engagement

1.4 Materiality analysis

Process to determine material topics GRI 3-1



Each year the working team reviews the consistency between the analysis results of material issues and three APC sustainability principles: Innovative Technology, Sustainable Development, Safety and Harmony and their performance.

Results of Material Issue Identification 2022

	Significance	Material Topic
Environmental	Negative Actual - Increased energy prices - Insufficient power supply	Climate Change and Energy Management (GRI 302 Energy)
	Negative Potential Carbon tax collection	
	Negative Actual Insufficient reservoir water	Water resources management (GRI 303 Water and Effluents)
	Negative Actual Improper air pollution control	Air pollution control (GRI 305 Emissions)

	Significance	Material Topic
Social	Positive Actual Building a friendly workplace environment	OH&S (GRI 403 Occupational Health and Safety)
	Positive Potential A happy workplace and business	
	Negative Actual Improper process safety management	PSM
	Negative Potential Accidents of highly hazardous chemical substance	
	Negative Potential No succession plan	Talent attraction and retention (GRI 401 Employment)

	Significance	Material Topic
Governance	Positive Potential Manufacturing transformation --Extrication from industry burdens Success in the development of sustainable materials	Technology R&D
	Positive Actual New product development and product diversity	
	Positive Actual Proper supply chain management	SCM (GRI 308: Supplier Environmental Assessment) (GRI 414 Supplier Social Assessment)
	Positive Actual Steady growth in financial performance	Economic Performance (GRI 201 Economic Performance)

List of Material Issues 2022 GRI 3-2



Environmental (E)

1. Climate change and Energy management
2. Water management
3. Air pollution control
4. Raw materials management



Social (S)

1. OH&S
2. PSM
3. Talent attraction and retention



Governance (G)

1. Technology R&D
2. Supply chain management
3. Economic performance

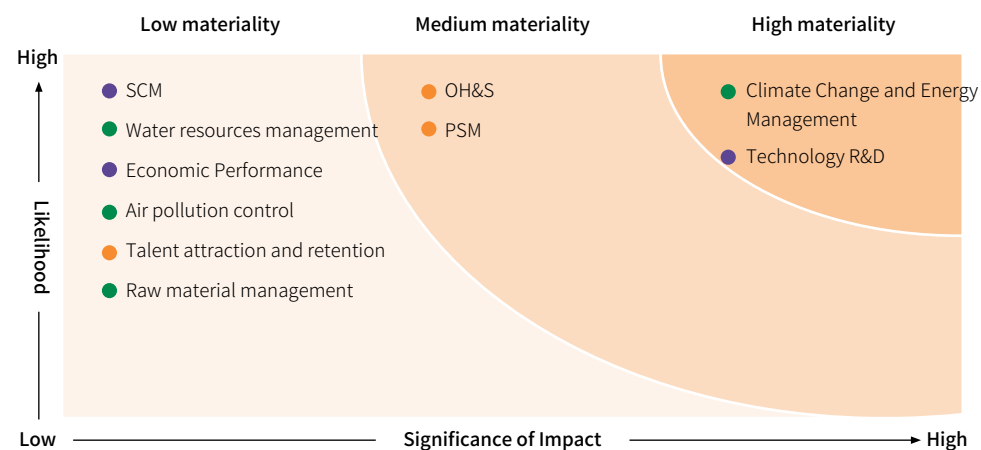
Description: To continue the management and follow-up of the short, medium, and long-term goals set in 2021, we included [**raw materials management**] in to material issues of 2022, **making up to 10 issues**.

Material Issue Comparison: 2022 vs. 2021:

Aspects	Material Topics		Changes	Causes of Change
	2022	2021		
Environmental	Climate Change and Energy Management	Climate Change and Energy Management		The extreme weather events due to climate change are still an issue of global concern, and businesses should make early preparation for the EU policies.
	Water resources management	---	Add	Water shortages have been increasing in southern Taiwan in recent years, making water management an increasingly important topic to both APC and stakeholders.
	Air pollution control	Air pollution control		Air quality is still an issue of public concern in the petrochemical sector, and its impacts are concerned by community residents.
	Raw material management	Raw material management		Continue the management and follow-up of the short, medium, and long-term goals set in 2021.
Social	OH&S	OH&S		A safe workplace environment has always been the issue that concerns both employers and employees most, and the provision of a friendly and happy workplace environment is the expectation from businesses.
	PSM	PSM		Process safety is crucial to the safety of both employees and community residents and an undeniable issue to the management of highly hazardous chemicals.
	Talent attraction and retention	Talent attraction and retention		Talent retention is an important basis for business operations. Hence, it is necessary to value employee benefits and training and the succession plan to prevent talents gap.
Governance	Technology R&D	Technology R&D		The development of sustainable materials and business transformation matter corporate competitiveness.
	SCM	---	Add	Understanding the impact on business operations, society, and the environment of suppliers and practicing supplier management are crucial to corporate sustainable development.
	Economic Performance	Economic Performance		The steady growth of financial performance is the prime issue of corporate sustainable development.

Identification and Boundaries of Material Issues

After determining ten material issues through the materiality analysis, the working team prioritized material issues by high, medium, and low materiality based on their significance and likelihood and corresponded them to the GRI specific topics and topic boundaries.



Materiality Sorting	Aspects	Material Topics	Reasons for Materiality	Corresponding GRI Standards Material Topic	Topic Boundaries			GRI Management Approach Corresponding Section	
					Level of Involvement	Scope of Impact			
						Upstream (Note 1)	Business Operations		Downstream (Note 2)
1	Environmental	Climate change and Energy management	All businesses must face extreme weather events due to climate change and cannot avoid the necessity of improving energy efficiency and reducing GHG emissions.	GRI 302 Energy 2016 GRI 305 Emissions 2016	<ul style="list-style-type: none"> The compliance with the Greenhouse Gas Reduction and Management Act (now Climate Change Response Act) and the Energy Administration Act and enhancement of energy efficiency directly impact APC Linyuan Plant and indirectly impact government agencies and community residents. The technology and experience exchange of energy conservation and carbon reduction will also indirectly affect out partners. 	<ul style="list-style-type: none"> Government agencies Partners (Note 3) 	<ul style="list-style-type: none"> APC Linyuan Plant 	<ul style="list-style-type: none"> Community agencies 	4.2 Climate change and energy management
2	Governance	Technology R&D	Developing new products and improving product quality can enhance market competitiveness, and fulfilling customer demands is the foundation of our sustainable development.	N.A.	<ul style="list-style-type: none"> Technology R&D capacity affects product competitiveness and business operations, which directly impact employees and customers. The Company's operational growth indirectly impacts investors and partners. 	<ul style="list-style-type: none"> Investors Partners 	<ul style="list-style-type: none"> Taipei HQ APC Linyuan Plant 	<ul style="list-style-type: none"> Customers 	3.1 Technology R&D
3	Social	PSM	As accidents of the primary process are often catastrophic to petrochemical plants, PSM implementation has become a trend in Taiwan's petrochemical sector. To prevent low-likelihood and high-hazard critical accidents, PSM is crucial to APC.	N.A.	<ul style="list-style-type: none"> Process safety accidents directly impact plant operations and employee safety, with the scope of impact covering Linyuan Plant, investors, government agencies, and customers. They also indirectly affect customer demands and community resident safety. 	<ul style="list-style-type: none"> Investors Partners 	<ul style="list-style-type: none"> APC Linyuan Plant 	<ul style="list-style-type: none"> Customers Community residents 	5.3 Healthy workplace
4	Social	OH&S	A healthy and safe workplace environment concerns workers most. Hence, we must implement safety and health management and provide employees and non-employees with a healthy and safe workplace environment.	GRI 403 Occupational-health-and-safety-2018	<ul style="list-style-type: none"> Implementing safety and health management can prevent accidents and directly impact APC employees and workers engaging in the relevant operations and activities in Linyuan Plant. Legal compliance indirectly impacts government agencies. 	<ul style="list-style-type: none"> Suppliers/Contractors Government agencies 	<ul style="list-style-type: none"> APC Linyuan Plant 		5.3 Healthy workplace
5	Governance	SCM	Issues in relation to sustainable operations and supply chain risk management are gaining importance. Hence, it is very important for us to understand the impacts on corporate operations, society, and the environment of suppliers and implement supplier management.	GRI 308 Supplier Environmental Assessment 2016 GRI 414 Supplier Social Assessment 2016	<ul style="list-style-type: none"> Add the Supplier CSR Commitment as a requirement for new supplier evaluation. This directly impacts APC suppliers/contractors. Undersupply or quality instability of suppliers directly impact Linyuan Plant and customers. 	<ul style="list-style-type: none"> Suppliers/Contractors 	<ul style="list-style-type: none"> Taipei HQ APC Linyuan Plant 	<ul style="list-style-type: none"> Customers 	3.3 Supply chain management
6	Environmental	Water resources management	Due to global warming and climate change, water shortages have become increasingly severe in Taiwan in recent years. The government's water rationing measures will directly affect the operation of our production lines.	GRI 303 Water and Effluents 2018	<ul style="list-style-type: none"> The government's water rationing measures prevent the optimal operation of production lines and affect production costs to directly impact the operating cost of Linyuan Plant. Reduced raw materials demand and product supply indirectly impact suppliers and customers. 	<ul style="list-style-type: none"> Suppliers/Contractors 	<ul style="list-style-type: none"> APC Linyuan Plant 	<ul style="list-style-type: none"> Customers 	4.1 Resources management

Materiality Sorting	Aspects	Material Topics	Reasons for Materiality	Corresponding GRI Standards Material Topic	Topic Boundaries			GRI Management Approach Corresponding Section	
					Level of Involvement	Scope of Impact			
						Upstream (Note 1)	Business Operations		Downstream (Note 2)
7	Governance	Economic Performance	Operational growth is crucial to business survival. Hence, economic performance is the prime issue of sustainable development.	GRI 201 Economic Performance 2016	· Economic performance matters business profitability and directly impacts employees and investors.	● Investors	● Taipei HQ ● APC Linyuan Plant	2.2 Economic performance	
8	Environmental	Air pollution control	Apart from violating the requirements of environmental protection regulations, air pollutant emissions also affect the air quality in the living environment.	GRI 305 Emissions 2016	· The legal compliance of air pollutant emissions and implementation of emission reduction plans directly impact Linyuan Plant. · Air pollutant emissions affect the air quality around the plant and directly impact community residents.		● APC Linyuan Plant ● Community residents	4.3 Emissions management	
9	Social	Attracting Talent Retention	Employees are an important asset. Through well-structured salaries and benefits and the provision of a safe workplace environment, we attract and retain talent to bring in the power of sustainable development.	GRI 401 Employment 2016	· The salary, welfare system, and workplace environment directly impact APC employees.		● Taipei HQ ● APC Linyuan Plant	5.1 Talent selection 5.2 Talent development	
10	Environmental	Raw material management	The circular economy has been gaining weight in environmental protection. Apart from reducing waste generation, it helps enhance materials efficiency and reduce production costs.	GRI 301 Materials 2016	· The production efficiency of raw materials and the control of materials recycling and reuse affect the production costs and directly impact the operating cost of Linyuan Plant. · They also indirectly impact the suppliers and contractors of raw materials.	○ Suppliers/Contractors	● APC Linyuan Plant	4.1 Resources management	

Note: 1. Upstream boundaries: Suppliers/contractors, investors, partners, and government agencies are the inputs that affect corporate operations.

2. Downstream boundaries: Customers and community residents are the outputs affected by corporate operations.

3. ● Direct impact; ○ Indirect impact

CH2 Operations and Governance

Corporate governance GRI 2-9, 2-10, 2-11, 2-12, 2-13, 2-14 25
GRI 2-15, 2-16, 2-17, 2-18, 2-20, 2-21

Economic performance GRI 3-3, 201-1, 201-4 35

Risk management GRI 2-23, 2-24, 2-25, 2-26, 2-27, 3-3 39

Performance Highlights

- ✓ **Gold Award of Corporate Sustainability Report Awards** in traditional manufacturing industries at the 15th Taiwan Corporate Sustainability Awards (TCSA) 2022
- ✓ Ranked top **21-35%** at the 9th Corporate Governance Evaluation
- ✓ Revenues: NT\$**9.815** billion
- ✓ Net income after tax: NT\$**1.447** billion
- ✓ Total output: **130,120**MT

Material Topics

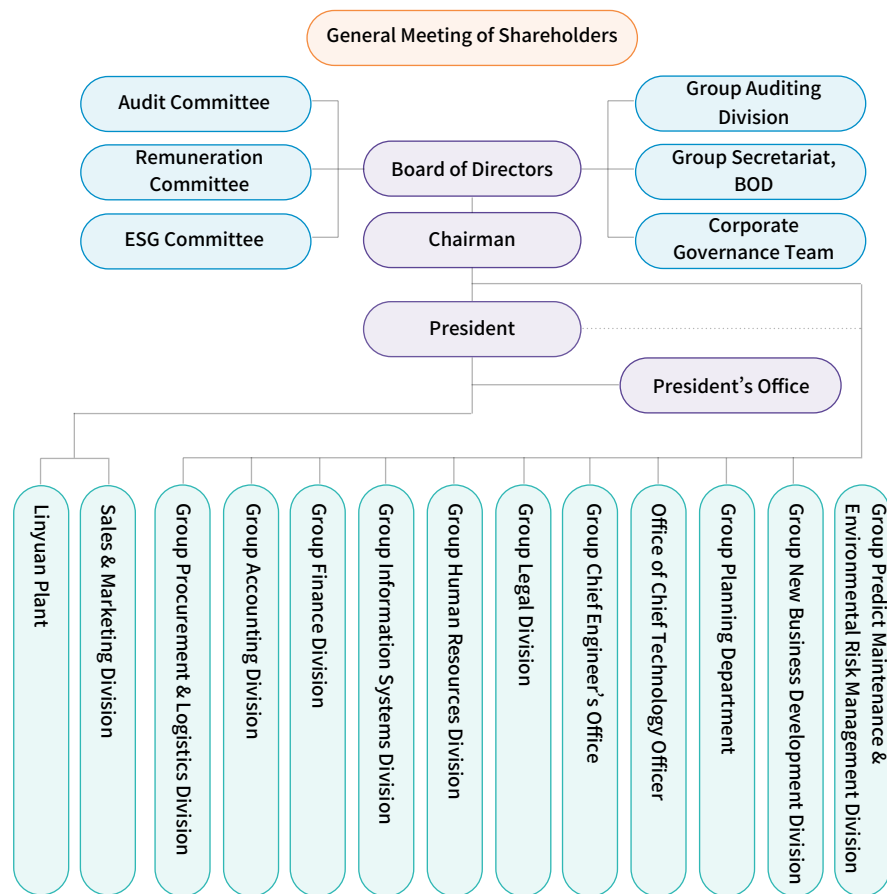
Economic Performance

SDGs Correspondence



2.1 Corporate governance

Governance structure GRI 2-9



Note: In terms of organizational framework, the Procurement & Logistics Division, Group Finance Division, Group Information Systems Division, Group Human Resources Division, and other common departments belong to USIG, and each department has responsible staff to take charge of APC's business.

Board operation GRI 2-9, 2-10, 2-11, 2-13

APC's Board is formed by nine directors with rich experience in each professional field. There are four independent directors, commanding at 44% of all directors. The term of each director is three years, and each director is entitled to a second term.

We adopt the candidate nomination system for the directorial (including independent directors) election. The Board along with shareholders holding over one percent of the total issued shares may nominate candidates to be listed the List of Candidates for Directors and Independent Directors. After candidate qualification by the Board, the List of Candidates for Directors and Independent Directors is presented at the AGM for shareholders to vote on.

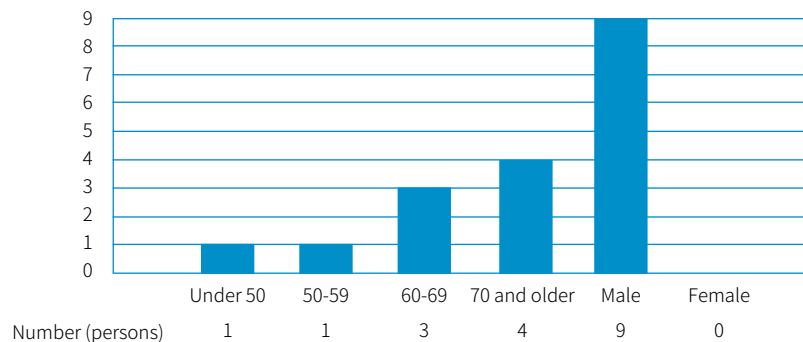
The term of the current board of directors commenced on 27 May 2022 and will end on 26 May 2025. A total of seven board meetings were held in 2022, with a personal attendance rate (including independent directors) of 96.83% (100% including attendance by proxies).

The Board is led by the chairman. Please refer to [p.27](#) of the APC Annual Report 2022 and the [board information](#) on the APC corporate website for more information.

The chairman convenes and chairs at least one board meeting each quarter (please refer to the [Rules of Procedure of Meetings of Board of Directors](#)). Under the Board there are functional meetings including the Remuneration Committee, Audit Committee, and ESG Committee. Each committee holds committee meetings to report, discuss, and resolve proposals before referring them to the Board for reporting, discussion, and resolution.

Current team	27 May 2022 to 26 May 2025
Member	Directors: Quintin Wu (chairman), Kuo-Hung Li, Pei-Chi Wu (president), Hung-Chu Wu, I-Hsiao Ko Independent directors: Frank Chen, Shang-Hung Shen, Tung-Chien Cheng, Chien-Ping Chen
Gender of members	Male: 9, Female: 0
Age of members	Under 50 years old: 1, 50-59 years old: 1, 60-69 years old: 3, 70 years old and older: 4

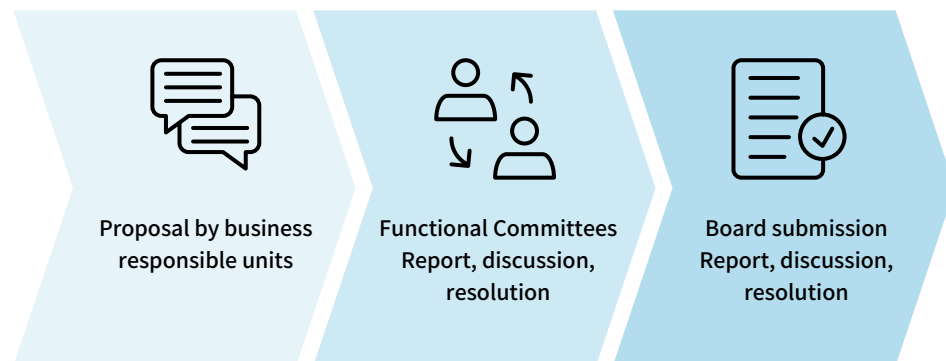
Age and Gender Distributions of Board Members



Process of proposal submission to the Board GRI 2-12, 2-16

The business responsible unit submits proposals to the functional committee(s) for discussion. After making the resolution, the functional committee(s) forward the proposals to the Board for discussion and resolution. After the meeting, functional committees and the Secretary Office of the Board produce the meeting minutes containing the procedure and resolution of meetings. Additionally, we have established the Secretary Office under the Board to plan and prepare matters relating to Board meetings, so as to enhance the efficiency of board meeting and help implement Board resolutions.

Important Board resolutions of 2022 (Please visit the [Board Resolution](#) section of our corporate website or refer to pp. 94-95 of the APC Annual Report)



Performance of the board member diversity policy

I. Performance of the board diversity policy GRI 2-10

In accordance with Article 20 of our [Corporate Governance Best Practice Principles](#), diversity should be considered for Board composition, and members should be equipped with the knowledge, skills, and competencies required by their duties.

To achieve the ideal goal of corporate governance, the board of directors shall possess the following abilities:

- ✓ Ability to make operational judgments
- ✓ Ability to perform accounting and financial analysis
- ✓ Ability to conduct operations and administration
- ✓ Ability to conduct crisis management
- ✓ Knowledge of the industry
- ✓ An international market view
- ✓ Leadership ability
- ✓ Decision-making ability

In addition to the above eight professional abilities required for carrying out their duties, and in response to the increasing global concerns about issues relating to corporate governance and environmental protection, three directors are also “legal” and “environmental” specialists and some directors also specialize in risk control and sustainable development to supervise the management team and promote various corporate sustainable development plans.

II. Targets for management of board diversity GRI 2-17

To recruit excellent talent from outside the company to the Board to achieve board member diversity, we increased the number of independent directors from three seats to four seats, and all were selected on 27 May 2022. Mr. Chien-Ping Chen is a new independent director to APC. Graduating from the MBA Program of the University of California, Mr. Chen has been the chairperson of Ta Chong Commercial Bank. With rich experience in finance and banking, he specializes in financial risk control to help improve the Board’s review quality of financial proposals. This also helps achieve the goal of the board member diversity policy. In the future, a director with professional experience in sustainability development will be the next target for board diversity. Such experience can help us realize the carbon reduction goal and implement the green power policy. A director specializing in operational risk control is another target to enhance our corporate competitiveness. With such an establishment, the Board functions will be more complete.

III. Performance of the board member diversity policy GRI 2-17

Name of Director	Gender	Diversity of board members									
		Operational judgments	Accounting finance	Management administration	Crisis management	Industry background knowledge	International market	Ability to lead	Ability to make policy decisions	Law	Eco-friendly
Quintin Wu	Male	✓	✓	✓	✓	✓	✓	✓	✓		
Kuo-Hung Li	Male	✓	✓	✓	✓	✓	✓	✓	✓		✓
Pei-Chi Wu	Male	✓		✓	✓	✓	✓	✓	✓		
Hung-Chu Wu	Male	✓		✓	✓			✓	✓		
I-Hsiao Ko	Male	✓		✓	✓	✓	✓	✓	✓		
Ta-Hsiung Chen	Male	✓	✓	✓	✓		✓	✓	✓	✓	
Shang-Hung Shen	Male	✓	✓	✓	✓		✓	✓	✓		✓
Tun-Chien Cheng	Male	✓	✓	✓	✓		✓	✓	✓		
Chien-Ping Chen	Male	✓	✓	✓	✓			✓	✓		

Note 1: Currently, 22% of directors are also employees, and 44% of them are independent directors.

Note 2: Regarding age distribution, 4 directors are aged 70 years old and above; 3 directors are aged 60-69 years old; 1 director is aged 50-59 years; and 1 director is under 50 years old.

Note 3: No independent director is in office for over three terms.

Improvement of professional competency of directors GRI 2-17

To enhance the professional competencies of directors, we provide them with information of the relevant continuing education courses regularly and help them register to such courses. In 2022 we arranged 6 hours of continuing education courses for them, including “Risks and Opportunities of Climate Change and Net Zero Policy on Business Operations” and “Takeover and Introduction to the Commercial Case Adjudication Act”, each three hours. The total hours of external continuing education for directors and independent directors in 2022 were 58 hours. Please refer to [pp. 31-32 of the APC 2022 Annual Report](#) for more information regarding the continuing education courses and their lengths.

Avoidance of conflicts of interest of directors GRI 2-11, 2-15

For directors to avoid conflicts of interest (including impact on the economy, environment, and people), the Board has established complete systems and measures described as follows:

1 System for avoidance of interest

(1) To ensure positive governance and for the Board to understand matters causing conflicts of interest with the organization so as to protect the rights and interests of investors, we have specified in Article 16 of the Rules of Procedure for Meetings of Board of Directors: “If a director or a legal person that the director represents is an interested party in relation to an agenda item, the director shall state the important aspects of the interested party relationship at the respective meeting. When the relationship is likely to prejudice the interest of this Corporation, that director may not participate in discussion or voting on that agenda item and shall recuse himself or herself from the discussion and the voting on the item and may not exercise voting rights as proxy for another director.”

(2) To reinforce disclosures of directors’ involvement in proposals or situations having interests in themselves, we have also specified in Article 17 of the Rules of Procedure for Board of Directors Meetings: “Discussions at a board meeting shall be recorded in detail in the meeting minutes, the name of director(s) involving a conflict of interest, an explanation of the important aspects of the relationship of interest, the reasons why the director was required or not required to avoid the conflict of interest.”

2 To develop sound corporate governance and independent director systems so that independent directors may demonstrate their functions on the Board and in corporate operations, we have established the “[Rules Governing the Scope of Powers of Independent Directors](#)” to stipulate that: “When an independent director expresses objections or reservations about any of the matters, they shall be recorded in the board meeting minutes”, “the Company shall not obstruct, refuse, or avoid the actions of independent directors in business execution,” and “as they deem necessary for business execution, independent directors may request the board to appoint relevant personnel or may hire by themselves professionals for assistance” to enable independent directors to carry out their duties so as to effectively enhance the

efficiency of Board operation and improve the Company’s operational performance.

3 Measures for avoidance of conflicts of interest: When discussing a proposal constituting a conflict of interest for one or more directors, the meeting chair shall remind such directors to recuse themselves from the discussion. If the chair should also be recused, she/he shall assign a director having no conflict of interest with the proposal to act as the chair.

4 The secretary office of the board of directors has recorded contents involving conflicts of interest with directors in the board meeting minutes in accordance with Article 17 of the Rules of Procedure for Board of Directors Meetings.

5 To address the avoidance of conflicts of interest, the Board has established complete systems and measures (please refer to [the Code of Ethical Conduct for Directors and Managerial Officers](#), [Ethical Corporate Management Best Practice Principles](#), and [Procedures for Ethical Management and Guidelines for Conduct](#)).

APC Board’s performance in avoidance of conflicts of interest in proposals in 2022

Name of Directors	Proposal	Reasons for Avoidance	Participation in voting	Remarks
Quintin Wu Pei-Chi Wu Han-tai Liu	Donation to the USI Education Foundation	Directors recusing themselves from the proposal were also the directors of the Foundation.	Abstained from voting	1 st Board Meeting in 2022 9 March 2022
Shang-Hung Shen Ta-Hsiung Chen Tun-Chien Cheng	Appointment of independent directors Shang-Hung Shen, Ta-Hsiung Chen, and Tun-Chien Cheng as the members of the Company’s Remuneration Committee.	A conflict of interest with directors.	Abstained from voting	4 th Board Meeting in 2022 2 June 2022
Pei-Chi Wu	Non-compete behavior of officers	A conflict of interest with directors.	Abstained from voting	5 th Board Meeting in 2022 3 August 2022 6 th Board Meeting in 2022 2 September 2022 7 th Board Meeting in 2022 2 November 2022

Board performance evaluation GRI 2-18

I. Results of performance evaluation of the Board and directors in 2022

- ① In accordance with the “Regulations for Performance Evaluation of the Board of Directors” amended and passed by the Board in November 2019, the performance of the entire Board and individual directors should be evaluated after the end of each fiscal year.
- ② The Board Secretary Office conducts the performance evaluation of the Board and individual directors by means of self-assessment. The results of performance evaluation will serve as the reference of corporate reviews and improvements and the reference for the remuneration and nomination for election of individual directors.
- ③ The performance evaluation was for the period from 1 January 2022 to 31 December 2022 and it was completed the performance evaluation in January 2023. The results of evaluation are consolidated as follows:

(1) Overall board performance

Aspect of Evaluation	Score (Note)	Results of evaluation and supplementary notes
Participation in the company’s operations.	4.67	1. The results of the overall Board performance evaluation show that the average score of the five major aspects is 4.6, which means “good”. 2. The unstable international situation and the continuation of the Russo-Ukrainian War and pandemic in the last year all affected corporate operations. Facing the uncertain future political and economic conditions, the Board and management should keep close track on the various challenges and risks that the Company faces and supervise all responsible units to propose countermeasures. Additionally, to achieve corporate sustainable development, we will continue to implement carbon reduction and plan green power solutions to meet the international standards.
Improvement of the decision quality of the board of directors.	5	
Composition and structure of the board of directors.	5	
Selection and continuing education of directors.	4.67	
Internal control	5	
Note: Score range: 0-5, 5 is the highest.		

(2) Director Performance

Aspect of Evaluation	Score (Note)	Results of evaluation and supplementary notes
Corporate targets and mission control	4.67	1. The results of director self-assessment show that the average score of all six major aspects is over 4.5, which means “good”.
Duty awareness of directors	4.74	
Participation in the company’s operations.	4.68	
Internal relationship development and communication	4.56	
Expertise and continuing education of directors.	4.67	
Internal control	4.67	
Note: Score range: 0-5, 5 is the highest.		

- ④ The results of 2002 performance evaluation of the entire Board and individual directors were reported to the 2023Q1 board meeting.

II. Results of performance evaluation of functional committees in 2022

The performance evaluation for the period from 1 January 2022 to 31 December 2022. The results of evaluation are consolidated as follows:

(1) Performance assessment of the Audit Committee

Aspect of Evaluation	Score (Note)	Results of evaluation and supplementary notes
Participation in the company's operations.	4.88	The results of director self-assessment show that the average score of all five major aspects is over 4.5, which means "good".
Duty awareness of the Audit Committee	4.75	
Improvement of the decision-making quality of the Audit Committee	4.67	
Composition and member selection of the Audit Committee	4.88	
Internal control	4.5	
Note: Score range: 0-5, 5 is the highest.		

(2) Performance assessment of the Remuneration Committee

Aspect of Evaluation	Score (Note)	Results of evaluation and supplementary notes
Participation in the company's operations.	4.83	The results of performance evaluation of the Remuneration Committee show that the average score of all four major aspects is over 4.6, which means "good".
Duty awareness of the Remuneration Committee	4.67	
Improvement of the decision-making quality of the Remuneration Committee	4.67	
Composition and member selection of the Remuneration Committee	4.83	
Internal control	4.5	
Note: Score range: 0-5, 5 is the highest.		

Recommendation and implementation:

In view of the increasing global attention to ESG issues, we have substantively implemented various measures in accordance with the Corporate Governance 3.0 Sustainability Roadmap published by the competent authorities. We have also reported those measures to the ESG Committee meeting and Board meeting to explain to the directors, who have also gave valuable opinions to those measures.

Apart from continuously enhancing corporate governance, we have also **planned carbon reduction targets and implemented carbon reduction and planned and implemented green power development strategies** to meet the international standards so as to achieve the ultimate goal of corporate sustainable development.

Chief corporate governance officer (CCGO)

To protect the rights and interests of shareholders and improve the competence of the board of directors, BOD made a resolution on 9 May 2019 to assign Director of Legal Division, Erik Chen to be the Chief Corporate Governance Officer (CGO) as the top officer of USI's corporate governance.

Key practices in 2022

- ✓ Assisted directors in carrying out their duties, provided them with the required data, and arranged continuing education and directors' and officers' liability insurance (D&O).
- ✓ Prepared the agenda for board meetings and AGM and verified the legal compliance of resolutions.
- ✓ Maintained investor relations.

Irregularly updated the information of the corporate website for investors to understand the Company's finance, sales, and governance so as to maintain the rights and interests of shareholders.

In 2022 Division Chief **Yung-Chih Chen** was the CCGO and received **43** hours of continuing education. Please refer to [p. 32](#) of the **APC Annual Report 2022** for more information.

Functional Committees GRI 2-9

Under the Board, we have established three functional committees: Audit Committee, Remuneration Committee, and ESG Committee to establish and review policies in relation to the responsibility and authority of each committee to strengthen corporate governance.

Title	Name	Audit Committee	Remuneration Committee	ESG Committee
Chairman	Quintin Wu	---	---	Committee
President	Pei-Chi Wu	---	---	Deputy Chief
Independent Director	Ta-Hsiung Chen	Committee	Convener	---
Independent Director	Shang-Hung Shen	Convener	Committee	---
Independent Director	Tun-Chien Cheng	Committee	Committee	Chief
Independent Director	Chien-Ping Chen	Committee	---	Committee

Audit Committee

The term of the current committee commenced on 27 May 2022 and will end on 26 May 2025. There are four seats in the committee formed by all independent directors.

In 2022 a total of 7 committee meetings were held, with a personal attendance rate (including independent directors) of 96% (100% including attendance by proxies). Please refer to [pp. 34-39](#) of the **APC Annual Report 2022** for more information regarding Audit Committee operation.

Remuneration Committee GRI 2-19, 2-21

① The term of the current committee commenced on 2 June 2022 and will end on 26 May 2025. There are three seats in the committee formed by all independent directors.

② The Remuneration Committee holds at least two committee meetings each year. Three committee meetings were held in 2022, with a personal attendance rate of

members of 100%. Please visit the [Remuneration Committee](#) section of our corporate website or the [Market Observation Post System \(MOPS\)](#) or refer to [pp. 58-60](#) of the APC Annual Report 2022 for more information regarding committee operation.

③ Apart from periodically reviewing the (1) performance evaluation and (2) salary and remuneration policy, system, standard, and structure of directors and officers, the Remuneration Committee also determines and assesses the salary and remuneration of directors and managers with reference to the median earnings in the industry; the duration of engagement, duty, and target accomplishment of each role; the salary and remuneration for the same role; achievement of the Company's short- and long-term sales targets; and the Company's financial condition; and submit the results to the Board for approval. GRI 2-20

- **Salary and remuneration:** The remuneration for directors covers remuneration, director profit sharing, and income for professional practice; and the compensation for managerial officers includes the monthly salary, fixed-amount bonuses, year-end bonus, employee profit sharing, annual special bonus, pension contribution and benefit payments by law. The profit sharing for directors and employees are subject to Article 18 of the articles of incorporation. The total compensation ratio and ratio of the percentage change in total compensation in 2022 were 4.11:1 and -81.06% respectively.
- **Performance evaluation:** The performance evaluation of directors covers the alignment with the corporate goals and missions, awareness of the directorial duties, development and communication of internal relationships, expertise and continuing professional development, and internal controls. The performance evaluation of managerial officers covers the finance (revenues, profits, and net income before tax), customers (customer satisfaction, service quality, and others), products (branding, quality innovation, and others), talents (talents development, potential development, and others), safety and profits (digital transformation, energy conservation and carbon reduction, circular economy, net zero emissions, and others), and medium-long-term goals for corporate sustainable development.

Note1: Total compensation ratio: The ratio of the total compensation for the organization's highest-paid individual to the median annual total compensation for all employees (excluding the highest-paid individual).

Note2: Ratio of the percentage change in total compensation: The ratio of the percentage change in the total compensation for the organization's highest-paid individual to the median percentage increase in the total compensation for all employees (excluding the highest-paid individual).

ESG Committee GRI 2-14

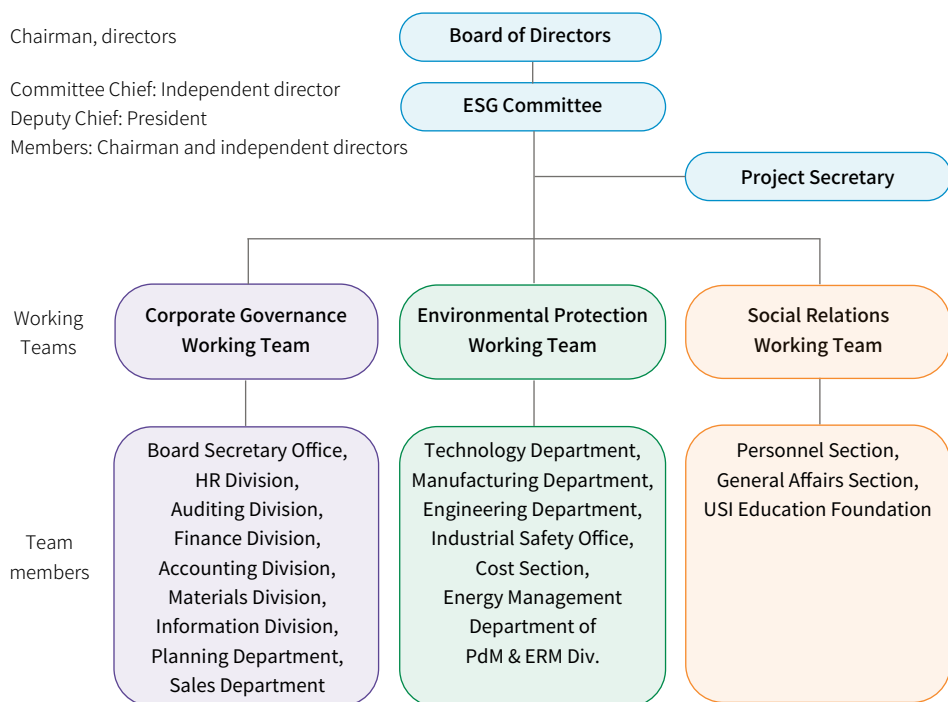
The term of the current committee commenced on 2 June 2022 and will end on 26 May 2025. The committee is seated by our members, including the chairman, president, independent directors Tun-Chien Cheng and Chien-Ping Chen.

The three working groups of the Committee include corporate governance, environmental protection, and social relation.

The Committee holds at least two meetings each year. Two committee meetings were held in 2022, with a personal attendance rate of members of 100%. The meeting results were reported to the Board.

Please refer to p. 79 of the APC Annual Report 2022 or the [ESG Committee](#) section of our corporate website for more information regarding committee operation.

The organizational framework, composition, and duty of the ESG Committee are illustrated below:



Duties of Committee

- ✓ Discussion and establishment of the ESG policy.
- ✓ Discussion and establishment of ESG strategy planning, annual plans, and project plans.
- ✓ Supervision of the implementation of ESG strategy planning, annual plans and project plans, and assessment of their performance.
- ✓ Review of the ESG report.
- ✓ Report of the annual ESG results to the Board every year.
- ✓ Other assignments instructed by the Board.

