

# FORMOSA PLASTICS GROUP

Introduction



Formosa Wang Brothers Park— Providing recreational spaces and educational areas for the public to promote Kaohsiung's economic and cultural development.

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In 1954, where today's Formosa Wang Brothers Park stands, founders of Formosa Plastics Group, Yung-Ching Wang and Yung-Tsai Wang, established Taiwan's first PVC factory with a daily production capacity of 4 tons, laying the foundation for the country's plastic industry.

To abide by the urban development policy of Kaohsiung City, production ceased in April 2014. Then in March 2018, 13 buildings were registered as memorial and historical buildings after passing the city's cultural heritage review, preserving the original office of the founders, the employee dormitory area, and the adjacent old trees. All these have borne witness to the evolution of Taiwan's petrochemical industry over the past 70 years, providing an urban space for tourism and historical and cultural education for the public. Moreover, the park aims to stimulate the economic and cultural development of Kaohsiung City.



An Extraordinary Enterprises that Recepets Nature and Friendly to the Environment.

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The world's smallest PVC resin plant began to drive Taiwan's economic development in 1954.

# **HISTORY**

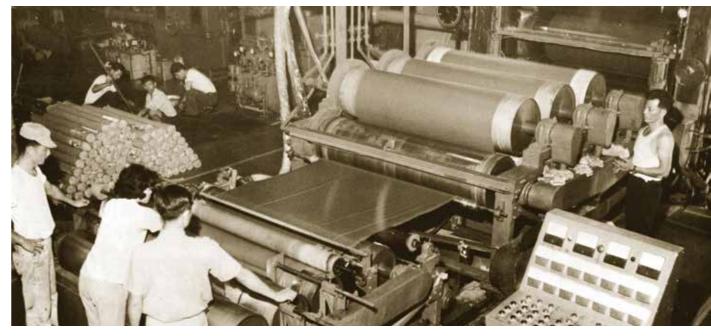


- PVC resin was transported to Kaohsiung Port via ox-carts for loading and export in 1957

FPG established Formosa Plastics Corporation in 1954. The PVC resin plant, with a daily production capacity of 4 tons, began production in 1957 and was the smallest PVC resin plant in the world at the time. However, due to the low production volume, relatively high cost, and lack of downstream customers in Taiwan, product piled up and sales was sluggish, creating a problem for the company. To overcome this issue, the company carefully considered its situation and

decided to increase production to lower unit cost. It also began building a processing plant to utilize the PVC resin, and then exported the processed goods.

As a result, daily PVC resin production production was increased from 4 tons to 20 tons. Nan Ya Plastics Corporation was established in 1958 to process PCV resin into PVC tubes, rubber, and tape. New Eastern Plastics Product Corporation was subsequently established to make use of the goods from Nan Ya Plastics Corporation's second processing, and produced



The first adhesive tape machine of Nan Ya Plastics Corporation

goods from tertiary processing such as purses, suitcases, shoes, curtains, raincoats, and blow toys. With an abundant supply of materials from Formosa Plastics and Nan Ya Plastics, New Eastern Plastics Product Corporation entered international markets and received a continuous stream of purchase orders. However, the Founder resolutely decided to shut down New Eastern Plastics Product Corporation and encouraged employees to start their own businesses. They thus created an unparalleled tertiary processing system which led to the flourishing petrochemical industry later on and greatly contributed to Taiwan's economic development.



FPG continued to diversify after laying the foundation for plastic raw materials and processing. The group established Formosa Chemicals & Fibre Corporation in 1965, which used branches and small logs to produce rayon, yarn, fabric, and apparel, formally bringing FPG into the textiles industry. Nan Ya Plastics Corporation subsequently established a plant in 1968 to produce polyester stable fiber, and FPG established a plant the same year to produce modacrylic yarn. Formosa Chemicals & Fibre Corporation established a plant in 1974 to produce nylon fiber and fabric. A large dyeing and finishing plant was established to increase the added value of the products and provide downstream customers with more complete services. FPG is the only company in Taiwan capable of manufacturing four types of fibers and providing dyeing and finishing, and the group is also one of the largest fiber manufacturers in the world.

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After entering the textile industry, FPG recognized that the thriving electronics and IT industry in Taiwan still relied on imports for main parts and components, and had Nan Ya Plastics Corporation invest in a plant to manufacture printed circuit boards (PCB) and copper clad laminate (CCL) in 1984. The main reason why PCB was selected as the first step for entering the electronics industry was because FPG has always been in the petrochemical, plastics, and textile industries, and was unfamiliar with the electronics and IT industry. PCB is the most fundamental part in the electronics and IT industry. PCB has a long product life cycle, few variations, and the key to success is quality, the production process, and cost control. These are all FPG's strengths gained through its management experience, therefore giving FPG an increased possibility of success. PCB related business operations allowed us to fully understand and become familiar with operations of the electronics and IT industry, providing a basis for further development.

Today, we have successfully established a vertically integrated production system for electronics raw materials, and further invested in the production of DRAM and wafers, which are key materials for upstream industries, significantly contributing to the self-sufficiency of Taiwan's electronics and IT industries.

FPG saw the insufficient supply of upstream petrochemical materials in Taiwan in the 1970s, and the dependency on imports that often forced companies to purchase raw materials at higher





Wan Zang-Yang Memorial Park in Mailiao Industrial Complex

prices, which reduced their competitiveness. FPG proposed building a naphtha cracker to resolve the problem of insufficient petrochemical raw materials numerous times starting in 1973, but the proposals were all turned down. It was not until 1986 that the government approved the proposal, and FPG began to construct Taiwan's Sixth naphtha cracker, which is the Sixth Naphtha Cracker Project. Formosa Petrochemical Corporation was established in 1992 in coordination with the operations of the Sixth Naphtha Cracker Project, and it was responsible for constructing the refining plant, naphtha cracker, and co-generation power plant. All of the plants were completed and have begun production, and a series of petrochemical plants were subsequently completed and have also begun production. We are beginning to enjoy the advantages from vertical integration in the Sixth Naphtha Cracker Project, which has further enhanced our overall operating capabilities.

After seven decades of development, FPG is currently comprised of over a hundred companies, including Formosa Plastics Corporation, Nan Ya Plastics Corporation, Formosa Chemicals & Fibre Corporation, Formosa Petrochemical Corporation, and Formosa Ha Tinh Steel Corporation, and has plants in Taiwan, the United States, China, Vietnam, the Philippines, and Indonesia. FPG also has a large number of education and healthcare institutions, making it one of the largest private enterprises in Taiwan.







Complete corporate organization and management system

# ORGANIZATION AND OPERATION STRUCTURE



The Headquarters of FPG

To pursuit the rationalization of management, the Group Administration, functioning as a professional staff and service unit, was established to coordinate resources and perform the cooperative function in the Group. The Office is responsible for coordinating the resources of the group and unleash the capabilities of FPG. Hence, besides management and improvement tasks, the Group Administration are also responsible for formulating group-wide strategy, computerized planning and implementation, business audits, raw materials procurement,

fund allocation, construction, legal affairs, and public relations. Each company has a President's Office, business department Manager's Office, Factory Office, thereby forming a complete staff hierarchy. Furthermore, we also established accounting departments, management departments, storage and transportation departments, technology departments, and labor safety and health offices as needed. We adopted the following business management system for each unit to serve its function in the organization and improve our overall business performance:

#### 1. Business department system:

To prevent inefficiencies resulting from the growing scale of our Group we thoroughly implemented the business department system to comply with the principles of integrated production and sales and responsible management. Each company in the group is divided into several business departments based on their respective industries. The purpose is for each business department to be able to make comprehensive plans for production, sales, and business goals based on its organization, manufacturing procedures, and product structures. A "profit-centered" system is also implemented with separate units that calculate the profit/loss of each plant or product, and business performance is measured based on cost and revenue of products using accounting management and analysis forms. The responsibilities of each unit are clearly defined to make management more reasonable.

#### 2. Goal management system:

To monitor the business performance of each unit, we pay special attention to performance and cost management. We review and find the causes of abnormalities by analyzing the difference between goals and actual performance, and formulate improvement measures to achieve cost control and better performance. We utilize "unit cost analysis" for an in-depth analysis of the individual costs in products, and then set a target cost on this basis. We also analyze the difference between actual cost and standard cost through abnormality management, and formulate improvement measures based on the results. New goals are set based on the effectiveness of improvements, and the cycle is repeated to improve the benefits and make costs become more reasonable.

#### 3. Individual performance system:

We comprehensively implemented the individual performance reward system to make the compensation of employees more reasonable, align employees' interests with the company's interests, and give employees a sense of involvement by encouraging them to find and solve problems. Employees are rewarded in the form of bonuses according to the regulations for rewards and which are based on their actual performance. The performance is also used as the basis for annual performance evaluations, thereby increasing the quality of their work, improving production efficiency, and increasing the income of employees.

To achieve sustainable development and high-level growth, we have diversified our business and engaged in multilateral development. All management systems, including supplies, productions, operations, construction, personnel finance, performance analysis, and healthcare, are computerized and online to make management more reasonable and to achieve better business performance. We are also making our plants smarter and extensively collecting and analyzing data on production processes to determine optimal process conditions. We also implemented AI technology to produce immediate improvements to production efficiency and product quality. We constantly introduce new concepts and new technologies on the basis of our solid management foundation in coordination with technological developments, and thereby enhance our competitiveness, in the hopes of seizing new opportunities and pursuing sustainable development in this volatile global market.



7 / 2024 FPG INTRODUCTION PRODUCTION PRODUCTION IN TAIWAN - MAIN BUSINESS ITEMS / 8

Industrial development that spans multiple fields

# PRODUCTION IN TAIWAN MAIN BUSINESS ITEMS

Production units of FPG in Taiwan does not only include Formosa Plastics Corporation, Nan Ya Plastics Corporation, Formosa Chemicals & Fibre Corporation, and Formosa Petrochemical Corporation, but also over 50 other companies, including Formosa Heavy Industries, Formosa Sumco Technology Corporation, Nanya Technology Corporation, Nan Ya Printed Circuit Board Corporation, Nan Ya Photonics Inc., and Formosa Biomedical Technology Corporation. The companies are engaged in the businesses of oil refining, petrochemicals, plastic materials, secondary processing of plastics, fiber and textiles, electronic materials, production of mechanical and new energy products, and transportation.



Mailiao Industrial Complex

#### 1.Oil refining, petrochemical, and plastic raw materials

Formosa Petrochemical Corporation is currently the only private company in Taiwan that operates a refining plant and naphtha cracker. Gasoline and diesel produced by the refining plant have been sold in gas station franchises around Taiwan since September 2000, creating a foothold in the domestic oil products market. As of December 2023, FPG's market share is approximately 22.4%.

Naphtha cracker No. 1 and No. 2 were completed and began production in 1999 and 2000 respectively, and naphtha cracker No. 3 was completed and began production in 2007; the total production capacity of ethylene reached 2.935 million tons a year.

