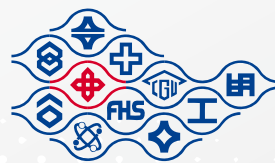


2024

Nan Ya Plastics Corporation

Sustainability
Report



台塑企業
FORMOSA PLASTICS GROUP



About This Report 2-1, 2-2, 2-3, 2-4, 2-5, 2-13, 2-14

◆ Report Overview

This is the Sustainability Report (hereinafter "this report") of Nan Ya Plastics Corp. (hereafter referred to as "the Company" or "NPC"). The content is compiled in accordance with the Global Reporting Initiative Sustainability Reporting Standards (GRI Standards) issued by the Global Report Initiative (GRI) in 2021. This report presents the data for the most recent 3 years and is expected to be published once a year. To communicate with our stakeholders through this report effectively, we provide an accurate and detailed introduction to specific actions and performance in Environment Protection(E), Social Welfare(S), and Corporate Governance(G) of the Company.

◆ Publication Overview

- Publication date of the first edition:
December 2015
- Publication date of the previous edition:
August 2024
- Publication date of the current edition:
August 2025
- Publication date of the next edition:
August 2026



2021
Sustainability Report



2022
Sustainability Report



2023
Sustainability Report

2024/9 – 11

Set up material topics and held kick-off meeting for the Sustainability Report

2025/1 – 4

Compiled relevant information of the Sustainability Report

2025/3 – 5

Verified by third-party international agencies.

2025/6

- Completed final draft of the Sustainability Report
- Submit the report to the Sustainable Development Committee and the Board of Directors for approval in June.

2025/8

Announce the publication of the Sustainability Report

Note: In compliance with the regulatory requirements for greenhouse gas verification and in response to the domestic verification capacity constraints, the "NPC 2024 Sustainability Report" is scheduled to be published in August in accordance with the regulations.

◆ Scope and boundaries of the Report

The scope of this report disclosure is based on Nan Ya Plastics Corporation (NPC) as the primary entity, and also covers its Taiwan subsidiaries, including Nan Chung Petrochemical Corp., Nan Ya Printed Circuit Board Corp., and PFG Fiber Glass Corp. (hereinafter collectively referred to as the Taiwan subsidiaries). Other consolidated financial statement subsidiaries, such as Wen Fung Industrial Co., Ltd, Wenling Technology Corp., and Formosa Plastics Group Investment Corp., are planned to be gradually incorporated into the scope of sustainability disclosures in phases, in accordance with shareholding ratios and revenue proportions, as part of future adoption of the IFRS S1 and S2 frameworks; therefore, they are not included in the scope of this report. If there are discrepancies in the disclosure boundary compared with the above description, they are separately explained within the respective chapters (greenhouse gas emissions disclosures follow regulatory requirements and are based on consolidated financial statement subsidiaries' inventories). The data sources and disclosure boundaries in this report are consistent with those of 2023, except that the indicators "Parental Leave Application and Return-to-Work Rate" have been recalculated based on the definition of "Retention Rate." The reporting period covers January 1, 2024, to December 31, 2024.

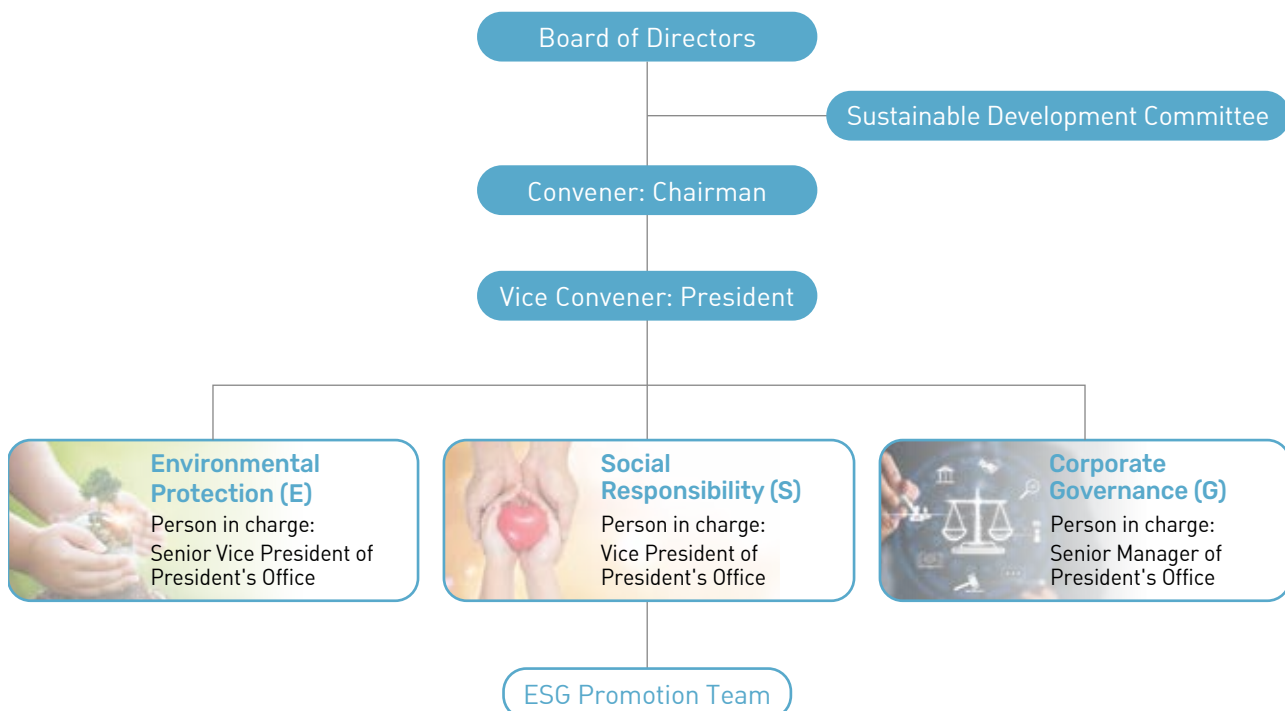
The financial data is publicly published after being audited by the CPA. Other statistical data are quoted from public information published by government agencies and related websites and are presented in words or numerical values. Any exceptions will be specifically stated in the report.

◆ Editorial Principles and Reference Guidelines

Issued unit	Framework/ Regulation
The United Nations, UN	UN Sustainable Development Goals, SDGs
Global Sustainability Standards Board, GSSB	Universal Standards 2021
Financial Stability Board, FSB	Task Force on Climate-related Financial Disclosures, TCFD
International Sustainability Standards Board, ISSB	Sustainability Accounting Standards Board, SASB
Account Ability Organization	Materiality, Inclusivity, Responsiveness, and Impact of AA1000 Accountability Principles Standard
Taiwan Stock Exchange Corporation	Taiwan Stock Exchange Corporation Rules Governing the Preparation and Filing of Sustainability Reports by TWSE Listed Companies

◆ Structure of ESG Sustainability Promotion Organization

To effectively integrate and promote the work of ESG, NPC has the Chairman of the board as the organizer to comprehensively manage related businesses and establish an "ESG Sustainability Promotion Organization," which is responsible for formulating company-wide strategies on environmental protection (E), social welfare(S), and corporate governance (G). The organization also actively promotes the execution of various businesses, conducts regular performance monitoring, and timely adjusts relevant strategies and promotion goals through continuous communication with stakeholders.



◆ Third-Party Assurance

To ensure the transparency and credibility of information disclosure, the relevant information presented in this report has been verified by the British Standards Institution Taiwan Branch (BSI) in accordance with the AA1000 v3 assurance standard, Type I, moderate assurance level. In addition to submitting the Sustainability Report (including BSI's verification results) to the Board of Directors, the related independent assurance statement has also been incorporated into this report. Furthermore, the Company's main third-party verification items are listed in the table below:

Sustainability Aspect	Verification Item	Verification Entity	Assurance Level	Scope of Verification
Sustainability Information Disclosure	Sustainability Report	British Standards Institution (BSI)	AA1000AS v3, Type I, Moderate Assurance	This Report
Financial Management	Financial Statements	KPMG Taiwan	Certified Public Accountant Audit of Financial Statements and Generally Accepted Auditing Standards	Individual and Consolidated Financial Statements
Operations and Customer Relations	ISO 9001: 2015 Quality Management System	SGS	-	NPC and Taiwan subsidiaries
Environmental Management	ISO 14001: 2015 Environmental Management System Certification	SGS	-	NPC and Taiwan subsidiaries
	ISO 14064-1: 2018 Organizational Greenhouse Gas Inventory	SGS, BSI	-	NPC and Taiwan subsidiaries
	ISO 50001: 2018 Energy Management System	SGS, CSQ, CISQ/IMQ, BellCERT Group TAIWAN	-	Shulin Plant No. 1 and 13 other production plants
	ISO 14046: 2014 Water Footprint	SGS	-	NPC and Taiwan subsidiaries
Occupational Safety Management	ISO 45001: 2018 Occupational Health and Safety Management System	SGS	-	NPC and Taiwan subsidiaries
Information Security Management	ISO 27001: 2022 International Information Security Management System Standard	SGS	-	R&D Center

◆ Contact Information

Thank you for reading this report. If you have any concerns or suggestions regarding this report, please feel free to contact us and give us advice. Our contact information is listed below:

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This report is available for download at:

[Download Reports](#)



Nan Ya Plastics Corp.'s official website

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Message from the Chairman

2-22

In order to actively promote sustainable development, NPC strengthens corporate governance, promotes environmental protection business, and implements corporate social responsibilities with the business philosophy of "diligence, perseverance, frugality, and trustworthiness" to create a safe and happy workplace. In recent years, the Company has been actively concerned with the global climate-changing issues and is committed to developing sustainable new blue ocean business opportunities, gradually integrating environmental protection sustainability into operations, and leading the industry in jointly creating a new era of green living.

In 2024, with the joint efforts of all employees, various management operations continued to be optimized. In addition to being a long-term constituent of the "Taiwan Sustainability Index," NPC maintained "Leadership Level" ratings in both the CDP Climate Change and Water assessments. The Mailiao Branch also received the "2024 National Sustainable Development Award" for assisting in processing household food waste in Yunlin County and producing "Yun-Gai Organic Fertilizer from Kitchen Waste." Moving forward, we will continue to build upon the solid foundations already established and work steadily toward the goals of sustainable operation and contributing to society.

In response to the significant changes in recent years in the external industry and operating environment, we have actively promoted four major management strategies: "Product Transformation," "Business Transformation," "Low-Carbon Transformation," and "Digital Transformation." These initiatives are aligned with three major industry development trends – semiconductors and advanced electronic materials, low-carbon energy and carbon-reduction products, and biotechnology and healthcare. From internal management to product development and application, we are implementing comprehensive optimization, strengthening innovation and R&D, and aligning with international ESG development trends to create sustainable operation value for the Company and enhance overall operational performance.

The company has long adhered to environmental concepts such as the "circular economy," implementing water and energy conservation, waste reduction, and recycling initiatives. In recent years, we have also integrated emerging technologies like AI to promote waste reuse and resource recovery. Internally, we achieve resource conservation through multiple recycling loops, while externally, we actively collaborate with upstream and downstream value chain partners to expand the market for low-carbon recycled products, maximizing environmental and economic benefits. In 2024, the Chiayi Plant was recognized for its outstanding performance and received the "Resource Recycling Excellence Award – Silver Award" from the Ministry of Environment.

With a goal of "carbon neutrality by 2050," we are actively implementing carbon reduction strategies, including "low-carbon energy transformation," "energy-saving and circular economy," "increased renewable energy use," and "carbon capture technology application." We are committed to transitioning towards energy transformation, circular economy, and low-carbon processes for green products. Currently, we have installed solar power systems on the roofs of some facilities at our Chiayi and Hsinkang sites, and we continue to advance other energy transformation plans.

We actively develop high-value green products, offering consumers a wide range of environmentally friendly options. Some of these products have obtained the Environmental Protection Label, Green Building Material Label, or the Global Recycled Standard for textiles. We also promote product carbon footprint assessments. For example, under NPC's sustainable recycled brand "SAYA RSCUW," the Chromuch® water-saving solution-dyed yarn became the first in Taiwan to receive international certification under the bluesign® standard. In addition, sales of 80,000 tons of recycled PET bottle products in 2024 reduced greenhouse gas emissions by approximately 140,000 tons, equivalent to the carbon absorption capacity of 358 Da'an Forest Parks.

In terms of creating a safe and happy working environment, our core value is "all-around security." Only a safe and comfortable workplace can attract talented people, enhance the Company's core competitiveness, and become a good foundation for sustainable development. Therefore, we established a positive industry safety culture by continuously improving standard operating procedures, implementing safety actions, preparing safety tools, educating safety awareness, and cultivating safety attitudes.

In addition, we provide employees with competitive compensation and benefits, comprehensive training, and clear career advancement pathways. Even in the face of a challenging business environment, we continue to implement salary adjustments to ensure that employees' physical and mental well-being, work environment, and family life are properly cared for. Looking ahead, we will continue to promote full employee participation in occupational safety activities, implement ISO 45001 and TOSHMS occupational health and safety management systems, and remain committed to providing employees with a safe and secure working environment.

In terms of social contributions, we uphold the principle of "giving back to society" by continually supporting local communities and vulnerable groups. We encourage our employees to engage wholeheartedly in providing warmth and assistance to these communities, fostering a spirit of unity between our company and local residents. In 2024, we continued sponsoring the Taipei 101 "Vertical Marathon" event, providing eco-friendly race shirts made with SAYA RSCUW recycled fabric yarn for participants from all participants. We also supported the "National Mile-a-Minute Weed Eradication Day" campaign, passing on the spirit of public welfare and ecological conservation to the next generation.

Looking back, the two founders established Chang Gung Hospital and three schools to serve the public, devoted themselves to providing high-quality products at reasonable prices, and worked hand in hand with the entire value chain to advance Taiwan's industrial development. This spirit has deeply ingrained ESG sustainability into our corporate DNA. Looking ahead, NPC will continue to uphold the philosophy of "diligence, perseverance, frugality, and trustworthiness," we will actively drive transformation, strengthen corporate governance, foster a sustainable environment, and engage in social welfare activities. Through constructive engagement with stakeholders and continuous improvement, we believe the Company can contribute more to the environment and society. With compassion for both the environment and society, we aspire to work with stakeholders to safeguard our planet and jointly create a happy and sustainable home.

Nan Ya Plastics Corporation
Chairman

Chia-Chau Wu

2025

About Nan Ya Plastics

2-1, 2-6, 2-28

Company Introduction

Nan Ya Plastics Corporation (hereafter referred to as "the Company" or "NPC") was founded in 1958 and initially specialized in plastic secondary processing products such as PVC pipes, PVC leather, and PVC sheeting. The Company gradually expanded to chemical products, polyester fibers, electronic materials, and mechanical and electrical engineering projects. NPC has expanded overseas to the United States, China, and other foreign business since 1979. The Company has established itself as an international and diversified business.



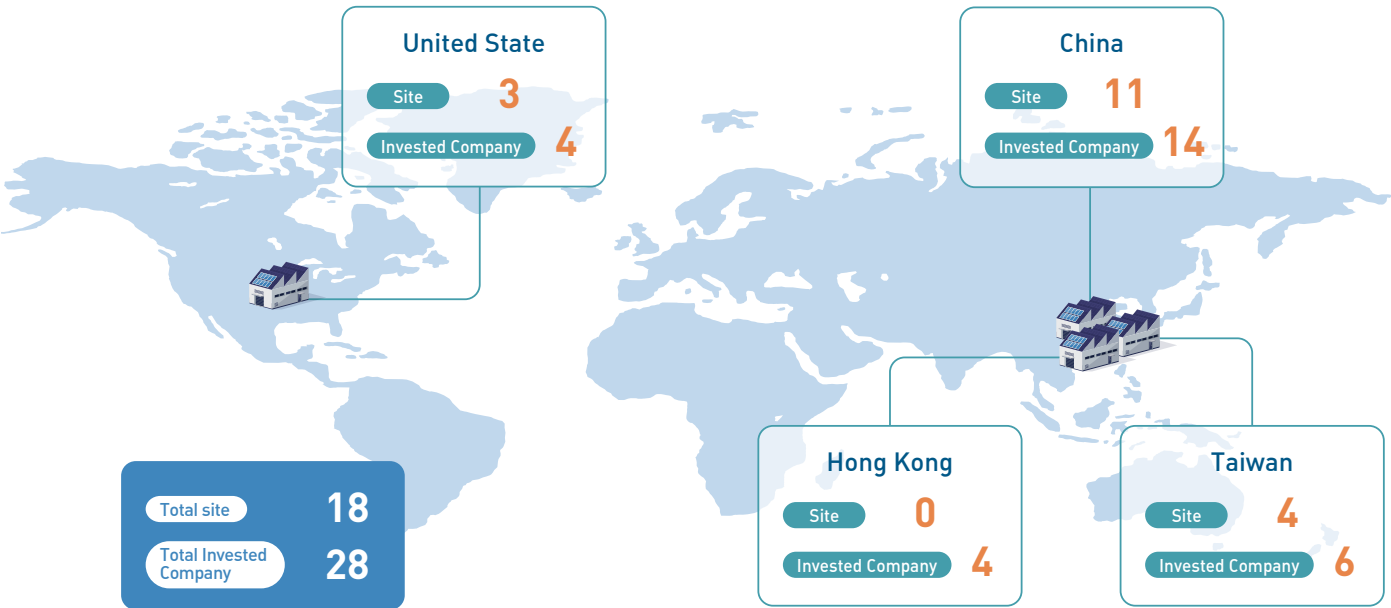
Company History" section
on NPC's website

Nan Ya Plastics Corporation	
Management Philosophy	Diligence, perseverance, frugality, and trustworthiness.
Date of establishment and listing	Date of establishment: August 22, 1958 ; Listing Date: November 5,1967
Major Operations	electronic materials, chemical products, polyester fibers, plastics processing, and mechanical and electrical engineering
Operating Locations	Registered address: 101, Shuiguan Road, Renwu Dist., Kaohsiung City 814 Taipei Office: (7F, A1 Building) No. 380, Section 6, Nanjing East Road, Neihu District, Taipei City, Taiwan
Global Locations	Taiwan, China, the United States (6 of the subsidiaries listed in the consolidated financial statements are from Taiwan, and 22 are overseas)
Capital	NT\$79,308,215,890
Number of employees in 2024	29,108 employees (this Report is mainly based on 17,658 employees, including Nan Ya Printed Circuit Board Corp., PFG Fiber Glass Corp., and Nan Chung Petrochemical Corp. The number does not include overseas subsidiaries listed in the consolidated financial statements)
2024 Revenue	NT\$259,608,483,000

Note1: The source of employee numbers comes from the 2024 Annual Report (as of December 31, 2024, including the subsidiaries in the consolidated financial statements).

Note2: The revenue, global locations, and number of subsidiaries are based on the data in the 2024 consolidated financial statements.

Locations of Global Operations



Source: 2024 Consolidated financial statements (For more information please refer to the "Investment" on the NPC website)

◆ Formosa Plastic Group Product Association Diagram

The Company is affiliated with Formosa Plastics Group (FPG). Through the vertical integration of upstream and downstream sectors, NPC actively lowers production costs and increases economic scale to meet customer demand for raw materials and enhance market competitiveness. In terms of oil refinement, petrochemical raw materials, plastics, fibers, and electronics, FPG has established an integrated supply chain. (Please refer to the NPC official website, "Upstream and Downstream Value Chain Distribution," for the "Formosa Plastics Group Product Correlation Diagram.")



NPC official website,
"Upstream and Downstream
Value Chain Distribution"

◆ Participate in external association

To help strengthen the competitiveness of Taiwan's industries, NPC actively participates in numerous industry associations, including the Taiwan Plastics Industry Association and the Petrochemical Industry Association of Taiwan, serving in important roles such as board directors in some associations. Through these organizations, the Company shares its operational experience with peers and exchanges the latest market information, supply and demand dynamics, and technical knowledge with the industry, with the aim of contributing to the overall sector. For details on the main external associations in which the Company participates, please refer to the NPC official website under "Participation in External Associations."



NPC official website under
"Participation in External
Associations."

NPC Sustainability Performance

Environmental Protection Aspect



Important achievements in 2024

- The Company received "Leadership Level (A-)" in the climate change sector and received "Leadership Level (A)" in the water security sector in the 2024 Carbon Disclosure Project (CDP).
- At the end of 2024, the company completed the installation of solar power systems with a total capacity of **14,713.02KW** (located at part of plants in Chiayi and Xingang) and conducted equipment registration. This meets the 8%-early-bird requirement of the "Energy-heavy Industries Clause" (the regulatory authority issued an obligation installation capacity of 7,791.6KW for the company).
- Compared with 2023, the Company reduced water consumption by **17.0%**, steam consumption by **14.3%**, and electricity consumption by **9.4%**.
- In 2024, the Company completed 488 energy-saving improvement projects, achieving electricity savings of 11.3 thousand kWh per hour and reducing carbon emissions by 246,000 tons of CO₂e; it also completed 49 water-saving improvement projects, reducing water consumption by **686 tons per day**.

Social Responsibility Aspect



Important achievements in 2024

- The Company was granted the "Golden Medal" of Manufacturing Industry Happiness Enterprise from 1111 Job Bank in 2024.
- Employee hiring of the Company and subsidiaries in Taiwan: more than **99.3%** are permanent employees, and **95.1%** are Taiwanese citizens.
- In 2023, the average monthly voluntary resignation rate from the Company and its subsidiaries in Taiwan was 0.31%.
- In 2023, the company had no major fatal occupational accidents. Among the occupational accident indicators, disabling severity rate (SR) was 5, **better than in 2023**.

Corporate Governance Aspect



Important achievements in 2024

- The Company has continued to be included as a constituent stock of the "Taiwan Sustainability Index."
- In the 2024 customer satisfaction survey, the Company achieved an overall satisfaction score of **4.3**, representing **86%** of the total score.
- In 2024, the Company invested approximately **NT\$1.3 billion** in R&D, with a cumulative total of **878 approved patents** from 2000 to 2024, surpassing the cumulative number recorded from 2000 to 2023.
- In 2024, the Company completed **82 AI projects**, generating an annual benefit of **NT\$90 million** and achieving an annual carbon reduction of **10,000 tons** of CO₂e.

NPC Awards



2024 CDP assessment:
"Climate Change": Leadership Grade A-
(Leadership level for 7 consecutive years)
"Water Security": Leadership Level A
(Leadership level for 6 consecutive years)



FTSE4Good Index
TIP Taiwan ESG index



National Council for Sustainable
Development, Executive Yuan
"2024 National Sustainable Development
Award"(Mailiao Branch)



Ministry of Environment – 1st
"Water Sustainability Award"
(Mailiao Plant)



1111 Job Bank
The "Gold Medal" of Manufacture
Industry in 2024



Ministry of Environment
"Outstanding Green Procurement
Supplier"



Ministry of Environment –
"2024 Resource Recycling Excellence
Award – Silver Award"
(Chiayi Plant)



Bureau of Energy, Ministry of
Economic Affairs –
"2024 Energy Conservation
Benchmark Award – Silver Award"
(Propylene Glycol Plant)



"2024 Industrial Greenhouse Gas
Reduction Outstanding Manufacturer"
of the Ministry of Economic Affairs
(Shulin Plant, Kung San Plant, Hsinkang
Plant, Chiayi Plant I, Chiayi Plant II)



Water Resources Agency, Ministry of
Economic Affairs –
"2024 Water Conservation
Excellence Award"
(Propylene Glycol Plant)



Yunlin County Government –
"Occupational Safety and Health
Excellence Award – Five-Star Rating
(Three Consecutive Awards)"
(Propylene Glycol Plant)



Ministry of Labor –
"Occupational Safety and Health
Excellence Award"
(PA Plant)

ESG collections

Special Action

1

(Public Welfare & Environmental Protection) - Assisting in Household Food Waste Treatment in Yunlin County and Producing "Yun-Gai Organic Fertilizer" (Project Awarded the "National Sustainable Development Award")

- NPC's Mailiao Food Waste Composting Plant assists in addressing household food waste issues in Yunlin County by converting the waste into high-quality organic fertilizer. In collaboration with the county government, the project created the exclusive composting brand "**Yun-Gai Organic Fertilizer**," which is provided free of charge to farmers and the general public.
- The dewatered, high-concentration organic food waste liquid is delivered to the plant's wastewater anaerobic treatment system to produce biogas as fuel. In addition, thermal energy generated during household waste processing at the Mailiao site is recovered and converted into "**low-carbon steam**," which is then used in plant operations. This initiative achieves an annual carbon reduction of approximately 100,000 tons of CO₂e, realizing a circular economy of "**turning waste into energy**."
- This project received the "**2024 National Sustainable Development Award**" from the National Council for Sustainable Development, Executive Yuan.



NPC President Ming-Jen Chou received the "2024 National Sustainable Development Award" from the Premier of the Executive Yuan.

SDGs

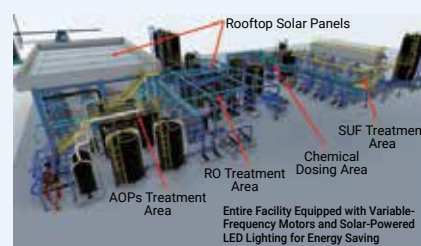


Special Action

2

(Environmental Protection)- Mailiao Plant Awarded the "Water Sustainability Award"

- NPC's Mailiao Plant wastewater management: implemented total volume control for source water-saving and planned the addition of a treated effluent recycling system to purify water for reuse in production processes.
- Through continuous process improvements, wastewater generation has been reduced from 16,550 CMD in 2006 to **3,128 CMD** in 2023, a reduction of **81%**. With the efforts of the wastewater treatment plant, COD treatment load has been reduced by 67%, and sludge generation has been cut from 11,171 kg/day to **1,965 kg/day**, a reduction of **82%**.
- An investment of **NT\$283 million** was made to add an effluent purification and recycling system at the Mailiao wastewater treatment facility. The treated effluent is reintroduced into the SUF+RO+AOPs process, generating **3,150 CMD** of purified water for reuse in production.
- This project was honored with the Ministry of Environment's inaugural "**Water Sustainability Award**."



NPC Mailiao Wastewater Treatment Plant SUF+RO+AOPs Process Flow Diagram



Mr. Lin, Director of NPC's Resource Recycling Department, received the award on behalf of the Company.

SDGs



Special Action

3

(Public Welfare & Ecological Conservation) – Participation in the “National Mile-a-Minute Weed Eradication Day” Campaign

Corresponding ESG Issues

- Social Welfare, Environmental Protection.
- Response to the ecological and environmental sustainability issue of the “National Mile-a-Minute Weed Eradication Day.”

2024 Mile-a-Minute Weed Eradication Day Awareness Campaign

- Organizer: Initiated by the Hsinchu Branch of the Forestry and Nature Conservation Agency, with joint participation from the Taoyuan City Government, NPC, and Kimberly-Clark Taiwan.
- Date: September 7, 2024.
- Location: Formosa Yangmei Organic Ecological Farm.
- A total of **300 volunteers** joined together to remove Mile-a-Minute weeds, ultimately eliminating **797 kilograms**. The campaign aimed to mitigate the spread of this invasive species while providing employees with the opportunity to learn and share ecological conservation knowledge.

SDGs



Representatives from the Forestry and Nature Conservation Agency and other organizations participated in the Mile-a-Minute Weed removal activity.



Event Outcome: 300 volunteers collectively removed 797 kilograms of Mile-a-Minute Weed.

Special Action

4

(Public Welfare) – Sponsorship of the “2024 Taipei 101 Vertical Marathon” Event

- **Event Date:** May 4, 2024.
- **Location:** Taipei 101 Building (this year’s event was the World Championship, designated by the Towerrunning World Association, TWA).
- Since 2023, NPC has continued to sponsor the “**Taipei 101 Vertical Marathon**” annually. The eco-friendly race shirts provided were made using “SAYA 365” 100% polyester (PET) recycled yarn. Compared with virgin yarn, this sustainable material reduces carbon emissions by approximately **1.73 kilograms** per kilogram of yarn, encouraging athletes to jointly support environmental protection and energy conservation through carbon reduction.

SDGs



101 Vertical Marathon Eco-Friendly (Recycled Yarn) Race Shirt



Mr. Chih-Wen Chen, Vice President of the Fiber Division, attended the opening ceremony of the “2024 Taipei 101 Vertical Marathon World Championship” and officiated the starting signal.

Special Action

5

Donation of Reclaimed Water Pipeline to the Taoyuan City Government

- Reason for Donation: To address water demand during drought periods at the Shimen Reservoir, NPC's Jinxing site participated in the "Northern Taoyuan Water Resources Recycling Center Effluent Reuse Project." The Company invested approximately **NT\$145 million** to construct intake pipelines (using NPC water pipes), along with external transmission pipelines, flow meters, and water quality monitoring equipment connecting the Recycling Center's outlet to the Jinxing site's intake point. These facilities were donated to the Taoyuan City Government.
- This initiative supported the Taoyuan City Government's "**Water Resources Reuse**" project, enhancing flexibility in water resource allocation and use in the Taoyuan region, mitigating drought risks caused by extreme climate events, and strengthening climate resilience.

SDGs



Aerial View of the Water Resources Recycling Center



Ultrafiltration Water Production Equipment

Special Action

6

(Product Sustainability) – Development and Expansion of Bio-based, Eco-friendly, Safe, and Healthy Sustainable Products and a Sustainable Circular Value Chain

- SAYA RSCUW launched Chromuch® water-saving solution-dyed yarn, the world's first and Taiwan's only product to obtain international certification under the **bluesign® standard**, demonstrating that both its processes and products meet international requirements for ecological, environmental, health, and safety (EHS).
- Partnered with Taiwanese circular economy startup ECOCO to install advanced smart recycling machines across major retail channels, jointly building a PET bottle recycling system.
- Products such as Bisphenol A (BPA), butanediol, and epoxy resins have successively obtained **ISCC Plus (International Sustainability and Carbon Certification)** since September 2024. With third-party verification of raw materials, products, supply chain traceability, and greenhouse gas emissions and reductions, these certifications support the use of the mass balance approach to produce more sustainable products from bio-based feedstock, thereby reducing product carbon footprints. Starting January 2025, NPC will collaborate with Mitsui Chemicals, with Mitsui supplying bio-based acetone and NPC producing bio-based Bisphenol A for downstream development of bio-based resins (epoxy resins and polycarbonate).

SDGs



Chromuch® Water-Saving Solution-Dyed Yarn "bluesign® Standard" Certificate

Material topics Identification and Stakeholders Engagement

2-29, 3-1, 3-2

Material topics identification and analysis process

When NPC compiles the sustainability report, members of the "ESG Promotion team" will gather to focus on the current major stakeholders and the essential issues. Communicate and discuss the relevant topics and achieve consensus, which will serve as a critical reference for the content disclosed in the report.

STEP 1

Identification stakeholders: 9 types of stakeholders

From 2023, NPC convened key personnel from various departments to conduct a horizontal comparison of the impacts on operations at domestic and international industry counterparts, and a vertical analysis of its own business activities and sustainability context. Based on the five principles of the AA1000 Stakeholder Engagement Standard (SES): Dependence, responsibility, influence, diverse perspectives, and attention. The company identified nine categories of stakeholders and has continued to adopt the identification results from 2023.

Stakeholders: Employees, Shareholders and Investors, Customers, Suppliers and Contractors, Local Residents, Government Agencies, Experts, Scholars, and Industry Associations, Environmental Groups, Media

STEP 2

Collection of issues that impact the Company: 91 impact items

Using 2024 as the primary timeframe for collecting impact factors, NPC referred to the GRI Standards, SASB, TCFD, TNFD, IFRS, the "Practical Guidelines for Sustainable Development for TWSE/TPEX Listed Companies," ISO 26000 Social Responsibility International Standard, international sustainability rating topics, the United Nations Sustainable Development Goals (SDGs), as well as domestic and international industry issues, global trends, and media reports. In total, 91 impact factors were consolidated, covering external events in the economic, environmental, and social/human rights dimensions. These factors were assessed to identify the actual/potential and positive/negative impacts, as well as their significance, arising from the Company's business activities on the external environment.

STEP 3

Integrating company impact issues into sustainability issues: 19 sustainability issues

After the consulting team gave integration suggestions, the impact issues were integrated into sustainable matters according to the theme. After discussion with the core members of the ESG promotion team and external consultants, they were consolidated into 19 sustainability issues for subsequent identification.

STEP 4

Analysis and ranking of material topics: 765 questionnaire responses

The functional groups of the President's Office, Accounting Department, Safety and Health Department, various business offices, Mailiao Management Department, Kaohsiung Management Department, and other departments will assist in issuing electronic questionnaires. Then, based on the "level of Financial Impact of Issues on the Organization" and "level of the Organization's Impact on the External Environment," high, medium, and low-intensity analysis is conducted to identify its importance. In 2022, 727 valid questionnaires from stakeholders and 38 valid questionnaires from company executives were collected.

STEP 5

Issue impact assessment and discussion: 10 material topics

Applying the GRI 3 materiality analysis approach, NPC evaluated the financial impact and likelihood of occurrence for issues of high and medium significance, then mapped material topics to the corresponding GRI Topic Standards, identifying 10 material topics. Compared with the 12 material topics in 2023, adjustments included merging "Regulatory Compliance" into "Integrity in Operations and Governance," and combining "Climate Change Mitigation and Adaptation" with "Greenhouse Gas Management," which was then adjusted to "Climate Change Response Strategy."

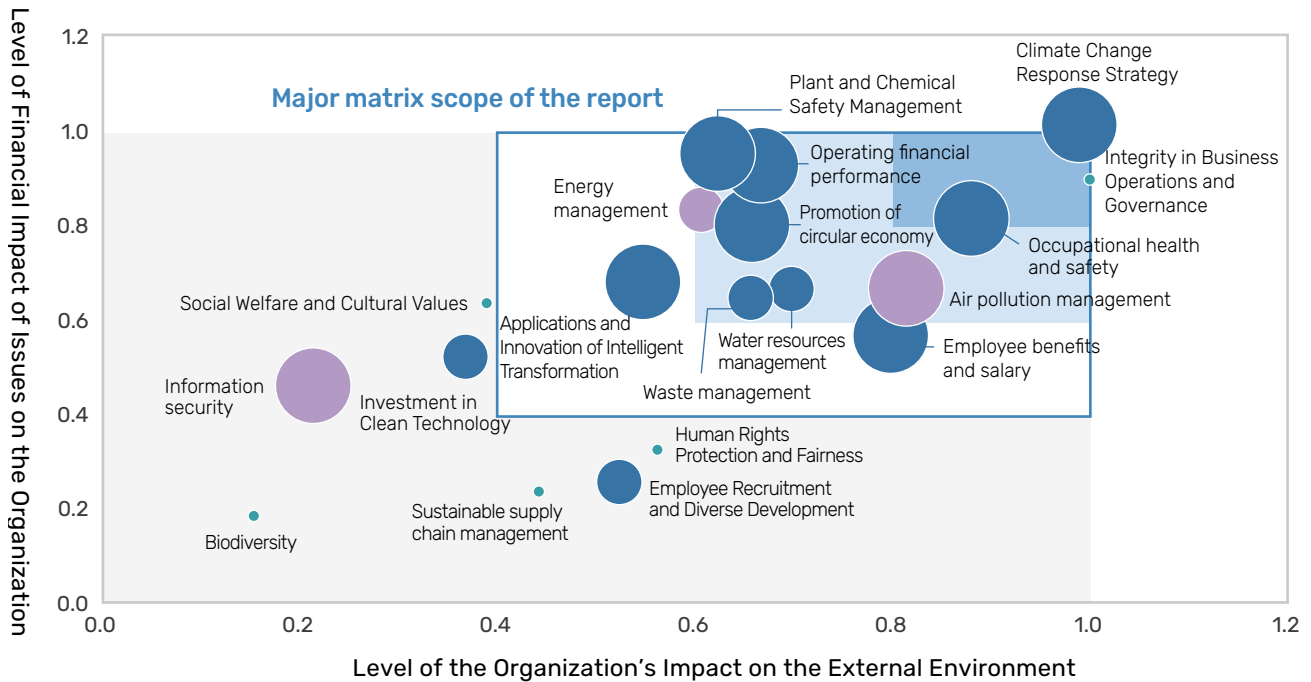
STEP 6

Disclosure and reporting of material topics

After evaluation by the company, 10 material topics have been selected as key disclosure points for this report. Management policies for these topics have been developed. The importance of various sustainability issues will continue to be reviewed in the future to address stakeholder expectations and ensure that the report's disclosures are transparent, reasonable, and balanced.

Material topic matrix and ranking

With a spirit of continuous improvement, we will appropriately disclose relevant issues of concern in this report and will continue to engage with stakeholders in the future. Areas of insufficiency will be prioritized for improvement, as we remain committed to maintaining constructive interactions with stakeholders.



Management Policy	Opportunity/Risk Issues	Possibility
3 Highly Material Topics	13 Opportunity Issues	9 High Possibility
7 Moderately Material Topics	6 Risk Issues	5 Moderate Possibility
2 Low Materiality Issues		5 Low Possibility
7 Off-Matrix Tracking Issues		

In comparing the 2024 questionnaire topics with those of 2023, adjustments were made by referencing international sustainability trends, consolidating certain issues, and refining issue names. The results of the 2024 materiality assessment showed no significant changes compared with 2023. With a spirit of continuous improvement, we will appropriately disclose relevant issues of concern in this report and will continue to engage with stakeholders in the future. Areas of insufficiency will be prioritized for improvement, as we remain committed to maintaining constructive interactions with stakeholders.






















NPC Business Model and Value Chain

The Company's business model and value chain can be categorized into five major stages: "R&D and Improvement," "Raw Material Procurement," "Manufacturing and Production," "Product Sales," and "After-Sales Service and Consulting." These stages operate in a continuous cycle. For detailed information on the main activities of each stage and their impact on the entity, please refer to the NPC official website under "Business Model and Value Chain."



NPC Official Website –
"Business Model and
Value Chain"

◆ Impact Identification and Value Chain Mapping

Items	SDGs		Material Topics	Impact Description
	Goal	Sub-Goal		
Core connection		-	Integrity in Operations and Governance	NPC's internal management mechanisms include tax policies, the composition and operation of the Board of Directors, and the assessment of the legitimacy of business counterparties and whether they are involved in dishonest practices. These mechanisms also cover management measures addressing significant fines or non-monetary penalties resulting from violations of environmental, social, or economic laws and/or regulations.
		8.8		
		13.3	Climate Change Response Strategy	The actions of management in NPC's operations regarding greenhouse gas emissions include the establishment of carbon reduction targets related to carbon pricing, carbon sequestration, and carbon capture.
		7.a.		
Sub-connection	 	3.4 8.8	Occupational Health and Safety	NPC's management practices also address the working environment and health of employees and other workers.
		-	Operational and Financial Performance	NPC's financial performance, the financial impacts of climate change, employee compensation and benefits, and government subsidies.
	  	3.9 11.6 12.4	Air Pollutant Management	NPC's management of sulfur oxides (SOx), volatile organic compounds (VOCs), and other pollutants generated during the production process.
	 	6.3, 6.4, 6.5 8.8	Water Resources Management	NPC's practices in water intake, recycling, and reuse, along with information on affected water sources.
	  	3.9 11.6 12.4, 12.5	Waste Management	NPC's total volume of hazardous and non-hazardous waste generated during operations, and the extent of their environmental impacts.
	 	9.4 13.3	Energy Management	NPC's internal and external energy consumption patterns and demands, categorized by renewable and non-renewable energy sources.
	   	- 3.9 12.4 14.1	Circular Economy Promotion	NPC's involvement in the circular economy, including initiatives for wastewater and waste recycling and reuse, as well as the management of packaging materials for major products and services, categorized by renewable and non-renewable materials.
		8.8	Site and Chemical Safety Management	NPC's efforts to enhance industrial safety through the management, maintenance, and actions related to office areas, sites, and public safety, including the handling, response, and training mechanisms for controlled chemical substances.

Note: Financial impact degree intervals: High (greater than 10 billion NTD), Medium-High (1 billion - 10 billion NTD), Medium (100 million - 1 billion NTD), Medium-low (10 million - 100 million NTD), Low (above 1 million NTD).

	Impact Dimension			Financial Impact	Financial Assessment Item
	Scenario	Aspect	Degree		
Potential		Positive	62.8%	Low	The Company has not experienced any disputes or penalties related to integrity in operations over the years. We promote "Integrity Management Training," strengthens internal audit and control functions, and has taken out directors' and officers' liability insurance to reduce potential financial losses arising from management decisions. The expected impacts are reflected in the income statement and cash flow statement.
		Negative	37.2%	Low	
Potential		Positive	70%	Medium-Low	The Taiwan government has imposed a carbon fee, which has to be paid in 2026. In response, NPC is promoting PCR products and investing in low-carbon transformation businesses (such as the "Multi-Axial Fabric Technology Development and Equipment for the Fiberglass Industry"). The expected impacts are reflected in the balance sheet, income statement, and cash flow statement.
		Negative	30%	Low	
Potential		Positive	71%	Low	NPC also continues to promote employee health checkups, care for employee well-being, and advance healthy workplace programs and plant occupational safety management activities. These measures help enhance employees' physical and mental health, actively prevent major accidents, and ensure stable operations.
		Negative	29%	Low	
Actual		Positive	80.6%	Medium-High	The Company is actively promoting four major transformation strategies, including "Product Transformation," while also expanding the sales of green products. The expected impacts are reflected in the income statement and cash flow statement.
		Negative	19.4%	Low	
Actual		Positive	50%	Medium-Low	To assist in handling household waste in Yunlin County, air pollutants have increased, resulting in higher air pollution control fees payable. The expected impacts are reflected in the income statement and cash flow statement.
		Negative	50%	Low	
Potential		Positive	77.3%	Medium-Low	An investment of NT\$2,012 thousand was made in a water-saving improvement project, reducing water consumption by 686 tons per day, with an estimated annual benefit of NT\$3,838 thousand. In addition, the government has imposed a water consumption fee. The expected impacts are reflected in the income statement, cash flow statement, and balance sheet.
		Negative	22.7%	Medium	
Potential		Positive	69.7%	Medium	Recycling initiatives for fiberglass fabric scrap, trimming sawdust, and PP and PVC die-head materials are expected to reduce disposal costs or generate additional income. The expected impacts are reflected in the income statement and cash flow statement.
		Negative	30.3%	Low	
Potential		Positive	31.3%	Medium	The initial cost of promoting ISO 50001 energy management system certification across NPC's Taiwan sites was approximately NT\$10 million, and the Company continues to advance solar photovoltaic projects at sites. The expected impacts are reflected in the balance sheet, income statement, and cash flow statement.
		Negative	68.2%	Medium	
Actual		Positive	73.2%	Medium	Ongoing promotion of PCR products (such as recycled PET products) and the recycling and reuse of packaging materials like PP boxes (EPE) can increase revenue or improve recycling efficiency. The expected impacts are reflected in the income statement and cash flow statement.
		Negative	26.8%	-	
Actual		Positive	78.7%	Low	Proper promotion of site and chemical safety management enhances industrial safety, including the handling, response, and training mechanisms for controlled chemical substances. These measures proactively prevent major accidents, ensure stable operations, and enhance the Company's reputation for sound management.
		Negative	21.3%	Low	

Material Topics	Impacts and Business Relationships					GRI Topic Response	The Chapter to Response
	R&D and Improvement	Raw Material Procurement	Manufacturing and Production	Product Sales	After-Sales Service and Consulting		
Integrity in Operations and Governance	●	✓	●	●	✓	GRI 205: Anti-corruption GRI 206: Anti-competitive Behavior	CH1 Ongoing Sustainable Governance Strategy
Operational and Financial Performance	●	●	●	●		GRI 201: Economic Performance	
Climate Change Response Strategy	●	✓	●	●	✓	GRI 201: Economic Performance GRI 305: Emissions	CH3 Green Environmental Management Promotion
Air Pollutant Management	●	✓	●	●		GRI 305: Emissions	
Water Resources Management	●	✓	●			GRI 303: Water and Effluents	
Waste Management	●		●			GRI 306: Waste	
Energy Management	●	✓	●			GRI 302: Energy	
Circular Economy Promotion	●	✓	●	●		GRI 306: Waste	CH4 Creating a Happy and Safe Workplace
Site and Chemical Safety Management	●	✓	●	●		Custom Topic	
Occupational Health and Safety		✓	●	●		GRI 403: Occupational Health and Safety	

Note1: Degree of involvement in impact and business relationship:

Cause (●): Indicates the impact caused by the organization's own activities.

Contribute to (△): Indicates that the organization's activities lead to, facilitate, or induce another entity's impact.

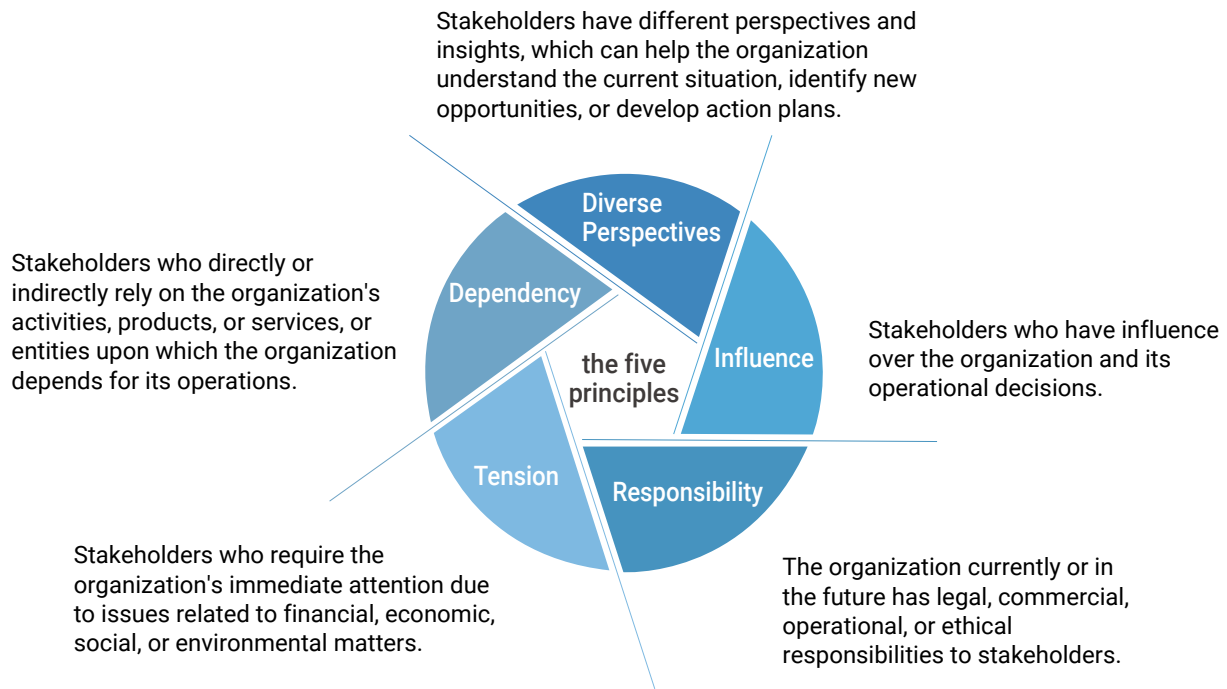
Directly linked to (✓): Indicates that an organization has not caused or contributed to a negative impact but may be directly linked to a negative impact through its business relationships (operations, products, or services).