Duties of project secretary and working teams

- | | |
|--|--|
| Project Secretary | <ul style="list-style-type: none"> · Plan ESG policies and set ESG targets · Follow up on the progress of action plans and improvement performance |
| Corporate Governance Working Team | <ul style="list-style-type: none"> · Collect economic data such as corporate governance and supply chain management · Prepare issues concerning sustainable operations for the discussion and review by the ESG Committee · Compile corporate governance and economic data for the ESG report |
| Environmental Protection Working Team | <ul style="list-style-type: none"> · Integrate data relating to issues such as environmental protection, energy conservation, carbon emissions, and green products · Prepare issues concerning environmental protection for the discussion and review by the ESG Committee · Compile data relating to environmental protection in the ESG report |
| Social Relations Working Team | <ul style="list-style-type: none"> · Collect and integrate issues that concern the employees, community residents, and social groups · Prepare issues concerning labor-management relations and society for the discussion and review by the ESG Committee · Compile data relating to labor-management relations, employee benefits, charitable activities, and community engagement in the ESG report. |

ESG Committee Annual Tasks and Next-Year Annual Plan

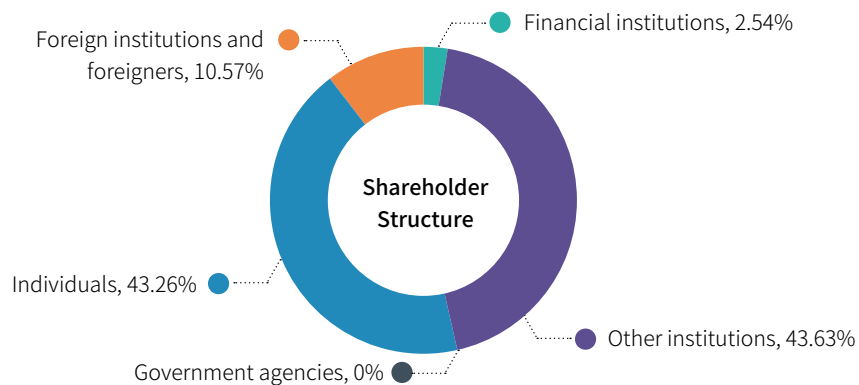
Highlights of Sustainable Development Performance Reported to the Board in 2022	2023 ESG Work Plan
1. Implemented GHG inventory and verification. Completed the GHG inventory and verification of Linyuan Plant.	1. Complete the GHG inventory and verification of individual companies
2. Set carbon reduction targets and planned emissions reduction pathways	2. Plan carbon reduction pathways according to USIG's carbon reduction targets and review them annually
3. Participated in the Asia Pacific Forum & Exposition for Sustainability.	3. Continuously engage in activities relating to corporate sustainable development
4. Implemented energy conservation and carbon reduction plans which saved electricity by 271MWh and reduced emissions by 138tCO ₂ e.	4. Continuously promote energy conservation and emissions reduction plans
5. Achieved the "zero accident" OH&S goal with an accumulative zero lost time due to disabling injury for up to 5.32 million hours. (from 14 October 2010 to 31 December 2022), and accumulation is still in progress.	5. Maintain the "zero accident" OH&S goal. 6. Continue to implement PSM.
6. Implemented social engagement and supported the "Air Quality Purification Zone Adoption Program" and "GHG Reduction Matching Plan" organized by the Kaohsiung Environmental Protection Bureau.	7. Implement water resources management
7. Participated in charitable activities by engaging in care for the vulnerable, remote township education, and assistance for community, neighborhood, and village development through donation for the USI Education Foundation. (Donation of NT\$5 million to the USI Education Foundation in 2022)	8. Implement social engagement and charitable activities to repay society.
8. Published the 2021 ESG Report (Chinese version) by the end of June	9. Publish the 2022 ESG Report (Chinese version) as scheduled. 10. Participate in the TCSA for the sustainability report.
9. Awards (1) Gold Award of Corporate Sustainability Report Awards in traditional manufacturing industries at the 15 th Taiwan Corporate Sustainability Awards (TCSA). (2) Ranked the top 6-20% among all listed companies at the 8th Corporate Governance Evaluation. (3) Rated A in ESG ratings by Cathay Securities. (4) Awarded the certificate of the top 500 exporters 2021 by the Bureau of Foreign Trade, MOEA.	11. Continuously participate in sustainability-related ratings.

Shareholder rights and interests and information transparency

The stock transfer for the 2023 Annual General Meeting will be closed until April 1, 2023. The major shareholders of APC consist of individuals and other corporate entities. For the names, shareholding amounts, and percentages of shareholders holding 5% or more of the equity, or the top ten shareholders, please refer to [p. 102](#) of the **APC Annual Report 2022**.

Committed to providing shareholders with transparent and real-time corporate information, we hold investor conferences and the AGM regularly and publish the annual report and ESG report every year. Additionally, we post information regarding our business performance, financial information, and material information on TWSE’s Market Observation and Post System (MOPS). We have also set up the “Investors section” on our Chinese and English websites to disclose information relating to the company’s governance, business announcements, financial statements, investor conferences, and latest news. Furthermore, we gather shareholders’ opinions and report them to the management team for the reference of making decisions.

We value the rights and interests of foreign investors and the trend of enterprise internationalization. Therefore, since 2018, we began to enhance information disclosures in English in the annual report and on the MOPS and corporate website. By actively establishing various unfettered two-way communication channels with shareholders, we maintain the rights and interests of shareholders in real action.



IP rights management

We established the Intellectual Property (IP) Rights Management Plan on 12 August 2020 to manage the trade secrets relating to production and operations and intellectual property, such as the outcomes and copyrights from R&D to enhance the Company’s competitive strengths. The performance in IP rights management is reported to the Board at least once a year. The “accomplishment and status of IP rights management” was reported to the 7th Board meeting on 2 November 2022 to realize the Company’s IP rights management policy.

Patent management

1 Innovation patent and invention application platform

We have established the “Innovation Patents and Inventions Application Platform” to keep a full record of and store the innovative ideas and experiment outcomes from R&D. R&D outcomes are submitted to the relevant officers for review before forwarding to the chief R&D officer (CRDO) to determine the need for patent application.

Performance in 2022: 0 patent application.

2 Trademark management

Disputes over the rights of our existing registered trademarks suggest either a third-party’s infringement of our trademark rights or a third-party’s claim for opposition, invalidation, or revocation of our trademarks. As this will seriously affect our sales and eventually revenues, apart from reviewing the suitability of the management of our trademark application process, we need relevant countermeasures for trademark maintenance and trademark dispute handling.

Currently acquired trademarks: 2 in Taiwan and 4 in mainland China.

There was no trademark dispute in 2022.

2.2 Economic performance

Material issue: Economic performance; Corresponding sustainability principle: Innovative technology GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <hr/> <p>Operational growth is key to sustainable development. It affects the expectation of investors, employee care, industry development, and corporate growth.</p> <p style="text-align: center;">Management Practice and Target</p> <hr/> <p>Enhance product competitiveness and operational performance through continual product R&D and innovation and market expansion to maintain continual corporate growth and corporate sustainable development.</p> <p style="text-align: center;">Strategy</p> <hr/> <ul style="list-style-type: none"> · Product R&D and innovation · Strengthening market expansion · Enhancing brand awareness or brand value 	<p style="text-align: center;">Positive/Negative Impacts</p> <hr/> <p>Positive Actual Impact: Steady growth in financial performance</p> <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <hr/> <p>NA</p>	<p style="text-align: center;">2020 Performance</p> <hr/> <ul style="list-style-type: none"> · EPS NT\$1.90 · ROE: 9.88% · Annual total sales: 133,345MT <p style="text-align: center;">2021 Performance</p> <hr/> <ul style="list-style-type: none"> · EPS NT\$5.22 · ROE: 22.5% · Annual total sales: 132,462MT <p style="text-align: center;">2022 Performance</p> <hr/> <ul style="list-style-type: none"> · EPS NT\$2.43 · ROE: 9.75% · Annual total sales: 130,414 MT <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <hr/> <ul style="list-style-type: none"> · The ethylene underground pipeline project of the Kaohsiung ICT Project Phase II continues and will be completed in 2023Q4. · The equipment test of the EVA production facilities in the Gulei Petrochemical Zone started in 2022Q3, and feedstock test will be completed in 2023Q1. · Integrate the products and production lines of USI, APC, and Gulei to enhance market influence. 	<p style="text-align: center;">Effectiveness Assessment</p> <hr/> <ul style="list-style-type: none"> · Financial statements and annual reports · ESG reports · Corporate governance evaluation <p style="text-align: center;">Grievance Mechanism</p> <hr/> <ul style="list-style-type: none"> · “Investor Service” email on the corporate website · Investor Conference · General Meeting of Shareholders <p style="text-align: center;">Evaluation of the management approach</p> <hr/> <p>Review through meetings including executive meetings, production meetings, and development quality meetings to timely adjust the direction of market development.</p>

Financial performance GRI 201-1

In terms of the consolidated operations in 2022, there was the geopolitical turmoil in Eastern Europe at the beginning of the year, and the oil price surging past US\$100 per barrel around the world also padded the cost of raw materials. The persistent interference from the pandemic also slowed down the global economic recovery. The demand for EVA for solar power was strong at the beginning of the year, which pushed up the EVA price. The price reached the highest point in the first half of the year. Due to the subsequent surge in the price of raw materials, downstream module manufacturers were unable to transfer the cost in time and had weaker demand, which in turn affected the demand for packaging films. After shoe manufacturers also had less orders, which further limited the demand for foaming, the price of EVA in the market had a downturn in the middle of the year. The price stopped falling later, but it did not have a significant rebound. The price again went down afterward, before stabilizing at the end of the year. In terms of annual sales volume, the sales of LDPE/EVA reduced by 2% YoY, while the average sales price increased by 5%. In production, both ethylene and VAM's production cost increased as the price of raw materials went up. The combined annual output of LDPE/EVA reduced by 4% over last year to about 130,000 MT. We also continued to build our process safety management system (PSM) and reinforce the relevant education and training of personnel. In order to the government's policy on energy conservation and carbon emissions reduction, we started to carry out the inventory and verification of greenhouse gas. We have started to plan our green power strategy, test efficiency and discuss energy conservation measures of major energy-consuming equipment, and continued to refine our practices in emission reduction.

Summarizing the operating results for the year, it is clear that inflation issues and supply-demand status have resulted in that the increase in sales price of products has not been able to maintain the same pace as the surging materials costs, which narrowed margin.

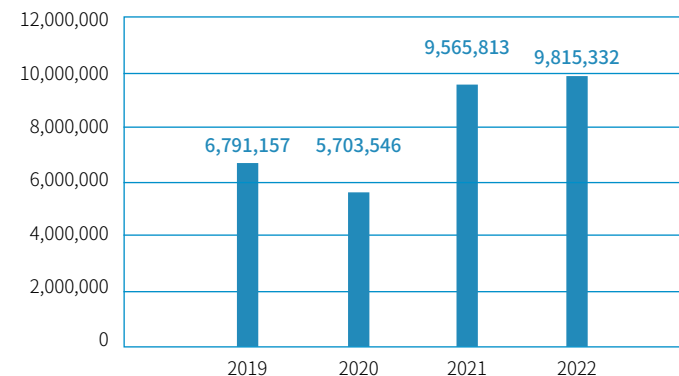
Consolidated Financial Information in Past 4 Years (unit: NT\$ thousands)

Item	Basic Element	2019	2020	2021	2022
Direct economic value	Income (including net sales, investment income, and gain on sale of assets)	6,956,778	5,878,383	9,838,486	10,191,795
	Operating costs	5,607,864	4,411,844	5,834,461	6,468,607
Distributed economic value	Employee wages and benefits	379,530	361,699	401,024	389,657
	Payments to providers of capital	665,984	857,480	1,803,975	722,804
	Payments to government (including income tax, fines, land value tax, and house tax)	158,622	196,503	668,221	656,892
	Community investments	3,795	4,875	6,873	7,898
Economic value retained		50,725	45,982	1,123,932	1,945,937

Distribution of profit

In 2022, the revenue was NT\$9,815,332 thousand, income tax (excluding estimates) was NT\$663,597 thousand, accounting for 6.76% of the revenue, distributable earnings were NT\$4.36 billion, and the cash dividend was NT\$1.2 per share. Our revenues and dividend distributions in the past for years are shown below:

Revenues in Past 4 Years (unit: NT\$ thousands)

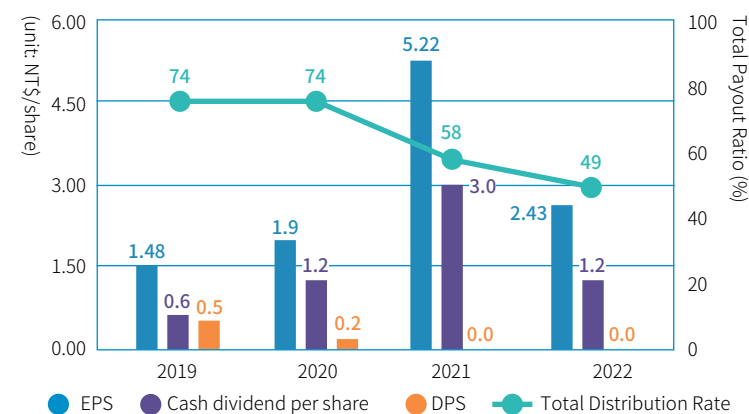


Financial statements over the years:

<https://www.apc.com.tw/zh-tw/dirServices/frmServices3.aspx>



Dividend Distributions in Past 4 Years



Stock prices and dividends over the years:

<https://www.apc.com.tw/zh-tw/dirServices/frmServices5.aspx>



Major investments

1 Gulei Project

Investment objective

- Many changes have emerged in the global petrochemical industry in recent years. They included the rise of the petrochemical industry in emerging regions and shale oil mining in North America, which have brought not only huge impacts to the energy structure and petrochemical material supply but also significant changes to development of the petrochemical industry across the Taiwan Strait.
- To get prepared for future trends and challenges, petrochemical companies of Taiwan and China co-established the Gulei Integrated Refinery Project to achieve the vertical integration of the mid- and down-stream products.

Investment Item

We engage in the production and sales of the following petrochemical products:

1. Ethylene, propene, butadiene
2. Ethylene vinyl acetate copolymer (EVA)
3. Ethylene oxide (EO)
4. Ethylene glycol (EG)

Investment amount and efficiency

- After the approval of the relevant competent authorities, re-investment in the Gulei Port Economic Development Zone Project in Zhangzhou, Fujian Province, mainland China, was made through a third region with a maximum amount of NT\$6 billion.
- In the future, the project can stabilize upstream materials supply, vertically integrate steam cracking, petrochemical intermediate materials, and plastic products, reduce transportation costs, and enhance competitive niche to facilitate deployment in the Greater China market and sales competition in the international market.

Progress of Investment Items

- The steam cracker is the core processing unit, and hot commissioning was completed smoothly in August 2021.
- The first shipment of ethylene monomers from Gulei Petrochemical was already sold to Taiwan in November 2021.
- Fujian Gulei Petrochemical Co., Ltd. started commercial operations in December 2021.
- The the mid-term delivery of EVA facility of the Gulei Project was completed in October 2022*

Note: Intermediate delivery refers to the delivery of a construction project in the middle of the construction period. It suggests that the contractor has completed the construction of all processing routes, including running the pressure and utilities test, while the remaining projects will not affect the trial run.

Project Milestones

2022	Oct	Mid-term delivery of EVA facility
2021	Dec	Fujian Gulei Petrochemical Co., Ltd. started commercial operations.
	Aug	Smooth hot commissioning of steam crackers, SM, EO/EG.
	Mar	PP hot commissioning succeeded.
2020	Sep	Intermediate delivery of the PP processing units.
2019	Jun	Project construction started.
	May	Approval of the land for project planning by the Gulei Committee.
2018	Aug	Official approval was granted to the Gulei Refining & Petrochemical Plant Project.
2016	Nov	Established Fujian Gulei Petrochemical Co., Ltd.



Panorama of the Gulei Integrated Refinery Project



Steam cracking unit



EVA production line facility



Celebration of the interim delivery of the 300,000MT EVA facility

2 Kaohsiung ICT Project Phase II-Storage and Transportation Investment Project

In response to the Petrochemical Product Storage and Transportation Center Policy of the Kaohsiung Intercontinental Container Terminal (ICT) Project launched by the Port of Kaohsiung, Taiwan International Ports Corporation, Ltd., China General Terminal & Distribution Corporation (CGTD), the ethylene transportation side of Linyuan Plant, will be relocated from the old port area to the Petrochemical Product Storage and Transportation Center of the Kaohsiung ICT Project Phase II. To ensure the steady production and transportation of ethylene, we invested NT\$1.02 billion to build the outgoing pipelines for the ethylene cold storage at the Petrochemical Product Storage and Transportation Center of the Kaohsiung ICT Project Phase II, hoping to continuously provide existing customers with steady ethylene supply after project completion.

Financial assistance received from government GRI 201-4

On 4 January 2021 the Ministry of Economic Affairs (MOEA) approved our application for the “Action Plan for Accelerated Investment by Domestic Corporations” program to the with the Kaohsiung ICT Project Phase II, enabling us to apply for bank project financing of up to 80% of the amount of project investment. Additionally, we will also receive a subsidy at 0.5% of the financing service charge from the National Development Fund, as if a kind of preferential interest reduction.

With the Kaohsiung ICT Project Phase II investment project, we were granted a project financing credit of NT\$1.419 billion. Apart from disbursing NT\$455 million from the credit, **we also received a subsidy of about NT\$2.06 million from the National Development Fund by the end of 2022.**



2.3 Risk management

To strengthen corporate governance, reduce potential operational risks, and ensure steady operations and sustainable development, the Audit Committee and the Board passed the establishment of the “Regulations for Risk Management Policy and Procedure” in December 2020. These Regulations cover the policy, organization, process, category, and mechanism for risk management implemented by the Board, Audit Committee, various risk management units, and the Auditing Division to effectively control risks in business activities so as to improve the effectiveness of risk management and protect the interest of the Company, employees, shareholders, and stakeholders.

Risk management process GRI 3-3

In terms of the attributes of business and external environment, we design methods to identify risks and establish appropriate measurement methods for the reference of risk management. Each risk management unit continuously monitor the risks in their business and propose countermeasures to senior management to ensure the normal operation of the management framework and risk controls.



Risk management category

Based on the characteristics of business and operations, we include the following risk categories in management:

Risk	Risk Description	Risk	Risk Description
Financial risk	<ul style="list-style-type: none"> Interest rate risk Foreign exchange risk Property damage risk Endorsement and guarantee risk Receivable risk 	R&D risk	<ul style="list-style-type: none"> Product competition risk Outdated technology and product development delay IP rights and patent rights risks R&D information control risk
Strategy and operational risks	<ul style="list-style-type: none"> Industrial risk Investment risk Operational interruption risk Materials and goods stock risks 	Human resources risk	<ul style="list-style-type: none"> Compliance risk Human resources management risk Labor cost increase risk Workforce stability risk
Materials price change and supply chain risk	<ul style="list-style-type: none"> Capture of information on changes in materials prices Materials stock and logistics management Production equipment and spare part plan 	Climate change and environmental risks	<ul style="list-style-type: none"> Assessment of risks and opportunities due to climate change Legal compliance Capture of information on environmental protection laws and regulations
OH&S	<ul style="list-style-type: none"> Legal compliance and inspection Contractor occupational safety management Education/training and publicity of occupational safety COVID-19 epidemic prevention measures 	Information security risk	<ul style="list-style-type: none"> Preservation of information operations and maintenance systems Education/training and publicity of information security Security protection of customer transactions
Legal risk	<ul style="list-style-type: none"> Compliance risk Transaction risk Suit settlement Legal compliance awareness and behavior 	Disaster and accident risk	<ul style="list-style-type: none"> Accident response and handling Operational and property/personal loss risks Operational safety risk Operational interruption risk
Technology risk	<ul style="list-style-type: none"> Information security risk caused by new technology use. Changes in consumption habits and outdated production technology 	Other risks	<ul style="list-style-type: none"> COVID-19 epidemic control

Risk management operation

After analyzing the risk within its unit, each risk management unit proposes counteractions and reports the risk status to senior management based on the performance of counteractions. The president or the person he or she designates should report the status of risk management to the Audit Committee and the Board at least once a year.

On 2 November 2022, the head of the sales department reported the status of risk management in 2022 to the Board. Please refer to the [2022 Risk Management Report](#) in the ESG section on our corporate website for more information.

Internal control and audit systems

The Auditing Division is an independent unit directly under the Board and hires certified internal auditors (CIAs) to the audit team and maintains impartiality in audits. Each year the Auditing Division conducts internal audits according to the audit program approved by the Board, reports the audit findings and matters required for improvement and follow-up to the Auditing Committee and the Board. In 2022 the Auditing Division submitted 49 audit reports and 9 improvement follow-up reports, with a 100% improvement follow-up rate. The improvement results are highlighted below:

Audit Item	Recommendation	Improvement
Sales Cycle	Recommendation for adding the check function to the special offer application program.	Corrections were completed as recommended.
Industrial Safety Cycle	Recommendation for tightening the oversight of contractor in-house management.	
Production Cycle	Recommendation for issuing purchasing orders or signing contractors when outsourcing processing missions.	

Legal compliance GRI 2-27

In addition to ethical corporate management, we also emphasize legal compliance in all areas. In routine operations, we concern ourselves with and gather the information of the establishment of and amendment to environmental, social, and governance laws and regulations in relation to corporate governance, labor human rights, environmental protection, and OH&S at all times; identify the compliance of the relevant laws and regulations of our operations; revise the relevant documents; and implement risk management or regulatory implementation. SASB RT-CH-530a.1



Ethical corporate management

To establish a corporate culture for ethical corporate management, we have established the “Ethical Corporate Management Best Practice Principles”, “Procedures for Ethical Management and Guidelines for Conduct”, and “Code of Conduct and Ethics for Directors and Officers”.

✓ **Applicability: Directors, officers, employees, or those with actual control over the company**

Forms of unethical behavior

Neither directly or indirectly offer, promise, request, or accept any undue or improper advantage nor seek or maintain advantage through unethical behavior such as breach of trust, illegal act, or breach of fiduciary duties.

Forms of advantage: Money, endowments, commissions, positions, services, preferential treatment, or kickbacks in any form or any name.

For employees to understand compliance-related topics, we set up the “Ethical Corporate Management” unit on the corporate website to publicize ethical behavior, continuously organize related education and training activities, and hold departmental routine meetings to publicize the information and trends regarding the latest regulatory and statutory requirements for employees to acquire information regarding new laws and regulations and amendments of existing laws and regulations. The Legal Division also provides legal consultation and recommendations. Additionally, apart from arranging internal training or irregular external training courses, we also invite external legal experts to give talks or seminars to enrich employees’ knowledge and competencies in business-related policies and regulations. Moreover, we offer related courses in the orientation training for new employees and request them to sign the statement of no corruption.

To enforce ethical corporate management and ethical behavior, we continuously publicize business integrity and ethics and organize related training courses. In 2022 we organized a total of **353** hours of education and training relating to ethical corporate management (including the Fair Trade Act, prevention of workplace violence (bullying), online copyrights and use of legal software, and the Trade Secrets Act) for a total of **134** participants.



List of Related Legal Training Courses in 2022

Item	Course name	Hours	Person	Total hours
1	Integrity Talk: Fair Trade Act: Regulations and Case Study	3	82	246
2	Integrity Talk: Prevention of Workplace Violence (Bullying)	2	48	96
3	Integrity Talk: Online Copyright and Legal Software Use	2	1	2
4	Integrity Talk: Trade Secrets Act: Introduction and Case Study	3	1	3
5	Integrity Talk: HR Personnel Labor Regulations Study	3	2	6
Total			134	353

Governance in 2022: Non-compliance with the relevant laws and regulations.

Social in 2022: Linyuan Plant was fined NT\$180,000 by the Kaohsiung Labor Affairs Bureau for violation of the Occupational Safety and Health Act.

Environmental in 2022: Linyuan Plant was fined NT\$425,000 by the Kaohsiung Environmental Protection Bureau for violation of the Air Pollution Control Act.

The offence and improvement are described as follows:

Item	Authority	Offence	Date	Amount of fine (NT\$10,000)	Improvement
1	Kaohsiung Labor Standards Inspection Office	On 22 January 2022, the explosion panel of the pipeline connecting heat recovery steam bumping tank V-1227 and heat exchanger E-1227 of the reactor in production line 2 broke. (Violation of Article 36 of the Occupational Safety and Health Act)	24 January 2022	Lockout	Application for re-opening. Re-opened on 17 June 2022. Improvement: 1. Wrap up the explosion panel with aluminum foil to prevent rainwater from entering. 2. Remove the equipment sharing the same safety valve and the front and rear pipeline diaphragm valves. 3. Organize training for safety equipment maintenance and diaphragm valve removal. 4. Revise the related SOPs of safety equipment maintenance.
2	Kaohsiung Labor Standards Inspection Office	On 28 March 2022, the explosion panel of reactor R-1201 in production line 2 broke. (Violation of Article 36 of the Occupational Safety and Health Act)	31 March 2022	Lockout	Application for re-opening. Re-opened on 19 April 2022 1. Replace the explosion panel. 2. Examine catalysts when they are not used for 10 days and release them to cold storage when they are not used for 14 days to prevent deterioration. 3. Arrange education and training to strengthen personnel training.
3	Kaohsiung Labor Standards Inspection Office	On 28 March 2022, the explosion panel of reactor R-1201 in production line 2 broke because of failure to assess its hazards, reaction characteristics, and take necessary actions. (Violation of Article 43 of the Occupational Safety and Health Act)	4 May 2022	18	1. Examine catalysts when they are not used for 10 days and release them to cold storage when they are not used for 14 days to prevent deterioration. 2. Arrange education and training to strengthen personnel training.
4	Kaohsiung Environmental Protection Bureau	On 29 March 2022, significant particulate pollutants spread into the air when the explosion panel of the safety device reacted to a pressure surge of reactor R-1201 as a result of a significant reaction burst when adding catalyst deteriorated after prolonged storage in the tank during the resumption of the manufacturing process of production line 2 after the plant shutdown due to a power outage on 3 March 2022. (Violation of Article 32, paragraph 1, of the Air Pollution Control Act).	5 May 2022	22.5	1. Examine catalysts when they are not used for 10 days and release them to cold storage when they are not used for 14 days to prevent deterioration. 2. Arrange education and training to strengthen personnel training.
5	Kaohsiung Environmental Protection Bureau	On 1 August 2022, the chief of the Industrial Safety Office was found acting as the class A dedicated air pollution control specialist and class-1 manager of occupational safety and health affairs at the same time by the Kaohsiung Environmental Protection Bureau during the onsite audit of the employment of responsible specialists. (Violation of Article 34, paragraph 4, of the Air Pollution Control Act).	28 December 2022	20	Application for replacement of the dedicated air pollution control specialist on 11 August 2022. Approval of the Kaohsiung Environmental Protection Bureau on 24 August 2022.

Reporting channels GRI 2-25, 2-26

On 9 November 2017 the Audit Committee and the Board passed the proposal to establish the “Regulations for Handling Reports of Illegal and Unethical or Dishonest Behaviors” specifying the reporting and processing procedures and related protection mechanisms. Whistleblowers can report an illegal and unethical or dishonest behavior personally or through the report email or report hotline. All reports will be handled by the responsible units.

✓ Report email

“Audit Committee Email” in the “Investor Service” section on the corporate website.

✓ Report hotline

(02) 2650-3783

After consolidation the Audit Division reports the acceptance, processing, and improvement of each report to the Auditing Committee. **There was no report of non-compliance in 2022.**

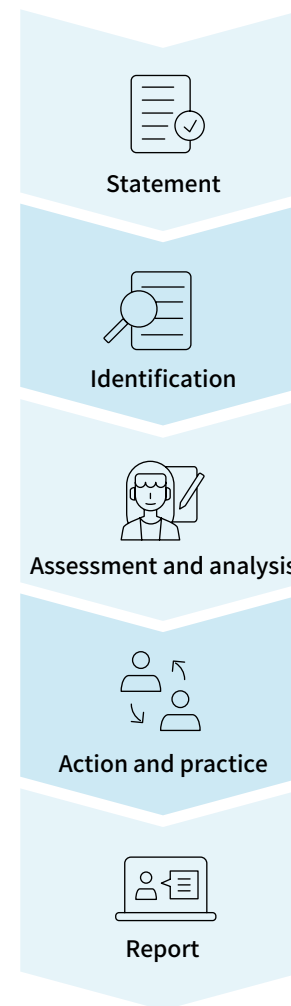
Human rights policy GRI 2-23

With the approval of the chairman, we establish the human rights policy applicable to APC and USIG affiliates with respect to internationally accepted human rights standards, such as the International Bill of Rights and the [Declaration on Fundamental Principles and Rights at Work], so as to eliminate prejudicial behavior and human rights violations. Apart from providing employees with a reasonable and safe workplace environment, we ensure employees to enjoy reasonable and dignified treatments at APC.

Identification and assessment of human rights risk

We identify human rights risks every year and perform compliance checks and assessments of authenticated human rights issues. Based on the risk assessment results and defects found in internal and external audits, we adopt mitigation and corrective actions and make continual improvement to achieve the goal of risk management. Because human rights issues involve different units and departments, the HR Division exercises due diligence on people affected by human rights issues.

We establish the steps and processes for each stage of human rights management as the foundation for human rights maintenance and protection. They include:



Human rights due diligence process GRI 2-24

Stage	Step	Practice
Stage 1: Commitment	Statement	Make external commitment and support and draw up the human rights policy in compliance with international standards and local laws and regulations.
Stage 2: Management	Identification	Validate material human rights issues and the affected based on the organizational attribute and style of operations.
	Assessment and analysis	Periodically assess human rights impacts on all employees and service processes to understand the significance of exposure.
Stage 3: Countermeasures	Action and practice	Draw up different action plans based on the significance of the periodically assessed human rights risks. Follow up the status and performance of action plans and communicate to ensure the effectiveness of human rights management. If there is a human rights violation, provide compensatory measures through system improvement, physical benefits, and counseling.
	Report	Discuss and report human rights management within the organization and disclose the practice and effectiveness of human rights management on the corporate website.

Achievements in human rights management 2022 GRI 2-24

There was no report of no significant non-compliance in 2022. We will continue to arrange education and training on human rights. Please visit the ESG section of our corporate website for more information regarding our [training for human rights protection](#). After identifying risks based on the approaches to implement the human rights policy, we included a total of 14 human rights issues for this year, including 8 issues of material concerns, with risks covering “excessive working hours” and “workplace inclusion” ([2022 Human Rights Risk Assessment and Management Sheet](#)). The measures implemented to mitigate and compensate for the impacts of human rights risks are as follows:

Topic	Mitigation Measure	Compensation Measure
Excessive working hours	<ol style="list-style-type: none"> When it needs to work extra hours, apart from asking for the agreement of employees, management also allows employees to accept either overtime pay or time off in lieu (TOIL). Additionally, we allow employees to select the reasons for leaving the workplace after regular hours: personal matters or working extra hours. The HRD reviews the overtime work condition of all companies and follow up the reasons for working overtime. 	<ol style="list-style-type: none"> Employees working overtime will receive overtime pay. After understanding the workload and reasons for working overtime of employees, we actively improve and optimize the workflows to enhance work efficiency. Employees working excessive hours will be included in the abnormal workload identification and risk investigation list. We will also arrange health checkups for these employees and adjust the relevant job content and workforce arrangement
Workplace inclusion	<ol style="list-style-type: none"> Employ persons with disabilities by law. Build an accessible workplace environment for persons with disabilities. Handle insufficient employment based on the regulations of the competent regulations. 	We did not hire the required quota of persons with disabilities. Apart from paying the substitution payment, we also actively recruit qualified persons with disabilities.

CH3 Product Innovation and Supply Chain Management

Technology R&D	GRI 3-3, 201-1	46
Customer service	GRI 2-6	49
Supply chain management	GRI 2-6, 2-23, 2-24, 3-3	52
	GRI 308-1, 308-2, 414-1, 414-2	

Performance Highlights

- ✓ Quality improvement: **2** products
- ✓ Overall customer satisfaction: **98%**
- ✓ Signing of the Supplier CSR Commitment

Material Topics

Technology R&D
SCM

SDGs Correspondence



Certified management system



ISO 9001 Quality Management Systems
Validity: 3 May 2022 - 3 May 2025



3.1 Technology R&D

Product R&D Projects

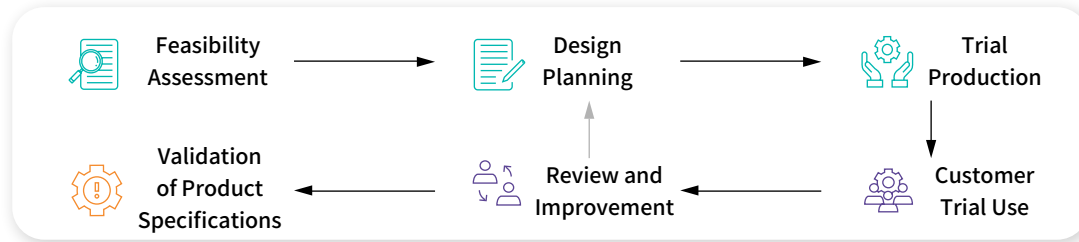
Material issue: Technology R&D; Corresponding sustainable development principle: Innovative technology GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <p>Continual product quality improvement and new product development inject market competitiveness and enable continual profit for sustainable development and survival.</p> <hr/> <p style="text-align: center;">Management Practice and Target</p> <p>Collect information regarding market development trends, fulfill customer demands, set directions for product quality improvement and new product development, and improve product quality and market competitiveness.</p> <hr/> <p style="text-align: center;">Strategy</p> <ul style="list-style-type: none"> · Niche product development · High-value product development <hr/> <p style="text-align: center;">Goals</p> <ul style="list-style-type: none"> · New product development or product quality improvement: At least one product each year 	<p style="text-align: center;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> · Positive Potential Impact: Getting rid of the industry burdens through manufacturing transformation · Positive Potential Impact: Successful development of sustainable material. · Positive Actual Impact: New product development and product diversity <hr/> <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <p>NA</p>	<p style="text-align: center;">2022 Goals</p> <ul style="list-style-type: none"> · New product development or product quality improvement: At least one product each year <hr/> <p style="text-align: center;">2022 Performance</p> <ul style="list-style-type: none"> · New product development: 2 (✔) <ol style="list-style-type: none"> 1. Completed the trial production of the hot melt adhesive grade EVA product (part number V08085) and complies with the quality specifications. 2. Completed the trial production of the hot melt adhesive grade EVA product (part number V19150) and complies the quality specifications. <hr/> <p style="text-align: center;">2023 Goals</p> <ul style="list-style-type: none"> · New product development or product quality improvement: At least one product each year <hr/> <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> · Development of market-leading product: At least 2 	<p style="text-align: center;">Effectiveness Assessment</p> <ul style="list-style-type: none"> · Control product development progress with the “Product R&D and Test SOP”. · Review R&D direction through the quality meeting. · Exchange R&D and development experience through the executive meeting. <hr/> <p style="text-align: center;">Grievance Mechanism</p> <ul style="list-style-type: none"> · Customer Management Process · Customer Anomaly Management SOP <hr/> <p style="text-align: center;">Evaluation of the management approach</p> <p>The sales department collects market information and capture the market trends of products through technical customer service.</p>

R&D Process

Data Collection

- The sales development collects market information and customer feedback and suggest product development or product improvement needs.
- Linyuan Plant improves product as necessary.



R&D Outcomes

R&D Outcomes		Research Aim
2020	High-speed lamination-grade EVA (part number V18251) successful development and specification setting	<ul style="list-style-type: none"> · Enhance the threshold of production technology of low-gel grade EVA. · Fulfill the market demand for high-speed lamination processing and application.
2021	High-speed lamination-grade EVA (part number V18251) quality improvement and technology enhancement.	<ul style="list-style-type: none"> · Enhance the threshold of production technology of low-gel grade EVA. · Fulfill the market demand for the technological improvement of production process.
2022	Completed the trial production of the hot melt adhesive grade EVA products (part numbers V08085/V19150) and comply with the quality specifications.	<ul style="list-style-type: none"> · Enhance the threshold of production technology of the hot melt adhesive grade EVA. · Respond to the mass production of the Gulei Project and product diversity.

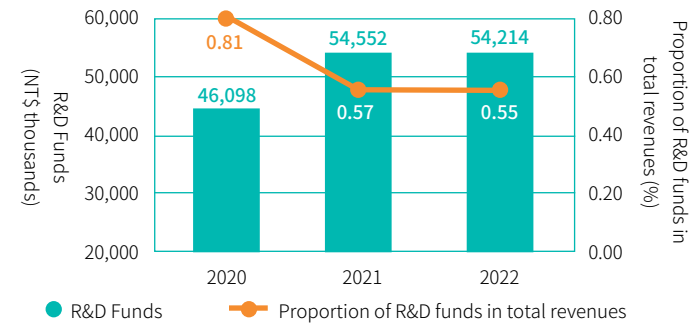
In response to the high-value product strategy and market demand change, apart from expanding the EVA capacity and developing high-end applications and products with high VA contents, we have set lamination-grade EVA products as our niche product range and the R&D focus in the past three years. [GRI 201-1](#)

Resources Provision

R&D Funds

The amount of R&D funds in 2022 was NT\$54,214 thousand, accounting for 0.55% of the revenue. In addition to the R&D funds, USIG has also established a common R&D department to provide both R&D funds and human resources, to help accomplish the R&D targets with the group's power.

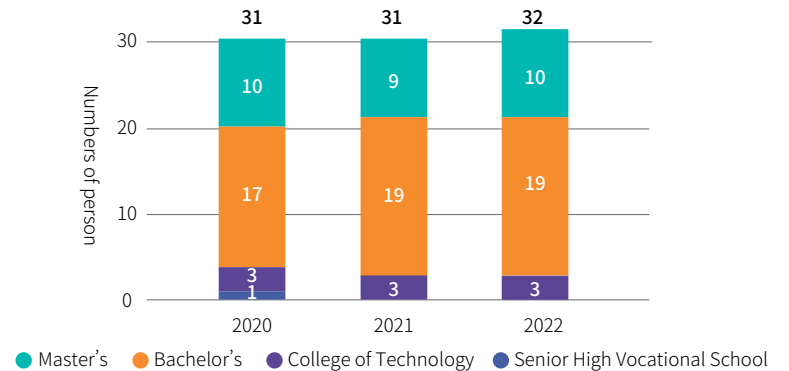
Proportion of R&D Funds in Total Registered Revenues in Past 3 Years



R&D Workforces

There were 32 R&D personnel in 2022, accounting for 13.7% of all employees. Most R&D personnel are outstanding talents holding a bachelor's or master's degree. The distribution of education attainments of R&D personnel in the past three years is as follows:

Distribution of Education Attainment of R&D Personnel in Past 3 Years



Green products

Non-toxic products

We consider the legal and regulatory requirements such as FDA, CNS, JIS, and RoHS right from the feasibility assessment of product development to ensure compliance with the standards, regulations, and laws governing human health and environmental impact. [SASB RT-CH-410b.2](#)

In 2009 we passed SONY's green partner certification (Green Partner Environmental Quality Approval System) to set up our corporate image of toxic substance free and clean production. To meet the legal and regulatory requirements for environmental protection and quality, we request suppliers to meet the relevant environmental protection and quality requirements to ensure no use of limited or restricted substances.