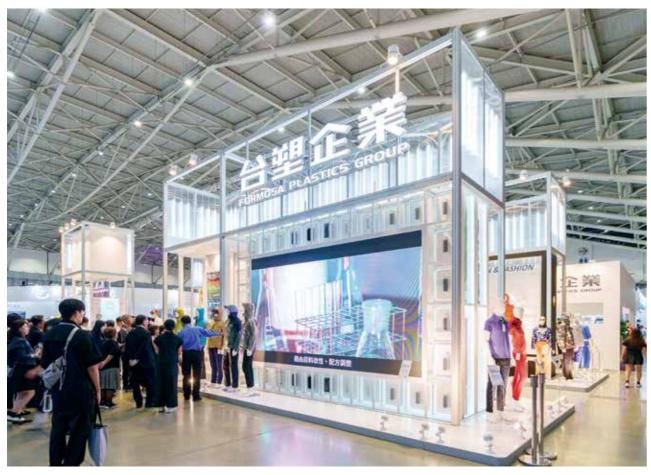
FPG's current annual production capacity of PVC resin has reached 3.13 million tons, making FPG one of the world's largest manufacturers. Meanwhile, Nan Ya Plastics Corporation, which manufactures plastic tubes, rubber, and tape, has also become the world's largest secondary PVC plastics processing plant.

Besides ethylene, propylene, PVC resin, and the plastics processing businesses, we also produce liquid caustic soda, VCM, EDC, MBS, POM, HDPE, EVA, LDPE, LLDPE, PP, AN, MMA, MAA, ECH, MTBE, B-1, DEHP, AE, NBA, ABS, PS, PC, PTA, SM, PTMG, and PIA, which are intermediate petrochemical materials, and we rank as first for each product in terms of market share.



Refinery in Mailiao

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Integrated marketing of fiber products

#### 2. Fibers, textiles and carpets

We currently manufacture polyester, nylon, rayon, carbon, glass, and elastic fibers. We are also a global market leader for most fibers with respect to production volume. Our capabilities also include textiles, dyeing, and finishing equipment for manufacturing gray yarn, gray cloth, dyed yarn, and dyed cloth. Our carpet plant is currently the only professional carpet plant in Taiwan, and over 70% of raw materials are from FPG's system, achieving integrated production from raw materials to finished goods. We also have embroidery machines and spray dyeing equipment to manufacture square carpets with exquisite patterns, broadloom, and artificial grass; our products are marketed and recognized worldwide.



FPC is one of PVC world's largest PVC producers

#### 3. Electronic materials and products

FPG's products in the electronics industry can be divided into printed circuit boards and semiconductors. For printed circuit boards, FPG built a complete vertically integrated supply chain from upstream glass yarns, glass fabrics, epoxies, and copper foil to downstream CCLs and printed circuit boards. Upstream silicon wafer, midstream DRAM and downstream packaging/testing businesses give FPG full-spectrum involvement and a competitive position in the IC sector. In addition, FPG also step into LED lighting to provide systematic solution in all directions.

#### **4.**Mechanical products

Our products and services include power plant and co-generation system equipment manufacturing and turnkey services, smart storage and logistics systems, oil refining and petrochemical process equipment, heavy object transportation and lifting, industrial gear reducers, high speed increaser (reducer), large precision gears and rubber lining. We are the largest mechanical equipment manufacturer and turnkey service provider in Taiwan.

2 Nan Ya Copper foil

3 Huge tower made by Formosa-Heavy Industries Corp

1 Formosa Sumco Technology-silicon wafers







#### **5.**Transportation Business

Besides three land transportation companies, namely Formosa Fairway Corporation, Formosa Plastics Transport Corporation and Formosa Petrochemical Transportation Corporation, we also established our first chemical shipping fleet in 1981 to lower our raw materials transportation costs and to ensure the delivery schedule. The shipping fleet was expanded to meet the large demand for raw materials, such as: oil products, petrochemical materials, and coal used by the power plant in the Sixth Naphtha Cracker Project. The fleet currently has 45 ships, including 14 chemical/oil tankers, 2 oil product tankers, 2 naphtha tankers, 7 crude oil tankers (ranging from 280,000 to 300,000 tons), 17 bulk carriers (ranging from 37,000 to 205,000 tons), 2 gas carriers and 1 container ship.square carpets with exquisite patterns, broadloom, and artificial grass; our products are marketed and recognized worldwide.





Formosa Plastics Transportation Corp.

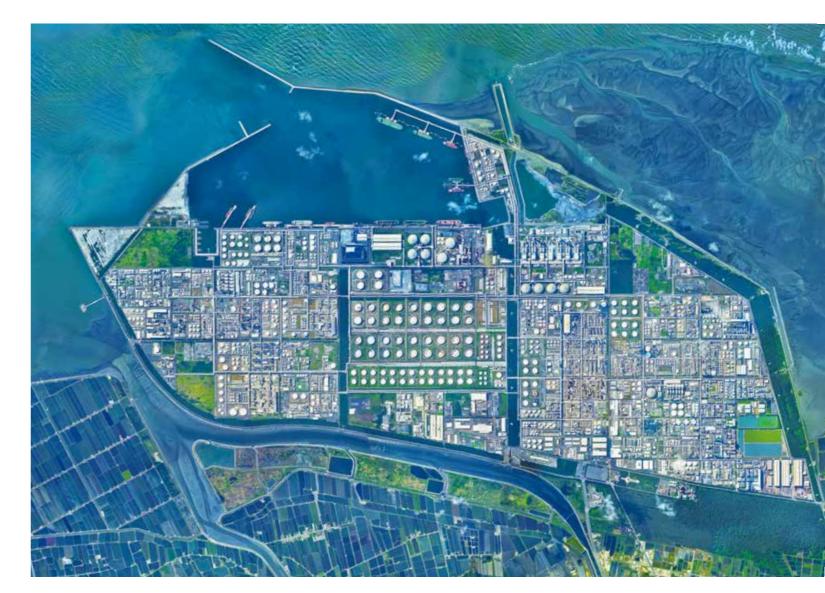
- FPMC C Intelligence

#### **6.New Energy Business**

Formosa Smart Energy Tech Corporation was founded in 2022 for the vertical integration of resources within the Formosa Plastics Group. The company was established for the four major fields of "energy-saving, energy storage, new-energies, and recycling." With a domestic lithium iron energy storage system that has comprehensively passed UL/IEC safety certifications, it can be applied to ESS, home energy storage, and electric vehicles, and has successfully entered international markets, including the United States, Europe, and Africa. The company has established cell and module plants and introduced battery recycling technologies for the development of a domestic battery industry chain to achieve a circular economy and environmental sustainability. Additionally, the company has invested in the research and development of "microalgae carbon capture" and accelerated the promotion of various new energy industry developments to help enterprises shift towards carbon neutrality.



Formosa Smart Energy Tech Corporation has established a lithium iron phosphate battery cell and module plant in the Changhua Coastal Industrial Park.



Global expansion plan based in Taiwan

# THE SIX<sup>TH</sup> NAPHTHA CRACKER PROJECT



In light of the severe shortage of basic petrochemical materials in Taiwan over the years, which has limited the development of the petrochemical industry's mid-stream and down-stream industries, Formosa Plastics Group proposed the building of a naphtha cracker to resolve the problem of insufficient raw materials numerous times starting in 1973, but all the proposals were turned down. It was not until 1986 that the government approved the proposal for the Sixth Naphtha Cracker Project.

The first task at hand after the project was approved was site selection. The plant was originally planned to be built in Yilan Lize, in an area with 280 hectares of land, but was relocated to Taoyuan Guanyin in 1988 after irrational protests by environmental activists. FPG later abandoned the plan in Taoyuan Guanyin due to a similar reason. Chiayi Aogu and Yunlin Taixi were also evaluated, but

they were found to be incompatible with the project, and a site still could not be decided after several setbacks. It was not until 1991 that Mailiao Township, Yunlin County, was selected, and we began carrying out land reclamation and plant construction.

Mailiao District and Haifeng District, developed by the Sixth Naphtha Cracker Project, are located at the estuary of Zhuoshui River in the northmost end of Yunlin County. The area stretches approximately 8 km from north to south, and extends 4 km offshore from the coastline. Most of the land in the area is below sea level, so it was necessary to carry out large scale land reclamation and ground improvements to secure the foundation of the site. The total reclaimed area is approximately 2,255 hectares and there is a channel separating the site from coastal fish farms.

Mailiao Township is commonly known as the place "where the water ends and the wind begins," and not only is it inconvenient to access, but also extremely poor weather conditions for six months every year due to the strong northeast monsoon affect the area. The Sixth Naphtha Cracker Project was a massive construction project that was built up from nothing.

The Sixth Naphtha Cracker Project includes a refining plant which is capable of refining 25 million tons of crude oil every year, a naphtha cracker with an annual capacity to produce 2.935 million tons of ethylene, and related petrochemical plants, heavy machinery plants, a cogeneration power plant, and Mailiao Harbor. Furthermore, seeing the impact of Taiwan's severe power shortage on domestic and business developments, FPG decided to establish a coal-fired power plant that will be connected to Taiwan Power Company's power grid, so as to help resolve Taiwan's power shortage.



Ground improvement

At present, the total investment amount of the Sixth Naphtha Cracker Project is approximately USD30.92 billion (including the industrial harbor and power plants). A total of 56 plants were constructed, and all plants have begun production.

After the Sixth Naphtha Cracker Project was completed, Taiwan's ethylene self-sufficiency ratio increased from 38% in 1994 to 100% in 2023, with an output value of USD41.23 billion in 2023 and government tax revenue increased by more than USD553 million, and it drove the development of mid-stream and down-stream industries.

The Sixth Naphtha Cracker Project effectively lowered operating costs through its comprehensive planning which included a power plant, industrial harbor, and a series of related facilities. The various petrochemicals are vertically related and transported to nearby locations, saving transportation costs. The supply of raw materials is stable and fully utilizes the benefits of vertical integration. Hence, the products are very competitive internationally. The scale and content of the 56 plants constructed under the Sixth Naphtha Cracker Project are as follows:



Border dike construction



Plant and tower installation

THE SIX<sup>TH</sup> NAPHTHA CRACKER PROJECT / 18



#### 1. Project construction

#### Land reclamation :

Approximately 109.15 million cubic meters of sand was used, which is enough to cover the 8-lane highway that stretches 373 km from Keelung to Kaohsiung in sand 3-stories high. The area of reclaimed land is approximately 2,255 hectares, which is about 8% of the area of Taipei City (27,180 hectares) and 0.062% of the area of Taiwan.

#### • Foundation equipment construction :

The total length of piles that were installed reached 4.7 million meters. 9.04 million cubic meters of concrete was used (requires approximately 1.97 million MT of cement).

#### Plant construction :

A total of 56 plants, including a refining plant, naphtha cracker, co-generation power plant, power plant, heavy machinery plant, boiler plant, fab, and other petrochemical related plants were constructed in a single industrial complex. The length of pipelines in the complex stretches over 3,000 km.

#### Complex area :

Approximately 2,603 hectares, over four times the total area of Linyuan Industrial Park (403 hectares), Dashe Industrial Park (109 hectares), and Toufen Industrial Park (95 hectares).

#### 2. Mailiao Harbor

The project's Mailiao Harbor covers an area of 476 hectares. The depth of navigation channels at mean sea level reaches 24 meters, which allows access by 300,000-ton vessels. It is not only the deepest port in Taiwan, but also the first industrial port to be constructed with private investments, and also Asia's first EcoPort. The annual cargo throughput of Mailiao Harbor reaches 70 million MT, the second highest in Taiwan, and is only behind Kaohsiung Port. Even though Mailiao Harbor is an industrial port operations of the port have benefited the vast hinterland, providing Yunlin with convenient sea transportation while driving industrial and local developments.

#### 3. Independent Power Plant

Four large coal-fired power generators were planned for the project, each with a capacity of 600,000 kW. Three generators with a total capacity of 1.8 million kW have been completed, and all of the electricity is sold to Taiwan Power Company and fed into its power supply system, greatly helping to resolve Taiwan's insufficient power problem.