Note 2: NPC's value chain operating activities showed no significant changes compared with the previous reporting period.



NPC's Stakeholder Identification and Engagement

In response to international trends and industry changes, NPC has re-examined the sustainability context of its operations, centering on the “ESG Promotion Organization.” In 2023, the Company referred to the five principles of the AA1000 Stakeholder Engagement Standard (SES, 2015) — dependency, responsibility, influence, tension, and diverse perspectives — and in 2024 continued to adopt the nine key stakeholder groups identified in its sustainability development process. NPC engages and responds to these stakeholders’ needs and expectations. Through the stakeholder engagement process, the Company has enhanced its accountability to stakeholders while also strengthening its internal sustainability strategies.



Nine Categories of Stakeholders



Communication Channels and Frequency with Stakeholders



Customers

Definition	Significance to NPC	Responsible departments
Individuals, organizations, companies, or other entities that purchase products from NPC, including both domestic and international enterprises, as well as product distributors.	Winning long-term support and feedback from customers is one of NPC's key business strategies. NPC provides high-quality products and continually innovates and improves its products and services to meet customer expectations and needs.	<ul style="list-style-type: none"> General Manager's Office, Sales and Technical Departments Contact Person: Mr. Liu, President Office (Management Department II) TEL: (02) 2712-2211 #5626
Material Topics	Frequency and Methods of Communication	Stakeholder Communication Performance in 2024
<ul style="list-style-type: none"> Integrity Corporate Management and Governance Climate Change Response Strategy Occupational health and safety 	<ul style="list-style-type: none"> Annually: Distributor Conference Occasionally: Product Exhibitions, Dedicated Visits, Customer Satisfaction Surveys, Complaint Handling Forms, Customer Feedback Channels, Email/Telephone 	<ul style="list-style-type: none"> In NPC's 2024 customer satisfaction survey, the overall satisfaction score reached 4.3, accounting for 86% of the total score. Customers could communicate through the online feedback platform; in 2024, the NPC official website received 1,138 submissions related to business matters such as "product inquiries." After careful evaluation, the responsible departments incorporated the feedback as reference or provided appropriate responses. Sales personnel occasionally visited customers and, when appropriate, provided NPC's Sustainability Report, TCFD Report, or conducted surveys to meet customers' ESG requirements.



Employees

Definition	Significance to NPC	Responsible departments
Individuals who work for NPC, are employed, and receive salary or compensation; this includes current staff at various operational locations and plants, management, on-site operators, union members, and informal or irregular workers (e.g., interns).	Employees are a crucial foundation for enhancing the company's competitiveness. NPC values the development of employees' professional knowledge and skills, thus providing comprehensive training and a supportive work environment to lay a solid foundation for sustainable operations.	<ul style="list-style-type: none"> HR Department, Plant Departments Contact Person: Mr. Bai, President Office (HR Department) TEL: (02) 2712-2211 #5630
Material Topics	Frequency and Methods of Communication	Stakeholder Communication Performance in 2024
<ul style="list-style-type: none"> Operational and Financial Performance Occupational Health and Safety Circular Economy Promotion 	<ul style="list-style-type: none"> Annually: Employee Satisfaction Survey Quarterly: Occupational Safety and Health Committee Meetings Every 2 Months: "Formosa Plastics Group" Bimonthly Magazine Daily: Morning Meetings 24 Hours: Physical and Online Suggestion Boxes (Notes, Outlook) Occasionally: Direct Communication Between Senior Management and Labor Union Representatives, Labor-Management Meetings, Welfare Committee, and Management System Improvement Feedback Forms 	<ul style="list-style-type: none"> A total of 37 labor-management committee meetings were held with 760 participants, primarily negotiating matters such as year-end bonuses and salary adjustments. A total of 70 welfare committee meetings were held with 876 participants, mainly addressing employee meals, holiday celebrations, travel, and other welfare measures. Occupational safety and health training sessions were conducted for 3,496 participants, totaling 22,438 training hours. General job competency training and managerial training were attended by 1,757 participants, totaling 17,385 training hours. In 2024, "Human Rights Policy Awareness Training" sessions included 16,186 participants (including Taiwan subsidiaries), with a total of 8,093 training hours. In 2024, "Integrity Management Training" sessions included 16,519 participants (including Taiwan subsidiaries), with a total of 8,260 training hours. Six issues of the "Formosa Plastics Group" bimonthly magazine and 12 monthly employee learning e-newsletters were published. Received the 2024 "Happiness Enterprise Award – Gold Award" in the Manufacturing Industry from 1111 Job Bank.



Suppliers and Contractors

Definition <p>Individuals, companies, organizations, or other entities that provide NPC with raw materials, products, equipment, services, or undertake specific projects. This includes both existing and potential direct and indirect vendors, such as agents, manufacturers, distributors, equipment suppliers, and third-party verification companies.</p>	Significance to NPC <p>NPC's suppliers and contractors play a crucial role in ensuring the company's stable and high-quality products and services. Building long-term partnerships with suppliers and contractors is one of the key factors for NPC's success and sustainable development.</p>	Responsible departments <ul style="list-style-type: none"> General Manager's Office (Procurement and Contracting Center) Contact Person: Mr. Wei, President Office (Management Dept. I) TEL: (02) 2712-2211 #5621
Material Topics <ul style="list-style-type: none"> Operational and Financial Performance Air Pollutant Management Occupational Health and Safety 	Frequency and Methods of Communication <ul style="list-style-type: none"> Annually: Supplier Briefings 24 Hours: Formosa Plastics Group Electronic Trading Marketplace Customer Service Center Occasionally: Supplier/Contractor Complaint Channels, Email/Telephone, Contractor Agreement Organization Meetings 	Stakeholder Communication Performance in 2024 <ul style="list-style-type: none"> Among active suppliers, 3,068 signed the "Corporate Social Responsibility Commitment," 3,027 completed the "Social Responsibility Commitment Questionnaire," and 3,095 completed the "Formosa Plastics Group Supplier Integrity, Confidentiality, and Anti-Corruption Commitment." Suppliers could communicate through the online feedback platform; in 2024, the NPC official website received 110 inquiries from suppliers. After careful evaluation, the responsible departments incorporated the feedback as reference or provided appropriate responses.



Shareholders and Investors

Definition <p>Individuals, institutions, or groups that hold shares in NPC or invest in NPC. This includes financial institutions (such as property insurance and investment advisors), general shareholders, securities firms, institutional shareholders and directors, as well as corporate entities with cross-shareholdings.</p>	Significance to NPC <p>Individuals or entities holding shares in NPC will provide operational insights and financial assistance through various perspectives. In recent years, the disclosure of non-financial information has gradually become a criterion for investment selection. The issues and feedback that investors focus on have become one of the important reference for NPC in formulating its sustainable development strategy.</p>	Responsible departments <ul style="list-style-type: none"> President Office, Corporate Spokesperson System Contact Person: Ms. Tsai, President Office (Operating Analysis Dept.) TEL: (02) 2712-2211 #5612
Material Topics <ul style="list-style-type: none"> Climate Change Response Strategy Operational and Financial Performance Energy Management 	Frequency and Methods of Communication <ul style="list-style-type: none"> Annually: Board of Directors Meetings Quarterly: Shareholders' Meetings Occasionally: Market Observation Post System, Company Website "Investor Relations" Section, Investor Conferences, Email/Telephone 	Stakeholder Communication Performance in 2024 <ul style="list-style-type: none"> A total of four investor conferences were held, and institutional investors occasionally conducted teleconferences. Fifty-three material announcements were released in both Chinese and English, including 16 related to business performance in each language. Shareholders and investors could communicate through the online feedback platform; in 2024, the NPC official website received 12 investor relations inquiries. After careful evaluation, the responsible departments incorporated the feedback as reference or provided appropriate responses. ESG-related communications with domestic and international investment institutions were conducted, including responses to climate change questionnaires, circular economy topics, and six engagement cases such as meetings or consultations.



Government Agencies

Definition		Significance to NPC	Responsible departments
<p>The government departments or related agencies responsible for formulating and implementing laws, policies, regulations, and providing public services, resources, and regulatory functions. This includes central and local government authorities and relevant ministries such as the Ministry of Economic Affairs, Ministry of Environment, Ministry of Finance, Ministry of Labor, Ministry of Justice, Ministry of Environmental Resources, Financial Supervisory Commission, Industrial Development Bureau, Water Resources Agency, Bureau of Energy, Industrial Development Bureau, and the Stock Exchange.</p>		<p>Government agencies are the formulators and regulators of relevant policies. In addition to complying with applicable regulations, NPC actively communicates with the government to jointly promote the sustainable development of the industry.</p>	<ul style="list-style-type: none"> President Office and Direct Departments, and Each Business Division Contact Points: President Office - Mr. Zhang (Operating Analysis Section) TEL: (02)2712-2211 #5615 Safety and Health Dept. - Mr. Zhang, Ms. Zhou TEL: (02)2712-2211 #5627, 5653
Material Topics	Stakeholder Communication Performance in 2024		
<ul style="list-style-type: none"> Integrity in Operations and Governance Climate Change Response Strategy Occupational Health and Safety 	<ul style="list-style-type: none"> In 2024, there were no major violations related to integrity in operations. In accordance with regulatory requirements, the Company carried out internal audit and control, ESG reporting, questionnaire responses, and submission of relevant reports. In cooperation with the Central Taiwan Science Park Administration of the Ministry of Economic Affairs, NPC implemented follow-up actions for the "2024 Comprehensive Inspection of the Formosa Plastics Group Mailiao Sixth Naphtha Cracker Complex." Participated in Ministry of Environment sessions including the "Carbon Fee Policy Exchange Forum," "Explanatory Meeting on Three Draft Sub-Laws for the Carbon Fee," "Explanatory Meeting on the Three Supporting Sub-Laws of the Carbon Fee System," and the "Explanatory Meeting on Voluntary Reduction Plans." Also participated in the Industrial Development Administration's "Explanatory Meeting on Voluntary Reduction Plan Guidance." Received multiple government recognitions: the Mailiao Branch was awarded the "2024 National Sustainable Development Award" by the National Council for Sustainable Development, Executive Yuan; the Ministry of Environment's first "Water Sustainability Award"; the Chiayi Plant received the Ministry of Environment's "2024 Resource Recycling Excellence Award – Silver Award"; the BPA Plant III received the Bureau of Energy's "2024 Energy Conservation Benchmark Award – Silver Award" and the Water Resources Agency's "2024 Water Conservation Excellence Award – Merit Award"; the Kung San Plant received the Ministry of Environment's "Outstanding Regional Joint Defense Organization Operations Award"; and the Propylene Glycol Plant received the Yunlin County Government's "Occupational Safety and Health Excellence Award – Five-Star Rating" for three consecutive terms. Donated NT\$145,495 thousand worth of external transmission pipelines, flow meters, and water quality monitoring equipment connecting the outlet of the Water Resources Recycling Center to the intake point of the Jinxing Plant to the Taoyuan City Government. On September 7, 2024, joined the Taoyuan City Government and Kimberly-Clark Taiwan in supporting the "Mile-a-Minute Weed Eradication Awareness Campaign," hosted by the Hsinchu Branch of the Forestry and Nature Conservation Agency at the Formosa Yangmei Organic Farm. 		
Frequency and Methods of Communication			
<ul style="list-style-type: none"> Occasionally: Meetings (such as public hearings, seminars, etc.), Official Documents, Dedicated Visits, Email/Telephone 			



Residents of the Operating Areas

Definition		Significance to NPC	Responsible departments
<p>Community members, the general public, and organizations located around NPC's operating locations and plant areas.</p>		<p>Co-creating a prosperous vision with the community is a key focus for NPC's operations. Specifically, NPC formulates relevant care and feedback policies for residents near the operating plants. Feedback from residents in the operating areas is also considered one of the factors in setting the annual strategic objectives.</p>	<ul style="list-style-type: none"> Administration Dept., On-Site Safety and Health Office Contact Person: Mr. Li, Taipei Administration Dept. TEL: (03)328-4191 #182
Material Topics	Stakeholder Communication Performance in 2024		
<ul style="list-style-type: none"> Integrity in Operations and Governance Air Pollutant Management Operational and Financial Performance 	<ul style="list-style-type: none"> Maintained regular communication with surrounding communities; for example, in 2024, the Northern sites recorded a total of 48 communication sessions, with additional meetings arranged as needed in special circumstances. Site environmental volunteers cleaned the surrounding areas at least once a month; in 2024, 1,193 participants contributed a total of 1,915 volunteer hours. Organized charitable "Ren-Ai Service" activities with a total of 1,613 participants, contributing 4,632 volunteer hours. Provided social donations and community support totaling approximately NT\$2.53 million, directed toward orphanages, nursing homes, and disadvantaged community members. On April 28, the Linkou Plant hosted a children's theater performance of The Adventure in the Candy Forest by the Apple Children's Theater Group, attended by approximately 3,000 people. 		
Frequency and Methods of Communication			
<ul style="list-style-type: none"> Monthly: Dedicated Visits Occasionally: Meetings – Village (Community) Assemblies, Plant Construction (Expansion) Briefings, Forums, Observation Tours, Liaison Meetings, Email/Telephone 			



Environmental Groups

Definition Non-profit or non-governmental organizations or groups dedicated to environmental protection, ecological conservation, and sustainable development.	Significance to NPC In addition to valuing academic theories on sustainability issues, NPC also emphasizes environmental sustainability issues just as environmental groups do. NPC hopes to apply these theories to enhance the competitiveness of Taiwan's industries and work toward environmental sustainability together. This includes environmental NGOs, green groups, community environmental organizations, environmental volunteer groups, and ecological conservation groups.	Responsible departments <ul style="list-style-type: none"> Resource Recovery Dept., Safety and Health Department Contact Person: Resource Recovery Dept. - Mr. Lee TEL: (05) 681-8223 Safety and Health Dept. - Mr. Huang, Mr. Tan TEL: (02) 2712-2211 #5653
Material Topics <ul style="list-style-type: none"> Circular Economy Promotion Energy Management Water Resources Management 	Frequency and Methods of Communication <ul style="list-style-type: none"> Occasionally: Meetings (e.g., Environmental Impact Assessment review meetings for new/expansion projects and monitoring meetings on the implementation of EIA conclusions), Email/Telephone 	Stakeholder Communication Performance in 2024 <ul style="list-style-type: none"> Participated in the "Key Petrochemical Industry Stakeholders Consultation Meeting" organized by the Green Foundation. Attended quarterly meetings of the "Supervisory Committee on the Implementation of EIA Conclusions for Sixth Naphtha Cracker Complex Projects," organized by the Ministry of Environment (with committee members composed of experts and scholars). Co-hosted with Feng Chia University the "Exemplary Environmental Management Plants Observation and Improvement Case Presentation and Selection Event."



Experts and Industry Associations

Definition Scholars, researchers, or experts with professional knowledge and experience in the chemical plastics industry and related fields. Organizations composed of businesses, organizations, merchants, or professionals.	Significance to NPC Experts provide NPC with diverse perspectives, collaborating through industry-academic partnerships and technical research, and offering recommendations for sustainable development strategies. This helps the company continuously improve in professional fields. The goal is to apply theoretical knowledge practically and enhance both Taiwan's industrial competitiveness and environmental sustainability efforts.	Responsible departments <ul style="list-style-type: none"> President Office, R&D Center, Resource Recovery Dept., Safety and Health Department, Business Units Contact Person: Resource Recycling Dept., Mr. Li TEL: (05) 681-8223 Safety and Health Dept., Mr. Tan TEL: (02) 2712-2211 #5653
Material Topics <ul style="list-style-type: none"> Occupational Health and Safety Site and Chemical Safety Management Waste Management 	Frequency and Methods of Communication <ul style="list-style-type: none"> Occasionally: Meetings (e.g., Environmental Impact Assessment review meetings for new/expansion projects and monitoring meetings on the implementation of EIA conclusions), Email/Telephone 	Stakeholder Communication Performance in 2024 <ul style="list-style-type: none"> Participated in the "Key Petrochemical Industry Stakeholders Consultation Meeting" organized by the Green Foundation. Attended quarterly meetings of the "Supervisory Committee on the Implementation of EIA Conclusions for Sixth Naphtha Cracker Complex Projects," organized by the Ministry of Environment (with committee members composed of experts and scholars). Co-hosted with Feng Chia University the "Exemplary Environmental Management Plants Observation and Improvement Case Presentation and Selection Event." The Shulin site cooperated with the Northern Regional Occupational Safety and Health Center to hold the "Workplace Environment Comfort Improvement Technical Guidance Meeting" (with members consisting of representatives from the Northern Occupational Safety and Health Center and academic experts).



Media

Definition		Significance to NPC	Responsible departments
Organizations, platforms, or individuals responsible for collecting, editing, reporting, and disseminating news, information, and opinions.		NPC views the media as a crucial partner for external communication in its operations. The company continuously maintains good interactions with the media by providing information and explanations, conveying its business mission, values, and achievements.	<ul style="list-style-type: none">◆ President Office, Corporate Spokesperson System◆ Contact Person: Mr. Zhang (Operating Analysis Group), President Office TEL: (02) 2712-2211 #5615
Material Topics	Frequency and Methods of Communication	Stakeholder Communication Performance in 2024	
<ul style="list-style-type: none">◆ Climate Change Response Strategy◆ Occupational Health and Safety◆ Integrity in Operations and Governance	<ul style="list-style-type: none">◆ Monthly: Performance Presentations◆ Occasionally: Media Interviews or Press Releases	<ul style="list-style-type: none">◆ Released 53 material announcements in both Chinese and English, including 16 related to business performance in each language.◆ Issued six press releases, including “NPC, in collaboration with SGS Taiwan and Chunghwa Telecom, Obtains ISO/IEC 27001 Information Security Certification.”◆ Participated in the launch press conference for the “Taipei 101 Vertical Marathon” and was interviewed by the Belgian media outlet Le Soir on the development of chemical recycling processes in Taiwan’s textile industry.◆ Updated the official website occasionally.	

Ongoing Sustainable Governance Strategy

1



1.1 Remarkable Governance of Nan Ya Plastics	28
1.2 Improve Business Performance	35
1.3 Essential Risk Management	38

NPC complies with legal regulations, adheres to the principle of ethical standards, and continues to strengthen corporate governance and risk control mechanisms, as well as enhance the ethical business awareness of all employees. The Company aims to become the most trusted corporation with the business philosophies of "diligence, perseverance, frugality and trustworthiness" and "to aim at the sovereign good".

Strategies

- Sustainable development - Continue to expand business, and promote high-value products
- Integrity management - Improve corporate governance and protect shareholders' rights and interests.
- operational risk management - Control operational risks and develop risk response strategies.

Material Topics

- Integrity Corporate Management and Governance,
- Operating financial performance

Sustainable Development

2024 Targets

- Continue to advance expansion plans such as domestic release film production lines
- Continue to advance expansion plans for copper foil in Mainland China and soft PVC sheet in Texas, USA
- Provide stable returns to shareholders
- Convene at least one meeting of the Sustainable Development Committee

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ Expansion plans such as domestic release film production lines are ongoing
- ✓ Expansion plans for copper foil in Mainland China and soft PVC sheet in Texas, USA are ongoing
- ✓ Cash dividend per share: NT\$0.70
- ✓ Two meetings of the Sustainable Development Committee convened

Short-term Targets (2025)

- Continue to advance solar PV system installation projects at the Hsinking copper foil plant
- Continue to advance expansion plans for soft PVC sheet in Texas, USA
- Provide stable returns to shareholders
- Convene at least one meeting of the Sustainable Development Committee

Medium and Long-term Targets (2026-2030)

Continue enhancing the competitiveness of existing products, developing high-value and differentiated products, and seeking new investment opportunities to ensure the Company's sustainable operation.

Integrity Corporate Management

2024 Targets

- Conduct "Self-Evaluation of the Board of Directors regularly every year.
- Participation in 4 or more investor conferences at least once per quarter.
- Announce company information in both Chinese and English.
- Continuously improve various internal control systems in line with legal and practical needs.
- No major violations (with penalties exceeding NT\$1 million).

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ "Self-Evaluation of the Board of Directors" has been conducted.
- ✓ Participated 4 investor conferences.
- ✓ 53 material messages were announced in Chinese and English.
- ✓ Completed 53 audits based on the "2024 Audit Plan", and all abnormalities found have been improved.
- In 2024, a fire at the Linkou Plant violated the Air Pollution Control Act and resulted in a fine of NT\$5 million.

Short-term Targets (2025)

- Conduct "Self-Evaluation of the Board of Directors regularly every year.
- Participation in 4 or more investor conferences at least once per quarter.
- Announce company information in both Chinese and English.
- Continuously improve various internal control systems in line with legal and practical needs.
- Comply with regulations: independent directors must account for at least one-third of Board seats, and more than half may not serve more than three consecutive terms
- No major violations (fines exceeding NT\$1 million)

Medium and Long-term Targets (2026-2030)

Ensure that all operations of the Company comply with legal requirements, continue to strengthen corporate governance, and disclose important company information promptly to protect the rights and interests of shareholders.

Implement Operational Risk Management

2024 Targets

- Identify risk events and draft responsive measures accordingly.
- Report on the execution of "Risk Management" to the board of directors at least once a year.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- A total of 21 risk events including climate change have been identified, and response measures have been drafted accordingly.
- On June 12, a report on ESG sustainability matters — including sustainability, environmental, and risk management — was presented to the Sustainable Development Committee, and on June 19, to the Board of Directors.

Short-term Targets (2025)

- Identify risk events and draft responsive measures accordingly.
- Report the implementation status of "risk management" to the Board of Directors at least once a year.

Medium and Long-term Targets (2026-2030)

The Company shall promptly identify internal and external risks and draft responsive measures policies to mediate the hazard of troubles and strengthen operational flexibility.



Management of Material Topics

2-23, 2-24, 2-25, 3-3

Policy Commitment

- NPC upholds integrity as a guiding principle in the operations, continuously enhancing corporate governance through three main aspects: "Establishment of systems and regulations," "signing of self-discipline documents," and "implementation of training." We aim to increase employees' awareness of "anti-corruption, fraud prevention, and strict discipline" and have computerized the management of various business operations. By leveraging new technologies, we strive to achieve management goals and, ultimately, ensure the effective implementation of audit operations to prevent personnel fraud and reduce risk occurrences.
- The Company is committed to mitigating operational risks, seizing market opportunities, and using emerging technologies such as AI and product differentiation innovations to create stable profits for shareholders.
- Compliance with regulatory standards is the fundamental principle of NPC and the foundation of our pursuit of "to aim at the sovereign good" and "sustainable management." We will strictly adhere to local regulations at each operational site and use this as a basis to improve various business activities and reduce the occurrence of external risks.

Organizational Vision

Establish a governance system based on integrity, comply with regulations, and pursue the maximization of shareholder interests.

Integrity Corporate Management and Governance

GRI 205: Anti-corruption, GRI 206: Anti-competitive Behavior
SASB: Management of the Legal & Regulatory Environment

Management Impact

- **Definition:** NPC's internal management mechanisms include tax policies, the composition and operation of the Board of Directors, internal control systems, and the evaluation of the legitimacy of business counterparties to ensure they are not engaged in dishonest practices, thereby avoiding transactions with companies that have records of violations or misconduct.
- **Impact:** A diverse, professional, and transparent Board of Directors, together with effective integrity management and internal control systems, can prevent unethical risks and enhance operational performance. Conversely, a lack of accountability within the Board or ineffective internal management would increase operational and reputational risks.

Management Actions	Action Performance Tracking in 2024	Achievement Overview	Short-Term Goals (1-3 years)	Mid-to-Long-Term Goals (over 3 years)
[Guidelines and Standards] Internally established regulations such as the "Code of Ethical Conduct," "Corporate Social Responsibility Practice Principles," "Corporate Governance Guidelines," and "Personnel Management Rules" are available for instant reference.	Reported revisions to the "Internal and External Reporting Procedures for Illegal and Unethical Behavior".	✓	Ensure that NPC's guidelines and regulations comply with domestic laws and international ESG sustainability standards, implementing integrity management policies.	Ensure that NPC's guidelines and regulations comply with domestic laws and international ESG sustainability standards, implementing integrity management policies.
[Grievance Mechanism & Education and Training] There are established "Employee Grievance Handling Guidelines" and "Internal and External Reporting Procedures for Illegal and Unethical Behavior," providing internal and external grievance channels. "Integrity Management Education" training sessions are held annually.	<ul style="list-style-type: none">■ The company received two reports, both of which have been resolved and neither involved corruption.■ A total of 16,519 individuals completed "Integrity Management Education" training (including subsidiaries in Taiwan).	✓	<ul style="list-style-type: none">■ Properly handle reported cases and ensure no incidents of corruption occur.■ Continue promoting "Integrity Management Education" training and expand the scope of the training.	<ul style="list-style-type: none">■ Properly handle reported cases and ensure no incidents of corruption occur.■ Continue promoting "Integrity Management Education" training and expand the scope of the training.
[Internal Control] Digitize the management processes of various operations, with each operating unit conducting regular self-inspections, while the independent audit department also performs occasional re-examinations.	<ul style="list-style-type: none">■ Internal and external audits have been completed as planned, with no incidents of corruption.■ In the 10th Corporate Governance Evaluation, NPC ranked in the top 21%~35% out of 976 listed companies.	-	<ul style="list-style-type: none">■ Annually plan and complete internal and external audits to ensure no corruption incidents occur.■ Maintain a top 20% ranking in corporate governance evaluations.	<ul style="list-style-type: none">■ Continue strengthening internal and external audit operations to ensure no incidents of corruption occur.■ Maintain a top 20% ranking in corporate governance evaluations.

Stakeholder Groups

Shareholders, customers, supply chain, government agencies

Engagement Channels and Effectiveness

In 2024, 53 significant announcements were released in both Chinese and English.

Operating financial performance

GRI 201: Economic Performance

Management Impact

- **Definition:** Financial operational performance and overall revenue management of NPC, including salary allocation.
- **Impact:** 1. Investment in high-end material applications is expected to boost revenue. 2. Rising costs in the raw materials market affects the company's stock performance.

Management Actions	Action Performance Tracking in 2024	Achievement Overview	Short-Term Goals (1-3 years)	Mid-to-Long-Term Goals (over 3 years)
Sustained Profitability	Earnings per share: NT\$0.42	✓	Continued profitability	Continued profitability
Promote AI Applications to Enhance Competitiveness	Continued investment in AI applications, please refer to 2.2.2 Artificial Intelligence (AI) Applications.	✓	Ongoing investment in AI applications	Ongoing investment in AI applications
Actively Expand Markets and Plan Ahead	Revenue from sales in the U.S. market increased by 1.2%.	✓	Proactively exploring markets and planning ahead	Proactively exploring markets and planning ahead

Stakeholder Groups

Shareholders

Engagement Channels and Effectiveness

In 2024, NPC was invited to participate in 4 corporate briefings.



1.1 Remarkable Governance of Nan Ya Plastics [2-12, 2-13, 2-14, 2-15]

1.1.1 Organizational structure

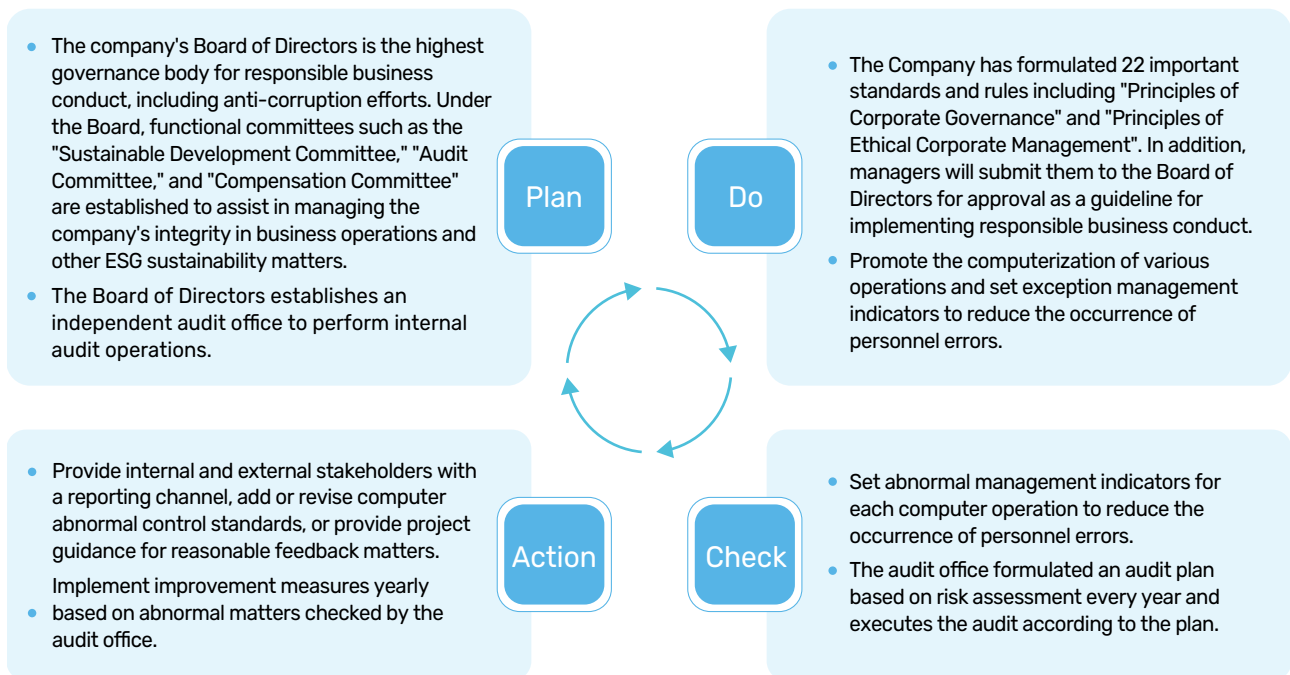
The Company's organizational structure has a clear division between rights and responsibilities. To ensure the independence of the Company's operations, the current Chairman does not concurrently serve in a managerial position at the Company. In addition, the Company is divided into 11 business divisions according to their respective business product categories, and indirect departments are also set up based on different functional attributes. All business divisions and indirect departments are under the General Manager's jurisdiction. Please refer to NPC's website on "Company Organization" for the organizational chart.



NPC Official Website –
"Company Organization"

On the other hand, the Company adopts the PDCA (Plan-Do-Check-Action) process to review policy formulation and vision commitments. In addition, NPC considers feedback suggestions from stakeholders to improve its corporate governance and enhance operational resilience.

NPC Responsible Business Conduct Implementation Process



1.1.2 Board of Directors [2-9, 2-10, 2-11, 2-12, 2-17, 2-18, 2-19, 2-20, 2-21]

◆ Board of Directors Operations

The Board of Directors is the highest governance unit and the center for making business decisions of the NPC. The shareholders entrust the Board of directors. In addition to complying with the conclusion of the shareholders' meeting, the Board of Directors also abides by relevant regulations such as the "Company Act", "Securities and Exchange Act", "Company policy," and "rules of procedure for the Board of Directors". It also has the "Code of Ethical Conduct for Directors and Managers," requiring relevant personnel to adhere to ethical standards when performing their duties and prevent behaviors that harm the Company's and shareholders' interests.

The election of the Company's directors is based on the nomination of candidates system. The shareholders will select from the list upon resolution from the Board of Directors. All those serve a three-year term and organize board meetings at least once every quarter. Currently, the Board of Directors has 15 directors, of which 3 are independent and 2 are female. Please refer to the Company's website and the Annual Report for details on the list of directors and their respective educational and work experiences.

The role of NPC's Board of Director

The purpose of the Board of Directors

Approve important regulations, formulate management norms, supervise the Company to implement ethical business management, strengthen the promotion of various ESG businesses, and control potential risks to create the maximum value for the enterprise.

The vision of Sustainable Development

Implement corporate governance, strengthen the Company's sustainable information disclosure, keep in line with international trends, and fulfill the obligations of social citizens to achieve the vision of sustainable development.

ESG strategies and policies

Understand the critical concerns of stakeholders, grasp the changes in international ESG trends, and lead the Company to formulate ESG policies. In addition, promote departments to implement project actions and then review and optimize them regularly.

Board Composition Overview

Board Seats (Including Independent Directors)	15	Independent Directors		Female Directors	
		Seats 3	Percentage 20%	Seats 2	Percentage 13%

Director Participation Summary

Number of Meetings in 2024	6	Board Attendance Rate in 2024	94.44%
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2024 Major Conclusion of Board of Directors

Content of the Conclusion

(A total of 15 cases, with examples listed below as non-routine items)

- Donated to the "Wang Yung-Ching and Wang Yung-Tsai Kunzhong Park Cultural Foundation, Kaohsiung City."
- Approved additional investments in "NPC Texas Co., Ltd." and "Formosa New Intelligent Technology Co., Ltd."
- Donated reclaimed water pipelines to the Taoyuan City Government.



Diversity of Directors

Name/Diversity Items	Director Attendance Rate in 2024	Gender	Concurrent Employment	Age		
				55-64	65-74	Above 75
Chia-Chau Wu	100%	Male				●
Wen-Yuan Wong	100%	Male				●
Wen-Chiao Wang	67%	Male			●	
Ruey-Yu Wang	100%	Female		●		
Chih-Kang Wang	100%	Male				●
Yi-Fu Lin	100%	Male				●
Yun-Peng Chu	83%	Male			●	
Ming-Jen Tzou	100%	Male	●			●
Shen-Yi Lee	100%	Male				●
Zo-Chun Jen	100%	Male	●			●
Kuei-Yung Wang	100%	Female	●			●
Fong-Chin Lin	100%	Male	●			●
Cheng-Chung Lee	83%	Male	●		●	
Chung-Yueh Shih	83%	Male	●		●	
Ching-Cheng Chang	100%	Male			●	

Note: For industrial experience and professional ability of each director please refer to "Board of Directors" on NPC's website and Annual Report.

◆ Remuneration for Directors and Managers

The current remuneration standard and structure of directors and managers of the Company is not only assessed and approved by the Remuneration Committee but also reported to the Board of Directors for approval. Managers' performance is evaluated by the Chairman based on the overall performance within the scope of the manager's responsibility and the achievement status of personal "Annual Work Goals" to ensure managers understand and co-achieve the Company's strategic goal. It is also an incentive system that connects the manager's performance with the Company's overall performance. In 2024, directors' remuneration amounted to NT\$28,962 thousand, accounting for 0.8671%, and was disclosed in NPC's 2024 Annual Report (p.21), including individual remuneration for directors (independent directors included).

Remuneration for General Directors and Independent Directors

Remuneration Policy for Directors and Managers of NPC

Director (Including independent directors)

Performance Review

According to Article 16 of the Memorandum and Articles of Association, the Board of Directors is authorized to decide based on the director's degree of participation in the Company's operations, the value of his contribution, and the level generally paid by peers.

Distribution Items

- The chairman's remuneration includes a fixed monthly salary, bonuses, and incentives paid based on the Company's performance in the previous year. It is planned to be no more than two times the remuneration of the Company's President and is provided monthly following the Company's "Retirement Regulations." Allocate pensions, welfare funds, and severance pay upon retirement, and pay travel expenses based on actual attendance at the board of directors.
- Independent directors Shen-Yi Lee and Ching-Cheng Chang receive fixed monthly remuneration and travel expenses based on their attendance on the board of directors.
- The remaining directors only receive travel expenses based on their actual attendance at the Board of Directors, and no remuneration is paid.

Manager (President, Vice President and other managers)

Performance Review

The Company's managers' remuneration and performance evaluation indicators are as follows:

- Financial indicators: Including operating profit and loss/EBITDA, operating target achievement rate, revenue growth rate, and profit contribution.
- Non-financial indicators:
 - ◆ Environmental protection (E): Participation in environmental sustainability, water, and energy saving performance, circular economic benefits, and reduction carbon target achievement rate.
 - ◆ Social responsibility (S): Industrial safety/occupational disaster incidents, product research, development, innovation, and neighborliness.
 - ◆ Corporate governance (G): Operational management capabilities, AI promotion cases/efficiencies, and the number of fraud cases.

Distribution Items

- Fixed monthly salary, diligence bonus, year-end bonus, supervisor bonus, monthly provision of pension (including new and old pensions), welfare funds, etc. following the Company's "Retirement Measures."
- Pay severance pay, pension, and other remuneration to supervisors under particular circumstances.

Director Compensation as a Percentage of Net Profit After Tax at NPC (Unit: NT\$ Thousands)

Category	Item	2022	2023	2024
NPC	Director Compensation	27,749	27,836	28,962
	Compensation Percentage (%)	0.09	0.44	0.87

Note: The percentage represents the ratio of director and supervisor compensation to net profit after tax.

◆ Directors' Training

NPC provides or assists in arranging annual training courses for directors to help them stay informed of the latest international trends and developments. In 2024, director training courses included topics such as “Global Geopolitical and Economic Megatrends and Opportunities, Challenges, and Responses for Taiwan’s Industries” and “Directors’ Fiduciary Duties and Insider Trading.” For detailed information on individual directors’ training, please refer to the Company’s 2024 Annual Report, p. 51–52.

Number of directors trained 15 Training rate 100%	Total training hours 96 hours
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◆ Functional Committees

To uphold business ethics and strengthen the supervisory function of the Board of Directors, NPC has established three functional committees under the Board: the Audit Committee, the Remuneration Committee, and the Sustainable Development Committee. Among them, both the Audit Committee and the Remuneration Committee are composed entirely of independent directors. In 2024, the Audit Committee convened four times, the Remuneration Committee convened twice, and the Sustainable Development Committee convened twice. The primary functions of the committees and the attendance of their members are described below.

Major Functions of the Functional Committees

Audit Committee

- Ensure fair presentation of the Company's financial statements.
- The appointment (or dismissal) of Certified Public Accountants (CPA), and evaluation of the CPA's competency, independence, and performance.
- The effective implementation of the Company's internal control system.
- The Company complies with relevant laws and regulations and controls existing or potential risks of the Company.

Remuneration Committee

Evaluate the Company's directors' and managers' compensation policies and systems and make recommendations to the Board of Directors for decision-making.

Sustainable Development Committee

Review the Company's sustainable development policies and management guidelines, and supervise the Company's promotion of sustainable development business, etc.

Corporation	Annual total compensation ratio ^(Note 1)		Percentage increase in annual total compensation ratio ^(Note 2)	
	2023	2024	2023	2024
Nan Ya Plastics	17.61 times	17.6 times	+30.76%	+98.39%
Nan Ya Printed Circuit Board	11.98 times	10.41 times	+3.59%	+197.72%
PFG Fiber Glass Corporation	5.31 times	4.56 times	+11.29%	-132.34%
Nan Chung Petrochemical	2.56 times	2.33 times	+18.05%	+24.06%

Note1: Annual total compensation ratio = highest-paid individual's annual salary / Median of other employees' annual salary

Note2: Percentage increase in annual total compensation ratio = increase ratio of highest-paid individual's annual salary / increase ratio of median of all employees' annual salary (exclude the highest-paid individual)

2024 Meeting Attendance

Title	Name	Audit Committee			Remuneration Committee		
		Actual Attendance	Number of delegated attendances	Attendance Rate	Actual Attendance	Number of delegated attendances	Attendance Rate
Organizer (Executive directors)	Chih-Kang Wang	4	0	100%	2	0	100%
Member (Independent directors)	Yi-Fu Lin	4	0	100%	2	0	100%
Member (Independent directors)	Yun-Peng Chu	4	0	100%	2	0	100%

Audit Committee, Remuneration Committee in 2024 Major Resolutions

Audit Committee (A total of 8 cases, with examples listed below as non-routine items)

- Approved donation to the "Wang Yung-Ching and Wang Yung-Tsai Kunzhong Park Cultural Foundation, Kaohsiung City."
- Approved additional investments in "Nan Ya Plastics Texas Co., Ltd." and "Formosa Smart Energy Co., Ltd."

Remuneration Committee

Approved that managerial salary adjustments in 2024 would follow the same rate as those of all employees.

Note: For matters regarding the communications between independent directors, CPAs, and internal audit officer, please refer to the "Board of Directors" on NPC's website.

2024 Meeting Attendance of Sustainable Development Committee

Sustainable Development Committee

Title	Name	Number of Meetings (A)	Number of Actual Attendance (B)	Number of delegated attendances	Attendance Rate
Organizer (Chairman)	Chia-Chau Wu	2	2	0	100%
Member (General Manager)	Ming-Jen Tzou		2	0	100%
Member (Executive Independent Director)	Chih-Kang Wang		2	0	100%
Member (Independent Director)	Yi-Fu Lin		2	0	100%
Member (Independent Director)	Yun-Peng Chu		2	0	100%

2024 Major Conclusion

Drafted the 2023 Sustainability Report and the 2023 greenhouse gas verification results, and confirmed the Company's implementation plan for adopting the International Financial Reporting Standards (IFRS) Sustainability Disclosure Standards.



1.1.3 Integrity Management and Internal Control Mechanisms

[2-26, 205-1, 205-2, 205-3, 206-1]

NPC has established strict codes of ethics and related guidelines, requiring all employees to uphold high moral standards, safeguard the Company's reputation, and comply with laws and regulations with a responsible attitude in both work and daily conduct. The Company's main management measures are as follows:

1

Submitted to the Board of Directors for adoption of 22 key regulations, including the "Corporate Governance Practice Principles" and the "Integrity Management Code," and disclosed them on the NPC official website under the "Investor Relations" section.



NPC Official Website
– "Investor Relations"

2

Established codes of conduct such as "Anti-Corruption," "Fraud Prevention," and "Strict Discipline." Through three aspects – "Formulation of Systems and Regulations," "Execution of Self-Disciplinary Declarations," and "Implementation of Training" – the Company enhances employees' awareness of professional ethics. Detailed explanations, anti-corruption policies, and related actions are available on the NPC official website under "Integrity Management and Ethical Conduct."



NPC Official Website –
"Integrity Management
and Ethical Conduct"

3

Established "Whistleblowing Procedures for Internal and External Stakeholders Regarding Unlawful or Unethical Conduct," providing specific channels for reporting any illegal or improper behavior, while protecting the rights of whistleblowers and preventing retaliation.

◆ Antitrust

To ensure NPC's operations comply with local government regulations and reduce legal risks, the Company requires employees and all levels of management to strictly perform their duties in accordance with the provisions of the Antitrust Law. Compliance status is reported to the Board of Directors as appropriate, and relevant personnel are provided with regular training courses. In 2024, there were no violations of the Antitrust Law.

◆ Implementation Results and Training

In accordance with the above policies, NPC and its Taiwan subsidiaries conducted corruption risk assessments across all operating sites in 2024, and no significant corruption risks were identified. In addition, to strengthen employees' awareness of integrity management and ethical conduct, annual training programs on "Integrity Management" and "Prevention of Insider Trading" have been promoted since 2021. The Board of Directors and other top governance bodies also participate in such awareness training each year. Furthermore, upon assuming office, directors and insiders are provided with educational materials such as "Matters Concerning Securities Market Regulations That Listed Companies, Directors, Supervisors, and Major Shareholders Should Heed." The implementation results are as follows:

Education and training item	NPC's education and training implementation status		
	2022	2023	2024
Integrity management (includes anti-corruption and antitrust law)	11,104 participations were trained. Total training hours are 5,552.	12,156 participations were trained. Total training hours are 12,156.	16,519 participations were trained. Total training hours are 8,260.
Insider trading prevention	11,062 participations were trained. Total training hours are 11,062.	11,472 participations were trained. Total training hours are 11,472.	12,716 participations were trained. Total training hours are 6,358.

Note1: Starting from 2023, education and training on integrity management and prevention of insider trading will include NPC's subsidiaries in Taiwan.

Note2: Employees currently participating in integrity management include full-time employees and contract employees.

◆ Whistleblowing Channels

NPC and Taiwan subsidiaries provide internal whistleblowing channels for reporting illegal activities through the systematic "Employee Grievance Procedure." When the Company and the designated investigators are handling the reported incidents, principles of fairness and impartiality shall be upheld during investigations and case reporting. The whistleblower shall not receive retaliation, and the process shall remain confidential to avoid potential punishment (see 4.1.3 Valuing Employee Feedback for details on internal communication channels, P.100.)

Nan Ya Plastics Corporation and Taiwanese Subsidiaries' Anti-Corruption Policy Implementation Status Over the Past Three Years (Unit: Cases)						
Number of Cases / Year	NPC			Subsidiaries in Taiwan		
	2022	2023	2024	2022	2023	2024
Total number of reported cases	1	2	0	1	4	3
Number of reported cases related to anti-corruption policy	0	0	0	0	0	0
Number of cases that violate anti-corruption policies after investigation	0	0	0	0	0	0
Number of completed pieces	0	0	0	0	0	0

Note: The scope of assessment and disclosure includes all the business locations in Taiwan.

◆ Internal Control Mechanism

NPC and its Taiwan subsidiaries have fully implemented digitalized operations, integrating six major management functions — human resources, finance, sales, production, materials, and engineering — through technological management. The effectiveness of the internal control system is evaluated annually by the Board of Directors, which issues a statement of effectiveness. Details of the scope and procedures of internal audits are available on the NPC official website under "Internal Audit."

NPC provides annual training for internal audit personnel to enhance professional competence and ensure complete execution of the internal audit process. In 2024, 11 audit deficiencies were identified: 4 in production and sales, 1 in materials and engineering, 4 in general administration, and 2 in finance. None were major deficiencies, and all have been rectified.

2024 Internal Audit Personnel Training			
Corporation	Numbers of Participant	Total training hours	Name of major courses
NPC	27 people	342 hours	1. Pre-job training and workshop for newly appointed internal auditors in the company. 2. Analysis of Sustainability Information Disclosure and Management Policies, and Related Audit Key Points. 3. Introduction to Information Security Construction for Listed Companies and Audit Seminar.
Taiwan Subsidiaries	3 people	36 hours	1. Analysis of Sustainability Information Disclosure and Management Policies, and Related Audit Key Points. 2. Introduction to Information Security Construction for Listed Companies and Audit Seminar.

Internal Audit Statistics for the Past Three Years (Unit: Number of Cases, %)				
Corporation	Items	2022	2023	2024
NPC	Number of audit items performed	52	53	53
	Number of abnormalities found	11	11	11
	Abnormality improvement rate	100%	100%	100%
Nan Ya PCB Corporation	Number of audit items performed	41	42	42
	Number of abnormalities found	2	2	3
	Abnormality improvement rate	100%	100%	100%

Note: In 2024, NPC identified 11 audit deficiencies: 4 in production and sales, 1 in materials and engineering, 4 in general administration, and 2 in finance. None were major deficiencies, and all have been rectified.