Apart from engaging in energy conservation and clean production in the product manufacturing process, we also develop EVA products suitable for the shielding layer of electric wires and cables for producing low-smoke, halogen-free wire and cable jackets to comply with the environmental protection requirements.

Our products have passed third-party verification. The standards we have passed are tabulated below:

Item	Standard	Product Model
1	US FDA Standards (Title21, Pt 177.1520)	LDPE
2	Halogen-free	LDPE
3	Plasticizer Test	M5100
4	EU Specifications (EU 10/2011)	C7100
5	EN 71-3:2013 - Part 3: Migration of certain elements (19 items)	LDPE/EVA
6	RoHS Specifications	LDPE/EVA
7	New Balance Specifications	C7100, EV101, EV102, EV303
8	US FDA Standards (Title21, Pt 177.1350)	EVA
9	Adidas Specifications	EVA
10	Article 4, Sanitation Standard for Food Utensils, Containers and Packages (Taiwan)	C7100
11	Specifications for Plastic Food Contact Materials (China)	C7100, C4100, F2201
12	Crocs RSL Specifications	EVA
13	Nike RSL Specifications	C7100
14	ASICS Specifications	EV101

Product innovation

1 Project R&D progress

Year	R&D Project	Progress	R&D Funds (NT\$ thousands)	Estimated Time of Mass Production Duration	R&D Outcomes
2022	Develop Low crystal point, high-speed lamination of EVA grade	Mass production in progress	13,650	2022	1. Total V18251 production in 2021: 2,195MT 2. Total V18251 production during January to September in 2022: 1,274 MT

2 Product R&D Project

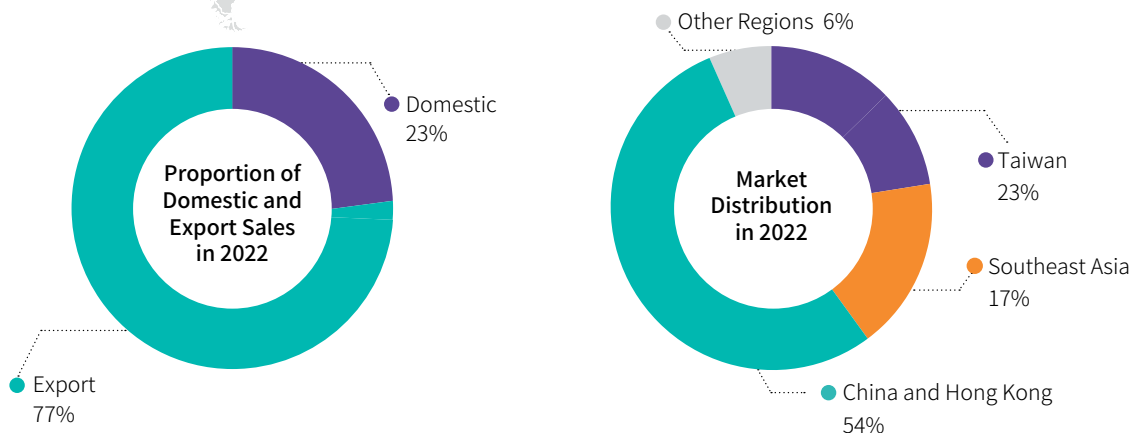
Year	R&D Project	Progress	R&D Funds (NT\$ thousands)	Estimated Time of Mass Production Duration	R&D Outcomes
2023	Trial productions of the hot melt adhesive grade EVA	1. Completed the trial production of two in June and October 2022 respectively. 2. The third trial production is scheduled in October 2023.	26,800	2023	We add a chiller to the manufacturing process to facilitate the development of higher-specification hot melt adhesives to meet the market demand. This will also increase revenues.

3.2 Customer service

The R&D department of Linyuan Plant assists the sales department by supporting customer services, product improvement, new product and new market development. It also supports the development of custom products and product characteristic improvement. In recent years, the sound collaboration of both departments has earned customer recognition.

Product sales and markets GRI 2-6

Product markets: LDPE is primarily for domestic sales and EVA is for export sales. In addition to Taiwan, we also distribute products worldwide to mainland China, Hong Kong, Japan, Thailand, Vietnam, Malaysia, Singapore, the USA, Indonesia, Cambodia, India, Bangladesh, Pakistan, Sri Lanka, the UAE, Israel, Egypt, South Africa, and Russia. Our customers include processing plants and traders of packaging films, food packaging materials, microfibers, plastic injection molding, foaming shoe materials, sports goods, PV packaging films, pre-coating/lamination films. The proportion of domestic and export sales and market distribution in 2022 are shown below by sales volume.



Customer privacy

In customer privacy confidentiality, the Group Credit Department establishes the Customer Personal Data Control Regulations in response to the Personal Data Protection Act to ensure customer data is controlled in compliance with the Personal Data Protection Act. The control process is as follows:

- 1 Cancel the access, including the system and file access privilege, to customer personal data over the Enterprise Resource Planning (ERP) system, except for the group credit personnel.
- 2 Obtain the “Personal Data Collection, Processing, and Use Notification and Agreement” in advance before collecting documents containing customer personal data.
- 3 After receiving customer personal data, the Group Credit Department should input paper data in the ERP system. Personnel should store paper documents in media files and cover text or data containing customer personal data before archiving. Except as otherwise required, destroy paper documents afterwards.

There was no customer privacy right infringement or loss of customer personal data in 2022.

Handling Customer Complaints

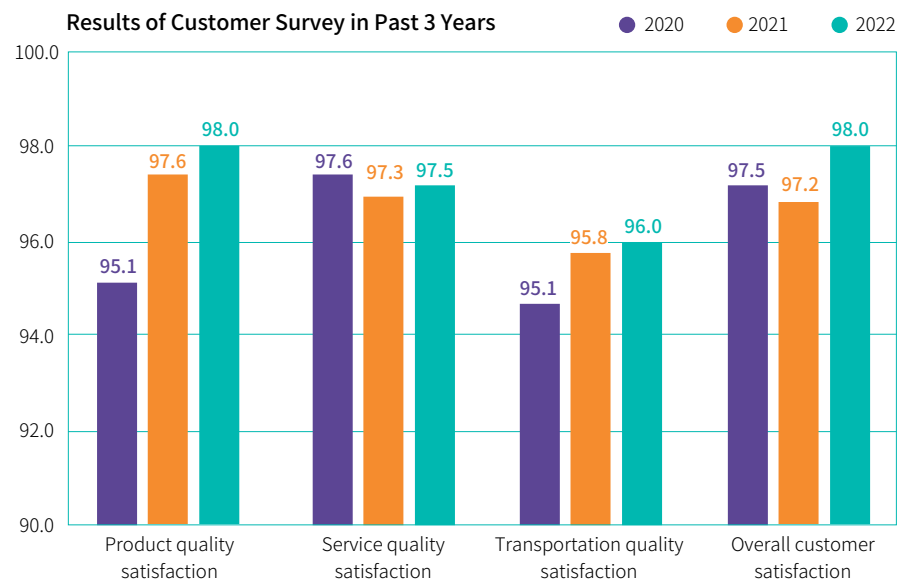
To optimize the customer complaint handling process, we have established the Customer Complaint Management Platform to digitize the customer complaint handling process, control and analyze the causes of customer complaints, and follow up the handling progress of responsible units and corrective and preventive actions so as to implement quality improvement activities and improve the quality of customer service.



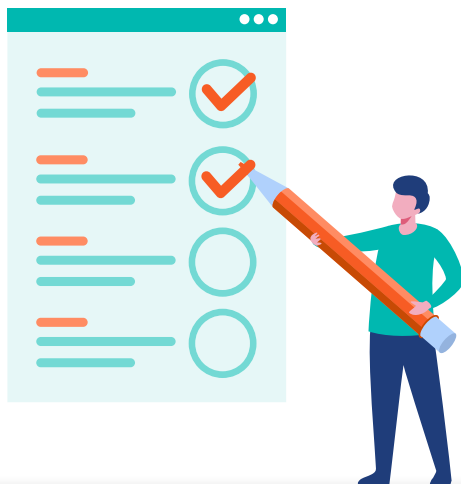
Customer satisfaction survey

To gather the opinions regarding our products and services from customers, in addition to the telephone interview or visit of sales representatives, we also conduct a questionnaire survey on customer satisfaction each year to ensure that customer requirements are fully understood and properly addressed. Then, we hold the “management review meeting” to propose improvement plans based on the customer opinions and follow up their results so as to maintain continual quality improvement of products and services.

Respondents of the customer satisfaction survey are selected from the top 25 customers by purchasing quantity of domestic sales and export sales respectively. If the collected responses are insufficient, we will select respondents of lower ranks. The survey is conducted among 50 customers to assess the product quality, service quality, transportation quality, and overall satisfaction of APC products. The satisfaction score is calculated based on the proportion of 'highly satisfied' and 'satisfied' responses. **In 2022, a total of 50 valid responses were collected, and the overall satisfaction was 98%**, which is similar to that of 2021. We appreciate the vast majority of customers for their recognition of our product and service quality. We will make continual improvement to repay the long-time support of customers. Customer satisfaction in the past three years is shown below:



Suggestions gathered from customer satisfaction survey have been transferred to the relevant units, such as “assistance in solving processing problems by the technical service unit”, “selection of shipping companies with better punctuality and more reasonable transportation cost by the customs department to meet the shipment expectation of customers”, “provision of standby plastic pallets”.



Product responsibility and technical support

We pay special attention to product quality and services. Hence, we provide the catalogs and safety data sheet (SDS) that include the specifications, performance, and application description of existing and new products in the “Product” section on the corporate website for customers to access related product information and meet their demands.

To maintain the rights and interests entitled to customers for using our products, we have established the technical service and marking units under the sales department to develop the new application of products to help customers improve processing issues and facilitate technological cooperation and exchange.

All APC products comply with the relevant legal and regulatory requirements and contain no Health and Environmental Hazardous Substances as categorized in the Globally Harmonized System (GHS). **SASB RT-CH-410b.1**

In 2022 there was no legal non-compliance or fine in relation to product labeling.

After analysis and organization, questions reflected in the 2022 satisfaction survey are as follows:



Product Quality

None.



Service Quality

1. No onsite service from sales and technical personnel due to COVID-19.
2. Products have price advantages. More products are expected from APC so as to reciprocate both parties.



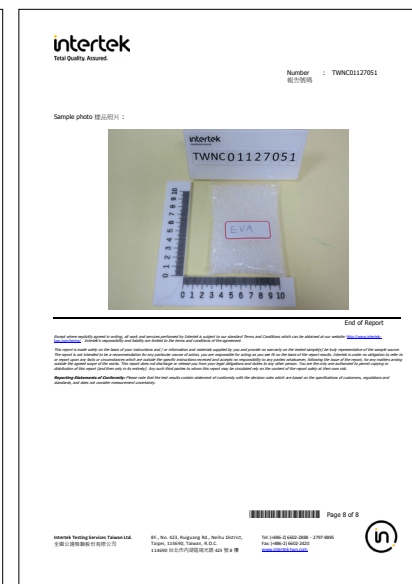
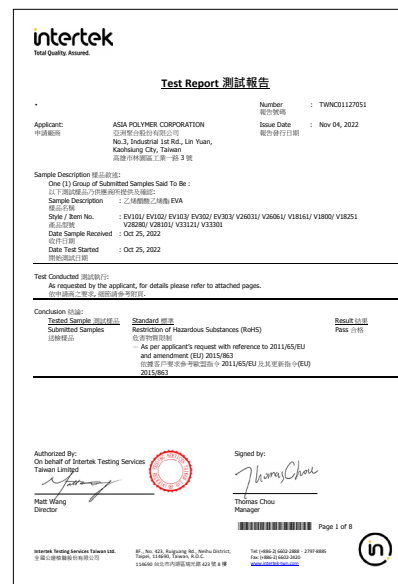
Transportation Quality

A higher percentage of broken package when unloading by drives, causing inconveniences to both parties.



Other Suggestions

1. Punctual shipment is expected.
2. Development of functional and eco-friendly products with energy conservation and carbon reduction performance.



3.3 Supply chain management GRI 2-6

Material issue: Supply chain management; Corresponding sustainability principle: Sustainable development GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <p>As an indicative business in Taiwan, apart from pursuing profit, it is also our responsibility and obligation to assume the sustainable supply chain responsibility together with suppliers.</p> <hr/> <p style="text-align: center;">Management Practice and Target</p> <p>Establish the mechanism for supply chain sustainability risk assessment and prevention to develop a supply sustainability management culture.</p> <hr/> <p style="text-align: center;">Strategy</p> <ul style="list-style-type: none"> Enhance purchasing performance and establish partnership. Develop safety awareness and improve the workplace environment. Share corporate social responsibility. <hr/> <p style="text-align: center;">Goals</p> <p>We are committed to developing communication channels with suppliers to increase the opportunities for opinion exchange so as to achieve environmental protection, industrial safety, and human rights for sustainable operations together with suppliers.</p>	<p style="text-align: center;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> Positive Actual Impact: Proper supply chain management <hr/> <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <p>NA</p>	<p style="text-align: center;">2022 Goals</p> <hr/> <ul style="list-style-type: none"> Added the Supplier CSR Commitment as a requirement for new supplier evaluation. <hr/> <p style="text-align: center;">2022 Performance</p> <hr/> <ul style="list-style-type: none"> Added the Supplier CSR Commitment as a requirement for new supplier evaluation, with a 100% accomplishment rate (✔). <hr/> <p style="text-align: center;">2023 Goals</p> <hr/> <ul style="list-style-type: none"> Develop the “Supplier Code of Conduct and Quality Requirements Self-Assessment Form” to preliminarily identify the potential risks in the follow five management aspects: labor and human rights (S), health and safety (S), environment and resources (E), integrity and ethics (G), and management and quality (G). Completed the trial visits on 2 suppliers Ensure all suppliers sign the “Supplier CSR Commitment”. <hr/> <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <hr/> <ul style="list-style-type: none"> Conduct on-site audits on 2 suppliers each year and include the sustainability self-assessment questionnaire in the on-site audit. Based on the on-site audit results, build an opinion exchange platform with suppliers and ask related USI professionals to make recommendations for their inadequacies and help them make corrective planning. After the preliminary identification of risks in the above five aspects, we will conduct statistical analysis on the identification results and develop solutions. 	<p style="text-align: center;">Effectiveness Assessment</p> <hr/> <p>The table below shows the information regarding the supply chain ESG risk management and performance.</p> <hr/> <p style="text-align: center;">Grievance Mechanism</p> <hr/> <p>We have a grievance hotline and a suggestion email on the corporate website for filing grievances.</p> <hr/> <p style="text-align: center;">Evaluation of the management approach</p> <hr/> <p>Internally, conduct supplier evaluation and project construction evaluation periodically, discuss the results, and make adjustments; externally, hold irregular supplier opinion exchange conferences to discuss and share opinions on unspecific topics.</p>

Supplier category and procurement proportion

With the rise in the awareness of the issues related to sustainable development and supply chain risk management, apart from proactively performing social responsibilities and contributing to society, we have gradually realized the need to understand the supplier’s ESG impacts on APC in order to implement supplier management.

Our major suppliers include materials suppliers, equipment suppliers, and project contractors. Additionally, the procurement from information hardware and software suppliers and office supplies were omitted as the proportion was statistically insignificant. To effectively integrate group resources, we implement procurement in collaboration with the Group Procurement & Logistics Division. Through the internal e-procurement system, we ensure the transparency and impartiality of procurement, uphold business integrity and ethics, and develop a steady partnership with suppliers.


APC Supplier Category and Proportion of Transaction Amount in 2022

Supplier Type	Materials Supplier	Equipment Supplier	Project Contractor
Definitions	Suppliers supplying materials for product manufacture	Suppliers supplying equipment or parts for product manufacture	Suppliers to which projects are outsourced
Proportion of procurement amount (%)	84	12	4

Source: APC amount statistics 2022


Supply chain sustainable development policy GRI 2-23

Apart from requesting suppliers to provide high-quality products and high-efficiency services, we are committed to expanding communication channels for suppliers to increase opportunities for exchange so as to achieve the goals of environmental protection, labor safety, and human rights.



Supply Chain Sustainable Development Policy

- Optimize partnership and share sustainable business opportunities
- Enhance workplace safety and enforce environmental protection
- Take social responsibility and enhance competitiveness





Supply chain risk management GRI 308-2, 414-2

Risk Assessment and Prevention	Impact Response	Future Planning
<ul style="list-style-type: none"> Review the special conditions (including chemical process risk, handling premises, fugitive emissions of VOCs, and the operation of environmental controlled substances) of chemical suppliers in addition to the supply chain safety requirements. Establish long-term cooperation with suppliers; cultivate a second source or multiple sources and maintain cooperation to coordinate long-term material preparation. Develop an internal safety stock mechanism and set a purchase base point according to the supply schedule to prevent the risk of supply disruption. Provide purchasers with education and training for supply chain sustainable development and contractors with EHS education and training. Implement the supplier sustainability self-assessment questionnaire on 2023 to provide information for preliminary risk assessment. 	<ul style="list-style-type: none"> Adjust the supply proportion of suppliers, timely supplement or dispatch from other suppliers. For construction projects, the ESH unit immediately investigates personnel safety, equipment damage, and environmental impact. After consolidation, the ESH unit will hand over the results to related units to address and understand the situations. 	<ul style="list-style-type: none"> Apart from setting chemical suppliers as the focus, a risk assessment mechanism will also be established based on the procurement amount, project outsourcing amount, or project importance, and the on-site audit results of the said sustainable development strategy. Conduct statistical analysis and plan future handling methods based on the above risk assessment and identification mechanisms and the risk levels.

Performance in supply chain ESG risk management GRI 2-24

Risk and Attribute	Supplier (chemicals)	Project Contractor
	Environmental (E), Social (S), and Governance (G) Aspects	
Potential Risk	<ul style="list-style-type: none"> a. Chemicals manufacturing process (E) b. Dusty, high-temperature, noisy, and humid operating premises (E) c. Risk of fugitive emissions of VOCs (E) d. Labor-intensive industries (S) e. Supply chain disruption/delay risk (G) f. Quality risk (G) 	<ul style="list-style-type: none"> a. Dusty, high-temperature, noisy, and humid operating premises (E) b. Work at height risk (E, S) c. Labor-intensive (S) d. Industrial safety risk of cutting or welding (S) e. Project disruption/delay risk (G) f. Project quality risk (G)
Number of audited and visited suppliers	Trial audits of 2023	
Audit Details	Environmental (E): Regulatory compliance of the manufacturing and storage of environmentally controlled substances. Governance (G): Management of quality, production, and orders; customer satisfaction follow-up. Employee education and training and external processing management.	Implemented alongside the project construction evaluation of contractors.

Promotion of Supplier’s Code of Conduct (Supplier CSR Commitment) GRI 308-1, 414-1

Sustainable development indicators such as environmental, labor, human rights, and social impacts have been getting increasing public attention in recent years. In addition to APC, we will also review the completeness of the code of conduct of suppliers. In 2022 we already completed the revision of our SOPs to include the Supplier CSR Commitment as a required document for new supplier evaluation.

Currently, apart from including these sustainable development indicators as part of the criteria for new supplier selection and supplier evaluation, we also request new suppliers to sign related undertakings to comply with the following:



Labor and human rights

No forced labor; no child labor; provision of due wages and benefits; guarantee for working hours and breaks; elimination of workplace sexual harassment, bullying, and discrimination; and no conflict minerals.



Health and safety

Measures required for occupational safety, emergency response, industrial health, protection against machinery injuries, public health, food and accommodation, and health and information safety information.



Environment

Operation permit; pollution prevention and resource conservation; hazardous substances; effluents; non-toxic solid waste; noise; exhaust emissions; product and service limitation; energy/resource consumption; and GHG emissions.



Ethics and integrity

Ethical corporate management; respect for intellectual property rights; abidance by non-disclosure agreements; privacy protection; and avoidance of the conflict of interest.

Apart from setting the Supplier CSR Commitment as an incentive, we have also requested suppliers to sign and comply with the commitment. We have revised our SOPs to include the Commitment as one of the required documents for new suppliers. Currently, major suppliers of bulk materials and the top five materials suppliers are requested to sign the Commitment. After all suppliers sign the Commitment, an unannounced onsite supplier audit for compliance with the Commitment will be implemented from time to time.

Currently, major feedstock suppliers and contractors Taiwan CPC and Dairen Chemical and partner CTCI have become our sound sustainable developer corporate suppliers. We adopt the “active risk management” policy to investigate suppliers with potential negative impacts, including irregular visit of THAU BING to check for the offences or news regarding suppliers’ violation of the said terms and assess if such offences or news will bring negative or potential impacts (such as punishment or suspension order of competent authorities). In addition, we will take related risk controls and countermeasures for the potential raw materials supply crisis based on their offences.

New suppliers in 2022	6
New suppliers that have signed the undertaking	6

SCM mechanism

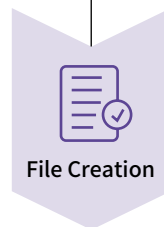
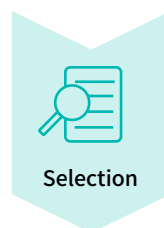
With quality, ability, and environmental policy as conditions, we perform corporate social responsibility in collaboration with outperforming suppliers on a long-term basis. We also communicate with contractors and transporters our environmental policy, comply with the EU’s RoHS directive, enhance environmental education and training, and care about the safety of contractors working in our plants in order to ensure the safety of all operations, protect the life, safety, and health of personnel, and optimize risk management.

We establish long-term strategic partnership with raw materials suppliers and determine the safety stock based on materials preparation lead-time to ensure supply chain smoothness. Additionally, the Group Procurement & Logistics Division evaluates suppliers periodically in terms of quality, delivery performance, environmental protection, industrial safety, packaging, quality certification (ISO 9001), and service.

Apart from conducting the annual supplier evaluation to ensure that all APC suppliers comply with our commitment to environmental sustainability and sustainable operations, we also hold supplier conferences from time to time to communicate with suppliers so as to maintain long-term cooperation and opinion exchange. In addition to new product promotion, new technology and market intelligence exchange are also included in the conferences to ensure the steady supply of major materials.

Additionally, during the project construction of contractors, the supervision and management of plant onsite personnel are key to construction quality control, and the quality monitoring of the engineering and industrial safety units is crucial to ensure environmental safety, occupational safety, human rights, and labor practices. Results are reported to HQ for management to keep up with the latest condition.

Source: Qualified Supplier Selection and Withdrawal Regulations, Supplier Evaluation Regulations, Capital Expenditure Requests (CER) Project Outsourcing Management Regulations.



Selection of New Suppliers and Contractors

- Requirements for new suppliers of raw materials:
 - ✓ CNS, UL, JIS, ISO certificates
 - ✓ Compliance with the required technical capabilities for sole agents or distributors
 - ✓ Quality validation of raw materials by the technology department
 - ✓ Agreement to comply with the APC environmental protection requirements
- Submission of samples by new suppliers of raw materials to the recipe section and the related units for examination, assessment, or trial use.
- Delivery of the “Project Contractor Investigation Form” to contractors for them to fill out the form and submit the relevant certifications to facilitate and evaluation and grading of the procurement unit.

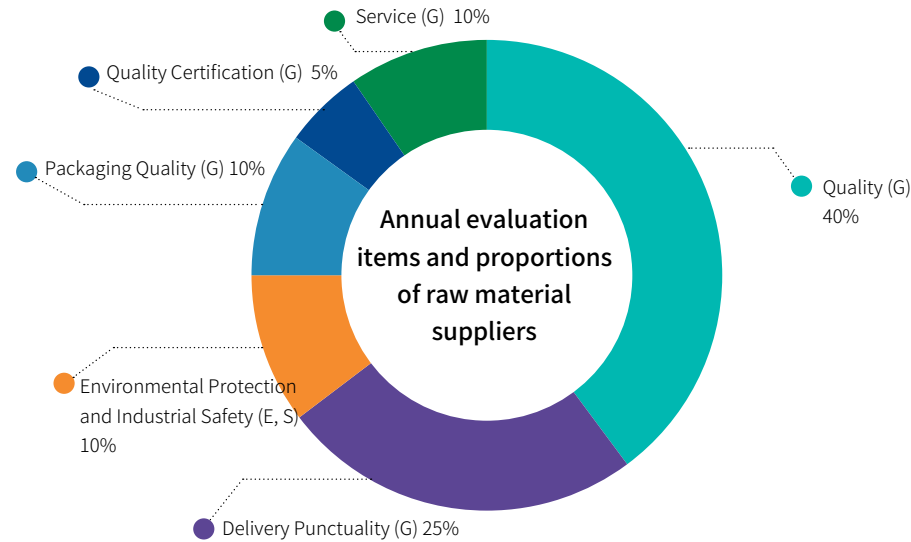
File creation of qualified suppliers and contractors

- After sample validation, the procurement unit reports new materials suppliers the chief of the engineering department, plant director, and president for approval, includes them in the qualified vendor list (QVL), and timely reviews and updates the QVL.
- After filling out the “Project Contractor Investigation Classified Catalog”, the procurement unit will grade the contractors, create a file for each of them, and maintain a record alongside their certifications for the reference of project outsourcing and price inquiries. The procurement unit also updates the investigation contents from time to time.

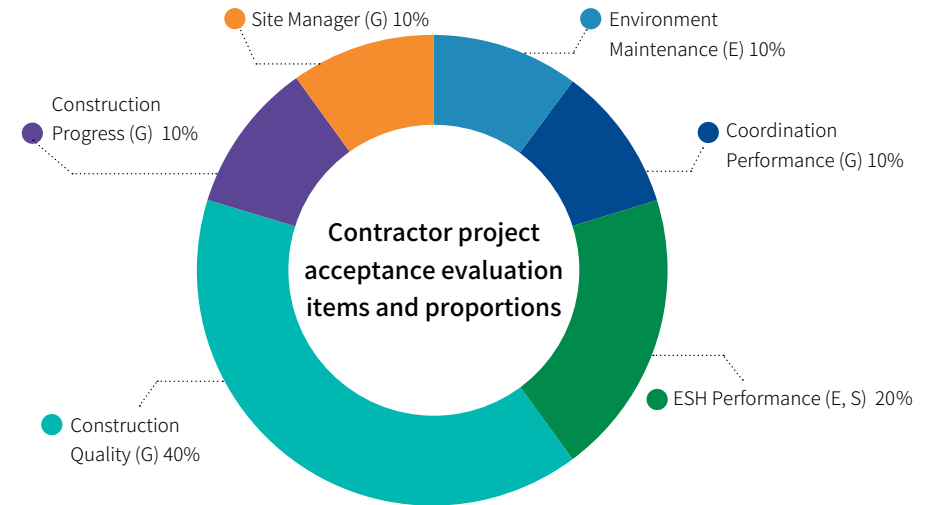
Annual evaluation of qualified suppliers and contractors

- We rate the quality, delivery, and industrial safety performance of materials suppliers in terms of four grades for the reference of procurement management.
- We supervise the construction process of contractors and perform inspection and acceptance of projects for the reference of project outsourcing management.

Materials supplier evaluation and contractor evaluation



E, S and G represent respectively environmental, social, and governance aspects



E, S and G represent respectively environmental, social, and governance aspects

Results of Materials Supplier Evaluation in Past 3 Years

Item	2020	2021	2022
Suppliers Evaluated	24	31	33
Pass Rate	100%	100%	100%

1. Source: APC supplier evaluation
2. Grading criteria:
A: 85-100 marks, B: 75-84 marks, C: 60-74 marks, D: 59 marks and below. Grade B and above suppliers are qualified suppliers.
3. For grade A suppliers, we will prioritize transactions or increase the procurement volume.
4. For grade C suppliers, we will advise them to make improvement and reduce or suspend transactions with them until they complete improvement and pass the re-evaluation.
5. For grade D suppliers, we will stop transactions with them and remove them from the QVL.
6. Suppliers rated grade A for three consecutive years are exempted from evaluation for three years. As a results, only 24 suppliers were evaluated in 2019 and 2020.

Results of Contractor Construction Evaluation in Past 3 Years

Item	2020	2021	2022
Suppliers Evaluated	40	28	6
Pass Rate	100%	100%	100%

1. Source: APC Contractor Construction Evaluation
2. Contractors receiving 70 or more marks are qualified contractors.
3. Contractors receiving 60-69 marks will be suspended from price inquiry for six months.
4. Contractors receiving 50-59 marks will be suspended from price inquiry for one year.
5. Contractors receiving 49 or less marks will be prevented from tendering and transaction.

In 2022 the amount of procurement of major materials accounted for 83% of the total amount of procurement. To secure the sustainable supply of material sources and stimulate market circulation, we actively cultivate new material sources and increase bulk material suppliers to 16 companies, including 3 domestic suppliers and 13 foreign suppliers.

Materials procurement will be prioritized for local suppliers with reliable and stable supply. Due to the longer annual repair duration, the supply of domestic ethylene suppliers reduced in 2022, and the procurement thus reduced over 2021. As the annual repair duration of domestic suppliers was similar to that of 2021, local VAM procurement only increased slightly by 1%.

Support for local procurement

To promote local economic development, simplify the transportation process, and reduce transportation risks, we prioritize local procurement when the procurement conditions are similar. In 2022, the proportion of local procurement, including materials and equipment procurement and project outsourcing, accounted for about 83%. In consideration of the need to increase stock due to delivery delay as a result of shipment problems, local procurement increased by 2% over 2021.

Amount and Proportion of Local Procurement of Major Materials in Past 3 Years (%)

Year	2020		2021		2022	
	VAM	Ethylene	VAM	Ethylene	VAM	Ethylene
Locations/Materials						
Taiwan	92	59	83	73	84	65
Foreign	8	41	17	27	16	35
Source	2 Taiwan suppliers and 12 foreign suppliers		3 Taiwan suppliers and 13 foreign suppliers		3 Taiwan suppliers and 13 foreign suppliers	

Source: APC amount statistics 2022

Procurement of energy-efficient and eco-friendly equipment

We have been implementing energy conservation and carbon reduction in recent years, and the procurement unit has also prioritized support for eco-friendly materials by establishing SOPs to prioritize inquiries to products certified for using the Green Mark by the Environmental Protection Administration (EPA); or products complying with EPA's

requirements for recycled materials, recyclable products, low pollution, or energy conservation; or products that increase social benefits or reduce social costs.

Green procurement in 2022 included lamps and equipment carrying the Green Mark and Energy Label and the energy-efficient equipment replacement projects of Linyuan Plant, reducing energy consumption to achieve energy conservation and carbon reduction.

The overall green procurement amount accounted for about 1% of equipment construction amount. We will continue to enhance the equipment energy efficiency to practice environmental sustainability towards corporate sustainable development.

Proportion of Local Procurement Amount of Materials and Equipment and Project Outsourcing in Past 3 Years (%)

Location	Proportion of purchasing amount		
	2020	2021	2022
Taiwan	76	81	83
Foreign	24	19	17

Source: APC amount statistics 2022

CH4 Eco-friendliness

Resources management	GRI 3-3, 301-1, 301-2, 301-3, 303-1, 303-2, 303-3, 303-4, 303-5	60
Climate change and energy management	GRI 2-23, 2-24, 3-3, 201-2, 302-1, 302-3, 302-4, 305-1, 305-2, 305-4, 305-5	65
Emissions management	GRI 3-3, 305-6, 305-7, 306	76

Performance Highlights

- ✓ Electricity consumption reduced by **1.63%** on average each year during 2015-2022, better than the regulatory requirement of 1%.
- ✓ GHG emissions were **111,975tCO₂e**, by **4.5%** less over 2017 (base year) in 2022.
- ✓ Reduced energy consumption by **977GJ** or carbon by **138tCO₂e** in 2022.

Material Topics

- Raw material management
- Water resources management
- Climate Change and Energy Management
- Air pollution control

SDGs Correspondence



Certified management system



ISO 14001 Environmental Management Systems
Validity: 13 May 2022 - 3 May 2025



ISO 50001 Energy Management Systems
Validity: 19 November 2022 - 19 November 2025



4.1 Resources management

Raw material management

Material issue: Materials management; Corresponding sustainability principle: Sustainable development GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <p>Strengthen materials management, enhance materials efficiency, lower the production cost, and reduce waste generation.</p> <hr/> <p style="text-align: center;">Management Practice and Target</p> <p>Lower the production cost, reduce waste generation, and lower environmental impact through monitoring ethylene efficiency and controlling FIBC recovery.</p> <hr/> <p style="text-align: center;">Strategy</p> <ul style="list-style-type: none"> · Energy efficiency monitoring · Materials recycling and reuse 	<p style="text-align: center;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> · Continued the management follow-up of 2021 <hr/> <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <p>NA</p>	<p style="text-align: center;">2022 Goals</p> <ul style="list-style-type: none"> · Ethylene efficiency ≤ 1.009 · Equipment operation rate $\geq 96.6\%$ · FIBC recovery rate $\geq 78\%$ <hr/> <p style="text-align: center;">2022 Performance</p> <ul style="list-style-type: none"> · Ethylene efficiency: 1.0041 (✓) · Equipment operation rate: 95.1% (✗) · FIBC recovery rate: 78.2% (✓) <hr/> <p style="text-align: center;">2023 Goals</p> <ul style="list-style-type: none"> · Ethylene efficiency ≤ 1.009 · Equipment operation rate $\geq 96.6\%$ · FIBC recovery rate $\geq 78\%$ <hr/> <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> · Increase the dispatch flexibility of materials supply through the Kaohsiung ICT Phase II investment project to increase ethylene supply by about 19%/day. · Promote the circular economy, enhance the scrap efficiency, and recycle and reuse waste film rolls $\geq 60MT$. 	<p style="text-align: center;">Effectiveness Assessment</p> <ul style="list-style-type: none"> · Include ethylene efficiency as a quality target to control the accomplishment rate. · Include materials recycling and reduction volumes in routine management. <hr/> <p style="text-align: center;">Evaluation of the management approach</p> <ul style="list-style-type: none"> · Periodically review ethylene efficiency at the weekly plant affairs meeting. · The Finished Product Section produces statistics and follows up the FIBC recovery rate each month.

Materials use

We mainly produce low density polyethylene (LDPE) resins and ethylene vinyl acetate copolymer resin (EVA) with ethylene and VAM being the major materials and mineral spirit the secondary material.

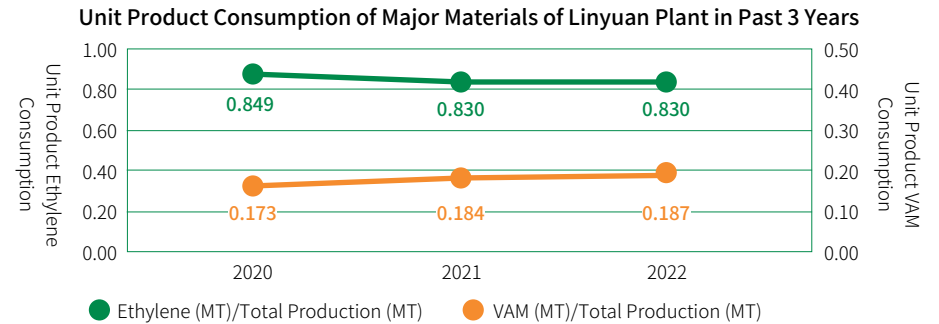
We do not use recycled materials for the major materials or recycle our products for reuse. The consumption of major materials in the past three years are tabulated below:

Major Materials Consumption of Linyuan Plant in Past 3 Years

Material	Unit	2020	2021	2022
Ethylene	MT	110,065	112,990	107,936
VAM	MT	22,460	25,105	24,270

In 2022, the overall capacity reduced by 4.4% over 2021 as a result of the increased unplanned halts. Due to the high EVA demand and development of high-value and high VA content products, the unit product VAM consumption increases annually, while the unit product ethylene consumption reduces each year.

The graph below shows the unit product consumption of major materials in the past three years:



Materials Use GRI 301-1, 301-2

Linyuan Plant packs products in bags or in containers. The former includes PE bags, FIBC, container bags, top sheet, and shrinkable films. **No recycled materials are used.**

To lower the environmental impact of product packaging materials, customers recover PE bags, container bags, top sheets, and shrinkable films for the temporary packaging of goods or debris. Linyuan Plant recovers FIBC for reuse. Transporters will bring FIBC back to Linyuan Plant in the next delivery. Each FIBC is reused for about four times on average.

Reuse Volume and Recovery Rate of Packaging Materials in Past 3 Years GRI 301-3

Packaging Material	Unit	2020		2021		2022	
		Consumption	Recovery	Consumption	Recovery	Consumption	Recovery
PE Bag	MT	389	Recovered by customers	482	Recovered by customers	474	Recovered by customers
Top Sheet and Shrinkable Films	MT	27	Recovered by customers	58	Recovered by customers	61	Recovered by customers
Container Bag	MT	0	Recovered by customers	0	Recovered by customers	0	Recovered by customers
FIBC	MT	144	78.0 %	126	78.2 %	146	78.2 %

Note: FIBC recovery rate = (Number of recovered FIBCs ÷ Number of products sold in FIBC), based on domestic sales.

The FIBC recovery rate cannot be increased because some FIBCs recovered from customers are damaged and cannot be reused. We have notified sales representatives to communicate with customers to handle FIBCs with caution to prevent damage from affecting FIBC recovery and reuse.