#### 4. Refining plant

The daily refining capacity is 540,000 barrels, which is equal to 25 million MT of crude oil a year. The annual production volume of naphtha can reach 3.75 million MT, which is used by plants in Mailiao Industrial Complex. Meanwhile, gasoline, diesel, and aviation fuels are also produced.

#### 5. Naphtha cracker

A total of three naphtha crackers were constructed to produce ethylene, propylene, and butadiene, of which annual production capacity of ethylene reaches 2.935 million MT, the highest capacity of a single plant in Taiwan. It is an important basic industry that supplies materials for special chemicals, IT, and high-tech domestic industries.

#### 6. Co-generation power plant

Mainly produces electricity, steam, industrial water, ultra-pure water, nitrogen, oxygen, and compressed air for use by relevant plants in Mailiao Industrial Complex. The installed capacity of the self-usage power generation system currently is 2.75 million kW, including 15 qualified co-generators with a total installed capacity of 2.15 million kW, which makes it the largest co-generation power plant in Taiwan. The electricity generated is used by manufacturing processes, and any excess electricity is sold to Taiwan Power Company to help alleviate the pressure on the power grid in Taiwan.

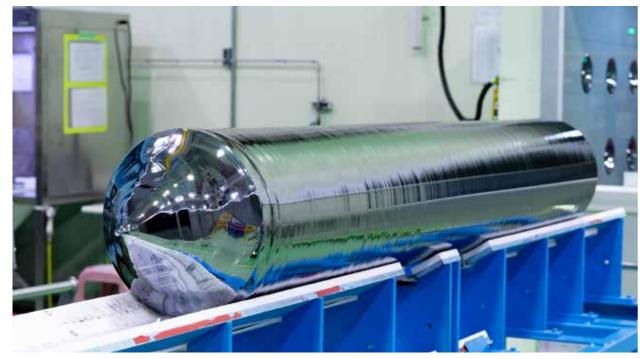
#### 7. Machinery plant and boiler plant

The machinery plant mainly designs, manufactures, installs, and constructs oil refining and petrochemical process equipment (reaction tank, tower, pressure container, heat exchanger). The plant has obtained "S," "U," "U2," and "R" certifications from the ASME. The overall manufacturing ability is 12 M<sup>\phi</sup> x 120 ML x 2,000 MT, meaning that a single piece of equipment has a diameter exceeding 12 m, length of 120 m, and weight of 2,000 MT. The boiler plant mainly plans, designs, manufactures, installs, and constructs equipment for the cogeneration power plant and power plant. Production capacity: Cogeneration power plants can produce up to 35-150 MW and independent power plants can produce 600 MW.













#### 8. Fab

The fab is a joint venture between FPG, Asia-Pacific Investment Co., Ltd., and Japan's Sumco Techxiv Corporation that produces semiconductor-grade wafers, and its annual capacity is 4.08 million 8" silicon wafers and 3.66 million 12" silicon wafers. These wafers are important substrate materials for IC, and can also be used in the substrate of solar power batteries.

## 9. Spandex Plant

The plant is a joint venture between FPG and Asahi Kasei Corp. that produces spandex and PTMG. Its current annual capacity is 5,000 MT of spandex and 21,000 MT of PTMG. Spandex is extensively used in functional clothing and medical products, and has become indispensable to artificial fibers.

## 10. The Six<sup>th</sup> Naphtha Cracker Project Investments

Product Category	Investing Company	Factory	Product	Capacity (10000 MT/Y unless otherwise noted)
Petroleum	Formosa Petrochemical Corp.	Refinery plant	Naphtha, gasoline, diesel	2,500(Refinery)
Products	Simosa Oil Co, Ltd.	Asphalt plant	Asphalt	30
	Formosa Plastics Corp.	Acrylic Acid & Ester plant Polyvinyl Chloride plant Vinyl Chloride Monomer plant Caustic Soda plant High Density Polyethylene plant Ethylene-Vinyl Acetate plant Acrylonitrile plant Linear Low Density Polyethylene plant Methyl Methacrylate plant C4 plant Epichlorohydrin plant NBA plant SAP plant	EVA AN	11.1/15.4 50.6 80 133 35 24 28 26.4 9.8 17.4/3.2 10 25 7
Petrochemicals & Chemical Products	Nan Ya Plastics Corp.	Plasticizer plant Epoxy Resin plant Propionic Anhydride plant Isooctanol plant Bisphenol A plant Ethylene Glycol plant Hydrogen Peroxide plant 1,4-Butylene Glycol plant Iso-nonyl Alcohol plant Maleic Anhydride plant	Plasticizers EPOXY PA 2EH BPA EG ESO/H <sub>2</sub> O <sub>2</sub> 1,4BG INA MA	44 16 22.8 20 42 152 2/2 12 11.5 6
	Formosa Chemicals & Fibre Corp.	Aromatic Hydrocarbon plant Styrene Monomer plant Purified Terphthalic Acid plant Phenol Synthesis plant Polypropylene plant PABS plant Polycarbonate plant	BZ/PX/OX/MX SM PTA PHENOL/ACETONE PP PS/ABS/PBT PC	143/202/29/14 132 72 44/27.1 64 21/12/6 22
	Formosa Petrochemical Corp.	Naphtha Cracker plant	Ethylene	293.5
	Formosa INEOS Chemicals Corp.	Acetic Acid Plant	HAC	40
	Nan Chung Petrochemical Corp.	Ethylene Glycol plant	EG	37.5
Fiber	Formosa Asahi Spandex Co.	Spandex plant	SPANDEX/PTMG	0.5/2.1
Power	Formosa Petrochemical Corp.	Utilities Supply plant	Steam Electricity	11,580 T/H 2,754MW
Generation	Mailiao Power Corp.	Power station	Electricity	600MW X 3
Electro- Mechanical	Formosa Heavy Industries Corp.	Equipment for Machinery Shop Boiler Shop	Equipment for refinery, petrochemical plants Equipment for Cogeneration and utility power plants	4.3 500T/H X 8ST
Electronics	Formosa Sumco Technology Corp.	Wafer fabrication plant	8-inch silicon wafers 12-inch silicon wafers	4.08million pcs. 3.66million pcs.

23 / 2024 FPG INTRODUCTION CONSOLIDATING ESG SUSTAINABLE DEVELOPMENT FOR FPG / 24

We actively consolidate various management tasks to move toward sustainable development

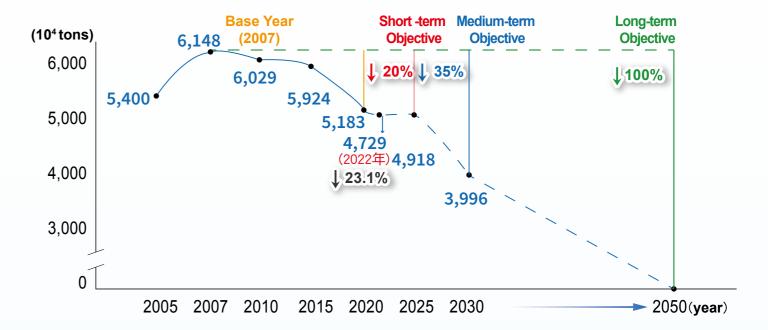
# CONSOLIDATING ESG SUSTAINABLE DEVELOPMENT FOR FPG

Formosa Plastics Group has remained firm to long lasting management philosophies including "diligence, perseverance, frugality and trustworthiness", "strive for excellence", "positive contribution to the society", and "sustainable development", thus, we actively carry out various management tasks to achieve sustainable development. In 2006, FPG established the "Energy Conservation and Emission Reduction Task Force" to ensure environmental protection while pursuing economic development. In 2020, the scale of the task force was expanded with a new title "FPG ESG Promotion Committee". The newly made Committee is to ensure that the entire enterprise is committed to various ESG (environmental, social, governance) tasks.

#### Achieving carbon neutrality by 2050

The carbon emissions of FPG reached its peak in 2007 with 61.48 million tons, therefore, 2007 was made FPG's base year for carbon reduction. The short-term goal is to lower emissions to 49.18 million tons by 2025, a 20% decrease from the base year. The mid-term goal is to further decrease emissions to 39.96 million tons by 2030, a 35% reduction compared to the base year. After years of promoting energy conservation, emission reduction, and circular economy, emissions were reduced to 51.83 million tons by 2020, a 15.7% decrease from the base year. It has further dropped to 47.29 million tons in 2022, a 23.1% decrease from the base year. Moving forward, FPG will continue to keep pace with government policies and the international ESG development, while making plans to striding forward for achieving the long-term objective of carbon neutrality by 2050.

#### Trajectory of Formosa Plastic Group's Short to Long Term Carbon Reduction Objectives





#### Note:

- $1. \text{ CO}_2$ -e is used to convert amounts of other greenhouse gases to the equivalent amount of carbon dioxide with the same global warming potential.
- 2.The third-party audit for confirming the amount of greenhouse gas emissions was carried out by SGS (Société Générale de Surveillance) and BSI (British Standards Institution) °

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#### The strategy for vigorously promoting sustainable development

- Contentiously carries out measures such as improving factory processes, adopting circular economy, developing AI, combining AI and process simulation for better decisionmaking, increasing energy utilization efficiency and productivity.
- Contentiously pays attention to the opportunities for introducing the top-notch carbon reduction technologies.
- Considering the possibility of using zero carbon fuel: Hydrogen fuel, ammonia fuel, biofuel, carbon neutral natural gas.

• Process Technology improvement: Crude Oil to Chemicals (COTC).

• Establishes renewable energy producing capacity and energy

administration and living area.

power systems in every

- Developing carbon capture, utilization and storage (CCUS).
- Purchasing renewable energy storage equipment: Installing solar certificates (RECs) and carbon certificates.
- Works with our suppliers to save energy in supply chain of raw material and equipment purchasing, and develop recyclable products.
- Carrying out studies for Introducing Science-Based Targets Initiatives (SBTi).



Mailiao Eco-Industrial Showroom – Exhibiting endeavors of enterprises in achieving sustainable development

# The Six<sup>th</sup> Naphtha Cracker Project **Circular Economy Implementation**

Chairman WenYuan Wong follows the spirit of the two founders - "with diligence and modesty, we strive for excellence", the management team, in order to maintain a robust enterprise operation, must be persistent, and always seek innovation and breakthroughs. Since 1993, we

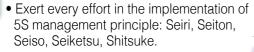
have implemented the 5S principle with every effort; later on, the no leakage policy, energy conservation and emissions reduction, and circular economy have been progressively promoted. We are currently focused on the AI, AI+simulation and digital transformation.



Mailiao Industrial Complex

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1993 **5S**   Uphold the spirit of "with diligence and modesty, we strive for excellence."





1999 No leakage



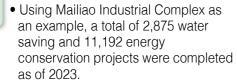
 Implementation of the no leakage policy: No steam leakage, no water leakage, and no oil leakage to become friendlier to the environment and increase rainwater recycling. In the beginning, recovere d rainwater was not clean enough and only suitable for plants watering.

 Using Mailiao Industrial Complex as an example, an average of 13,676 tons of rainwater was collected each day in 2023, which is equal to saving USD 6,474/day in water charges or the domestic water consumption of the complex's 13,000 employees over 2 weeks.

2006
Energy
conservation
and
emission
reduction



 An enterprise-wide "Energy Conservation, Carbon Reduction, and Pollution Prevention Task Force" was established and became the foundation for subsequent efforts to achieve a circular economy.