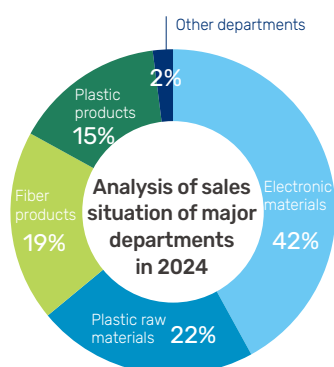
1.2 Improve Business Performance

1.2.1 Economic Performance [201-1]

NPC and Taiwan Subsidiaries Operating Performance (Unit: NT\$ thousand)

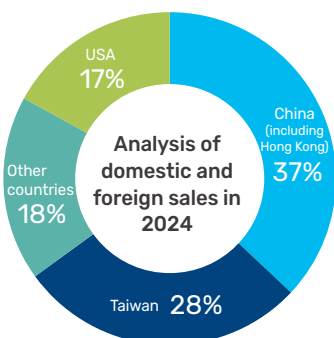
Items	2022	2023	2024
Operating Revenue	355,183,300	259,755,344	259,608,483
Operating Costs	301,274,899	240,529,041	241,034,446
Net Profit After Tax	38,484,719	8,110,047	3,307,170
Net Profit Margin (%)	10.83%	3.12%	1.27%
Earnings Per Share (NTD)	4.05	0.80	0.42
Return on Equity (%)	9.35%	2.10%	0.89%
Return on Assets (%)	6.09%	1.83%	0.93%
Payments to Government*	7,649,368	3,759,452	941,191
Total Taxes Paid (excluding VAT)			
Employee Salaries and Benefits	38,204,641	34,442,486	33,382,534
Cash Dividends Paid (to Investors)	59,374,150	23,833,140	5,615,258
Retained Earnings (Retained Economic Value)	247,505,467	230,801,650	229,117,977
Community Investments	117,916	256,455	140,256

Note: Source: NPC Consolidated Financial Statements 2024. Items marked with "*" are based on NPC individual financial statements or internal statistics.



Type of Product	Amount (NT\$ thousand)	Percentage
Electronic materials	108,364,521	42%
Plastic raw materials	58,363,299	22%
Fiber products	48,509,571	19%
Plastic products	39,237,537	15%
Other departments	5,133,555	2%
Total	259,608,483	100%

[Note: Sourced from NPC's 2024 consolidated financial statements]



Type of Product	Amount (NT\$ thousand)	Percentage
China (including Hong Kong)	95,348,266	37%
Taiwan	72,496,549	28%
Other countries	46,868,474	18%
USA	44,895,194	17%
Total	259,608,483	100%

Note: Sourced from NPC's 2024 consolidated financial statements

1.2.2 Special Focus and Regulatory Compliance [2-16, 2-27]

Compliance with regulations and standards is the Company's most fundamental principle, and it is also the foundation of the Company's philosophy of "to aim at the absolute perfection, and perpetual business operation." NPC will strictly abide by the local laws and regulations of each operation, and use this as the foundation to improve each business and reduce the occurrence of external risks. Regarding major violations, NPC defines these as illegal incidents where fines exceed NT\$1 million.

Focus Events

In 2024, two fire incidents occurred at NPC with no casualties. Among them, the "Linkou CPP Plant Fire" was classified as a major focus event. No significant incidents occurred at the Taiwan subsidiaries. The causes of the fires and related corrective measures are as follows:

- Linkou CPP Plant: An electrical fire broke out in the cable trough. After the incident, a comprehensive inspection of electrical equipment was conducted, and all combustible materials under the cable trough were removed.
- Hsinkang Copper Foil Substrate Plant I: During the heating process of an electric boiler (in an independent room), a malfunctioning safety valve caused a leak and fire. Measures were implemented to strengthen pre-, mid-, and post-startup inspections to thoroughly prevent recurrence.

In addition to internal promotion of lessons learned from the above cases, the Company has strengthened emergency response training for on-site personnel to improve disaster response capabilities, and has carried out comprehensive inspections to prevent similar incidents from recurring.

Regulatory Compliance

Environmental Regulations (E)

NPC's production and sales operations are conducted under the laws and regulations. We continue to develop environmentally friendly products that comply with EU's RoHS, REACH, and other environmental regulations and either meet Green Building materials standards or can be used as Green Energy applications. The Company hopes to safeguard the health and safety of customers while contributing to the sustainable development of the environment.

Social Regulations (S)

NPC values the rights of its employees and continuously ensures diligent workplace safety management. All business operations comply with the Labor Standards Act, and the company has implemented several improvement projects that exceed regulatory requirements. These include offering health check-up leave, installing movable safety barriers (guards) in process areas, and implementing interlock devices in restricted access zones. These measures aim to provide a healthy and safe environment that fosters employee well-being.

Corporate Governance (G)

Product Labeling Labeling NPC's product information meets statutory requirements and the requirements from the Industrial Development Bureau, MOEA. The label "Not fit for human and animal consumption" is marked on the outer packaging and product delivery note of specific non-food additives products.

Data Protection NPC has established the "Regulations Governing Personal Information Management", which requires all relevant departments to list personal data management as a self-inspection item. Only authorized personnel are allowed to browse employee or customer information. Any personnel that wish to access such information due to business needs must sign the "Application Form for Personal Information collection, processing and use", while verification has to be carried out to ensure that such application complies with the regulations before access may be granted. The method of such access is also strictly regulated.

◆ Environmental Compliance

In 2024, NPC and its Taiwan subsidiaries received eight environmental violation fines (one under appeal). The main causes and corrective measures are summarized as follows:

- **Main Causes:** Two cases related to fire incidents, four cases due to human operational errors, and two cases stemming from gaps in regulatory understanding.
- **Corrective Measures:** Conducted thorough root cause analysis of fire incidents and carried out comprehensive inspections of similar installations for improvement; reviewed the causes of human errors, developed case study materials for abnormal events to strengthen employee training, and promoted digitalization by implementing computer-based fail-safe controls.

Overview of Environmental Regulatory Compliance by NPC and its Taiwanese Subsidiaries				
Scope	Type	2022	2023	2024
NPC	Air Pollution	0 case/NT\$ 0	1 case/NT\$ 100,000	4 case/NT\$ 5,400,000
	Water Pollution	0 case/NT\$ 0	0 case/NT\$ 0	1 case/NT\$ 74,750
	Waste Pollution	1 case/NT\$ 60,000	0 case/NT\$ 0	1 case/NT\$ 6,000
	Others	1 case/NT\$ 500,000	2 cases/NT\$ 360,000	1 case/NT\$ 300,000
Subsidiaries	Air Pollution	0 case/NT\$ 0	0 case/NT\$ 0	0 case/NT\$ 0
	Water Pollution	0 case/NT\$ 0	0 case/NT\$ 0	0 case/NT\$ 0
	Waste Pollution	0 case/NT\$ 0	0 case/NT\$ 0	1 case/NT\$ 60,000
	Others	0 case/NT\$ 0	0 case/NT\$ 0	0 case/NT\$ 0
Total		2 cases/NT\$ 560,000	3 cases/NT\$ 460,000	8 cases/NT\$ 5,840,750

◆ Social Regulatory Compliance

In 2024, NPC and its Taiwan subsidiaries received a total of eight violation fines related to social regulations. The main causes and corrective measures are summarized as follows:

- **Labor Standards Act cases:** Instances included situations where employee absences could lead to negative wage balances, with absence deductions made directly from salaries, resulting in wages not being fully paid. To prevent recurrence, the Company will strengthen prior communication with employees to avoid unnecessary labor disputes caused by misunderstandings, and will adjust relevant rules or practices in line with regulatory requirements.
- **Occupational safety and health cases:** These included four incidents of non-compliance with SOPs, one case of inadequate procedures for abnormal situation handling, and one case of insufficient preventive measures against potential hazards. Corrective actions have since been taken, including reviewing and improving equipment safety protections and personal protective equipment, developing accident case materials for training and awareness across all plants, and imposing disciplinary actions on responsible personnel as a warning (see Section 4.2.1 Workplace Safety Management, p.103).

Overview of Social Regulatory Compliance for NPC and Taiwanese Subsidiaries				
Scope	Type	2022	2023	2024
NPC	Labor Standards Act	0 case/NT\$ 0	1 case/NT\$ 20,000	1 case/NT\$ 50,000
	Workplace Safety and Health	8 cases/NT\$ 660,000	3 cases/NT\$ 310,000	5 cases/NT\$ 460,000
Subsidiaries	Labor Standards Act	0 case/NT\$ 0	4 cases/NT\$ 110,000	1 case/NT\$ 20,000
	Workplace Safety and Health	0 case/NT\$ 0	1 case/NT\$ 100,000	1 case/NT\$ 100,000
Total		8 cases/NT\$ 660,000	9 cases/NT\$ 540,000	8 cases/NT\$ 630,000

1.3 Essential Risk Management

1.3.1 Risk Management Promotional Organization and Identification Process

NPC set up the "Risk Management Promotional Team" and was proved by the Board of Directors on December 16, 2020 to formulate the Company's risk management policies. The Company hopes to enhance the awareness of all employees through these procedures. This will allow the Company to maintain risk at tolerable levels, ensure the completeness and reasonableness of risk management, and maximize benefits.



"Risk Management Promotional Organization" on NPC's website

◆ Risk Management Process



Identification and Evaluation

According to the degree of impact on stakeholders, it is divided into environmental, social, and corporate. The three aspects of governance are risk identification.



Control and supervision

Process and procedure of internal control is formulated according to risk issues and will be monitored continuously.



Report and Disclosure

The operating status of risk management will be reported to the Board of Directors at least once a year and the relevant risk management policies will be published on NPC's website.



Performance Management and Improvement

The performance of risk issues will be tracked, recorded and will be adjusted and improved timely.

1.3.2 Operational Risk Evaluation and Response Measures

The Company's "Risk Management" has identified 22 risks, including "climate change", in 2024 (7 risks in environmental aspect, 4 risks in social aspect, and 11 risks in corporate governance). Please refer to "Risk Management" on NPC's website for the management strategies, mitigation measures, and management departments of various risks.



"Risk Management" on NPC's website

NPC's Major Risk Issues in 2024



Environmental (E)

Climate change*, Greenhouse gas management*, Air pollutant management*, Waste management*, Controlled chemical substance management*, Water resource management*, Energy management*



Social (S)

Human rights and talent retention* (including employee benefits and compensations), Occupational health and safety*, Industrial and public safety*, Epidemic risk



Corporate Governance (G)

Ethical business management*, Legal compliance*, Changes in interest rates, Changes in exchange rates, Loaning of funds, Endorsements/ guarantees, Derivative transactions, Supply interruptions, Market risk (e.g., US-China trade conflicts, ECFA termination), Equipment maintenance, Information security threats

Note: Risk items that are both major sustainability issues of the Company are marked with "*".

1.3.3 Information Security Management

To ensure information security, NPC has established relevant policies and regulations, and through various preventive measures and drills, strengthened its operational systems to safeguard trade secrets and maintain information security when employees, customers, and suppliers engage in business interactions.

◆ Information security policy goals

Stable	Ensure the continued operation of the Company's business operations and the safe and stable use of information services provided.
Secure	Ensure the confidentiality, integrity and availability of the information assets held by the Company, and protect the security of business secrets.
Aligned	Introduce international information security certification to comply with regulations and standards of international markets.

◆ Information Security Risk Framework

NPC has appointed both a Chief Information Security Officer and an Information Security Manager within the President's Office, and established a cross-division Information Security Management Team to ensure effective implementation of information security practices across all business units.

The President's Office is responsible for planning and formulating information security operating procedures and management policies. The Information Security Management Team convenes at least once a year (12 meetings were held in 2024) to review and revise management policies and implementation status. In addition to these regular meetings, the Company reports at least once annually to the Board of Directors on implementation progress, with the most recent report presented on June 19, 2024.

◆ Information Security Control Measures and Management Plan

NPC's information security defense strategy maintains a multi-layered defense-in-depth framework to reduce information security risks. The Research and Development Center has implemented the ISO 27001:2022 international information security management system standard, obtaining the certification in May 16, 2024.



NPC joined hands with SGS Taiwan and Chunghwa Telecom to obtain ISO/IEC 27001 Information Security Certification. Photo: Bao Po-Yu, Vice President of SGS (left); Chia-Chau Wu, Chairman of NPC (center); and Chao-Yang Lin, President of Chunghwa Telecom (right).

Information Security Control Measures

Basic Protection

- Access control facilities and CCTV systems are installed in information and communication machine rooms to monitor and record personnel entry and exit.
- Company data centers are equipped with firewalls, and external service systems (such as the official website and e-commerce platforms) are protected with a dual-layer DMZ firewall and a Web Application Firewall (WAF) architecture. Firewall policy rules are spot-checked annually.
- An OT Network Detection and Response (NDR) system has been implemented to collect production equipment network traffic and use AI to detect malicious activities, thereby monitoring overall security risks and exposure levels, improving response speed, and reducing threats.

Multi-layer Fortification

- In addition to basic antivirus and control software, control and filtering mechanisms have been established for employee internet use, email, and network isolation. These include functions for DDoS prevention, Intrusion Prevention System (IPS), malicious URL filtering, and Advanced Persistent Threat (APT) defense, enabling proactive blocking of intrusion attacks.
- A Data Loss Prevention (DLP) mechanism has been implemented to prevent unauthorized transmission or leakage of data via USB devices, internet use, or email.
- To prevent data damage and mitigate ransomware risks, a data backup center has been established to centrally manage offsite backups of the Company's critical business and R&D data.

Awareness Enhancement

- Conduct regular information security awareness programs, including annual information security training and social engineering drills.
- Perform regular external website source code security scans and server vulnerability scans, with improvements made for any identified security flaws.
- Carry out regular internal information security audits and implement corrective actions for any deficiencies identified.
- Require all employees to comply with legal regulations and information security policies, with supervisors monitoring staff compliance and strengthening awareness of information security and legal concepts.

Preventive Practices

- Conducted red-team exercises by engaging third-party professional service providers to identify and remediate vulnerabilities in core systems, strengthen defenses, reduce risks, and ensure effectiveness.
- Implemented annual business continuity drills; in 2024, eight key system drills were completed, and the results met the expected objectives.
- Established standardized procedures for responding to and reporting information security incidents, with tiered handling and countermeasures based on incident severity to prevent escalation of damages.

◆ Strengthen Employee Information Security Awareness

In order to enhance the information security awareness of all employees, a series of information security education training and drills were held in 2024, including:



Online Information Security Training

A total of **10,885** participations and a total of **5,443** training hours.



AEO Supply Chain Security Online Training

A total of **3,495** participations and a total of **1,748** training hours.



Data Management and Security Protection Technologies

A total of **121** participations and a total of **242** training hours.



Employee email social engineering drills

A total of **6,286** participations attended.

◆ Enhancing the Capabilities of Dedicated Information Security Personnel

To strengthen the professional competencies of the Company's information security workforce, in 2024 the Chief Information Security Officer and dedicated staff obtained valid international information security certifications listed by the Executive Yuan Information and Communication Security Committee. These included ISO 27001:2022 Information Security Management System Auditor/Lead Auditor and EC-Council CND (Certified Network Defender).



In 2024, NPC and its Taiwan subsidiaries experienced no major information security incidents.





Product Value Expansion

2

2.1 Brand Management and Customer Relations	44
2.2 Product R&D and Intelligent Applications	47

2-23, 2-24, 2-25

Nan Ya Plastics Corporation is committed to providing customers with diverse and high-quality products, in addition to continuous investment in research and development, utilizing AI and digital transformation technologies to enhance the company's competitiveness and product quality, and ensuring effective management of the supply chain, aiming to bring a virtuous cycle to business partners and contribute to sustainable development for the industry.

Strategy

- Strengthen Research and Development Innovation
- Enhance Customer Service

Strengthen Research and Development Innovation, Enhance Customer Service

2024 Targets

- Strengthen research and development to increase the proportion of differentiated and high-value-added products.
- The cumulative number of approved patents continues to grow.
- Conduct customer satisfaction surveys and review and improve them in a timely manner.
- There have been no major violations (fines exceeding NT\$1 million) related to product labeling, customer privacy rights, etc.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ NPC's research and development expenses exceeded NT\$1.38 billion in 2024, representing a growth of approximately 3.5% compared to 2023.
- ✓ NPC and its Taiwanese subsidiaries have accumulated a total of 1,089 valid patents approved from 2000 to 2024, exceeding the cumulative number of 869 valid patents approved from 2000 to 2023.
- ✓ The overall satisfaction rate in NPC's 2024 customer satisfaction survey was 4.3 points, accounting for 86% of the total score.
- ✓ No major illegal incidents related to product labeling, customer privacy rights, etc. occurred in 2024.

Short-term Targets (2025)

- Strengthen research and development to increase the proportion of differentiated and high-value-added products.
- The number of approved patents continues to grow cumulatively.
- Master AI technology development, optimize existing AI projects, and improve model accuracy and applicability (new target).
- Conduct customer satisfaction surveys, achieving a "total satisfaction" score above satisfaction level.
- No major violations related to product labeling, customer privacy rights, etc. (fines exceeding NT\$1 million) have occurred.

Medium and Long-term Targets (2026-2030)

- Through innovation research and development, as well as customer relationship maintenance, the company aims to grasp market trends and expand potential markets.
- Developing AI technology with a mid-term goal of "introducing generative AI applications and landing large language models (LLM)" and a long-term goal of "constructing a smart factory".



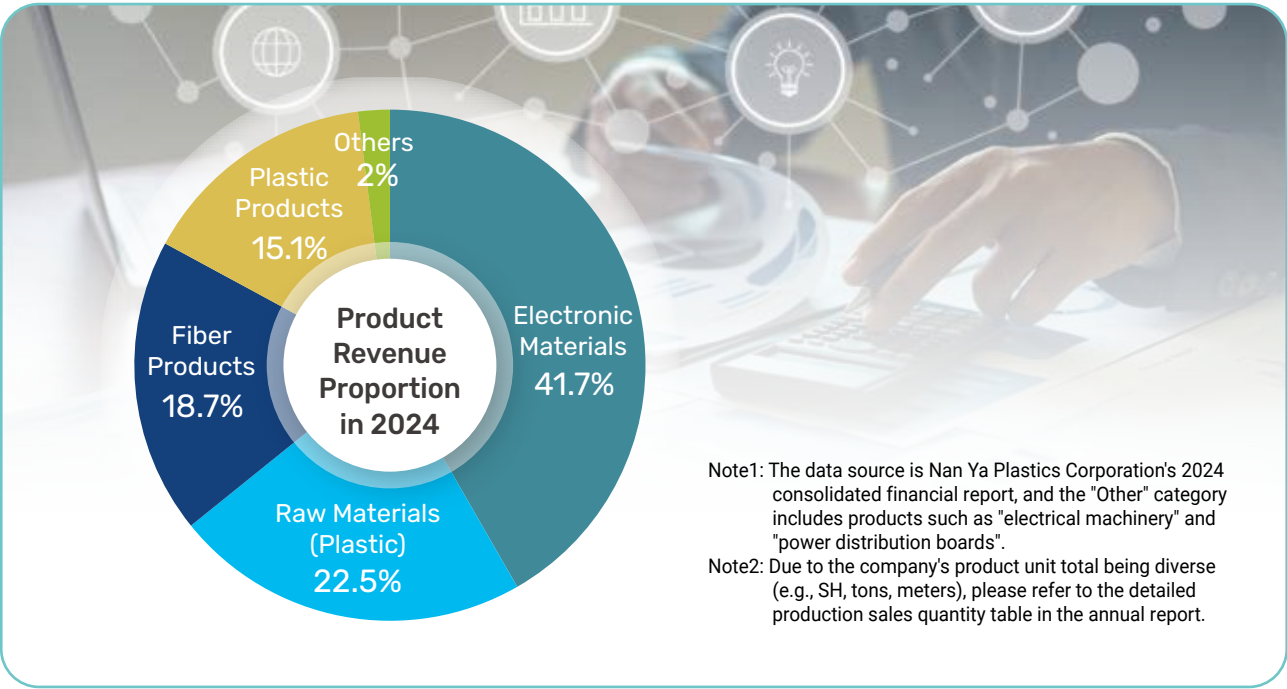
2.1 Brand Management and Customer Relations

2-6

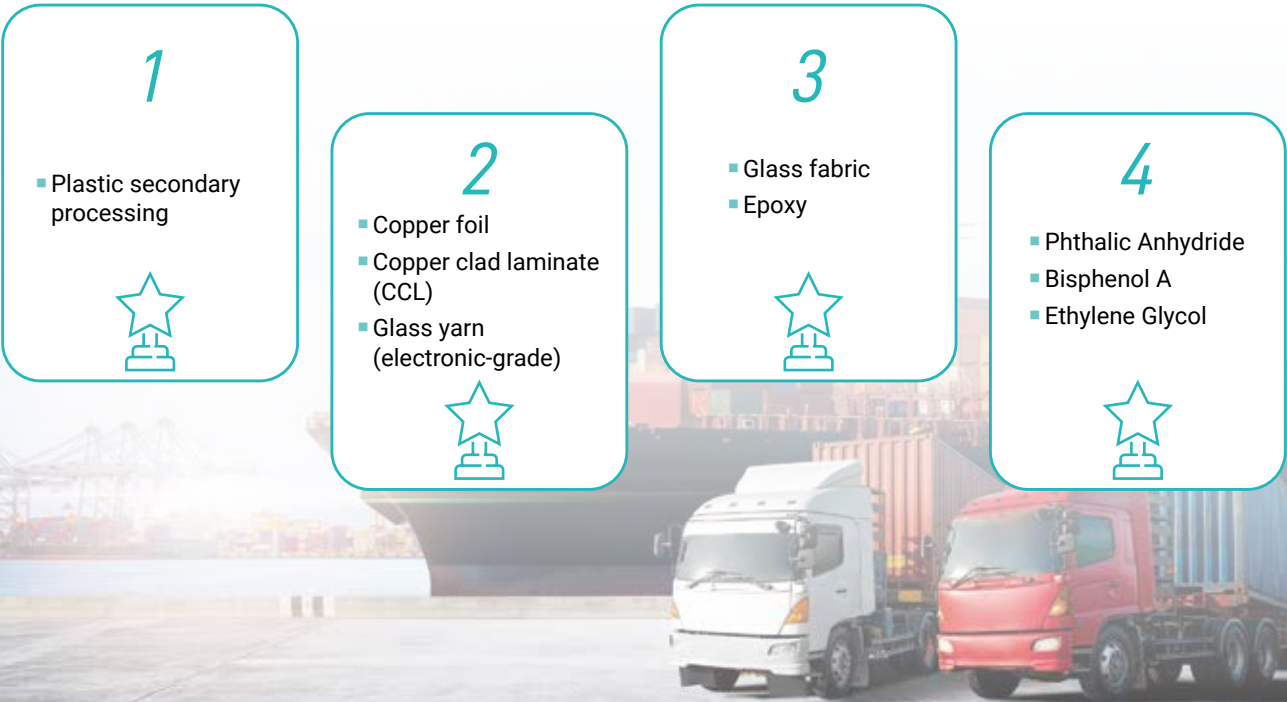


Nan Ya Plastics Corporation Website, "Products"

Nan Ya Plastics Corporation has a diversified product portfolio that includes electronic materials, chemical products, polyester products, plastic products, and electrical components, among others. The company's main products have the following market position (global ranking), with detailed product information available on Nan Ya Plastics Corporation's official website "Product Overview".



◆ Main Products Hold a Leading Position in the Global Market.



2.1.1 Main Brand Introduction

Nan Ya Plastics Corporation's products such as Neuma, SAYA, and others under the Nan Ya brand have been marketed globally through years of effort, establishing a good reputation in the industry (please refer to NPC official website "Nan Ya Brand" for main brands).



Nan Ya Plastics Corporation Official Website "Nanya Brand"

2.1.2 Customer Relationship Management

Nan Ya Plastics Corporation attaches great importance to customers' interests and precious opinions, aiming to improve customer satisfaction not only for the sales department but also as a continuous effort of all employees. As downstream customer business operations run smoothly, it indicates support and affirmation from our company, and we look forward to forming a virtuous cycle with customers, growing together, and pursuing mutually beneficial cooperation relationships.

◆ Good Interactive Mode

To strengthen customer relationships, the sales department conducts regular visits to customers, exchanging opinions on existing or new products and establishing interactive and timely communication channels. Additionally, by participating in product exhibitions and other events, we directly engage with customers to discuss market information and incorporate their feedback into our operations and future improvements.

Stakeholder Engagement and Feedback Mechanism



◆ Customer Feedback Response and Handling

Customer Relationship Management is a crucial element of the company's sustainable operations, and to understand valuable customer opinions, Nan Ya Plastics Corporation has clearly defined customer complaint channels, return and exchange procedures, and compensation application processes as follows:



◆ Customer Satisfaction Survey Model

According to the 2024 customer satisfaction survey results, the overall satisfaction rate reached 4.3 points, accounting for 86% of the full score. Six items performed above the "satisfaction" benchmark, with some company product prices failing to meet customer expectations, mainly due to customers' perception that the company's product price response amplitude did not meet their expectations during the market raw material price adjustment period. The company will continue to strive for cost reduction while maintaining product quality and feedback the achieved results to customers.

Customer Satisfaction



Nan Ya Plastics Corporation Customer Satisfaction Survey over the past 3 years								
Year	Technical Research	Service Attitude	Brand Image	Product Delivery Schedule	Product Quality	Product Features	Product Price	Overall Satisfaction
2022	4.3	4.5	4.4	4.3	4.3	4.3	3.7	4.3
2023	4.4	4.5	4.4	4.3	4.4	4.4	3.8	4.4
2024	4.3	4.5	4.4	4.3	4.4	4.3	3.8	4.3

Note: 5 points indicate very satisfied, 4 points indicate satisfied, 3 points indicate no opinion, 2 points indicate dissatisfied, and 1 point indicates very dissatisfied.



2.2 Product R&D and Intelligent Applications

2.2.1 Innovative and Environmentally Friendly Products

◆ Product Research and Development Innovation Management Process

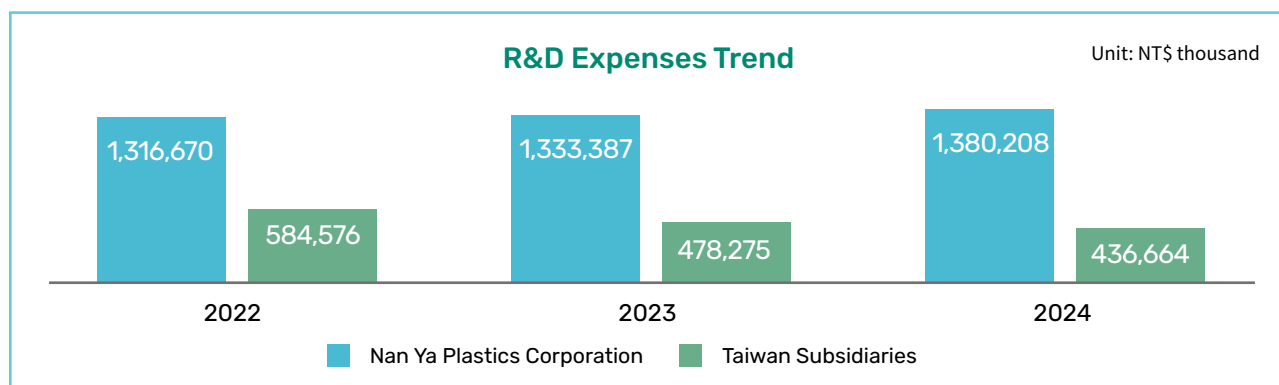
Nan Ya Plastics Corporation strengthens the promotion of R&D innovation by setting up independent research and development centers, in addition to having development teams, technical departments, and technical courses established within each business unit. The company adopts an operational model that integrates technology and market information, collaborates with domestic and foreign partners, and actively develops technological innovations, developing and expanding new markets (please refer to the Nan Ya Plastics Corporation official website "R&D Innovation Management" for detailed information on organizational roles and R&D operating models).



Nan Ya Plastics Corporation
official website "R&D
Innovation Management"

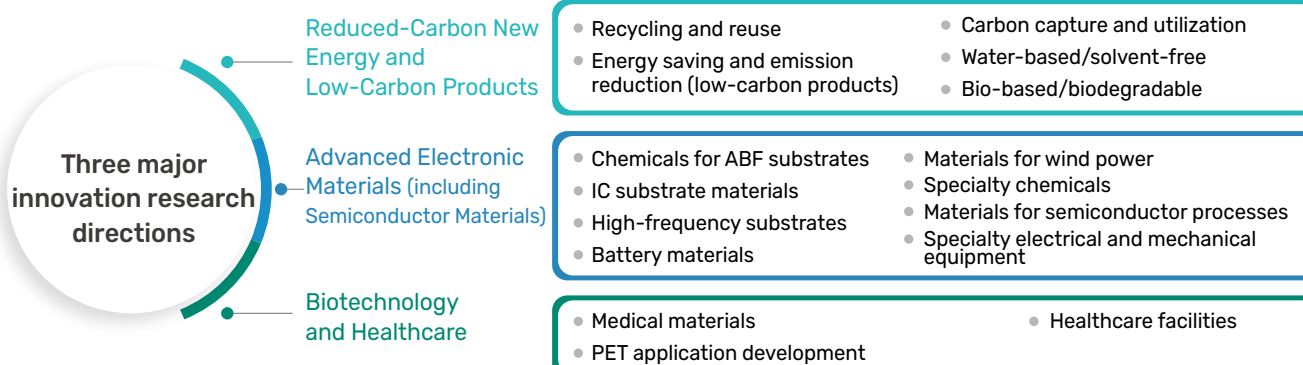
◆ R&D Investment

Nan Ya Plastics Corporation has acquired various trial production equipment and precision analytical instruments, which not only reduces the cost of raw materials used in the direct launch of new products but also provides small sample quantities for customer evaluation, thereby shortening the research and development cycle. The company's R&D expenditure over the past three years is as follows:



◆ Innovation Research and Product Application

Nan Ya Plastics Corporation's products encompass plastics, chemicals, electronics, and fibers, categorized by product type into: plastic products, chemical products, electronic materials, artificial fibers, electrical and power equipment, etc. In recent years, in addition to implementing industrial 4.0 intelligent factories on production lines, the company has also been working on innovative product development directions in line with government policies, including biotechnology and healthcare, carbon reduction new energy and low-carbon products, high-end electronic materials (including semiconductor materials), among three major innovation research directions, covering 16 research areas, and future planned investment projects can be referred to in the company's annual report P.190-192.

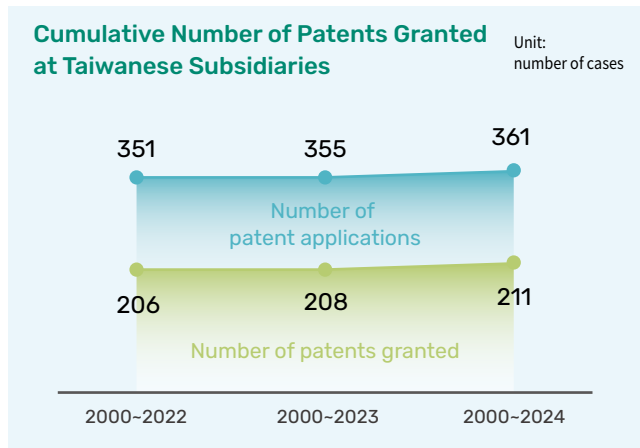
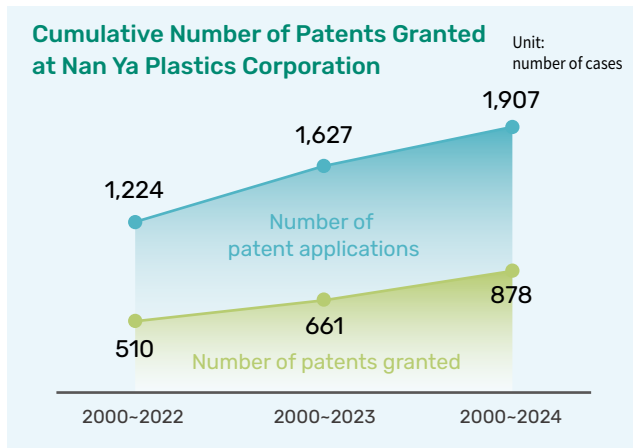


◆ Protection of innovative R&D patents and intellectual property rights

Nan Ya Plastics Corporation has established the "Research and Development Management Regulations" and "R&D Personnel Research and Development Achievement Award Regulations" to encourage innovation and strengthen intellectual property rights protection. It has introduced knowledge management technology platforms, enhanced R&D innovative capabilities, and implemented various protective measures for patents, trademarks, and business secrets. The company uses digitalized management systems to reduce the risk of harm and reports its intellectual property management operations to the board of directors at least once a year. For detailed information, please refer to Nan Ya Plastics Corporation's official website "Intellectual Property Management". Additionally, please see the diagram illustrating the innovation and R&D patent achievements over the years.



Nan Ya Plastics Corporation Official Website "Intellectual Property Management"



Important Research Achievements in 2024



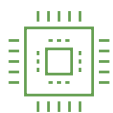
Biotechnology and Healthcare

- **Medical Materials:** Medical-grade TPU pellets, PVC pellets for medical devices, leukocyte-reduced blood bags, surgical-grade anti-adhesive membrane, cell culture bags, dental socket regeneration membrane, cell preservation bags, healthcare-grade plasticizers.
- **Health Facilities:** Whole-body wellness baths, foldable modular rooms, health chairs.
- **PET Application Development:** Vacuum-sealed blood vessels, medical-grade polyester pellets.



Low-Carbon New Energy and Low-Carbon Products

- **Recycling and Reuse:** r-PET UP resin, GRS-Certified Recycled Engineering Plastic Pellets, PC recycled low-carbon BPA, textile recycling technology, continuous chemical recycling pellets (continuous process chemical recycling pellets), single-material packaging heat-resistant BOPP film, PET bottle recycling (PET bottle recycling polyethylene terephthalate film/ release liner), Low-Carbon Extruded Products.
- **Energy Saving and Emissions Reduction (Low-Carbon Products):** Anti-corrosion and thermal insulation coatings, carbon fiber composite materials, differentiated window frames, energy-saving films, lightweight plastic pallets, printing-grade foam paper, EG plant power utilization rate and by-product revenue enhancement, energy and electric vehicle products, thick transparent soft PVC film, inkjet pressure-sensitive materials, high-value SMC products, food-grade PO packaging film, TPU release beads, ethylene oxide resin, industrial-grade textiles, fine denier PET fibers, high-transparent polyethylene terephthalate pellets, TPEE elastic fibers, strong twisted yarns, woven elastic fabric, high-crystalline polyethylene terephthalate (high-crystallinity polyethylene terephthalate), non-crystalline copolyester (non-crystallinity copolyester), heat-resistant polyethylene terephthalate film, heat-resistant release liner, polarized plate base material, differentiated high-quality membrane materials (differentiated high-quality membrane materials), moisture-absorbing MOFs adsorbent.
- **Carbon Capture and Reuse:** Low-carbon 2EH, US EG plant carbon sequestration, waste heat recovery system.
- **Water-based/ Solvent-free:** Hot-melt adhesive for footwear, low-VOC PU leather, low-carbon low-VOC odorless TPO materials.
- **Biodegradable/Biodegradable:** Biodegradable high-solid resin, biobased PVC film, furfural FDCA, biodegradable diol, CiCLO degradable cotton, low-carbon biodegradable polyethylene terephthalate pellets, biodegradable ethylene glycol, waistcoat phenolic resin/dispersant.



High-end Electronic Materials (including semiconductor materials)

- **Chemicals used by ABF:** Adhesive cleaning solution, green paint protective coating, special stripping liquid, green paint developer additive, rapid etching additive, and super-fine chemical solution.
- **IC substrate materials:** Substrate processing materials, IC substrate resin, active ester hardener, low-shrinkage fiberglass cloth, low-shrinkage fiberglass yarn, and diamine resin.
- **High-frequency substrates:** Copper foil for separation, copper foil for soft boards, low-dielectric fiberglass cloth, quartz fiber cloth, low-dielectric fiberglass yarn, ultra-fine fibers, SMA (styrene-maleic anhydride), high-frequency/high-speed copper foil substrate resin, and high-phosphorus hardener.
- **Materials used in semiconductor processing:** Protective coatings for semiconductors and electronics, CMP post-cleaning solution, fluorinated plastic tubing, wafer development pads for crystal growth, laser cutting protection liquid for encapsulation, and cutting cleaning solution.
- **Battery materials:** Copper foil for solid-state batteries, solar power systems.
- **Wind turbine materials:** Functional hardener, heavy-duty resin formulation, composite material resin, silicone-based resin mixture (#696), woven fabric, special weave fiberglass cloth.
- **Special chemicals:** G2 electronic-grade hydrogen peroxide, electronic-grade nitrogen gas, electronic-grade liquid CO₂, solid/solvent-type additive resin, ethylene carbonate (EC), dimethyl carbonate (DMC), EOD (epoxyethane EO derivative), and low-chlorine epoxy resin.
- **Special electrical equipment:** Electronic-level mold development, server immersion cooling system development, H-level mold casting transformer development, high-voltage power switch development, logistics automation system technology integration, and environmental gas power switch.

◆ Encourages innovative R&D high-performing teams

Formosa Plastics Group establishes various research and development incentive measures to encourage R&D work, targeting patent applications, certifications, and significant benefits from key products or derivative patents within NPC and other companies. The corporation holds an annual "Formosa Plastics Group Applied Technology Symposium" where it invites representatives from each department to participate in a research competition and result presentation. A professional jury publicly commends outstanding R&D achievements and awards prizes to departments, fostering mutual exchange and growth among companies and stimulating innovative research capabilities.

◆ Green Environmental Protection and Innovative Products

NPC attaches great importance to customer health and safety, continuously improving production processes (such as reducing hazardous ingredients, energy conservation and carbon reduction, and developing green products), and cooperating with market trends and downstream customer demands to develop towards producing non-toxic, environmentally friendly, improved production processes, and green energy products. The company develops and summarizes its green and environmentally friendly products in eight major aspects: "energy efficiency", "emission reduction", "waste reduction", "water conservation", "non-toxicity", "health", "recycled products", and "safety". Among them, the estimated carbon reduction effect of energy-saving and carbon-reducing products is approximately 85,534 tons by 2025 (mainly due to the recycling of PET bottles, with an estimated carbon reduction benefit based on the difference in carbon emission coefficients between recycled pellets and virgin pellets). The following are new items added in 2024 (please refer to Nan Ya Plastics Corporation's official website "Green Environmental Protection and Innovative Products" for complete product information):



Nan Ya Plastics Corporation Official Website
"Green Environmental Protection and Innovative Products"

Solution	Main Products	Environmental Benefits Explanation
Water Conservation	<ul style="list-style-type: none"> ▪ Original Liquid Dye Polyester Fiber 	Compared to traditional dyeing, the water usage can be reduced by up to 94% with this method. It achieved the goal in 2024.
Non-toxic	<ul style="list-style-type: none"> ▪ Electric PVC tape sheet ▪ PET film ▪ BOPP film ▪ PE film 	<ul style="list-style-type: none"> ▪ The PVC sheet used in electrical applications does not contain heavy metals and complies with the RoHS regulation. ▪ The materials such as PET film, BOPP film, and pearl paper do not contain heavy metals and comply with the RoHS regulation, and they will not produce hazardous substances when burned.

Solution	Main Products	Environmental Benefits Explanation
Non-toxic	<ul style="list-style-type: none"> ■ Unsaturated polyester resin ■ Non-loaded board ■ Non-loaded board substrate 	To meet the high-frequency and low-loss substrate production requirements, while also requiring a halogen-free environmental requirement.
Recycled Products	<ul style="list-style-type: none"> ■ Bioplastic bottle non-woven fabric ■ R-APET ■ Regenerated polyester pellet ■ Regenerated polyester long fiber (processed yarn, raw sheet) ■ Regenerated polyester short fiber (cotton) ■ Regenerated polyester film 	<ul style="list-style-type: none"> ■ After collecting PET bottle flakes, discarded textile products, and industrial PET film, we produce recycled polyester pellets through a recycling process. In 2024, this initiative is expected to reduce carbon emissions by approximately 78,525.8 tons. ■ The collected PET bottles are reprocessed into polyols. Polyols and diisocyanates are then used to manufacture TPU gel particles and fabrics for products such as hot-melt adhesives and synthetic leather, which can achieve a 20% reduction in carbon emissions and meet the demands of recycling and environmental sustainability.
	<ul style="list-style-type: none"> ■ Recycled Polyester Pellets (PET Industrial Material Recycling Application) 	Recycled PET industrial materials, re-manufactured PET pellets, show a significant reduction in CO ₂ emissions compared to traditional petrochemical manufacturing processes for PET pellets, with an emission reduction effect of approximately 86.2% to 95.67%. In 2024, this is expected to reduce carbon emissions by 349.6 tons .

◆ Environmental Friendly Promotion Project

1 Single-material design and development

Combining with international brands of various industries through leasing, renting, or exchanging old for new products to ensure single-source materials; integrating the capabilities of flagship brand marketing and design to guarantee sustainable promotion of single materials. Leveraging Nan Ya Plastics Corporation's diversified advantages in plastic processing, there is a potential opportunity to become Taiwan's first green gold recycling company.

To drive the collaborative impact of circular economy in the supply chain, related raw materials are provided by Formosa Plastics Corporation. Internal vertical integration develops production chains to co-create sustainable recycling values. Nan Ya Plastics has developed single-material CPP film, BOPE film, and heat-resistant BOPP film for customers to process composite packaging materials with a single material, continuously expanding applications.

Orientation	Product Development	Implementation Process and Methodology
Development of Modified Polyester Pellets (Material Simplification)	Blinds	Collaboration with domestic window screen manufacturers to replace non-recyclable materials with upgraded PET, producing polyester fabric window screens.
	Apparel/ Packaging	Development of accessories for traditional clothing bags, such as zippers and buttons, using non-PET materials has been adopted. After recycling, manual removal is required. To simplify the recycling process, we are developing modified polyester particles that can be used to make accessories with a single material composition, which will facilitate product verification in the fashion bag industry.
	Polyurethane sports shoes	Current sports shoes are produced using different functional materials, which are bonded together with adhesives. By developing foamable, heat-bonded, and elastic modified polyethylene particles, we can utilize existing processes to convert the entire shoe into a single material, making it easier to recycle.
	Luggage	Using modified PET pellets to replace commercially available PC and ABS pellets, and utilizing traditional techniques to produce luggage shells. Modified polyester pellets are also used for accessories to completely replace non-PET materials such as zippers, handles, and wheels. Certified by SGS to meet luggage specifications, this design allows the luggage to be easily recycled after removing the aluminum alloy trolley handle.
Single Packaging Film	Packaging bag	Functional packaging films based on quality and preservation considerations require high water vapor barrier properties and oxygen barrier properties. Using different material films for lamination causes recycling difficulties, therefore, we have developed a single-material packaging film (high-barrier BOPP/BOPE film) to facilitate future recycling and reuse.

Expected Outcomes

► Material singleization of products can drive the convenience and efficiency of value chain recycling, while single-material packaging (PP or PE) can be recycled, with an initial estimate of reducing packaging waste by **25%**, achieving the characteristic of raw material circulation utilization.

2 NPC's recycled PET bottle production reaches 8 billion units, reducing carbon emissions by 72% compared to virgin materials.

Nan Ya Plastics Corporation has been committed to the concept of protecting the earth and sustainable development. Since 2007, the company has focused on recycling and reusing post-consumer PET products such as plastic bottles, and developing eco-friendly and sustainable products with full force. Meanwhile, it continues to expand its production lines. By 2025, Nan Ya aims to achieve a sales volume of recycled material-based products in Taiwan reaching 79% of that of virgin material-based products.

Driving Performance

NPC collected **8 billion** PET bottles in 2024, reducing carbon emissions by **172,000** tons per year.

Recycled PET bottles **90%** Used in high-tech production of **long-fiber polyester** with high added value

By replacing virgin polyester pellets with pellets recycled from PET bottles, the carbon emissions from the original manufacturing process can be reduced by **72%**.

Historical Recycling Quantities and Carbon Emissions Reductions

2022



Recycling Quantity

88,140 tons
7 billion PET bottles

Recycling volume can circle the Earth **120** times



Carbon Emissions Reduction Amount

152,042 tons

The carbon sequestration of **390** Daan Forest Parks

2023



Recycling Quantity

80,904 tons
6.4 billion PET bottles

Recycling volume can circle the Earth **110** times



Carbon Emissions Reduction Amount

139,559 tons

The carbon sequestration of **358** Daan Forest Parks

2024



Recycling Quantity

99,990 tons
8 billion PET bottles

Recycling volume can circle the Earth **136** times



Carbon Emissions Reduction Amount

172,483 tons

The carbon sequestration of **442** Daan Forest Parks

Note1: One ton of recycled products equals approximately 80,000 PET bottles.

Note2: The amount of carbon emissions reduced is equal to the difference between original particle carbon emissions and recycled particle carbon emissions multiplied by sales volume.

Note3: Each ton of recycled PET products can circle the Earth approximately 0.0013596361119351 times; another, the carbon absorption capacity of each Daan Forest Parks is 390 tons CO₂e per year.

3 All types of products with effective recycling serve as a solid foundation for green research and innovation.

Post-consumer PP sheet recycling.

Introduction of recycled PP particles and low-carbon footprint eco-friendly plastic pallets produced within the company, using external procurement recycling PP particles, with a production volume of 13,644 tons in 2024 (accounting for 100.0%), which is approximately 76% lower than that of the original product, with a carbon reduction percentage calculated as [(original product carbon emissions - recycled product carbon emissions) / original product carbon emissions].

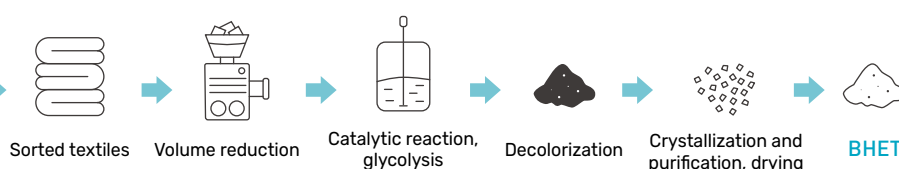
Textile Recycling

Possesses technology for recycling and producing pure PET pellets, fabric, and edge trim, with a monthly production capacity of 1,000 tons before processing and pelletizing. Additionally, has developed advanced depolymerization BHET chemical recycling technology and established a pilot plant to promote large-scale production in the future.