Water resources management

Material issue: Water management; Corresponding sustainability principle: Sustainable development GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <hr/> <p>In response to global climate change, valuable water resources are reclaimed for reuse through water conservation and process improvement programs.</p> <p style="text-align: center;">Management Practice and Target</p> <hr/> <ul style="list-style-type: none"> Reduce pollution and emission through process and source improvement and then end-of-the-pipe treatment promote water resource recycling and reuse. Continuously implement water conservation measures and emissions reduction, and water resource reclamation management. <p style="text-align: center;">Strategy</p> <hr/> <ul style="list-style-type: none"> Management and follow-up of water reclamation rate Continuous follow-up and management of unit product water consumption Continuous follow-up and management of process improvement projects related to water conservation. The data boundary of water management covers Linyuan Plant, and data coverage is 100%. <p style="text-align: center;">Goals</p> <hr/> <ul style="list-style-type: none"> Accomplish the annual target for water reclamation. Accomplish the annual target for unit product water consumption. Keep up with the annual schedule planning for process improvement projects related to water conservation. 	<p style="text-align: center;">Positive/Negative Impacts</p> <hr/> <ul style="list-style-type: none"> Negative Actual Impact- Insufficient reservoir water <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <hr/> <ul style="list-style-type: none"> Implement three-stage water conservation measures in coordination with the government's stage water conservation program to save water by about 10%. Continuous follow-up and management of water reclamation rate, unit product water consumption, and process improvement projects for water conservation. 	<p style="text-align: center;">2022 Goals</p> <hr/> <ul style="list-style-type: none"> Water reclamation rate >95% Water consumption per unit product: <4.1 m³/MT <p style="text-align: center;">2022 Performance</p> <hr/> <ul style="list-style-type: none"> Water reclamation rate: 99.2% (✓) Unit product water consumption: 3.8 M³/MT (✓) <p style="text-align: center;">2023 Goals</p> <hr/> <ul style="list-style-type: none"> Water reclamation rate >95% Unit product water consumption <4.0 m³/MT <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <hr/> <ul style="list-style-type: none"> Water reclamation rate >95% Unit product water consumption <4.0 m³/MT Process improvement projects related to water conservation: At least one project each year 	<p style="text-align: center;">Effectiveness Assessment</p> <hr/> <ul style="list-style-type: none"> Water conservation statistics Water bills Periodic calibration of flowmeters Follow-up and management of unit product water consumption based on ISO 9001 <p style="text-align: center;">Grievance Mechanism</p> <hr/> <ul style="list-style-type: none"> "ESG" section on APC website Environmental impact grievance channels <p style="text-align: center;">Evaluation of the management approach</p> <hr/> <ul style="list-style-type: none"> Report the status and rate of self-imposed water conservation at the periodic plant affairs meeting and make rolling review. Discuss the progress and construction methods of improvement projects related to water conservation at the periodic technological exchange meeting.

Water source of APC Linyuan Plant

Water risk level: Low

Water source: Tap water

Water is supplied by the Gaoping River Weir via the Fengshan Reservoir.

1. Use of the water risk assessment tool of the World Resources Institute (WRI)
2. The data boundary of water management covers Linyuan Plant, and data coverage is 100%.

Water consumption of Linyuan Plant in 2022 494,813 M³

Water discharge of Linyuan Plant 177,084 M³

Water consumption of Linyuan Plant 317,729 M³

Water reclamation rate (reuse rate, R1) 99.2 %

$R1 = \frac{\text{Total volume of recycled water} + \text{Total volume of reclaimed water}}{\text{Tap water consumption} + \text{Total volume of recycled water} + \text{Total volume of reclaimed water}} \times 100\%$

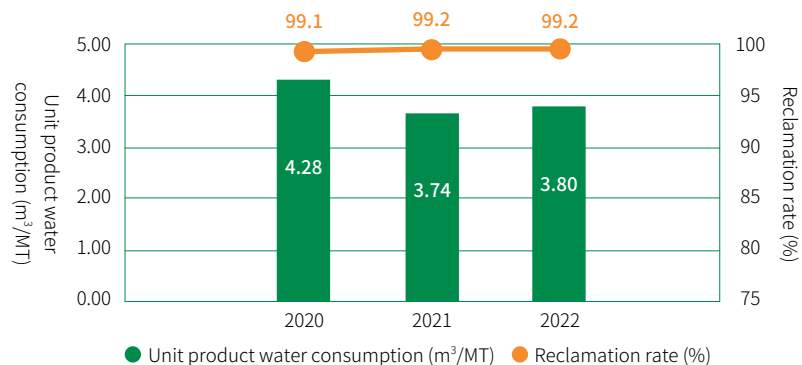
GRI 303-1, 303-3, 303-4, 303-5

SASB RT-CH-140a.1

In 2022 the unit water consumption slightly increased by 1.6% over the previous year to 3.80 m³/MT, which was still below the standard at 4.10 m³/MT.

In Linyuan Plant, we reclaim condensate and recycle water of the cooling water tower for reuse. In accordance with the Directions for Review of Water Consumption Plans promulgated by the Ministry of Economic Affairs, the water reclamation rate in 2022 was 99.2%, which is the same as that of 2021. The graph below shows the unit product water consumption and unit product water reclamation rate of Linyuan Plant in the past three years. Additionally, **the impact of global warming and climate change concerns us. Due to the water crisis in Kaohsiung region in recent years, we will propose the water solution policy to management in 2023.**

Unit Product Water Consumption and Water Reclamation Rate of Linyuan Plant in Past 3 Years

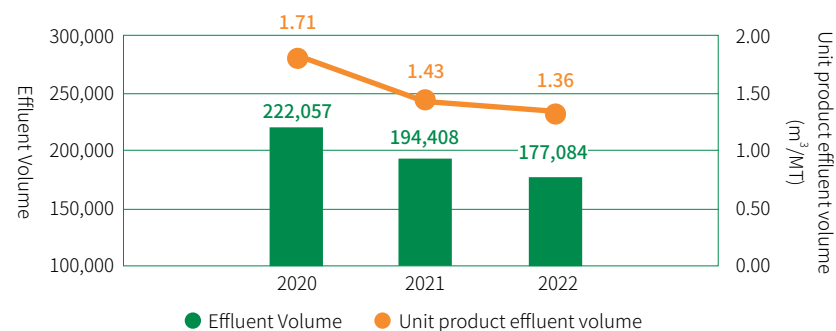


Effluent management

In Linyuan Plant, solid polyethylene products are produced by means of gas compression. After equipment cooling, dicing and cooling, and rinsing product storage tanks, tap water is collected in the equalization basin. Hence, effluents can be discharged free from contamination with a quality better than the legal requirements. It is transported to the dedicated sewerage system via underground pipelines and discharged to the wastewater treatment plant of Linyuan Industrial Park for treatment.

The 2022 effluent volume reduced by 8.9% over 2021 to 177,084m³; the volume of unit product effluent was 1.36 m³/MT. Due to the proper water quality control of the cooling water tank, the required water replacement volume reduced, reducing the volume of unit water effluent over 2021.

Unit Product Water Consumption and Water Reclamation Rate of Linyuan Plant in Past 3 Years



In Linyuan Plant, the major effluent testing items include suspended solids (SS), chemical oxygen demand (COD), and pH. The periodic report data is lower than the sewerage water quality limits.

The table below shows the results of major water quality test items of Linyuan Plant in the past three years: [GRI 303-2](#)

Unit: mg/L

Test Item	2020	2021	2022	Standard
S.S.	10.26	9.51	9.18	≤ 25
COD	38.23	32.72	40.72	≤ 90
pH	7.39	7.58	7.52	6~9

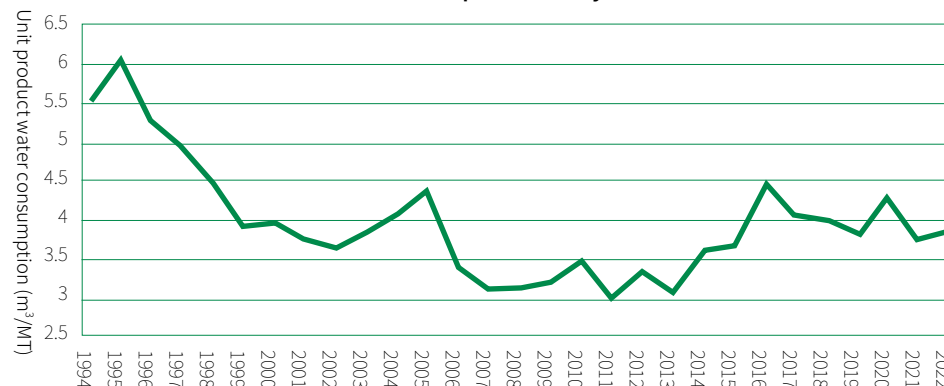
✓ In 2022 the results of all water quality test items fell within the limit, and there was no illegal discharge. [SASB RT-CH-140a.2](#)

Water conservation measures

At APC, the enthalpy of vaporization of heat removal equipment and cooling water towers is the main source of water consumption. Over the years we have implemented various water conservation programs, such as replacing the absorption chiller with the electric chiller, waste heat recovery, dicing soft water management, and increasing the concentration factor of cooling water. By maintaining the efficiency of heat exchangers, the 2022 unit product water consumption increased slightly.

Due to global warming and climate change, the situation of industrial water supply in Taiwan has been worsening in recent years. Apart from adopting progressive water rationing, the government also actively combined the wastewater discharged from various processing zones and industrial parks and further planned and built wastewater recycling plants in response to water shortages. In the future, the consumption of the recycled water generated will become a key factor. After assessing the construction and operating costs of an in-house wastewater recycling system, we temporarily hold the construction of the small wastewater recycling system and consider using the recycled water from the government's wastewater recycling plants for in-house consumption to support the government's wastewater recycling policy so as to achieve the win-win advantage for the public and private sectors. [SASB RT-CH-140a.3](#)

Trend of Unit Water Consumption of Linyuan Plant Over the Years



Our stage response to the government's stage water rationing measures:

1 Phase I

- Urge employees to save water.
- Reclaim office rinsing water for plant irrigation.
- Reclaim dicing water and cooling water for low-level water use.

2 Phase II

- Increase the concentration factor of cooling water tower water (from 5.5 times to 7.5 times)
- Reduce dicing water replenishment of production lines.
- Temporarily stop unnecessary washing of product storage tanks and floor

3 Phase III

- Lower the frequency of fire hydrant water tests and postpone fire drills.
- Activate distillation and purification only when the liquid in the reclamation tank is at the high liquid level.
- Temporarily shut down bathroom use for employees.

Through the above measures, we can save water by about 10%. However, we will need to buy groundwater with water tankers in severe droughts.

4.2 Climate change and energy management GRI 2-23, 2-24

Material issue: Climate change and energy management; Corresponding sustainability principle: Sustainable development GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <p>Extreme weather events impact human lives and property. As climate change is an inevitable global issue, it is necessary for businesses to take immediate action to enhance energy efficiency and reduce GHG emissions as the immediate action.</p> <hr/> <p style="text-align: center;">Management Practice and Target</p> <p>Establish the ISO 50001 Energy Management Systems to enhance energy efficiency through improving energy conservation measures and monitoring energy KPIs. Implement voluntary GHG inventory and emission control to realize our voluntary reduction commitment and ensure legal compliance. Analyze the risks and opportunities due to climate change to reduce the financial loss on production and operations as a result of extreme weather events.</p> <hr/> <p style="text-align: center;">Strategy</p> <ul style="list-style-type: none"> Establish the energy conservation and carbon reduction commitment Enhance energy efficiency Legal compliance Climate change risk response 	<p style="text-align: center;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> Negative Actual Impact: Increased energy prices Negative Actual Impact: Insufficient power supply Negative Potential Impact: Carbon tax collection <hr/> <p style="text-align: center;">Processes to remediate and prevent negative impacts</p> <ul style="list-style-type: none"> Review in-house energy conservation and carbon reduction programs each year in coordination with the Group Energy Management Department. Plan and build generation sets to ensure electricity redundancy during power supply disruption. Plan and implement green power strategies within the group: APC will use green power (solar PV) of about 2.5GWh in 2025 by law. 	<p style="text-align: center;">2022 Goals</p> <ul style="list-style-type: none"> The 2022 emissions reduced by 3.8% over 2017 Unit product electricity consumption: 1.49 MWh/MT Feasibility assessment of the installed and contractual capacity of 10% green power Operational interruption due to extreme weather events: 0 day <hr/> <p style="text-align: center;">2022 Performance</p> <ul style="list-style-type: none"> The 2022 emissions reduced by 4.5% over 2017 (✓) Unit product electricity consumption: 1.477 MWh/MT (✓) USI Green Energy Corporation (USIGE), a USIG business, continues to purchase solar PV project sites and will discuss the green power purchase contract with all USIG businesses in 2024. Operational interruption due to extreme weather events: 0 day <hr/> <p style="text-align: center;">2023 Goals</p> <ul style="list-style-type: none"> GHG emissions were 111,100tCO₂e Reduce emissions by about 1,738 tCO₂e with the energy conservation and carbon reduction program. Unit product electricity consumption: 1.48 MWh/MT The verification of Linyuan Plant's 2022 GHG emissions will be completed in 2023Q4. Operational interruption due to extreme weather events: 0 day <hr/> <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> 27% less than 2017 by 2030 USIG plan and implement the green power strategy. Linyuan Plant will use 2.5GWh of green power (solar PV) by law in 2025 	<p style="text-align: center;">Effectiveness Assessment</p> <ul style="list-style-type: none"> Include energy conservation and carbon reduction programs in the energy management system for progress control. Monitor, measure, and control energy KPI and review differences monthly. Energy Conservation Audit System Report of Energy Users of the Bureau of Energy. Regulations for Management of GHG Inventory and Registration of the EPA, voluntary GHG inventory. <hr/> <p style="text-align: center;">Grievance Mechanism</p> <ul style="list-style-type: none"> "Contact us" on the corporate website Survey on issues that concern stakeholders <hr/> <p style="text-align: center;">Evaluation of the management approach</p> <ul style="list-style-type: none"> USIG Technology exchange Meeting Energy Management System Management Review Meeting

Description: Values have been converted into the annual value after a change in the method of energy conservation and carbon emissions calculation; and the actual reduction was used as the 2022 target in response to USIG's carbon reduction target: 27% less than 2017 by 2030.

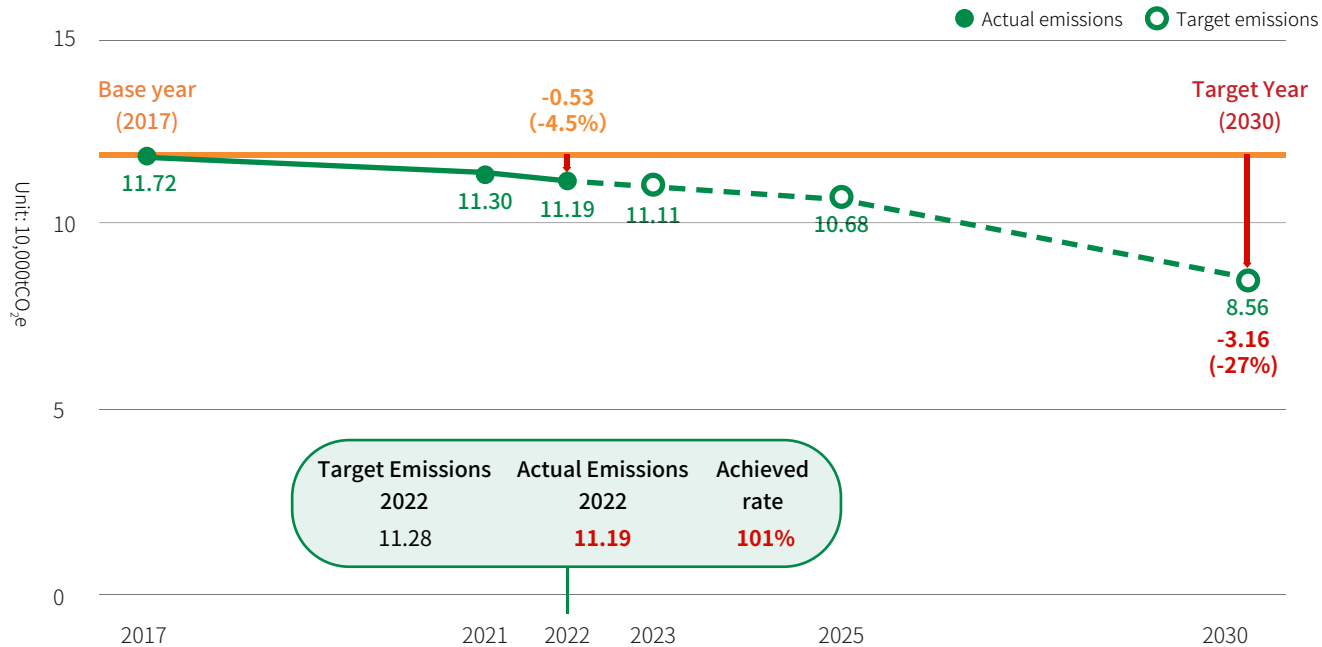
Climate change and risk management GRI 2-23, 2-24

Climate change is a common challenge around the world. To keep up with the world and match the demand for sustainable development, Taiwan’s legislature passed the Climate Change Response Act in October 1, 2023.

Facing the impact of climate change, carbon reduction has become a global goal. To enhance carbon reduction, we set the 2030 carbon reduction target at “**27% less than 2017 by 2030**” in early 2022 to actively implement countermeasures and management mechanisms. Nine core businesses of the group will continue to implement ISO 14064-1 GHG inventory and verification and plan and implement carbon reduction programs. The group will also actively develop external renewables sites. By the end of 2022, the accumulative on-grid capacity of solar PV sites has reached 5.9MW.

We plan the carbon reduction pathway based on the 2030 carbon reduction target. **Greenhouse gas emissions in 2022 will be 111,975tCO₂e, a decrease of 4.5% compared with the base year.** In the future, we will implement the energy conservation and carbon reduction programs more actively, enhance energy efficiency, use low-carbon fuels, accomplish carbon reduction targets, and promote sustainable development.

Description: 1. Base year: We set 2017 as the base year of total GHG emissions because it was the first year after the commercial operation of our fourth production line.
2. Based on the results of ISO 14064-1 external verification in 2022, we revised the emissions in 2017 to 117,228tCO₂e (formerly 110,863tCO₂e).



Based on the framework recommended by the Task Force on Climate-related Financial Disclosures (TCFD), we identify climate-related risks and opportunities, assess risks and opportunities from different departments, assess financial impacts, and set responsive plans. GRI 201-2

Climate change management framework



Governance

ESG Committee	As the highest governance body of climate change management chaired by independent directors, the ESG Committee reports the plans implemented for addressing climate change and their performance to the Board every year.
Group Management Review Meeting	Chaired by the Board chairman, it plans and implements material policies for energy conservation and carbon reduction and reports the results from time to time.
Group Environmental Quarterly Review Meeting	It is the top management of the group's energy management and reports the planning, progress, and decisions of energy management to the chairman.
Group Green Power Team	As the Group's responsible unit for green power promotion, it reports the status of and future plans for green power development to the chairman.



Strategy

Identification of Risks and Opportunities	Identify material risks and opportunities based on their likelihood and impact.
Assessment of Potential Financial Impact	Assess the financial impacts of identified material risks and opportunities.
Scenario Analysis	Set plans to achieve net zero emissions in different scenarios.



Risk Management

Implementation of TCFD	Identify risks and opportunities based on the TCFD framework, communicate with all responsible units, and confirm by senior management.
Submission of Identification Results	Include them in the annual risk assessment. The president reports the control measures and management performance to the Audit Committee and Board every year.



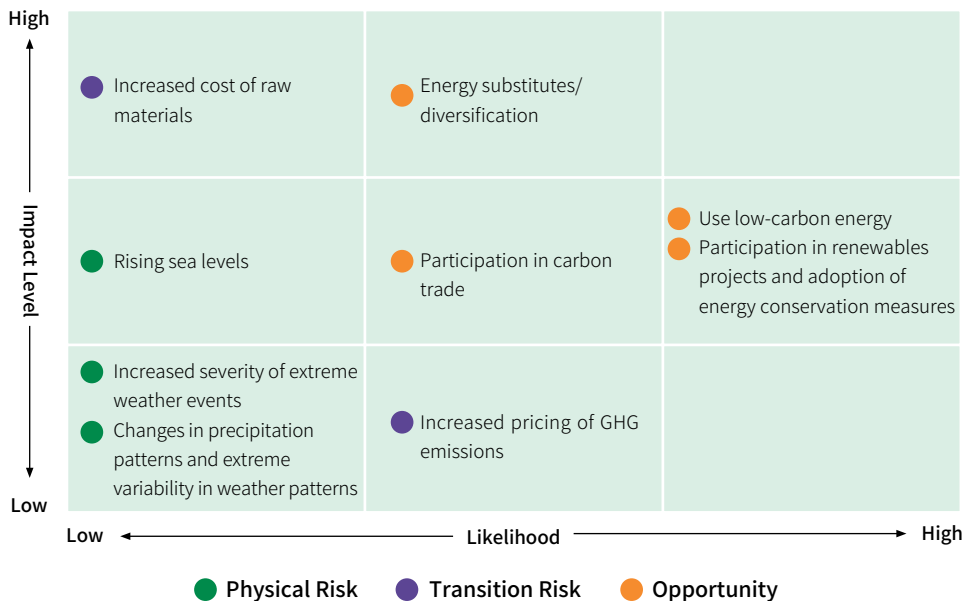
Indicators and Targets

Group Energy Management Targets	We set 2017 as the base year and reduction by 27% by 2030 as the carbon reduction target. We also review the target every three years.
Climate-Related Response Strategy	Equipment renewal, construction of renewable energy equipment, optimization of production scheduling, planning building aircon, energy management system, extreme weather emergency response plan
GHG Emissions Disclosure	Disclose the data of scopes 1, 2, emissions in the ESG report every year and review the causes of changes periodically.

Identification of Risks and Opportunities GRI 201-2

The impact of climate change on APC's operations has been increasing. To carefully tackle potential risks and capture potential new business opportunities, we have spared no efforts in implementing programs to enhance energy conservation and carbon reduction, improving production efficiency, and replacing old equipment with high-efficiency equipment. During operations, we have identified 5 major risks and 4 major opportunities with the TCFD-recommended methods and assessed and differentiated the duration of impacts. In the future, we will review the counteractions every year and develop a resilient climate change culture.

Map of Climate-Related Risks and Opportunities



The climate change risks and opportunities by the identified duration are tabulated below:

Type	Short-term (<3 years)	Medium-term (3-5 years)	Long-term (>5 years)
Physical Risk	---	<ul style="list-style-type: none"> Increased severity of extreme weather events Changes in precipitation patterns and extreme variability in weather patterns 	<ul style="list-style-type: none"> Sea level rises
Transition Risk	---	<ul style="list-style-type: none"> Enhance GHG Emission Pricing 	<ul style="list-style-type: none"> Raw material cost rises
Opportunity	<ul style="list-style-type: none"> Participation in renewables projects and adoption of energy conservation measures 	<ul style="list-style-type: none"> Alternative energy and energy diversification Participation in carbon trade 	<ul style="list-style-type: none"> Use low-carbon energy



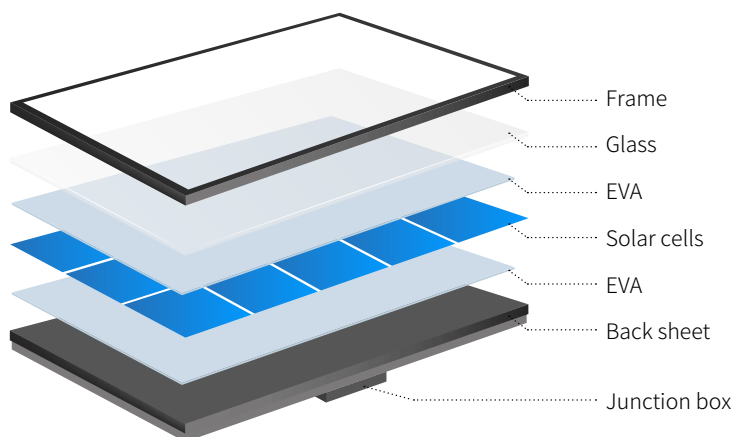
Financial implications and other risks and opportunities due to climate change and countermeasures GRI 201-2

Type	Climate Related Risk/ Opportunity	Likelihood	Impact	Potential Financial Risk	Description	Countermeasures
Physical Risk	Sea level rises	Low	Medium	Increase in capital expenditure	Our production plant is located in the Linyuan Industrial Park. It is an area subject to low to medium risk of rising sea levels. Hence, seawater intrusion or floods may cause operational interruption.	<ol style="list-style-type: none"> 1. Raise the foundation of key equipment. 2. Build flood control and drainage facilities. 3. Assess the inundation potential of new equipment sites
	Increased severity of extreme weather events	Low	Low	Increased capital expenditure, reduced value of assets	Prolonged droughts will lead to low water storage in reservoirs, resulting in water rationing and water shortages. Typhoons and unexpected torrential rain will lead to floods, resulting in operational interruption.	<ol style="list-style-type: none"> 1. Build flood control and drainage facilities. 2. Monitor the water regime and emergency response procedures. 3. Plan backup water sources
	Changes in precipitation patterns and extreme variability in weather patterns	Low	Low	Increased capital expenditure and increased costs of operations	Changes in precipitation patterns, such as typhoons and floods, will increase the probability of damage to the factory buildings and equipment, resulting in operational interruption.	<ol style="list-style-type: none"> 1. Build flood control and drainage facilities. 2. Raise the foundation of key equipment 3. Plan natural disaster insurance
Transition Risk	Raw material cost rises	Low	High	Increase in operating costs	<ol style="list-style-type: none"> 1. Extreme weather events will increase materials transportation cost and delivery uncertainty. 2. Use of low-emission materials will increase the purchasing cost. 	<ol style="list-style-type: none"> 1. Diversify materials suppliers. 2. Implement low-carbon transition to win the market demand for carbon neutrality in the supply chain.
	Enhance GHG Emission Pricing	Medium	Low	Increase in operating costs	Due to the impact of the Climate Change Response Act, carbon tax collection will begin in Taiwan.	<ol style="list-style-type: none"> 1. Set carbon reduction target to 27% by 2030. 2. Form the Green Power Team in USIG to actively build green power installations and discuss green power purchase. 3. Replace old equipment and enhance energy efficiency.
Opportunity	Alternative energy and energy diversification	Medium	High	Increased overheads, annually reduced operating costs.	Assess power source diversification and substitute high-emission power sources.	<ol style="list-style-type: none"> 1. Contract renewables retailers 2. Develop self-constructed solar PV sites 3. Keep track on and engage in the power market
	Use low-carbon energy	High	Medium	Increased overheads, annually reduced operating costs.	Instead of coal, we use natural gas as the fuel. We have already installed PV systems with a capacity up to 499 kW and will also consider the use of renewables.	<ol style="list-style-type: none"> 1. USIG will take charge of the green power procurement design in compliance with the regulatory obligatory capacity by 2025. 2. Develop self-constructed solar PV sites
	Participation in renewables projects and adoption of energy conservation measures	High	Medium	Increased overheads, reduced later emissions and operating costs.	Increase production, enhance unit product energy efficiency, and reduce GHG emissions through proper equipment and operation optimization.	Implement the energy conservation program of 1% less each year and enhance energy efficiency through process and equipment improvement.
	Participation in carbon trade	Medium	Medium	Increased overheads, annually reduced operating costs.	Carbon tax collection is prioritized under the Climate Change Response Act. We will continue to actively reduce the unit product emissions to respond to the market impact from the future cap control.	<ol style="list-style-type: none"> 1. Trace the development of climate-related laws and regulations periodically. 2. Understand the condition of the global carbon market.

In response to the extreme weather events due to climate change, we continuously develop innovative materials and products to reduce the impacts of climate change by integrating related our R&D experience and USIG’s technical and R&D capacity.

PV-grade EVA

The composition of solar panels



In response to the extreme weather events due to climate change, the market demand for green power products continue to rise. We thus actively develop PV applied products with high added value, such as the EVA films for PV module packaging, to fulfill the eager demand for PV module packaging materials and cultivate new markets for high-value products.

Due to COVID-19, the demand burst in 2021H2 continued in 2022, the product price remained high, and the PV-grade EVA sales increased by 6.5% over 2021.

Participation in Asia Pacific Forum & Exposition for Sustainability



The 2022 Asia Pacific Forum & Exposition for Sustainability organized by the Taiwan Institute for Sustainable Energy (TAISE) was held at Exhibition Hall 1, Taipei World Trade Center during 12-14 August 2022.

Based on the topic of “**Low-Emission Green Power, High-Performance EVA Films**”, we exhibited the EVA materials (PV-grade EVA) for the PV module packaging films. We also displayed the PV packaging films and PV modules supplied by downstream suppliers to present samples of the complete ranges covering raw materials, packaging film processing, and PV module packaging, demonstrating our contribution to the green power industry.

Energy management

In 2016 USIG voluntarily set energy management targets and began to make dynamic target reviews in accordance with the country’s energy development policies and by keeping track on the international trends and domestic laws and regulations. After measuring the internal and external factors, USIG set the 2030 carbon reduction target to “carbon reduction by 27% over 2017 by 2030” in early 2022. The nine USIG core businesses began to implement the ISO 50001 energy management system and obtained the certificate on after another in 2018 to effectively manage energy performance and continuously improve energy conservation and carbon reduction, hoping to demonstrate USIG’s influence and so to lower environmental impact.

Every year USIG holds the “plant technology exchange meeting” and several “northern/Kaohsiung plants resource integration meetings” for plants to share resources and exchange technologies to improve performance in energy conservation and carbon reduction. In 2022 the “plant technology exchange meeting” was held in October. Case presentation with themes including “industrial safety and environmental protection”, “equipment preventive maintenance”, and “energy conservation and carbon reduction” were conducted through competitions.

Through plan technology case submission and documentary review, a total of 7 cases entered the final. Senior USIG officers and plant representatives elected the three best cases. The USIG chairman presented the certificates and bonuses to winners. Through ratings and encouragement, sharing, and mutual learning, we aim to advance technology in the group.



The table below shows the energy conservation rate of APC Linyuan Plant in the past three years:

Electricity Conservation Rate of Linyuan Plant in Past 3 Years

Electricity Conservation Rate (%)	2020	2021	2022
	1.27	0.75	0.68

Description:

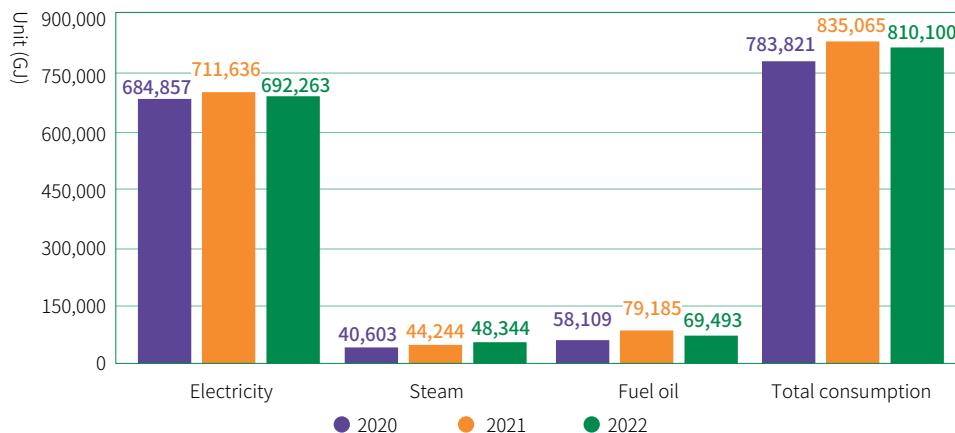
1. Due to the delay of some energy construction projects, the target reduction rate (1%) of 2022 was unachieved.
2. The rate of energy conservation in 2022 was 0.68%, and the average rate of energy conservation during 2015-2022 was 1.63%, meeting the “average energy conservation by 1%” regulatory requirement of the Bureau of Energy.
3. Energy conservation rate (including the demand bidding of Taiwan Power Company (TPC), the demand bidding capacity of electricity conservation was 328,668kWh)



Energy use GRI 302-1, 302-3

The data boundary of energy management in 2022 covers Linyuan Plant, and data coverage is 100%. The graph below shows the internal energy consumption of Linyuan Plant by electricity, by fuel oil, and by steam in the past three years and the unit product energy consumption

Statistics of Energy Consumption of Linyuan Plant in Past 3 Years



Note: 1. Unit product heating value factors: electricity = 860 Kcal/kWh and fuel oil = 9,600 Kcal/L as announced by the Bureau of Energy, MOEA; and steam = 679 Kcal/kg as announced by the steam supplier.

2. 1 Kcal= 4.187 KJ

3. (Electricity/Steam/Fuel Oil) energy consumption = (Electricity/Steam/Fuel Oil) consumption x Unit product heating value factors x 4.187×10^{-6} (GJ/KJ)

4. Sources of electricity, steam, and fuel oil consumption and production data: Monthly production statistics.

5. Only non-renewables is used.

6. Fuel oil here means oil discharged from the manufacturing process.

Unit Product Consumption of Linyuan Plant in Past 3 Years



Note: 1. Unit product consumption = Total consumption (GJ) ÷ Total production (MT)

2. Source: Report on the Energy Saving Audit System of Energy Users of the Bureau of Energy.

The 2022 unit product energy consumption increased was 6.23 GJ/MT, up by about 1.63% over the 6.13 GJ/MT of 2021. This is mainly because of the increased unit product energy consumption due to the reduced total capacity and the increased proportion of EVA products with a higher unit product energy consumption after the product portfolio adjustment to meet the market changes.



Total 2022 Energy Consumption

810,100 GJ, Less: 2.99%

Energy consumption reduced over 2021 because of the reduced total production in 2022 by 4.4% over 2021.



Electricity Consumption

692,263 GJ,

accounting for 85.5%



Percentage renewables

0%



Self-Generation Energy (Solar) **2,150** GJ

Total capacity of self-generation and self-consumption (solar) 0 GJ

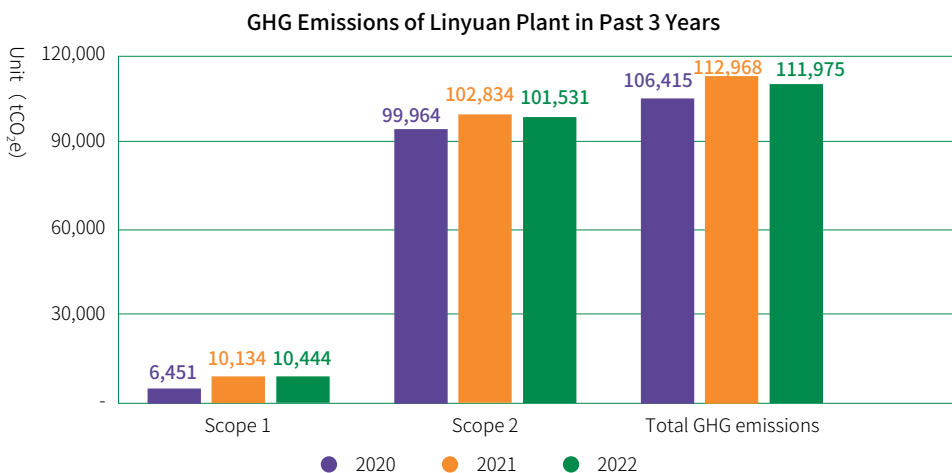
In 2022, all electricity generated by PV

systems was sold to TPC SASB RT-CH-130a.1

GHG management

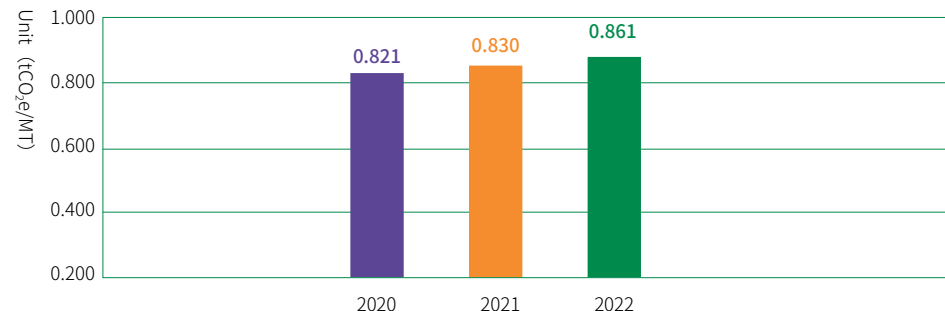
In accordance with the amended Industrial Emission Sources Required for GHG Emissions Inventory and Registration promulgated by EPA on 8 August 2022, Linyuan falls in the second group of industries required for GHG emissions inventory and registration and should complete the inventory of GHG emissions in the previous years and have the results verified by a third-party certification body and registered to the EPA-designated website by 31 August 2023. Linyuan Plant has received guidance on GHG emissions inventory from the Kaohsiung Environmental Protection Bureau and has been conducting self-imposed inventory for years. In 2022Q3, it completed the verification in accordance with ISO 14064-1 through a third-party certification body.

In accordance with the “Sustainable Development Roadmap” promulgated by the Financial Supervisory Commission (FSC), we will include the GHG emissions data of Taipei HQ and complete the GHG inventory and verification of individual companies (Linyuan Plant and Taipei HQ) in 2023. The graphs below show the GHG emissions of Linyuan Plant by scope and the intensity of unit product emissions in the past three years: [GRI 305-1, 305-2, 305-4](#)



Description: As Linyuan Plant implemented the ISO 14064-1 GHG inventory third-party verification system in 2021, we replace the original 2021 GHG emissions inventory data with the data verified by the third party.

Intensity of Unit Product GHG Emissions of Linyuan Plant in Past 3 Years



Note 1: Emissions of electricity were calculated based on the 2021 electricity emission factor at 0.509kg/CO₂e, and the emissions of steam were calculated based on the 2021 purchased steam emission factor at 0.230kg/CO₂e.

Note 2: GHG emissions:

Scope 1 refers to the direct emissions from the manufacturing process or facilities.

Scope 2 refers to the indirect emissions, such as purchased electricity (all supplied by TPC) and purchased steam (all supplied by Formosa Linyuan Plant).

Note 3: GHG emissions = (Energy/fuel consumption) × (EPA-announced emission factor) × (EPA-requested IPCC GWP value)

Note 4: Intensity of unit product emissions = Total GHG emissions (tCO₂e) ÷ Total production (MT)

Note 5: Conversion into equivalent carbon dioxide (CO₂e) based on the GHG Emission Factor V. 6.0.4 announced by EPA and the GWP value announced by the IPCC AR5 (2013).

Direct (Scope 1) GHG emissions

10,444 tCO₂e

Accounting for **9.33%**

Data boundary: Linyuan Plant + Taipei HQ

[GRI 305-1](#) [SASB RT-CH-110a.1](#)

Energy indirect greenhouse gas (GHG) emissions (Scope 2)

101,531 tCO₂e

Accounting for **90.67%**

Data boundary: Linyuan Plant + Taipei HQ

[GRI 305-2](#)

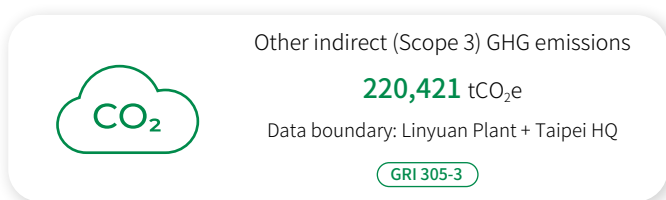
The total GHG emissions of Linyuan Plant in 2022 reduced by 0.88% over 2021 to 111,975tCO₂e because of the reduced total production by 4.4%.