2016 Circular economy  Further on, four aspects of circulation, namely raw materials, water resources, energy, and waste has been taken into consideration.



- Executing inter-factories, intercompany energy and resource integration to achieve better energy conservation, emission reduction, and efficiency of energy utilization.
- Taking water resource circulation in Mailiao Industrial Complex as an example, impurities have been removed from the recycled rainwater, thus can be further used in processes; for now, every drop of water is used 12.9 times.

 At the end of 2023, we have invested a total of USD 1.38 billion, generating approximately USD 1.26 billion in benefits each year.

2017 AI

- We donated USD 1 million to Academia Sinica at the end of 2017 to aid them in the establishment of an Al academy.
- A total of 592 employees received training as of the end of December 2023.
- Began optimizing industrial safety management and production processes to maximize productivity and energy efficiency.
- As of December 31, 2023, the Group has initiated 1,970 Al projects and expects to invest USD 112.9 million for an estimated annual benefit of USD 279.1 million. So far, 1,225 projects have been completed with USD 74.2 million invested for an annual benefit of USD 201.7 million.
- The future goal is for annual benefits to reach USD 700-1,000 million.

2021 February Al+ Simulation  Al involves using Big Data to optimize the manufacturing process.

 Simulation refers to optimizing the manufacturing process by applying chemical engineering theories or its experimental data.



- It is necessary to consider the risks in the manufacturing process, so AI and simulation are integrated.
- For example, petrochemical companies optimize the procedure for propylene recycling via an Al-enabled operating system, and Formosa Chemicals & Fibre Corporation (FCFC) has established a simulation factory for aromatic hydrocarbons to enhance production efficiency.

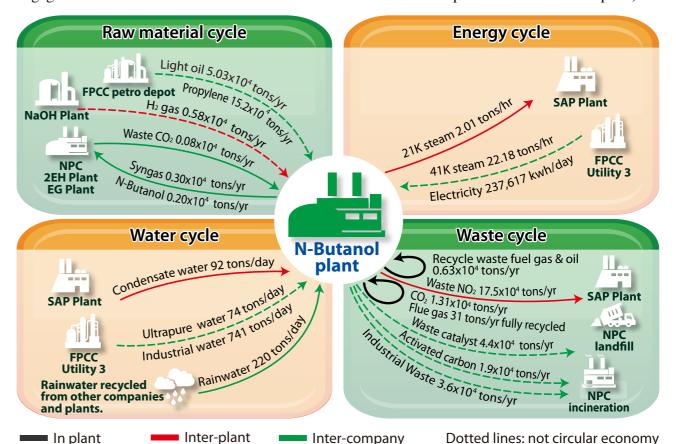
Now
Digital
transformation

 Utilize all digital technologies (Al, big data, cloud, IoT, 5G) to optimize processes and improve business performance.



• On September 24, 2020, the Chairman: We'll make every effort to promote digital transformation.

The concept of circular economy is to take the aspects of raw materials, water resources, energy, and waste into mutual consideration, and engage tremendous human and material resource to execute inter-factories and intercompany resource integration for energy conservation and emissions reduction (the schematic diagram shows the example of FPG's 1-Butanol plant).





Formosa Sumco Technology Corporation - Al production process, key to keeping a finger on the pulse of digital transformation

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# **Implementation of a Circular Economy in Mailiao Industrial Complex**

We established the enterprise-wide "Energy Conservation, Carbon Reduction, and Pollution Prevention Task force" in 2006 to assist factories making improvements. Later on, the idea was combined with the circular economy philosophy in 2016, and further expanded to inter-factories and intercompany integration. As of the end of 2023, we have invested a total of USD1.38billion, which have generated approximately USD 1.26 billion benefits each year.

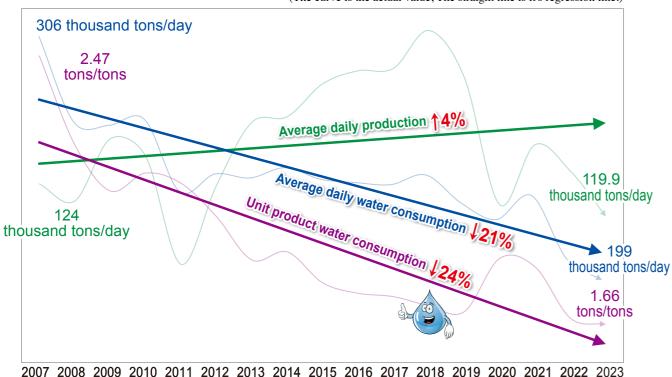
Among all effort in pursuing the circular economy, process water usage reduction, wastewater and rainwater recycling have reduced water consumption, and the water recycling rate reached 91.5%. A total of 2,875 water conservation projects were completed, saving approximately 112.6 million tons/year of water, which is equal to the annual water consumption of approximately 1.23 million people and is enough water to fill 45,041 Olympic-size swimming pools. Compared to the water consumption in 2007, while average daily production yield of the Sixth Naphtha Cracker Project increased by

4% in 2023, in the meantime, water consumption decreased by 21% and unit product water consumption decreased by 24%.

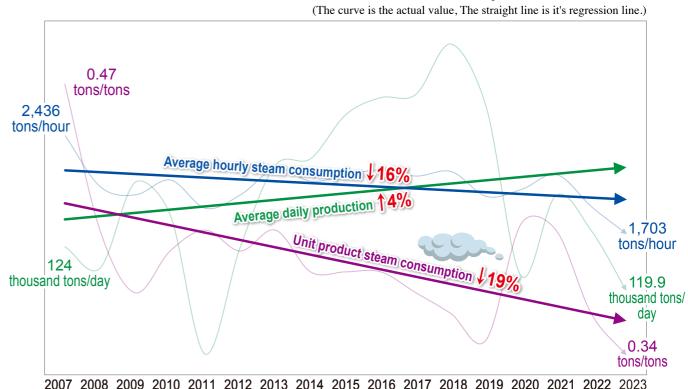
Furthermore, we are vigorously promoting the projects to increase energy efficiency, waste heat recycling, and energy usage integration between factories. As of the end of 2023, we have completed 11,192 energy conservation projects which are able to reduce steam consumption by 3,409.5 tons/hour and energy consumption by 349.3 thousand kWh/hour; the energy saved is equal to reducing 13.72 million tons of CO<sub>2</sub> emission per year, the carbon absorption capacity of approximately 1.96 billion trees a year, or 35,264 times the annual carbon absorption capacity of Da'an Forest Park. Taking the examples of steam and energy saving results, while compared to those of 2007, the daily production rate in 2023 hast increased by 4%, steam and energy consumption have decreased by 16% and 14%, respectively; unit product steam and energy consumption have decreased by 19% and 18%, respectively.

#### **Water Conservation Results of Mailiao Industrial Complex**

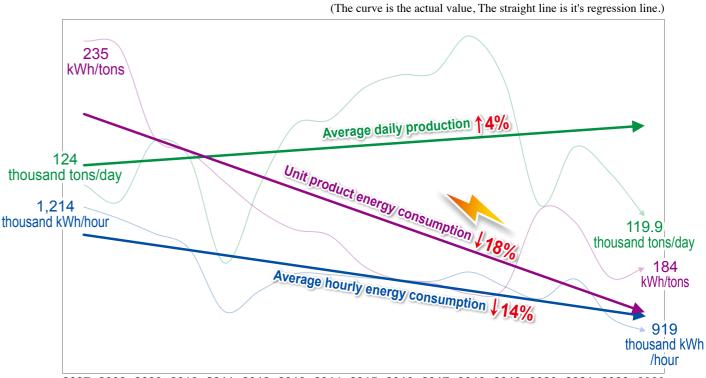
(The curve is the actual value, The straight line is it's regression line.)



#### **Steam Conservation Results of Mailiao Industrial Complex**



#### **Energy Conservation Results of Mailiao Industrial Complex**



2007 2008 2009 2010 2011 2012 2013 2014 2015 2016 2017 2018 2019 2020 2021 2022 2023

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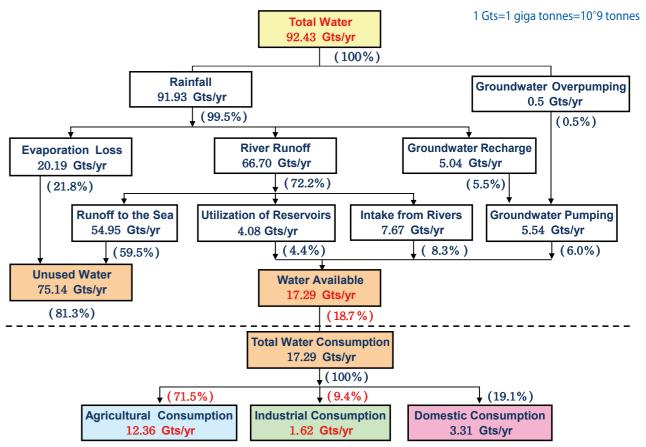
It is our belief that industrial development and environmental protection are equally important and can coexist. Therefore, Mailiao Industrial Complex invested USD 4.4 billion in advanced pollution prevention technology. In the case of air pollution prevention, coal used by the coal-fired power plant is transported and stored in a closed system to prevent fugitive coal dust. The discharged flue gas is treated by denitrification,

desulfurization, and static dust precipitators to remove pollutants, and emitted pollutant concentration levels are far lower than the national standards. Furthermore, state-of-theart technology has been applied to the power plants' air pollution control device. Hence, the emission level rival with those of natural gas power generators.

	Emission Standards			ds		Stricter	Mailiao Industrial	
Pollutants	EU	USA	Japan	Taiwan	EIA Promise	standards adopted by Yunlin Country September 2023	Natural gas power generators in Taiwan	
SOx(ppm)	70	63	63	60	25	25	12.34	0.33~0.55
NOx(ppm)	98	68	200	70	46	46	30.58	12.5~37.5
TSP(mg/ Nm³)	20	20	100	20	23	15	3.0	2.5~10.0