Recycling source



Process



Multilayer Ceramic Capacitor (MLCC) Recycling using Debinding Film.

Customer used materials are originally required to be disposed of, but now Nan Ya Plastics Corporation recycles and processes them to supply raw materials for producing UP resin and polyester cotton products, with a recycling capacity of 600 tons per month, which can also recover domestic MLCC and optical customers' used release films.



2.2.2 Artificial Intelligence (AI) Applications

Nan Ya Plastics Corporation has been constructing an internal AI promotion team since 2018, dedicated to developing relevant technologies and continuously providing various training courses, including internal personnel training, external institution training, and industry-academia collaboration. The team applies related technologies to image defect detection, virtual instrument establishment, and other application fields, aiming to develop operations through process optimization combined with AI technology introduction, enhancing factory automation, digitalization, and intelligence levels, gradually building a smart factory.

◆ Organizational Development

The chairman has appointed the president to serve as the overall coordinator for AI promotion, and the president office, department managers' office, and plant (section) data scientists and process experts have formed an AI promotion team together. Through the division of labor and cooperation between the general manager's office and department managers' AI promotion teams, we aim to accelerate the promotion of AI projects.

◆ Artificial Intelligence (AI) Application Domains and Development Goals:

NPC's current areas of AI application include the following 5 areas:



Development Goals

Vision

Establishing a smart factory with adaptability and resource efficiency.

Expected Benefits

- Focusing on in-depth research and development of 5 major application areas, establish autonomous technologies, and gradually apply AI technology to various management functions.
- Through the integration of software and hardware, enable factories to possess sensing collection, environmental monitoring, internet connectivity, information exchange, manufacturing execution, and decision analysis capabilities.

Artificial Intelligence Five Major Fields

Process Condition Optimization

- Collecting data on process variations and quality changes, identifying key factors.
- Using statistical analysis or AI-related algorithms to find the optimal operating conditions, assisting in decision-making judgments.

Benefits in 2024

- Completed **17** projects in 2024, with a total benefit of NT\$**72,924** thousand.
- From 2019 to 2024, a total of **153** projects were completed, with a total benefit of NT\$**1,161,546** thousand.

Artificial Intelligence Five Major Fields

Operational Process Optimization

- Establish production and sales intelligent scheduling.
- Image recognition-assisted occupational safety and environmental monitoring.
- Design process optimization.

Benefits in 2024

- 2024 completed **14** projects, with a total benefit of NT\$**13.316** million.
- Completed **25** projects from 2019 to 2024, with a total benefit of NT\$**43.733** million.

Quality Prediction (Virtual Analysis Tool)

- Establish a quality prediction model based on process data.
- Real-time monitoring of quality variations and adjustments.

Benefits in 2024

- Completed **22** projects in 2024, with a total benefit of NT\$**7,609** thousand.
- From 2019 to 2024, a total of **74** projects were completed, with a total benefit of NT\$**198,700** thousand.

Equipment Status Monitoring

- Apply multivariate analysis methods to establish process or equipment health indicators.
- Predict maintenance cycles.
- Predict equipment lifespan.

Benefits in 2024

- 2024 completed 29 cases, with a total benefit of NT\$19,390 thousand.
- From 2019 to 2024, a total of 88 cases were completed, with a total benefit of NT\$83,927 thousand.

Defect Recognition

- Enhance defect classification accuracy using a CNN model and implement automatic quality grading.
- Trace back production history, connect production conditions to improve them.

Benefits in 2024

- From 2019 to 2024, a total of 57 cases were completed, with an annual benefit of NT\$504,788 thousand. (There were no completed cases in 2024.)
- The accuracy rate of defect classification was increased from 70% to above 95%.

◆ Professional Talent Training

Nan Ya Plastics Corporation is training AI professionals to enhance its internal autonomous development of AI applications, through three major directions: "Taiwan Artificial Intelligence School", "Internal AI-related education and training", and "Industry-academia collaboration". The key points are as follows:



NPC Taiwan Artificial Intelligence School Dispatch

The cumulative number of trainees from 2018 to date.

150 people

Cumulative Training Hours as of 2018

57,600 hours

The number of trainees in 2024.

19 people

Total Training Hours in 2024

7,296 hours

Artificial Intelligence Related Education Training

Cumulative number of events held from 2018 to date.

133 events

Total number of participants from 2018 to date.

4,430 people

Events held in 2024

61 events

The total number of participants in 2024.

2,262 people

Industry-Academe Collaboration

Collaborative Units in 2024	Collaborative Achievements in 2024
Ming Chi University of Technology	<ul style="list-style-type: none">◆ Development of Automatic Object Detection Labeling Technology, Improving the Speed and Consistency of Image Labeling by Business Department Personnel to Enhance Model Development Efficiency.◆ Development of Electronic Copper Foil Luster Prediction Model, Subsequently Judging the Production Yield of Qualified Copper Foils, Reducing Quality Abnormalities, and Increasing Yield by Over 4%.
Chang Gung University	<ul style="list-style-type: none">◆ Regarding the education and training of generative AI applications in program design and retrieval-enhanced generation (RAG) technology.
Formosa Plastics Corporation Electronic Division	<ul style="list-style-type: none">◆ Application of AI technology to optimize the quality performance of hard pipes, optimizing average thickness and thickness variation, improving pressure resistance strength, and reducing production material consumption.

◆ Performance and Overview of AI Execution

As of the end of 2024, our company has implemented a total of 696 AI projects (completed and ongoing), with an estimated investment of NT\$645,018,000 and an estimated annual benefit of NT\$2,803,759,000. The key points are as follows:

Item	Case Number	Investment Amount	Annual Benefit
Completed	397 cases	NT\$553,780,000	NT\$1,992,694,000.
In progress	299 cases	NT\$91,238,000	NT\$811,065,000
Total	696 cases	NT\$645,018,000	NT\$2,803,759,000

Green Environmental Management Promotion

3



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To pursue environmental sustainability, Nan Ya Plastics Corporation actively manages the environmental impact of all its operational processes. The company is fully committed to promoting water and energy conservation projects and integrating the circular use of raw materials, energy resources, and waste across its facilities. This is done to avoid or mitigate environmental impact risks. Furthermore, the company sets goals to review the results of its sustainability performance, fulfilling its responsibility for green production.

Strategies

- Implementing Circular Economy - Introducing single-material design to improve recycling efficiency, reduce waste at the source, and promote resource utilization.
- Mitigating Climate Change Risks - Promoting energy transformation, improving energy resource utilization efficiency, integrating across plants, increasing renewable energy usage, and applying carbon capture technology.
- Complying with Environmental Regulations - Implementing air pollution management, achieving zero environmental non-compliance.

Material topics

- Climate Change Mitigation Strategy,
- Air Pollution Management,
- Circular Economy Promotion,
- Water Resource Management,
- Waste Management,
- Energy Management

Promoting Circular Economy

2024 Targets

- Continuously promoting energy-saving and water-conserving measures, the company's total water consumption, steam consumption, and electricity consumption have decreased compared to 2023.
- Each site compares its unit product usage with that of the previous year, achieving a 2% reduction in water consumption, a 3% reduction in energy consumption (steam, electricity, and fuel), and a 1% reduction in waste.
- Increase rainwater harvesting and wastewater reuse across all facilities.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ Compared to 2023, water usage decreased by 17.0%, steam consumption decreased by 14.3%, and electricity consumption decreased by 9.4%.
- ✓ Compared to 2023, the Mailiao site reduced its water consumption per unit of product by 10.9%, steam consumption per unit of product by 8.1%, and electricity consumption per unit of product by 2.8%.
- Compared to 2023, the fuel consumption increased by 2.8% due to reduced capacity and continuous operation of utility facilities at the Mailiao site. Waste increased by 95.3%, primarily because of an increase in fly ash and bottom ash from assisting local governments in treating municipal waste.
- ✓ In 2024, rainwater collection volume increased by 515 tons per day compared to 2023, primarily due to the 13.5% increase in rainfall in 2024.
- The wastewater collection volume was 584 tons per day in 2024, as a result of decreased production utilization rate, leading to reduced waste generation and lower collection volume.

Short-term Targets (2025)

- Continuous promotion of energy-saving and water-conserving measures, the company's total water consumption, steam consumption, and electricity consumption have decreased compared to 2024.
- Each year, the Mailiao site compares the unit product consumption with that of the previous year, showing a decrease in water consumption by 2%, energy consumption (steam, electricity, and fuel) by 3%, and waste reduction by 1%.
- Individual units increase rainwater collection and wastewater reuse quantities.

Medium and Long-term Targets (2026-2030)

- Continuous promotion of water conservation, energy saving, carbon reduction, and waste reduction operations to improve rainwater storage utilization rates.
- Continuous introduction of new technologies to increase rainwater collection quantities and wastewater reuse rates.

Reduce Climate Change Risks

2024 Targets

- Completed verification of 2023 greenhouse gas emissions and third-party external audit, ensuring accuracy.
- Greenhouse gas emissions decreased by 2.5% or greenhouse gas intensity (greenhouse gas emissions/NPC's individual revenue) compared to the previous year.
- In addition to meeting regulatory requirements, we will continue to plan and set up renewable energy equipment.
- Maintained a "Leadership Level" rating in the 2024 Carbon Disclosure Project (CDP) questionnaire for "Climate Change" and "Water Disclosure".
- Published Nan Ya Plastics Corporation's 2023 TCFD report.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ Nan Ya Plastics Corporation has completed its 2023 greenhouse gas emissions verification and third-party external audit, confirming the results.
- ✓ Nan Ya Plastics Corporation's 2024 greenhouse gas emissions decreased by 0.02% compared to 2023, with a carbon intensity of 0.302 thousand tons per billion NT dollars, down from 0.315 thousand tons per billion NT dollars.
- ✓ NPC and its Taiwan subsidiaries have registered a total of 15,060.45 KW of renewable energy generation equipment, and have applied for renewable energy certificates. Among them, the company has installed 14,713.02 KW, which meets the mandatory installation capacity for large-scale users.
- ✓ Nan Ya Plastics Corporation received an "A-" (leadership level) rating in the 2024 CDP climate change questionnaire evaluation; and an "A" (leadership level) rating in the water disclosure questionnaire evaluation.
- ✓ Nan Ya Plastics Corporation published its TCFD report in August 2024.

Short-term Targets (2025)

- Completed verification of 2024 greenhouse gas emissions and third-party external audit, ensuring accuracy.
- Greenhouse gas emissions decreased or greenhouse gas intensity (greenhouse gas emissions/Nan Ya Plastics Corporation's individual revenue) dropped by 2.5% compared to the previous year.
- In addition to meeting regulatory requirements, we will continue to plan and set up renewable energy equipment.
- Maintained a "Leadership Level" rating in the 2025 Carbon Disclosure Project (CDP) questionnaire for "Climate Change" and "Water Disclosure".

Medium and Long-term Targets (2026-2030)

- With "Carbon Neutrality by 2050" as the long-term goal, the combined Scope 1 and 2 targets are set as follows, based on different purposes:
 - External commitment: Reduce by 20% in 2025 compared to 2007 and by 35% in 2030.
 - Internal tightening: Reduce by 12.5% in 2025 compared to 2020 and by 25% in 2030.
 - SBTi target: Reduce by 15% in 2027 compared to 2021, and scope3 reduces by 7.4%.
- Promote all Taiwan factories to obtain ISO 50001 Energy Management System certification.
- Continuously review the feasibility of installing solar power or other renewable energy facilities at each site.
- Continuously fill out CDP questionnaires to understand international climate change mitigation trends.

Compliance with Environmental Regulations

2024 Targets

- 2024 Air pollutant emissions decreased compared to 2023.
- The number of environmental fines, reduced to less than half (1 or fewer) of that in 2023.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- The total amount of air pollutants emitted in 2024 increased by 162.16 tons compared to 2023 due to assisting local governments in incinerating household waste.
- In 2024, there were 8 environmental fines issued, an increase of 5 cases compared to 2023, and the issues have been thoroughly investigated; we will continue to strengthen internal management.

Short-term Targets (2025)

- Air pollution emissions in 2025 decreased compared to 2024.
- The number of environmental fines, reduced to fewer than 2 cases.

Medium and Long-term Targets (2026-2030)

- Continuously reducing all types of pollutant emissions.
- Zero environmental non-compliance.

Management of Material Topics [2-23, 2-24, 2-25, 3-3]

Policy Commitment

To pursue environmental sustainability, Nan Ya Plastics Corporation actively manages the environmental impact of all its operational processes. The company is fully committed to promoting water and energy conservation projects and integrating the circular use of raw materials, energy resources, and waste across its facilities. This is done to avoid or mitigate environmental impact risks. Furthermore, the company sets goals to review the results of its sustainability performance, fulfilling its responsibility for green production.

Organizational Vision

Through the guidance of the Board of Directors and the Sustainability Committee, we will implement four major carbon reduction strategies to achieve our goal of carbon neutrality by 2050 and fulfill our environmental protection responsibilities.

Climate Change Mitigation Strategy, Air Pollution Control

GRI 201 Economic Performance, GRI 305 Emissions
SASB Greenhouse Gas Emissions, Air Quality

Management Influence

- The company's strategy for implementing carbon neutrality and innovative research plans helps review the carbon reduction path, and improves external communication.
- Physical and transitional climate risks will increase the operating costs of the enterprise.
- Improving energy efficiency by using alternative fuels, etc., can enhance operational efficiency, and reduce regulatory risks.
- High-carbon-emitting companies will be subject to government regulations, develop and implement carbon reduction plans, or pay substantial carbon fees.
- By optimizing technical processes or other management strategies, reducing air pollution emissions can reduce regulatory fees, and boost brand value.
- Unusual air pollution events will incur additional management, monitoring costs for the enterprise, and affect brand value.

Management Action	2024 Performance Tracking Action Plan	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
Promote various carbon reduction management activities in accordance with short-term, medium-term, and long-term carbon reduction targets, as well as the "Four Major Carbon Reduction Strategies".	Implementation of the "Four Major Carbon Reduction Strategies"	✓	Achieved Carbon Reduction Target	Achieved Carbon Reduction Target
Entrust third-party independent organizations to conduct verification and participate in international assessments such as CDP to review and refine our company's energy-saving and carbon-reducing practices towards the long-term goal of "carbon neutrality by 2050".	Maintained a "Leadership Level" in the CDP Climate Change Questionnaire.	✓	Performance maintained "Leadership Level (A)"	Performance maintained "Leadership Level (A)"
Continuously push forward process optimization, water conservation, and energy-saving improvements, holding regular "Water Conservation and Energy-Saving Effectiveness Review Meetings" to review various response measures and assess execution results.	Annual publication of the TCFD report.	✓	Annual Publication	Annual Publication

Stakeholder Group

Shareholders, customers, supply chains, government agencies, environmental organizations, experts and scholars, local residents.

Engagement Channels and Effectiveness

- In accordance with regulatory requirements, disclose various information in annual reports, sustainability reports, and government open data platforms.
- The 2023 TCFD report was published in 2024, and we will follow a similar approach for 2025.

Energy Management

GRI 302 Energy, SASB Energy Management

Management Influence

- Reducing energy consumption can decrease environmental liabilities and external costs, enhancing corporate competitiveness.
- The process energy intensity is high, and under government regulations, we need to purchase renewable energy or pay a fee, increasing operating costs.

Management Action	2024 Performance Tracking	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
Implement solar power generation systems on the rooftops of buildings in Kaohsiung, Xin Gang, Mailiao, Chang Bin, and Northern sites in stages.	The Company and all of its Taiwanese subsidiaries' plants have completed the installation of 15,060.45 KW of solar energy and have obtained renewable energy generation facility registration certificates. In 2024, a total of 12,206 renewable energy certificates were acquired..	✓	Except for meeting regulatory requirements, we continue to plan and set up renewable energy equipment.	Promoting ISO 50001 energy management system certification across all sites in Taiwan.
Promote energy management system EMS.	The Shulin Plant 1 and Chiayi Plant 1, among other production facilities, have passed the ISO 50001 Energy Management System certification.			

Stakeholder Group

Shareholders, customers, supply chains, government agencies, environmental organizations, experts and scholars, local residents

Engagement Channels and Effectiveness

- Comply with regulatory requirements to disclose various information in annual reports, sustainability reports, and government open data platforms.
- The 2023 TCFD report was published in 2024, and we will follow a similar approach for 2025.

Water Resource Management

GRI 303 Water and Effluents, Water Resource Management

Management Influence

- Reducing water consumption and recycling wastewater can decrease environmental liabilities and external costs, enhancing corporate competitiveness.
- Water-intensive businesses will be regulated by the government and will be required to pay a water consumption fee, which will increase operating costs.
- The quality of discharged water does not meet the discharge standards, posing a risk of punishment, with the most severe consequence being possible operation disruption, resulting in operational losses.

Management Action	2024 Performance Tracking	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
<ul style="list-style-type: none"> Using the World Resources Institute (WRI) water risk assessment and the Available Water Remaining (AWARE) method, we verified the annual water scarcity risk for each sites. For facilities with a higher risk, we are strengthening various water conservation measures. The company has established a "water quality automatic monitoring and transmission system, CWMS" and a "water pollution prevention management system" to ensure that water quality meets regulatory requirements. Water footprint inventory and report entrusted to verification institutions for guidance on inventory and verification. Continuously promote process optimization, water conservation, and energy-saving improvements, holding regular "water conservation and energy-saving effectiveness review meetings" to review various measures and assess execution results. 	<ul style="list-style-type: none"> The international carbon disclosure project (CDP) "water safety" questionnaire maintains a leadership level (A) rating. All effluent from each site meets water quality testing standards, with no illegal incidents occurring. A total of 49 water-saving improvement projects were completed by the company and Taiwanese subsidiaries, with an investment of NT\$2 million and an estimated annual benefit of NT\$4 million. The "water footprint inventory and report" has been entrusted to the SGS verification organization for guidance and verification, with a total water intake of 11,626,969 cubic meters in 2024. 	✓	<ul style="list-style-type: none"> International Carbon Disclosure Project (CDP) "Water Safety" questionnaire, maintaining a "Leadership Level (A)" rating. All effluent from each site meets water quality standards, with no illegal incidents occurring. 	<ul style="list-style-type: none"> NPC's international carbon disclosure project (CDP) "Water Safety" questionnaire maintains a leadership level (A) rating. All effluent from each site meets water quality testing standards, with no illegal incidents occurring.

Stakeholder Group

Shareholders, customers, supply chains, government agencies, environmental organizations, experts and scholars, local residents

Engagement Channels and Effectiveness

- Comply with regulatory requirements to disclose various information in annual reports, sustainability reports, and government open data platforms.
- The 2023 TCFD report was published in 2024, and we will follow a similar approach for 2025.

Waste Management, Circular Economy Promotion

GRI 306 Waste
SASB Hazardous Waste Management

Management Influence

- Increasing the proportion of waste recycling can achieve a circular economy effect, reduce environmental responsibility and external costs, and enhance corporate competitiveness.
- Investing in circular economy and recycling technologies can improve the green product portfolio, reduce costs, increase market exposure for recyclable products, and enhance corporate reputation.
- Poor management of waste will result in additional management and monitoring costs for the company, affect brand value, and may lead to penalties, with the most severe consequence being a disruption to operations.
- If we cannot meet customer requirements by improving green products and recycling technologies, we may not be able to secure orders, increasing operational pressure.

Management Action	2024 Performance Tracking	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
<ul style="list-style-type: none"> Promote circular economy, increase waste recycling ratio. Comply with regulations, promote waste flow tracking and reduce illegal occurrences. Implement operational improvements in line with the 4Rs of circular economy: Reduce, Reuse, Recycle, and Recover. 	<ul style="list-style-type: none"> The company and its Taiwanese subsidiaries generated a total of 108,446.6 tons of waste, with a recycling rate of approximately 61.5%. A total of 347 waste flow tracking checks were completed in accordance with regulations. There were 3 environmental fines issued for violating waste regulations. The company and its Taiwanese subsidiaries completed a total of 488 energy-saving improvement projects, achieving reductions of 14.1 tons/hour in steam consumption, 11.3 thousand kWh/hour in electricity consumption, 18.47 tons/hour in fuel consumption, and 246,000 tons/year in CO₂ emissions, with an investment benefit of NT\$8.2 billion/year. The company and its Taiwanese subsidiaries completed a total of 49 water-saving improvement projects, achieving reductions of 686 tons/day in water usage, with an annual benefit of NT\$400 million/year. 	✓	<ul style="list-style-type: none"> The company and its Taiwanese subsidiaries have achieved a resource utilization rate of 70%. Waste flow tracking has been completed in accordance with regulations. No environmental fines were issued for violating waste regulations. 	<ul style="list-style-type: none"> The company and its Taiwanese subsidiaries have achieved a resource utilization rate of 80%. Waste flow tracking has been completed in accordance with regulations. No environmental fines were issued for violating waste regulations.

Stakeholder Group

Shareholders, customers, supply chain, government agencies, environmental organizations, experts and scholars, local residents

Engagement Channels and Effectiveness

- Comply with regulatory requirements to disclose various information in annual reports, sustainability reports, and government open data platforms.
- The 2023 TCFD report was published in 2024, and we will follow a similar approach in 2025.
- In 2024, Nan Ya Plastics Corporation communicated its sustainability initiatives to several media outlets. For example, the Belgian newspaper Le Soir reported on the development of chemical recycling processes in Taiwan's textile industry, and the Public Television Service program "Our Island" conducted a special report on fabric recycling. We also sponsored the eco-friendly race shirts for the Taipei 101 Vertical Run.



3.1 Commitment to Environmental Protection

Nan Ya Plastics Corporation has consistently adhered to the spirit of environmental protection and industrial development in harmony, persistently pursuing the goal of "zero accidents, ensuring sustainable operations." In addition to publicly declaring its commitment to protecting the environment and maintaining community safety, the company also emphasizes that all employees must enrich their professional skills and consider safety, health, and environmental protection as fundamental factors in any decision-making process. Each individual should take personal responsibility for ensuring safety, health, and environmental protection. Please refer to Nan Ya Plastics Corporation's official website "Environmental Protection Commitment" for more information on the company's environmental protection policy.



Nan Ya Plastics Corporation's official website
"Environmental Protection Commitment"

3.1.1 Occupational Health, Safety, and Environmental Protection Operating Procedures

Nan Ya Plastics Corporation has been committed to implementing environmental protection policies, developing green and environmentally friendly products, and achieving sustainable operations. It actively promotes measures such as "reduction from the source, waste reduction," "introduction of clean production," and "strengthening environmental management systems" to achieve the goal of zero pollution.

Nan Ya Plastics Corporation's Goals

Environmental Case Studies Linkage in 2024.

Research and Development of Green and Environmentally Friendly Products

- ◆ NPC's "SAYA 餘創" has launched Chromuch® water-reducing dyeing original color yarn, the world's first and Taiwan's only to obtain international certification under the "bluesign® standard".
- ◆ "SAYA 餘創" s proprietary BPA- Clear dual phenol A control technology produces low phenol A products (including those with levels below 1 PPM), with a sales volume of 3,613 tons in 2024.

Source Reduction, Waste Reduction

Material usage reduction, green procurement, waste reduction in manufacturing process, pollution prevention, and upstream management of environmental impact.

Recycled Product Development

- ◆ Fabric Recycling: Confirm PET degradation conditions and BHET purification process meet quality requirements at pilot plant.
- ◆ Bottle Recycling: After recycling, replace original polyester pellets with recycled ones, reducing carbon emissions by 72%. (23 qualified suppliers have been developed, with a total capacity of 712,000 tons/year, and available supply of 310,000 tons/year).
- ◆ MLCC (Multilayer Ceramic Capacitor) Film Recycling: Recover 600 tons/month, and recycle 100% of film from domestic MLCC customers, (negotiations have been held with well-known brands in Taiwan, the US, Europe, and Japan for new product applications).

Introduction of Clean Production

Utilizing modernized advanced environmental protection technology, investing in process improvement, and developing the best production processes.

- ◆ Through process operation condition changes, model adjustments, AI, and big data applications, we enhance process efficiency to achieve energy conservation and carbon reduction.
- ◆ We invested NT\$113,556 thousand in 2024 to complete the installation of a 50-ton natural gas boiler at the Shulin Utility Plant, which can reduce carbon emissions by 147,024 tons per year.
- ◆ The Shulin No. 2 Plant and other production plants have obtained the "Green Factory Certification" (green building + clean production evaluation), and we will parallelly promote strengthened clean production management measures for other production plants.

Strengthen Environmental Management System Administration

Deployment of environmental, health, and safety (EHS) personnel, establishment of targets, standard operating procedures (SOP), introduction of an environmental management system, implementation of environmental audits, hosting environmental law case explanation seminars, development of a carbon management platform.

- ◆ Inventory the computerization of various environmental operations to promote e-management and strengthen management effectiveness.
- ◆ Implement internal carbon pricing operations.
- ◆ Strengthen environmental inspections.

3.1.2 Health, Safety, and Environmental (HSE) Organization and Promotion

In 2006, the Formosa Plastics Group established the "Energy Saving, Carbon Reduction, and Pollution Control Promotion Organization" to collectively advance water and energy conservation and pollution control improvements across all its companies. Furthermore, Nan Ya Plastics Corporation's president office has established the "Safety and Health Department" and the "Resource Recycling Department" to manage company-wide safety, health, and environmental affairs. An audit team is also staffed to handle audits, track improvements, and perform inspections at the plants. Each business division and production plant is also equipped with safety, health, and environmental management personnel to supervise and coordinate various related tasks. For details on Nan Ya Plastics Corporation's safety, health, and environmental system organizational structure and the environmental management system certifications it has obtained, please refer to the "Safety, Health, Environmental Organization and External Certification" section on the Nan Ya Plastics Corporation's official website.

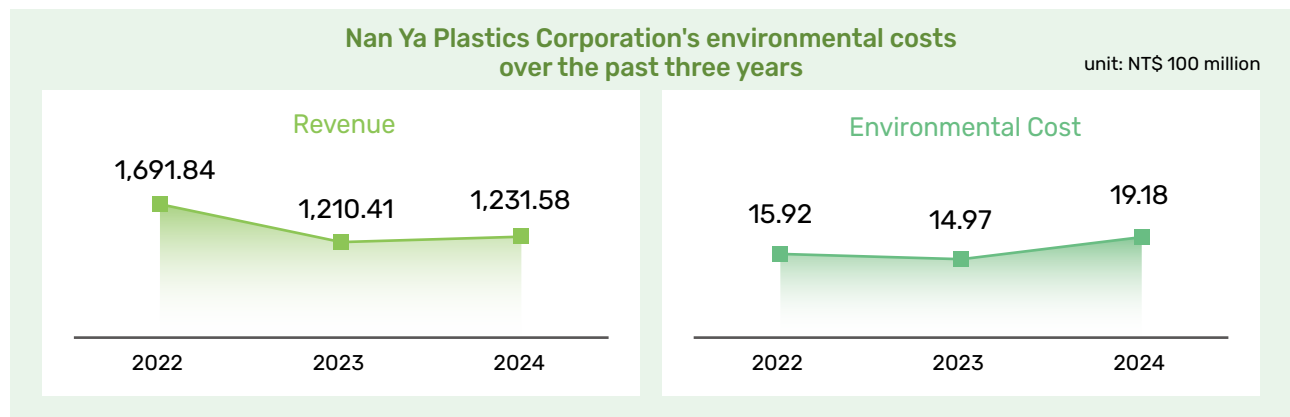


Nan Ya Plastics Corporation's official website
"Safety, Health, Environmental Organization and External Certification"

3.1.3 Environmental Expenditures

◆ Environmental Accounting

Nan Ya Plastics Corporation defines environmental costs as direct or indirect costs related to the environment, with a total expenditure of NT\$ 1.918 billion in 2024. Of this amount, approximately NT\$ 0.897 billion was spent on pollution prevention and control measures, accounting for 46.77% of the company's environmental costs.



Note : (1) Revenue data source is "Nan Ya Plastics Corporation's individual financial reports for each year."
(2) Relevant data only includes statistics from Nan Ya Plastics Corporation.

Nan Ya Plastics Corporation Environmental Cost Breakdown Table (Unit: NT\$ thousand)				
Category	Item	2022	2023	2024
Environmental Cost	Operating Expenses of the Company	1,481,331	1,371,422	1,643,578
	Supply Chain and Customer Upstream and Downstream Costs	12,381	11,375	28,969
	Management Activity Costs	48,310	52,131	104,458
	Research and Development Expenses	0	0	24,029
	Social Activity Costs	17,700	35,112	56,281
	Losses and Compensation Costs	0	0	5,081
	Other expenses, including taxes, fees, and energy taxes.	32,067	26,928	55,708
	Total	1,591,789	1,496,968	1,918,104

Note: (1) Data source: Formosa Plastics Group Environmental Accounting Computer Database.
(2) The "Operating Expenses" section includes expenses incurred by Formosa Plastics Group for green procurement, product recovery and recycling costs, and service-related expenses provided to customers in the context of environmental protection.

◆ Sustainable Procurement

Nan Ya Plastics Corporation prioritizes the procurement of eco-friendly products with labels that meet criteria for recyclability, low pollution, and energy conservation. This includes second-class environmental protection products and those that can increase social benefits while reducing social costs, with similar or equivalent performance to existing products (such as energy-saving labels, water-saving labels, and energy-star labels). According to statistics, the procurement amount of green products in 2024 was NT\$112,820,000.

◆ Clean Technology and Energy Investment

Nan Ya Plastics Corporation, in addition to actively promoting process energy-saving and carbon reduction projects, is proactively seeking investment opportunities related to energy transformation to respond to the international trend of reducing carbon emissions, align with government energy transformation policies, and improve the proportion of renewable energy and apply new technologies. This aims to reduce the impact of climate change.

In 2024, Nan Ya Plastics Corporation and its Taiwanese subsidiaries invested over NT\$1.214 billion in various energy transformation projects, with key highlights as follows:

Low-Carbon Energy Transition

Nan Ya Plastics Corporation invested NT\$113,556 thousand in 2024 to complete the installation of a 50-ton natural gas boiler at the Shulin Utility Factory, which can reduce carbon emissions by 147,024 tons per year.

Circular Economy Energy Conservation Carbon Reduction (Nan Ya and Taiwan Subsidiaries)

Nan Ya Plastics Corporation and its Taiwanese subsidiaries invested NT\$617,546,000 in 2024 to improve efficiency, resulting in annual benefits of **NT\$780,145,000**. The investments enabled the reduction of water consumption by **686** tons per day, steam consumption by **14.1** tons per hour, electricity consumption by **11,295** degrees per hour, and fuel consumption by **18.5** tons per hour. Additionally, the company reduced its carbon emissions by **245,976** tons per year. The details are as follows:

- Energy Management Case: Kung San site's 1-2 area 5.5K compressed air connection improvement.
- Equipment Efficiency Improvement Case: Shulin Plant II uses AI system recommendations to replace manufacturing processes and reduce losses.
- Case of heat recovery and steam reuse: BG2 introduces 7K steam reduction at MA factory through the introduction of a new system.
- Process Energy Consumption Reduction Case: EG-4 Carbon Dioxide Removal System Improves Efficiency.

Increase the use of renewable energy

In 2024, Nan Ya Plastics Corporation invested NT\$483 million to install a 6,874.47 KW solar power generation system on the rooftops of some buildings at the Chiayi plant and at the Mailiao composting facility. Including the projects completed before 2024, the total cumulative installed capacity for the Company and its Taiwanese subsidiaries is **15,060.45** KW, with an estimated annual carbon reduction of **10,299** tons.

Other Key Projects Continuously Promoted

By the end of 2024	Future Development Projects
Equipment Efficiency Enhancement	The 7K compressed air pressure reduction system reduces carbon emissions by decreasing supply pressure.
Process Energy Consumption Reduction	Rapid rectifier replacement of internal voltage regulators due to poor quality of internal transformers can reduce energy consumption by 3.93 kW per unit with high-efficiency transformer installation.
Equipment Efficiency Improvement	Wastewater treatment equipment performance improvement.

3.2 Climate Action and Strategies

3.2.1 Greenhouse Gas Reduction and Adaptation Strategy

Climate Strategy Overview		
	Climate Change Mitigation Factor Carbon dioxide, Greenhouse Gas (GHG), Greenhouse gases and others	Scope of Activities Nan Ya Plastics Corporation Operations Scope, Value Chain Scope
Mitigation and Adaptation Strategy Action Plan		
Four Major Carbon Reduction Strategies	Transition to Low-Carbon Energy utility plants will stop operating coal-fired boilers and set up gas-fired steam boilers, etc., while each production plant will also switch to low-carbon energy sources (such as natural gas) to replace high-carbon energy sources (such as coal, heavy oil).	Energy Conservation and Carbon Reduction Circular Economy Continuously promote process improvements, circular economy, heat recovery from flue gas, AI, and digital transformation to improve energy efficiency and reduce waste generation.
	Increase Renewable Energy Capacity Install solar power generation equipment on rooftops of each factory building, with a total capacity of approximately 56,265.97 KW by 2030, expected to account for 19.5% of Taiwan Power Company's contract capacity, far exceeding the government's requirement of 8%.	Carbon Capture Technology Application Use alkaline solution to absorb CO ₂ through supergravity installation, and then cultivate microalgae in the absorbed alkaline solution to reduce carbon emissions.

In response to the global trend of carbon reduction and in line with the United Nations' Sustainable Development Goals (SDGs) 13 Climate Action, Nan Ya Plastics Corporation has set a long-term goal of "Carbon Neutrality by 2050" and is actively promoting four major carbon reduction strategies. The key focus areas and brief descriptions of each strategy are as follows:

Short-, Medium-, and Long-term Carbon Reduction Strategies of NPC

	Short- term 2021-2025	Medium-term 2025-2030	Long-term 2030-2050
Low-carbon energy transition	Replace coil-fired boilers with gas-fired boilers in utility plants		Duly replace natural gas with bio-based material
	Replace high-carbon energy (such as coal, heavy oil) with low-carbon energy (such as natural gas) in each production plant		
	Continue to grasp the development trend of hydrogen energy and other alternative energy sources and energy storage equipment, and appropriately introduce them after commercialization		
Energy-saving and carbon-reduction and circular economy	Continue to promote process improvement for energy conservation and carbon reduction		
	Promote resource recycling and other projects based on 4R circular economy principle		
	Promote AI and digital transformation, introduce intelligent management systems, and improve the utilization efficiency of energy and resources		
Increase the consumption of renewable energy	Install solar power generation equipment on the roofs of each plant for about 56,265.97 kW.	Review and evaluate other plant areas where solar power generation equipment can be applied	Evaluate for purchasing renewable energy certificates
	Continue to evaluate and duly introduce applications of renewable energy such as water, wind and geothermal		
Application of carbon capture technology	Expand the electronic-grade and industrial-grade liquid CO ₂ plants. Recycle all CO ₂ generated in the process into resources		Introduce feasible technologies in the industry such as carbon capture from flue gas to reduce CO ₂ emissions
	Carrying out research on forests and carbon sinks, negative emission technologies, carbon capture and storage, etc., with the industry and academia. The aforementioned practices will be introduced in due course after commercialization		

3.2.2 Climate Change Risk and Opportunity Identification 201-2

Nan Ya Plastics Corporation's climate change management is supervised from the top down to ensure the implementation of relevant tasks. Following the framework of the Task Force on Climate-related Financial Disclosures (TCFD) by the Financial Stability Board (FSB), the company identifies climate change risks and opportunities, sets clear carbon reduction targets, and implements management actions such as promoting carbon reduction strategies. To inform global investors about the company's achievements in addressing global climate change, Nan Ya continues to participate in the CDP climate change questionnaire, striving for a "Leadership Level" rating. The company also actively strengthens its climate change resilience through participation in the TCFD initiative and by applying to join the Science Based Targets initiative (SBTi).

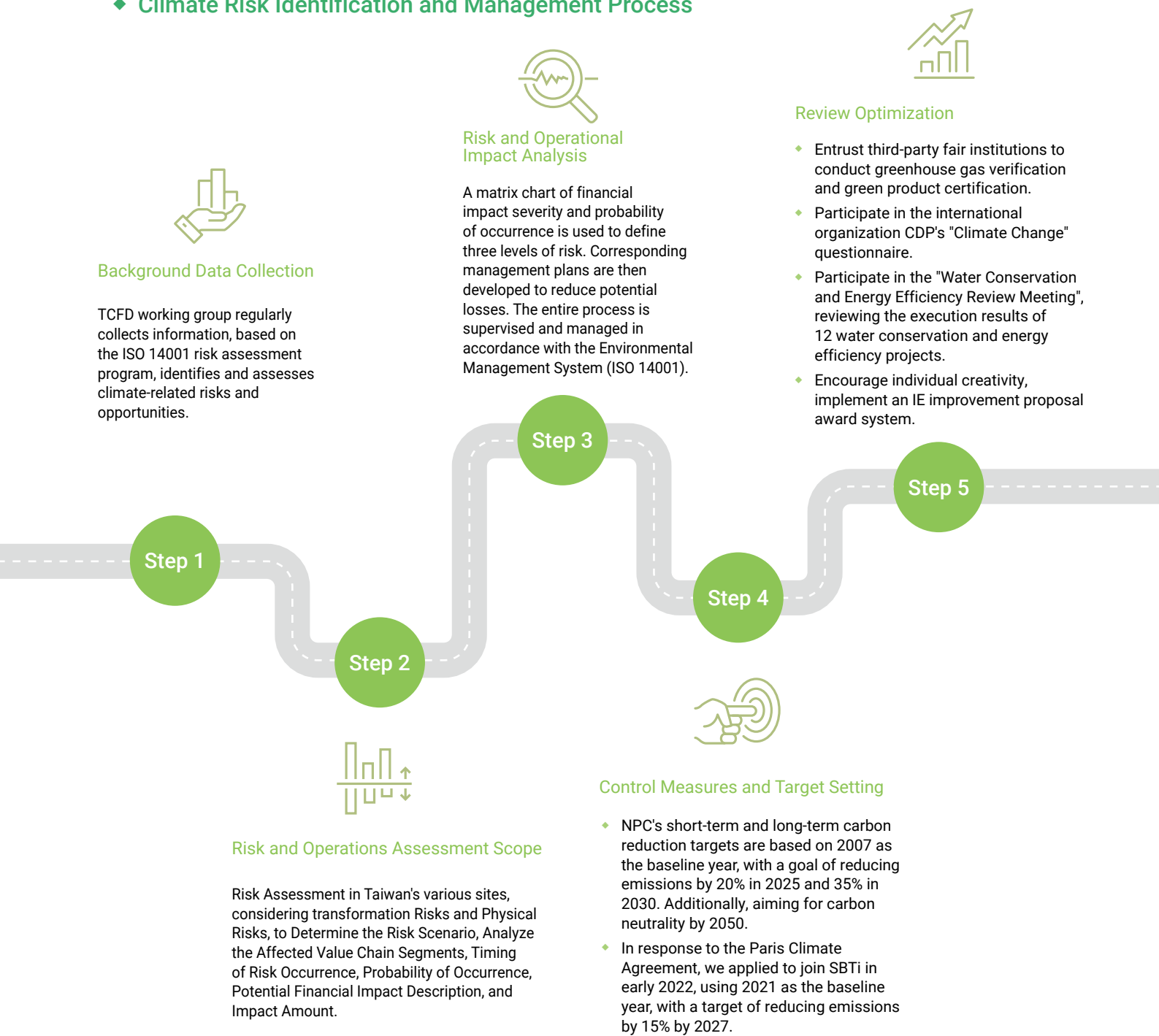
Management Strategy and Action Plan	2024 Performance Report
Governance <ul style="list-style-type: none"> Board of Directors discusses ESG progress at least once a year, including climate-related issues. The TCFD Working Group, under the "Risk Management Promotion Organization," is responsible for identifying climate change risks and opportunities, formulating response strategies, and reporting the results to the Chairman. 	<ul style="list-style-type: none"> ESG Promotion Organization reported to the Sustainability Committee in June 2024 a summary of this company's sustainability report; and in December 2024, it will report on the company's greenhouse gas emissions situation for 2023. The organization holds one "Environmental Protection (E)" working meeting per quarter to oversee various environmental protection plans, including climate change mitigation, and reports its execution results to the chairman. A total of four meetings were held in 2024.
Strategy <ul style="list-style-type: none"> Establish short, medium, and long-term carbon reduction targets. Promote management strategies such as "Internal Carbon Pricing." Identify climate risks and opportunities. Implement four key carbon reduction strategies, including "Low-Carbon Energy Transition." Apply to join the Science Based Targets initiative (SBTi). 	<ul style="list-style-type: none"> Establish two types of carbon reduction targets: external commitments and stricter internal goals, with carbon neutrality by 2050 as the long-term objective. Implement "Internal Carbon Pricing" and other management activities, and integrate them into ERP computer management. Continuously promote the four major carbon reduction strategies, including "Low-Carbon Energy Transition". The 2023 SBT target was approved.
Risk Management <ul style="list-style-type: none"> Constructing a Climate Risk Identification Process for the Company using TCFD Framework. Based on the ISO 14001 risk management process, to prioritize climate risks and formulate corresponding response plans accordingly. 	<ul style="list-style-type: none"> 2024 TCFD Report Disclosure, the Company identified 16 TCFD risks and opportunities. Developed strategies to address risks/opportunities.
Indicators and Targets <ul style="list-style-type: none"> In accordance with the ISO 14064-1 standard, promote greenhouse gas emissions inventory. Based on scenario analysis and scientific reduction targets, formulate climate change management goals and review performance achievement. 	<ul style="list-style-type: none"> 2024 greenhouse gas emissions decreased by 46% compared to 2007. Invested approximately NT\$0.5 billion in energy-saving and carbon-reducing projects in 2024.

Relevant Links, please refer to Nan Ya Plastics Corporation's 2024 TCFD Report

◆ Governance Unit and Supervision System

To address global sustainability trends such as carbon reduction, Nan Ya Plastics Corporation has established a TCFD Working Group under the "Risk Management Promotion Team." This group is responsible for identifying climate change-related risks and opportunities. The "ESG Promotion Team" and the "Energy Saving and Carbon Reduction Promotion Team" then formulate management actions to adapt to climate change risks and enhance resilience. They regularly track the progress of energy saving and emission reduction initiatives across all business divisions and relevant departments. The status of climate change-related business operations is reported to the Chairman, who represents the highest management level of the "ESG Promotion Organization," as needed. Additionally, the "ESG Promotion Organization" reports to the Board of Directors and the Sustainability Committee at least once a year.

◆ Climate Risk Identification and Management Process



◆ Climate Change Risk and Opportunity Analysis Results

The Risk and Opportunity Matrix considers factors such as the probability of occurrence and financial impact of each risk and opportunity. It divides the severity of potential financial impact and the likelihood of occurrence into five levels, assigning scores based on different financial impacts and probabilities. After each department conducts its climate change risk and opportunity assessment, the compiled risks and opportunities are mapped onto the Risk and Opportunity Matrix, as shown in the following figure:



Transition Risks	Physical Risks	Opportunities
<ul style="list-style-type: none"> 1 Regulatory/Policy - Risk of Carbon Tax (or Fee) Imposition 2 Regulatory/Policy - Risk of High Electricity Consumption Regulations 3 Regulatory/Policy - Risk of Water Consumption Fee Imposition 4 Market - Changes in Customer Behavior 5 Company Reputation - Negative Feedback 	<ul style="list-style-type: none"> 6 Chronic - Rising Temperatures 7 Chronic - Water Scarcity 8 Acute - Extreme Weather (Heavy Rain/Floods) 9 Acute - Extreme Weather (High Winds/Typhoons) 10 Acute - Extreme Weather (Water Shortage/Drought) 	<ul style="list-style-type: none"> 11 Energy/Technology - (1) Low-carbon energy transition; (2) Carbon capture, sequestration, and utilization 12 Resource Efficiency - Circular economy, cost reduction 13 Resource Efficiency - Improved efficiency in energy and resource use 14 Products and Services - Development of energy-efficient products 15 Products and Services - Expansion of recycled products 16 Market - Business diversification
<ul style="list-style-type: none"> Material Risk/High Opportunity Moderate Risk/Medium Opportunity Low Risk/Low Opportunity 		

Note: For relevant details and response strategies, please refer to the explanations in "3.3 Summary Table of Risk and Opportunity Impacts on the Company."



◆ Impact on Financials of Risk

Risk Type	Risk Categories	Scope			Impact Level (Proportion of individual revenue of the Company and its Taiwanese subsidiaries in 2024)	Main Potential Financial Impact Explanation
		Upstream	Operations	Downstream		
Transformation Risk	Policies and Regulations		✓		0.11%	"Climate Change Mitigation Law" and the EU's "Carbon Border Adjustment Mechanism (CBAM)" - related expenses for compliance with regulations (carbon fees, carbon taxes).
			✓		- (Compliant with current regulations, no risk of non-compliance or fines).	Renewable Energy Development Regulation (Large-Scale Electricity User Clause) - Related expenses for compliance with regulations (no compensation for renewable energy setup).
			✓		0.004%	Water Consumption Charge - Related expenses in accordance with relevant laws and regulations.
	Market		✓	✓	5.82%	Customer behavior change - Revenue decline impact caused by inability to meet customer demands.
	Corporate Reputation	✓	✓	✓	0.05%	Negative reputation impact, financial institutions may increase loan interest rates, and in the most severe cases, refuse to lend to high-carbon industries.
Physical Risk	Sustained - Environmental Change				0.09%	Temperature rise
		✓	✓	✓	0.07%	Water Resource Scarcity: According to the Taiwan Climate Change Science Report, the warming scenario is becoming increasingly severe, with RCP2.6 predicting a 2% reduction in rainfall and being influenced by global climate change, resulting in changes to original rainfall patterns and shortened rainy seasons, ultimately leading to long-term water resource scarcity issues.
					0.82%	Heavy Rain/Floods: Based on the 1986-2005 period as a baseline, estimating the recent(2016-2035) climate situation in the factory area under RCP4.5 and RCP8.5 scenarios, with maximum consecutive rainfall of 7.5-7.7 days, 1,078mm-1,085mm, and an overall increase in rainfall amount by 15%, which may pose potential risks to factory operations.
	Acute - Extreme Weather	✓	✓	✓	0.27%	Extreme winds/Typhoons: Based on the 1986-2005 baseline, it is estimated that the climate situation in the vicinity of the factory (2016-2035) will be affected by a decrease of -15% in typhoon frequency, an increase of +100% in strong typhoon proportion, and an increase of +20% in typhoon rainfall under the RCP8.5 scenario, which may pose potential risks to factory operations.
					0.82%	Drought/Flood: Based on the baseline period of 1986-2005, it is estimated that the factory area will experience drought or flood conditions for two months each year from 2016 to 2035.