(Note: GHG inventory data is the data after third-party verification)

The intensity of unit product emissions was 0.861tCO₂e/MT, about 3.7% more than the 0.83tCO₂e/MT in 2021. This is mainly because of the increased intensity of unit product emissions due to the increased EVA unit product energy consumption and the increased proportion of EVA products with a higher unit product energy consumption after the product portfolio adjustment to meet the market changes.

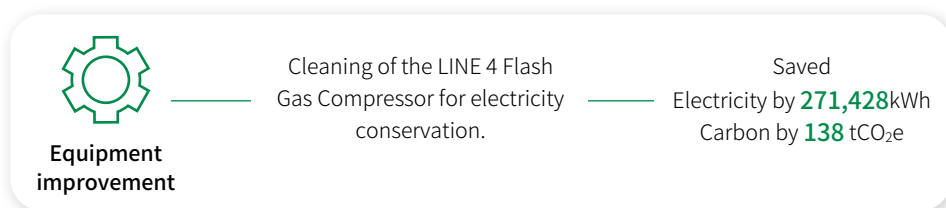
Other indirect (Scope 3) GHG emissions

We inventoried the other indirect GHG emissions of Linyuan Plant in accordance with ISO 14064-1. To assess and identify the plant’s sources of indirect GHG emissions so as to inventory specific emission sources, the implementation team has established the “Significant Sources of Indirect GHG Emissions Identification Score Sheet”. Categories 3-6 indirect GHG emissions were identified and scored in accordance with the indicators in Annex H of ISO 14064-1:2018. The identification and scoring were implemented by personnel of the relevant activities. Based on the methods of activity data quantification, factor availability, the influence of data providers, and the item’s final effect (range) on total emissions, five major sources of indirect emissions were identified, including one in Category 3 (emissions from upstream transport and distribution for goods) and four in Category 4 (emissions from purchased goods) falling in other indirect (Scope 3) GHG emissions of 220,421tCO₂e. (Note: GHG inventory data is the data after third-party verification)



Measures and performance of energy conservation

The diagram below shows the one energy conservation and carbon reduction management program implemented in 2022:



The program saves electricity by 271,428kWh and reduced carbon by 138 tCO₂e. The table below shows the energy saved and carbon reduced by process improvement and by equipment improvement.

Type		Process Improvement	Equipment improvement	Total
Energy Saved	Electricity (GJ)	---	977	977
	Steam (GJ)	---	---	---
Carbon reduced (tCO ₂ e)		---	138	138

Note: Instead of the actual energy conservation over 12 months, calculations of the 2022 energy conservation and carbon reduction program have been expressed by year.

All reduced GHG emissions were indirect (Scope 2) GHG emissions. GRI 302-4, 305-5

We establish energy conservation and carbon reduction programs and targets in response to the government’s energy conservation policy and in accordance with USIG’s energy management targets. Every month we produce statistics on the results of implementation of the energy conservation and carbon reduction programs for the reference of progress control. We also share resources and exchange experience with other USIG businesses through the group’s “Resource Integration Meeting” and “Technology Exchange Meeting” to learn from one another so as to implement practical and effective energy conservation and carbon reduction programs.

2023 Energy conservation and carbon reduction programs

Five energy conservation and carbon reduction measures will be implemented to save electricity by 2,179,826kWh and steam by 2,736MT and reduce emissions by 1,739tCO₂e.

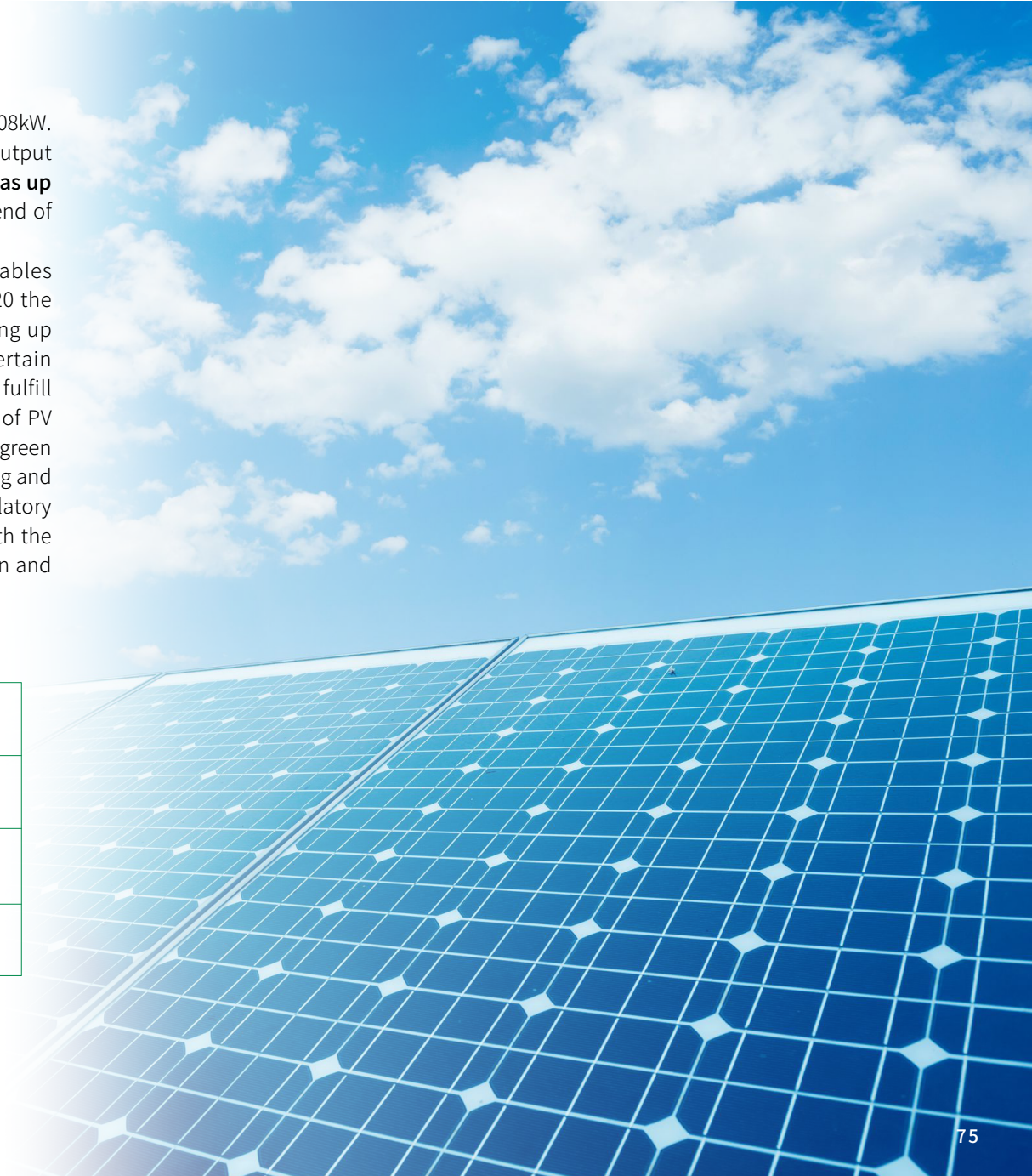
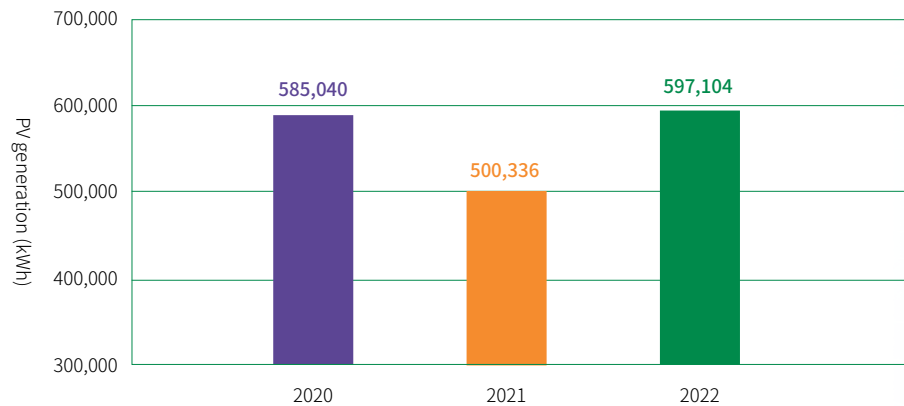
Type	Energy conservation management program	Program target value	Total program energy saved	2023 emission reduction target
Process Improvement	1. Increase steam output of V-1227 2. Reduce production pressure to save electricity	Electricity 985,600kWh Steam 2,736MT	Electricity by 2,179,826kWh	1,739 tCO ₂ e
Equipment improvement	3. Enhance energy conservation of the Line 4 chip feeding zone 4. Replace the old P-7103A/B cooling water circulation pump 5. Replace the old reactor motor	Electricity 1,194,226kWh	Steam 2,736MT	

Renewables

In June 2011 we completed PV installations with an installed capacity of 496.08kW. Thanks to the proper maintenance of the in-house PV installations, the 2022 output increased significantly by 19% over the previous year. **Our 2022 PV generation was up to 597,104kWh**, and all was sold to TPC. The accumulative generation by the end of 2022 was 6.83GWh, reducing emissions by about 3,578tCO₂e.

In recent years the government has been vigorously advocating renewables development and encouraging renewables installations. On 31 December 2020 the government further promulgated the Regulations for the Management of Setting up Renewable Energy Power Generation Equipment of Power Users above a Certain Contract Capacity. Currently, USIG is planning to lead all USIG businesses to fulfill the green power demands within five years through the central construction of PV installations by the group. If the output is insufficient, the group would purchase green power and renewable energy certificates (RECs) and sign the green power wheeling and green power and REC resales contracts with USIG businesses to meet the regulatory requirements. We will follow the regulations of the new law and coordinate with the group's overall assessment and planning to fulfill the spirit of social contribution and legal compliance.

PV Generation Volume of Linyuan Plant in Past 3 Years



4.3 Emissions management

Material issue: Air pollution control; Corresponding sustainability principle: Sustainable development GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center; color: #0072bc;">Significance to APC</p> <p>In addition to violating environmental protection laws and regulations, air pollutant emissions also affect air quality in our living environment.</p> <hr/> <p style="text-align: center; color: #0072bc;">Management Practice and Target</p> <p>At Linyuan Plant, we monitor and improve the quality of air pollutant emissions through equipment and component VOCs leakage checks and equipment air pollutant emissions reduction to meet the control standards of the Air Pollution Control Act and improve the air quality around the plant.</p> <hr/> <p style="text-align: center; color: #0072bc;">Strategy</p> <ul style="list-style-type: none"> · Equipment and component leakage tour inspection · Reduction of air pollutant emissions · Legal compliance 	<p style="text-align: center; color: #00b09b;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> · Negative Actual Impact-Improper air pollution control <hr/> <p style="text-align: center; color: #00b09b;">Processes to remediate and prevent negative impacts</p> <ul style="list-style-type: none"> · Increase the frequency of periodic tour inspection of equipment and components from 140 spots/month to 280 spots/month. · Install online detectors to monitor the emission status of air pollutants (NOx, SOx, VOCs) to make immediately adjustments in process or equipment anomalies. · Reduce equipment failure rate through monthly periodic maintenance. 	<p style="text-align: center; color: #4b2981;">2022 Goals</p> <ul style="list-style-type: none"> · Periodic tour inspection of equipment and components for 140 spots each month · Process air pollutant emissions improvement programs · Complying with the recognized target emissions for air pollutants of Gaoping Phase I. (NOx 8,982kg, SOx 1,352kg, VOCs 39,771kg) <hr/> <p style="text-align: center; color: #4b2981;">2022 Performance</p> <ul style="list-style-type: none"> · Periodic tour inspection of equipment and components for 280 spots/month (✓) · Air pollutant emissions: NOx 6,025kg (✓) SOx 1,813kg (✗) VOCs 32,400 kg (✓) <hr/> <p style="text-align: center; color: #4b2981;">2023 Goals</p> <ul style="list-style-type: none"> · Periodic tour inspection of equipment and components: 280 spots/month · Process air pollutant emissions improvement programs · Complying with the recognized target emissions for air pollutants of Gaoping Phase I. (NOx 8,982kg, SOx 1,352kg, VOCs 39,771kg) <hr/> <p style="text-align: center; color: #4b2981;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> · Monthly tour inspection of VOCs equipment and components by the Industrial Safety Office: 300 pcs/month. · Reduce boiler NOx emissions to below 30ppm and TSP emissions to below 10mg/Nm3 with new air pollution control equipment. · Air pollutant emissions: Reduce NOx by 1% and SOx by 1% 	<p style="text-align: center; color: #e67e22;">Effectiveness Assessment</p> <ul style="list-style-type: none"> · Commission EPA-accredited testing laboratories to test air pollutant emissions each year. <hr/> <p style="text-align: center; color: #e67e22;">Grievance Mechanism</p> <ul style="list-style-type: none"> · Environmental impact grievance channels <hr/> <p style="text-align: center; color: #e67e22;">Evaluation of the management approach</p> <ul style="list-style-type: none"> · Exchange of environmental pollution prevention technology and experience at the group technology exchange meeting.

Air pollution control GRI 305-6

Nitrogen oxides (NOx), sulfur oxides (SOx), volatile organic compounds (VOCs), and total suspended particulates(TSP) are the major pollutants of Linyuan Plant. NOx and SOx are mainly produced by the plant's combustion facilities (e.g., regenerative thermal oxidizer (RTO), steam boiler, thermal oil boiler). Linyuan Plant does not generate ozone depleting substances (ODS). VOCs mainly come from the emissions and leakage of the RTO, flare, storage tanks, equipment and components. PMs mainly come from product storage tanks.

In addition to periodically testing and reporting air pollutants, we have planned the following reduction programs to effectively reduce air pollutants:



Reduce VOCs emissions

We commission EPA-accredited institutions to check all equipment and components in the plant each quarter, enhance the self-imposed tour inspection of equipment and component (about 15,000 spots/month), and replace one old catalyst pump.

The Industrial Safety Office has purchased two FID detectors (TVA-2020) to perform up to 280 spot checks each month, doubling that of the past.



Process ethylene recovery

We have implemented ethylene recovery among production lines when a production line halts.



Offsite underground ethylene pipelines ethylene emptying and recovery

When it is necessary to empty the offsite underground ethylene pipelines for maintenance, we recover ethylene to each production line through the in-house ethylene recovery pipelines to reduce air pollution.



Process waste reduction and improvement SASB RT-CH-110a.2

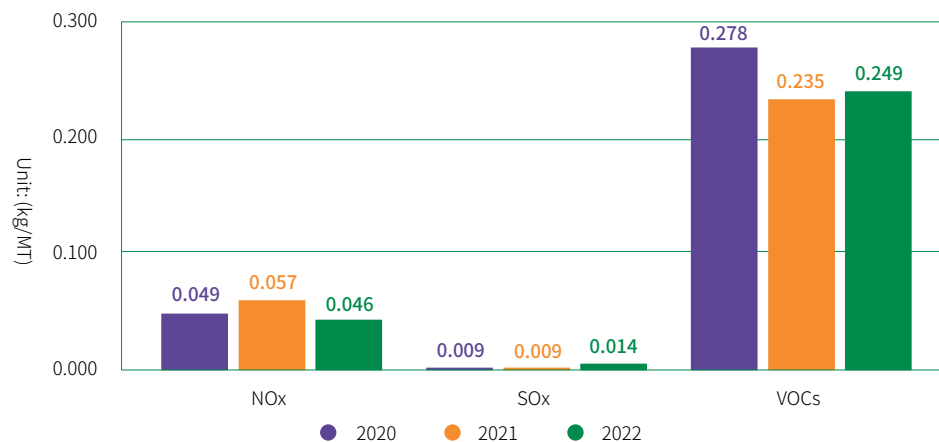
- In 2019 we changed the discharge pipeline of the outlet separator at section 1 of the flash compressor on line 4 to flow back to the inlet separator of the compressor.
- In 2021 we changed the discharge pipeline of the outlet separator at section 1 of the flash compressor on line 3 to flow back to the inlet separator of the compressor.
- In 2022 we planned the old steam boiler replacement.
- In 2023 we plan to purchase the dual fuel steam boiler to handle the process discharge oil and process exhaust to reduce the emission of total suspended particulates (TSP) and NOx.

2022 Air Pollutant Emissions of Linyuan Plant GRI 305-7 SASB RT-CH-120a.1

Type	Unit	NOx	SOx	VOCs	HAPs
Total Emissions	MT	6.0	1.8	32.4	0.653

The 2022 SOx emissions increased over 2021 mainly because the Kaohsiung Environmental Protection Bureau changed the SOx calculation method for RTOs, increasing the SOx emissions. No control limit has been set for VAM, the hazardous air pollutants (HAPs) of Linyuan Plant. The 2022 VAM emissions were 0.653MT.

Unit Product Air Pollutant Emissions of Linyuan Plant in Past 3 Years



Over the years, emission test results of the Linyuan Plant have been consistently well below the EPA emission standards. The table below shows the results of our pipeline emission test in 2022:

Pollutant	Unit	Thermal Oil Boiler	Steam Boiler	Standard	Regenerative Thermal Oxidizer	
					Standard	Standard
NOx	ppm	74	80	100	3	150
SOx	ppm	2	5	50	4	100
TSP	mg/Nm ³	1	3	30	0.6	100

Note: Total Suspended Particulate (TSP).

Waste GRI 306

Industrial waste generated by Linyuan Plant includes general industrial waste and hazardous industrial waste. We sign contracts with EPA-accredited domestic contractors to remove and dispose of waste in accordance with the Waste Disposal Act.

General industrial waste is disposed by type through intermediate waste treatment including incineration, pyrolysis, and physical disposal operations. Contractors will direct waste to landfills as final treatment according to the approved methods in their licenses.

The table below shows the methods and weight of waste disposal reported by Linyuan Plant in the past three years.

VA waste was reduced after the completion of the MRT modification for VA purification in 2022, and the generation of waste oil mixture also reduced over 2021. Waste lubricants increased due to the increased lubricant replacements after the implementation of the PSM system in recent years to optimize equipment preventive maintenance.

- ✓ There was no hazardous waste in 2022. SASB RT-CH-150a.1
- ✓ Additionally, there was no spill of oils, fuels, waste, or chemical substances 2022.

Method and Weight of Waste Disposal of Linyuan Plant in Past 3 Years Unit: t

Treatment	Type of waste	2020	2021	2022
Incineration	Household waste Waste plastics Waste wood, mixed	44.37	43.64	43.7
Physical	Waste oil, mixed	112.26	268.49	145.5
Pyrolysis, Physical	Waste lubricants	27.35	66.95	68.81
Physical	General waste chemical substances mixture	16.85	16.48	16.43
Offshore disposal	including cadmium battery	3.54	---	---
Total weight of waste		204.37	395.56	274.44

Environmental impact grievance channels

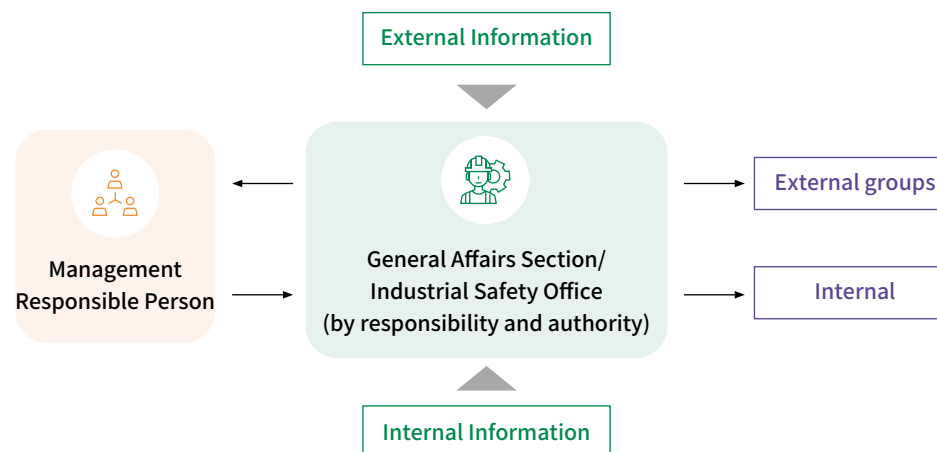
APC Linyuan Plant has established the “Procedures for Implementation of Communication and Consultation” to establish, implement and maintain channels and procedures for the communication, engagement, and consultation of environment-related topics for internal stakeholders (employees, industry associations, occupational safety and health committee meetings) and external stakeholders (customers, competent authorities, community residents, and environmental groups).

The procedure for addressing internal grievances is: Employees propose EHS-related grievances through the “Union Board Meeting”, “OSHC Meeting”, or other meetings. If publicity or response is required, the responsible departments will review the responses, which will be communicated within the company through meetings, education and training, or announcements after the approval of the OHS management representative.

The procedure for addressing external grievance is: After any units of Linyuan Plant receives an ESH-related grievance from outside of the company over the phone, orally, or in writing, the responsible units will verify the grievance contents and register them in the “EHS Information Registration Form” and make appropriate response and take appropriate action if this grievance becomes a case study.

Item	2020	2021	2022
Grievance (pieces)	0	2	3
Valid case (pieces)	0	2	3

Environmental Grievance Flowchart of Linyuan Plant



CH5 Safe Workplace and Social Inclusion

Talent selection (GRI 2-7, 3-3, 401-1)	80
Talent development (GRI 201-3, 401-2, 401-3)	88
Healthy workplace (GRI 2-8, 3-3, 403-1-9)	92
Social engagement	106

Performance Highlights

- ✓ Employee turnover rate: **2.14%**
- ✓ Employee education and training: **22.2** hours/person
- ✓ Zero lost time due to disabling injury: **5.32** million hours
- ✓ Donation to the USI Education Foundation: **NT\$5** million

Material Topics

Talent attraction and retention
OH&S
PSM

SDGs Correspondence



Certified management system



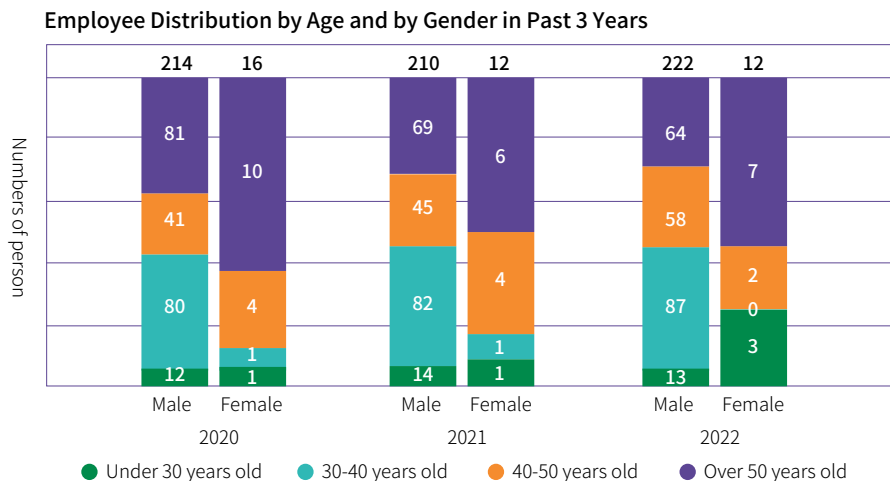
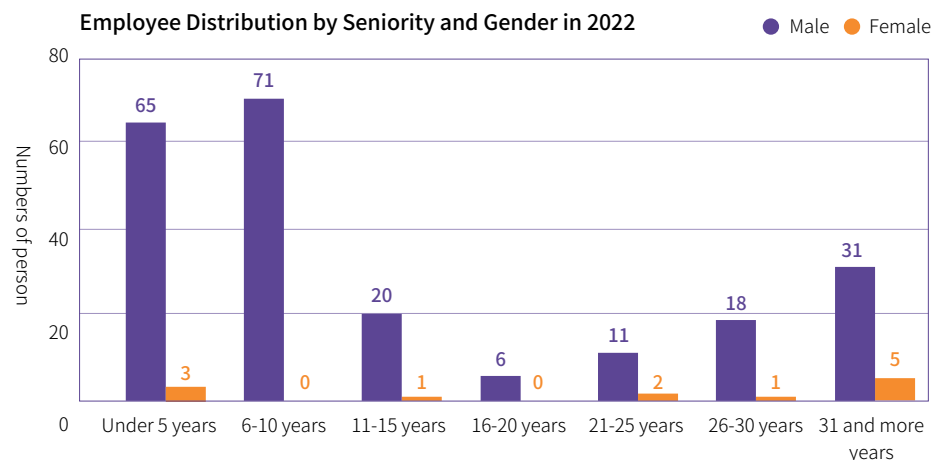
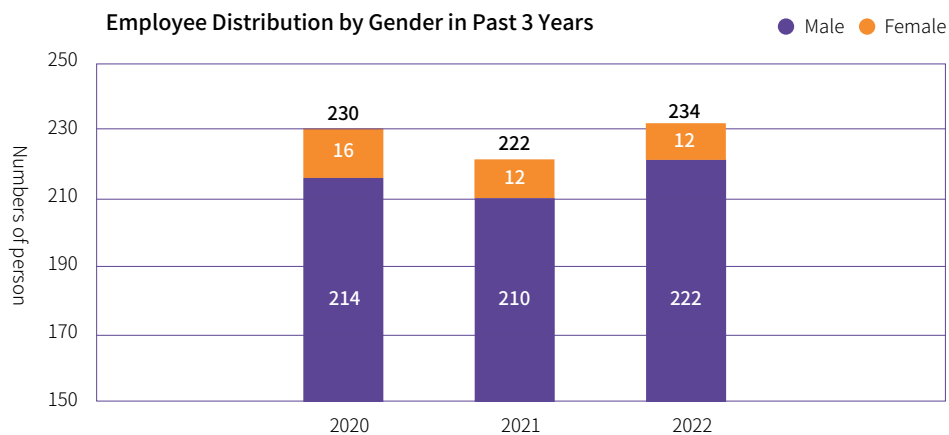
ISO 45001 Occupational Health and Safety (OH&S) Management Systems
Validity: 13 May 2022 - 23 April 2025



5.1 Talent selection

Workforce structure GRI 2-7

By 31 December 2022, APC had a total of 234 employees, including 222 male employees and 12 female employees. All were full-time employees on non-fixed-term contracts. Due to the characteristics of the petrochemical sector, there are more male employees than female employees. The average service length of employees is 13.8 years; the average age of employees is 44.5 years old; and 82.1% of employees hold a bachelor's or higher degree. All employees are hired locally, mainly from Taipei and Kaohsiung.



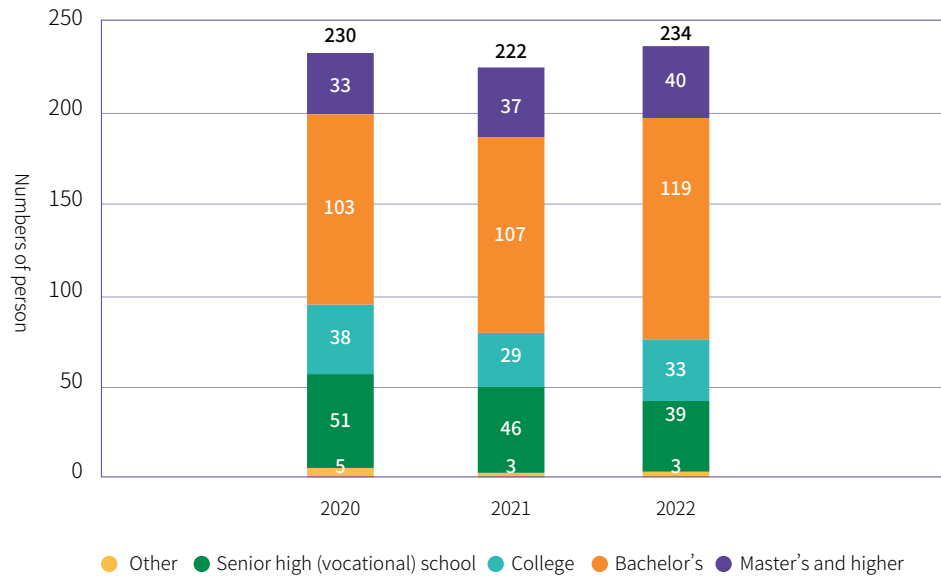
Total Number of Employees by Gender and by Region in 2022

Regions	Taipei HQ		Kaohsiung Linyuan Plant	
	Male	Female	Male	Female
Permanent employees	13	3	209	9
Temporary employees	0	0	0	0
Non-guaranteed hours employees	0	0	0	0
Full-time employees	13	3	209	9
Part-time employees	0	0	0	0

Talent distribution

Based on the characteristics of the petrochemical sector, we emphasize education attainment, work experience, and professional competencies in employee recruitment. Then, we arrange job-related professional training and field training to develop professional petrochemical talents. The rate of in-service quality employees holding a bachelor's or higher degree increases every year. In 2022 up to 96% new employee hires hold a bachelor's or higher degree, raising the technical and operational levels.

Employee Distribution by Education Attainment in Past 3 Years



Employee Distribution by Job and by Gender in Past 3 Years



All junior and intermediate officers (foremen and section chiefs) and senior officers (department chiefs and above) of Taipei HQ and Kaohsiung Linyuan Plant are Taiwan citizens to facilitate the understanding of local culture and needs and increase local economic benefits.

Talent attraction and retention

Material issue: Talents attraction and retention; Corresponding sustainability principle: Safety and harmony GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <p>Employees are an important asset. Through well-structured salaries and benefits and the provision of a safe workplace environment, we attract and retain talent to raise the bar for sustainable development.</p> <hr/> <p style="text-align: center;">Management Practice and Target</p> <p>Excellent and appropriate talents are selected through a fair, open, impartial, and efficient recruitment system, while the basic human right to employment equality is maintained to achieve the right job for the right person through talent selection, talent development, and talent retention to ensure the competence of new employee hires and stability of employment to strengthen the corporate structure.</p> <hr/> <p style="text-align: center;">Strategy</p> <p>Enhance organizational commitment</p> <ul style="list-style-type: none"> Establish multifaceted recruitment channels to find like-minded talent to join us through a fair, open, impartial, and efficient recruitment system. Offer attractive salaries and comprehensive benefits and build a friendly, harmonious, and safe workplace environment to retain talent. 	<p style="text-align: center;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> Negative Potential Impact-No succession plan <hr/> <p style="text-align: center;">Measures to remediate and prevent negative impacts</p> <ul style="list-style-type: none"> Prioritize the stabilization and retention of excellent talent and give employees a raise each year based on the consumer price index (CPI) and personal performance. We participate in the petrochemical sector compensation survey each year to assess the salary standard in the market so as to give employees an appropriate raise. We will also give a special promotion to excellent talent with outstanding performance. We also timely replenish the workforce and plan the handover schedule based on the sales volume in response to employees at the retiring age. We also arrange education and training and business succession for new employees. Every year we send employees to receive external training and obtain the relevant licenses to prevent the talent gap. 	<p style="text-align: center;">2022 Goals</p> <ul style="list-style-type: none"> Maintain the right to work of workers Employee turnover rate ≤ 5.0% Rate of implementation of education and training programs: 100% <hr/> <p style="text-align: center;">2022 Performance</p> <ul style="list-style-type: none"> No violation of human rights and labor conditions. Employee turnover rate: 2.14% (✔) Rate of implementation of education and training programs: 100% (✔) Average hours of training per employee: 22.2 hours <hr/> <p style="text-align: center;">2023 Goals</p> <ul style="list-style-type: none"> Maintain the right to work of workers Employee turnover rate ≤ 5.0% Rate of implementation of education and training programs: 100% <hr/> <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> Improve the corporate image to attract fresh graduates and reduce employee turnover rate to below 1%. Develop appropriate training courses, improve training quality, and increase the average hours of training to over 30 hours/person. 	<p style="text-align: center;">Effectiveness Assessment</p> <ul style="list-style-type: none"> Group internal audit Labor inspection of competent authorities <hr/> <p style="text-align: center;">Grievance Mechanism</p> <ul style="list-style-type: none"> Linyuan Plant Labor Union APC Grievance Hotline

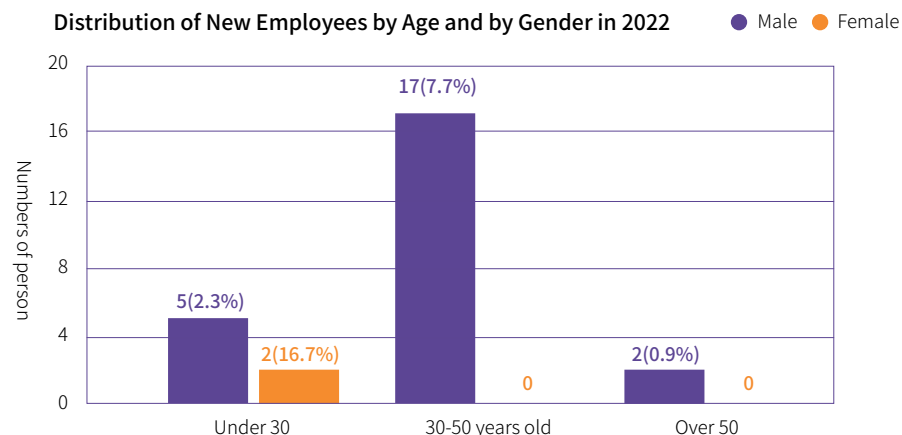
In response to the need for workforce and experience succession due to employee retirement, each unit timely replenish the substitute workforce based on the employee turnover condition. We select excellent and competent talent based on professional competencies and experience through a fair, impartial, open, and efficient recruitment system. Through talent selection, talent development, and talent retention, we ensure the competence and steady employment of new employees to strengthen the corporate structure. We also review the workforce composition and implement workforce dispatch and control at any time in routine operations, as well as analyze and improve the status of employee turnover to ensure workforce competence and experience succession.

When a unit needs to fill an existing position or expand the workforce due to business needs, organizational planning, or employee resignations, with the approval of their current supervisors, active employees interested in such openings may voluntarily submit their resume to the human resources unit. After further screening, the human resources unit will forward the resumes of eligible candidates to the supervisor of the requesting unit to provide multiple options to the unit and a better career development mechanism for employees.

We also recruit employees from outside of the organization through newspapers, human resources websites, human resources consulting agents, schools and employment service stations. For job openings at the Kaohsiung Plant, we give priority to local citizens as a way of giving back to the local communities.

✓ **In 2022 there were 26 new employees hired aged between 22-57 years old. All were male and accounted for 11.1% of the total number of employees.**

The table below shows the distribution and proportion of employees by gender and by age. [GRI 401-1](#)



Note: 1. Entities of APC, including Taipei HQ and Kaohsiung Linyuan Plant, are all located in Taiwan, thus considering as one region.

2. The rate of new employee hires of different age groups is calculated with the total number of male and female employees as the denominator.

Current management practices for retention

To improve workforce competence, develop management talent, and coordinate with the organizational development needs, we encourage employees with outstanding performance and developmental potential to take the entrance examinations of the related graduate programs, such as EMBA, of domestic universities and receive management assistant training. We also fund their study and arrange job accommodations for them so as to improve the professional competencies of employees in different fields and actively develop executive talent. To stabilize the workforce and retain outstanding talent, apart from giving employees a salary raise according to the CPI and the personal performance of employees every year, we also participate in a compensation survey of the petrochemical sector to assess the salary standards in the market to make appropriate adjustments and planning. We also give a special raise to employees with outstanding performance to ensure that our pay is competitive with the market.

Talent turnover

The position change and resignation of employees are handled in accordance with the relevant regulations. Full-time employees may apply for retirement at 65 years old in accordance with the Labor Standards Act or for voluntary retirement at earlier ages by law. That is, all employees are entitled to voluntarily terminate employment by law. The rights, obligations, and labor conditions of resignation are handled with by law. When there are significant operational changes, such as closure, transfer, operating losses, or business contraction, that workforce reduction is required, we will notify employees from 10-30 days in advance based on the seniority of employees in accordance with the Labor Standards Act.

✓ In 2022 there were 14 employees resigning from APC (including 9 retirees). After deducting the retirees, the actual rate of employee turnover was 2.14%.

The table below shows the distribution and proportion of employees by gender and by age.

GRI 401-1

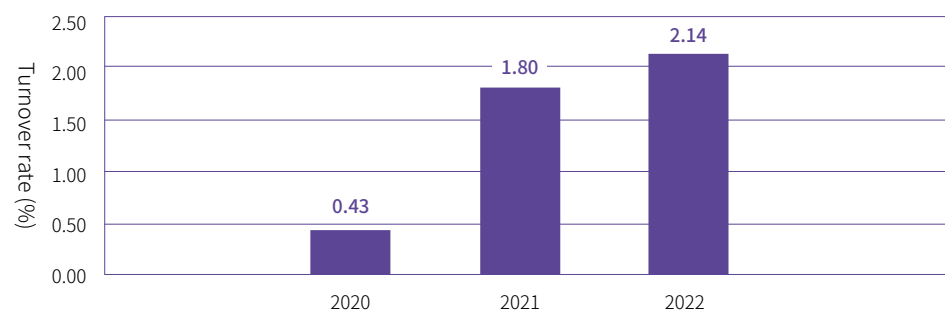
Gender	Under 30 years old		30-50 years old		Over 50 years old	
	Number (persons)	Proportion (%)	Number (persons)	Proportion (%)	Number (persons)	Proportion (%)
Male	1	0.45	3	1.35	0	0.00
Female	0	0.00	1	8.33	0	0.00

Note: 1. The rate of employee turnover by gender and by age group is calculated with the total number of male and female employees as the denominator.

2. The turnover rate is calculated based on the actual number of resigned employees (after deducting the number of retirees).

3. Entities of APC, including Taipei HQ and Kaohsiung Linyuan Plant, are all located in Taiwan, thus considered as one region.

Rate of Employee Turnover in Past 3 Years



Talent cultivation and development

Based on the macroeconomic environment, business policy, operational goals, department performance, and employee career development needs; in accordance with the labor safety and environmental protection laws and regulations; and in compliance with the requirements of the quality, environmental, energy, and OH&S management systems, we establish an education and training system to provide training courses for all types of talent.