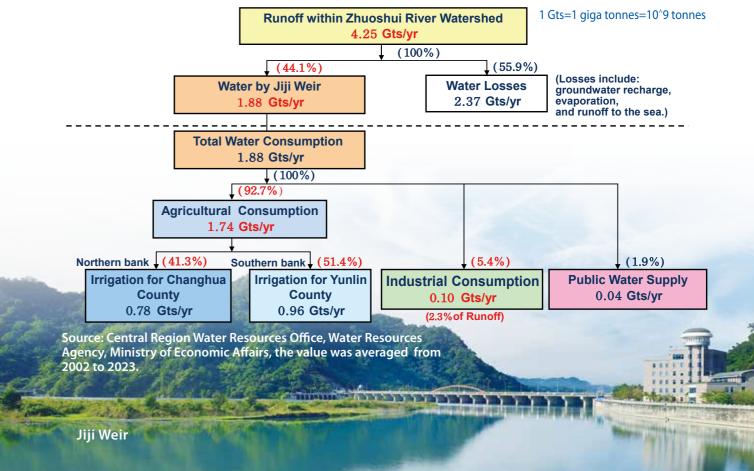


#### **Utilization of Water Resources in Taiwan**



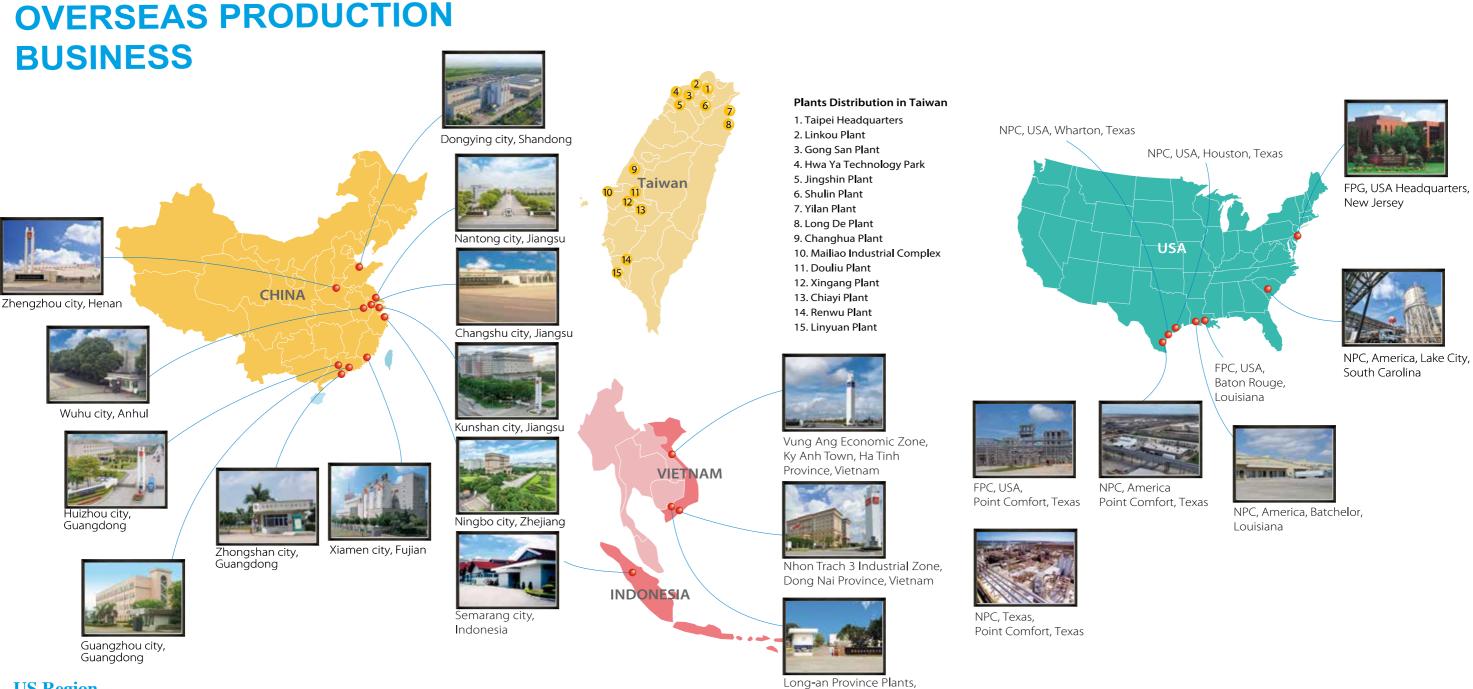
Source: Central Region Water Resources Office, Water Resources Agency, the value was averaged from 2002 to 2021 (the 2021 data were published in August, 2023).

### **Sectoral Water Consumption Supplied by Jiji Weir**



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FPG Global Production Bases



#### **US Region**

In 1978, Formosa Plastics Group landed in the United States as a location for the overseas investment, primarily due to its abundant natural resources, mature political and economic systems, well-established legal framework, excellent infrastructure, and high-quality workforce.

Through years of effort, we have established several entities including Formosa Plastics Corporation, U.S.A., Nan Ya Plastics Corporation, U.S.A., and Nan Ya Plastics Corporation, America. We also own multiple large-scale petrochemical cackers and downstream processing plants in the country.

Formosa Plastics Corporation, U.S.A., headquartered in Livingston, New Jersey, operates production facilities in Point Comfort, Texas, and Baton Rouge, Louisiana. Initially focused on polyvinyl chloride (PVC) powder and related plants, the company made a significant investment in 1990, allocating \$1.9 billion to construct upstream ethylene production and eight related petrochemical plants at the Texas site. These facilities commenced operations successfully in 1994, marking a major achievement. Additionally, the second ethylene cracking unit and expansions for polyethylene and polypropylene were completed in early 2002. With these developments, Formosa Plastics Corporation, U.S.A., emerged as one of the leading producers of PVC powder, polyethylene, polypropylene, and chlor-alkali in the United States. By establishing

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an integrated petrochemical operation, the company ensured a stable supply of raw materials, reduced costs, and laid a solid foundation for its development in the United States.

NPCUSA was founded in 1979. It produces PVC and A-PET rigid film in Wharton, Texas and SMC Door in Houston, Texas.

NPCA was founded in 1989 and produces PVC flexible film, ethylene glycol (EG), and polyester fiber in Batchelor, Louisiana, Point Comfort, Texas, and Lake City, South Carolina respectively.

To leverage the abundant shale gas resources and mature production technologies in the United States, Formosa Plastics Corporation, U.S.A., completed the expansions of the High Density Polyethylene Plant 3 (HDPE-3), Olefins Plant 3 (OL-3), and Lolita Packaging Plant in 2019. Furthermore, the Low Density Polyethylene Plant (LDPE) and Ethylene Glycol Plant 2 (EG-2) successfully commenced operations in the fourth quarter of 2020. With the completion of the VCM Plant de-bottleneck expansion project in the fourth quarter of 2023 to ensure a more robust PVC raw material supply, Formosa Plastics Corporation, U.S.A., has enhanced its overall portfolio of polyolefin and polyester products in the United States.





New EG II plant in Point Comfort, TX

Ningbo Plant

#### China

China gradually opened its market to the world after the 1980s and attracted investments from companies around the world with its low labor costs and massive domestic market. FPG saw this development trend and began investing in China in 1994, starting with secondary processing for Nan Ya Plastics Corporation. We established the petrochemical materials zone in Ningbo City, Zhejiang Province in 2001 to meet the massive demand of China's processing industry, and established self-sufficient production in the upstream and midstream industries.

We currently have over ten production bases in China, located in Guangzhou, Xiamen, Nantong, Kunshan, Ningbo, Zhongshan and Changshu and have invested in petrochemical materials, primary and secondary processing of plastics, electronic materials, heavy machinery and textiles.

#### Vietnam

In response to the high cost of textile products in Taiwan, FPG established textiles, fibers, and secondary plastics processing plants in Vietnam in 2001, and relocated a portion of its production units to Vietnam. We found new prospects for the industry and also adjusted our business structure for our long-term development.

Current investments in Vietnam include textiles, power generation, polyester fiber, BOPP, nylon chips, and nylon textile yarn. All of these investments are already in the mass production phase and Vietnam will become our main textiles and fiber production center in Asia.

Optimistic about Vietnam's steel market, geographic location, government policy, and ASEAN tariffs, FPG, China Steel Corporation, and Japan's JFE Steel Corporation set up the joint venture Formosa Ha Tinh Steel Corporation, and built an integrated steel mill in Vung-Ang Economic Zone, Ha Tinh Province, Vietnam and a deep water harbor in Son Duong District. It is currently the largest foreign direct investment project in Vietnam, and also the first integrated steel mill in Vietnam.

The total invested amount for phase one construction was approximately USD12.8 billion. The two blast furnaces annual production capacity of molten iron will reach 7 million tons. The main products of the plant include slabs, blooms, billets, hot-rolled steel coils, bars and rods. We constructed a deep-water harbor in Son Duong District and 13 berths are all currently in use. The harbor meets the requirements for raw material imports and steel exports of Formosa Ha Tinh Steel Corporation.

The completion of phase one construction made Formosa Ha Tinh Steel Corporation the largest integrated steel mill in ASEAN. With Ha Tinh Province at the center, it has enabled Vietnam's steel industrial chain to flourish along with midstream and downstream industries. It will develop Ha Tinh Province into a place of strategic importance to the international steel industry. Exports to ASEAN countries and Europe market have brought considerable economic benefits for Vietnam



Ecological Park of Formosa Ha Tinh Steel Corporation

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Taken from the community, giving back to society

# HEALTHCARE AND EDUCATION BUSINESS

#### **Chang Gung Memorial Hospital**

Aiming to "take from the society and use it for the society", FPG has established several medical and educational nonprofit organizations. Chang Gung Memorial Hospital was funded in 1976 when Taiwan was in great shortage of medical facilities. As there were only 19 medical beds for every per 10,000 persons, it was far lesser than 40 beds per 10,000 people standard in modernized nations. To address the problem, we built big hospitals in Taipei, Linkou, Keelung, Kaohsiung, Taoyuan, Chiayi and Yunlin. Chang Gung Medical Foundation also accepts government's commission to built and operate Kaohsiung Municipal Feng-Shan Hospital and New Taipei Municipal TuCheng Hospital. At present, Chang Gung treats 34,700 outpatients daily and has 11,225 beds available for inpatients. It is one of the largest, best equipped, and best-performed general hospitals in the Far East.

To provide children with more professional medical care, Chang Gung Memorial Hospital established a major children medical center inLinkou and Kaohsiung in 1993 and 1994 respectively, with a total capacity of 800 inpatient beds. In order to attain the best efficiency for the use of medical resources, we founded Nursing Home in early 2001, and established Taoyuan Branch for both acute and chronic medical care in December of 2003, to target chronic medical



Chang Gung Medical Foundation" Hospital Sustainability Accord "Signing Ceremony





 Chang Gung Memorial Hospital Surgical Training Academy and Research Center " (CGMH-STARC) Inauguration Ceremony

 Chang Gung Robotic Surgery Training Center Inauguration Conference

and long-term nursing services and to provide people with complete medical treatments. While the population of people over 65 years old has now exceeded 17% of total population, our Health and Culture Village has been completed and opened for service since January 2005 to provide 1,100 rooms for ideal community for older people to spend the rest of their lives.

Furthermore, in order to promote Traditional Medicine by combining it with the modern and scientific-techniques and approaches of Western Medicine, we have established the first medical-center-grade Chinese medicine department in Taiwan.

In order to optimize our medical services, we also established a cancer center to develop our critical-disease-based specialist medical service, We invest billions of dollars to set up the Asian first and largest Proton and Radiation Therapy Center at Linkou Y.C.WANG Center for Advanced Medicine, had started service since Nov 2015, We have also set up YUNG-CHING Premier Cancer Therapy Center and provided proton radiation therapy at Kaohsiung branch since Oct 2018.

"The Chang Gung Robotic Surgery Training Center" was inaugurated in 2020 at Linkou CGMH, the first in Taiwan and the third in Asia. Collaborating with Intuitive Surgical, Inc. (ISRG), it provides training to domestic and international surgeons alike. To enhance the surgical skills of surgeons, CGMH has established the international-level "Chang Gung Memorial Hospital Surgical Training Academy and Research Center "(CGMH-STARC), which was officially opened on March 14, 2023. It stands as the largest surgical training facility in Taiwan.

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2023 Healthcare EXPO TAIWAN

Chang Gung Memorial Hospital has paid great attention to both clinical and basic medical research since its founding. Based on the established systems in research resource management, we continuously devote our resources to recruiting potential scholars and physicians to set up institutes, research centers, core laboratories and research platforms across all areas. In addition, there are research platforms include Laboratory Animal Center, Clinical Trial Center, Bacteria Bank and Virus Core Laboratory. These facilities provide high quality resources and are user-friendly, resulting in excellent achievements in the field of medical research.