Possible Impact on Time/Schedule	Response Strategy/Cases
Medium to Long-term	<ul style="list-style-type: none"> Short-term: Sharing of energy-saving and carbon-reduction cases across plants. Medium-to-long term: Continuously promoting the "Low-Carbon Energy Transition" strategy and four major carbon reduction strategies. The company has completed the installation of a 14,713.02 KW solar power generation system on the rooftops of new Hsinkang site and all factories in Chiayi by 2024, meeting the three-year 8% early bird discount under the "Large-Scale Electricity User Agreement".
Short-term	
Short-term	<ul style="list-style-type: none"> Short-term: Construction of the seawater desalination plant project at the Mailiao Industrial Park (Constructed by Formosa Petrochemical Corporation). Mid-term: Continuously implementing circular economy, promoting rainwater harvesting and water-saving improvement projects, and utilizing AI technology to enhance water resource utilization efficiency.
Long-term	<ul style="list-style-type: none"> Short-term: Actively develop new applications, new materials, and products that meet market demands, environmental trends, and special specifications. Mid-term: Collaborate with upstream and downstream value chain partners to establish a "sustainable recycling value chain" and other initiatives.
Medium to Long-term	<p>Actively participating in international energy-saving and carbon-reducing initiatives, promoting various carbon reduction measures, enhancing corporate reputation, with the following main cases:</p> <ul style="list-style-type: none"> Short-term: Joining international "Carbon Disclosure Project (CDP)" evaluation, "Task Force on Climate-related Financial Disclosures (TCFD)" initiative, and "Science-Based Targets Initiative (SBTi)". Long-term: Continuously strengthening information disclosure, improving company ESG international assessment performance, such as achieving an A- grade in 2024 CDP "Climate Change" report; achieving an A grade in "Water" report (both leading levels).
Medium to Long-term	<ul style="list-style-type: none"> Short-term: Replace old air conditioning equipment with high-efficiency energy-saving models, and adopt green building design for new factory buildings. Mid-term: Promote the all plants to obtain ISO 50001 energy management system certification. Long-term: Continuously promote circular economy and apply AI technology to improve the efficiency of water and energy conservation projects.
Mid-to-long-term	<ul style="list-style-type: none"> Short-term: Conduct water resource risk assessment and management annually. Medium-to-long term: Expand water sources, implement various water-saving measures, and promote cross-site and inter-company water resource sharing and integration, such as seawater desalination, recycled water, rainwater harvesting, and process water recycling and reuse.
Medium to Long-term	<p>Each plant area continues to do well in flood prevention measures, and key improvement projects are listed below:</p> <ul style="list-style-type: none"> Short-term: The Renwu Plant has installed flood pumps, and the Northern sites have added water gates. Regular maintenance and repair are also conducted. Mid-term: The Mailiao site conducts annual dredging and sand-clearing operations every year.
Medium to Long-term	<ul style="list-style-type: none"> Short-term: Establish a typhoon task force, clarify roles and responsibilities, conduct emergency response training, and strengthen internal basic facilities to minimize the risks and hazards brought by strong typhoons. Medium-to-long term: Insure company assets and equipment to reduce the impact of disasters when they occur.
Medium to Long-term	<p>Each plant area continues to manage water resources, with the following main improvement measures listed below:</p> <ul style="list-style-type: none"> Short-term: To mitigate the potential risk of drought or water scarcity, the Renwu site has drilled two anti-drought wells, which can increase water supply by 2,300M³/day. Medium to long term: Collaborate with government agencies to develop underground water resources in Donggang Creek and Gaoping Creek, ensuring stable water supply. Additionally, assess the development of Huliao Creek's high ammonia nitrogen wastewater treatment, and achieve water reuse through water-to-water exchange, obtaining water rights.

◆ Opportunity Impact on Financials

Opportunity Type	Opportunity Category	Scope			Impact Level (Percentage of individual revenue of the Company and its Taiwanese subsidiaries in 2024)	Main Potential Financial Impact Explanation
		Upstream	Operations	Downstream		
Transformation Opportunities	Energy/ Technology		✓	✓	0.001%	Promoting the following climate transformation projects is expected to reduce carbon costs or increase revenue, bringing potential opportunities to Nan Ya Plastics Corporation: <ul style="list-style-type: none">■ Low-carbon energy transition.■ Carbon capture, storage, and utilization.
	Resource Efficiency		✓		0.07%	Circular Economy, Cost Reduction: Nan Ya Plastics Corporation implements the 4R principles of circular economy: Reduce, Reuse, Recycle, and Renew to promote the recycling and reuse of raw materials, increase the proportion of waste resource utilization, and gradually create a sustainable circular value chain.
			✓		0.58%	Energy Resource Utilization Efficiency Improvement: Actively promotes AI applications, introduces advanced energy-saving equipment, and implements various water-saving and energy-saving improvement projects to actively reduce carbon emissions.
	Products & Services		✓	✓	0.53%	Energy-Saving Product Research and Development: In recent years, the global impact of extreme weather has led to a continuous rise in temperatures, with consumers' low-carbon energy-saving demands increasing steadily, resulting in potential business opportunities for energy-saving and insulation products.
			✓	✓	0.81%	Product Recycling Expansion: To extend the product life cycle, make it easier to reuse, repair, and recycle, and use recycled materials as much as possible instead of primary raw materials, governments around the world have set targets for using recycled materials in beverage containers. At the same time, international brands such as Nike, IKEA, and HP are also planning to set targets for using recycled materials.
	Market	✓	✓	✓	0.70%	Diversified Operations - Various countries around the world have formulated net-zero carbon emission plans, such as implementing phase-out schedules for fossil fuel-based vehicles or promoting renewable energy development like wind power. In line with international trends, this will drive rapid growth in the electric vehicle and wind power industries.

Possible Impact on Time/Schedule	Response Strategy/Cases
Medium-to long-term	<ul style="list-style-type: none"> Mid-term: Convert CO₂ generated from chemical processes through carbon capture technology into liquid CO₂, and sell it to downstream customers. Long-term: Continuously master the commercialization of technologies such as "flue gas capture" and "green algae carbon capture", introducing them in a timely manner or collaborating with industry and academia to develop and introduce new low-carbon technologies.
Short-term	<ul style="list-style-type: none"> Continuous expansion of recycled materials and PIR recycling usage, including PET recycled materials, PP recycled pellets, MLCC separation film recycling reuse. Improving the proportion of waste resource utilization, recycling, and reusing, such as recycled glass fibers from SMC waste and edge trim from fiberglass. Increase the proportion of recycled materials used to reduce carbon emissions from the raw material side.
Short-term	<ul style="list-style-type: none"> Utilizing AI and emerging technologies to reduce material waste in the manufacturing process, thereby decreasing raw material costs. Implementing water-saving and energy-saving improvement projects. Promoting process technology improvements and replacing all lighting fixtures in the factories and office areas with LED lighting.
Medium to Long-term	<p>Developed multiple green products, NPC will continue to invest in research and development, driving the transformation of new green business opportunities. Main examples include:</p> <ul style="list-style-type: none"> Cool Paint (Thermal Insulation Paint): Certified by Taiwan's National Science Council, summer air conditioning energy consumption reduced by 31.8%. Energy-Saving air-tight Windows: Low thermal conductivity, can save energy consumption by over 20%. ICE COOL (Ice Cool Thermal Insulation Paper): Using non-toxic materials, with blast-proof, high transparency, and high IR/UV blocking properties, reducing energy consumption.
Short to Medium-term	<ul style="list-style-type: none"> Continuous expansion of PCR products, including PET products, eco-friendly film products, APET sheet products, and textile recycling. Actively expanding the source of recycled materials to ensure a stable supply of raw materials. Developing modified polyester particles and single-material packaging films for easy subsequent recycling use. Promoting the recycled product brand "Nan Ya SAYA".
Short-term	<ul style="list-style-type: none"> Actively investing in the research and development of products related to the electric vehicle industry, such as copper foil initially used in the electrical and electronics industries, with some copper foil being converted into electrodes for lithium-ion batteries in electric vehicles, expanding copper foil production lines. Investing in "Development and Equipment for Multi-Axis Fabric Technology for Industrial Use" to produce multi-axis fabric for wind power applications, targeting the market for wind turbine blade applications.

◆ Environmental Context Analysis

Nan Ya Plastics Corporation's primary climate change risk analysis uses future scenario simulations based on the climate models RCP2.6 (SSP1-2.6), RCP4.5 (SSP2-4.5), and RCP8.5 (SSP5-8.5). The company also references the IEA Net Zero Emissions by 2050 Scenario (NZE) and the Nationally Determined Contribution (NDC) targets set by the countries where its manufacturing sites are located. In its Intended Nationally Determined Contribution (INDC) report, Taiwan set a target to reduce greenhouse gas emissions by 50% from the Business as Usual (BAU) scenario by 2030, in line with the nation's 2050 net-zero emission pathway.

Under this scenario, the company analyzes future impacts on the market, technology, reputation, finance, and operations, after factoring in the power generation structure and national departmental developments from 2030 to 2050. It also estimates the impact of rising temperatures, changes in rainfall, and the risk of floods and droughts from 2020 to 2050.

For detailed scenario data for each plant, please refer to the "Climate Risk Scenario Analysis" chapter in the 2024 Sustainability Report.

	Business As Usual (BAU) Environment	Aggressive decarbonization scenario
Contextual Explanation	RCP8.5 (SSP5-8.5)	RCP2.6 (SSP1-2.6) Net Zero Emissions by 2050 Scenario (NZE)
Analysis Results	Greenhouse gas emissions control degree is lower, and climate change severity increases. The frequency and severity of floods and droughts also increase. Estimated temperature rise, rainfall, flood risk, and drought risk from 2020 to 2050.	Under the trend of net-zero carbon emissions, awareness of greenhouse gas emission control is enhanced, and the severity of climate change is mitigated. Based on the RCP 2.6 and 2050 net-zero emission pathways, analyzing the power generation structure and development of various departments in the country after introducing the measures, we analyzed the future impact of the company's market, technology, reputation, finance, and operations.
Risk	In a scenario with low greenhouse gas emission controls, intensifying climate change will lead to an increased frequency of floods and droughts, impacting operating costs.	To effectively control greenhouse gas emissions, it is necessary to consider the company's future operational growth and investment in various carbon reduction measures, assessing the potential financial impact of low-carbon transformation.

Nan Ya Plastics Corporation provides corresponding action plans for different scenarios, and outlines four major carbon reduction strategies. The following are examples of action plans for each scenario:

Action Plan	<p>Physical Risk Action Plan</p> <ul style="list-style-type: none">Assess the impact and scope of droughts, develop a comprehensive plan to respond to water shortages, establish a water warning system, and take measures to respond to droughts or industrial water supply restrictions.To reduce the dependence on water, we have set annual water reduction targets and regularly review the rationality of our water usage.Review the risk of flood disasters caused by sea-level rise, analyze the potential for flooding in Taiwan's production sites due to sea-level rise, and develop a response plan accordingly.Upholding the principles of the circular economy, we recycle and reuse rainwater, wastewater, and process water to mitigate the impacts of floods and droughts.
	<p>Transition Risk Action Plan</p> <ul style="list-style-type: none">Achieve energy reduction through changes in process operating conditions, model adjustments, AI, and big data applications.Develop low-carbon products, recycled products, and alternative raw materials, and invest in new market development to increase market share and boost company revenue.Establish solar power generation and develop carbon capture technology applications.

3.2.3 Carbon Issue Management

[302-1, 302-3, 302-4, 305-1, 305-2, 305-3, 305-4, 305-5]

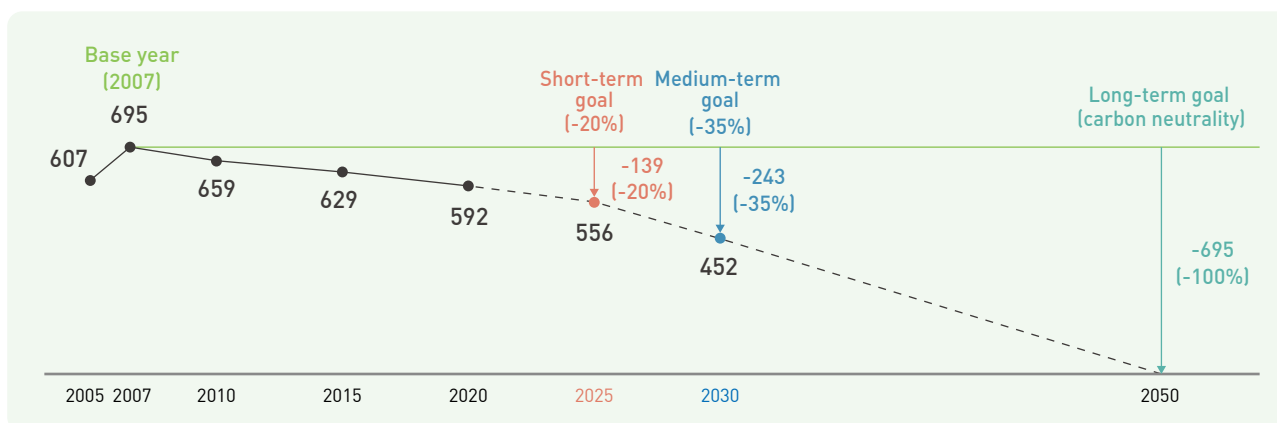
◆ Carbon Reduction Roadmap

Nan Ya Plastics Corporation sets different carbon reduction targets in response to various purposes, including "External Commitment", "Internal Enhanced Management", and "SBTi Certification". However, it will pursue the most stringent reduction requirements as its goal, allowing each stage of the carbon reduction path to achieve multiple targets, ultimately achieving the long-term target of "Carbon Neutrality by 2050".

Process	Scope One + Scope Two	Scope Three	Final Goal
External Carbon Reduction Commitment Target	Based on 2007 as the baseline year (6,950 thousand tons CO ₂ e) <ul style="list-style-type: none"> Reduce by 20% in 2025 (5,560 thousand tons CO₂e) Reduce by 35% in 2030 (4,520 thousand tons CO₂e) 	NA	
Internal Control Strengthening Objectives	Based on 2020 as the baseline year (5,920 thousand tons CO ₂ e) <ul style="list-style-type: none"> Reduce by 12.5% in 2025 (5,180 thousand tons CO₂e) Reduce by 25% in 2030 (4,440 thousand tons CO₂e) 	NA	Net-Zero Emissions by 2050
Science-Based Targets Initiative (SBTi) approved targets.	In accordance with the requirements of SBTi, a target application was approved in March 2023. Based on 2021 as the baseline year (6.14 million tons CO ₂ e), a reduction of 15% by 2027 is targeted, equivalent to approximately 5.22 million tons CO ₂ e. Based on 2021 as the baseline year (23.79 million tons of CO ₂ e), a reduction of 7.4% is targeted by 2027 (22.03 million tons of CO ₂ e).		

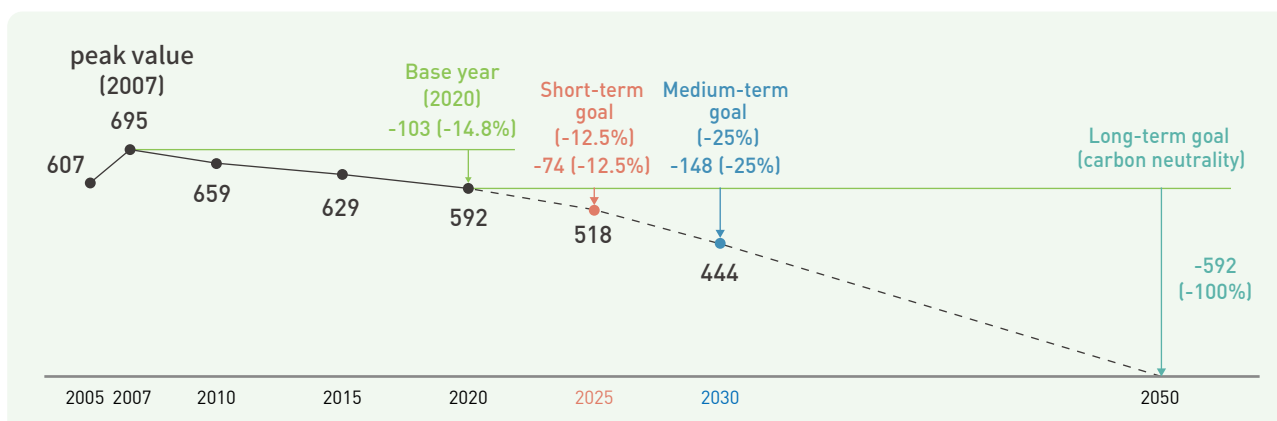
External Carbon Reduction Commitment Target

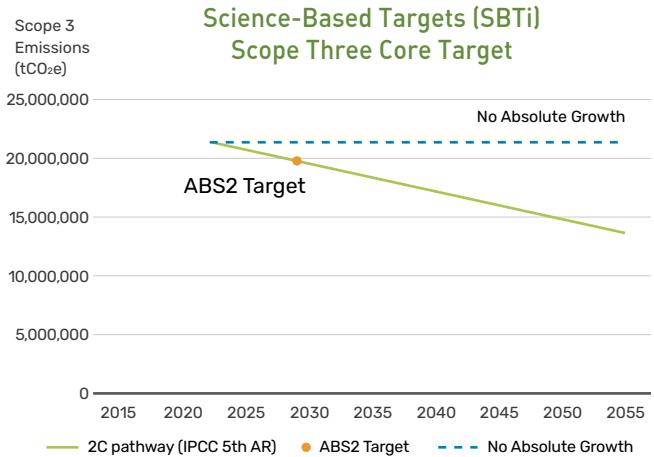
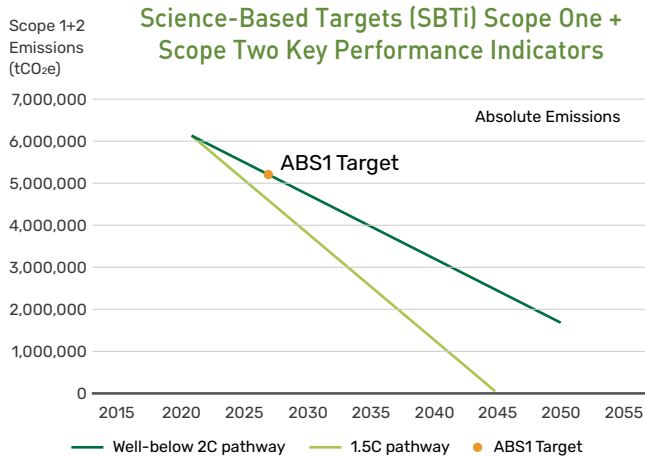
CO₂-e (10 thousand tons)



Internal Control Strengthening Objectives

CO₂-e (10 thousand tons)





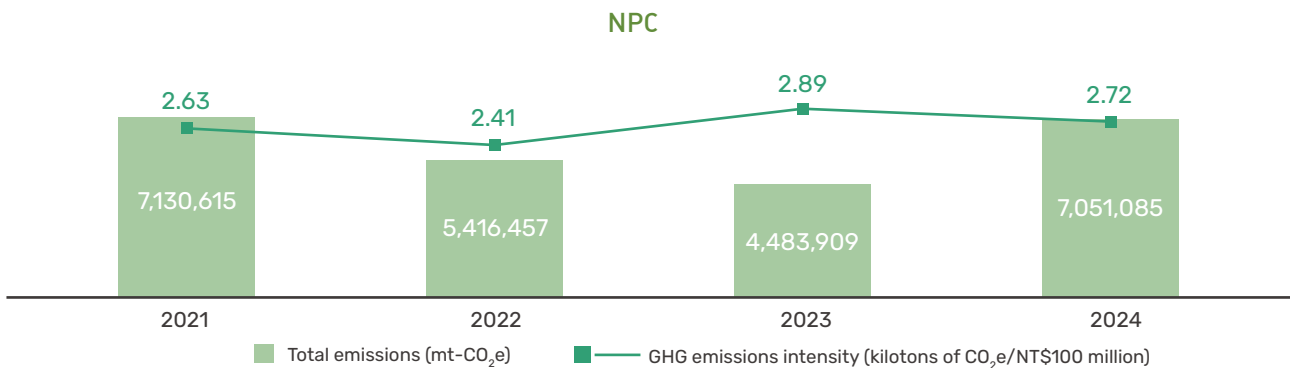
Greenhouse Gas Management

Each year, Nan Ya Plastics Corporation commissions a third party to verify its greenhouse gas emissions inventory in accordance with the regulations set by ISO 14064, the GHG Protocol, and Taiwan's Ministry of Environment's guidelines, including the "Greenhouse Gas Emission Inventory Operation Guidelines (2024 Edition)," "Greenhouse Gas Verification Guidelines (June 2024)," and "Greenhouse Gas Emission Inventory, Registration and Verification Management Regulations."

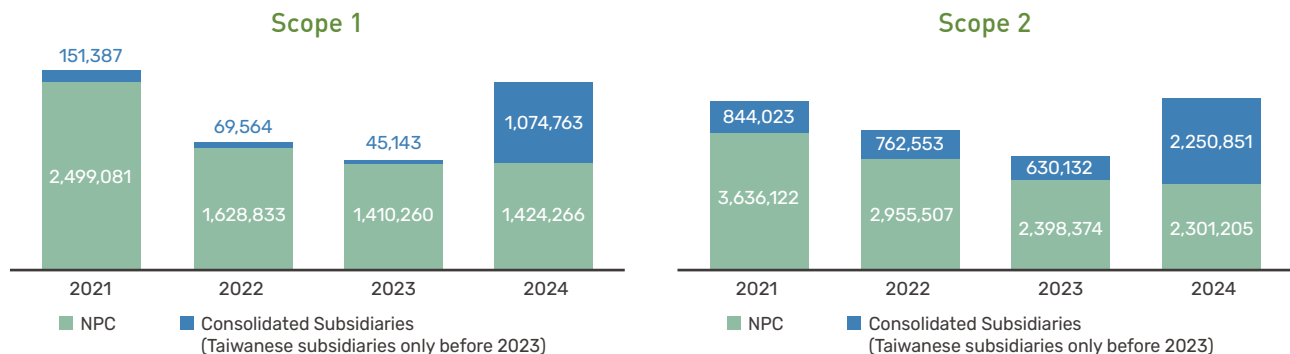
The 2024 verification results show that Scope 1 emissions were approximately 1.424 million tons of CO₂e, and Scope 2 emissions were approximately 2.301 million tons of CO₂e. Although Scope 3 emissions are not required by regulations to be included in the above verification metrics, they are still subject to internal and third-party verification in accordance with inventory principles.

Additionally, in 2024, the company's individual revenue was NT\$123.2 billion, and total emissions were approximately 3.725 million tons of CO₂e, a 2.18% decrease from 2023. The greenhouse gas emission intensity was 3.025 kilotons of CO₂e per NT\$100 million, representing a 3.9% decrease from 3.147 kilotons of CO₂e per NT\$100 million in 2023 (revenue of NT\$121 billion). This indicates that the company's carbon reduction efforts have been effective.

Greenhouse Gas Emissions Trend Chart



Note: Scope of greenhouse gas emissions information statistics for 2021-2023 includes the parent company + Taiwan subsidiaries (Nan Ya Printed Circuit Board Corporation, Nan Chung Petrochemical Co., Ltd., and PFG Fiber Glass Corporation), while from 2024 onwards, it was expanded to include the parent company (consolidated number) + consolidated subsidiaries (self-reported number).



Note: Scope of greenhouse gas emissions information statistics for 2021-2023 includes the parent company + Taiwan subsidiaries (Nan Ya Printed Circuit Board Corporation, Nan Chung Petrochemical Co., Ltd., and PFG Fiber Glass Corporation), while from 2024 onwards, it was expanded to include the parent company (consolidated number) + consolidated subsidiaries (self-reported number).

Statistics Data of Scope Three

Emissions Source	2022 Greenhouse Gas Emissions (tons CO ₂ e)	2023 Greenhouse Gas Emissions (tons CO ₂ e)	2024 Greenhouse Gas Emissions (tons CO ₂ e)
Purchased Products and Services	5,539,058	4,613,425	4,525,275
Capital Products	48,624	39,063	19,775
Fuel and Energy-Related Activities (excluding those falling within Scope 1 or 2)	659,068	561,348	504,753
Upstream Transportation and Logistics	17,547	16,965	17,833
Operational waste	4,759	1,901	6,055
Business Travel	179	1,581	942
Employee Commuting	201	7,058	7,245
Downstream Transportation and Logistics	171,793	217,660	251,272
Manufacturing Products Sold	1,071,379	863,410	907,450
End-of-Life Products Disposal	1,155	363,987	346,875
Investment	6,166,696	4,922,474	4,783,938
Total	13,680,459	11,608,872	11,371,413

Note 1: Scope 1 refers to direct greenhouse gas emissions, and Scope 2 refers to indirect emissions. The inventory includes the following gases: carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, perfluorocarbons, and sulfur hexafluoride. Scope 3 refers to other indirect greenhouse gas emissions.

Note 2: From 2024 onwards, the Global Warming Potential (GWP) values from the IPCC Fifth Assessment Report (2013), as announced by the Ministry of Environment, are used to calculate CO₂ equivalent emissions.

Note 3: The emission factors used for Scope 1 direct emissions refer to the greenhouse gas emission factors announced by the central competent authority. For Scope 2 energy indirect emissions, the factors from the Taiwan Power Company as announced by the Ministry of Economic Affairs Energy Administration are used, along with the electricity and steam factors from the Formosa Plastics Group's various utility plants after verification by SGS and BSI.

Note 4: Plants with emissions greater than 25,000 metric tons are managed by the Ministry of Environment. Therefore, their inventory and verification are conducted in accordance with the Ministry of Environment's "Greenhouse Gas Emission Inventory Operation Guidelines (2024 Edition)," "Greenhouse Gas Emission Inventory, Registration and Verification Management Regulations (Sep 14, 2023)," and "Greenhouse Gas Verification Guidelines (June 2024)." Plants with emissions below 25,000 tons are not within the scope of Ministry of Environment management, and their inventory and verification are conducted in accordance with ISO 14064.

◆ Energy Management

Main Sources of Greenhouse Gas Emissions and Energy Consumption in 2024

Emissions Source	Nan Ya Plastics Corporation				Taiwan Subsidiaries			
	Consumption (A)	Calorific Value (B)	Energy Consumption Total Amount (A) × (B)	Carbon dioxide equivalent (CO ₂ e) emissions proportion	Consumption (A)	Calorific Value (B)	Energy Consumption Total Amount (A) × (B)	Carbon dioxide equivalent (CO ₂ e) emissions proportion
Coal-fired power generation	319,759 tons	26.78 GJ/ton	8.56*10 ⁶ GJ	20.6%	-	-	-	-
Fuel Oil	52,862 kiloliters	34.08 GJ/kiloliters	1.80*10 ⁶ GJ	3.7%	74 GJ/kiloliters	37.91 GJ/kiloliters	2.80*10 ³ GJ	0.0%
Natural Gas	108,508 tons	51.10 GJ/ton	5.54*10 ⁶ GJ	7.0%	12,129 tons	53.56 GJ/ton	6.50*10 ⁵ GJ	5.1%
Internal Purchased Steam	1,550,643 tons	2.83 GJ/ton	4.39*10 ⁶ GJ	12.1%	162,173 tons	2.83 GJ/ton	4.59*10 ⁵ GJ	7.0%
Internal Purchased Electricity	1,596,253 thousand degrees	3.60 GJ/ton	5.74*10 ⁶ GJ	38.3%	429,681 thousand degrees	3.60 GJ/ton	1.55*10 ⁶ GJ	73.9%
External Purchased Electricity	890,348 thousand degrees	3.60 GJ/ton	3.20*10 ⁶ GJ	11.3%	134,046 thousand degrees	3.60 GJ/ton	4.82*10 ⁵ GJ	11.0%
Solar Power Generation	11,827 thousand degrees	3.60 GJ/ton	4.26*10 ⁴ GJ	0.0%	379 thousand degrees	3.60 GJ/ton	1.36*10 ³ GJ	0.0%
Total	-	-	2.93*10 ⁷ GJ	93.0%	-	-	4.45*10 ³ GJ	97.1%

Energy Intensity
(Total energy consumption /
Million NT dollars of revenue)

237.78





0.18

Note 1: The data in this table is sourced from the 2024 annual greenhouse gas emissions inventory of each company.

Note 2: The heat values for each emission source are calculated using average values.

Note 3: Heat Conversion Coefficient: Electric Power 860 MCAL/kWh, Steam 675.9 MCAL/t, Coal 6,400 MCAL/t, Natural Gas 9,900 MCAL/m³, Liquefied Petroleum Gas 6,000 MCAL/t. 1 cal = 4.184 J.

◆ Energy Management Improvement Incentive Policy

Rewarding Project Improvements	Encouraging Individual Creativity	Showcasing Excellent Improvement Cases	Recognizing Excellent Environmental Performance
<p>We have implemented a project improvement reward system that provides proposal bonuses ranging from NT\$ 300 to NT\$ 20,000, based on the improvement level.</p> 	<p>We have launched an IE (Industrial Engineering) improvement proposal reward system, offering both proposal bonuses from NT\$ 300 to NT\$ 20,000 and administrative awards, based on the improvement level.</p> 	<ul style="list-style-type: none"> We nominate excellent improvement cases each year to participate in inter-company evaluations. We take turns hosting the company-wide presentation of outstanding environmental, energy-saving, and water-saving cases. 	<p>We encourage and reward our plants for participating in government-led evaluations for corporate environmental, energy-saving, and water-saving awards.</p> 

◆ Energy Conservation Improvement Performance Management

Since 2020, Nan Ya Plastics Corporation has referred to the industry guidelines recommended by the Sustainability Accounting Standards Board (SASB) and consolidated and tracked annual energy consumption data to facilitate evaluation and optimization of energy use efficiency, achieving energy-saving targets.

Energy Consumption Status in 2024

Energy Consumption Total Amount (GJ)

Nan Ya Plastics Corporation	29,283,976
Taiwan Subsidiaries	4,452

Percentage of grid electricity consumption (%)

Nan Ya Plastics Corporation	77.10
Taiwan Subsidiaries	99.93

Total amount of self-generated energy (GJ)

Nan Ya Plastics Corporation	2,657,622
Taiwan Subsidiaries	1,364

Nan Ya Plastics Corporation Energy Conservation Implementation Status Summary Table

Item \ Year	1999-2022 (A)	2023 (B)	2024 (C)	Ongoing Implementation (D)	Total (E=A+B+C+D)
Number of Improvement Cases	5,397	443	371	301	6,512
Steam Savings (ton/hour)	736.2	26.0	13.7	35.4	811.3
Energy Savings (kWh/hour)	88.9	13.3	9.6	11.7	123.5
Fuel savings (ton/hour)	37.2	0.8	18.4	0.4	56.8
CO ₂ e Reduction (thousand tons/year)	272.8	14.4	23.2	15.9	326.3
Investment Amount (NT\$ billion)	71.6	7.8	5.0	26.0	110.4
Investment Benefits (NT\$ billion/year)	69.2	6.4	7.8	5.3	88.7

Taiwan Subsidiaries' Energy Conservation Implementation Status Summary Table

Item \ Year	1999-2022 (A)	2023 (B)	2024 (C)	Ongoing Implementation (D)	Total (E=A+B+C+D)
Number of Improvement Cases	1,079	99	117	14	1,309
Steam Savings (ton/hour)	134.1	2.4	0.4	0.4	137.3
Power savings (kWh/hour)	10.5	1.3	1.7	0.7	14.2
Fuel savings (ton/hour)	3.0	0.1	0.03	0	3.1
CO ₂ e Reduction (thousand tons/year)	46.4	2.2	1.4	0.6	50.6
Investment Amount (NT\$ billion)	23.8	2.1	1.2	0.4	27.5
Investment Benefits (NT\$ billion/year)	12.5	0.5	0.4	0.2	13.6

Note: The table uses 1,000 degrees = 3.6 x 10⁹ joules to convert related numerical values.

The company's energy-saving cases are explained through three key examples with better performance, and the relevant information is calculated based on actual hourly savings and annual operating hours, presented in the project format for explanation and carbon reduction calculation.

Energy Conservation Improvement Key Cases Explanation
in 2024 of Nan Ya Plastics Corporation

Kung San site's Zone 1-2, 5.5K compressed air connection improvement, avoiding high-level low-use energy waste.	Ethylene oxide (EO) absorption water at EG-1 plant is reduced, which can decrease steam emissions by 3.6 tons per hour.	Hsinkang utility Department replacement of 1,000 RT refrigeration units.
872 tons CO ₂ e/year	9,023.8 tons CO ₂ e/year	3,516 tons CO ₂ e/year

Note: The greenhouse gas emission coefficient used is 0.494 tons per thousand degrees, based on Taiwan Power's 2023 power generation emission coefficient and the verified electricity and steam coefficients of each utility factory of Formosa Plastics Group in 2023.

Nan Ya Plastics Corporation and its Taiwanese subsidiaries' product overview						
Site	Nan Ya Plastics Corporation			Taiwan Subsidiaries		
Year	2022	2023	2024	2022	2023	2024
Steam consumption (unit: ton/ton)	1.015	0.862	0.455	0.450	0.524	0.431
Electricity consumption (unit: kWh/ton)	699.2	654.6	415.2	764.9	1,204.9	1,471.1



3.3 Air Pollution Management

305-7

3.3.1 Air Pollution Prevention and Control

◆ Air Pollution Prevention and Reduction Management

Nan Ya Plastics Corporation undertakes to fulfill its responsibilities in air pollution prevention and reduction management, primarily through the following measures, for detailed information please refer to Nan Ya Plastics Corporation official website "Air Pollution Prevention and Reduction Management".



Nan Ya Plastics Corporation
official website
"Air Pollution Prevention and
Reduction Management"

- Adopting the Best Available Control Technology (BACT) and introducing various process improvement and pollution prevention technologies from around the world. Additionally, setting up emission control equipment based on the characteristics of each process, collecting and processing waste gas properly, and regularly inspecting and testing all exhaust pipes to ensure that emissions are below the standards set by government regulations. Furthermore, continuously reviewing and improving existing facilities. In February 2024, the coal-fired boiler at the Chiayi Utility Plant was decommissioned, and the installation of a new 50-ton natural gas boiler at the Shulin Utility Plant was completed, resulting in a total carbon reduction of 147,024 tons per year.
- To reduce VOC emissions and minimize the occurrence of odor complaints from residents, measures include arranging personnel to conduct regular patrols around the factory area, as well as specific improvement methods such as "process optimization", "management improvement", and "strengthening detection technology".
- Nan Ya Plastics Corporation's cogeneration coal-fired units and incinerators are regularly commissioned to testing agencies certified by the Environmental Analysis Laboratory to monitor the concentration of dioxins in their emission stacks. All test results consistently meet regulatory standards.

◆ Nan Ya Plastics Corporation and its Taiwanese subsidiaries' air pollution emissions statistics.

In 2024, Nan Ya Plastics Corporation and its Taiwanese subsidiaries emitted a total of 385.86 tons of sulfur oxides (SOx), an increase of 77.67 tons from last year; 723.32 tons of nitrogen oxides (NOx), an increase of 7.82 tons from last year; 1,471.32 tons of volatile organic compounds (VOCs), an increase of 58.8 tons from last year; and 53.16 tons of particulate matter (TSP), an increase of 6.99 tons from last year. The main reason for the increase is that the Mailiao Sixteenth Naphtha Cracker Incinerator is assisting local governments in handling a large amount of municipal waste. Going forward, in addition to introducing various advanced process improvements and pollution control technologies as appropriate, we also work with local governments and residents to properly sort waste and increase the proportion of household garbage that is recycled.

2024 Total SOX Emissions Increased by 77.67 tons Compared to 2023.

Sulfur Oxides (SOx) (Unit: Tons)			
Year	2022	2023.	2024
Nan Ya Plastics Corporation	292.98	303.35	385.36
Taiwan Subsidiaries	0.02	4.84	0.50
Total	293.00	308.19	385.86

2024 NOx emissions increased by 7.82 tons compared to 2023

Nitrogen Oxides (NOx) (Unit: Tons)			
Year	2022	2023.	2024.
Nan Ya Plastics Corporation	636.48	653.59	650.82
Taiwan Subsidiaries	89.04	61.91	72.50
Total	725.52	715.50	723.32

2024 Total VOC Emissions Increased by 58.8 tons Compared to 2023

Emissions of Volatile Organic Compounds (VOCs) (Unit: Tons)			
Year	2022	2023.	2024.
Nan Ya Plastics Corporation	1,585.65	1,371.36	1,433.11
Taiwan Subsidiaries	80.46	41.16	38.21
Total	1,666.11	1,412.52	1,471.32

2024 Total TSP Emissions Increased by 6.99 tons Compared to 2023

Particulate Matter (TSP) (Unit: Tons)			
Year	2022	2023.	2024.
Nan Ya Plastics Corporation	47.14	44.83	51.64
Taiwan Subsidiaries	1.37	1.34	1.52
Total	48.51	46.17	53.16

Note: Data source is the "Environmental Protection Administration's Integrated Management System for Air Pollution Fee and Emissions Reporting".

3.4 Water Resource Management

[303-1, 303-2, 303-3, 303-4, 303-5]

3.4.1 Water Usage Statistics

Nan Ya Plastics Corporation values water resources and closely monitors the source of its water intake. The company has a total of 9 major production sites across Taiwan, from north to south, which primarily utilize surface water and tap water as their main sources.

Water Consumption Statistics for the Past Three Years (unit : millions of liters)							
Category		Nan Ya Plastics Corporation			Taiwan Subsidiaries		
		2022	2023	2024	2022	2023	2024
Water Withdrawal (A)	Surface Water	10,417	8,235	7,767	2,242	1,034	933
	Groundwater	1,434	1,080	974	-	-	-
	Rainwater	577	484	672	33	27	1
	Third-party (tap water)	2,841	2,038	2,215	3,959	4,101	3,399
Discharge Volume (B)		4,850.76	4,095.26	3,457.14	3,546.67	2,836.00	2,934.66
Water Consumption (A-B)		10,418.79	7,741.74	8,170.86	3,312.33	2,326.00	1,398.34

Water Consumption Analysis by Site in 2024:

Unit: tons

Corporation	Site	Surface Water	Groundwater	Third-party (tap water)	Others	Total
Nan Ya Plastics Corporation	Shulin	-	307,639	649,097	-	956,736
	LinKou	94,844	-	258,204	24,682	377,730
	KungSan	-	614,362	1,022,501	7,186	1,644,049
	JinXing	1,717,003	-	19,511	-	1,736,514
	Mailiao	4,128,334	-	61,977	633,792	4,824,103
	Chiayi	339,382	1,794	25,884	6,074	373,134
	Hsinkang	1,487,304	-	133,584	-	1,620,888
	Renwu	-	49,808	36,458	-	86,266
	LingYuan	-	-	7,548	-	7,548
Total		7,766,867	973,603	2,214,764	671,734	11,626,968
Nan Chung Petrochemical Co., Ltd.	Mailiao	-	-	-	-	-
Nan Ya Printed Circuit Board Co., Ltd.	JinXing	437,004	-	2,377,170	-	2,814,174
	Shulin I	-	-	1,019,310	732	1,020,042
PFG Fiber Glass Corporation	Hsinkang	495,564	-	2,935	-	498,499

Note: Other sources of water supply include rainwater recycling.

◆ Water intake from the Jiji River Dam

The following data is based on the "Monthly Report on the Diversion of Agricultural Water for Industrial and Public Use from the Jiji Weir" by the Industrial Development Bureau, Ministry of Economic Affairs:

Water supply statistics of Ji Ji Dam, 2021-2024 (unit:10 thousand tons)					
Year	Jiji Weir Inflow (A)	Agricultural Irrigation	Industry		Public Water Supply
		Average Water Consumption (B)	Average Water Consumption (C)	Water usage ratio (C)/(A)	Average Water Consumption (D)
2022	266,056	169,917	8,860	3.3%	4,306
2023	364,015	153,449	8,393	2.3%	4,366
2024	449,628	166,667	7,904	1.8%	4,182

Although water usage at the Mailiao site does not displace other industries or compete with farmers for water, the Formosa Plastics Group is actively working to solve water scarcity issues during the dry season. On October 9, 2018, the Ministry of Environment approved the environmental impact statement submitted by the company. On December 26 of the same year, the Ministry of Economic Affairs granted permission to develop and build a seawater desalination plant with a daily capacity of 100,000 tons of fresh water, with the goal of beginning production in 2025.

◆ Water Resource Stress Test

Nan Ya Plastics Corporation monitors water resource usage and adopts the water resource risk assessment and residual analysis method (AWARE) from the World Resources Institute (WRI) to identify water resource risks and assess the impact of water resource pressure. Through water resource scenario simulation, it is shown that all sites do not take water from or discharge wastewater into areas under water resource pressure [based on indicators such as "water stress", "water consumption", "annual changes in water supply", and "seasonal changes in water supply" to identify the baseline water stress level of each site]. Additionally, the company has independently upgraded its management level, aligning with the intensity of water resource pressure zone management, continuously promoting water-saving measures and improving the use of recycled water in production processes.

◆ Water Resource Circulation Use

Factory water mainly uses industrial water, pure water, and steam for production processes. Each factory has a rational review of its water usage, promotes recycling, and actively pushes for the recovery and reuse of process water, rainwater, and wastewater.

◆ Water Resource Risk Response

To mitigate the risk of water resource scarcity caused by extreme weather events, we are focusing on the following key initiatives:

- Formosa Plastics Group is adding a seawater desalination plant to the Mailiao Sixth Naphtha Cracker Industrial Complex (constructed by Formosa Petrochemical Corporation).
- The JinHsing plant utilizes the water resources of the Taoyuan North District Water Recycling Center for process cooling purposes, and in 2024, it plans to donate approximately NT\$145 million to the Taoyuan City Government for the construction of an external water supply pipeline, flow meter, and water quality monitoring equipment from the water recycling center's discharge point to the JinHsing plant.
- Continuously implementing circular economy, actively promoting various water-saving improvement projects.

3.4.2 Water Discharge Management and Wastewater Prevention

◆ Water Effluent Control Process



◆ Wastewater Treatment Efficiency Monitoring Standards

Each plant area conducts regular sampling and testing, in addition to daily monitoring by the treatment department at least once a day. The results all meet national regulatory standards. Among them, the Shuilin, Mailiao, Hsinkang, and Jiayi sites have automatic continuous monitoring systems for wastewater discharge (a total of 8 sets), which are connected in real-time with local authorities and monitor parameters such as flow rate, water temperature, pH value, conductivity, etc. (Mailiao site requires additional testing for COD and SS). Please refer to the Nan Ya Plastics Corporation official website "Environmental Protection and Energy Conservation Performance" for specific discharge standards of each plant area.



Nan Ya Plastics Corporation official website "EHS and Energy Efficiency Performance"

◆ Wastewater Discharge Volume Statistics

Wastewater Discharge Statistics Table for 2024 (Unit: Million liters/year)

Wastewater Treatment Corporate	Surface Water	Sea water	Third-party water.	Total
Nan Ya Plastics Corporation	1,307.71	1,491.74	657.69	3,457.14
Taiwan Subsidiaries	2,934.66	0	0	2,934.66
Subtotal	4,242.37	1,491.74	657.69	6,391.80

Note 1: Taiwan subsidiaries include Nan Ya Printed Circuit Board Corporation and PFG Fiber Glass Corporation. Among them, Nan Chung Petrochemical Corporation has entrusted our company's Mailiao wastewater treatment plant to handle its wastewater.

Note 2: The effluent from each of the above tables belongs to freshwater with a total dissolved solids (TDS) concentration equal to or less than 1,000 mg/L.

historical effluent discharge volume (Unit: million liters/year)

Wastewater Treatment Corporate	2022	2023	2024
Nan Ya Plastics Corporation	4,850.76	4,095.26	3,457.14
Taiwan Subsidiaries	3,546.67	2,836.00	2,934.66
Subtotal	8,397.43	6,931.26	6,391.80

Water Consumption Statistics Table for 2024 (Unit: Million liters/year)

Item	Nan Ya Plastics Corporation	Taiwan Subsidiaries
Water Consumption	8,170.86	1,398.34
Total Water Consumption	9,569.20	

Note: Nan Chung Petrochemical Corporation has entrusted Nan Ya Plastics Corporation to handle the wastewater treatment at the Mailiao Wastewater Treatment Plant.

◆ The impact of Emissions on the Environment: Ecological Conservation in the Mailiao Zone

To understand the impact of the Mailiao site on the local flora and fauna and the environment, we have commissioned professional organizations to conduct surveys over the years. The results consistently show that the number of plant families, genera, and species remains stable. The animal populations primarily fluctuate with the seasons and have not shown any significant changes due to the establishment of the Mailiao site. Furthermore, we strictly manage all wastewater treatment plants to ensure that wastewater is treated to meet all standards before discharge. Monitoring results over the years have consistently met the effluent discharge standards. Long-term observation of the marine ecosystem has also revealed that Chinese white dolphins inhabit and forage in the area, indicating that the operation of the Mailiao site has no impact on the dolphin population's ecological behavior. (For detailed information on the Mailiao site's ecological observations, please refer to the "Ecological Conservation" section of the "Beauty of the Sixth Naphtha Cracker" website.).



"Ecological Conservation" section of the "Beauty of the Sixth Naphtha Cracker" website

3.4.3 Water Conservation Performance Improvement

To ensure efficient water usage, NPC continues to implement measures to reduce process water consumption, manage water conservation, and minimize evaporation loss. The company also recycles and reuses wastewater and enhances rainwater collection operations at all its plants.

Nan Ya Plastics Corporation Yearly Water Conservation Implementation Status Summary Table					
Item \ Year	1999-2022 (A)	2023 (B)	2024 (C)	Ongoing Implementation (D)	Total (E=A+B+C+D)
Number of improvement cases	808	26	21	33	888
Water Conservation Volume (tons/day)	33,287	6,224	312	2,653	42,476
Investment Amount (NT\$ 100 million)	6.7	1.2	0.02	1.5	9.4
Improved Benefits (NT\$ 100 million/year)	1.8	0.3	0.01	0.1	2.2

Note: Data source: FPG's water conservation and energy-saving improvement case database, as well as ongoing cases of continuous improvement.

Taiwan Subsidiaries' Water Conservation Implementation Status Summary Table					
Item \ Year	1999-2022 (A)	2023 (B)	2024 (C)	Ongoing Implementation (D)	Total (E=A+B+C+D)
Number of improvement cases	405	17	28	1	451
Water Conservation Volume (tons/day)	12,072	204	374	2	12,652
Investment Amount (NT\$ 100 million)	0.9	0.05	0.001	0.00002	1.0
Benefits Improvement (NT\$ 100 million/year)	0.5	0.01	0.03	0.0002	0.5

Note: Data source: FPG's water conservation and energy-saving improvement case database, as well as ongoing cases of continuous improvement.