The training framework is made up of four parts: in-service (on-the-job) training, competency training, e-learning and self-growth learning. Training courses are planned and designed comprehensively and systematically according to the development needs of employees and connect with the lifelong learning and training system of employees.

The career development training for active employees can enrich their competencies, skills, and learning capability of employees, which will become the foundation of personal lifelong learning. When employment is terminated due to retirement or resignation, such training can become the skills enabling employees to find new jobs or make retirement planning.



In-service training

- Job instructions by supervisors
- Mentoring
- Technological and vocational certification
- Job rotation



Competence training (internal/ external training)

- Management general education
- Hierarchical training
- Competence training
- Talent Development
- Employee self-education



e-Learning

- New employees orientation training
- New employees certificate courses
- Multimedia learning platform
- Commonwealth Leader Campus



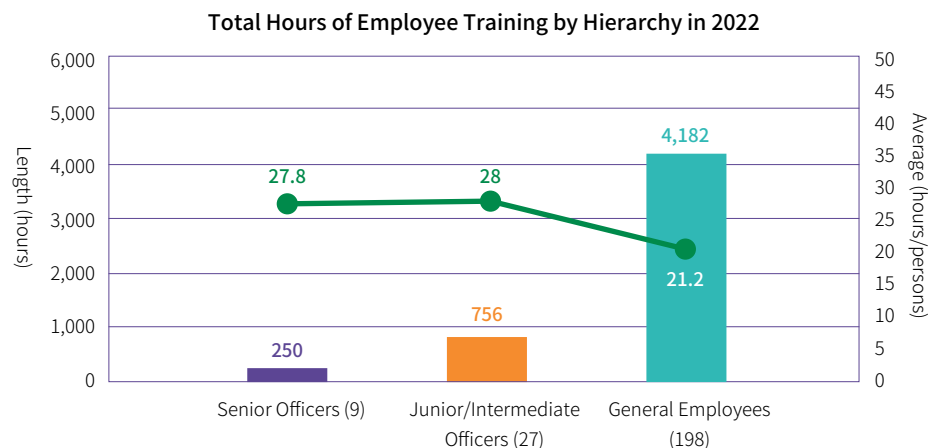
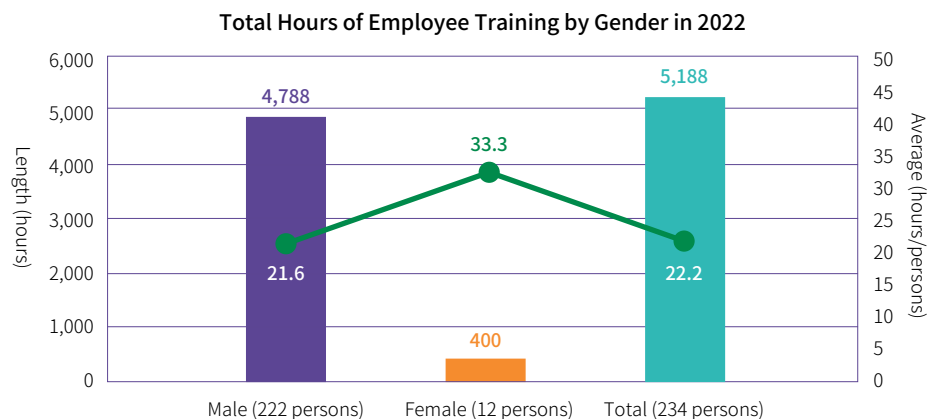
Self-growth learning

- Study group
- Humanities intellectual talks
- Seminars
- Health talks

Performance in education and training

We always value the education and training of employees and arrange orientation training, on-the-job training, and work instructions for employees based on the training needs of employees and their units. We also offer education and training through DVDs and the e-learning platform to improve the competency and skills of employees. We also maintain a record of employee education and training and include them in the monthly and annual performance evaluations. Each department sets the criteria for “hierarchical training” and “competency training” for identifying the required skills of employees at different positions and in different areas so as to provide a reference for training assignment and ensure employees are competent for their jobs.

In 2022, the total hours of employee training were 5,188 hours, and the average hours of training per employee were 22.2 hours. The tables below show the total hours of employee training by gender and by hierarchy.



Education and training for new employees

USIG has developed a complete orientation training program for new employees to introduce in detail USIG’s corporate culture, corporate spirit, systems, and regulations so as to help new employees get familiar with the workplace environment more quickly to demonstrate their talent and enhance their organizational commitment and loyalty. Additionally, we can verify the learning effectiveness of new employees through USIG’s e-learning platform.

The personnel and industrial safety units immediately arrange awareness training courses for new employees of Linyuan Plant. These courses include the introduction, environment, organization and regulations, welfare system, and labor safety and health regulations of the company, and the concept training on the quality, environmental, energy, and OH&S management systems and product, environment, and quality assurance systems.

On-the-job training

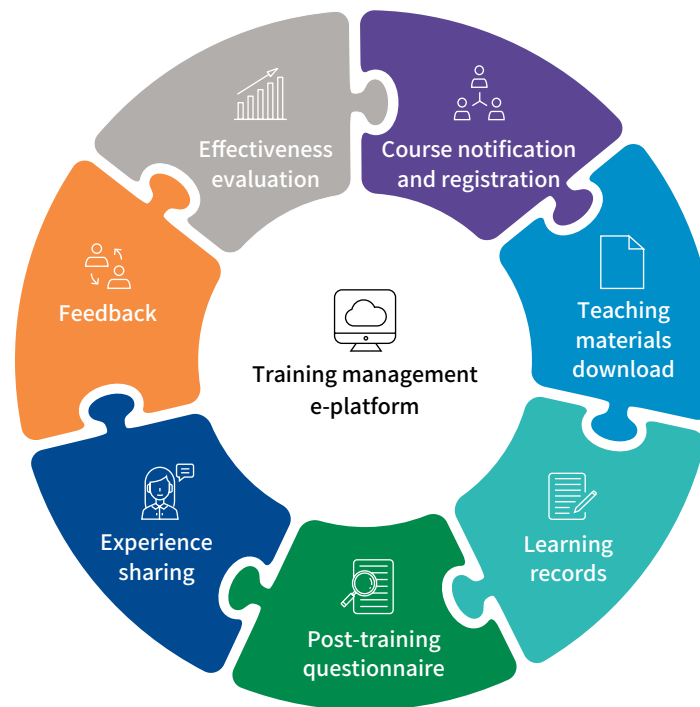
To improve the work competencies of employees when they are in service, work-related skill training is offered through supervisors and senior employees to ensure employees are competent for their jobs.

Each unit provides on-the-job training (OJT) based on the needs of jobs, missions, and training. The hiring unit shall arrange work instructions for new employees, transferred employees, related personnel after a process modification, personnel whose jobs will affect quality and product, environment, and quality assurance, personnel who will cause significant environmental impact and hazards to occupational safety and health, or after a system information update to ensure that they are competent to carrying out their jobs.

To raise the PSM awareness of onsite workers so as to ensure the plant's operational safety, apart from organizing training for the required training items as stipulated in the Occupational Safety and Health Education and Training Rules, related units should also enhance the education and training for operation instructions, repair and maintenance, emergency response, and safety of machinery and arrange examinations (including written or oral examinations or practical examination) based on the actual needs for the reference of recurrent training.

Additionally, to ensure that each employee has comprehensive competencies and a broad vision, apart from their own jobs, they also engage in other research projects, including probationary customer complaint handling, interpersonal relationship development, and problem-solving so as to enrich knowledge and improve skills.

We arrange education and training courses periodically, including professional skill training, leadership and management, computer, and general education courses, to provide internal training for potential management personnel.



Occupational safety and health education and training course

Performance in external training

Based on the needs of operations and work and the demand for internal instructor training, supervisors will send related personnel to participate in the technology seminars organized by external training and academic institutions and obtain the relevant certificates and licenses to raise the technical standards and operating safety. **In 2022 we obtained 109 related certificates and licenses (including 11 new certificates and licenses and 98 recurrent training certificates and licenses) through external training. All certificates and licenses were retained by the personnel section for future reference.**

Additionally, we encourage and train successors and actively encourage them to participate in external management training courses to learn the latest management knowledge so as to enhance management competence. We also fund employees with strong learning motivation and high developmental potential to receive further education in universities at home and abroad and arrange duty adjustment to give them complete training and cultivate leader talent for the company.

Performance in external training Linyuan Plant in 2022

Serial number	Certificate/license type	Number
1	Supervisor in charge of dusty operations	1
2	Supervisor in charge of organic solvent operations	1
3	Acetylene operation	1
4	Specified high-pressure gas equipment	1
5	Category A pressure vessels operation	2
6	Lifting equipment operation	2
7	Forklift operation	2
8	PSM	1
Total		11

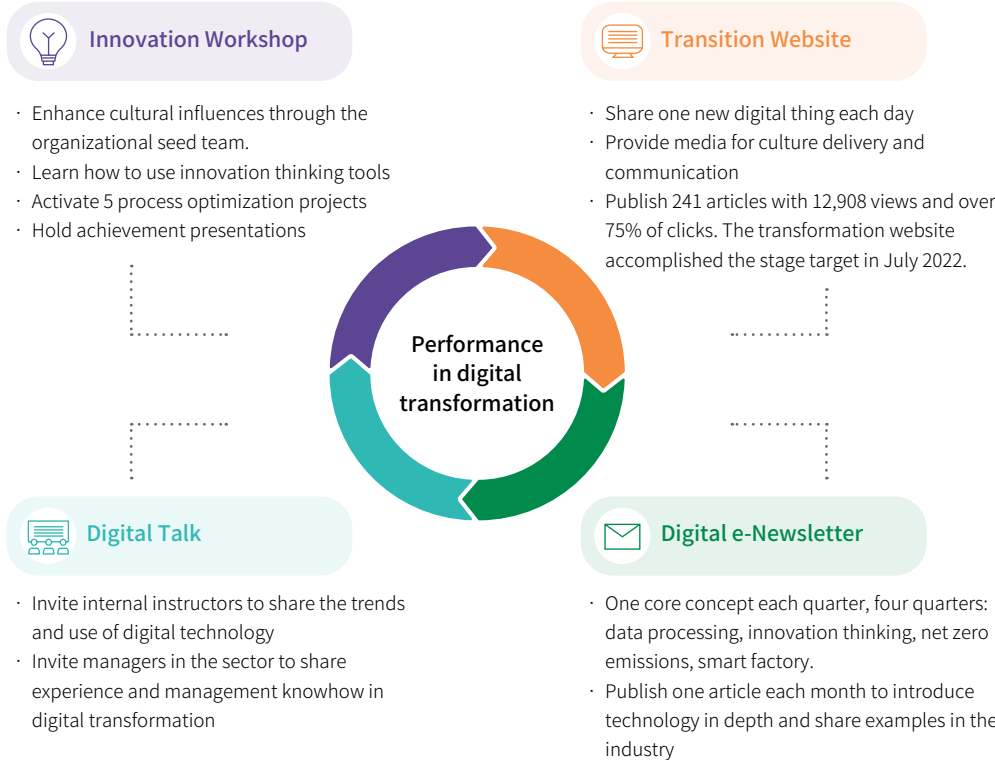
USIG e-training

To rid the confines of time and space of classroom courses, USIG has established the “USIG e-Learning Platform” to provide employees of all USIG businesses with a ubiquitous learning environment.

Cultivation of talent for digital transformation

The digital wave arose following the technology innovation in recent years. Pushed by the pandemic, digital transformation has become a heat in all industries, and there is no exception to USI. Besides engaging in industry-academia collaboration with academic units, we all invited professional instructors to give instructions to constantly transform toward smart manufacturing.

In addition to the use of technology, we understand that digital transformation needs a new way of thinking in employees and a change in the organizational culture. Hence, we have actively implemented data-driven and process improvement in the organization through talents cultivation. All employees can learn digital transformation through the Group’s transformation website, e-newsletter, and digital talks in order to enhance their awareness of digital transformation. We also held workshops and AI training courses for seed members to practice digital transformation in real work to enhance promotion.



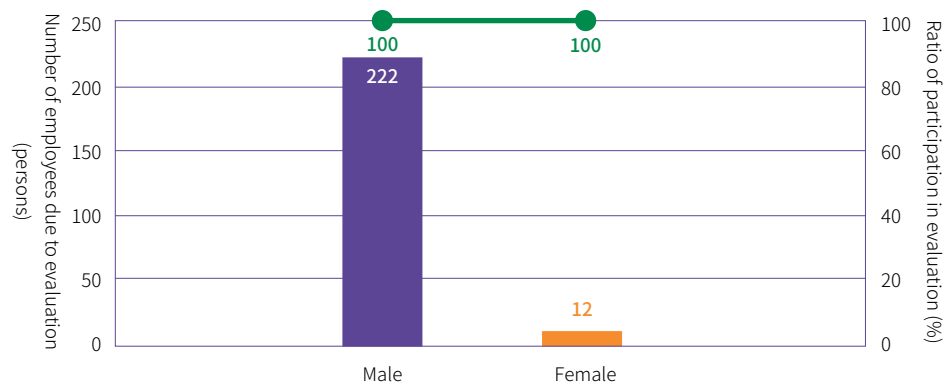
5.2 Talent development

Performance evaluation system

To reasonably evaluate the organizational commitment, work competence, and contribution of employees, we boost employee morale and strengthen teamwork spirit through monthly target management and annual performance evaluation and combine them with training and promotion to facilitate the personal development of employees and corporate HR management.

The evaluation items of monthly target management include the workload, work quality, cooperativeness, as well as the implementation performance of the four major management systems and training performance of employees. The annual performance evaluation aims at evaluating the work performance and personal competitiveness (including vision, leadership, implementation, self-development, organizational commitment, innovation, and planning capabilities) of employees. Employees receiving the annual performance evaluation are full-time employees completing the probation. The table below shows the ratio of performance evaluation of women to men in 2022.

Ratio of Participation in Performance Evaluation of Women to Men in 2022



Employee compensation plan

To attract, retain, develop, and incentivize excellent talent in different areas, we introduce comprehensive and competitive compensation plans. In addition to a pay higher than the minimum wage, new employees will be compensated based on their education attainment and work experience, with different position-based allowances.

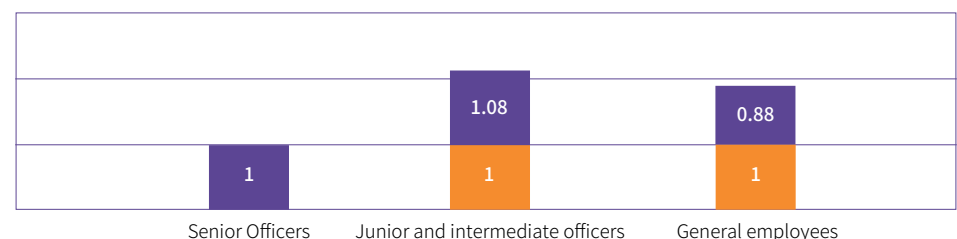
We will give employees a salary raise based on their work performance regardless of gender. In 2022, the ratio of basic salary and remuneration of women to men nears 1:1, which is much better than other companies in the same sector.

The table below shows the difference in the number and mean and medium compensation of non-management full-time employees between 2022 and 2021.

Description	2021	2022	Difference from the Previous Year
Number of non-management full-time employees (persons)	219	216	-3
Non-management full-time employees Mean compensation (NT\$ thousands)	1,439	1,490	51
Non-management full-time employees Median compensation (NT\$ thousands)	1,346	1,407	61

As there were three employees less than that of 2021 and some administrative personnel were transferred to USIG affiliate USI Management Consulting Corporation (UM), the number of full-time employees reduced in 2022. The amount of mean and medium compensation increased mainly because of the salary raise and year-end bonuses.

Ratio of Basic Salary and Remuneration of Women to Men in 2022



Note: 1. In the calculation, the base for women was "1", including basic salary, bonuses, and benefits.

2. Employees with seniority less than one year were excluded from the statistics.

3. All senior management members were male, and no female supervisor was thus recorded.

Pension system GRI 201-3

We handle employee pensions in compliance with the Labor Standards Act, and the pension reserve is contributed based on the Regulations for Employee Retirement, with a contribution rate of 10%.

Apart from setting up the Pension Reserve Supervisory Committee, we began to contribute monthly to the pension of employees choosing the LPA plan to their personal pension account at the Bureau of Labor Insurance based on the Monthly Contribution Classification of Labor Pension and the contribution rate stipulated by the government from 1 July 2005.

Item	Proportion of Contribution	Employee Participation in the Retirement Plan
Pension as per the Labor Standards Act (LSA, old system)	Employer contribution: 10% of the employee's monthly wage.	100%
Pension as per the Labor Pension Act (LPA, new system) the Labor Standards Act (LSA, old system)	Employer contribution: 6% of the employee's monthly wage. Employee contribution: 0-6% of the employee's monthly wage.	100%

Reward System

To boost employee morale and promote the teamwork spirit, employees with special work performance or timely response to and proper management of emergencies will immediately receive a monetary reward as an encouragement.

Additionally, to encourage employees to engage in improvement activities and stimulate their creativity, we have established the Regulations for Improvement Suggestions. After the acceptance and review of suggestions for optimization and improvement of process technology, product quality, repair and maintenance, engineering, warehousing, production management, and routine operations; improvement of safety and health, environmental protection, energy conservation, and cost reduction, we will issue a monetary reward to the proposing employee based on the level of innovation and performance in improvement.

Comprehensive benefits GRI 401-2

We value employee benefits. The table below shows the benefits entitled to all employees.

Item	Contents
Bonus	Year-end bonus and performance bonus
Leave	Parental, menstrual, family care, maternity, pregnancy checkup, pregnancy checkup accompaniment, and paternity leaves.
Insurance	Accident insurance, life insurance, employee/family group insurance, employee relief payment, employee travel group insurance
Food	Employee canteens and meal allowances.
Transport	Employee parking spaces and travel allowances
Entertainment	Employee gym, employee tours, and regular employee gatherings.
Allowances	Subsidies for on-the-job training, domestic/overseas further education
Other benefits	Birth funding, wedding/funeral funding, travel funding, senior employee commendation, cash gifts for three major folk festivals, and periodic health checkup.

Insurance

Employees are the biggest corporate asset and the main drive of sustainable business operations and development. Hence, in addition to the mandated Labor Insurance and National Health Insurance, we also plan the group insurance plans for employees, including term life insurance, critical illness insurance, accidental injury insurance, occupational accident insurance, cancer insurance, and dependent health benefits. By paying all the premiums (self-financed for dependents) for employees, we aim to provide employees with appropriate coverage, so that they can dedicate themselves to their work without worries to create better sales performance.

Health care benefits

Every year we arrange health checkups (general and special checkups) for employees. We equip Taipei HQ with exercise and fitness equipment and Linyuan Plant with an infirmary and registered nurses to provide employees with health care, health consultation, and medical assistance. We also organize health promotion activities in coordination with health education institutions and hold health talks from time to time to invite health professionals to give talks on the prevention of cardiovascular disease, hypertension, and diabetes to protect the physical and mental health of employees.

Additionally, apart from providing female employees with menstrual leave and independent breastfeeding space, we also offer childcare and after-school club services through collaboration with childcare and educational institutions. Parental leave is granted by law to employees with children under three years old. In 2022 no employee applied for parental leave.

To support the government’s birth encouragement policy and enrich benefits for employees, we have specifically established the Regulations for Employee Birth Allowance to fund employees with NT\$10,000 for each baby. The allowance increases according to the number of births each time.

Rate of Application Parental Leave for and Rate Return to work After Parental Leave in 2022 (GRI 401-3)

Gender	Total number of employees entitled to parental leave	Total number of employees taking parental leave	Total number of employees due to return to work after taking parental leave	Total number of employees retained 12 months after returning to work in 2021	Return to work rate of employees after taking parental leave	Retention rate of employees after taking parental leave
Male	10	0	0	0	--	--
Female	0	0	0	--	--	--

As no employee took parental leave in 2021, there was no employee retained 12 months after returning to work.

Employee Assistance Program

USIG has established the Employee Assistance Program Service Center (EAPC) to promote the Employee Assistance Program (EAP), organize various celebration activities, and provide employees with consultation and counseling services for employees to enjoy all-round care and assistance in psychological adjustment, career management, health promotion, life quality improvement.

Employee Welfare Committee

We contribute welfare funds according to the Employee Welfare Fund Act. In 2022 we contributed a total of NT\$14.53 million (accounting for 5.48% of the annual compensation) as the fund for the Employee Welfare Committee (EWC) to fund employee travels, birthday, birth, wedding, and funeral; organize dependent socializing activities; and pay for the group medical insurance so as to compensate for the hard work of employees.

In employee club activities, we have 15 employee clubs, including the cycling, snooker, fishing, dart, tennis, photography, softball, basketball, mountaineering, badminton, road running, bowling, hiking, study, and art clubs. Guided and funded by the company and EWC, these clubs enable employees to relieve work stress, balance work and life, and promote health to boost employee morale and enhance organizational commitment.

Employee club activities



EWC travels



Labor union GRI 2-30

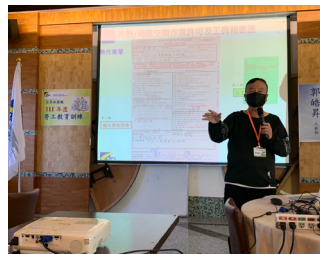
The APC Linyuan Plant Labor Union was established on 4 January 1988 to promote mutual cooperation among members, enhance member intelligence, protect the rights and interests of employees, assist with production development, promote labor-management harmony, and assist with the outreach of laws and regulations. The labor union holds the “Union Board Meeting” regularly, with the guest attendance of relevant APC officers to fully discuss and communicate with union representatives regarding labor rights and interests, health and welfare, occupational safety, labor conditions, and others. The union also organizes member education and training every year to cohere member understanding and promote labor-management cooperation. These education and training activities are welcome by members. **As we maintain sound communication with employees through the labor union and labor-management meeting, no collective bargaining agreement has been concluded.**

In 2022 the union had 205 members, including 197 males and 8 females, accounting for about 87.6% of all employees. The “Pension Reserve Supervisory Committee”, “Employee Welfare Committee”, and “Occupational Safety and Health Committee” are formed by labor and management representatives and hold committee meetings periodically. They provide channels for labor-management communication and maintain the rights and interests of employees. In 2022, the labor union held four union board meetings, two extraordinary union board meetings, and one union general meeting.

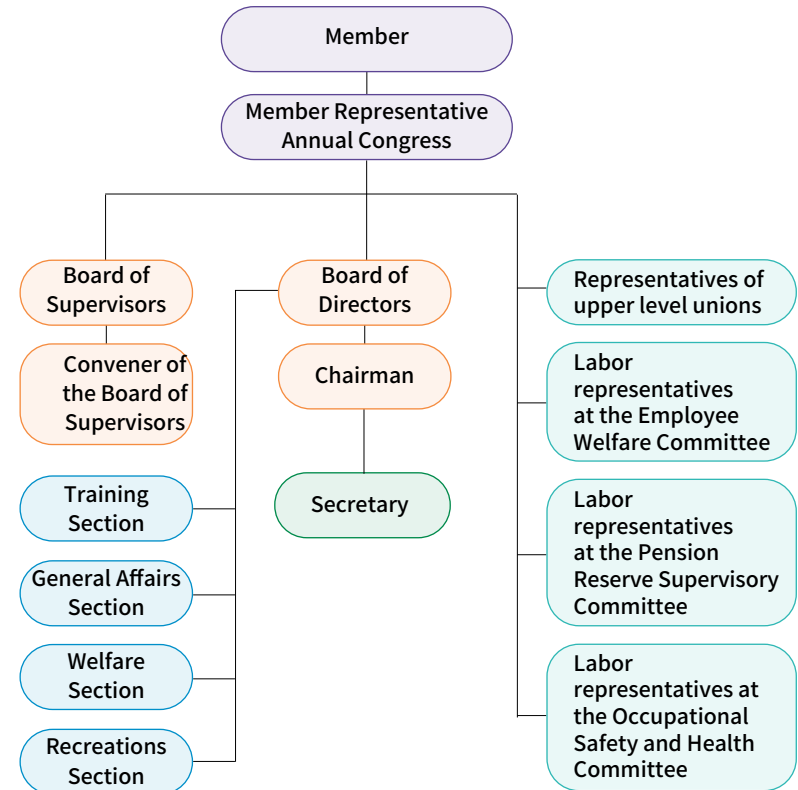
Union general meeting



Union member education seminar



Organizational Chart of Linyuan Plant Labor Union



5.3 Healthy workplace

Occupational safety and health

Material issue: Occupational safety and health; Corresponding sustainability principle: Safety and harmony GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center; color: #0072bc;">Significance to APC</p> <p>A healthy and safe workplace environment concerns workers most. Hence, it is our responsibility to implement safety and health management and provide employees and other workers with a healthy and safe workplace environment.</p> <hr/> <p style="text-align: center; color: #0072bc;">Management Practice and Target</p> <p>Implement occupational safety and health management through routine tour inspections, health and safety audits, and contractor management to provide workers with a safe and worry-free workplace environment to achieve the goal of zero occupational accident.</p> <hr/> <p style="text-align: center; color: #0072bc;">Strategy</p> <p>Enhance safety prevention</p> <ul style="list-style-type: none"> · Implement the OH&S management systems · Implement the PSM system and cross-plant audits <p>Enforce health management</p> <ul style="list-style-type: none"> · Employee periodic health checkups · Hire contractual physicians to provide onsite health consultation services · Provide onsite health consultation services by factory nurses 	<p style="text-align: center; color: #00c09d;">Positive/Negative Impacts</p> <ul style="list-style-type: none"> · Positive Actual Impact: Building a friendly workplace environment · Positive Potential Impact: Becoming a happy workplace business <hr/> <p style="text-align: center; color: #00c09d;">Measures to remediate and prevent negative impacts</p> <p>NA</p>	<p style="text-align: center; color: #4b2c82;">2022 Goals</p> <ul style="list-style-type: none"> · Injury rate (IR): 0 · Lost day rate (LDR): 0 · Employee periodic health checkups · Onsite health consultation by physicians: 6 times · Average health consultation by nurses: 6 times/month <hr/> <p style="text-align: center; color: #4b2c82;">2022 Performance</p> <ul style="list-style-type: none"> · Injury rate (IR): 0 (✔) · Lost day rate (LDR): 0 (✔) · Four sessions of health checkups for 214 persons in total (✔) · Onsite health consultation by physicians: 6 times (✔) · Average health consultation by nurses: 7 times/month (✔) <hr/> <p style="text-align: center; color: #4b2c82;">2023 Goals</p> <ul style="list-style-type: none"> · Injury rate (IR): 0 · Lost day rate (LDR): 0 · Employee periodic health checkups · Onsite health consultation by physicians: 6 times · Average health consultation by nurses: 6 times/month <hr/> <p style="text-align: center; color: #4b2c82;">Planning Medium- & Long-Term Goals</p> <ul style="list-style-type: none"> · Complete the PSM system in June 2024 · Zero accident through underground pipeline safety management · General industrial safety, environmental protection, and fire safety inspections in Linyuan Plant 	<p style="text-align: center; color: #e67e22;">Effectiveness Assessment</p> <ul style="list-style-type: none"> · Hold the OSHC meeting each quarter to review and follow up the status of safety and health improvements. · Hold the management review meeting of the OH&S management systems to review the effectiveness of the OH&S management systems. <hr/> <p style="text-align: center; color: #e67e22;">Grievance Mechanism</p> <ul style="list-style-type: none"> · Establish the “Procedures for Implementation of Communication and Consultation” to establish, implement, and maintain channels and processes for communication, engagement, and consultation of ESH issues. Please refer to the “Environmental impact grievance channels” section for more information. <hr/> <p style="text-align: center; color: #e67e22;">Evaluation of the management approach</p> <ul style="list-style-type: none"> · Timely review the occupational safety and health improvements for workers through the OSHC meeting.

OH&S

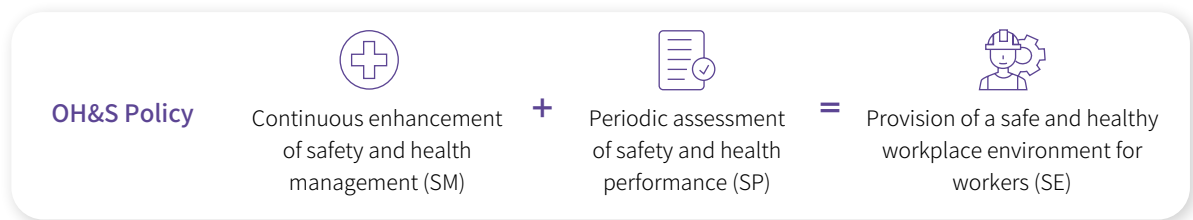
By implementing the OH&S management systems in Linyuan Plant and coordinating with USIG’s “USIG Safety and Health Partnership Regional Joint Defense” system, we conduct onsite tour inspections to enforce OH&S management through mutual supervision and experience sharing among USIG businesses. Each month we attend the “Linyuan Industrial Park Safety and Health Promotion and Industrial Park Regional Joint Defense” meeting held by the Linyuan Service Center. Through the experience and concept exchange on regional joint defense among park businesses, we improve park safety and health. We conduct legal compliance audits in response to the general inspection of industrial safety, environmental protection, and fire safety of Linyuan Industrial Park implemented by MOEA and also establish relevant compliance KPIs and process leading indicator to implement routine inspection and ingrain industrial safety and environmental protection awareness to lower the industrial safety and environmental protection risk in operations.

Linyuan Plant passed the certification of the ISO 45001 OH&S management systems in 2019 and the certificate renewal certification on 13 May 2022. The validity of the new certificate will expire on 23 April 2025. We also pass third-party verification every year.

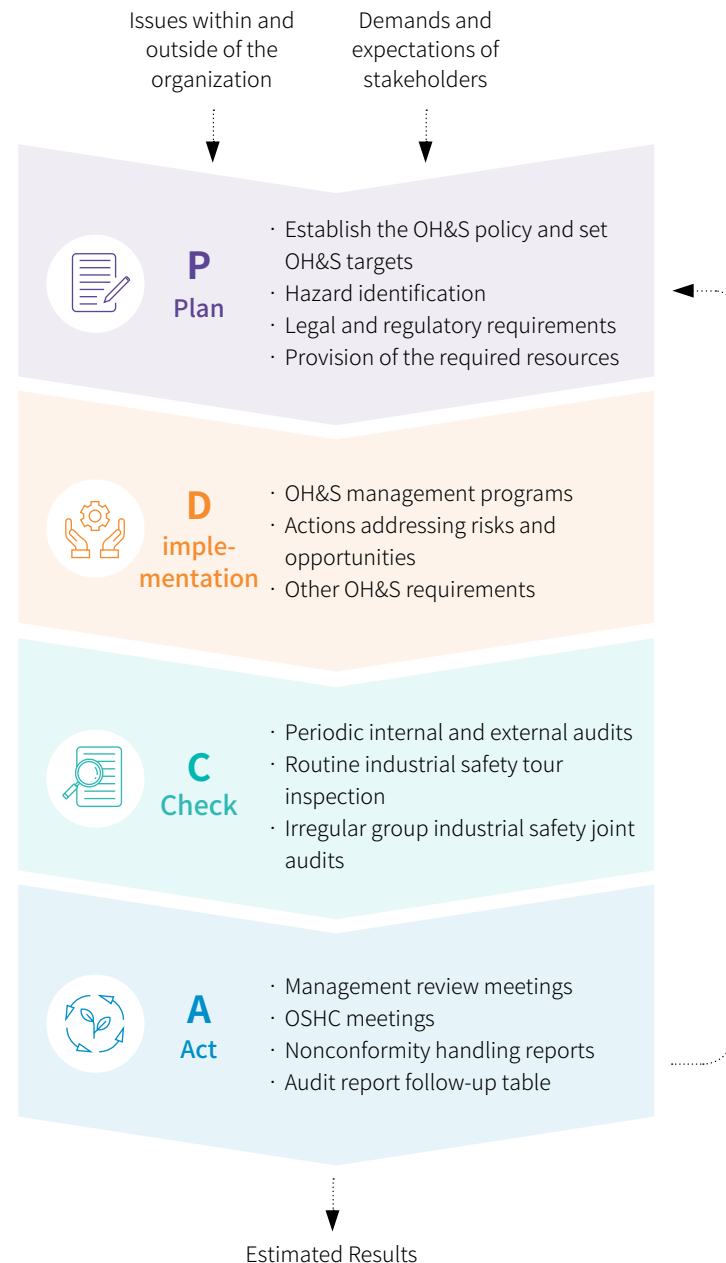
The scope of management system verification is Linyuan Plant, covering both the employees and workers who are not employees of Linyuan Plant. After excluding the employees of Taipei HQ, the employee coverage rate is 90%. The coverage rate of workers who are not employees (including contractors, outsourcing service providers, contract workers, and visitors whose work and/or workplace is controlled by the organization, same as below) is 100%. [GRI 2-8, 403-1](#)

In October 2020, Occupational Safety and Health Administration (OSHA) approved the extension of our occupational safety and health performance for three years (expiry: 28 June 2023). We are among one of the 91 businesses (updated on 3 January 2023) passing the OSHA performance review and recognition. The review content includes safety and health policy, hazard identification, change management, procurement management, hazardous chemicals assessment and management, incident report, accident investigation and statistics, workplace health management and health protection, and emergency response action.

The diagram below shows the operation of the management system. Through the plant, do, check, and act (PDCA) cycle, we accomplish the safety and health management targets of the OH&S management systems. We also continuously check and discover problems and timely take corrective action, develop a complete OH&S management system, create a safe and comfortable workplace environment, and protect the safety and health of employees and workers who are not employees.



Process of Linyuan Plant’s OH&S Management System



Performance of OH&S management systems in 2022:

Safety and Health Performance

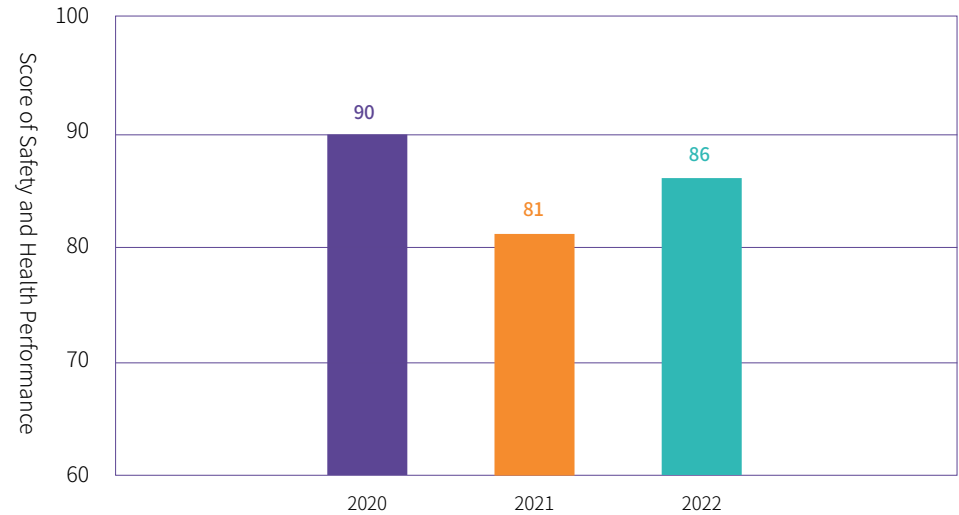
Active Indicators

1. Accomplishment rate of safety and health management programs
2. Operation environment test
3. Allowable concentration of organic solvents in operating environments.
4. Health checkups and health talks
5. Safety and health publicity, education, and training

Passive Indicators

1. Number of accidents (including close calls)
2. Violations and fines

Score of Safety and Health Performance of Linyuan Plant in Past 3 Years



We scored performance through the self-assessment of active and passive indicators. The total score of safety and health performance in 2022 was 86. Marks were deducted from the passive indicators--number of accidents and violations and fins--due to the explosion panel breakage of reactor R-1201 on 28 March 2022.

By identifying related hazards and assessing related risks and opportunities within the organization through employee competence and behavior, work, activities, facilities, and changes, we can identify more clearly the hazards of risks required for prioritized handling in the OH&S management systems and the opportunities for early action to improve OH&S performance so as to control risks within the acceptable level and improve OH&S performance. [GRI 403-2](#)

Processes for Hazard Identification and Risk and Opportunity Assessment



$$\text{Risk level} = \text{Frequency} \times \text{Severity} \times \text{Loss Likelihood}$$

- Frequency, severity, and loss likelihood are divided into five levels by significance
- **Unacceptable risk: Risk level \geq 30 marks**

Results of Hazard Identification and Accident Investigation in 2022 GRI 403-2

Unacceptable risks:

Operation	Deviation from Standard	Control	Corresponding Action Plans and Performance
TPC Power Supply	System halt due to power undersupply or low reliability	Administration	Four emergency response drills each quarter
Recycle line Xylene CIP	Pipelines or equipment are not emptied, diaphragm valves are not closed.	Engineering control	Plan budgets, make modifications, increase online xylene CIP equipment
External thickness inspection of pressure vessels and pipelines.	Burn risk due to measurement negligence and equipment contact	Personal protective equipment (PPE)	Inspectors are required to wear gloves or use infrared thermometers to check temperatures in advance.
Reactor (R-1101/R-120) stop	Uncontrolled reaction due to failure to stop the catalyst pump.	Administration	Implement scenario simulated drill from time to time each month for operators to get familiar with various situations, organize four emergency response drills each quarter
Ethylene underground pipeline management	Underground pipeline ethylene leakage	Engineering control	There was no ethylene leakage in 2022 due to the implementation of action plans with one emergency response drill each year
Equipment lockout, out of service	Failure to meet the government requirements in the resumption procedures or contents when applying for resumption.	Administration	Request for assistance from experts, scholars, or government units to meeting the government requirements.
Sample analysis with differential scanning calorimetry (DSC)	Nitrogen pipeline leakage	Engineering control	Install oxygen alarms

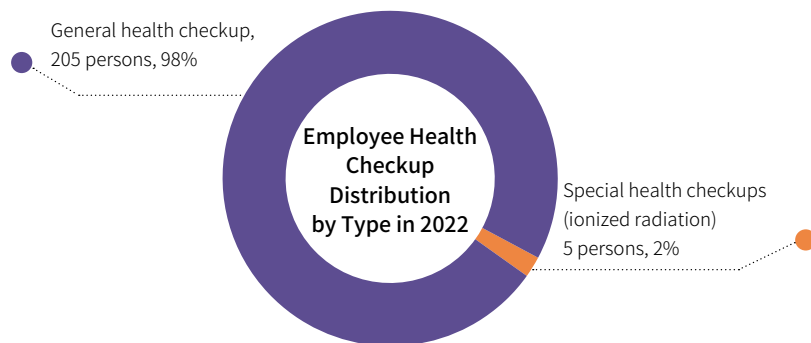
Investigation of incidents:

Accident Type	Situation Description	Corrective and Prevention Action
Critical accident	On 22 January 2022, there was a steam leakage caused by the abnormal action of the protective device (explosion panel) of steam bumping tank V-1227 of line 2.	<ol style="list-style-type: none"> 1. Wrap up the explosion panel pipeline with aluminum foil to prevent rainwater from entry. 2. Organize training for safety equipment maintenance and diaphragm valve removal. 3. Revise the related SOPs of safety equipment maintenance. 4. Remove the related front diaphragm valve and explosion panel and install the blind flange.
Critical accident	On 28 March 2022, the reactor experienced a rapid temperature and pressure rise, and the safety device (explosion panel) broke as the pressure exceeded the pressure limit.	<ol style="list-style-type: none"> 1. Formulate new catalysts to replace the deteriorated catalysts. 2. Examine catalysts when they are not used for 10 days. If they are not used for 14 days, they should be unloaded and stored in the cold storage for further processing. 3. Revise in-house SOPs to include it in the PSM items. 4. Arrange education and training to strengthen personnel training on catalyst management. 5. Further guidance and optimization of the PSM system.