Following the principles of founder Wang Yung-Ching, Chang Gung Medical Foundation is dedicated to utilizing information technology to integrate operations, manpower, and equipment, assisting in the functioning of healthcare services and elevating their quality.

The foundation consistently undergoes certification by the Healthcare Information and Management Systems Society (HIMSS). In 2019, it became the first hospital in Taiwan to achieve Level 7 certification, the highest level, in the HIMSS Electronic Medical Record Adoption Model (EMRAM). In 2022, it participated in the Digital Health Indicator (DHI) evaluation, ranking as the world's second and Taiwan's top smart hospital.

A special fund was set up to subsidize low-income and handicapped patients with medical expenses and taken an active part in social welfare.

In 2023, CGMH provided relief to over 3.06 million patients, CGMH have taken an active part in Social welfare such as Charity project of sport medicine, Mobile health care project for rural schools in Yilan County, The protection of children and youths program, Health care system of communities in Yunlin County, Telemedicine service, Medical volunteer programs by employees, etc. An outlay over US\$ 23.10 million from our social service fund.

#### **Chang Gung University**

Chang Gung University traces its origins back to April 1987 when it was established as Chang Gung Medical College. It was later renamed Chang Gung College of Medicine and Technology. In August 1997, recognizing its growing scope and influence, it was elevated to the status of Chang Gung University. Presently, Chang Gung University encompasses four colleges: Medicine, Engineering, Management, and Intelligent Computing. Collectively, these colleges consist 22 departments, 24 graduate institutes, 2 bachelor's degree programs, 7 master's degree programs, and 1 doctoral degree program. With a faculty complement of 606 full-time faculty members and 605 adjunct faculty members, the university serves a student body of 7,103 individuals.).

Chang Gung University prioritizes student-centered innovative teaching, which include expanding courses in programming languages and AI applications, promoting small-class English courses, and augmenting interdisciplinary programs. These initiatives aim to enhance students' career competitiveness and international mobility. The university also places significant emphasis on cultivating students' humanistic qualities and caring values. By implementing the concept of holistic education, Chang Gung University endeavors to shape students into outstanding individuals who embody the university motto of "Diligence, Perseverance, Frugality, and Trustworthiness", fostering both knowledge and integrity among its student body.

In the realm of academic research, Chang Gung University is dedicated to advancing key technologies through interdisciplinary research centers and fostering collaborations with international organizations to address significant societal and environmental challenges. For instance, the Molecular Medicine Research Center actively participates in the U.S. Cancer Moonshot Program to propel advancements in cancer prevention and treatment. Likewise, the Research Center for Emerging Viral Infections collaborates with the Centers for Research in Emerging Infectious Diseases (CREID) to combat various emerging viral infections, including COVID-19, in partnership with international entities. In terms of academic achievement, Chang Gung University has garnered notable recognition. In 2023, an expert team from Stanford University released the list of "World's Top 2% Scientists", ranking our university 9th domestically and 1st among private universities nationwide. Additionally, the CWTS World University Rankings for scientific impact, published by Leiden University in the Netherlands in 2023, positioned Chang Gung University among the top 300 globally and 3rd nationally. In the field of biomedical and health sciences, Chang Gung University achieved a remarkable global ranking of 85th and secured the top position nationally, solidifying its reputation as a leading institution driving scientific contribution in Taiwan.



Chang Gung University campus



 High density plasma etching for microstructures on Si wafer

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#### Ming Chi University of Technology

Ming Chi University of Technology was founded in 1963 as Ming Chi Institute of Technology, upgraded in 1999, and then approved for further transformation into a university in 2004. Currently, the University consists of Colleges of Engineering, Environment & Resources, and Management & Design, offering 3 Ph.D. programs, 12 M.A. programs and 13 departments. The University currently hosts 4,400 students and 207 faculty members. All the Departments and Graduate Institutes have passed the certifications of IEET (Institute of Engineering Education Taiwan) or ACCSB (Accreditation of Chinese Collegiate School of Business). Through the years, Ming Chi has been receiving excellent Ministry of Education evaluation results. In addition, Ming Chi has ranked number four among all the technological universities nationwide and number one among private technological universities for the average amount of funding per MOST research project director in 2023. Also, according to the data collected from Web of Science, Ming Chi ranked number one in 2023 among all the technological universities in producing SCI/ SSCI papers per author by assistant professors and above.

Since its establishment, Ming Chi has been a boarding school and implemented "coop practical training programs. Students keep a regular daily routine and become physically stronger through living on campus. The one-year co-op practical training by combining theories and practices achieves the goal of holistic education, and cultivate talents with the attitude of diligence, perseverance, frugality, trustworthiness, and the abilities in integrating both theories and practices as well as life-long learning.

In these years, industry-academia research and development has become the school focus. Ming Chi ranked number four nationwide in 2023 for securing the highest per capita amount of industry-academia cooperation projects.

Ming Chi has attempted to integrate interdisciplinary resources and built ten featured research centers, including Research Center for Intelligent Medical Devices, Artificial Intelligence and Data Science Research Center, Environmental Sustainability and Human Health Research Center and Intelligent Vehicle R&D Center. Ming Chi has evolved into a technology university specializing in industry-academia research and development. It is expected that, by closely cooperating with industries, Ming Chi will achieve a "win-win situation" of reaching educational goals and improving industrial technological force.



Ming Chi University of Technology campus



Microanalysis LAB

#### **Chang Gung University of Science and Technology**

Group founders the Wang brothers established the Chang Gung Institute of Nursing in 1988 to increase the number and quality of nursing personnel. The institute initially offered two-year and five-year clinical nursing courses to provide education and training for clinical nursing personnel. Since 1995, the institute has offered free tuition to five-year nursing students of aboriginal background to provide them with education and employment opportunities. To enhance the level of vocational education, the institute was restructured in 2002 into the Chang Gung Institute of Technology (CGIT). In August 2011, CGIT was again renamed, to Chang Gung University of Science and Technology (CGUST). Presently, the university has two colleges: Nursing and Human Ecology, under which there are three graduate schools, six departments. The University currently has approximately 317 full-time teachers, and has more than 6,113students enrolled.

To enhance ties with the industry and promote academic research, the University strongly encourages and supports teachers participating in applied research projects and cooperation with industry. CGUST established Taiwan's first domestic nursing Clinical Competency Center, Research Center for Food and Cosmetic Safety, Research Center for Chinese Herbal Medicine, Chronic Diseases and Health Promotion Research Center, and Aging and Long-Term Care Research Center. Excellent performance as affirmed by the fact that we have received the Accreditation of Degree-granting Programs, which was granted to us by the Taiwan Assessment and Evaluation Association (TWAEA) after an external evaluation was carried out. The registration rate and graduate employment rate were top among all universities.

CGUST upholds its motto, "Diligence, Perseverance, Frugality, and Trustworthiness" and our educational philosophy: "be human-oriented; derive truth from facts." Our vision, founded on a core development principle of providing healthcare, is to be a top-tier university and a high quality institution for the teaching of healthcare that pursues teaching excellence, provides employment for graduates, and endows industries with the best professionals.



Department of Nutrition and Health Sciences cultivates professional practical skills in healthy diet within a high-quality educational environment



The professor guided the students in special research on extracting functional components of plant peels using microwave extraction

# **Main Products and Business Departments**

#### PETROLEUM PRODUCTS

PETROLEUM PRODUCTS						
Product	Capacity (Y)	Company	Division	Tel	FAX	
			International Trading Dept.	02-27122211#7236	02-27189001	
Gasoline	6,000,000KL	FPCC	Oil Product Division	02-27129038 02-27129228 02-27129387 02-27129070	02-27129848	
			International Trading Dept.	02-27122211#7235	02-27189001	
Diesel	10,000,000KL	FPCC	Oil Product Division	02-27129038 02-27129228 02-27129387 02-27129070	02-27129848	
6 . 14	2,500,000KL	FPCC	International Trading Dept.	02-27122211#7235	02-27189001	
Aviation fuel/kerosene			Oil Product Division	02-27122211 #7491/7492	02-27178383	
5 100	4 000 000//	FPCC	International Trading Dept.	02-27122211#7280	02-27189001	
Fuel Oil	1,000,000KL		Oil Product Division	02-27122211 #7701/7705	02-27178383	
LPG	730,000MT	FPCC	International Trading Dept.	02-27122211#7236	02-27189001	
Li G	750,0001111	11 00	Oil Product Division	02-27122211#7701	02-27178383	
Lube Base Oil	650,000MT	FPCC	International Trading Dept.	02-27122211#7243	02-27189001	
Food Grade White Oil	50,000MT	FPCC	International Trading Dept.	02-27122211#7243	02-27189001	

#### PETROCHEMICALS & CHEMICAL PRODUCTS

Product	Capacity (MT/Y)	Company	Division	Tel	FAX
PVC Resin	1,338,000	FPC	Plastics Div.	02-27178131	02-27137012
VCM	1,644,000	FPC	Plastics Div.	02-27122211#6086	02-27135423
Caustic Soda (liquid)	1,700,000	FPC	Plastics Div.	02-27122211#6097	02-27137012
Caustic Soda (flake)	50,000	FPC	Plastics Div.	02-27122211#6097	02-27137012
Micro Prills Caustic Soda	100,000	FPC	Plastics Div.	02-27122211#6097	02-27137012
Chlorine	366,700	FPC	Plastics Div.	02-27178546	02-27137012
Hydrochloric Acid	126,700	FPC	Plastics Div.	02-27178129	02-27137012
MBS	23,024	FPC	Plastics Div.	02-27178546	02-27137012
Chlorosolvents	48,900	FPC	Plastics Div.	02-27178551	02-27137012
Processing Aids	7,000	FPC	Plastics Div.	02-27178546	02-27137012
Lithium-ion battery electrolyte	1,200	FPC	Plastics Div.	02-27178129	02-27137012
HDPE	566,000	FPC	Polyolefin Div.	02-27122211#5994	02-27178176
EVA	240,000	FPC	Polyolefin Div.	02-27122211#5994	02-27178176
LLDPE	264,000	FPC	Polyolefin Div.	02-27122211#5994	02-27178176
AA	147,000	FPC	Tairylan Div.	02-27122211#6194	02-27134818