Water Conservation Improvement Project in 2024 and Achievements

Project One	Project Two	Project Three
Cooling water tower at the Isomerization Plant reduces backwash water discharge volume	Vacuum pump water-saving improvement on the double-axis press machine at the film factory.	Cooling Tower of Dihydroxyphenol Plant Enhances Conductivity to Reduce Water Discharge Volume
Water Conservation Improvement Performance 100 tons per day	Water Conservation Improvement Performance 34.8 tons per day	Water Conservation Improvement Performance 24 tons per day

3.5 Waste Management and Circular Economy

3.5.1 Waste Management [306-1, 306-2, 306-3, 306-4, 306-5]

◆ Waste Impact Assessment and Control Strategy

Based on the operational and production processes, NPC identifies potential sources of impact from "raw material supply," "production processes" (including product manufacturing, pollution prevention, and equipment maintenance), and "shipment." The company controls waste in accordance with the Ministry of Environment's regulations on waste, the waste clearance plans approved by competent authorities, and the company's own "Industrial Waste Management Regulations." (For details on the relevant management procedures, please refer to the "Waste Management" section on Nan Ya Plastics Corporation's official website).



"Waste Management" section on Nan Ya Plastics Corporation's official website

The general and hazardous waste generated is centrally managed by the production departments, and the clearance and disposal are entrusted to qualified and certified environmental firms. The company has also established a self-auditing and control system for waste disposal to ensure that all industrial waste is properly handled by the waste transport and disposal companies. In 2024, the company and its subsidiaries completed 347 site inspections for waste requiring tracking and had no reported incidents of waste being illegally dumped by transport companies.

◆ Waste Treatment Volume Statistics

2024 NPC and its Taiwan subsidiaries generated a total of 108,446.6 tons of waste, with a recycling rate of approximately 61.5% (the combined proportion of reuse and regeneration among the total amount of waste). The breakdown by hazardous and general waste is as follows:

Hazardous Industrial Waste Treatment Statistics Table (Unit: Tons)					
Corporation	Covering	Incineration		Reuse	Recycling
		Without energy recovery	Energy Recovery Inclusion		
Nan Ya Plastics Corporation	6.14	1,932.60	0.00	0.00	1,902.74
Taiwan Subsidiaries	0.00	1,598.19	0.00	0.00	10,287.78
Subtotal	6.14	3,530.79	0.00	0.00	12,190.52
Total		15,727.45			

Note: The reuse and recycling of materials is categorized according to the relevant regulations of the Environmental Protection Administration's Resource Recycling Act.

General Industrial Waste Disposal Statistics Table (Unit: Tons)					
Corporation	Covering	Incineration		Reuse	Recycling
		Without energy recovery	Energy Recovery Inclusion		
Nan Ya Plastics Corporation	29,636.38	3,903.67	3,549.03	46.18	48,911.26
Taiwan Subsidiaries	0.00	1,166.90	5.65	0.00	5,500.09
Subtotal	29,636.38	5,070.57	3,554.68	46.18	54,411.35
Total		92,719.16			

Item		Hazardous Industrial Waste (tons)		General Business Waste (tons)	
Handling Method		On-site handling	Off-site disposal	On-site handling	Off-site disposal
Processing Volume	Nan Ya Plastics Corporation	0.00	3,841.48	32,822.56	53,223.96
	Taiwan Subsidiaries	0.00	11,885.97	5.65	6,666.99
Subtotal		15,727.45		92,719.16	
Total		108,446.61			

Note 1: Data source is the "Environmental Protection Administration's Resource Recycling Agency Waste Reporting and Management Information System".

Note 2: In 2023, Nan Ya Printed Circuit Board Corporation, a Taiwanese subsidiary, added a new plant: Shulin Plant 1.

Creating a Happy and Safe Workplace

4

4.1 Human Rights Protection and Talent Development	92
4.2 Workplace Safety	103
4.3 Supplier and Contractor Management	112



Employee is a key factor in the company's sustainable development, and Nan Ya Plastics Corporation is committed to providing a safe and secure working environment. We utilize multiple channels to comprehensively care for employees' "physical, mental, and spiritual" health, strengthen all-employee safety awareness, and strive to build a company that all employees can be proud of.

Strategy

- Foster employee care and health concern - enhance work environment and maintain employees' physical and mental well-being
- Shape safety and health culture - implement comprehensive process safety and health management, prevent hazardous accidents from occurring

Material topics

- Occupational Health and Safety
- Plant and Chemical Safety Management

Employee Welfare and Health Care

2024 Targets

Provide employees with comprehensive compensation and benefits, complete education and training, and smooth career development channels.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ✓ Conducted 441 new employee interviews and opinion surveys, with a response rate of 57 people.
- ✓ NPC and its Taiwanese subsidiaries provided an average of approximately 43 hours of training per person in 2024, and offered opportunities for qualified personnel to take promotion exams.
- ★ Revised "Human Rights Policy of NPC", expanding coverage to subsidiaries and supply chain management, and strengthening focus on human rights concerns.

Short-term Targets (2025)

Provide employees with comprehensive compensation and benefits, complete education and training, and smooth career development channels.

Medium and Long-term Targets (2026-2030)

Provide employees with comprehensive compensation and benefits, complete education and training, and smooth career development channels.

Fostering a Safety and Health Culture

2024 Targets

- Continuously promote digital optimization of occupational safety, firefighting, and PSM operations.
- Continuously promote senior management's safety concerns and inspections.
- Implement horizontal expansion of abnormal accident improvement.
- Zero fatalities, no more than 5 cases of work-related injuries or illnesses; zero accidents.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- ★ To enhance work safety, fire prevention, and Process Safety Management (PSM), we are digitizing our operations to improve efficiency. This data-driven supervision will strengthen on-site management functions.
- ★ We are promoting safety care and inspections by senior executives and establishing an optimized system that can immediately extend both abnormal incidents and positive cases to all departments for review and improvement.
- We had zero fatal occupational accidents. There were 9 disabling occupational injuries, with an occupational injury frequency rate of 0.25, a severity rate of 5, and a comprehensive index of 0.03. We will continue to review and improve our performance.

Short-term Targets (2025)

- Continuous promotion of digital optimization for occupational safety, firefighting, and PSM operations.
- Continuous promotion of senior management's safety concerns and inspections.
- Implementation of abnormal accident level expansion improvement.
- Zero fatalities, fewer than 5 cases of work-related injury, and no accidents.

Medium and Long-term Targets (2026-2030)

Zero work-related injury, zero accidents.

Implementation of Sustainable Supply Chain Management

2024 Targets

- The response rate of the "Social Responsibility Commitment" has increased to 100%.
- The response rate of the "Social Responsibility Commitment survey" has increased to 100%.

2024 Performance Status

● Unmet Target ✓ Met Target
★ Exceeded Target

- "Social Responsibility Commitment" response rate increased to 96.72%.
- "Societal Responsibility Commitment Questionnaire Survey" response rate increased to 95.43%.

Short-term Targets (2025)

- The response rate of the "Social Responsibility Commitment" has increased to 100%.
- The response rate of the "Social Responsibility Commitment survey" has increased to 100%.

Medium and Long-term Targets (2026-2030)

Strengthening sustainable supply chain management lays the foundation for industry sustainability development.



Management of Material Topics [2-23, 2-24, 2-25, 3-3]

Policy Commitment

1. Fulfill obligations, 2. Perform social responsibilities well 3. Prioritize pollution prevention
4. Promote circular economy 5. Enhance risk management 6. Prevent unusual accidents
7. Encourage all employees to participate 8. Implement continuous improvement 9. Implement health management
10. Ensure good internal and external communication 11. Improve management performance
12. Ensure sustainable operations

Organizational Vision

Achieve Ultimate Goal: "Zero Accidents, Zero Harm"

Occupational Health and Safety

GRI 403 Occupational Health and Safety,
SASB Occupational Health and Safety

Management Influence

- **Definition:** NPC's management of employee and other workers' working environment and health.
- **Impact:** If the company performs well in managing its working environment and health, it can create a safe and healthy work environment, thereby preventing unusual workplace accidents from occurring and attracting outstanding talent. Conversely, if the company fails to perform related tasks, it may lead to talent loss and potential external risks such as reputational damage.

Management Action	Action Performance Tracking in 2024	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
Promoting Senior Management's Safety Concerns and Inspections	<ul style="list-style-type: none"> ■ Each department vice president conducts a monthly review for their respective departments, a total of 48 times. ■ 2. Senior vice presidents of business groups conduct a quarterly review for their respective departments, a total of 18 times. 	✓	To foster a sense of awareness among on-site personnel that senior management attaches great importance to occupational safety and health management, thereby motivating employees to take good care of their own work and improve their safety consciousness, establishing a good safety culture.	Achieve zero injuries, zero accidents.
Dissemination and Improvement of Abnormalities, Deficiencies, and Accidents	By collecting and reviewing abnormal absence and accident cases from the safety, health, and environmental department and business units on an irregular basis, we require horizontal expansion of review and improvement at the factory (department) level.	✓	Conduct a thorough review and improvement at the factory (department) level for significant abnormal or accident events, aiming to prevent similar incidents from recurring.	
Educational Training and Promotion on Audits, Deficiencies, and Accident Cases	By collecting and reviewing abnormal absence and accident cases from the safety and health department and business units on an irregular basis, the company requires its personnel to undergo education and training.	✓	Collection of critical incident cases and important inspection deficiencies within the company, to be compiled into educational training materials, requiring each department to conduct training for their respective employees to enhance overall safety awareness.	
Employee Safety Observation and Interview (SWAT) Implementation Rate Verification.	The safety and health department has been conducting regular employee safety observation and interview (SWAT) checks at each affiliated factory (department) every month to ensure the implementation of personnel safety measures and prevent unsafe behavior.	✓	Prompting the factory (department) to implement employee safety observation and interview (SWAT), uncover unsafe behaviors of personnel, and timely rectify them.	

Stakeholder Group

Employee

Engagement Channels and Effectiveness

Utilize regular personnel safety observation and interviews (SWAT), or provide internal and external complaint channels to enable stakeholders to timely respond to issues.

Plant and Chemical Safety Management

Customized Theme Guidelines, Sustainability Accounting Standards Board (SASB) Chemical Substance Safety and Environmental Management Operating Safety and Emergency Response

Management Influence

- **Definition:** To enhance industrial safety, Nan Ya Plastics Corporation manages and maintains safety and public security in office areas and plants. This includes the handling of controlled chemical substances, as well as response and training mechanisms.
- **Impact:** By effectively managing plant and chemical safety, the company can avoid major industrial accidents, ensuring normal operations. Failure to properly manage these operations could, in the most severe cases, result in issues such as government-mandated shutdown.

Management Action	Action Performance Tracking in 2024	Achievement Overview	Short-term Goals (1-3 years)	Long-term goals (more than 3 years)
Hazardous Chemical Substance Assessment and Classification Management, Promoting Process Sampling Safety Inspection Improvement	<ul style="list-style-type: none"> ■ Implementing hazardous chemical substance assessment and classification management in accordance with laws, which includes 1,498 first-level managed items and 1 second-level managed item. ■ Promoting safe sampling inspections for hazardous chemical substances in manufacturing processes, where a total of 487 spots (100% completion rate in 2024) have completed the cancellation of sampling points, conversion to closed sampling, and replacement with online/virtual analysis, which will continue to be reviewed, inspected, and improved. 	✓	Except for complying with the regulations of hazardous chemical substance assessment and classification management, reviewing process sampling points protection and discussing the adoption of closed-type sampling boxes to make operations safer.	<ul style="list-style-type: none"> ■ Complies with the regulations of hazardous chemical substance assessment and classification management. ■ Achieves zero accidents, zero incidents.
Prioritized Management of Chemical Substance Registration Reporting	In accordance with the Regulations on the Designation and Management of Priority Management Chemicals, we have completed the registration and reporting process. All data reporting for 2024 was conducted as normal.	✓	Compliance with the designated and operating management regulations for priority chemicals.	Compliance with the designated and operating management regulations for priority chemicals.

Stakeholder Group

Employees, Supply Chain, Operating Region Residents

Engagement Channels and Effectiveness

Utilize regular personnel safety observation and interviews (SWAT), or provide internal and external complaint channels to enable stakeholders to timely respond to issues.

4.1 Human Rights Protection and Talent Development

4.1.1 Human Rights Policy

Nan Ya Plastics Corporation supports and complies with the United Nations Universal Declaration of Human Rights, the International Covenant on Civil and Political Rights, and other fundamental human rights principles and regulations in all countries where its operations are located. Additionally, to ensure the well-being of current employees (including contract and temporary staff), Nan Ya Plastics has established a "Human Rights Policy" that covers both company employees and non-employee workers; this policy was updated and published in 2024, with detailed content available on the NPC official website under "Human Rights Policy and Specific Practices".

Nan Ya Plastics Corporation has been promoting "Human Rights Policy Advocacy" education and training since 2021 to establish a human rights awareness among all employees. The scope of the training was expanded to include Taiwan subsidiaries starting from 2023. In 2024, a total of 16,186 people received training, with a total training time of 8,093 hours.



NPC official website
"Human Rights Policy
and Specific Practices"

Nan Ya Plastics Corporation and its Taiwanese subsidiaries Human Rights Policy Promotion Education and Training Execution Status

Training Personnels			Training Hours		
2022	2023	2024	2022	2023	2024
11,117	17,017	16,186	5,559	17,017	8,093

Note: From 2023 onwards, the training scope will be included in Taiwan's subsidiary company. Additionally, due to course content arrangement planning, from 2024 onwards, training time will be calculated at 0.5 hours.

4.1.2 Employee Structure and Employment 2-7, 2-8

2024 Nan Ya Plastics Corporation and its Taiwanese subsidiaries collectively employed 16,659 staff members, with a domestic employee ratio of 95.1%. Among the domestic employees, there were 12,777 males and 2,959 females. The proportion of regular employees was 99.3%, while that of non-regular employees was 0.7%.

An analysis of the company's full-time employees in Taiwan reveals a gender ratio of approximately 3.8 to 1 (3.0 to 1 in administrative departments and 4.3 to 1 in on-site departments). The average employee age is 45.7 years, with an average tenure of 20.4 years. The number of employees in the company has not fluctuated significantly compared to 2023.

2024 Official Staff Structure (Unit: Person)										
Corporation		Nan Ya Plastics Corporation				Taiwan Subsidiaries				Total
Category	Group	Female		Male		Female		Male		
		Number	Ratio	Number	Ratio	Number	Ratio	Number	Ratio	
Position	Executive (including and above)	2	0.1%	66	0.7%	0	0.0%	10	0.2%	78
	Senior management and management	79	4.6%	1,492	16.6%	36	2.1%	313	7.5%	1,920
	Junior Supervisor and Staff	1,630	95.3%	7,438	82.7%	1,649	97.9%	3,825	92.3%	14,542
Workplace	Northern Taiwan	1,031	60.2%	3,903	43.4%	1,532	90.9%	3,641	87.8%	10,107
	Central Taiwan	66	3.9%	1,343	14.9%	0	0.0%	28	0.7%	1,437
	Southern Taiwan	614	35.9%	3,750	41.7%	153	9.1%	479	11.5%	4,996
Age	Under 29 years old.	139	8.1%	955	10.6%	122	7.2%	424	10.2%	1,640
	30-39 years old	215	12.7%	2,188	24.4%	234	13.9%	673	16.2%	3,310
	40-49 years old	562	32.8%	1,560	17.3%	936	55.6%	1,990	48.0%	5,048
	50-59 years old	632	36.9%	3,272	36.4%	367	21.8%	969	23.4%	5,240
	Above 60 years old.	163	9.5%	1,021	11.3%	26	1.5%	92	2.2%	1,302
Years of Service	Less than 10 years	352	20.6%	3,143	34.9%	308	18.4%	1,060	25.5%	4,863
	2011-2020	60	3.5%	543	6.0%	378	22.4%	1,222	29.5%	2,203
	20-30 years	626	36.6%	2,727	30.3%	813	48.2%	1,604	38.7%	5,770
	More than 30 years	673	39.3%	2,583	28.8%	186	11.0%	262	6.3%	3,704
Education Distribution	Doctor	1	0.1%	22	0.2%	0	0.0%	4	0.1%	27
	Master's	79	4.6%	620	6.9%	73	4.3%	264	6.4%	1,036
	College/University	99	5.8%	1,163	12.9%	83	4.9%	354	8.5%	1,699
	Others	1,532	89.5%	7,191	80.0%	1,529	90.8%	3,526	85.0%	13,778
Gender Breakdown		1,711	100%	8,996	100%	1,685	100%	4,148	100%	16,540

2024 Non-Formal Employee Structure (Unit: Person)			
Corporation	Title	Female	Male
Nan Ya Plastics Corporation	Regular Contract Employees	27	57
	Intern	16	1
Taiwan Subsidiaries	Regular Contract Employees	8	2
	Intern	6	2
Total		119	

Nan Ya Plastics Corporation and its Taiwanese subsidiaries have a workforce comprising full-time employees and temporary workers. The full-time employees total 16,540 people, while the temporary workers include interns and contract personnel totaling 119 people, for a combined total of 16,659 people.

Employee Information in 2024							
Corporation	Classification	Gender			Workplace		
		Female	Male	Total	Northern Taiwan	Central Taiwan	Southern Taiwan
Nan Ya Plastics Corporation	Employee Count	1,754	9,054	10,808	4,992	1,409	4,407
	Permanent Employees (Note 1)	0	0	0	0	0	0
	Temporary Employee Count (Note 2)	43	58	101	58	0	43
	Number of employees without a fixed term contract (Note 3)	0	0	0	0	0	0
	Full-time Employee Count (Note 4)	1,711	8,996	10,707	4,934	1,409	4,364
	Part-time Employee Count (Note 5)	0	0	0	0	0	0
Taiwan Subsidiaries	Employee Count	1,699	4,152	5,851	5,190	28	633
	Permanent Employees (Note 1)	0	0	0	0	0	0
	Temporary Employee Count (Note 2)	14	4	18	17	0	1
	Number of employees without a fixed term contract (Note 3)	0	0	0	0	0	0
	Full-time Employee Count (Note 4)	1,685	4,148	5,833	5,173	28	632
	Part-time Employee Count (Note 5)	0	0	0	0	0	0

Note1: Permanent Employees: Full-time or part-time employees who have signed a contract with no fixed term (i.e., unlimited) and are employed on a permanent basis.

Note2: Temporary Employees: Employees who sign a contract with a fixed term, which expires at a specified time or upon the completion of a specific task or event with an evaluation schedule (e.g., project completion or return to original duties).

Note3: Number of employees without a fixed term contract: Those who do not have a minimum or fixed number of working hours per day, week, or month, but may be required to be available for work on an as-needed basis, such as temporary employees, zero-hour contract employees, or on-call employees.

Note4: Full-time employees: The working hours per week, month, or year are based on the legal and practical definitions of working hours as defined by national laws.

Note5: Part-time employees: Employees who work fewer hours per week, month, or year than full-time employees.

◆ Human Resources

Nan Ya Plastics Corporation has always adhered to the principles of fairness, justice, and openness in its recruitment practices. The selection of new hires is based on their performance and professional background, strictly complying with labor laws and regulations, and ensuring that all employees are treated fairly. The company has never employed child labor and respects the basic human right of equal employment opportunities for everyone. After hiring, the company has established clear rules for employee promotion, evaluation, training, and discipline to ensure fair treatment for all employees. In 2024, a total of 16,659 employees were hired, including 180 contract workers who performed various tasks such as kitchen staff (51 people), environmental cleaning (129 people).

Age and Regional Distribution of New Hires in 2024 (Unit: Person)					
Corporation		Nan Ya Plastics Corporation		Taiwan Subsidiaries	
Category	Group	Female	Male	Female	Male
Age Group	Under 29 years old.	25	120	22	51
	30-39 years old	7	43	6	9
	40-49 years old	1	2	0	0
	50-59 years old	0	0	0	0
	Above 60 years old.	0	0	0	0
Regional Division	Northern Taiwan	7	9	0	0
	Central Taiwan	23	76	28	60
	Southern Taiwan	3	80	0	0
Total		33	165	28	60
New Hire Ratio		1.9%	1.8%	1.7%	1.4%

Note: New Hire Ratio is calculated by dividing the number of new hires of a specific gender by the total number of employees of that gender.

◆ Percentage of local managers

Nan Ya Plastics Corporation and its Taiwanese subsidiaries prioritize the recruitment of local residents for entry-level positions, actively cultivating them to become outstanding senior executives. Additionally, all levels of management are composed of domestic employees, who undergo internal training and development, thereby motivating colleagues' work morale. Over the past three years, the proportion of local residents hired as junior supervisor (including) or above has averaged over 70%.

Ratio of hiring local residents as supervisors from 2022 to 2024 (unit: person, %)				
Corporation	Item	2022	2023	2024
Nan Ya Plastics Corporation	Number	2,987	3,178	3,097
	Percentage	69.0%	74.0%	74.6%
Taiwan Subsidiaries	Number	836	850	865
	Percentage	76.2%	75.4%	76.5%

◆ Good employment security

Nan Ya Plastics Corporation establishes a human resource integration mechanism to provide a safe and secure career development for employees, replacing layoffs with reassignments. Additionally, for employees who are not suitable for their current positions, the company provides guidance, job rotation, and layoff procedures in accordance with labor laws and relevant regulations. Moreover, before department transfers and job changes, department heads will fully communicate with the affected individuals and handle the process in accordance with the established procedure. The internal reassignment ratio among employees in 2024 is 22.6%, aiming to enable employees to be deployed in suitable positions and continue to demonstrate their strengths, achieving the goal of flexible human resource utilization.

NPC and its Taiwanese subsidiaries had a voluntary turnover rate of 0.31% among employees in 2024, with an absenteeism rate of 0.77%. The absenteeism rate was calculated based on sick leave, maternity leave, and work-related injuries, with male employees having a rate of 0.62% and female employees having a rate of 1.34%. The outsource absenteeism rate was 0.89%, with males having a rate of 1.39% and females having a rate of 0.44%. This demonstrates the effectiveness of our care for employees and job security, as well as employee trust and recognition towards the company.

Distribution of Retirees by Age and Region in 2024 (Unit: Person)

Corporation		Nan Ya Plastics Corporation		Taiwan Subsidiaries	
Category	Group	Female	Male	Female	Male
Age Group	Under 29 years old.	25	148	45	128
	30-39 years old	25	133	44	89
	40-49 years old	21	36	31	69
	50-59 years old	20	142	26	44
	Above 60 years old.	10	146	12	10
	Retirement Age	19	149	1	11
Region	Northern Taiwan	1	64	0	2
	Central Taiwan	63	341	129	315
	Southern Taiwan	56	349	30	34
Total		120	754	159	351
Employee Turnover Rate		7.0%	8.3%	9.4%	8.5%

Note1: The number of employees who left the company includes those who retired and were laid off.

Note2: The turnover rate is calculated by dividing the number of resignations by the total number of employees in that gender group.



4.1.3 Employee Welfare and Care [2-19, 2-26, 2-30, 403-3]

◆ Total Employee Compensation

Nan Ya Plastics Corporation's remuneration package is generally higher than the local minimum wage, and to attract and retain outstanding talent, salaries are maintained at a level above industry average. Over the past 10 years (2015-2024), the average annual salary adjustment rate has been approximately 3.31%, with an additional bonus of 0.56% calculated annually, resulting in a total salary adjustment rate of 3.87%.

Average salary and median salary

The number, average salary, and median salary of the company's full-time employees who are not in managerial positions in 2024 are shown in the table below:

2024 Non-Manual Full-Time Employee Compensation Data (Unit: Person, thousand NT dollars/year)						
Year	2022		2023		2024	
	Nan Ya Plastics Corporation	Subsidiaries	Nan Ya Plastics Corporation	Subsidiaries	Nan Ya Plastics Corporation	Subsidiaries
Non-managerial employee headcount (person)	12,124	7,093	11,510	7,506	11,027	6,836
Non-managerial employee average salary (thousand NT dollars per year)	1,238	1,182	1,188	921	1,229	843
Median annual salary of non-managerial employees (thousand NT dollars)	1,161	1,134	1,105	890	1,139	779

Note: The scope of salary calculation is mainly based on employees at Taiwan's business locations.

Female-to-male employee salary ratio

Newly hired employees' salary standards are determined based on the required qualifications, education, and experience of the job. The basic salary ratio for male and female employees with the same position and level is 1:1. After hiring, salaries will be adjusted annually based on individual performance and promotions, with corresponding salary adjustments provided.

Gender pay ratio of employees in the same position and level at Nan Ya Plastics Corporation and its Taiwanese subsidiaries

Unit: %

Management
(including and above) personnel.

Female 1 Male 1.25

Junior Supervisors
(including the following personnel)

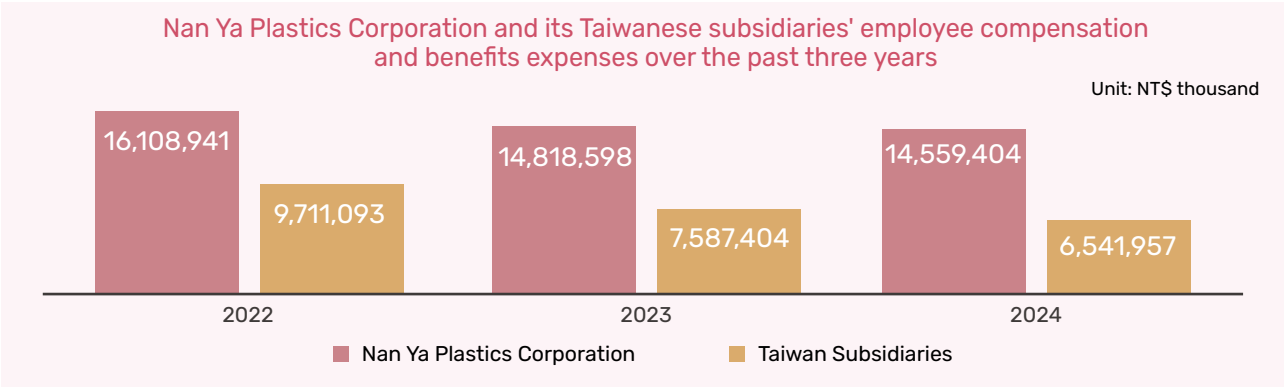
Female 1 Male 1.22

Note: In 2024, the number of male employees was higher than that of female employees. The difference in seniority among management (including and above) personnel contributed to this disparity. Meanwhile, junior supervisors were predominantly male due to their on-site shift work, which led to an increase in shift allowance for males.

Corporation	Gender	Minimum wage for entry-level employees	Minimum wage in the local area	Basic Salary Ratio of entry-level employees to Local Minimum Wage
Nan Ya Plastics Corporation	Male	39,253	27,470	1.43
	Female	32,419	27,470	1.18
Taiwan Subsidiaries	Male	39,253	27,470	1.43
	Female	32,419	27,470	1.18

Note: The government has stipulated that the minimum monthly basic wage for 2024 is NT\$27,470.

Compensation and Benefits Expenses



◆ Employee Welfare and Care

Nan Ya Plastics Corporation regards each formal employee as a family member, and to ensure that every employee feels secure in their work and can fully utilize their expertise. Prior to establishing any new plant, the company first builds a solid foundation of basic facilities for food, accommodation, and leisure, and then takes into account employees' long-term welfare when planning and perfecting various comprehensive welfare systems.

Nan Ya Plastics Corporation has implemented various employee welfare and benefits measures that exceed regulatory requirements, including:



Employee Benefits Details, please refer to Nan Ya Plastics Corporation official website "Employee Welfare"

Employee Benefits

- Vacation benefits
- Insurance benefits
- Marriage and child-rearing benefits
- Health care benefits
- Employee cafeteria benefits
- Employee relationship promotion
- Personal safety and family care
- Overseas benefits

Leisure and Personal Development Benefits

- Employee Welfare
- Self-Directed Learning Benefits

Retirement Benefits

- Retirement benefits
- Retirees' association

◆ The Effectiveness of Employee Assistance Project Execution

Nan Ya Plastics Corporation and its Taiwanese subsidiaries provide a childbirth allowance of NT\$20,000 per birth and a childcare allowance of NT\$2,000 per month for each child until the age of 6 (excluding periods of leave without pay). In 2024, there were 261 instances of childbirth assistance and 19,303 instances of childcare assistance, totaling NT\$43.826 million in benefits.

Nan Ya Plastics Corporation and its Taiwanese subsidiaries promote employee energy conservation and carbon reduction by providing a one-time electric vehicle subsidy per person. In 2024, the company assisted employees in purchasing 63 new (replacing) electric vehicles, totaling NT\$762,000 in subsidies.

In addition, to realize the concept of a happy workplace, we have set up lactation rooms in accordance with laws and regulations at our factory sites, established a friendly office environment for employees to use, and provided paternity leave and childcare leave systems in compliance with relevant laws. Eligible employees can adjust their working hours according to their childcare needs. In 2024, Nan Ya Plastics Corporation and its Taiwan subsidiaries received a total of 122 applications from female employees (43) and male employees (79), with a re-employment rate of 100%.

Number of employees applying for maternity leave and reinstatement rate from 2022 to 2024 (Unit: Person)

Corporation	Item	2022			2023			2024		
		Female	Male	Total	Female	Male	Total	Female	Male	Total
Nan Ya Plastics Corporation	Number of employees eligible for parental leave	31	459	490	25	460	485	34	482	516
	Actual number of employees on parental leave.	20	25	45	26	41	67	20	46	66
	Number of employees who should be reinstated during the year (A)	8	11	19	9	22	31	0	1	1
	Number of employees who applied for reinstatement during the year (B)	11	14	25	8	32	40	25	49	74
	Reinstatement rate (B/A)(%)	100	100	100	88.9	100	100	100	100	100
	Number of employees who continued to work for one year after reinstatement	23	12	35	11	14	25	7	26	33
	Retention Rate %	95.8	92.3	94.6	100	100	100	87.5	81.3	82.5
Taiwan Subsidiaries	Number of employees eligible for parental leave	30	194	224	25	163	188	31	154	185
	Actual number of employees on parental leave.	34	10	44	18	20	38	23	33	56
	Number of employees who should be reinstated during the year (A)	12	2	14	6	11	17	1	1	2
	Number of employees who applied for reinstatement during the year (B)	22	8	30	16	15	31	20	26	46
	Reinstatement rate (B/A)(%)	100	100	100	100	100	100	100	100	100
	Number of employees who continued to work for one year after reinstatement	13	7	20	22	8	30	13	11	24
	Retention Rate %	100	100	100	100	100	100	81.3	73.3	77.4

Note1: "Number of employees who applied for reinstatement during the year " includes those who returned early, "Reinstatement rate" refers to the actual re-employment ratio of employees who should have returned to work in the current year (up to 100%), and "Retention rate" is the percentage of employees who remained employed for more than one year after returning from maternity leave ([Total number of employees who were still employed 12 months after returning from maternity leave/Total number of employees who returned to work after maternity leave in the previous year]*100%).

Note2: The data has been reorganized based on the definition of "retention rate".

◆ Stable Retirement Pension System

For employee retirement benefits, Nan Ya Plastics Corporation adopts a new and old system of retirement pension plans according to employees' choices, with monthly payments made to designated accounts to ensure that employees can receive their retirement pensions in accordance with the law when they meet the statutory retirement requirements.

Old system

Selection of the "Labor Standards Act" retirement system, with a monthly salary total of 4% deposited into a dedicated account at Taiwan Bank. **The cumulative labor retirement fund for 2024 totals NT\$943,007,000 and is fully allocated.**

New system

Selection of the "Labor Pension Act" retirement system, with a monthly deduction of 6% of individual salary deposited into the individual's labor pension account. **As of 2024, a total of NT\$313,243,000 has been deducted and deposited, and a total of NT\$143,479,000 has been self-deducted.**

◆ Employee Opinion Emphasis

Nan Ya Plastics Corporation strives to maintain harmonious labor-management relations, providing diverse and open communication channels and pathways, and actively encourages employees to submit innovative ideas. Employees can participate in organizations such as the Labor Union (Labor-Management Council) and Welfare Committee to submit suggestions to the company, with a current employee participation rate of 79.0%.

Although the company has multiple factories and labor unions, each operating independently without a unified collective agreement. Regular meetings of the board of directors and labor-management conferences are held, with relevant department heads in attendance. The company reviews and responds to all requests and suggestions made by the labor unions. In major labor-management issues, the company prioritizes compliance with government regulations and engages in consultations with the highest-level management and labor union representatives. Any agreements reached are incorporated into the review and adjustment process. Over the long term, we have introduced numerous welfare measures that exceed labor laws, ensuring that all employees are protected by both labor laws and collective agreements. This has fully implemented the spirit of genuine and sincere communication between labor and management, safeguarding employees' collective bargaining rights and achieving harmony in labor-management relations. The company's primary communication items are listed below (for detailed communication channels, please refer to the "Internal Communication Channels" section on Nan Ya Plastics Corporation's official website):



Nan Ya Plastics Corporation's official website "Internal Communication Channels"

Labor Management Committee		Welfare Committee
Important Agreement Items	Year-end bonuses, salary adjustments, and other negotiations.	Employee benefits include meal allowances, year-end celebrations, travel opportunities, children's education scholarships, and social club activities.
Meeting Frequency (times)	37	70
Number of Participants (people)	760	876

◆ Employee Health Care

NPC employs systematic thinking and organizational approaches to continuously promote health promotion measures, providing employees with a healthy and safe working environment, good training plans and systems, allowing employees to have clear goals that can be clearly followed and enabling them to exercise their personal abilities and willingness to actively participate.

Health Risk Management

Nan Ya Plastics Corporation has been committed to creating a safe and healthy working environment for employees, therefore, it refers to the Ministry of Labor's "Occupational Disease Reference Guide" and categorizes five major hazards that may cause occupational diseases: "social psychological", "physical", "chemical", "biological", and "human factors", based on its own industry and organizational characteristics. The company has further identified these hazards and developed corresponding prevention management measures. Additionally, it provides health check items exceeding regulatory requirements (Occupational Disease Hazard Factor Response Measures, Prevention Measures, please refer to Nan Ya Plastics Corporation's official website "Employee Health Care").



NPC's official website "Employee Health Care"

To care for employee health, in addition to implementing the health check items required by laws and regulations, we have added four more check items that exceed regulatory requirements. Furthermore, all employees engaged in hazardous occupations are subject to special health checks and health classification management according to regulations.

There were no abnormal cases of occupational diseases found in the 2024 special health check results.

Health Promotion Measures

The on-site medical team provides personal health guidance and consultation, allowing employees to enjoy a comprehensive healthcare system that includes weight management, smoking prevention, health lectures, preventive care, and disease diagnosis. Furthermore, we have partnered with Chang Gung Memorial Hospital to provide medical center-level medical and health services, promoting preventive medicine and disease prevention, and strengthening employee health awareness. Additionally, professional doctors are stationed on-site to understand the work environment, work habits, and safety protection operations of employees, providing improvement suggestions and relevant medical consultation services to ensure the health of employees.

Health Promotion Effectiveness

General health checks are superior to regulatory inspection items.

- Alpha-fetoprotein (AFP) test
- Cancer embryonic antigen (CEA) test
- Oral cancer screening
- Electrocardiogram (ECG) examination
- Prostate cancer screening
- Breast cancer screening

Special Health Check-up Items

- Noise,
- stray radiation
- dimethylformamide
- p-toluenesulfonamide
- benzene
- Tetrachloroethane
- dust
- n-hexane
- butadiene
- chromium
- manganese
- mercury
- nickel
- arsenic
- formaldehyde
- lead

General Health Check-up Participants

7,910

Special Health Check-up Number

4,531

Special Health Check-up Second-level Management and Above Tracking Number

1,369

Health Promotion Activity Participants

7,311

Nan Ya Plastics Corporation employee health check frequency

Under 30 years old
Every 5 years once

Partially exceeds regulatory requirements

30 to 45 years old
Every 3 years once

exceeds regulatory requirements

45 to 65 years old
Every 2 years once

Above 65 years old
Once a year

◆ Full-scale promotion of setting up automated external defibrillators (AEDs)

Automated External Defibrillator (AED) is an instrument capable of automatically detecting arrhythmia and delivering electrical shock to restore normal heart function. According to the Ministry of Health and Welfare announcement, in cases where sudden cardiac arrest occurs due to arrhythmia, resulting in cardiac arrest, if defibrillation can be performed within one minute, the success rate of emergency treatment can reach up to 90%. The success rate will decrease by 7-10% for every minute exceeding one minute. Each site has successively set up AEDs, with a total of 119 units installed by 2024. Additionally, training for AED managers has been completed.

◆ 2024 Health and Wellness at Work and Care Achievements

Nan Ya Plastics Corporation and its Taiwanese subsidiaries, including Taipei Branch Office, Kung San Plant, Linkou Plant, Taiwan Dyeing Plant, JinXing Plant, Linyuan Plant, Nan Ya Printed Circuit Board Corporation Shulin Plant I, and PFG Fiber Glass Corporation, have obtained the "Health Promotion Mark" in 2024.



4.1.4 Talent Development and Assessment

Nan Ya Plastics Corporation has developed a comprehensive training system for personnel development. Through the e-training management system, employees progressively complete various stages of training. The current training system is divided into pre-employment training for new hires, fundamental job training, job-specific professional training, management reserve training, job certification, and cross-functional study courses, all aimed at achieving the goal of developing well-rounded employees.

Furthermore, to help improve work quality and foster a conscientious and responsible work attitude among employees, the "Performance Appraisal Regulations" explicitly stipulate a "periodic work assessment" process. Depending on their position, all employees undergo a periodic work assessment every 1 to 3 months. This is designed to motivate employees to seek growth and create a self-challenging work environment.

For detailed information on the "Employee Job-Specific Professional Technical Training System," "Employee Career Development Path," "Employee Performance Appraisal," and "Security Personnel Training and Digital Learning and Knowledge Management System," please refer to the "Talent Development" section on Nan Ya Plastics Corporation's official website.



Nan Ya Plastics Corporation's official website "Talent Development"

◆ Employee Education, Training and Examination

Nan Ya Plastics Corporation conducts various types of training programs to enhance the professional and management skills of employees at all levels, exceeding regulatory requirements. In 2024, the company and its Taiwanese subsidiaries provided an average of approximately 43 hours of training per employee, with the Senior Management receiving 13 hours, the Management receiving 33 hours, Junior Supervisor receiving 53 hours, and frontline staff receiving 43 hours. The main courses and effects are as follows:

Item	Purpose	Strategy and Approach	2024 Performance Achievements	
			Event instances	Participation Number
Professional Certification Course (Occupational Safety and Health Basic Training)	Conducting professional certification training courses related to job duties and safety requirements in conjunction with various department operations.	<ul style="list-style-type: none"> Publish the "Occupational Safety and Health Act", "Labor Standards Act", "Sexual Harassment Prevention Act", and other relevant laws and management policies. Conduct occupational safety education training for specific hazardous occupations, and require all employees involved in related business to complete relevant courses. 	21	627
Occupational Health and Safety Training (Job Safety Training)	Enhance Employee Awareness of Workplace Safety and Prevent Occupational Accidents.	<ul style="list-style-type: none"> Use media such as "in-house 10-minute training sessions", "communication meetings", "morning briefings", and "formal training sessions" to formally promote the program to employees. 	63	2,869
Other Thematic Study Courses	Enhancing Employees' Professional Competencies		56	1,757

Note: Safety and Health Education Training includes "Occupational Safety Training" and "Initial Occupational Safety Training"; a total of 3,496 people participated in 2024, with a total training time of 22,438 hours.

Nan Ya Plastics Corporation and its Taiwanese subsidiaries' employee training situation, 2022-2024 (Unit: hours)													
Company	Year	Senior Management			Management			Junior Supervisor			Entry-level employees		
		Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Nan Ya Plastics Corporation	2022	6,759	30	6,789	28,206	555	28,761	169,316	2,089	171,405	398,207	74,470	472,677
	2023	9,956	84	10,040	36,958	1,049	38,007	184,953	4,588	189,541	393,620	69,185	462,805
	2024	8,197	57	8,254	35,417	904	36,321	149,072	3,447	152,519	330,741	57,357	388,098
Taiwan Subsidiaries	2022	1,129	2	1,131	3,498	243	3,741	19,184	958	20,142	122,618	45,489	168,107
	2023	1,280	61	1,341	4,402	435	4,837	23,414	2,597	26,011	121,939	49,990	171,929
	2024	861	42	903	3,494	197	3,691	19,793	1,744	21,537	97,413	39,181	136,594

Note1: Training hours decreased in 2022 due to the impact of the COVID-19 pandemic.

Note2: Nan Ya Plastics Corporation is a secondary processing industry, with most female employees engaged in indirect office work, hence requiring fewer specialized training items.

Completion Rate of Employee Training Executed in Each Stage from 2022 to 2024

Nan Ya Plastics Corporation

Job Foundation Training	100%
Professional Training for Job Functions	100%
Annual Training Plan	100%

Taiwan Subsidiaries

Job Foundation Training	100%
Professional Training for Job Functions	100%
Annual Training Plan	100%

Note: Completion rate refers to the percentage of training subjects that should be completed within a year, which are actually completed within that year.

4.2 Workplace Safety

403-1, 403-2, 403-3, 403-4, 403-5, 403-6,
403-7, 403-8, 403-9, 403-10

4.2.1 Occupational Safety Management

Nan Ya Plastics Corporation has established a clear occupational safety and health organization to ensure workplace safety, with each site setting up an occupational safety and health committee in accordance with relevant laws and regulations. The company has also obtained ISO 45001 occupational safety and health management system certification and Taiwan Occupational Safety and Health Management System (TOSHMS) certification. The scope of the occupational safety management system covers all sites in Taiwan and Taiwan subsidiaries, including on-site environmental monitoring, personnel operations, and equipment safety inspections.



ISO 45001 Occupational Health and Safety Management System Certificate



Taiwan Occupational Safety and Health Management System (TOSHMS) Certificate

Occupational Safety Committee

- Committee Member: **341** people
- Labor Representative: **126** people
- Labor Representatives account for **37%** exceeding the legal requirements

Quarterly meetings are held, and in 2024, topics for discussion include:

- Submitting recommendations on occupational safety and health policies proposed by employers
- Coordinating and advising on occupational safety and health management plans
- Reviewing safety and health training plans
- Reviewing work environment monitoring plans, monitoring results, and implementing measures
- Reviewing health management, occupational disease prevention, and health promotion matters
- Reviewing all safety and health proposals
- Reviewing self-inspection and safety and health audit matters for business units
- Reviewing preventive measures against machinery, equipment, or raw materials hazards
- Reviewing reports on workplace accident investigations
- Evaluating the performance of on-site occupational safety and health management
- Reviewing matters related to the safety and health management of contracting operations

◆ Occupational Health and Safety Indicators

Nan Ya Plastics Corporation and its Taiwanese subsidiaries reported a total of 9 cases of occupational injuries in 2024, categorized by type of accident as follows: falls (1 case), being caught (2 cases), exposure to hazardous substances (1 case), object breakage (1 case), and slips (4 cases).

Nan Ya Plastics Corporation and its Taiwanese subsidiaries' occupational safety indicators for 2022-2024						
Year	Nan Ya Plastics Corporation			Taiwan Subsidiaries		
	Disabling Injury Frequency Rate	Disabling Injury Severity Rate	Total Injury Index	Disabling Injury Frequency Rate	Disabling Injury Severity Rate	Total Injury Index
2022	0.21	1	0.01	0.00	0	0.00
2023	0.10	5	0.02	0.00	0	0.00
2024	0.23	2	0.02	0.29	10	0.05

Note 1: Frequency of Incapacitating Injury Rate (FR) = Number of Incapacitating Injuries $\times 10^6 \div$ Total Working Hours.

Note 2: Severe Injury Rate (SR) = Total Lost Workdays of Incapacitating Injuries $\times 10^6 \div$ Total Man Hours.

Note 3: Total Injury Frequency Index = (FR \times SR $\div 1000$)^{0.5}.

Nan Ya Plastics Corporation and its Taiwanese subsidiaries' occupational Injury Statistics from 2022 to 2024						
Item	2022		2023		2024	
	Nan Ya Plastics Corporation	Taiwan Subsidiaries'	Nan Ya Plastics Corporation	Taiwan Subsidiaries'	Nan Ya Plastics Corporation	Taiwan Subsidiaries'
Total Working Hours	23,504,544	14,537,872	22,231,580	14,776,176	21,439,536	13,685,112
Recordable occupational injuries	5	0	4	0	5	4
Recordable occupational injury rate	0.21	0	0.17	0	0.23	0.29
Severe Occupational Injury Number	0	0	1	0	0	0
Severe Occupational Injury Rate	0	0	0.04	0	0	0
Total Loss of Workdays Due to Disability Injuries	46	0	472	0	54	145
Severe injury frequency	1	0	21	0	2	10

Note1: Total working hours = Number of employees in that category at the end of the year \times Total working days \times Hours worked per day.

Note2: Recordable occupational injuries: Same definition as the number of disabling injuries, referring to the number of victims who cannot continue their normal work and have lost one or more days of work time.

Note3: Recordable Occupational Injury Rate = Recordable Occupational Injuries / Total Working Hours $\times 10^6$.

Note4: Severe Occupational Injuries: Injuries that result in death or render workers unable to recover their health status within six months prior to the injury.

Note5: Severe Occupational Injury Rate = Severe occupational injury number (excluding fatalities) / Work hours $\times 10^6$.

Note6: Severe injury frequency (S.R.) = Total lost-time injury days / Total working hours $\times 10^6$.

◆ Occupational Safety and Health Management and Prevention

Event Explanation	Processing Overview	Improvement and Optimization
April 25, 2024, personnel at the Mailiao Dimethylformamide Plant in the unloading area completed blowing down the pipeline after unloading sulfuric acid (concentration: 98%) from a tanker truck. When checking for residual liquid at the bottom of the filter valve during rotation, sulfuric acid suddenly sprayed out and accidentally splashed onto the eyes.	Due to a lack of ophthalmologists at Chang Gung Memorial Hospital in Yunlin, the patient was transferred to Changhua Christian Hospital. The doctor diagnosed "chemical burns on both corneas" and returned to work on May 14th.	<ul style="list-style-type: none"> The original regulation mandated that the supervisor on duty execute photographic documentation of personnel using protective equipment. This procedure was later revised, and an in-house communication group feature was activated. Operating personnel must now have the supervisor on duty inspect their fully donned protective gear, take a photo, and upload it to the group for confirmation before commencing work. Revise operational standards and conduct training based on this case.