Occupational health management GRI 403-3 SASB RT-CH-320a.2

We request new employees to receive physical checkups to understand their physical condition so as to assign them an appropriate job. Additionally, we also arrange health checkups for employees at OSHA-accredited hospitals each year at the company's expense to protect the physical and mental health of employees.

In August 2022, we arranged four sessions of health checkups for a total of 210 employees of Linyuan Plant. We also implemented the graded management system for special health checkups and reported the results to the competent authorities for reference. The graph below shows the health checkup distribution by type.



Note: Special health checkups include additional checkup items based on the nature of jobs.

Although workers of Linyuan Plant are working in a high-risk and special operation areas, **there was no occupational accident or health hazard**, as well as work-related ill health in 2022. **The health checkup results of all employees were included in levels 1 and 2 management and follow-up.** Factory nurses provided at least six times of onsite consultation each month, and contracted physicians provided onsite service in every even month to control and produce statistics of the health checkup results.

Health promotion GRI 403-6



Onsite health service by contracted physicians

6 times/year, contracted physicians provide onsite health service for employees and workers who are not employees every even month.

40 persons, number of employees and workers who are not employees receiving health service.

Health talks

47 persons, number of employees participating in health talks

In 2022 we organized two health talks to provide health consultation service

Factory nurse health service

7 times/ month, 89 times of factory nurse health service for employees and workers who are not employees

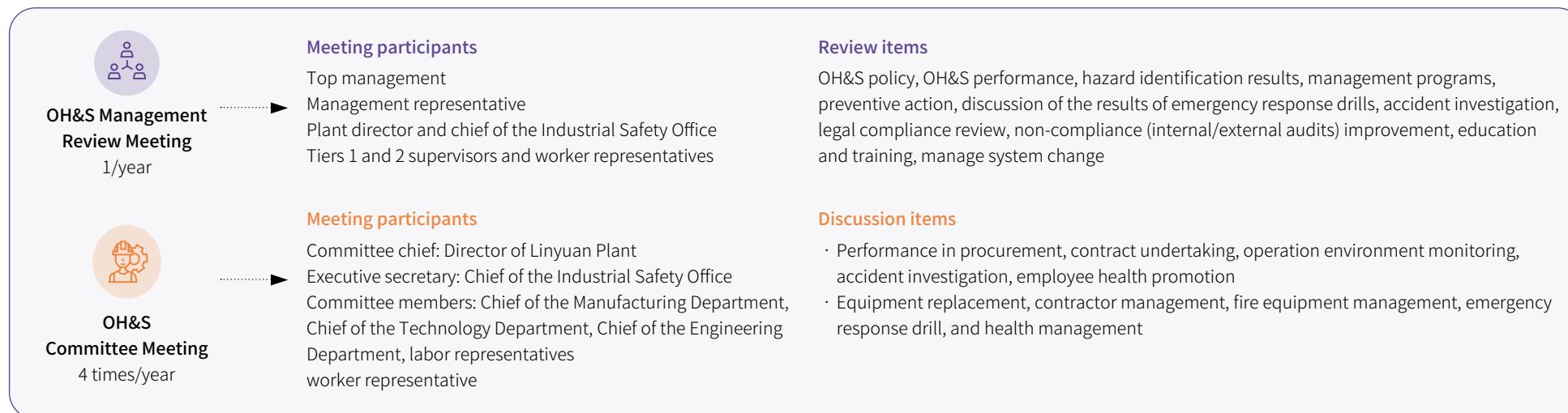
Employee club activities

251 persons/year

Following the gradual decline of COVID-19, some employee clubs began to organize club activities in 2022, although the epidemic control measures were maintained. Currently, 7 of the 15 employee clubs established by EWC have started organizing annual events with more participants than in the previous year for employees to relieve stress and improve physical health.

Worker participation, consultation, and communication on occupational health and safety GRI 403-4

We periodically hold the OH&S management review meeting (at least once a year) and OSHC meeting (quarterly) for the plant director, chief of the Industrial Safety Office, tiers 1 and 2 supervisors of all units, labor representatives (6), worker representative (1, chairperson of the labor union) to communicate and discuss matters relating to OH&S management, hoping to achieve the goal of zero occupational accident.



Education and training on occupational health and safety GRI 403-5

The table below shows the hours of OH&S education and training of Linyuan Plant in 2022:

Education, training, and publicity on occupational health and safety are the foundation to enhance the OH&S awareness in employees. We have established the “Regulations for Education and Training on Occupational Health and Safety” to arrange training on the related knowledge and skills for all types of employees based on the actual needs. Apart from external training, we also hold various sessions of internal education and training on occupational health and safety in collaboration with the labor union each year. We also hire physicians to give health education and talks to employees based on the results of health checkups. **The total hours of employee industrial safety training in 2022 were 4,078 hours, covering occupational health and safety (2,883 hours) and PSM (1,195 hours), accounting for about 79% of the total hours of training (5,188 hours) in 2022**

Type	Number of participants	Hours of training
OH&S OTJ training (including workers who are not employees)	328	2,376
PSM	281	1,195
Fire prevention training	40	240
Underground pipeline personnel training	22	88
Health management training	49	103
Hazardous chemicals training	5	76

Contractor management GRI 2-8, 403-7

The safety management of contractors and suppliers is very important to Linyuan Plant. Hence, apart from establishing “Regulations for Safety and Health Management of Joint Operations with Contractors” and the “Workplace Health and Safety Rules for Contractors”, we also hold the consultative organization meeting to inform contractors of the hazards in the workplace environment and counteractions before their entry for construction. Additionally, we conduct onsite inspection before construction to ensure that workers have completed training on the occupational health and safety notification before construction and only those passing the test are allowed to enter the plant for construction so as to ensure the safety and health of contractors’ employees.

Every day the Industrial Safety Office conducts occupational safety and health tour inspection on both employees and workers who are not employees. In 2022 a total of 187 nonconformities were found during onsite tour inspection. Violation of the occupational safety and health regulations in general operation was the most common nonconformity (e.g., content and flow indication, pressure gage anomaly, improper operation checks). By 31 December 2022, a total of 166 nonconformities were corrected, with a completion rate of 89%. The remaining 21 nonconformities were hardware nonconformities, including pipeline corrosion (9), road surface damage (5), fire coverage (1), equipment foundation damage (2), ladder (1), containment dike damage (2), and refractory mortar replacement (1). In consideration of operation safety, corrections can only be made when the whole plant stops operations.



Safety and health education and training



Training on occupational health and safety for contractors



Onsite construction coordination of contractors 2022.01.13



Employee health talk

2022.11.21



Labor education and training



PSM training

61 times

Number of consultative organization meetings held before contractors started construction in the plant.

100%

Rate of training on occupational safety and health of works before construction

187 cases

Number of nonconformities found during occupational safety and health onsite tour inspection

89%

Rate of completed corrections of nonconformities found in occupational safety and health onsite tour inspection

Workers covered by the occupational health and safety management systems GRI 403-8

The scope of verification of the occupational health and safety management systems is Linyuan Plant, covering both employees and workers who are not employees.

Internal Audit

Apart from establishing the “Occupational Safety and Health Audit SOP” and the “Process Safety Management Audit SOP”, we draw up the internal audit program in accordance with ISO 45001:2018 and the Regulations for Periodic Implementation of Process Safety Assessment to audit the management systems periodically. The audit covers both employees and workers who are not employees.

218 persons

Number of employees
of Linyuan Plant

100 %

Audit coverage rate

External Audit

Third-party audit unit: SGS
Audit reference: ISO 45001:2018

7,620 persons

Number of workers (contractors) who are not
employees working in Linyuan Plant

100 %

Audit coverage rate

Statistics of Types of Disabling Injuries of APC in 2022

Injury Class	Fall/tumble	Inhalation/ intoxication/ anoxia	Pinch	Burn	Roll	Electric shock	Cut/scratch	Noise	Sprain	Impact	Fire Explosion	Falling Object
Employees	0	0	0	0	0	0	0	0	0	0	0	0
Non-employee	0	0	0	0	0	0	0	0	0	0	0	0

When an incident breaks out, the concerned party should make an emergency response, immediately request for assistance from the supervisor, and secure the integrity of the incident scene. Then, the party concerned should report the causes, status, and process of the incident to the supervisor to start an investigation, submit an incident investigation report, and propose corrective action. After report approval, the supervisor should follow up the corrective action and close the file after corrective action is completed.

Work-related injuries GRI 403-9

Statistics on work-related injuries of APC in 2022: SASB RT-CH-320a.1

Regions Gender	Employees in Taipei		Employees in Kaohsiung	
	Male	Female	Male	Female
Injury rate (IR)	0	0	0	0
Occupational Disease Rate (ODR)	0	0	0	0
Lost day rate (LDR)	0	0	0	0
Work-related deaths	0	0	0	0

Note1. Injuries (disabling): Included employees could not go to work on the following day after treatment and applied for work-related sick leave or work-related injury with fatalities. Minor injuries (resolved after first aid or medical attention) were excluded.

2. Lost days: Started from the day following the injury and the day of work-related sick leave, calculated by calendar day.
3. Injury rate (IR) = Number of injuries x 200,000 hours worked ÷ total hours worked
4. Lost day rate (LDR) = Number of lost days ÷ total hours worked (8 hours as one day)
5. Occupational disease rate (ODR) = Number of employees suffering from occupational diseases ÷ Total number of employees
6. Workers who are not employees included contractors, visitors, and those having activities in the plant. ODR and LDR were excluded because no data was collected.



COVID-19 epidemic prevention measures

1. Employees are requested to measure body temperature before entry and get medical attention and rest at home if they have a fever. Records are maintained for each time of measurement to facilitate traceability. Employees with probable symptoms, such as fever (forehead temperature $\geq 37^{\circ}\text{C}$ or ear temperature $\geq 37.5^{\circ}\text{C}$) or symptoms of respiratory tract infection or loss of smell, are not allowed to enter the building.
2. Employees are requested to wear a facemask and are not allowed to drink or eat at all times on the company bus.
3. Employees are requested to minimize domestic/overseas business trips and business visits and replace them with videoconferencing. During epidemic control, domestic/overseas business trips must be approved by the president in advance.
4. Contractors, visitors, and government personnel must measure the forehead temperature before entry. Those with a forehead temperature over 37°C are not allowed to enter the plant.
5. All are requested to maintain the social distance. The employee canteens supply meals in boxes. Employees may select food from the canteen (always wearing a face mask).

In addition to the above epidemic control measures, we have also set up the “Self-Imposed Health Management Report System” to request employees report the relevant conditions every day to ensure total epidemic control.

日期	姓名	年龄	部门	项目	体温	状况	完成
05/28				晨间体温		良好	完成
05/29				晨间体温		良好	完成
05/30				晨间体温		良好	完成
05/31				晨间体温		良好	完成
06/01				晨间体温		良好	完成
06/02				晨间体温		良好	完成

Emergency response exercise plan

As a member of the Taiwan Responsible Care Association (TRCA), the safety and health promotion committee and regional joint defense organization of Linyuan Industrial Park, we organize fire and underground pipeline emergency response drills every year to develop the emergency response and self-imposed safety management capabilities of employees.

List of Fire and Underground Pipeline Emergency Response Drills of Linyuan Plant in 2022

Date	Emergency Response Drilling Item
May 27, 2022	Self-Defense Fire Safety Taskforce Drilling Plan for 2022H1. (Location: APC Linyuan Plant)
August 23, 2022	Annual Self-Imposed Drill of the 3rd Industrial Pipelines of the Underground Pipelines Organization. (Location: Linyuan No. 11 Park)
November 12, 2022	Self-Defense Fire Safety Taskforce Drilling Plan for 2022H2. (Location: APC Linyuan Plant)

! Fire Emergency Response Drill !



Zero disabling injury

From 14 October 2010 to 31 December 2022, we accumulated a total of 5,321,152 hours of zero disabling injury, and the accumulation continues.



List of Process Safety Emergency Response Drills of Linyuan Plant in 2022

Date	Process Safety Emergency Response Drilling Item
March 17, 2022	Process Power Supply Disruption Emergency Response Drill
May 19, 2022	Ethylene Supply Disruption Emergency Response Drill
November 23, 2022	Process Nitrogen Supply Disruption Emergency Response Drill
November 23, 2022	Tap Water Supply Disruption Emergency Response Drill

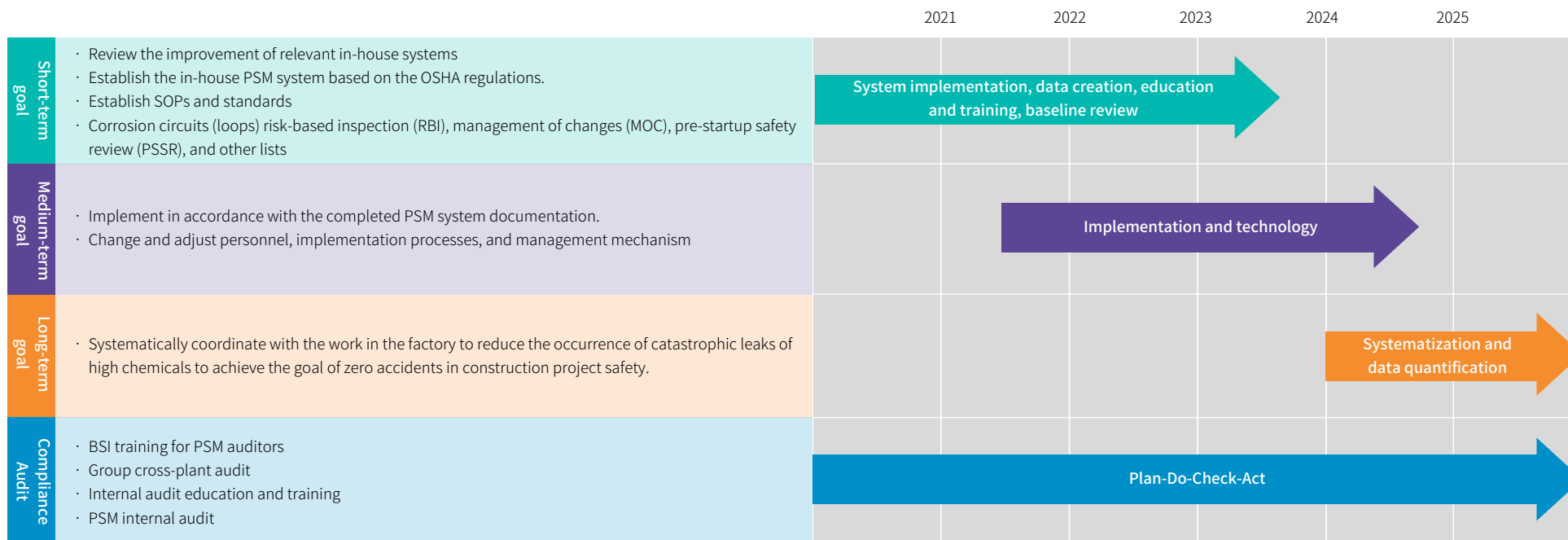
Process Safety Emergency Response Drill



Operation Safety Management

Material issue: Process safety management (PSM) ; Corresponding sustainability principle: Safety and harmony GRI 3-3

Management Approach and Its Components	Impact Management	Targets and Performance of Management Approach	Evaluation of Management Approach
<p style="text-align: center;">Significance to APC</p> <hr/> <p>APC is a Category C hazardous workplace. To prevent low-likelihood high-hazard critical incidents, strengthen the in-house process safety management (PSM) mechanism, and meet the comprehensive inspection requirements of Linyuan, we need to continuously improve and implement PSM.</p> <p style="text-align: center;">Management Practice and Target</p> <hr/> <p>Implement the PSM system and optimize the management mechanism in accordance with the Regulations for Periodic Implementation of Process Safety Assessment and the OSHA PSM spirit to lower the likelihood of high-hazard and high-risk incidents and so to reduce property losses and enhance worker safety.</p> <p style="text-align: center;">Strategy</p> <hr/> <p>Implementation and promotion of PSM</p> <ul style="list-style-type: none"> · Provide technical consultation for in-house process safety and plan and coordinate the implementation items of each unit; maintain coordination with all units to understand the implementation needs of their improvements. <p>Establishment of process safety performance management</p> <ul style="list-style-type: none"> · Follow up on the progress of PSM implementation and design the key monthly management objectives and the annual KPI management system based on OSHA's PSM system and PdM & ERM Division's policy to enhance work performance. 	<p style="text-align: center;">Positive/Negative Impacts</p> <hr/> <ul style="list-style-type: none"> · Negative Actual Impact: Improper process safety management · Negative Potential Impact-Accidents of highly hazardous chemical substances <p style="text-align: center;">Measures to remediate and prevent negative impacts</p> <hr/> <ul style="list-style-type: none"> · We have implemented the PSM system and will prevent accidents through systemic management. · The PdM & ERM Division audits our PSM progress and supervises our PSM performance. · We have designed the A, B, and C checklists for in-house chemicals for periodic inspection. · Run the hazard and operability study (HAZOP) on process modifications with higher risk as proven by the preliminary hazard analysis in the management of change (MOC) to ensure process safety. · Implement periodic equipment maintenance to lower the risk of leakage of high-hazard chemical substances. · Arrange education and training for related personnel after the completion of new process construction or process modification 	<p style="text-align: center;">2022 Goals</p> <hr/> <ul style="list-style-type: none"> · Process safety incident: 0 · Completion of 70% of information lists required by PSM implementation. <p style="text-align: center;">2022 Performance</p> <hr/> <ul style="list-style-type: none"> · Process safety incident: 1 (✘) · Completion of 85% of the information lists required by PSM implementation (✔) <p style="text-align: center;">2023 Goals</p> <hr/> <ul style="list-style-type: none"> · Process safety incident: 0 · Completion of 97% of the information lists required by PSM implementation (✔) <p style="text-align: center;">Planning Medium- & Long-Term Goals</p> <hr/> <ul style="list-style-type: none"> · Total participation and continual improvement of the PSM policy. · Complete creating all information lists (100%) required for PSM implementation and associate them with the existing jobs. · Conduct PSM compliance audits on a triennial cycle. · Make continual improvement to support USIG's cross-plant audits. · Lower the likelihood of catastrophic leakage of high-hazard chemicals to achieve zero accident through PSM. 	<p style="text-align: center;">Effectiveness Assessment</p> <hr/> <ul style="list-style-type: none"> · Hold the PSM implementation and status meeting and coordination meeting each month. · Write the PSM implementation report and status report of commissioned construction research project. · Design the performance management system based on the information lists required for APC's PSM implementation based on PMERM's follow-up policy to assess and review the completion rate of data creation. <p style="text-align: center;">Grievance Mechanism</p> <hr/> <ul style="list-style-type: none"> · Report the PSM progress of Linyuan Plant in the executive meeting, plant affairs meeting, and monthly coordination meeting. · Provide technical consultation related to in-house process safety and plan and coordinate the implementation items of each unit; maintain close contact with the supervisors of all departments and sections, PdM & ERM and the consultants to understand the implementation needs and reach consensus at all times. <p style="text-align: center;">Evaluation of the management approach</p> <hr/> <ul style="list-style-type: none"> · Report the PSM progress of Linyuan Plant in the executive meeting, plant affairs meeting, and monthly coordination meeting. · Make continual improvement in response to the request of external experts and legal amendments to meet the expectation for PSM implementation of external units. · Implement subsequent PSM tasks as scheduled and associate them with the existing tasks to internalize PSM and maintain traceability.



Process Safety Management (PSM)

Process safety is a critical issue to the global petrochemical sector, and PSM system implementation has become a global trend. Apart from ensuring safe process operation and reducing the loss on unnecessary unexpected operational interruption for a plant, a sound PSM system can also lower the impact on local communities.

As PSM has become a trend in the petrochemical sector, to prevent low-likelihood and high-hazard critical accidents, PSM is crucial to APC.

In recent years Linyuan Plant has been actively implementing PSM based on OSHA’s PSM system and set up short-, medium-, and long-term goals to implement 14 major PSM items.

In 2021 and 2022, we implemented PSM in terms of four short-term goals: system management, technology data lead-in and creation, PSM education and training, and continual assessment and improvement. Today, the in-house PSM has outperformed the current legal requirements, and we are making continual improvement to exceed the legal and policy requirements. In 2023 we will implement subsequent tasks as scheduled and associate them with the existing tasks to internalize PSM and maintain traceability.

Process Safety Management (PSM)

Promotion through system and management	Lead-in and Creation of Technical Data	PSM Education and Training	Continual Assessment and Improvement
<ul style="list-style-type: none"> Review of ISO documentation Responsibility and authority Management process Forms and records 	<ul style="list-style-type: none"> Equipment list Equipment grading Equipment integrity Labor engagement plan Incompatible matrices Inspection checklist before activation Cold work and hot work list 	<ul style="list-style-type: none"> Introduction and related regulations Safety information Hazard analysis Equipment technology Investigation of incidents 	<ul style="list-style-type: none"> Data collection and collation Baseline review Contents requested by scholars Group promotion projects

Process safety incident

We establish SOPs relating to initiator operation, arrange personnel education and training, and improve the PSM system to maintain process operation safety.

In 2022, there was one process safety incident, and we were fined by the Kaohsiung Environmental Protection Bureau and Kaohsiung Labor Affairs Inspection Office.

Incident description

On 3 March 2022, a TPC power outage caused an unplanned stop of all four production lines in the plant. Affected by the power disruption, the production equipment of line 1 was unable to resume feeding materials for LDPE production. On 28 March 2022, when producing LDPE with line 2, heat released from the reaction and initiator flow became unstable because the originally formulated initiator deteriorated. This thus triggered an ethylene pyrolysis and a surge of the reaction temperature and pressure of levels 2 and 4 of the reactor. As a result, the explosion panel of the reaction was activated to release pressure and produce black smoke. We were then fined by the Kaohsiung Environmental Protection Bureau.

Cause analysis

1. Direct cause (estimated energy or hazardous substances)
Reactor R-1201 experienced a rapid temperature and pressure rise, and the safety device (explosion panel) broke as the pressure exceeded the pressure limit, leading to an ethylene leakage.
2. Indirect cause
Unsafe situation: High-temperature initiator deteriorated, initiator flow became unstable during the reaction, causing the heat of reaction and leading to the reactor temperature and pressure surge.
Unsafe behavior: Failure to verify initiator quality and use of deteriorated high-temperature initiator.
3. Basic cause: Deterioration of high-temperature initiator due to prolonged storage.

Corrective action

1. Replace the safety explosion panel and implement strict control of initiators.
2. Revise initiator-related SOPs and arrange education and training for related personnel.
3. Improve the in-house PSM system to maintain process operation safety.

Statistics on Process and Transportation Safety Incidents of Linyuan Plant in 2022

PSIC	Process safety incident		Process safety incident Transportation safety incident
	PSTIR	PSISR	
1	0.36	0.36	0

Note 1: Total count of process safety incidents (PSIC)

Note 2: Process safety total incident rate (PSTIR) = (Total process safety incidents x [200,000 working hours] ÷ Total hours worked by workers)

Note 3: Process safety incident severity rate (PSISR) = (Total severity score for all process safety incidents x [200,000 working hours] ÷ Total hours worked by workers)

Note 4: There was one process safety incident. Based on the process safety index of the Center for Chemical Process Safety (CCPS), the severity level was grade 2, and the total score was one mark.

Note 5: Total hours worked by workers: Employees 458,184 hours + Contractors 90,632 hours = 548,816 hours

[SASB RT-CH-540a.1](#) • [540a.2](#)

Transportation safety management

The safety management of process operation, materials transportation, and product transportation are important to us, and we have established safety management SOPs for related operations.

Materials transportation

Ethylene and VAM are the major production materials of APC Linyuan Plant. They are transported through underground pipelines and tankers.

In consideration of materials transportation safety, most major production materials are transported via underground pipelines, while others are transported by tankers. We have established relevant maintenance measures for the safety management of underground pipelines, such as preventive maintenance, routine tour inspection, anomaly management, and emergency response drills. We also select qualified tankers to transport materials, establish well-planned emergency response procedures and plans, and comply with the relevant control regulations and management measures.

The table below shows the method, quality, and proportion of transportation of major materials in 2022.

Method of Materials Transportation and Proportion of Linyuan Plant in 2022

Transportation Methods	Quantity (MT)	Proportion (%)
Underground Pipelines	107,936	81.6
Tanker	24,270	18.4

Based on the “equipment maintenance operations” and “safety and health operations” under the internal control system, we have established the “Underground Pipelines Inspection Work Instructions” to implement preventive maintenance, routine tour inspection, anomaly management, and emergency response on our underground pipelines within and outside of the plant to prevent corrosion and leakage of underground pipelines. In 2022 we completed the “2023 Underground Pipelines Maintenance and Operation Plan” and the “2022 General Implementation Report” and submitted them to the Kaohsiung City Economic Development Bureau.

In addition to organizing emergency response training and drills, we also actively take the necessary preventive action and implement management programs. The table below shows the major maintenance measures of underground pipelines management of Linyuan Plant.

Underground pipeline maintenance measures

- Double protection including petrolatum tapes and impressed current cathodic protection.
- Daily routine inspection in collaboration with the pipeline joint defense organization.
- Outsourcing legally registered professional contractors to check the potential of cathode protection quarterly.
- Periodic pipeline pressure-holding test and real-time system monitoring of the transmission and receiving ends to ensure pipeline operation safety.
- Establishing relevant emergency response plans and reporting mechanisms and implementing emergency response training and exercises regularly.
- Stray current interference monitoring of underground pipelines along the Circular Light Rail in 2022.
- Full-length pipeline thickness test according to the test cycle requested by the self-governance ordinance of Kaohsiung Environmental Protection Bureau.



Product transportation

We transport products with trailers, trucks, and container trucks. To ensure product transportation safety, we hire only qualified transporters and establish management regulations related to transportation outsourcing to maintain product transportation safety.

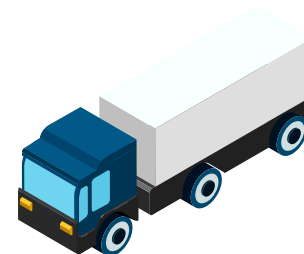
The table below shows the methods, quantity, and proportion of product transportation in 2022.

Methods of Product Transportation and Proportion of Linyuan Plant in 2022

Transportation Methods	Quantity (MT)	Proportion (%)
Trailers	30,147	23.1
Trucks	94,875	76.9

Product transportation management

- Legally registered transporters.
- Passed ISO 9001 certification with qualified health and safety management personnel.
- Annual evaluation of performance, efficiency, cooperation and quality and proposals for improvement programs based on customer feedback at the transportation review meeting.
- Regular vehicle examinations according to the relevant regulations.
- Holding transportation safety meetings quarterly to ensure that contractors can safely transport products to the destination to minimize environmental impacts caused by transportation.



5.4 Social engagement

We actively engage in social welfare and community activities and have established the USI Education Foundation in collaboration with USI Corporation (USI), China General Plastics Corporation (CGPC), and Taita Chemical Co., Ltd. (TTC) to sponsor education for remote townships and the vulnerable to give vulnerable students the opportunity to flip their life through educational reform so as to end educational inequalities. We also establish long-term partnership with local communities, support local community development, assist in selling local agricultural products, and sponsor community environmental protection activities so as to promote local development and achieve mutual prosperity with local communities.

Charity Events

In 2022, we donated NT\$5 million to the USI Education Foundation. In 2022, USI Education Foundation sponsored various activities with a total amount of NT\$13.61 million, including NT\$3 million for scholarships and grants; NT\$2 million for The Alliance Cultural Foundation, NT\$6 million for Junyi School of Innovation in Taitung; and NT\$2.61 million for other educational and charitable activities. To invest more resources in cultural and art development, we also supported the Cloud Gate Culture and Arts Foundation to promote its performances at home and abroad, as well as art education and residents' arts and cultural activities in the Tamsui community, enriching the cultural life of Taiwan and the world.

Scholarships and grants

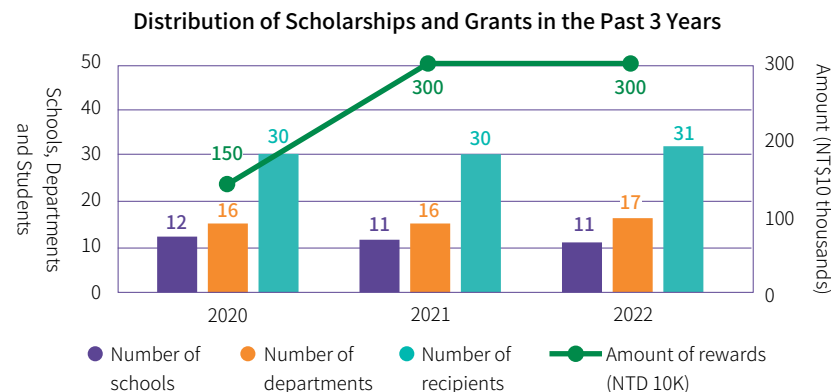
We offer scholarships to students from low-income families with outstanding performance and specializing in disciplines relating to chemical engineering, materials science, chemistry, and applied chemistry of 15 public and private universities to promote education and talent cultivation in related fields, encourage university students of related disciplines to study hard and cultivate outstanding industrial talent for society. 2022 marked the 11th year of the scholarships, and we have distributed scholarships amounting to NT\$17.1 million to 297 students over the past 11 years.

In 2022, we offered scholarships and grants of NT\$3 million in total to 31 students from 17 departments of 11 public and private universities, including 10 from doctoral programs, 16 from master's programs, and 5 undergraduates, and 23 of them were from low-income families. To encourage scholarship-winning students, the presentation and commendation ceremony was held at noon on December 9, 2022. USI officers attended the event to exchange opinions and experience with students, wishing them to keep studying in order to demonstrate positive influence and contribute to society.



Expenditure on Sponsoring of USI Education Foundation in 2022

- Taitung Junyi School of Innovation, NT\$6 million
- Scholarships and grants, NT\$3 million
- Other educational activities, NT\$2.61 million
- The Alliance Cultural Foundation, NT\$2 million



The Alliance Cultural Foundation and Taitung Junyi Experimental High School

To invest more resources in rural education and the sustainable development of Hualien and Taitung, the foundation sponsors the Alliance Cultural Foundation and Junyi Experimental High School on a long-term basis. Established 13 years ago, The Alliance Cultural Foundation always has a blueprint: hoping that Junyi Experimental High School will become the base in Hualien and Taitung for developing future talent. It also helped building the Paul Chiang Art Center into an international cultural and art landmark in Taitung and even in Taiwan, while the Forest Culture Museum in Yingping, Taitung, and GS Forest in Fengbin, Hualien, are demonstrations of indigenous culture and arts distributed in all parts of Taitung and Hualien.

Based on his personal experience, Chairperson Stanley Yen of the Alliance Cultural Foundation (ACF) proposes the four stages of public interest. “Generosity” is Public Interest 1.0. It aims to feed and clothe those in need of food and clothes, to fund those in need of education funds, and assist others in need of emergency assistance. Many religious groups solve these immediate problems and support the basic needs of society with compassion. “Accommodation” is Public Interest 2.0. It aims to set the education or work environment in order for people to find the meaning of life and dignity of work. “Enhancement” is Public Interest 3.0. It means to provide a long-term accompaniment mechanism, like the case of Junyi School for Innovation that integrates primary and secondary education, to offer a better vertically integrated learning environment for the competent to change their fate and future. “Reproduction and Dissemination” is Public Interest 4.0. It aims to extend influence for others to learn by combining with government policies or sharing the experience of success and failure. At this stage of 3.0, ACF and Junyi School of Innovation will advance the teacher training program to “Public Interest 4.0”, hoping to continuously disseminate the experimental education model of Junyi School and turn it into the reference for the government to revise the remote township education policy. It is believed that the sustainable development of Hualien and Taitung will bear fruit in the next three to five years. In recognition of the care for Taiwan’s remote township education and concern about sustainable cultural development of Mr. Stanley Yen, the USI Education Foundation sponsors various projects for remote township education development proposed by ACF and Junyi School of Innovation.



The Waldorf education for the elementary school department and senior students participated in the “Mianshan School: Jiafeng Adventure 2-day 1-night Camp Course”

Taitung Junyi Experimental High School: Realization of education for remote townships

The “Rural Education Seeds Cultivation Program” founded in 2012 supports children from economically vulnerable families in remote townships in Hualien and Taitung (also Pingtung in recent years) to go to Junyi School of Innovation in Taitung. Every year the program offers a third of the vacancies for grade 7 students and opens application for admissions of grade 10 students. 2022 marked the onset of program’s second decade. So far, the program has benefited a total of 210 students from low- and medium-income families, single-parent families, skipped-generation families, or families dedicating to indigenous culture promotion but cannot afford the full tuition and fees.

Over 80% of them are indigenous students from ethnic groups including Amis, Puyuma, Bunun, Payuan, Drekey, Tao, Truku, Cou, and Atayal. They hope that each education seed can become youth with “good character”, “cultural and art” literacy, and “critical thinking” and a world citizen who embraces enthusiasm, self-confidence, and international perspective and return to indigenous communities to become the seeds that change indigenous communities.

Schoolchildren in remote townships with less resources need connection with the world more in order to create more possibilities for their hometowns. Hence, in 2017 ACF activated the “Innovation and Overseas Study Education Program” to provide scholarships for highly potential students of Junyi School of Innovation to apply for overseas study at two-year community colleges, the United World College, or four-year university programs as a new start to connect with the world, develop specialties, and broaden their international view, so that they can become the power to change their communities and hometowns in the future. A total of 22 Junyi senior high school

students have studied in six foreign countries under the program. Due to the slowdown of the pandemic and through the experience sharing and encouragement of senior students, students began to consider about and prepare for studying overseas, including studying English more intensively. In 2022, the number of students applying for overseas student increased to 7.

Toufen Junior High School Music Program

By integrating with the Harvest 365 Music Program of the Harvest 365 Foundation (Harvest 365), The Alliance Cultural Foundation collaborated with Toufen Junior High School to introduce the Toufen Junior High School Music Education Program in September 2021.

The professional choir instructors of Harvest 365 collaborated with the music teachers of Toufen Junior High School to form the Harmony Choir with 7th and 8th graders. Currently the choir has 25 members. Apart from the routine school club time, the choir also practices after class. It is hoped that vocal art can keep students in company through their growth and motivate students to perform on stage at the annual music festival so as to develop self-confidence in students.

Instead of selecting talent for competitions, this Music Program enables children to learn happily and sing for happiness. Through this choir course, we hope to let every child develop self-confidence and the courage to challenge through singing and develop their character and team spirit through the choir. This is the very reason for naming the choir “Harmony”. Rather than singing techniques or musical knowledge, the meaning of “choral--singing together” is the real progress in students. Through the influence of music, they feel the power, self-confidence, and happiness of one another. This program also hopes that students can continue to show their self-worth.



The “Creativity Module” of the senior high school department enables students to learn more about themselves through “exploration, inspiration, and achievement”.



Students of the “Creativity Module-International Hospitality” course of the senior high school department coordinates the Thanksgiving dinner.



The capstone project of students of the senior high school department presents the achievements of “self-learning” over the past three years



Harmony Choir of Toufen Junior High School

Sponsoring other educational and philanthropic activities

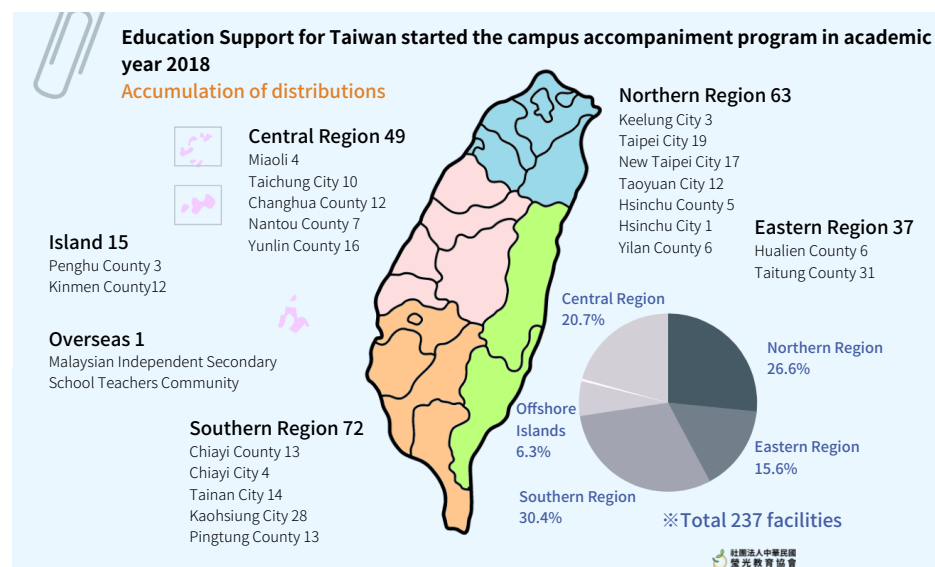
Other major sponsorships in 2022 included BOYO Social Welfare Foundation, Teach for Taiwan Association, Education Support for Taiwan, Cloud Gate Culture and Arts Foundation, and Taitung Blue Ocean Daily.