Product	Capacity (MT/Y)	Company	Division	Tel	FAX
NBA	250,000	FPC	Tairylan Div.	02-27122211#8554	02-27134818
SAP	120,000	FPC	Tairylan Div.	02-27122211#6187	02-27134818
AN	280,000	FPC	Chemicals Div.	02-27122211#7115	02-27178340
ACN	6,600	FPC	Chemicals Div.	02-27122211#6754	02-27178340
MMA	98,000	FPC	Chemicals Div.	02-27122211#7111	02-27178340
MAA	20,000	FPC	Chemicals Div.	02-27122211#7111	02-27178340
ECH	100,000	FPC	Chemicals Div.	02-27122211#7109	02-27178340
MTBE	174,000	FPC	Chemicals Div.	02-27122211#7109	02-27178340
B-1	32,000	FPC	Chemicals Div.	02-27122211#7115	02-27178340
Lime	250,400	FPC	Calcium Carbide Div.	02-27122211#6860	02-27193261
Calcium Carbonates	258,000	FPC	Calcium Carbide Div.	02-27122211#6860	02-27193261
Taical	14,400	FPC	Calcium Carbide Div.	02-27122211#6860	02-27193261
White masterbatch, Calcium carbonate masterbatch	27,420	FPC	Calcium Carbide Div.	02-27122211#6860	02-27193261
Precipitated Calcium Carbonate	36,000	FPC	Calcium Carbide Div.	02-27122211#6860	02-27193261
PP	474,000	FPC	Polypropylene Div.	02-27122211#6121	02-27181230
POM	45,000	FPC	Polypropylene Div.	02-27122211#6137	02-27181230
PTMG	21,000	FASC	Business Div.	02-27122211#6792	02-27128718
ВРА	420,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
1,4BG/THF	120,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
$H_2O_2$	20,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
ESO	20,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
Plastic Stabilizer	12,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
MA	60,000	Nan Ya	Petrochemicals 2nd Div.	02-27178244	02-27138248
Plasticizers	440,000	Nan Ya	Petrochemicals 1st Div.	02-27122211#5721	02-27178534
THPA/HHPA	12,000	Nan Ya	Petrochemicals 1st Div.	02-27122211#5721	02-27178534
PA	228,000	Nan Ya	Petrochemicals 1st Div.	02-27122211#5721	02-27178534
2EH	200,000	Nan Ya	Petrochemicals 1st Div.	02-27122211#5721	02-27178534
INA	115,000	Nan Ya	Petrochemicals 1st Div.	02-27122211#5721	02-27178534
EG	1,707,500	Nan Ya	Petrochemicals 3rd Div.	02-27122211#6880	02-25475259
Benzene	1,430,000	FCFC	Petrochemicals 1st Div.	02-27122211#5475	02-27180358
PX	2,020,000	FCFC	Petrochemicals 1st Div.	02-27122211#5475	02-27180358

Product	Capacity (MT/Y)	Company	Division	Tel	FAX
OX	290,000	FCFC	Petrochemicals 1st Div.	02-27122211#5475	02-27180358
MX	140,000	FCFC	Petrochemicals 1st Div.	02-27122211#5475	02-27180358
SM	1,320,000	FCFC	Petrochemicals 2nd Div	02-27122211#5561	02-27127173
Phenol	440,000	FCFC	Petrochemicals 2nd Div	02-27122211#5561	02-27127173
Acetone	271,000	FCFC	Petrochemicals 2nd Div	02-27122211#5561	02-27127173
РТА	1,320,000	FCFC	Petrochemicals 3rd Div.	02-27122211#5580	02-25148198
PIA	200,000	FCFC	Petrochemicals 3rd Div.	02-27122211#5580	02-25148198
PS	350,000	FCFC	Plastics Div.	02-27178405	02-27131649
ABS	460,000	FCFC	Plastics Div.	02-27178405	02-27131649
PP	640,000	FCFC	Plastics Div.	02-27178355	02-25471382
PC	220,000	FCFC	FIPC	02-27122211#6617	02-25473133
Anhydrous Sodium-Sulfate	50,400	FCFC	Rayon Div.	02-27178358	02-27175283
Ethylene	2,935,000	FPCC	Olefin Div.		
Propylene	2,367,500	FPCC	Olefin Div.	02-27122211	02-87128789
Butadiene	447,000	FPCC	Olefin Div.	#6762/6763/6764	02-0/120/09
Isoprene	60,800	FPCC	Olefin Div.		
High Purity hydrofluoric acid	43,000	FDAC	Business Div.	02-27122211#7403	02-27129281
NH <sub>4</sub> F	7,800	FDAC	Business Div.	02-27122211#7403	02-27129281
Buffer hydrofluoric acid	1,800	FDAC	Business Div.	02-27122211#7403	02-27129281
HAC	400,000	Formosa INEOS Chemicals Corp.	Business Div.	02-27122211#6575	02-27180053
High Purity electronic Isopro- pyl Alcohol	30,000	FTAC	Business Div.	02-27122211#6826	02-27178382

#### **PLASTICS**

Product	Capacity (MT/Y)	Company	Division	Tel	FAX
Flexible PVC Film	85,800	Nan Ya	Plastics 1st Div.	02-27178202	02-27178532
Rigid PVC Film	28,800	Nan Ya	Plastics 1st Div.	02-27178214	02-27126113
Metallized Film	6,000km	Nan Ya	Plastics 1st Div.	02-27178214	02-27126113
A-PET Film	11,400	Nan Ya	Plastics 1st Div.	02-27178214	02-27126113
PP Synthetic Paper	39,600	Nan Ya	Plastics 1st Div.	02-27178214	02-27126113
Rigid PVC Pipe	175,860	Nan Ya	Plastic 3rd Div.	02-27122211#6363	02-25140628
Extruded Products	14,520	Nan Ya	Plastic 3rd Div.	02-27178226	02-25140628
Injected Products	19,000	Nan Ya	Plastic 3rd Div.	02-27122211#6363	02-25140628
Plastic Pallet	25,500	Nan Ya	Plastic 3rd Div.	02-27122211#5756	02-25140628
PVC Plate	26,000	Nan Ya	Plastic 3rd Div.	02-27122211#5755	02-25140628

Product	Capacity (MT/Y)	Company	Division	Tel	FAX
Wrap Film	11,500	Nan Ya	Plastic 3rd Div.	02-27178233	02-27166899
PVCTile	11,900,000m <sup>2</sup>	Nan Ya	Plastic 3rd Div.	02-27122211#5755	02-25140628
BOPP & CPP Film	76,800	Nan Ya	Plastic 3rd Div.	02-27178233	02-27166899
PVC Compound	47,500	Nan Ya	Plastic 3rd Div.	02-27178229	02-25140628
PU Leather	3,600ky	Nan Ya	Plastics 1st Div.	02-27178248	02-27126113
TPU Film & TPU Synthetic Leather	2,880ky	Nan Ya	Plastics 1st Div.	02-27178292	02-27126113
Synthetic Raw Materials	12,000	Nan Ya	Plastics 1st Div.	02-27178292	02-27126113
Non Woven	3,600ky	Nan Ya	Plastics 1st Div.	02-27178292	02-27126113
SMC (Sheet Molded Compound)	27,000	Nan Ya	Plastic 3rd Div.	02-27178238	02-27198661
Engineering Plastics	28,800	Nan Ya	Plastic 3rd Div.	02-27178238	02-27198661
Unsaturated Polyester Resin	14,400	Nan Ya	Plastic 3rd Div.	02-27178238	02-27198661
Vinyl Windows & Doors	12,400	Nan Ya	Plastics 2nd Div.	02-27178168	02-27178512
SMC Door	13,600	Nan Ya	Plastics 2nd Div.	02-27178168	02-27178512
SMC Fire proof Door	1,800	Nan Ya	Plastics 2nd Div.	02-27178168	02-27178512
PE Bag	8,400	Inteplast Taiwan	Business Div.	02-27178113	02-27193262

#### FIBER, TEXTILE AND DYEING

Product	Capacity(Y)	Company	Division	Tel	FAX
Spandex	5,000MT	FASC	Business Div.	02-27122211 #6794	02-27128718
Polyester Staple Fiber	124,000 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
Polyester Chips	587,000 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
Polyester Spin Drawn Yarn	119,200 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
Polyester POY	118,800 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
Polyester Textured Yarn	92,147 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
SPP Chip	240,840 MT	Nan Ya	Polyester Fiber Div.	02-27178324	02-25454065
PET Film	109,200MT	Nan Ya	Polyester Film Div.	02-27178329	02-25454065
Polyester Release Film	360,000KSM	Nan Ya	Polyester Film Div.	02-27178333	02-25454065
Polyester Woven Fabric	18,000KY	Nan Ya	Polyester Fiber Div.	02-27178346	02-27124448
Knitted Fabric	1,800MT	Nan Ya	Polyester Fiber Div.	02-27178346	02-27124448
Rayon Staple Fiber	30,000MT	FCFC	Rayon Div.	02-27178358	02-27175283
Blended Spun Yarn	29,150 bales	FCFC	Textile Div.	02-27178367	02-27178544
Nylon 6 Chip	32,400MT	FCFC	Nylon Div.	02-27178371	02-27175285
Nylon 6 Filament for Textile Use	24,000MT	FCFC	Nylon Div.	02-27178371	02-27175285
Nylon 6 Stretch Yarn	4,200MT	FCFC	Nylon Div.	02-27178371	02-27175285
Nylon 6 Filament for Industrial Use	36,000MT	FCFC	Nylon Div.	02-27178371	02-27175285
Carpet Roll	1,200,000 ping	FCFC Carpet Corp.	Business Div.	02-27178552	02-27182221
Carpet Tile	600,000 ping	FCFC Carpet Corp.	Business Div.	02-27178552	02-27182221

#### **ELECTRONICS**

		ELECTRON			
Product	Capacity(Y)	Company	Division	Tel	FAX
Distributed Computer Control System	36 ST	FPC	Electronic Materials Div.	07-3711411 #5163	07-3727026
"Printed Circuit Board, IC substrate"	29,880K sft	Nan Ya Printed Circuit Board Corp.	Sales Dept.	03-3223751 #1037	03-3223802
Copper-clad Laminates	30.96 million sheets	Nan Ya	Electronic Materials Div.	02-27178261	02-27178260
Copper Foil	56,400 MT	Nan Ya	Electronic Materials Div.	02-2712211 #5828	02-27182258
Epoxy Resin	220,000 MT	Nan Ya	Epoxy Resin Div.	02-27178258	02-27182258
Glass Fabrics	270 million meters	Nan Ya	Electronic Materials Div.	02-27122211 #5831	02-27182258
LCD Display and Touch Panel	3,600 KPCS	Nan Ya	Electronic Materials Div.	03-3223751 #2713	03-3125803
Electronic Fiber Glass Yarn	81,000 MT	PFG Fiber Glass Corporation	Business Div.	02-27122211 #5888,8503	02-27189468
Chopped Strand and Roving	15,000 MT	PFG Fiber Glass Corporation	Business Div.	02-27122211 #5888,8503	02-27189468
8 inch Silicon Wafer	4,080,000 PCS	Formosa Sumco Technology	Business Div.	02-27122211 #6113	02-27178567
12 inch Silicon Wafer	3,660,000 PCS	Formosa Sumco Technology	Business Div.	02-27122211 #6113	02-27178567
DRAM	780,000 Wafers	Nanya Technology	Sales Div.	02-2904-5858 #6320	02-2908-0326
LED Hazardous Location	74 thousand sets	Nan Ya	Sales Dept.	02-27122211 #5908	02-27199187
Lights	74 tilousaliu sets	Photonics, Inc.	Overseas Markets Development Dept.	02-27122211 #5916	02-27199187
"LED Industrial Lights (Flooding Lights, Bay	20 thousand sets	Nan Ya	Sales Dept.	02-27122211 #5908	02-27199187
Lights, Street Lights)"	20 thousand sets	Photonics, Inc.	Overseas Markets Development Dept.	02-27122211 #5916	02-27199187
"LED Commercial lights (Panel Lights, Tube,	284 thousand sets	Nan Ya	Sales Dept.	02-27122211 #5908	02-27199187
Downlights)"	204 thousand sets	Photonics, Inc.	Overseas Markets Development Dept.	02-27122211 #5916	02-27199187
PV System	Project based	Nan Ya Photonics, Inc.	Green Energy Service Div.	02-27122211 #5918	02-27185596
UV System	Project based	Nan Ya Photonics, Inc.	Engineering & Construction Service Div.	02-26806311 #5560	02-26689494
Security Monitor System	Project based	Nan Ya Photonics, Inc.	Engineering & Construction Service Div.	02-26806311 #5560	02-26689494
Energy Storage System	Project based	Nan Ya Photonics, Inc.	Engineering & Construction Service Div.	02-26806311 #5560	02-26689494