Event Explanation	Processing Overview	Improvement and Optimization
2024/06/04, personnel at the Kung San Spinning Factory in the manufacturing area adjusted cotton bundles after processing and held onto the handrail while walking down the stairs to the fifth floor (150 cm above ground) when right foot accidentally slipped and fell, resulting in an injury.	The supervisor accompanied the personnel to Linkou Chang Gung Hospital, where a doctor diagnosed the personnel with "right cheek laceration", and returned to work on June 17.	<ul style="list-style-type: none"> The original warning signs were placed on a side wall, making it difficult for colleagues to take notice of them; therefore, the warning signs will be relocated to a prominent and easily visible location near the stairs. The person responsible will verbally brief others during morning meetings and shift handovers, and this case study will also be used as an educational training session for personnel at the factory.
2024/06/27, An employee of Nan Ya Printed Circuit Board (NPC) Plant 2 was escorting a vendor from the rear security office to the plant. While walking along Jin Xing 9th Road and past the #A Pulverizer Area, the employee's right foot tripped over a sewage/clean water diversion and containment dike (approximately 3 cm high), causing a fall and injury.	By colleagues accompanied to Min-Sheng Hospital, diagnosed by doctor as "facial and oral blunt trauma with abrasion", returned to work on July 2.	<ul style="list-style-type: none"> The vertical wall of the dike is changed to a sloping surface. Using the originally installed mobile guardrails for personnel control and have posted warning signs. This case will be used as an example for training all employees in the factory.
July 20, 2024, an employee of Nan Ya Printed Circuit Board Corporation's Utility Department suffered injuries while performing a routine inspection at the power plant building. The incident occurred when the employee stepped on an empty space and fell down the stairs from the first floor to the basement level.	The employee was sent to Min-Sheng Hospital by ambulance, where the doctor diagnosed with "facial and hand abrasions, cervical spine dislocation", and returned to work on August 30.	<ul style="list-style-type: none"> The exterior wall of the 1st floor entrance on the side of Building 6B has been added with a lighting switch, making it easier for personnel to find and conveniently turn on the lights. This case will be used as an educational training example, and safety observations and interviews will be conducted for personnel without handrails.
August 30, 2024, an employee at the Kung San Cotton Mill's 9C line drying machine cooling belt performed a wire drawing operation (the equipment was shut down) and completed the task. After standing up to leave, due to being overweight, the employee's weight caused the conveyor belt to sag, resulting in the employee's left second toe accidentally getting caught in the gap between the conveyor belt and the frame, causing an injury.	The employee was transported to Linkou Chang Gung Memorial Hospital by ambulance and diagnosed with a "left second toe anterior soft tissue injury". They returned to work on September 2.	<ul style="list-style-type: none"> The original wire wrapping operation was performed on the dryer's conveyor belt, which has been modified to place the rope in a guide ring and perform the wrapping operation behind the conveyor belt (on the ground). Revised "Packaging Operation Employee Work Regulations" and conducted training and reiterated that all site operations must wear safety shoes.
On September 27, 2024, an employee at the Shulin Plant 2 was preparing fire-fighting equipment in the Thermal Oil Boiler Phase 1 Distribution Room (3rd floor) for a fire drill rehearsal scheduled for September 30. While taking a SCBA air cylinder (6.5 kg) out of the equipment cabinet, the employee lost grip and the cylinder slipped. The valve struck the bottom edge of the equipment cabinet and fractured. The cylinder then struck the employee's right knee, causing an injury.	By ambulance to Tucheng Chang Gung Hospital, where the doctor diagnosed a "kneecap fracture", and returned to work on October 1.	<ul style="list-style-type: none"> Purchase an air cylinder dedicated storage box, and store self-carrying air respirator cylinders inside the box with a carrying rack to secure the lid properly, and transport as a whole unit. Conduct personnel training based on this example, promoting the need to store air cylinders in storage boxes with lids closed properly, and perform transportation by handling the entire unit.
2024/10/21, PFG Fiber Glass Corporation's maintenance personnel conducted a scheduled maintenance operation on automated high-low conveyor belt equipment in the Central Inspection Area. During the inspection of the conveyor belt chain gap, an adjacent conveyor belt was still in operation, resulting in the operator being injured by the conveyor equipment.	By ambulance to Chiayi Christian Hospital, diagnosed by doctor as "left thigh and ankle bone fracture", returned to work on December 9.	<ul style="list-style-type: none"> The scope of temporary stop-checking for electrical switches has been modified from 2.0m to 1.2m (vehicle length: 1.1m), making it impossible for personnel to follow behind. A region sensor has been added below the exit of the conveyor belt exchange machine control area, which is used to monitor the movement of vehicles. This case will be used as a training example for personnel education and training, with additional monthly observations and interviews to identify unsafe behaviors.
On November 28, 2024, an employee at Nan Ya Printed Circuit Board (NPC) Plant 5 was preparing the developer solution bath in the developing area on the 5th floor. While standing on the 60 cm high step surface to add materials, the employee lost footing, fell to the ground, and sustained an injury.	The day, despite feeling no major harm, he continued to work without informing his supervisor. After work, due to still experiencing pain in his left foot, he went to Min-Sheng Hospital in Taoyuan on his own initiative, where a doctor diagnosed him with a "fracture of the fifth metatarsal bone in the left foot". He returned to work on January 22, 2025.	<ul style="list-style-type: none"> Addition of "pre-dissolution tank" allows for the pre-dissolution of sodium carbonate powder into a liquid state, which is then transported to the bath tank by air-driven motor, eliminating the need for personnel to perform tank operations on the working ladder. Reiterate upper/lower working ladder safety education training through this example.
2024/12/06 Hsinkang Engineering Plastic Factory One employee was performing a cleaning operation on the residual powder in the mixing machine discharge valve (between the intermediate tank top and the floor, height: 60 cm) on the second floor of the plastic pellet production process. During the operation, the employee moved backward without stabilizing and fell, resulting in an injury.	The supervisor accompanied the employee to Jiayi Christian Hospital, where the employee was diagnosed with a fracture of the tibia and fibula by a doctor. The employee returned to work on December 10th.	<ul style="list-style-type: none"> Installation of a work platform, stairs, and safety barriers on the ground floor of the intermediate tank foundation to set up the difference in elevation. Conduct personnel training based on this example, increase the frequency of safety observations, and encourage employees to develop correct and good working habits.

Nan Ya Plastics Corporation and its Taiwanese subsidiaries' 2024 occupational injury data by site						
Plant Zone	Male			Female		
	Disabling Injury Frequency Rate	Disabling Injury Severity Rate	Comprehensive Working Injury Index	Disabling Injury Frequency Rate	Disabling Injury Severity Rate	Comprehensive Working Injury Index
Taipei	0	0	0	0	0	0
Shulin	0.56	1	0.02	0	0	0
Linkou	0	0	0	0	0	0
Kung San	0.93	5	0.02	0	0	0
Jinxiang	0.18	6	0.03	0.09	0	0
Mailiao	0.35	6	0.04	0	0	0
Chiayi	0	0	0	0	0	0
Hsinkang	0.24	6	0.32	0	0	0
Ren Wu	0	0	0	0	0	0
Explanation	Male occupational injuries totaled 8 cases, with the type of accident being: Falling: 1 case, Being caught: 2 cases, Contact with hazardous substances: 1 case, Object breakage: 1 case, Slipping and falling: 3 cases			Female occupational injury: 1 case, of which the type of accident is a fall.		

◆ Management Principles for Suppliers

To ensure workplace safety, we strengthen subcontractor safety management primarily through "holding coordination meetings," "enhancing entrance and exit plant management," "conducting toolbox meetings," and "implementing regular audits" and other management activities. For detailed information, please refer to Section 4.3.2 Subcontractor Safety Management.

◆ Contractor Occupational Safety Indicators

In 2024, a total of three occupational accidents occurred among subcontractors. After investigation, it was found that the main causes were subcontractors violating SOP (one case) and failing to identify potential hazards (two cases). We have requested subcontractors to conduct JSA with factory (department), engineering department, and on-site inspection at construction sites, incorporating environmental factors and possible interference with work operations, as well as prevention measures into analysis, and produce promotional materials to strengthen promotion.

Contractor Working Hours and Related Occupational Safety Indicators								
Corporation	Year	Total Working Hours and Days		Occurrence quantity	Total Loss Days	Injury Frequency	Severe Injury Rate	Comprehensive Injury Index
		Total Working Days	Total Working Hours					
Nan Ya Plastics Corporation	2022	495,194	3,961,550	4	6,413	1.01	1,618	1.27
	2023	462,488	3,699,907	1	180	0.27	48	0.11
	2024	369,541	2,956,330	3	26	1.01	8	0.08
Taiwan Subsidiaries	2022	79,606	630,848	0	0	0	0	0
	2023	44,376	355,006	0	0	0	0	0
	2024	41,697	333,581	0	0	0	0	0

Note: The definitions of various indicators are the same as those for occupational health and safety indicators.

4.2.2 Process Safety Management

Nan Ya Plastics Corporation has implemented Process Safety Management (PSM) in accordance with its corporate regulations, comprising 14 key items. A total of 82 PSM personnel have been assigned at various levels, all of whom hold the legally required process safety assessment certification and undergo regular retraining. These personnel are responsible for promoting and controlling PSM management operations across departments and ensuring operational quality. The scope of management operations includes:

Monthly

- Conducted a detailed audit of the 14 key items of Process Safety Management (PSM) for the manufacturing plant, confirming that all were implemented in accordance with regulations and work practices.
- Reported the results of process safety management KPIs, effectively controlling process safety management risks (only applicable to Taiwan region).

Annually

We select departments with outstanding Safety Culture (awards include: PHA, MOC, and SOP Implementation - All Employee Participation). These departments represent the Company at the corporate commendation ceremony, thereby enhancing the overall safety culture.



◆ Process Hazards Analysis (PHA)

For the aspect of Process Hazard Analysis (PHA) Quality Improvement in Nan Ya Plastics Corporation, Nan Ya Plastics Corporation has commissioned Sphera Company (formerly IHS Company) to provide PHA Facilitators training and certification since 2012, with a total of 18 qualified personnel. These seed personnel have expanded the PHA education and training to all production sites, where each monthly unit's PHA assessment team executes PHA work reviews. The PHA facilitators then conduct on-site guidance and quality control checks to identify potential hazards at workplaces and effectively manage process risks.

Regarding the review and planning for 2024, we established a new analysis module on the Process Safety Management (PSM) computerized platform. This module consolidates analysis records from similar processes across different plants for cross-comparison to identify discrepancies. By sharing and exchanging this information, we aim to improve the accuracy of risk assessment and thereby reduce the probability of accidents.

Taiwan site

Internal Auditor

By PHA guides or senior PSM experts from various departments, conducting on-site quality checks of operational processes at their respective plants.

Progress Execution

Completed quality audits for 59 plants in 2024, continuously reviewing the execution and completeness of process risk assessments, analyzing potential hazards and safety measures, and re-examining PHA based on past incident investigation reports.

Process Safety Incident Overview in Recent Years

Corporation	Item	Unit	2022	2023	2024
Nan Ya Plastics Corporation	Process Safety Incident Count (PSIC)	Quantity	0	0	0
	Process Safety Termination Rate (PSTIR)	%	0	0	0
	Process Safety Incident Severity Rate (PSISR)	%	0	0	0
Taiwan Subsidiaries	Process Safety Incident Count (PSIC)	Quantity	0	0	0
	Process Safety Termination Rate (PSTIR)	%	0	0	0
	Process Safety Incident Severity Rate (PSISR)	%	0	0	0

◆ Management of Change (MOC)

To ensure that all design, equipment, raw materials, or operating conditions changes do not pose a hazard to the manufacturing process, process safety management specialists are set up in each department to control and review change management operations, in accordance with corporate regulations. In 2021, the scope of "Process Change Management" was further expanded to include fixed asset sales contractors, computer source management at the initial stage of process trial production for each plant, and in 2024, to ensure that all units execute MOC in accordance with regulations, preventing abnormal hazards caused by process trial production, and promoting an OA computer management system for "MOC Confirmation Form" execution.

Taiwan site	
Internal Auditor	Conducted by PSM professionals from each department, and implemented through cross-checking methods.
Progress Execution	Completed quality inspections for 60 plants in 2024, reviewed and assessed change cases (including engineering contracts, process trials, and fixed asset sales), and identified effective control measures to mitigate risks, improve processes, and ensure continuous implementation of pre-production safety checks.

◆ Job Safety Analysis (JSA)

To ensure that the work safety analysis tasks of various departments at Nan Ya Plastics Corporation are carried out in accordance with regulations, we utilize organizational and systematic analytical techniques to assess potential hazards associated with personnel operations and job duties at workplaces. This enables us to identify various types of potential risks and take appropriate preventive measures to ensure workplace safety. Each month, department heads or senior PSM professionals conduct on-site inspections to verify the completeness and quality of work safety analysis tasks.

Taiwan site	
Internal Auditor	Occupational Health and Safety Department personnel inspection.
Progress Execution	Completed quality audits for 60 plants in 2024, continuously reviewing and strengthening JSA hazard identification, risk assessment, and control. Additionally, set up regular tracking and control of all improvement progress, and further strengthened the execution of JSA assessments and on-site re-inspections after training.

Occupational Safety and Health Promotion Cases in 2024

Scope of Promotion: Taiwan, mainland China

Promotion Projects

- Promote senior management's safety awareness and inspections in 2024.
- Improve automatic railcar safety protection.
- Improve electric tow-board car safety protection.
- Enhance prevention project for chemical operations (contact with high temperature or hazardous materials) spraying.

Performance of promotion

Total Permanent Incapacity (TPI) Claims (2019: 16, 2020: 10, 2021: 8, 2022: 5, 2023: 4, 2024: 9), we will continue to improve our strategies under the "Occupational Injury Management and Prevention" framework, promoting relevant operations.

◆ Production Process Standard Operating Procedure (SOP)

To ensure that all departments of Nan Ya Plastics Corporation implement SOPs and promote operational activities, the company has revised and regularly reviewed the content based on the results of work safety analysis, focusing on potential hazards and their corresponding SOPs, with the aim of comprehensively enhancing on-site operational safety.

Each unit conducts regular "SOP review and revision discussion meetings", "SOP updates and training", "SOP case promotion and opinion surveys", "SOP audits", "plant area audits and guidance visits", and "KPI evaluation standards and performance reviews" to ensure the effectiveness of operational activities; every month, safety and health personnel and department heads form a team to conduct on-site inspections to confirm the completeness of "implementation of SOPs - full participation" in quality operations.

Taiwan site	
Internal Auditor	Jointly audited by the Safety and Health Department and personnel responsible for SOP supervision in each department.
Progress Execution	In 2024, we completed quality audits for 72 plants and facilities, continued to strengthen the control of SOPs through quantification, and utilized SWAT to enhance the implementation of SOPs.

4.2.3 Control of Chemical Management and Emergency Response Training

◆ Control of Chemical Substance Use Management

Nan Ya Plastics Corporation operates 51 types of chemical substances subject to environmental department announcements, to ensure safe management of production, use, storage, and transportation activities. To guarantee normal operation of controlled chemical substance locations and facilities, factors such as regulatory compliance, operational risk, and emergency response have been incorporated into pre-use considerations. In addition to obtaining approval documents from the competent authority, other reporting work, pipeline labeling, etc., are all included in departmental self-check items.

◆ Chemical Substance Safety Management Control

Emergency Response Plan Preparation and Drills (Including Unannounced Testing)

Each plant conducts PHA analysis to consider possible disaster scenarios, and references the "SDS Safety Data Sheet" to develop "Emergency Response Guidelines", and regularly reviews the contents of the "Hazard Prevention and Emergency Plan" for appropriateness.

Continuing to conduct unannounced drills and comprehensive exercises, and cooperating with local authorities in each county/city to organize large-scale observation exercises. In 2024, a total of 18 environmental department controlled chemical material emergency response exercises were conducted, including simulation reporting, evacuation, handling, and post-handling items, with training focuses on:

1

Familiar with the emergency response drill process.



2

Strengthen the use of corresponding equipment and protective gear.



2024 Toxic Chemical Spill Drill, with the following scenarios:

Date of Exercise	Plant	Drill Topic and Name
2024/2/21	Mailiao	Ethylene Glycol Plant Full Black Process Deviation Handling and Waste Heat Boiler Blower (Toxicity and Flammability) Leakage Emergency Drill.
2024/4/10	Mailiao	Process Deviation and Protective Layer Failure - 1,3 Butadiene Pipeline Breakage and Leakage Chain Accident Simulation
2024/4/11	Hsinkang	Engineering Plastic Factory Simulated Unloading Station Neighboring Benzene-2-Methylamine Pump Leak Causes Fire and Toxic Chemical Hazard Response Exercise
2024/5/8	Mailiao	Emergency response drill for a fire caused by high discharge pressure in the plasticizer plant leading to diaphragm rupture and leakage, which encountered an ignition source.
2024/5/27	Mailiao	Emergency drill for fire at the Phthalic Anhydride Plant inlet pipe (including toxic chemical leakage)
2024/6/4	Linyuan	Linyuan Plant Acrylate Butyl Ester Storage Tank Leaks Emergency Response Drill
2024/6/20	Rin Wu	Emergency Response Drill for DINP Pipeline Leakage at Renwu No. 2 Plant Color Paste Department
2024/7/23	Shulin	2024 National Defense Mobilization and Disaster Relief Exercise (Civilian 10th Order)
2024/8/1	Mailiao	Epoxy Resin Plant Epoxy Chloropropane Collection Pipeline Leak Response Handling Exercise
2024/9/3	Hai Feng	Fire Drill of the Dibutyl Phthalate (DBP) Plant's Butyl Acetate Output Pipeline Fire Incident Affecting Adjacent Storage Tanks.
2024/10/7	Hsinkang	Copper Foil Plant 3, Chromium Oxide Leaks Unannounced Drill
2024/10/28	Mailiao	Emergency Response Drill for Chlorine Gas Leak in Wastewater Treatment Area Pipe Network
2024/11/14	Hsinkang	Emergency Response Drill for Dimethylformamide Leakage and Air Pollution Incident at Copper-Clad Laminate Plant 2 Feedstock Area
2024/11/19	Hai Feng	Abnormal Process Deviation Handling and Safety Shutdown Training for the EO Reactor (R-110) of the Ethylene Glycol Plant, Including Fire Emergency Response Exercise.
2024/11/21	Hsinkang	Emergency Response Drill for Fire and Toxic Chemical Disaster Caused by Simulated Raw Material Storage Tank Pipeline Leakage at Copper-Clad Laminate Plant 3
2024/12/2	Hai Feng	Emergency Response Drill for Flange Leakage at the Maleic Anhydride Plant Process Inlet
2024/12/4	Chiayi	Chemical Spill Response Drill
2024/12/10	Hsinkang	Emergency Response Drill for Dimethylformamide Leakage at Copper-Clad Laminate Plant 1 Feedstock Area

NPC's Kung San site has long served as the chairman of the regional defense organization in Taoyuan City, assisting government guidance teams to enhance response capabilities and supporting related matters for disaster relief. This effort has been highly recognized by the New Taipei City Government, which has recommended Nan Ya Plastics Corporation to participate in the "2024 Environmental Protection Agency's Defense Organization Operation Excellence Award" and ultimately won the "Regional Defense Organization Operation Excellence Award".



Minister of the Environmental Protection Agency presents an award.



Regional Defense Organization Operation Excellence Award Certificate

Professional emergency responder training has been conducted since 2022, in compliance with the Regulations for the Management of Professional Emergency Responders for Toxic and Concerned Chemical Substances. Based on the type and maximum daily operational volume of controlled chemical substances used in each process, we plan and dispatch personnel to attend training. In 2024, 78 personnel were approved and registered on the Ministry of Environment's website, including 10 expert level, 11 command level, 35 technical level, 18 operational level, and 4 general awareness level. Additionally, we maintain a reserve of personnel to promptly fill any professional emergency response staffing gaps.

◆ Green Chemical Promotion

Nan Ya Plastics Corporation promotes chemical management, mainly by introducing AI and other emerging digital tools to optimize process operations, reduce raw material consumption, or enhance recycling rates, thereby reducing overall chemical substance usage. Additionally, it will follow market trends, strengthen internal research and development, and collaborate with external academic institutions to develop alternative chemicals in a timely manner, promoting the application of green chemistry. Key examples are as follows:

- 1 In accordance with the SASB "Chemical Materials Safety and Environmental Management" international standard, we have calculated that 38.90% of our company and subsidiaries' products in Taiwan, which are classified as GHS Category 1 hazardous to health and Category 2 hazardous to the environment, decreased by 4.27% compared to 2023, and all of these products have completed hazard assessments.
- 2 "Nan Ya Plastics' SAYA residual creation" boasts a proprietary BPA-Clear dual-phenol A control technology, producing low dual-phenol A products (concentrations below 1 PPM). In 2024, sales volume reached 3,613 tons. Chromuch® water-saving dyeing original color yarn is the world's first and Taiwan's only to obtain international certification under the "bluesign® standard".
- 3 NPC has successively obtained the "ISCC Plus (International Sustainability and Carbon Certification)" certification for its products such as Bisphenol A, Diethylene Glycol, and Epoxy Resin starting from September 2024. This helps to produce more sustainable products through quality balance law using biomass raw materials, thereby reducing product carbon footprint. Additionally, from January 2025 onwards, Nan Ya will collaborate with Mitsui Chemicals, which will provide bio-based acetone, while Nan Ya produces bio-based Bisphenol A for downstream development of bio-based resins (epoxy resin and polycarbonate).

◆ Emergency Drill and Firefighting Self-Protection Organization

To enable disaster response units to understand the factors that may cause disasters and potential hazards in each process, each site establishes its own firefighting personnel and dispatches trained personnel. In addition to regular disaster training (such as conducting a fire emergency drill every six months), it also participates in joint drills with the competent authority, divided into task groups, simulating rescue operations. The content includes fire, toxic chemical accident, and complex disaster response exercises. To respond to poor air quality, we have also cooperated with local environmental protection agencies to conduct an air pollution emergency drill this year.

About NPC emergency response organization system, and fire self-defense team promotion framework, please refer to Nan Ya Plastics Corporation official website "Disaster Drill and Plant Outside Transportation Safety".



Nan Ya Plastics Corporation
official website "Disaster
Drill and Plant Outside
Transportation Safety"

◆ Transportation Safety in Logistics

Management Method	Content Description	Execution in 2024
Assessment	Nan Ya Plastics Corporation requires transportation contractors to undergo evaluation by the "Road Transport Safety Quality Assessment System (SQAS)" and obtain a qualified certificate (every three years).	<ul style="list-style-type: none">Conducted a 2024 carrier evaluation and dynamic audit: reviewed written documents, conducted interviews, and on-site inspections (including quarterly unannounced audits of tank cars for transporting gasoline/diesel oil and high-pressure gases, as well as hazardous chemicals, which must meet the explosion-proof function certification requirements for tank car electrical equipment (original manufacturer's European Agreement concerning the International Carriage of Dangerous Goods by Road ADR certificate)).Cooperated with the FPG to evaluate and audit carriers transporting hazardous chemicals on roads, and 6 carriers that passed SQAS evaluation were selected again, along with the existing 79 qualified carriers, for dynamic audits.Formed a joint inspection team to conduct unannounced inspections of tank cars carrying hazardous chemicals at Mailiao, Hsinkang, and Renwu sites, inspecting a total of 101 tank cars, and all abnormal deficiencies have been rectified.
	Qualified suppliers must undergo annual evaluations at regular intervals based on their evaluation level (A-level every two years, B-level every year).	
Education and Training	Regularly holds construction safety review meetings with each site, and irregularly holds coordination organization meetings with contractors to promote traffic accident cases and analyze the causes of accidents.	Each site conducts monthly educational promotion to educate transportation companies on traffic accident cases.
Emergency Drill	<ul style="list-style-type: none">Each site conducts regular disaster prevention training.Irregularly cooperates with the relevant authorities to conduct joint drills.	Main training sessions include "Cross-regional type joint defense organization implementation training" of the Taiwan Responsible Care Association (TRCA).

The company ensures the safety of transportation operations and reduces operational risks by following the various work procedures and operating standards set by FPG, primarily including "Transportation Safety Management Regulations" and "Emergency Response Handling Regulations", among others.

4.3 Supplier and Contractor Management

2-6, 403-4

◆ Local Procurement Priority Principle

Nan Ya Plastics Corporation and its Taiwanese subsidiaries adopt a procurement and outsourcing policy that prioritizes local procurement and outsourcing. If it is not possible to procure from local sources, the company will then consider international procurement and bidding activities. The domestic procurement ratio for the past three years is as follows:

Local procurement rate from 2022 to 2024				
Corporation	Item	2022	2023	2024
Nan Ya Plastics Corporation	Domestic procurement ratio (%)	87.25	88.45	88.41
	Foreign procurement ratio (%)	12.75	11.55	11.59
Taiwan Subsidiaries	Domestic procurement ratio (%)	78.91	66.31	67.98
	Foreign procurement ratio (%)	21.09	33.69	32.02

Furthermore, related operations continue to build a harmonious trading atmosphere through e-commerce models, constructing a buyer-seller relationship that achieves open, fair, and just procurement mechanisms, and through a healthy cooperation with suppliers management mechanism, eliminating bad suppliers and cultivating long-term excellent suppliers.

4.3.1 Supplier Management 205-1, 205-2, 205-3

◆ Supplier/Sponsor Sustainability Issues

Nan Ya Plastics Corporation conducts procurement operations in accordance with the spirit of sustainable development, adheres to fair trade principles, and strives to require suppliers to meet environmental, occupational health and safety, and human rights requirements. If these requirements are not met, they will be rejected and included in supplier evaluation procedures.

To further strengthen good safety management measures, improve the occupational health and safety standards of subcontractors, and prevent their employees from suffering work-related injuries, we have established a tiered management system for subcontractors who undertake our company's projects. This system is available for reference by the procurement department. In addition, the Company has included the necessary safety and health management expenses for outsourced work as a mandatory budget item. These costs are incorporated into contract specifications and computer control systems. Furthermore, during the tendering and pricing stage, the safety and health management fee for the awarded contract is restricted from being lower than the budgeted amount. This measure prevents vendors from neglecting safety and health management in an attempt to win bids through low pricing.



Nan Ya Plastics Corporation's official website "Vendor Management"

Detailed information on the company's "Procurement Operation Flow" and "Supplier Classification Management" can be viewed on Nan Ya Plastics Corporation's official website under "Vendor Management".

To reduce the cost of issuing invoices, improve invoice data management efficiency, and save on traditional invoice management expenses, we have actively promoted the replacement of traditional paper-based invoices with electronic invoices. Currently, the rate of electronic invoicing among our suppliers has reached over 81.82%, which can effectively reduce manual processing time, costs, and postal and paper-related expenses for both parties.

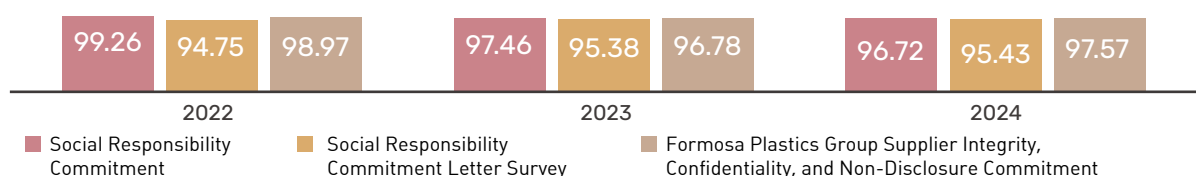
Nan Ya Plastics Corporation and Taiwan subsidiaries' electronic invoice ratio				
Corporation	Item	2022	2023	2024
Nan Ya Plastics Corporation	Traditional invoice ratio (%)	16.52	16.72	18.18
	Electronic Invoice Ratio (%)	83.48	83.28	81.82
Taiwan Subsidiaries	Traditional invoice ratio (%)	10.03	9.72	8.06
	Electronic Invoice Ratio (%)	89.97	90.28	91.94

◆ Supply Chain Management in 2024

Since 2019/10/1, we have successively set up "Supplier/Sponsor Social Responsibility Commitment" and "Supplier/Sponsor Social Responsibility Questionnaire", which are sent to suppliers upon login to the FPG Electronic Trading Market or after ordering, requiring them to sign and return the form in compliance with relevant regulations. By 2024, there were 3,172 trading partners, among which 3,068 had signed the social responsibility commitment, with a response rate of 96.7%. Additionally, 3,027 had completed the "Supplier/Sponsor Social Responsibility Questionnaire", with a response rate of 95.4%.

To ensure that suppliers strictly comply with procurement and packaging regulations, we resolutely resist collusive bidding (pricing), bribery, and unfair practices from occurring. Starting in 2021, we have added the "Formosa Plastics Group Supplier Integrity, Confidentiality, and Non-Disclosure Commitment" to our website for suppliers to download, sign, and return to us after signing and stamping; if a supplier fails to respond, it will be included in their evaluation and subsequently used as a reference for future procurement assessments. By 2024, we have had 3,172 trading partners, with 3,095 having signed the undertaking, resulting in a response rate of 97.6%. We will continue to require non-responding suppliers to comply with our company's policy.

Nan Ya Plastics Corporation 2022-2024 Sustainability Standard Signing Response Rate



4.3.2 Supplier Safety Management

Nan Ya Plastics Corporation ensures a safe working environment by requiring contractors to comply with occupational health and safety-related laws, establish safety and health management personnel, and have all contractor employees undergo safety and health education and hazard recognition training before entering the factory. Only those who pass the training are eligible to enter the factory. The company also promotes self-management among contractors through a mutual trust and cross-supervision approach aimed at achieving zero accidents. Additionally, to establish a platform for good communication and coordination between both parties, our main management methods include:

Held a meeting of the coordination organization With contractors, exchanging improvement suggestions on work environment hazards to ensure safe and worry-free operations.	Strengthening Plant Access Management Through door access management, we have a clear grasp of the number of workers on site. Additionally, contractors must undergo education and training before entering the factory to enhance their knowledge and awareness of safety and health.	Conduct a toolbox meeting Before starting work each day, we remind contractor personnel through educational means about the potential risks and hazards that may occur during the work. We also check the personnel's mental and physical condition to prevent operational negligence that could lead to industrial safety accidents.	Implementation of Regular Audits Require contractors to comply with the company's and regulatory safety and health regulations. If any abnormalities are found during audits, a review meeting will be held in the afternoon of the same day to actively improve and prevent similar abnormalities from recurring.
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Nan Ya Plastics Corporation has strengthened its subcontractor safety management to ensure a safe working environment, and has also promoted the following work items:

Safety Supervisor Implementation Timeline: From 2012 to present

Main Points in Operations

- Execute safety supervision before, during, and after construction.
- Accompany contractors to conduct self-inspection before work starts, and report any abnormal conditions found during contractor's construction.

2024 Performance

- The supervisor ensures the implementation of **pre-construction, construction, and post-construction inspections and supervision**. Regular and irregular on-site patrols are conducted to ensure factory safety, with abnormal findings reported in accordance with company regulations.
- In line with corporate planning, we will promote the "**High-Risk Operation Safety Permit APP**" to replace paper-based safety checks during pre-construction, construction, and post-construction phases with online real-time management. The pilot test was completed at the pilot factory in 2024, and it is planned to be fully implemented in 2025.

Transportation Product Safety Quality Assessment System

Implementation Timeline:
From 2011 to present

Main Points in Operations

- Suppliers whose SQAS assessment is not qualified are prohibited from handling or transporting hazardous materials on behalf of the company.
- Suppliers whose SQAS assessment is qualified, in addition to installing GPS or a vehicle recorder for each transportation vehicle, must also install necessary safety protection equipment that has been regularly inspected and found to be compliant with the characteristics of hazardous materials.

2024 Performance

Execution of 2024 Carrier Evaluation and Dynamic Audit: Written document review, interviews, and on-site inspections at the contractor's premises, with six new carriers passing SQAS evaluation (in addition to **79** qualified carriers). Additionally, completed dynamic checks without prior notice for hazardous chemical tank trucks at Mailiao, Hsinkang, and Renwu sites' loading stations, with a total of **101** tank trucks inspected.

Occupational Health and Safety Supervision and Inspection at Mailiao Site

Implementation Timeline:
From September 2011 to present

Main Points in Operations

By the Safety and Environmental Center, a joint inspection team was convened comprising Formosa Plastics Corporation, Formosa Chemicals & Fibre Corporation, Nan Ya Plastics Corporation, and Formosa Petrochemical Corporation to investigate the shutdown of the petrochemical process at Mailiao site, the fire accident during regular maintenance checks, and occupational safety prevention measures.

2024 Performance

Strengthening on-site supervision and inspection intensity, prioritizing high-risk construction projects (such as confined or hazardous material handling), and ensuring rigorous inspection and punishment.

Education and Training at Mailiao Site

Implementation Timeline: From 2006 to present

Main Points in Operations

By the Plant Management Office (Department), in collaboration with relevant departments, reviews and determines training dates and times for contractors and personnel working at the site. The Plant Safety Office or Safety and Health management personnel is responsible for coordinating the content of the training course, explaining it to trainees, and evaluating their performance through tests.

2024 Performance

- A total of **1,233,716** hours of training has been completed for subcontractors.
- Continuous strengthening of training and assessments for subcontractors has indeed enhanced personnel safety awareness.

Pursuing Co-prosperity and a Better Homeland

5

5.1 Local Community Engagement	118
5.2 Social and Cultural Values	124



2-23, 2-24, 2-25

Nan Ya Plastics Corporation is committed to social investment, actively promoting harmonious relationships with neighbors and local care, and cooperating with Formosa Plastics Group to participate in various public welfare activities, exerting social influence and promoting community development, together marching towards a sustainable and beautiful future.

Strategy

- Foster Good Neighborliness
- Expand Social Participation

Foster close relationships with neighbors and expand social participation.

2024 Targets

- Continuously call on colleagues in the factory area to form an environmental volunteer team, and designate one day a month as Environmental Volunteer Day, using the time before work to clean up the surrounding roads and community environment.
- Actively promote corporate volunteering and implement the concept of caring for vulnerable groups.
- Nan Ya Plastics Corporation partnered with the Hsinchu Branch of the Forest and Nature Conservation Agency to host a "Mikania micrantha Control Day Promotional Event," inviting employees and their families to collectively remove the invasive species, thereby implementing the company's ESG environmental initiatives.

2024 Performance Status

- ★ Continuously call on colleagues in the factory area to form an environmental volunteer team, and designate one day a month as Environmental Volunteer Day, using the time before work to clean up the surrounding roads and community environment.
- ✓ Actively promote corporate volunteering, implementing the concept of caring for vulnerable groups
- ★ Continuously organize or participate in various public welfare activities related to environmental protection, ecological education, etc.

● Unmet Target ✓ Met Target
★ Exceeded Target

Short-term Targets (2025)

- Continuously call on colleagues in the factory area to form an environmental volunteer team, and designate one day a month as Environmental Volunteer Day, using the time before work to clean up the surrounding roads and community environment.
- Actively promote corporate volunteering, implementing the concept of caring for vulnerable groups
- Continuously organize or participate in various public welfare activities related to environmental protection, ecological education, etc.

Medium and Long-term Targets (2026-2030)

- Continuously promote various community outreach and social welfare activities.
- Expand the promotion of traditional arts.

Nan Ya Plastics Corporation has long been committed to investing in the community and considers itself a responsible corporate citizen that strives to create a harmonious and beautiful home through its influence and collaboration with the community. For example, at the Mailiao site, Formosa Plastics Group not only established a dedicated research unit to conduct environmental monitoring and impact assessments but also provides free health care services and environmental knowledge promotion activities for local residents.

In addition, the management departments at each site conduct friendly neighbor activities such as visits and communication, traditional culture promotion, benevolent services, and care for disadvantaged groups. They also encourage employees to volunteer and participate in local environmental cleanup, second-hand charity markets, and other activities to enhance communication and interaction with residents. Furthermore, in coordination with the Formosa Plastics Group's planning, the company gives back to society by participating in various initiatives like the "Formosa LOHAS Circle" and collaborating with multiple foundations (7 total) and charitable trusts to execute various public welfare activities.

5.1 Local Community Engagement

Nan Ya Plastics Corporation invested NT\$140 million in social responsibility initiatives in 2024, including sponsoring the "2024 National Day Fireworks Display in Yunlin" event, donating funds for environmental road maintenance in Yunlin, nutrition lunch subsidies, Longevity Food Court project, school activity funding, Kaohsiung Kunzhong Park, and village construction and activity funding.

5.1.1 Building Good Neighborly Relations

Nan Ya Plastics Corporation's all sites have cooperated with local management departments to promote various community outreach activities, aiming to spread love and hope through various events and create a sense of "factory neighborhood family" together. For example, in 2024, the company's northern sites have actively participated and promoted the following community outreach activities:

Item	Cooperation Units	Implementation Method	2024 Performance Achievements
Visit and Communication	<ul style="list-style-type: none">Branch officeLocal residents	<ul style="list-style-type: none">Irregular visits to establish communication channels.Inviting participation in plant activities to promote harmonious relationships.	<ul style="list-style-type: none">The annual plan was executed 48 times.Traditional cultural promotion activities were organized in the factory area, inviting neighboring residents and local residents to participate.
Traditional Culture Promotion	Apple Children's Theater (Linkou Plant)	Supporting cultural troupes to perform arts and cultural activities at the site.	Lin Kou site hosted a performance by the Apple Children's Theater on April 28th, with an investment of approximately NT\$1.67 million and an estimated 3,000 attendees.
Harmonious Neighborhoods	<ul style="list-style-type: none">District OfficeNeighborhood OfficesCommunity Development Association	Actively participate in activities organized by the district office, neighborhood office, and community development association to maintain good interactive relationships.	The total amount of donations is NT\$3,257,969.
Environmental Volunteer	Employees and their families at each site.	The company is calling on factory employees and their families to participate in environmental volunteer work, together maintaining the cleanliness of the surrounding environment.	<ul style="list-style-type: none">Each plant shared 48 times of volunteer activities for environmental protection, with a total of 1,193 people participating.On September 7, the Mikania micrantha Control Day Promotional Event was held at the Formosa Plastics Yangmei Farm, with approximately 300 employees and their family members jointly responding to remove the invasive species and protect the local environment.On November 9th and 24th, a Nankan River cleanup activity was held, with approximately 2,800 employees and their family members participating in support of ecological conservation.
Charitable Services	<ul style="list-style-type: none">Employee Welfare Committee Charity ClubLabor UnionLocal Public Welfare Organization	<ul style="list-style-type: none">Conduct regular visits to orphanages and elderly care institutions, collecting donations of daily necessities and materials for social welfare organizations.Collaborate with the Employee Welfare Committee Charity Club and local public benefit groups to organize second-hand markets, with all proceeds donated.Assist disadvantaged groups in applying for emergency assistance funds from FPG Diligent Foundation.	<ul style="list-style-type: none">Organized 42 community service activities, with a total of 1,613 participants, and donated approximately NT\$1.78 million."Diligent Foundation" emergency relief fund application: 1 case, assisted amount: NT\$110,000.

◆ Community Neighbor Feedback - Tai Shan District, Guizi Community Road and Park Green Space Environmental Cleanup

"Given the large number of parks and green spaces in our village, we are very grateful for the long-term assistance provided by the Nan Ya Plastics Corporation Employee Welfare Committee Charity Club. They regularly help clean the village roads, alleys, parks, and green areas. The volunteers work together to clear and sweep up trash, and they help remove weeds, vines, and brush from the parks, keeping Guizi Village clean and tidy. Residents who exercise early in the morning often greet the volunteers, thanking them for their hard work."



Mr. Dai Lian-Shu, Village Chief of Guizi Village, Taishan District

◆ Fulfilling Responsibility for Local Co-Prosperity - "Formosa LOHAS Circle" and Special Action Plan for Ecological Conservation

Formosa Plastics Group aims to integrate local resources around the factory area, such as community, small farmers, merchants, and local government, into a "circle" concept, forming a shared prosperity circle that promotes joint development of local economy, revitalizes local tourism, creates shared prosperity and harmony goals, and brings more positive energy to Taiwanese society.

"Formosa LOHAS Circle", starting from Taoyuan, currently has five major LOHAS circles across Taiwan, including Taoyuan, Yilan, Yunlin, Kaohsiung, and Changhua, each developing different types of light travel activities. For detailed information, please refer to the official website of Formosa LOHAS Circle.



The official website of "Formosa LOHAS Circle"

To address the global ESG biodiversity issue, Nan Ya Plastics Corporation coordinates with the Formosa Plastics Group's centralized planning to implement various initiatives. These efforts include commissioning professional organizations to conduct ecological surveys at sites such as the Wilderness No. 2 Land and Yangmei Farm. The company also promotes multiple environmental protection, restoration, and education projects. By joining hands with experts, academics, and the public, Nan Ya aims to create an environmentally sustainable environment, protect biodiversity, and lay the groundwork for a green and sustainable living environment for the next generation. The main measures are as follows:

◆ Environmental Risk Assessment and Investigation

Nan Ya Plastics Corporation conducts ecological surveys and risk assessments in the following operational areas based on their risk attributes and operating requirements.

Mailiao Sixth Naphtha Cracker Industrial Complex (Petrochemical Zone)

To understand the ecological changes and environmental impact of Mailiao Industrial Complex on nearby regions, we have commissioned professional organizations to conduct surveys on animal species, including birds, mammals, amphibians, reptiles, butterflies, and plant ecology since 2007. The purpose is to understand the current situation of these organisms within the survey area and assess the impact of the complex's operation on the local environment. According to the results of annual surveys, the number of plant species remains stable, while animals are mainly affected by seasonal changes, with fluctuations in population sizes due to seasonal variations, without showing significant changes since the establishment of Mailiao Industrial Complex.

Mailiao Zone strictly controls all wastewater treatment processes and ensures that they meet standards before discharge. In addition to automated online monitoring of water temperature, conductivity, and pH, we also conduct regular sampling and testing. The monitoring results over the years have consistently met the discharge standards for wastewater, and we have multiple times observed Chinese white dolphins in nearby marine areas, indicating no significant impact on marine ecology.

Linkou site (Nanya Technology Corporation, a company in which NPC has invested, promotes Biodiversity Impact Assessment.)

Nanya Technology Corporation, a company in which NPC has invested, is located next to NPC's Linkou plant. In line with its ESG promotion plan, Nanya Technology is advancing work related to the Taskforce on Nature-related Financial Disclosures (TNFD). It has initially implemented the L.E.A.P. approach, cross-referencing and analyzing its operating site against the nine high-sensitivity biodiversity area information layers. The preliminary results show that there are no highly sensitive biodiversity areas within a two-kilometer radius of the Nanya Technology plant.

◆ Environmental Protection, Conservation, and Education Projects

Formosa Plastics Group has been promoting various environmental protection, conservation, and education projects in the northern, central, southern, and eastern regions. Among them, the "Unified Project" entrusted to the Yunlin County Fishermen's Association in 2008 for fish fry release conservation work has already reached over 8,000,000 fish fries. In addition, Nan Ya Plastics Corporation has donated the Wilderness No. 2 Land to the Society of Wilderness, a domestic NGO long focused on ecological conservation. We also collaborate with the Formosa Plastics Yangmei Organic Farm to promote several projects, as outlined below:



Note: The "Ecological survey conducted at the Wilderness No. 2 Land" and "Yangmei Farm Environmental Education" in the above figure are activities related to Nan Ya Plastics Corporation.

Nan Ya Plastics Corporation promotes organic education by considering the long-term adoption of organic farming methods at Yangmei Organic Farm, collaborating with Formosa Plastics Group to utilize the surrounding idle land and combine it with an organic education center. The company plans a series of agricultural, ecological education activities for various groups to promote organic farming, environmental education, and friendly land concepts and spirits. Additionally, to preserve Taiwan's original species, Nan Ya Plastics Corporation cooperates with Yangmei Organic Farm, Yangmei High School, and Yangmei Leisure Agricultural Zone.

The ecological pond, built under the guidance of Mr. He Hua-Xing from Yangmei Senior High School, serves as an environmental education site for the Yangmei area. It is also intended to contribute to the creation of biodiversity and the preservation of Taiwan's native species. The Company's efforts invested in this project for 2024 are detailed below:

Unit: New Taiwan Dollars (NTD)

Project Name	Investment		Output		Influence
	Resources	Event instances	Number of Participants (people)	Number of Volunteers Served	Substantive Influence
A In Response to the National Mikania micrantha Control Day	A total investment of NT\$208,500.	1	300	-	<ul style="list-style-type: none">Substantive Influence 300 partners were assembled to remove the invasive species, resulting in the final removal of 797 kg of Mikania micrantha.40 endangered Quercus dentata (Daimyo Oak) plants were restored at the Yangmei Farm.
B Habitat Conservation of the Second Wilderness Area	The participating human resources group consisted of 62 people, with a total of 620 attendees across 10 sessions.	10	184	23	<ul style="list-style-type: none">Investigation area: 35,461 square meters.Number of species observed: 2,036 records / 443 identified species / 183 participants in identification.Conservation of habitats to protect biodiversity and preserve ecological values.

◆ Special Action Plan - Collaborating with NGO Organizations to Protect Ecological Environment

To respond to the global ESG biodiversity issue, Nan Ya Plastics Corporation donated a parcel of land in the Xiushan section of Xizhi District (part of the Dajianshan area in Xizhi) in 2022 to the Society of Wilderness, a domestic NGO long focused on ecological conservation, to jointly promote its mission of "habitat protection." To date, the Company has maintained a collaborative ecological survey frequency of once per month with the Society of Wilderness for two years. Following discussions with the Society of Wilderness, we plan to share the precious survey results and ecological highlights of the No. 2 Land with a wider audience through an achievement exhibition film and an unveiling ceremony. The preliminary plan is as follows:

Ongoing operations

- Wilderness No. 2 Land Ecological Survey
- Video recording of achievements and handling achievement exhibition.



Future Planning

- The Society of Wilderness video production is scheduled for completion in June 2025.
- An unveiling ceremony will be held at the No. 2 Land to serve as a venue for promoting environmental education and ecological restoration.



Video recording of a route inspection and discussion on the results along the Wild No. 2 Creek Valley Line and Mountain Ridge Line, led by the Wilderness Conservation Association, Director Yu Ying-zong, and corporate colleagues on January 23, 2024.



Setup infrared camera with Director Yu Ying-chung on January 31, 2024, to capture dynamic biological activities of the No. 2 Wildland area, enhancing image resolution.



On December 5, 2024, Yu Ying-zong, director of the film, accompanied by senior partner Lin Zhi-mou, a teacher from The Society of Wilderness, conducted a video shoot for the achievement exhibition at No. 2 Wildland area. The photo shows Teacher Lin explaining the reasons for the formation of climate and ecological environment at No. 2 Wildland area.