- 1 Founded in 2002, **BOYO Social Welfare Foundation** provides free “remedial instruction” after-school club services for junior high school and elementary school students from low-income families in the belief that “education gives hopes for children living in poverty” so as to achieve its mission “End Poverty with Education”. Additionally, the foundation also provides “care guidance” to remedy learning instability for each child from vulnerable groups to receive an appropriate education environment so as to develop their basic capacity and social competitiveness to end poverty in the future with their own ability. Since BOYO Social Welfare Foundation was established 20 years ago, each year it invests a large amount of labor and resources in curriculum design, develops remedial teaching materials, and trains parents in the community. Currently, there are 17 locations to provide after-school club service for over 2,000 students.
- 2 Founded in 2013, **Teach for Taiwan (TFT)** is a non-profit organization caring for “education inequity”, hoping to create equal opportunities in education for every child. Upholding the belief in “one for all and all for one”, through training competent youth with a sense of mission to teach at elementary schools in low-income rural communities for at least two years, TFT resolves the long teacher shortage and high turnover rate problems in the rural area. In 2014, it sent the first group of nine TFT teachers to eight schools in Taitung and Tainan, making this the onset of a change. So far, it has sent over 300 quality talents to the rural areas, including Taitung, Tainan, Pingtung, Yunlin, Hualien, and Nantou, to help over 6,000 children from vulnerable groups.



Children teaching scene of TFT

- 3 **Yingguang Education Association support for Taiwan** was founded in 2019 to start services with school accompaniment. It is now in over 230 schools and regional groups in all cities and countries, including offshore islands, to help schools solve problems and find developmental advantages. In 2022 it began promoting the “No-License Substitute Teacher Support Program” starting from Taitung. Through cultivating teachers for remote townships, it improves teaching quality and enhance the learning enthusiasm of students. By accompanying substitute teachers with “partner teachers”, the program provides corresponding



- 4 **Cloud Gate Culture and Arts Foundation** is a non-profit business aiming to “promote cultural development and international exchange through creation, performance, and promotion of dance and other arts and cultural activities”. The foundation includes Cloud Gate Dance Theater founded in 1973, Cloud Gate 2 established in 1999, and Cloud Gate Theater in Danshui founded in 2015. Apart from promoting domestic and overseas performance over time to enrich the cultural life of Taiwan and the world, it also directs the “Art Makers Project” to fund young choreographers to create new works and rehearse at Cloud Gate Theater and the “Wanderer” project to support young artists to broaden their horizons overseas. It also engages in promoting community art education and citizen arts and cultural activities in Danshui.

5 **Taitung Blue Ocean Daily** is a brand-new Taitung-specific ocean culture exchange activity promoted by the Taitung County Government in 2022 for the first time. For two consecutive weekends from 17-25 September, based on the slow travel and downshifting concepts, they launched the immersive ocean recreation life experience in Sanyuan Bay, Huosui Lake, Jinjun, and Green Island. Additionally, as Taiwan is the origin of Austronesian language family and culture, they specially combined with the Austronesian culture to provide ocean culture education and training and outrigger canoe experience, invited Hawaii national treasure grade master Kimokeo Kapahulehua and international professional canoeing coach Denes Szaszak to provide a skills exchange and organized the Hawaii “canoe blessing” to help more citizens to understand the Austronesian culture. Additionally, these two honorable guests also engaged in two-way exchange on Austronesian culture with National Taitung University, Taitung County Tunghe Elementary School, Junyi School of Innovation, and Fudafudak and Torik villages of the eastern coast of Taitung to progressively start connecting Taitung’s recreation development with the world.



Community involvement

We actively care about and engage in community charitable activities, such as community environmental protection activities, community socializing activities, community sports club activities, community competitions, and others. Apart from maintaining friendship with community residents, promoting harmony with local communities, and fulfilling our corporate social responsibility, we also hire local workforces to enhance community recognition. In 2022 we hired 81 residents from Linyuan District. In 2022 we stopped all socializing activities in response to the government’s tightened epidemic controls due to COVID-19 and in consideration of possible community infection. This thus indirectly reduced our community engagement. We resumed some community welfare since the decline of COVID-19.

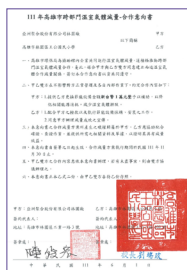
Donation of protective clothing and N95 masks to sanitary personnel of Kaohsiung City Environmental Protection Bureau

To empathize the hard work and danger in epidemic control of the sanitary personnel of Kaohsiung City Environmental Protection Bureau, five USIG businesses (USI, APC, TTC, TVCM, CGPCP) donated 250 sets of protective clothing to the Kaohsiung City Environmental Protection Bureau to ensure the operation safety of sanitary personnel. Additionally, we also sponsored rapid test kits to ensure the safety of workers working in other cities.



Cross-sector GHG reduction collaboration

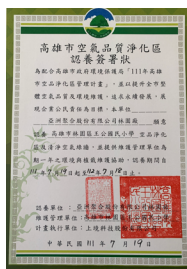
In response to the “Cross-Sector GHG Reduction Matching Plan” promoted by the Kaohsiung Environmental Protection Bureau, APC Linyuan Plant collaborated with Wang Gung Elementary School implemented GHG Reduction Program with Wang Gung Elementary School in Linyuan District to help the school purchase new energy-efficient equipment to reduce energy consumption and GHG emissions. The cooperation ended on 30 November 2022, and Headmaster Liu of Wang Gung Elementary School presented a certificate of appreciation to us.



Cross-sector GHG reduction collaboration with Wang Gung Elementary School of Kaohsiung City

Air Quality Purification Area Management Program 2022 of Kaohsiung City Environmental Protection Bureau

We supported the Air Quality Purification Area Management Program 2022 of Kaohsiung City Environmental Protection Bureau to improve the air quality and maintain the environment of the whole city to pursue sustainable development and demonstrate our corporate social responsibility. We adopted the air quality purification zone base in Wang Gung Elementary School to provide the management unit with assistance in environmental and plantation maintenance during 19 July 2022 to 18 July 2023.



2022 Air Quality Purification Zone Management Program of Kaohsiung City Environmental Protection Bureau

Sponsoring Children Are Us Kitchen

We organized the USIG Charitable Softball Competition and invited five USIG businesses, including USI, APC, TTC, TVCM, and CGPCP to the game. At the same time, we also sponsored Children Are Us Kitchen together with the USI Education Foundation. Apart from promoting friendship among employees of USIG businesses through the ballgame, we also encouraged employees to actively engage in social welfare activities for vulnerable groups to allow them to feel the warmth and care from society at the end of the year.



USIG sponsored Children Are Us Kitchen

Socialization with ballgames

The 12th Petrochemical Sector Softball Competition: Champion

To promote healthy leisure activities and employee physical and mental health, enrich the knowledge of occupational accident protection and labor insurance related regulations of employees, and enhance the labor-management harmony and work efficiency of the petrochemical sector, the Petrochemical Business Division of CPC Corporation Taiwan and Kaohsiung City Confederation of Petrochemical Industry Associations co-organized the 12th Petrochemical Sector Softball Competition to invite petrochemical industry associations in Kaohsiung to form teams to join the competition. After the two-day competition, we stood out from all 21 teams. Through the enthusiastic engagement and strong determination of employees, we won the champion of the 12th Petrochemical Sector Softball Competition.



The 20th USI Cup Tennis Tournament

Together with USIG businesses TTC and TVCM, we commissioned the Linyuan Tennis Association to organize the “USI Cup Tennis Tournament”, and it has been 20 years now. The event aims at promoting friendship and harmony among USIG employees, the industrial park, and community tennis teams through the game. The event took place in Linyuan Senior High School on 22 October 2022. Despite the unpleasant weather, all players demonstrated their practice achievements and enjoyed playing with others. The organizers also prepared thoughtful small gifts and encourage employees to actively join this friendship game with communities.



CH6 Appendices

GRI content index	113
SDGs content index	119
Chemical industry SASB index	120
Sustainability disclosure metrics — Plastics Industry	122
Climate-related financial disclosures	123
Independent Assurance Statement	126



6.1 GRI content index

Statement of use	Asia Polymer Corporation has reported in accordance with the GRI Standards for the period from 1 January 2022 to 31 December 2022
GRI 1 used	GRI 1: Foundation 2021

GRI 2: General Disclosures 2021				
Disclosure Item			Page	Remarks
The organization and its reporting practices	2-1	Organizational details	<u>12</u>	
	2-2	Entities included in the organization's sustainability reporting	<u>3</u>	
	2-3	Reporting period, frequency and contact point	<u>3</u> 、 <u>4</u>	
	2-4	Restatements of information	<u>3</u>	
	2-5	External assurance	<u>3</u> 、 <u>126</u>	
Activities and workers	2-6	Activities, value chain and other business relationships	<u>14</u> 、 <u>52</u>	No significant change.
	2-7	Employees	<u>80</u>	
	2-8	Workers who are not employees	<u>12</u> 、 <u>98</u>	
Governance	2-9	Governance structure and composition	<u>25</u> 、 <u>31</u>	
	2-10	Nomination and selection of the highest governance body	<u>25</u> 、 <u>26</u>	
	2-11	Chair of the highest governance body	<u>25</u> 、 <u>28</u>	
	2-12	Role of the highest governance body in overseeing the management of impacts	<u>26</u>	
	2-13	Delegation of responsibility for managing impacts	<u>25</u>	
	2-14	Role of the highest governance body in sustainability reporting	<u>32</u>	
	2-15	Conflicts of interest	<u>28</u>	

GRI 2: General Disclosures 2021				
	Disclosure Item		Page	Remarks
Governance	2-16	Communication of critical concerns	<u>26</u>	
	2-17	Collective knowledge of the highest governance body	<u>26</u> 、 <u>27</u>	
	2-18	Evaluation of the performance of the highest governance body	<u>29</u>	
	2-19	Remuneration policies	<u>31</u>	
	2-20	Process to determine remuneration	<u>31</u>	
	2-21	Annual total compensation ratio	<u>31</u>	
Strategy, policies and practices	2-22	Statement on sustainable development strategy	<u>5</u>	
	2-23	Policy commitments	<u>8</u> 、 <u>43</u> 、 <u>53</u> 、 <u>66</u>	
	2-24	Embedding policy commitments	<u>9</u> 、 <u>44</u> 、 <u>54</u> 、 <u>66</u>	
	2-25	Processes to remediate negative impacts	<u>43</u>	
	2-26	Mechanisms for seeking advice and raising concerns	<u>43</u>	
	2-27	Compliance with laws and regulations	<u>40</u>	
	2-28	Membership of associations	<u>15</u>	
Stakeholder engagement	2-29	Approach to stakeholder engagement	<u>16 - 18</u>	
	2-30	Collective bargaining agreements	<u>91</u>	Description: As we maintain sound communication with employees through the labor union and labor-management meeting, no collective bargaining agreement has been concluded.

Topic-specific disclosures					
Material Topics	Management approach and disclosures			Page	Remarks
Category: Governance					
Economic performance	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>35</u>	
	GRI 201: Economic Performance 2016	201-1	Direct economic value generated and distributed	<u>36</u> - <u>47</u>	
		201-2	Financial implications and other risks and opportunities due to climate change	<u>67</u> - <u>69</u>	
		201-3	Defined benefit plan obligations and other retirement plans	<u>89</u>	
		201-4	Financial assistance received from government	<u>38</u>	
Technology R&D	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>46</u>	
	Non-GRI Standards topic, APC specific topic			<u>46</u>	
SCM	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>52</u>	
	GRI 308: Supplier Environmental Assessment 2016	308-1	New suppliers that were screened using environmental criteria	<u>55</u>	
		308-2	Negative environmental impacts in the supply chain and actions taken	<u>54</u>	
	GRI 414: Supplier Social Assessment 2016	414-1	New suppliers that were screened using social criteria	<u>55</u>	
		414-2	Negative social impacts in the supply chain and actions taken	<u>54</u>	

Topic-specific disclosures					
Material Topics	Management approach and disclosures			Page	Remarks
Category: Environmental					
Raw material management	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>60</u>	
	GRI 301: Materials 2016	301-1	Materials used by weight or volume	<u>61</u>	
		301-2	Recycled input materials used	<u>61</u>	
		301-3	Reclaimed products and their packaging materials	<u>61</u>	
Climate change and energy management	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>65</u>	
	GRI 302: Energy 2016	302-1	Energy consumption within the organization	<u>72</u>	
		302-2	Energy consumption outside of the organization	NA	Unable to conduct supply chain energy inventory.
		302-3	Energy intensity	<u>72</u>	
		302-4	Reduction of energy consumption	<u>74</u>	
		302-5	Reductions in energy requirements of products and services	NA	Our products do not consume energy throughout the product life cycle.
Water resources management	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>	
		3-2	List of material topics	<u>20</u>	
		3-3	Management of material topics	<u>62</u>	
	GRI 303: Water and Effluents 2018	303-1	Interactions with water as a shared resource	<u>63</u>	
		303-2	Management of water discharge-related impacts	<u>64</u>	
		303-3	Water withdrawal	<u>63</u>	

Topic-specific disclosures						
Material Topics		Management approach and disclosures			Page	Remarks
Category: Environmental						
Water resources management	GRI 303: Water and Effluents 2018	303-4	Water discharge	<u>63</u>		
		303-5	Water consumption	<u>63</u>		
Air pollution control	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>		
		3-2	List of material topics	<u>20</u>		
		3-3	Management of material topics	<u>76</u>		
	GRI 305: Emissions 2016	305-1	Direct (Scope 1) GHG emissions	<u>73</u>		
		305-2	Energy indirect (Scope 2) GHG emissions	<u>73</u>		
		305-3	Other indirect (Scope 3) GHG emissions	<u>74</u>		
		305-4	Greenhouse gas (GHG) emissions intensity.	<u>73</u>		
		305-5	Reduction of GHG emissions	<u>74</u>		
		305-6	Emissions of ozone-depleting substances (ODS)	<u>77</u>		
305-7	Nitrogen oxides (NOx), sulfur oxides (SOx), and other significant air emissions	<u>77</u>				
Category: Social						
Talent attraction and retention	GRI 3: Management Approach 2021	3-1	Process to determine material topics	<u>19</u>		
		3-2	List of material topics	<u>20</u>		
		3-3	Management of material topics	<u>82</u>		
	GRI 401: Employment 2016	401-1	New employee hires and employee turnover	<u>83</u> 、 <u>84</u>		
		401-2	Benefits provided to full-time employees that are not provided to temporary or part-time employees	<u>89</u>		
		401-3	Parental leave	<u>90</u>		

Topic-specific disclosures						
Material Topics	Management approach and disclosures				Page	Remarks
Category: Social						
OH&S	GRI 3: Material Topics 2021	3-1	Process to determine material topics		<u>19</u>	
		3-2	List of material topics		<u>20</u>	
		3-3	Management of material topics		<u>92</u>	
	GRI 403: Occupational health and safety 2018	403-1	Occupational health and safety management system		<u>93</u>	
		403-2	Hazard identification, risk assessment, and incident investigation		<u>94</u> - <u>95</u>	
		403-3	Occupational health services		<u>96</u>	
		403-4	Worker participation, consultation, and communication on occupational health and safety		<u>97</u>	
		403-5	Worker training on occupational health and safety		<u>97</u>	
		403-6	Promotion of worker health		<u>96</u>	
		403-7	Prevention and mitigation of occupational health and safety impacts directly linked by business relationships		<u>98</u>	
		403-8	Workers covered by an occupational health and safety management system		<u>99</u>	
		403-9	Work-related injuries		<u>99</u>	
PSM	GRI 3: Material Topics 2021	3-1	Process to determine material topics		<u>99</u>	
		3-2	List of material topics		<u>19</u>	
		3-3	Management of material topics		<u>20</u>	
	Non-GRI Standards topic, APC specific topic				<u>102</u>	

6.2 SDGs content index

Material Topics	SDG Target		Page	Corresponding Section
Governance				
Economic performance	SDG 8.2	Achieve higher levels of economic productivity through innovation.	<u>35</u>	2.2 Economic performance
Technology R&D	SDG 9.5	Increase R&D expenditure.	<u>46</u>	3.1 Technology R&D
SCM	—	NA	<u>52</u>	3.3 Supply chain management
Environment				
Raw material management	SDG 12.5	Reduce resource consumption through recycling and reuse	<u>60</u>	4.1 Resources management
Water resources management	SDG 6.5	Implement integrated water resources management, control effluent quality, recycle and reuse effluents, and enhance water efficient.	<u>62</u>	
Climate change and energy management	SDG 7.3	Enhance energy efficiency.	<u>65</u>	4.2 Climate change and energy management
	SDG 7.a	Increase access to clean energy and technology		
	SDG 13.3	Risks due to climate change and response		
Air pollution control	SDG 11.6	Reduce hazardous substances in the environment	<u>76</u>	4.3 Emissions management
Social				
Talent attraction and retention	SDG 3.7	Reproductive health-care services	<u>80</u> 、 <u>82</u>	5.1 Talent selection 5.2 Talent development
	SDG 8.5	Equal pay for work of equal value		
	SDG 8.7	Elimination child labour and eradicate forced labour		
OH&S	SDG 3.d	Management capability of health risks	<u>92</u>	5.3 Healthy workplace
	SDG 8.8	Protect labour rights and interests		
PSM	SDG 3.9	Reduce the number of deaths and illnesses from hazardous chemicals and air pollution and contamination	<u>102</u>	5.3 Healthy workplace

6.3 Chemical industry SASB index

Code	Disclosure Item	Performance and Description	Corresponding Section (material issues)	Page
Topic: Greenhouse Gas Emissions				
RT-CH-110a.1	Gross global Scope 1 emissions (tCO ₂ e), percentage covered under emissions-limiting regulations (%)	The Scope 1 GHG emissions in 2022 were 10,444tCO ₂ e, accounting for 9.33%	4.2 Climate change and energy management	<u>73</u>
RT-CH-110a.2	Discussion of strategy or plan to manage Scope 1 emissions, emissions reduction targets and an analysis of performance against those targets	Established the “process system ethylene recovery”, “offsite ethylene underground pipelines vacation for ethylene recovery” to reclaim ethylene from the production lines and pipelines to reduce discharge to the RTO for incineration so as to reduce GHG emissions.	4.3 Emissions management (air pollution control)	<u>77</u>
Topic: Air Quality				
RT-CH-120a.1	Air emissions of the following pollutants: (1) NO _x ; (2) SO _x ; (3) volatile organic compounds (VOCs); (4) hazardous air pollutants (HAPs)	2022 air pollutant emissions: (1) NO _x : 6.0MT (2) SO _x : 1.8MT (3) VOCs: 32.4MT (4) HAPs: 0.653MT (VAM)	4.3 Emissions management (air pollution control)	<u>77</u>
Topic: Energy Management				
RT-CH-130a.1	(1) Total energy consumed (GJ); (2) Percentage grid electricity (%); (3) Percentage renewable (%); (4) Total self-generated energy (GJ)	2022 (1) Total energy consumed: 810,100 GJ ; (2) Electricity consumed: 692,263 GJ , accounting for 85.5% (3) Percentage renewable: 0% (4) Self-generated energy (solar): 2,150 GJ	4.2 Climate change and energy management	<u>72</u>
Topic: Water Management				
RT-CH-140a.1	(1) Total water withdrawn (2) Total water consumed (3) Percentage of each in regions with high or extremely high baseline water stress and the proportion of (1) and (2)	2022 (1)Total water withdrawn: 494,813 M3 ; (2) Total water consumed: 317,729 M3 ; (3) Use of the water risk assessment tool of the World Resources Institute (WRI) Linyuan is not location in regions with High or Extremely High Baseline Water Stress	4.1 Resource management (water management)	<u>63</u>
RT-CH-140a.2	Number of incidents of non-compliance associated with water quality permits, standards and regulations	In 2022 the results of all water quality test items fell within the limit, and there was no illegal discharge.	4.1 Resource management (water management)	<u>64</u>
RT-CH-140a.3	Description of water management risks and discussion of strategies and practices to mitigate those risks	Consider using the recycled water from the government’s wastewater recycling plants for in-house consumption to support the government’s wastewater recycling policy so as to achieve the win-win advantage for the public and private sectors.	4.1 Resource management (water management)	<u>64</u>
Topic: Hazardous Waste Management				
RT-CH-150a.1	Amount of hazardous waste generated, percentage recycled	Commission EPA-accredited contractors to make proper disposal. There was no hazardous waste generated in 2022.	4.2 Climate change and energy management	<u>78</u>

Code	Disclosure Item	Performance and Description	Corresponding Section (material issues)	Page
Topic: Workforce Health & Safety				
RT-CH-320a.1	(1) Total recordable incident rate (TRIR) formula: (Number of accidents x 200,000)/Total hours worked; (2) Fatality rate for (a) direct employees and (b) contract employees	The 2022 TRIR was zero; and fatality rate for (a) direct employees and (b) contract employees was also zero.	5.3 Healthy workplace (occupational health and safety)	<u>99</u>
RT-CH-320a.2	Description of efforts to assess, monitor and reduce exposure of employees and contract workers to long-term (chronic) health risks	Linyuan Plant arranged four sessions of health checkups for a total of 210 employees in August 2022 and implemented special health checkups and graded management. The results show that there was neither occupational accident nor health hazard, and all employees needed grades 1 and 2 health management based on the health checkup results.	5.3 Healthy workplace (occupational health and safety)	<u>96</u>
Topic: Safety & Environmental Stewardship of Chemicals				
RT-CH-410b.1	(1) Percentage of products that contain Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Category 1 and 2 Health and Environmental Hazardous Substances, (2) percentage of such products that have undergone a hazard assessment	All APC products comply with the relevant legal and regulatory requirements and contain no Health and Environmental Hazardous Substances as categorized in the Globally Harmonized System (GHS).	3.1 Technology R&D	<u>51</u>
RT-CH-410b.2	Discussion of strategy to manage chemicals of concern and develop alternatives with reduced human and/or environmental impact	We consider the legal and regulatory requirements such as FDA, CNS, JIS, and RoHS right from the feasibility assessment of product development to ensure compliance with the standards, regulations, and laws governing human health and environmental impact.	3.1 Technology R&D	<u>48</u>
Topic: Genetically Modified Organisms				
RT-CH-410c.1	Percentage of products by revenue that contain genetically modified organisms (GMOs)	We produce plastic materials that contain no GMOs.	N/A	—
Topic: Management of Legal & Regulatory Environment				
RT-CH-530a.1	Discussion of corporate positions related to government regulations and/or policy proposals that address environmental and social factors affecting the industry	In the routine operations, we concern ourselves with and gather the information of the establishment of and amendment to environmental, social, and governance laws and regulations in relation to corporate governance, workers' human rights, environmental protection, and OH&S at all times; identify the compliance of the relevant laws and regulations of our operations; revise the relevant documents; and implement risk management or regulatory implementation.	2.3 Risk management (Legal compliance) (non-material issue)	<u>40</u>
Topic: Operational Safety, Emergency Preparedness & Response				
RT-CH-540a.1	Total count of process safety incidents (PSIC), process safety total incident rate (PSTIR), process safety incident severity rate (PSISR)	2022 PSIC: 1 count, PSTIR: 0.36%, PSISR: 0.36%	5.3 Healthy workplace (PSM)	<u>104</u>
RT-CH-540a.2	Number of transport incidents	There was no transport incident in 2022.	5.3 Healthy workplace (PSM)	<u>104</u>

6.4 Sustainability disclosure metrics — Plastics Industry

No.	Unit of Measure	Category	Annual Disclosure	Unit	Corresponding Section	Page
1	Total energy consumed, percentage grid electricity, percentage renewable, total self-generated energy	Quantitative	(1) Total energy consumed: 810,100 (2) Percentage grid electricity: 85.5 (3) Percentage renewable: 0 (4) Total capacity of self-generation (solar): 0	Gigajoules (GJ) Percentage (%) Percentage (%) GJ	4.2 Climate change and energy management	<u>72</u>
2	Total water withdrawn and total water consumed	Quantitative	(1) Total water withdrawn: 494,813 (2) Total water consumed: 317,729	Thousand cubic meters (m ³)	4.1 Resources management	<u>63</u>
3	Amount of hazardous waste generated, percentage recycled	Quantitative	(1) Amount of hazardous waste generated: 0 (2) Percentage recycled: N/A	MT (%)	4.3 Emissions management	<u>78</u>
4	Number of employees in and rate of occupational accidents	Quantitative	(1) Number of employees in occupational accidents: 0 (2) Rate of occupational accidents: 0	Persons (%)	5.3 Healthy workplace	<u>92</u> 、 <u>99</u> 、 <u>101</u>
5	Volume of major products by category	Quantitative	Total output of low density polyethylene (LDPE) and ethylene vinyl acetate copolymer resin (EVA): 130,120	MT	1.2 Our value chain	<u>14</u>

6.5 Climate-related financial disclosures

No.	Item	Implementation Status																								
1	Describe the board’s oversight of climate-related risks and opportunities.	The ESG Committee supervised by the Board is the highest governance body of climate change management chaired by independent directors, it report the climate change implementation planning and performance to the Board every year. The Operations Management Meeting is held monthly and chaired by the Board Chairperson to report the planning and results of material energy conservation and carbon reduction plans.																								
2	Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	<p>Based on the likelihood and impact of climate-related risks and opportunities, we identified 5 major climate-related risks and 4 major climate-related opportunities and assessed the duration of impact and potential financial impacts as tabulated below:</p> <table border="1"> <thead> <tr> <th>Type</th> <th>Related Item</th> <th>Duration</th> </tr> </thead> <tbody> <tr> <td rowspan="3">Physical risk</td> <td>Increased severity of extreme weather events</td> <td>Medium-term (3-5 years)</td> </tr> <tr> <td>Changes in precipitation patterns and extreme variability in weather patterns</td> <td>Medium-term (3-5 years)</td> </tr> <tr> <td>Sea level rises</td> <td>Long-term (>5 years)</td> </tr> <tr> <td rowspan="2">Transition risk</td> <td>Enhance GHG Emission Pricing</td> <td>Medium-term (3-5 years)</td> </tr> <tr> <td>Raw material cost rises</td> <td>Long-term (>5 years)</td> </tr> <tr> <td rowspan="4">Opportunity</td> <td>Participation in renewables projects and adoption of energy conservation measures</td> <td>Short-term (<3 years)</td> </tr> <tr> <td>Alternative energy and energy diversification</td> <td>Medium-term (3-5 years)</td> </tr> <tr> <td>Participation in carbon trade</td> <td>Medium-term (3-5 years)</td> </tr> <tr> <td>Use low-carbon energy</td> <td>Long-term (>5 years)</td> </tr> </tbody> </table>	Type	Related Item	Duration	Physical risk	Increased severity of extreme weather events	Medium-term (3-5 years)	Changes in precipitation patterns and extreme variability in weather patterns	Medium-term (3-5 years)	Sea level rises	Long-term (>5 years)	Transition risk	Enhance GHG Emission Pricing	Medium-term (3-5 years)	Raw material cost rises	Long-term (>5 years)	Opportunity	Participation in renewables projects and adoption of energy conservation measures	Short-term (<3 years)	Alternative energy and energy diversification	Medium-term (3-5 years)	Participation in carbon trade	Medium-term (3-5 years)	Use low-carbon energy	Long-term (>5 years)
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Physical risk	Increased severity of extreme weather events	Medium-term (3-5 years)																								
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No.	Item	Implementation Status																								
3	Describe financial impacts of extreme weather events and transition actions	<p>The financial impacts of extreme weather events and transition actions are tabulated below:</p> <table border="1" data-bbox="763 357 2047 983"> <thead> <tr> <th data-bbox="763 357 898 424">Type</th> <th data-bbox="898 357 1473 424">Related Item</th> <th data-bbox="1473 357 2047 424">Potential Financial Risk</th> </tr> </thead> <tbody> <tr> <td data-bbox="763 424 898 624" rowspan="3">Physical risk</td> <td data-bbox="898 424 1473 480">Increased severity of extreme weather events</td> <td data-bbox="1473 424 2047 480">Increased capital expenditure, reduced value of assets</td> </tr> <tr> <td data-bbox="898 480 1473 571">Changes in precipitation patterns and extreme variability in weather patterns</td> <td data-bbox="1473 480 2047 571">Increased capital expenditure and increased costs of operations</td> </tr> <tr> <td data-bbox="898 571 1473 624">Sea level rises</td> <td data-bbox="1473 571 2047 624">Increase in capital expenditure</td> </tr> <tr> <td data-bbox="763 624 898 730" rowspan="2">Transition risk</td> <td data-bbox="898 624 1473 679">Enhance GHG Emission Pricing</td> <td data-bbox="1473 624 2047 679">Increase in operating costs</td> </tr> <tr> <td data-bbox="898 679 1473 730">Raw material cost rises</td> <td data-bbox="1473 679 2047 730">Increase in operating costs</td> </tr> <tr> <td data-bbox="763 730 898 983" rowspan="4">Opportunity</td> <td data-bbox="898 730 1473 821">Participation in renewables projects and adoption of energy conservation measures</td> <td data-bbox="1473 730 2047 821">Increased overheads, reduced later emissions and operating costs.</td> </tr> <tr> <td data-bbox="898 821 1473 877">Alternative energy and energy diversification</td> <td data-bbox="1473 821 2047 877">Increased overheads, annually reduced operating costs.</td> </tr> <tr> <td data-bbox="898 877 1473 933">Participation in carbon trade</td> <td data-bbox="1473 877 2047 933">Increased overheads, annually reduced operating costs.</td> </tr> <tr> <td data-bbox="898 933 1473 983">Use low-carbon energy</td> <td data-bbox="1473 933 2047 983">Increased overheads, annually reduced operating costs.</td> </tr> </tbody> </table>	Type	Related Item	Potential Financial Risk	Physical risk	Increased severity of extreme weather events	Increased capital expenditure, reduced value of assets	Changes in precipitation patterns and extreme variability in weather patterns	Increased capital expenditure and increased costs of operations	Sea level rises	Increase in capital expenditure	Transition risk	Enhance GHG Emission Pricing	Increase in operating costs	Raw material cost rises	Increase in operating costs	Opportunity	Participation in renewables projects and adoption of energy conservation measures	Increased overheads, reduced later emissions and operating costs.	Alternative energy and energy diversification	Increased overheads, annually reduced operating costs.	Participation in carbon trade	Increased overheads, annually reduced operating costs.	Use low-carbon energy	Increased overheads, annually reduced operating costs.
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4	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management	Identify risks and opportunities based on the TCFD-recommended framework, communicate with all responsible units, and confirm by senior management every three years Include them in the annual risk assessment. The president reports the control measures and management performance to the Audit Committee and Board every year.																								
5	When assessing the resilience taking into consideration different climate-related scenarios, state the input parameters, assumptions, and analytical choices for the scenarios used, and critical financial impacts.	No scenario analysis has been used for assessing the resilience in climate-related risks. We will include scenario analysis in two years.																								

No.	Item	Implementation Status
6	If transition plans are used in climate-related risk management, state the contents of such plans and the metrics and targets used to identify and manage physical risks and transition risks.	Plans include: Equipment replacement, construction of renewables facilities, optimization of production scheduling, planning building aircon, energy management systems, extreme weather events contingency plans. Please refer to 4.2 of this report for the details.
7	If internal carbon pricing is the planning tool, state the basis of the pricing system	No assessment tool for internal carbon pricing has been used.
8	If climate-related targets are set, state the activities, scopes of GHG emissions, planning period, and annual targets. If the relevant targets are achieved with the renewable energy certificates (RECs), state the sources and quantity of the carbon credit of such RECs or the quantity of RECs.	We set 2017 as the base year and reduction by 27% by 2030 as the carbon reduction target. Every year we disclose the data of scopes I and II GHG emissions in the ESG report and review the achievement progress periodically. No REC has been used for carbon reduction so far.
9	GHG inventory and verification	Please refer to 4.2 of this report for the details of GHG inventory and verification information.

6.6 Independent Assurance Statement



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Independent Assurance Statement

ASIA POLYMER CORPORATION'S 2022 SUSTAINABILITY REPORT

AFNOR GROUP was established in 1926. We are the National Standardization Body of France, a permanent council member in ISO and one of the leading certification bodies in the world. This verification work was carried out by AFNOR ASIA LTD., a subsidiary of AFNOR GROUP. All the members of the verification team have professional backgrounds and have accepted AA1000 AS, AFAQ 26000, ISO 9001, ISO 14001, ISO 14064, ISO 45001, ISO 50001, and other sustainability-related international standard trainings. All assigned verifiers have been approved as the lead auditors or verifiers. AFNOR Group hereby provides a summary of ASIA POLYMER CORPORATION's Sustainability Report of 2022 (hereinafter referred to as "the Report") but was not involved in any way in its preparation.

AFNOR Group and ASIA POLYMER CORPORATION (hereinafter referred to as "APC") are independent entities. AFNOR ASIA LTD., was commissioned by APC to conduct the assessment and assure the Sustainability Report of 2022 was in accordance with AA1000 Assurance Standard (v3) and the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards).

SCOPE

The disclosure scope of the Report covers the economic, environmental and social (the social welfare part comes from the USI Education Foundation) activities and operational performance of all operating entities (Taipei Main Office and Kaohsiung Lin Yuan Plant) in the APC's consolidated financial statements.

AFNOR Asia is responsible for:

1. According to the Type 1 of the AA1000 Assurance Standard (v3), evaluate APC's compliance with the AA1000 Accountability Principle (2018). The reliability verification of the revealed sustainability performance information and data was not included. The verification scopes include sustainability issues, response mechanism, performance information, management systems of information, and the processes of materiality evaluation and stakeholder participation.
2. In accordance with the GRI Standards, we verified the statement options and material topics disclosed in the Report compiled by APC.

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REFERENCES

The scope of the assurance includes an assessment of the source adequacy of specific performance information and an assessment of adherence to the following reporting criteria :

- AA1000 Accountability Principles (2018)
- GRI Standards

METHODOLOGY

- Review the process and management of the principles of inclusivity, materiality, responsiveness and impact described in the Report related to the AA1000 Accountability Principles (2018).
- The Report is reported in accordance with the GRI Standards, and the content of the Report is reviewed for general disclosures and specific topic disclosures that comply with the GRI Standards.
- Conduct interviews with the management team to confirm stakeholder communication and response mechanisms.
- The qualitative and quantitative information produced, collected, and disclosed by the Report was reviewed through a validated sampling plan.
- Interviews with members of the organization related to sustainable development management and report writing, including representatives of all levels and departments.
- The verification team inspected and reviewed the documents, materials and information related to the report by interviewing the responsible personnel of each group of APC.
- Check the sufficiency and completeness of supporting materials and evidence for the content of the Report.

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CONCLAPCON

◆ **AA1000 Accountability Principles**

Inclusivity

APC has continued to implement a wide range of stakeholder engagement programs to identify and understand the important information generated by issues of concern to stakeholders. The report has fairly reported and disclosed economic, environmental and social information, which is sufficient to support appropriate plans and goals. Future reports may:

- sustaining corporate sustainable development strategies, effectively integrating internal and external resources, managing risks and opportunities, clearly setting program goals, and presenting sustainability-related performance that stakeholders are concerned about.
- continuously strengthen the existing mechanism for identifying stakeholders and materiality issues, collect and understand stakeholders' concerns, specific methods of participation, and reasonable expectations and interests.

Materiality

APC has released relevant information on sustainable management to enable stakeholders to judge the company's management and performance, and develop and implement a decision-making mechanism for material issues to accommodate issues from all parties. Future reports may:

- expand the number of questionnaires and returns of stakeholders, continue to collect and disclose significant sustainable development information, and fully disclose significant sustainable development information.
- continue to strengthen the identification mechanism of positive and negative impacts, materiality considerations and related impacts, strengthen the risk and opportunity management and control of materiality issues, and implement them into the operating procedures of each department.




Responsiveness

APC has developed and implemented a stakeholder response mechanism and the comparison of SDGs, clearly declaring relevant policies and communicating with stakeholders, and responding to expectations and opinions from stakeholders. Future reports may:

- continue to strengthen the response and communication mechanism of various departments and stakeholders, strengthen the depth and breadth of disclosed data and increase their comparability.
- continue to compile the responses of stakeholders to this report as a reference for future refinement.

Impact


APC has developed and implemented a process for understanding, measuring, evaluating and managing the impact of the organization, and provided the necessary capabilities and resources, and committed to making a comprehensive and balanced disclosure of the measurement and evaluation of the organization's impact on stakeholders and itself. Future reports may:

- continuously strengthen the risk and opportunity monitoring and measurement mechanism of various major sustainable actions and related impacts, and implement them into the operating procedures of various departments.

◆ **Global Reporting Initiative Sustainability Reporting Standards**

Based on the results of the review, we confirm that the Report complies with GRI reporting requirements in terms of general disclosure items and specific topic disclosures, including material topic management and disclosure items. Future reports may:

- continuously collect and disclose performance information that can be extended to other regions or operating bases in the future, and strengthen the depth and breadth of disclosed information, strengthen the content of management policy disclosure, and more completely present the context of sustainability and related sustainability performance.
- continuously collect major issues, risks and opportunities, strengthen management and control, practice results, and gradually implement various operations and management actions of subsidiaries in various operating bases, so as to expand the influence of enterprises on sustainable management.

ASSURANCE OPINION

In our opinion, the information and data presented in the Report by APC provides a fair and balanced representation. We believe the focuses on economic, environmental, and social aspects of APC in 2022 are well represented.

Afnor Group has developed a set of process for the Assurance of Sustainability Reports based on current practice guidance provided in the AA1000 Assurance Standard (v3) and GRI Standards. We believe that the evidence collected by onsite assessment has exhibited that APC did follow the guidance of AA1000 Assurance Standard (v3) and GRI Standards, and their self-declaration in response to the Global Reporting Initiative.

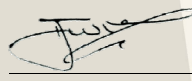
ASSURANCE LEVEL

In accordance with the AA1000 Assurance Standard (v3), we verified this assurance statement corresponding to a moderate level. The scope and methods are as described in this statement.


LIABILITY

This assurance statement is intended for the use of ASIA POLYMER CORPORATION only. Afnor is not responsible for any other uses. Our responsibility is only based on the scope and methodology described, and to provide stakeholders an independent assurance statement.

For and on behalf of Afnor :




Trevor Wilmer
The Director for Certification and Assessment
MAY.22.2023



**AA1000
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000-84/V3-G9M84**

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