5.1.2 Mailiao Region Sustainability Development

◆ Environmental Research and Assessment at Mailiao Zone

In response to public concern regarding the impact of air emissions from the Mailiao Industrial Complex on air quality, and to understand whether factory effluent affects marine ecology, the Formosa Plastics Group has taken comprehensive action. Firstly, specialized research units, such as the "Mailiao Industrial Complex Air Quality Impact Assessment and Consultation Committee," were established. Secondly, following scientific evaluation, the Group legally installed air quality monitoring stations at sensitive, densely populated points around the complex. It also integrated all lawfully mandated and voluntary air quality monitoring facilities within the complex to establish an eight-layer air quality monitoring network. This network enables internal prevention of pollution dispersion and external tracing of pollution sources, ensuring the protection of environmental air quality and the reduction/improvement of air pollution within the complex. Furthermore, effluent water quality is monitored 24 hours a day. The coastal area around the Mailiao Industrial Complex meets the Class A Marine Environmental Quality Standards. Quarterly surveys of marine water quality and ecology are conducted, and no negative impact on the neighboring marine environment has been found. The Mailiao Port has also obtained Green Port certification, featuring a vibrant ecosystem, including sightings of the Chinese White Dolphin. For more detailed information, please refer to the "Ecological Conservation" section on the Formosa Plastics Group's "Beauty of the Sixth Naphtha Cracker" website.



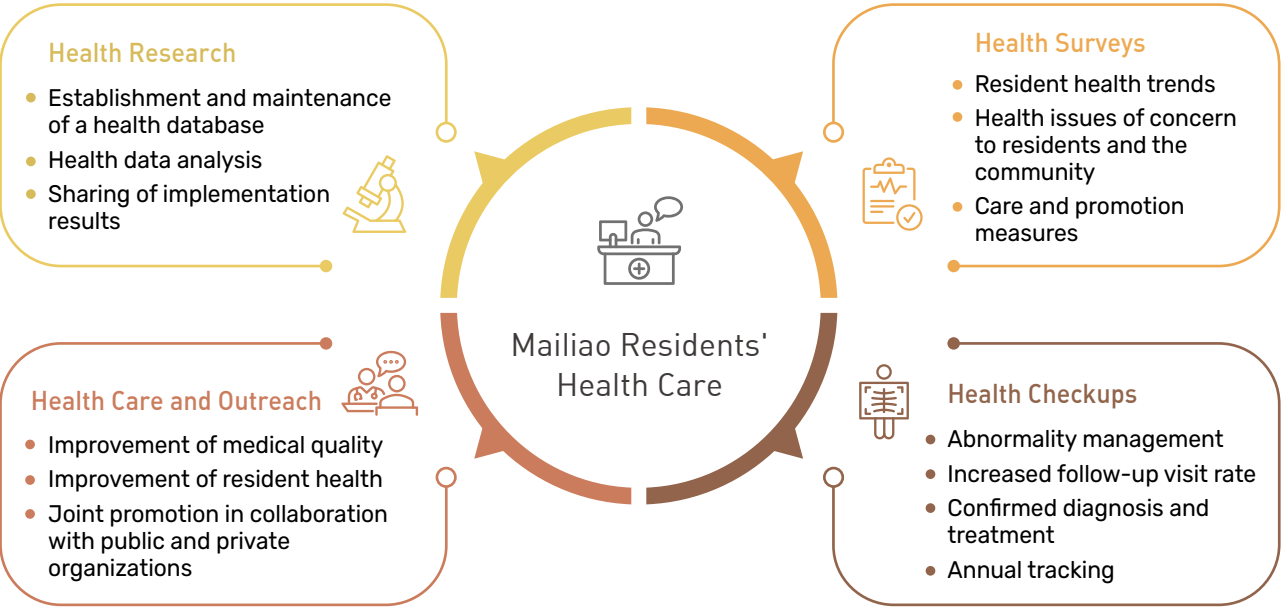
Formosa Plastics Group's "Beauty of the Sixth Naphtha Cracker" website

◆ Mailiao Residents' Health Care

To prioritize the health of local residents, since 2009, the Company has commissioned National Cheng Kung University to complete a health risk assessment for 64 specific hazardous air pollutants. The simulation results show that the maximum total non-carcinogenic risk values are all below 1, which indicates an acceptable risk level for human health. Furthermore, we established the Chang Gung Hospital Yunlin to enhance the quality of medical care in neighboring areas. By integrating the medical and educational resources of the Chang Gung system, we are deepening our commitment to the community by jointly promoting health and hygiene education for local residents. Our goal is to establish the Mailiao area as a model healthy community.






Formosa Plastics
Group's official website
"Community Health Care"



Main Execution Scenarios of Health Care in 2024

Medical Services		Health Check-ups and Follow-up Treatment	
Target	Local residents	Target	Local residents
Number of attendance	Outpatient visits 141,072 times; Emergency department visits 14,130 times.	Number of attendance	Conducted health checks on 15,433 people and tracked treatment for 1,400 individuals.
Health Education Activities			
Target	Local residents	Teacher and student	
Number of attendance	5,374 residents participated in community health education activities in 7 Communities.	Implementation of tobacco harm prevention education program for 5,938 junior and senior high school students.	

Note: For detailed execution of the Mailiao community health care, please refer to Formosa Plastics Group's official website "Community Health Care".

	 Transportation Improvement	 Noise Management	 Air Quality
Purpose	Maintaining good traffic conditions near the Mailiao Zone and ensuring the safety of schoolchildren commuting to and from school.	Effective Management of Noise Impact in Mailiao Zone's Manufacturing Process	Maintenance of Air Quality in Yunlin County
Method	Implementation of the Mailiao Zone's vehicle traffic separation system, and hiring security guards, guides to assist in maintaining traffic safety at nearby road intersections.	Regularly conducting noise variation monitoring operations in nearby areas.	Require diesel vehicles entering and exiting the Mailiao Industrial Complex to submit documents certifying compliance with exhaust emission standards.
Performance	The transportation to and from the Mailiao Zone is smooth, and it has also enhanced the safety of students commuting to and from school.	Monitoring results show that the operation of Mailiao Zone has not had a significant noise impact on the local community.	In the 2024 inspection work, a total of 195 diesel-powered vehicles were inspected and all passed.

According to historical diesel vehicle exhaust inspection statistics from the Yunlin County Environmental Protection Bureau, roadside inspections were conducted on neighboring roads accessing the Mailiao Industrial Complex in 2024. A total of 195 diesel vehicles were flagged for inspection, and 84 vehicles were tested, with all of them passing. The roadside inspection results for the past three years are as follows:

Year	Vehicle Traffic Volume (A)	Vehicle Inspection Count (B)	Vehicle Count Detection (C)	Pass Rate (D)	Defect Rate [(D-C)/B]	Vehicle traffic Defective rate [(D-C)/A]
2022	1,341	163	82	82	0.0%	0.0%
2023	2,470	212	82	82	0.0%	0.0%
2024	2,206	195	84	84	0.0%	0.0%

Note 1: Vehicle traffic volume: refers to the number of diesel vehicles detected by the Environmental Protection Agency during road inspections.

Note 2: Inspection numbers: refers to the number of diesel vehicles inspected by the Environmental Protection Agency at roadside checkpoints.

Note 3: Detection vehicle numbers: refers to the number of diesel vehicles detected and inspected for black smoke emissions during roadside checks.

Note 4: Non-compliance numbers: refers to the number of diesel vehicles that do not meet regulatory standards for particulate matter (PM), opacity, or other pollutants.

◆ "Formosa Plastics Caring Nutritional Breakfast" Subsidy

The "Formosa Plastics Caring Nutritional Breakfast" program was launched in December 2011. It covers schools in seven townships along the Yunlin coast (including Dacheng Township in Changhua County). The program provides nutritional breakfast subsidies to students from low-income households, mid-to-low-income households, families that have experienced a sudden change, and students identified as impoverished by their teachers. In 2024, a total of 1,166 person-times benefited, with a total subsidy amount of approximately NT\$4.86 million.



◆ Community Industry Promotion

To care for the local residents' livelihoods and fulfill our commitment to coexist with the community, we have been engaged in agricultural production and aquaculture in areas such as Mailiao, Taixi, Dongshi, Sihui, and Kouhu. We have entrusted professional teams to provide project guidance to enhance the economic value of crops and aquatic organisms, aiming to promote sustainable fisheries management in the region, create a vision for residents, and achieve coexistence and mutual prosperity between the Sixth Naphtha Cracker Industrial Complex and the local community.



Formosa Plastics Group
Official Website "Guidance
for Local Industries"



Other details on agricultural and fisheries guidance can be found on the Formosa Plastics Group official website, "Guidance for Local Industries".

5.2 Social and Cultural Values

To implement the philosophy of our two founders, the Formosa Plastics Group actively collaborates with the government and various private organizations to deeply understand social needs, care for, and assist disadvantaged groups. FPG continuously extends help to those in need across the fields of education, healthcare, and social welfare. All related large-scale public welfare activities are centrally planned by FPG President Office, with NPC providing timely coordination and execution. For detailed execution status of "Healthcare and Educational Promotion" and "Social Assistance," please refer to the "Foundations and Charitable Trusts" section on the Formosa Plastics Group's official website and the "Social Feedback" section on the Nan Ya Plastics Corporation's official website.



"Foundations and Charitable
Trusts" section on the
Formosa Plastics Group's
official website



"Social Feedback"
section on the Nan Ya
Plastics Corporation's
official website



Appendix

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Appendix 1: Comparison of International Sustainability Disclosure Standards

i. GRI Standards Content Index

Statement of Use	Nan Ya Plastics Corporation's Sustainability Report for the period from January 1, 2024 to December 31, 2024, in accordance with GRI standards.
Use of GRI 1	GRI 1: Foundation (2021)
Applicable GRI Sector Standards	NA

GRI 2: General Disclosures 2021

Disclosure Indicators		Reference Sections	Page	Note
2-1	Organizational Structure Details	About This Report About Nan Ya Plastics	P.1 P.6	
2-2	Entities included in the organization's sustainability reporting	About This Report	P.1	
2-3	Reporting Period, Frequency, and Contact Person	About This Report	P.1	
2-4	Information Reorganization	About This Report	P.1	
2-5	External Assurance/Confirmation	About This Report	P.1	
2-6	Activities, Value Chain, and Other Business Relationships	About Nan Ya Plastics 2.1 Brand Management and Customer Relationship 4.3 Supplier and Contractor Management	P.6 P.44 P.112	
2-7	Employee	4.1.2 Employee Structure and Employment	P.93	
2-8	Non-employee workers	4.1.2 Employee Structure and Employment	P.93	
2-9	Governance Structure and Composition	1.1.2 Board of Directors	P.28	
2-10	English: Highest Governance Unit Nomination and Selection	1.1.2 Board of Directors	P.28	
2-11	Chairman of the Board of Directors	1.1.2 Board of Directors	P.28	
2-12	Role of the Highest Governance Body in Overseeing Impact Management	1.1 Remarkable Corporate Governance	P.28	
2-13	Crisis Management Responsible Person	About This Report 1.1 Remarkable Corporate Governance	P.1 P.28	
2-14	Highest Governance Unit's Role in Sustainability Reporting	About This Report 1.1 Remarkable Corporate Governance	P.1 P.28	
2-15	Conflict of Interest	1.1 Remarkable Corporate Governance	P.28	
2-16	Critical Communication of Major Events	1.2.2 Special Attention and Compliance with Laws	P.36	
2-17	Highest Governance Unit Collective Intelligence	1.1.2 Board of Directors	P.28	
2-18	Highest Governance Unit Performance Evaluation	1.1.2 Board of Directors	P.28	
2-19	Compensation Policy	1.1.2 Board of Directors 4.1.3 Employee Welfare and Care	P.28 P.97	
2-20	Compensation Determination Process	1.1.2 Board of Directors	P.28	

Disclosure Indicators		Reference Sections	Page	Note
2-21	Annual Total Remuneration Ratio	1.1.2 Board of Directors	P.28	
2-22	Sustainability Development Strategy Declaration	Message from the Chairman	P.5	
2-23	Policy Commitment	Material Theme Management of Each Chapter	P.26, 43, 58, 91, 117	
2-24	Incorporate Policy Commitments	Material Theme Management of Each Chapter	P.26, 43, 58, 91, 117	
2-25	Processes for Remediating Negative Impacts	Material Theme Management of Each Chapter	P.26, 43, 58, 91, 117	
2-26	Seeking Advice and Raising Concerns Mechanism	1.1.3 Integrity Management and Internal Control 4.1.3 Employee Welfare and Care	P.33 P.97	
2-27	Compliance with Laws	1.2.2 Special Attention and Compliance with Laws	P.36	
2-28	Membership Qualifications of the Public Association	External Association Participation	P.7	
2-29	Stakeholder Engagement Policy	Stakeholder Communication Channels and Frequency	P.18	
2-30	Collective Agreement	4.1.3 Employee Welfare and Care - Valuing Employee Opinions	P.100	Although the company does not have a collective agreement, it still listens to employee opinions through labor unions and labor-management meetings, creating harmony between labor and management.

GRI Theme Guidelines

Topic	GRI Indicator Reference	Section Reference	Page Number	Omission/Notes
GRI 3: Material Topics 2021	GRI 3-1 Process to determine material topics	Material topics Identification and Stakeholder Engagement	P.12	
	GRI 3-2 List of material topics	Material topics Identification and Stakeholder Engagement	P.12	
Integrity in Business Operations and Governance				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	1.Ongoing Sustainable Governance Strategy	P.26	
GRI 205: Anti-corruption 2016	205-1 Operations assessed for risks related to corruption	1.1.3 Integrity Management and Internal Control	P.33	
	205-2 Communication and training about anti-corruption policies and procedures	4.3.1 Supplier Management	P.113	
	205-3 Confirmed incidents of corruption and actions taken			
GRI 206: Anti-competitive Behavior 2016	206-1 Legal actions for anti-competitive behavior, anti-trust, and monopoly practices	1.1.3 Integrity Management and Internal Control System	P.33	
Operational and Financial Performance				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	1.Ongoing Sustainable Governance Strategy	P.27	
GRI 201: Economic Performance 2016	201-1 Direct economic value generated and distributed	1.2.1 Economic Performance	P.35	

Topic	GRI Indicator Reference	Section Reference	Page Number	Omission/Notes
Energy Management				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	3 Green Environmental Management Promotion	P.59	
GRI 302: Energy 2016	302-1 Energy consumption within the organization	3.2.3 Carbon Issue Management	P.73	
	302-3 Energy intensity	3.2.3 Carbon Issue Management	P.73	
	302-4 Reduction of energy consumption	3.2.3 Carbon Issue Management	P.73	
Water Resource Management				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	3 Green Environmental Management Promotion	P.59	
GRI 303: Water and Effluents 2018	303-1 Interactions with water as a shared resource	3.4 Water Resource Management	P.81	
	303-2 Management of water discharge related impacts	3.4 Water Resource Management	P.81	
	303-3 Water withdrawal	3.4 Water Resource Management	P.81	
	303-4 Water discharge	3.4 Water Resource Management	P.81	
	303-5 Water consumption	3.4 Water Resource Management	P.81	
Climate Change Mitigation Strategy				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	3 Green Environmental Management Promotion	P.58	
GRI 201: Economic Performance 2016	201-2 Financial implications and other risks and opportunities due to climate change	3.2.2 Climate Change Risk and Opportunity Identification	P.64	
GRI 305: Emissions 2016	305-1 Direct (Scope 1) GHG Emissions	3.2.3 Carbon Issue Management	P.73	
	305-2 Energy Indirect (Scope 2) GHG Emissions	3.2.3 Carbon Issue Management	P.73	
	305-3 Other Indirect (Scope 3) GHG Emissions	3.2.3 Carbon Issue Management	P.73	
	305-4 GHG Emissions Intensity	3.2.3 Carbon Issue Management	P.73	
	305-5 Reduction of GHG Emissions	3.2 Climate Action and Strategies	P.73	
Air Pollution Management				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	3 Green Environmental Management Promotion	P.58	
GRI 305: Emissions 2016	305-6 Emissions of Ozone-Depleting Substances	Regulatory Prohibition	-	Nan Ya Plastics Corporation does not use or manufacture substances that destroy the ozone layer and complies with domestic regulations, and does not use substances or equipment that destroy the ozone layer in its manufacturing process.
	305-7 Nitrogen Oxides (NOx), Sulfur Oxides (SOx), and Other Significant Air Emissions	3.3 Air Pollution Management	P.79	

Topic	GRI Indicator Reference	Section Reference	Page Number	Omission/Notes
Waste Management and Promotion of Circular Economy				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	3.Green Environmental Management Promotion	P.60	
GRI 306: Waste 2020	306-1 Waste generation and significant waste-related impacts	3.5.1 Waste management	P.86	
	306-2 Management of significant waste-related impacts	3.5.1 Waste management	P.86	
	306-3 Waste generated	3.5.1 Waste management	P.86	
	306-4 Waste diverted from disposal	3.5.1 Waste management	P.86	
	306-5 Waste directed to disposal	3.5.1 Waste management	P.86	
Plant and Chemical Safety Management				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	4 Creating a Happy and Safe Workplace	P.92	
Occupational Health and Safety				
GRI 3: Material Topics 2021	GRI3-3 Management of material topics	4 Creating a Happy and Safe Workplace	P.91	
GRI 403: Occupational Health and Safety 2018	403-1 Occupational health and safety management system	4.2 Workplace Safety	P.103	
	403-2 Hazard identification, risk assessment, and incident investigation	4.2 Workplace Safety	P.103	
	403-3 Occupational health services	4.1.3 Employee Welfare and Care	P.97	
		4.2 Workplace Safety	P.103	
	403-4 Worker participation, consultation, and communication on occupational health and safety	4.2 Workplace Safety 4.3 Management of Suppliers and Contractors	P.103 P.112	
	403-5 Worker training on occupational health and safety	4.2 Workplace Safety	P.103	
	403-6 Promotion of worker health	4.2 Workplace Safety	P.103	
	403-7 Prevention and mitigation of occupational health and safety impacts directly linked by business relationships	4.2 Workplace Safety	P.103	
	403-8 Workers covered by an occupational health and safety management system	4.2 Workplace Safety	P.103	
	403-9 Work-related injuries	4.2 Workplace Safety	P.103	
	403-10 Work-related ill health	4.2 Workplace Safety	P.103	

ii. "Sustainability Accounting Standards Board (SASB) Mapping Table"

This table has adjusted its scope of disclosure for Nan Ya Plastics Corporation and its Taiwanese subsidiaries starting from this year, and any discrepancies in the disclosed boundaries will be explained separately.

Disclosure Theme	Greenhouse Gas Emissions				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
	Scope 1 Emissions (in CO ₂ -e)	1,698,397	1,455,403	2,499,029	
RT-CH-110a.1	Emissions coverage rate within regulatory limits (%).	According to the regulations of "Greenhouse Gas Emissions Inventory Registration and Verification Management Procedure", conduct an inventory registration and verification.			3.2 Climate Action and Strategies
RT-CH-110a.2	Long- and short-term carbon reduction strategies or plans for Scope 1 GHG emissions, including a description of the emission reduction targets and the status of target achievement.	Nan Ya Plastics Corporation sets different carbon reduction targets in response to various purposes, although it has formulated "external commitments" and "internal strengthened management" as carbon reduction goals. However, the company will pursue the most stringent reduction requirements as its target and actively promote four major carbon reduction strategies to make progress towards its long-term goal of achieving "carbon neutrality by 2050", thereby mitigating and adapting to the impacts of climate change.			

Note: 2024 Information, in accordance with the Financial Supervisory Commission's "Sustainability Development Roadmap for Listed Companies", discloses the boundary as Nan Ya Plastics Corporation and its consolidated financial statements subsidiaries.

Disclosure Theme	Air Quality				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
	Air pollutant emissions (unit: tons)	2022	2023	2024	
RT-CH-120a.1	Nitrogen Oxides (excluding N ₂ O)	725.52	715.50	723.32	3.3 Air Pollution Management
	Sulfur Oxides (SOx)	293.00	308.19	385.36	
	Volatile Organic Compounds (VOC)	1,666.11	1,412.52	1,471.32	
	Hazardous Air Pollutants (HAPs)	-	-	-	

Disclosure Theme	Energy Management				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-130a.1	Energy Consumption (Unit: GJ)	40,449,629	33,639,615	29,288,428	3.2 Climate Action and Strategies
	Percentage of grid electricity consumption (unit: %)	83.6%	81.9%	80.5%	
	Percentage of renewable energy consumption (unit: %)	0	0.063%	0.322%	
	Self-generated energy total amount (unit: GJ)	2,668,080	2,523,403	2,658,986	

Disclosure Theme	Community Relations		
Indicator Code	Disclosure Indicators	Disclosure Matching	Referenced Section
RT-CH-210a.1	Explanation of Organization as a means to enhance community benefits, assist in assessing and addressing community risks.	Caring for the community's emergency needs, donating for social welfare expenditures, and collaborating with academia to provide local agriculture and fishery sectors with scientific cultivation and breeding technology for environmentally friendly operations and increased output.	5.1 Local Community Engagement

Disclosure Theme	Water Management					
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section	
		2022	2023	2024		
RT-CH-140a.1	Total water usage (unit: 1,000 m³)	15,269	11,837	15,961	3.4 Water Resource Management	
	Proportion of water use in areas with high or extremely high baseline water pressure (unit:%).	-	-	-		
	Total water consumption (unit: thousand cubic meters)	10,418.79	7,741.74	9,569		
	Percentage of water consumption in high or extremely high pressure areas along the baseline (unit: %)	Not applicable to the current disclosure scope.				
RT-CH-140a.2	Number of non-compliance events related to water quality permits, water-related standards, and regulations	Environmental Violations Related to Water Pollution Occurred from 2022 to 2024:			3.4 Water Resource Management	
		Unit: Number of Cases				
		Type of Violation \ Year	2022	2023		2024
		Water Pollution	0	0		1
RT-CH-140a.3	Number of non-compliance incidents associated with water quality permits and water-related standards and regulations	Soil and Groundwater	0	0	0	
		Through the risk matrix ISO 14046 and WRI Aqueduct assessment tool, we evaluate the risks of water resource availability and abstraction. Our company plans to increase wastewater recycling quantities and seawater desalination equipment to reduce impacts.				

Note: Based on the water resource scenario simulation, all plants do not take in or discharge water from areas under water resource pressure. Therefore, the "Percentage of water use from high-pressure or extremely high-pressure areas (unit: %)" field is represented by "-".

Disclosure Theme	Hazardous Waste Management				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-150a.1	Hazardous waste generation total quantity (unit: tons)	21,757.0	17,019.48	15,727.45	3.5 Waste Management and Circular Economy
	Waste recycling rate of hazardous waste (unit: %)	84	79	78	

Disclosure Theme	Workforce Health & Safety				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-320a.1	Total Recordable Incident Rate (TRIR) and Fatality Rate for Direct Employees	Fatality Rate: 0 TRIR: 0.042	Fatality Rate: 0 TRIR: 0.022	Fatality Rate: 0 TRIR: 0.051	
	Total Recordable Incident Rate (TRIR) and Fatality Rate of temporary workers.	Fatality Rate: 0 TRIR: 0	Fatality Rate: 0 TRIR: 0	Fatality Rate: 0 TRIR: 0	
RT-CH-320a.2	Description of actions to assess, monitor, and reduce the long-term health risks of exposure for employees and contractors	Nan Ya Plastics Corporation strengthens process safety management to reduce the occurrence of hazardous accidents, continuously reviews and improves process protection measures at each plant site, and installs chain brake devices, alarm devices, and warning horns according to process characteristics to enhance equipment inherent safety, and requires the occupational health and safety KPI to submit a self-reflection report for improvement.			4.2 Workplace Safety

Disclosure Theme	Product Design for Use-phase Efficiency (Disclosure Boundary: Nan Ya Plastics Corporation)				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-410a.1	Product Revenue with Resource Efficiency Design (in reporting currency)	Green product sales accounted for approximately 5.4% of individual revenue.	Green product sales accounted for approximately 9.3% of individual revenue.	Green product sales accounted for approximately 11.7% of individual revenue.	2.2 Product R&D and Intelligent Applications

Disclosure Theme	Safety and Environmental Stewardship of Chemicals				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-410b.1	Percentage of products classified as hazardous substances under the Global Harmonized System (GHS) for health and environmental hazards, categorized as Class 1 for health and Class 2 for environment, expressed in terms of revenue percentage.	49.44%	43.17%	38.90%	2.2 Product R&D and Intelligent Applications 4.2 Workplace Safety
	Percentage of products that have undergone harm assessment (unit: revenue percentage).	100%	100%	100%	
RT-CH-410b.2	The Explanation of Chemical Management Strategy	Regularly track relevant chemical regulations both domestically and internationally, serving as a basis for internal selection and adoption of chemicals, green product design development, and process safety design.			2.2 Product R&D and Intelligent Applications 4.2 Workplace Safety
	Explain the development of alternative products that reduce impact on humans and/or the environment.	Strategic consideration for product development focuses on green products and clean production as the main axis, with a focus on low human hazard, environmental friendliness, and reduced volatile organic compound (VOC) emissions as key transformation priorities.			

Disclosure Theme	Management of the Legal & Regulatory Environment				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-530a.1	Description of the organization's position on government regulations and/or policy proposals related to environmental and social matters that affect the industry	Fine: 10 items; Fine amount: NT\$1.22 million	Fine: 12 items; Fine amount: NT\$1 million.	Fine: 16 items; Fine amount: NT\$6.47 million.	1.2.2 Special Focus on Compliance with Laws and Regulations

Disclosure Theme	Operational Safety, Emergency Preparedness & Response				
Indicator Code	Disclosure Indicators	Disclosure Matching			Referenced Section
		2022	2023	2024	
RT-CH-540a.1	Process Safety Incident Count (PSIC)	0	0	0	4.2 Workplace Safety
	Process Safety Event Rate (PSTIR)	0	0	0	
	Process Safety Incident Severity Rate (PSISR)	0	0	0	
RT-CH-540a.2	Transportation Accidents (Incident)	0	0	0	

Disclosure Theme	Genetically Modified Organisms		
Indicator Code	Disclosure Indicators	Disclosure Matching	Referenced Section
RT-CH-410c.1	Percentage of products containing genetically modified organisms (GMOS) by revenue (unit: %).	Nan Ya Plastics Corporation does not produce products containing genetically modified organisms (GMOs).	2.2 Product R&D and Intelligent Applications

Operating Indicators	Production by Reportable Segment		
Indicator Code	Disclosure Indicators	Disclosure Matching	Referenced Section
RT-CH-000.A	The company produces the following categories of products (in units of m ³ or tons).	<p>Main Products Production Statistics as Follows:</p> <ul style="list-style-type: none"> Plastic Products: PVC sheet 86,389 tons, plastic windows 25,465 tons, rigid pipes 136,446 tons. Chemical Products: Diethylene glycol 571,109 tons, ethylene glycol 1,272,940 tons, plasticizers and hardeners 212,337 tons. Electronic Materials: Printed circuit boards 11,571 thousand square inches, copper foil 75,351 tons, copper-clad laminates 54,588 thousand pieces. Polyester Products: Polyester fibers 1,297,200 tons, polyester film 56,916 tons. 	2.1 Brand Management and Customer Relations

Appendix 2: Comparison Table of Regulations Governing the Preparation and Filing of Sustainability Reports by TWSE/TPEX-Listed Companies

i. Industry-Specific Sustainability Disclosure Metrics – Plastics Industry

Number	Indicator	Indicator Type	2024 Sustainability Disclosure Report	Unit	Note
1	Total Energy Consumption	Quantification	29,288,428	1 billion joules (GJ)	
	Percentage of purchased electricity	Quantification	80.5%	Percentage (%)	
	Renewable Energy Utilization Rate	Quantification	0.322%	Percentage (%)	
	Self-generated energy consumption total amount ^(Note 1)	Quantification	2,658,986	1 billion joules (GJ)	
2	Total Water Intake	Quantification	15,961	thousand cubic meters(1,000m ³)	
	Total Water Consumption	Quantification	9,569	thousand cubic meters(1,000m ³)	
3	Production of Hazardous Waste Weight	Quantification	15,727.45	Ton (t)	
	Waste Recycling Rate of Hazardous Waste Generation	Quantification	78	Percentage (%)	
4	Occupational Accident Number	Quantification	9	Quantity	No work-related fatalities occurred in 2024.
	Occupational Accident Rate	Quantification	0.04%	Percentage (%)	Occupational injury rate per 1,000 employees (‰)

Main Products Production Statistics as Follows:

- Plastic Products: PVC sheet 86,389 tons, plastic windows 25,465 tons, rigid pipes 136,446 tons.
- Chemical Products: Diethylene glycol 571,109 tons, ethylene glycol 1,272,940 tons, plasticizers and hardeners 212,337 tons.
- Electronic Materials: Printed circuit boards 11,571 thousand square inches, copper foil 75,351 tons, copper-clad laminates 54,588 thousand pieces.
- Polyester Products: Polyester fibers 1,297,200 tons, polyester film 56,916 tons.

Note 1: The total amount of self-generated renewable energy is defined according to the "Renewable Energy Development Act", "Renewable Energy Certificate Implementation Regulations" or relevant subsidiary laws.

Note 2: Due to the diverse product categories of Nan Ya Plastics Corporation, this annex only discloses major production items and quantities. The completed product revenue includes "Electronic Materials 41.7%, Plastic Raw Materials 22.5%, Fiber Products 18.7%, Plastic Products 15.1%, and Others 2.0%", which can be seen in the "2.1 Brand Management and Customer Relationships" chapter of this report book.

Note 3: Scope of Statistical Information: Nan Ya Plastics Corporation and its Taiwanese subsidiaries (Nan Ya Printed Circuit Board, PFG Fiber Glass, and Nan Chung Petrochemical).

ii. Climate-Related Information for TWSE/TPEX-Listed Companies

Climate Change Risks and Opportunities to the Company and Relevant Countermeasures Adopted by the Company		
Topic	Response Explanation	Referenced Section
1 Description of Board of Directors and Management's Supervision and Governance of Climate-related Risks and Opportunities	To effectively promote and implement sustainability-related operations, the Company's Board of Directors serves as the highest governing body for ESG sustainability. Management functions through the "ESG Promotion Organization," with the "ESG Promotion Team" responsible for the implementation and execution of all related tasks.	
2 Describing the climate risks and opportunities recognized by the company, how they impact business, strategy, and finance (short-term, medium-term, long-term)"	Our company's climate change risk assessment method refers to the TCFD report recommendations, and when identifying risks, considers transformation risks (policy and legal/market/technical/reputation) and physical risks (chronic and acute), and provides a risk explanation for possible events, including detailed impact severity, response strategies, and handling procedures. Please refer to our company's 2024 TCFD report for further details.	
3 Impact of Extreme Weather Events and Transition Actions on Financials	<ul style="list-style-type: none"> ■ Extreme Weather Events: The company has identified extreme weather-related physical risks, primarily including: (i) heavy rainfall and flooding, (ii) strong winds and typhoons, (iii) water scarcity and droughts. Assuming that due to extreme weather events, production at the factory is reduced or halted in response, the financial impact of each 1-3 day shutdown. ■ Transition Action: The company is actively promoting various climate transition activities in response to global low-carbon trends, which can reduce carbon emissions and costs while also driving product process innovation and design creativity, thereby enhancing operational efficiency. For detailed information, please refer to our 2024 TCFD report. 	
4 Description of Climate Risk Identification, Assessment, and Management Process Integration into Overall Risk Management System	The Company has established a comprehensive risk management culture and diligently implements risk management. The "Risk Management Regulations," which were approved by the Board of Directors on December 16, 2020, explicitly list climate change as one of the Company's risk items. By integrating this with the existing ISO 14001 Environmental Management System, climate risk management is incorporated into the overall risk management mechanism through the standard risk management process of "identification, analysis and assessment, control and treatment, monitoring and review, and communication and reporting."	
5 If using scenario analysis to assess the resilience of facing climate change risks, it should explain the scenarios used, parameters, assumptions, analytical factors, and main financial impacts.	Our company's climate-related risk identification, assessment, and management process: Background data collection → Risk and operational scope evaluation → Risk and operational impact analysis → Control measures and target setting → Review and optimization. For detailed information, please refer to our 2024 TCFD report.	3.2.2 Climate Change Risk and Opportunity Identification
6 If there are transformation plans for managing climate-related risks, explain the content of this plan and the indicators and targets used to identify and manage actual risks and transformation risks.	<ul style="list-style-type: none"> ■ To address the risks and opportunities brought by climate change, the Company continues to promote four key carbon reduction strategies, including "Low-Carbon Energy Transition." ■ We participate in important international climate assessments, actively completing the CDP "Climate Change Questionnaire" and "Water Questionnaire." We adjust our carbon reduction policies and management actions as necessary, referencing the assessment indicators, with the goal of maintaining a "Leadership Level" rating in the CDP evaluation. ■ To ensure stakeholders are fully informed about the Company's efforts in promoting carbon reduction management, the execution results, and the climate change resilience against physical and transition risks, we will continue to prepare reports based on the TCFD framework. These reports will be updated annually and published on the Company's website, clearly disclosing climate risks, opportunity identification results, promotion goals, strategies, and performance. For detailed content, please refer to the Company's 2024 TCFD Report. 	
7 If internal carbon pricing is used as a planning tool, it should explain the basis of price setting.	Nan Ya Plastics Corporation promotes internal carbon pricing, with a price of NT\$100 per ton. For facilities that exceed their carbon emission limits, the carbon pricing is set at NT\$1,500 per ton. Through our self-developed greenhouse gas calculation system, we calculate and include the cost of carbon emissions (including excess emissions) in our monthly operational performance evaluation to deepen each facility's work on reducing greenhouse gas emissions. Meanwhile, to promote supply chain decarbonization, we have established an "Equipment Selection Analysis Table" for high-carbon-emission equipment procurement cases, where the purchasing department estimates and calculates the carbon emissions of proposed equipment purchases and incorporates carbon costs into the evaluation criteria for procurement selection.	

Climate Change Risks and Opportunities to the Company and Relevant Countermeasures Adopted by the Company		
Topic	Response Explanation	Referenced Section
8 If climate-related targets are set, disclose the covered activities, GHG emission scopes, planning timeline, and annual progress toward achievement. If carbon offsets or Renewable Energy Certificates (RECs) are used to meet the targets, disclose the source and quantity of the offset credits or the quantity of RECs.	<p>Please refer to the table below for information regarding greenhouse gas reduction targets, covered activities, GHG emission scope, planned timeline, and annual progress.</p> <p>The Company and its Taiwanese subsidiaries are also actively installing solar power generation systems on the rooftops of various plants, with a cumulative installed capacity of 15,060.45 KW as of 2024. Additionally, the Company acquired 12,206 Renewable Energy Certificates (RECs) in 2024, which is equivalent to 12,206 megawatt-hours (MWh) of electricity generation.</p>	3.2.2 Climate Change Risk and Opportunity Identification

Greenhouse Gas Inventory and Emissions Reduction Target, Strategy, and Action Plan

Please see the table below for details

1-1 Recent greenhouse gas inventory and assurance situation of the company over the past two years.					
1-1-1 Greenhouse Gas Inventory Information					
Year (Republic of China year)	2023 (112th year)			(113th year)	
	Scope	Emissions (tons CO ₂ e)	Carbon intensity (tons CO ₂ e per million NTD in revenue)	Emissions (tons CO ₂ e)	Carbon intensity (tons CO ₂ e per million NTD in revenue)
Nan Ya Plastics Corporation	Scope 1	1,410,260		1,424,266	
	Scope 2	2,398,374	-	2,301,205	-
	Subtotal	3,808,633		3,725,471	
Subsidiaries (only Taiwan subsidiaries in 2023; merged financial statements as the basis in 2024)	Scope	Emissions (tons CO ₂ e)	Carbon intensity (tons CO ₂ e per million NTD in revenue)	Emissions (tons CO ₂ e)	Carbon intensity (tons CO ₂ e per million NTD in revenue)
	Scope 1	45,143		1,074,763	
	Scope 2	630,133	-	2,250,851	-
	Subtotal	675,276		3,325,614	
	Total	4,483,909	28.94	7,051,085	27.16

Note1: Scope 1 (direct emissions from sources owned or controlled by the company) includes greenhouse gases such as carbon dioxide, methane, nitrous oxide, hydrofluorocarbons, and sulfur hexafluoride. Scope 2 (indirect energy-related emissions) refers to indirect emissions caused by input electricity, heat, or steam, which include greenhouse gases such as carbon dioxide, methane, and nitrous oxide. Scope 3 (other indirect emissions) are emissions generated by company activities that are not related to energy consumption and come from other sources owned or controlled by the company.

Note2: The standard for the Greenhouse Gas (GHG) inventory is primarily ISO 14064-1. The inventory data and total emissions calculation are based on the Global Warming Potential (GWP) values published in the Intergovernmental Panel on Climate Change (IPCC) Fifth Assessment Report (2013).

1-1-2 Greenhouse Gas Emissions Confirmation Information		
Scope of Assurance	2023 (112th year) emissions volume (tons of CO ₂ e)	2024 Emissions (tons CO ₂ e)
Nan Ya Plastics Corporation	Scope 1	1,410,260
	Scope2	1,424,266
	Total	2,398,374
	Percentage of self-inspection and disclosure in accordance with the preceding 1-1-1.	2,301,205
Subsidiaries (only Taiwan subsidiaries in 2023; merged financial statements as the basis in 2024)	Total	3,808,633
	Percentage of self-inspection and disclosure in accordance with the preceding 1-1-1.	3,725,471
	Scope 1	45,143
	Scope2	630,133
Independent Auditor	Total	675,276
	Percentage of self-inspection and disclosure in accordance with the preceding 1-1-1.	0%
	SGS	0%
	SGS	
Confidently Certain Situation Explanation	<ul style="list-style-type: none"> Nan Ya Plastics Corporation shall individually confirm its greenhouse gas emissions for 2023 from 2024 onwards. The company has entrusted third-party professional organizations to conduct verification work since 2005 and will execute confirmation work starting from 2023. Subsidiaries included in the consolidated financial report shall individually confirm their greenhouse gas emissions for 2026 from 2027 onwards, with plans to execute confirmation work annually from 2026 onwards. The confirmed organization adopts the ISO 14064-3 standard for confirmation and provides a reasonable assurance level in its confirmation opinion. 	<ul style="list-style-type: none"> Nan Ya Plastics Corporation shall individually confirm its greenhouse gas emissions for 2023 from 2024 onwards. The company has entrusted third-party professional organizations to conduct verification work since 2005 and will execute confirmation work starting from 2023. Subsidiaries included in the consolidated financial report shall individually confirm their greenhouse gas emissions for 2026 from 2027 onwards, with plans to execute confirmation work annually from 2026 onwards. The confirmed organization adopts the ISO 14064-3 standard for confirmation and provides a reasonable assurance level in its confirmation opinion.
Conclusion/Opinion	Declaration of Reasonable Assurance Level Verification (Scope: Nan Ya Plastics Corporation).	Declaration of Reasonable Assurance Level Verification (Scope: Nan Ya Plastics Corporation).

1-2 Nan Ya Plastics Corporation's Greenhouse Gas Reduction Target, Strategy, and Specific Action Plan
(2023-2030)

Greenhouse Gas Reduction Baseline Year and Reduction Target	<ul style="list-style-type: none">■ Nan Ya Plastics Corporation Based on the 2007 baseline year (6,950,000 t CO₂e), we aim to reduce greenhouse gas emissions by 20% in 2025 (5,560,000 t CO₂e), 35% in 2030 (4,520,000 t CO₂e), and achieve carbon neutrality by 2050.■ Subsidiaries Based on the 2024 baseline year (3,330,000 t CO₂e), we set a target to reduce greenhouse gas emissions by 1% annually for our consolidated subsidiaries' report. We expect to emit 3,300,000 t CO₂e in 2025 and 3,130,000 t CO₂e in 2030, with the goal of achieving carbon neutrality by 2050.
Greenhouse Gas Reduction Strategy and Specific Plan	<ul style="list-style-type: none">■ Nan Ya Plastics Corporation<ul style="list-style-type: none">◆ Low-Carbon Energy Transition: The utility plant has stopped operating coal-fired boilers and installed gas-fired steam boilers and other equipment. Meanwhile, each production site has also switched to low-carbon energy sources (such as natural gas) to replace high-carbon energy sources (such as coal and heavy oil).◆ Energy Conservation and Carbon Reduction Circular Economy: We have continued to promote process improvements, circular economy, AI, and digital transformation to enhance energy efficiency and reduce waste generation.◆ Increase in Renewable Energy Capacity: We have planned to install solar panels on the rooftops of our company's various factories, with a total installed capacity of 52,259.54 KW (14,713.02 KW completed).◆ Carbon Capture Technology Application: We have expanded electronic-grade and industrial-grade liquid CO₂ factories to recover CO₂ resources from chemical processes.■ Subsidiaries Our subsidiaries have followed the four major low-carbon strategies of our parent company and implemented various energy-saving and carbon-reducing improvements. Additionally, we have planned and installed solar panels with a total installed capacity of 48,216.43 KW (6,747.43 KW completed).
Achievement of Reduction Targets	Nan Ya Plastics Corporation's 2024 emissions totaled 3.74 million tons, a decrease of 70,000 tons compared to the verified amount of 3.81 million tons in 2023, and has already achieved its internal strict management target (reducing emissions to 444 million tons by 2030).

Appendix 3: Third-Party Verification Statement



INDEPENDENT ASSURANCE OPINION STATEMENT

Nan Ya Plastics Corporation 2024 Sustainability Report

The British Standards Institution is independent to Nan Ya Plastics Corporation (hereafter referred to as Nan Ya Plastics in this statement) and has no financial interest in the operation of Nan Ya Plastics other than for the assessment and verification of the sustainability statements contained in this report.

This independent assurance opinion statement has been prepared for the stakeholders of Nan Ya Plastics only for the purpose of assuring its statements relating to its sustainability report, more particularly described in the Scope below. It was not prepared for any other purpose. The British Standards Institution will not, in providing this independent assurance opinion statement, accept or assume responsibility (legal or otherwise) or accept liability for or in connection with any other purpose for which it may be used, or to any person by whom the independent assurance opinion statement may be read.

This independent assurance opinion statement is prepared on the basis of review by the British Standards Institution of information presented to it by Nan Ya Plastics. The review does not extend beyond such information and is solely based on it. In performing such review, the British Standards Institution has assumed that all such information is complete and accurate.

Any queries that may arise by virtue of this independent assurance opinion statement or matters relating to it should be addressed to Nan Ya Plastics only.

Scope

The scope of engagement agreed upon with Nan Ya Plastics includes the followings:

1. The assurance scope is consistent with the description of Nan Ya Plastics Corporation 2024 Sustainability Report.
2. The evaluation of the nature and extent of the Nan Ya Plastics's adherence to AA1000 AccountAbility Principles (2018) in this report as conducted in accordance with type 1 of AA1000AS v3 sustainability assurance engagement and therefore, the information/data disclosed in the report is not verified through the verification process.

This statement was prepared in English and translated into Chinese for reference only.

Opinion Statement

We conclude that the Nan Ya Plastics Corporation 2024 Sustainability Report provides a fair view of the Nan Ya Plastics sustainability programmes and performances during 2024. The sustainability report subject to assurance is free from material misstatement based upon testing within the limitations of the scope of the assurance, the information and data provided by the Nan Ya Plastics and the sample taken. We believe that the performance information of Environment, Social and Governance (ESG) are fairly represented. The sustainability performance information disclosed in the report demonstrate Nan Ya Plastics's efforts recognized by its stakeholders.

Our work was carried out by a team of sustainability report assurers in accordance with the AA1000AS v3. We planned and performed this part of our work to obtain the necessary information and explanations we considered to provide sufficient evidence that Nan Ya Plastics's description of their approach to AA1000AS v3 and their self-declaration in accordance with GRI Standards were fairly stated.

Methodology

Our work was designed to gather evidence on which to base our conclusion. We undertook the following activities:

- a review of issues raised by external parties that could be relevant to Nan Ya Plastics's policies to provide a check on the appropriateness of statements made in the report.
- discussion with managers on approach to stakeholder engagement. However, we had no direct contact with external stakeholders.
- 11 interviews with staffs involved in sustainability management, report preparation and provision of report information were carried out.
- review of key organizational developments.
- review of the findings of internal audits.
- review of supporting evidence for claims made in the reports.
- an assessment of the organization's reporting and management processes concerning this reporting against the principles of Inclusivity, Materiality, Responsiveness, and Impact as described in the AA1000AP (2018).

Conclusions

A detailed review against the Inclusivity, Materiality, Responsiveness, and Impact of AA1000AP (2018) and GRI Standards is set out below:

Inclusivity

This report has reflected a fact that Nan Ya Plastics has continually sought the engagement of its stakeholders and established material sustainability topics, as the participation of stakeholders has been conducted in developing and achieving an accountable and strategic response to sustainability. There are fair reporting and disclosures for the information of Environment, Social and Governance (ESG) in this report, so that appropriate planning and target-setting can be supported. In our professional opinion the report covers the Nan Ya Plastics's inclusivity issues.

Materiality

Nan Ya Plastics publishes material topics that will substantively influence and impact the assessments, decisions, actions and performance of Nan Ya Plastics and its stakeholders. The sustainability information disclosed enables its stakeholders to make informed judgements about the Nan Ya Plastics's management and performance. In our professional opinion the report covers the Nan Ya Plastics's material issues.

Responsiveness

Nan Ya Plastics has implemented the practice to respond to the expectations and perceptions of its stakeholders. An Ethical Policy for Nan Ya Plastics is developed and continually provides the opportunity to further enhance Nan Ya Plastics's responsiveness to stakeholder concerns. Topics that stakeholder concern about have been responded timely. In our professional opinion the report covers the Nan Ya Plastics's responsiveness issues.

Impact

Nan Ya Plastics has identified and fairly represented impacts that were measured and disclosed in probably balanced and effective way. Nan Ya Plastics has established processes to monitor, measure, evaluate, and manage impacts that lead to more effective decision-making and results-based management within the organization. In our professional opinion the report covers the Nan Ya Plastics's impact issues.

GRI Sustainability Reporting Standards (GRI Standards)

Nan Ya Plastics provided us with their self-declaration of in accordance with GRI Standards 2021 (For each material topic covered in the applicable GRI Sector Standard and relevant GRI Topic Standard, comply with all reporting requirements for disclosures). Based on our review, we confirm that sustainable development disclosures with reference to GRI Standards' disclosures are reported, partially reported, or omitted. In our professional opinion the self-declaration covers the Nan Ya Plastics's sustainability topics.

Assurance level

The moderate level assurance provided is in accordance with AA1000AS v3 in our review, as defined by the scope and methodology described in this statement.

Responsibility

The sustainability report is the responsibility of the Nan Ya Plastics's chairman as declared in his responsibility letter. Our responsibility is to provide an independent assurance opinion statement to stakeholders giving our professional opinion based on the scope and methodology described.

Competency and Independence

The assurance team was composed of auditors experienced in relevant sectors, and trained in a range of sustainability, environmental and social standards including AA1000AS, ISO 14001, ISO 45001, ISO 14064, and ISO 9001. BSI is a leading global standards and assessment body founded in 1901. The assurance is carried out in line with the BSI Fair Trading Code of Practice.

For and on behalf of BSI:



Peter Pu, Managing Director BSI Taiwan



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