#### **OTHERS**

Product	Capacity(Y)	Company	Division	Tel	FAX
Switchgear & Control Panel	6,000ST	Nan Ya	Engineering Div.	02-27122211 #6329~6337	2f910@npc.com.tw
Cast Resin Transformer	450,000 KVA	Nan Ya	Engineering Div.	02-27122211 #6329~6337	2f910@npc.com.tw
Vacuum Contactor Switch	720ST	Nan Ya	Engineering Div.	02-27122211 #6329~6337	2f910@npc.com.tw
Anhydrous Sodium-Sulfate	19,500	FCFC	Rayon Div.	02-27178358	02-27175283
Gear Reducer	1,000 ST	Formosa Heavy Industries	Gear Div.	07-3738164	07-3721748
Large Precision Gear	4,000 PCS	Formosa Heavy Industries	Gear Div.	07-3738164	07-3721748
Petrochemical Process Equipment/ Power Plant Auxiliary Equipment	30,000 MT	Formosa Heavy Industries	Machinery Div.	07-3711411#6121, 5936	07-3717476
Automatic Storage/ Retrieval System	20 ST	Formosa Heavy Industries	Automation Div.	07-37111411 #5902~5904 02-27122211 #6158,6159	07-3715148 02-27135519
Rubber and Flake Lining	9,000 m <sup>2</sup>	Formosa Heavy Industries	Rubber Div.	05-6816052	05-6816058
Cogeneration System and Power Generation Equipment	8 ST	Formosa Heavy Industries	Cogeneration Div.	07-3711411 #6406~6407	07-3721833
Cooling Tower	60 ST	Formosa Heavy Industries	Cogeneration Div.	05-6812130	05-6812576
Air Quality Control System(AQCS)	10 ST	Formosa Heavy Industries	Cogeneration Div.	07-3711411 #6406~6407	07-3721833
Alkyl Benzene Sulphonic Acid	24,000 MT	Formosa Biomedical Co.	Business Div.	02-27122211#8672	02-27178381
Detergent Powder	18,000 MT	Formosa Bio- medical Co.	Business Div.	02-27122211#7815	02-27178381
Detergent Liquid	34,500 MT	Formosa Bio- medical Co.	Business Div.	02-27122211#7815	02-27178381
Personal Clean Products	6,480 MT	Formosa Biomedical Co.	Business Div.	02-27122211#7815	02-27178381
Skin Care Products	3,456,000 PC	Formosa Biomedical Co.	Business Div.	02-27122211#7815	02-27178381
Diagnostic Products	9 million Tests	Formosa Biomedical Co.	Business Div.	02-27122211#7824	02-27178381
Lithium iron battery pack Energy Storage System	Base on Project	Formosa Biomedical Co.	Energy Div	02-27122211#6675	02-27178381
Water Treatment Chemical	10,000 MT	Formosa Waters Tech Co.	Sales Development Div.	02-27122211 #7786/8696	02-27178381

#### MAJOR PRODUCTS OF US COMPANIES

Product	Capacity (MT/Y)	Company	Tel	Fax
PVC Resin	1,355,000	FPC-USA	1-973-992-2090	1-973-422-7724
VCM	1,467,000	FPC-USA	1-973-992-2090	1-973-422-7724
Caustic Soda	969,000	FPC-USA	1-973-992-2090	1-973-422-7723
Chlorine	859,000	FPC-USA	1-973-992-2090	1-973-422-7723
EDC	1,118,000	FPC-USA	1-973-992-2090	1-973-422-7723
Ethylene	1,539,000	FPC-USA	1-973-992-2090	1-973-716-7230
Ethylene	1,200,000	FOL	1-973-992-2090	1-973-716-7230
Propylene	350,000	FPC-USA	1-973-992-2090	1-973-716-7230
HDPE	798,000	FPC-USA	1-973-992-2090	1-973-422-7737
ПИРС	400,000	FIC	1-973-992-2090	1-973-422-7737
PP	852,000	FPC-USA	1-973-992-2090	1-973-422-7856
LLDPE	373,000	FPC-USA	1-973-992-2090	1-973-422-7737
LDPE	400,000	FPC-USA	1-973-992-2090	1-973-422-7737
EG (EG-I)	360,000	NPC-A	1-843-389-7800	1-843-389-6889
EG (EG-II)	828,000	NPC-TX	1-843-389-7800	1-843-389-6889
Polyester Chips	600,000	NPC-A	1-843-389-7800	1-843-389-6889
Bottle Grade PET Chip	186,000	NPC-A	1-843-389-7800	1-843-389-6889
Polyester Staple Fiber	88,000	NPC-A	1-843-389-7800	1-843-389-6889
Partially Orientated Yarn	16,500	NPC-A	1-843-389-7800	1-843-389-6889
Polyester Spin Drawn Yarn	12,100	NPC-A	1-843-389-7800	1-843-389-6889
Polyester Textured Yarn	13,200	NPC-A	1-843-389-7800	1-843-389-6889
Flexible PVC Film	14,400	NPC-A	1-225-492-2141	1-225-492-2818
Rigid PVC Film	43,200	NPC-USA	1-281-727-7300	1-281-727-7309
A-PET Rigid Film	10,800	NPC-USA	1-281-727-7300	1-281-727-7309
SMC Door	120,000 Units	NPC-USA	1-713-674-7822	1-713-674-7823
Ethane/Propane/Butane	37,461,209BBL	FHC	1-361-987-8900	1-361-987-2283

#### MAJOR PRODUCTS OF CHINA COMPANIES

Product	Capacity(MT/Y)	Company	Tel	FAX	
PVC Resin	439,106	Formosa Industries (Ningbo)	86-574-86902999 #3131	chrishuang@fpc.com. tw	
AA	340,000	Formosa Industries (Ningbo)	86-574-86902999 #3151	86-574-86902967	
SAP	100,000	Formosa Industries (Ningbo)	86-574-86902999 #3365	86-574-86902987	
PP	522,000	Formosa Industries (Ningbo)	86-574-86902999 #2711	86-574-86902983	
PROPYLENE	600,000	Formosa Industries (Ningbo)	86-574- 86902999#5311	86-574-86902983	
EVA	100,000	Formosa Industries (Ningbo)	86-574- 86902999#3020	86-574-86029999 #3975	
Distributed Computer Control System	12 ST	Formosa Electronics (Ningbo)	86-574-86902999 #3683	86-574-86902939	

Product	Capacity(MT/Y)	Company	Tel	FAX	
Florible DVC Films	46,800	Nan Ya Plastics (Guangzhou)	86-20-36413900 #2806	86-20-36413900- 28053	
Flexible PVC Film	42,000	Nan Ya Plastics (Nantong)	86-513-85291811 #111	86-513-85291903	
Flexible PVC Film for Building Material	24,000 KY	Nan Ya Kyowa Plastics (Nantong)	86-513-85291811 #262	86-513-85291963	
	5,400 KY	Nan Ya Plastics (Guangzhou)	86-20-36413900 #2806	86-20-36413900- 28053	
PVC Leather	34,200 KY	Nan Ya Plastics (Nantong)	86-513-85291811 #112	86-513-85291903	
PU Leather	14,000 KY	Nan Ya Synthetic Leather (Nantong)	86-513-89100128	86-513-85284989	
10 Leather	12,000 KY	Nan Ya Plastics (Huizhou)	86-752-6926202	86-752-6926888-62021	
PVC Casting	12,000 KY	Nan Ya Plastics (Huizhou)	86-752-6926202	86-752-6926888-62021	
Aluminum Laminated Film	26,664 K square meters	Nan Ya Plastics (Nantong)	86-513-85291811 #305	86-513-85284989	
Rigid PVC Film	52,800	Nan Ya Plastics Construction Materials (Nantong)	86-513-85291811 #613	86-513-85291575	
Ş	38,400	Nan Ya Rigid Film (Guangzhou)	86-20-36413262	86-20-36413360	
Metallized Rigid PVC Fill	4,800	Nan Ya Rigid Film (Guangzhou)	86-20-36413262	86-20-36413360	
Engineering Plastics	14,400	(Huizhou)	Nan Ya Plastics (Huizhou) 86-752-6926210		
	49,700	Nan Ya Plastics (Xiamen)	86-592-6510371#150	86-592-6518907	
	85,800	Hua Ya Wu Hu Plastic	86-553-5841111	86-553-5843939	
Rigid PVC Pipe	118,600	Hua Ya Dongying Plastic	86-546-8305238	86-546-8307178	
	19,600	Nan Ya Plastics (Guangzhou)	86-20-36413900 #5801	86-20-36416205	
	44,000	Nan Ya Plastics (Zhengzhou)	86-371-66777888	86-371-66777889	
PVC Fitting	12,700	Nan Ya Plastics (Xiamen)	86-592-6510371 #150	86-592-6518907	
Plasticizer ( DOTP )	150,000	NanYa Plastics ( Ningbo )	86-574-86026001/ 86026009	86-574-8602-9999 #6008	
ВРА	260,000	NanYa Plastics ( Ningbo)	86-574-86026001	86-574-8602- 9999#6008	
PVC Film	21,000	Nan Ya Plastics (Nantong)	86-513- 85291811#640	86-513-85281936	
PVC Compound	12,000	Nan Ya Plastics (Guangzhou)	86-20-36413900 #5801	86-20-36416205	
Switchgear & Control Panel	3,500 ST	Nan Ya Electric (Nantong)	86-513-85291811 #669~673	2f920@nypc.com.cn	

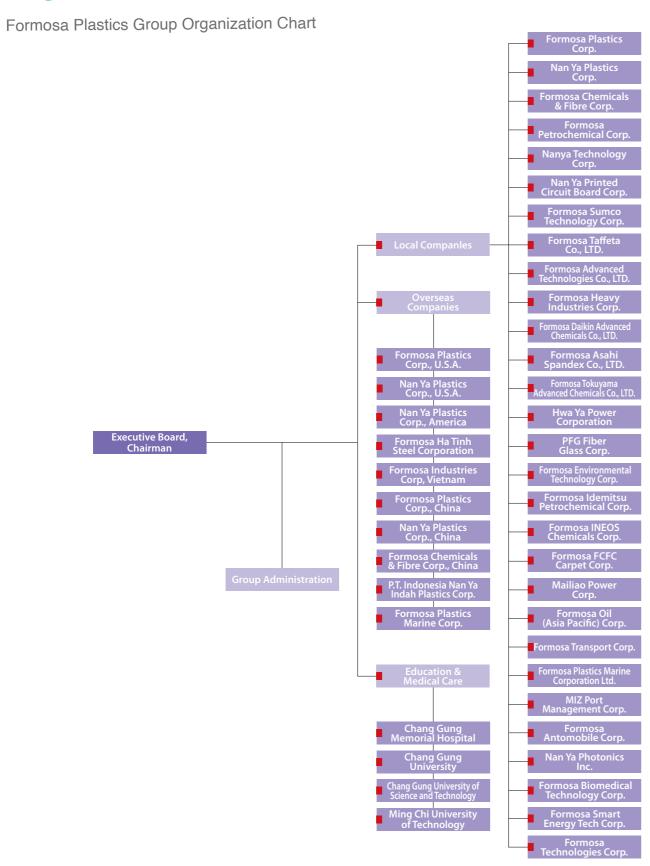
Product	Capacity(MT/Y)	Company	Tel	FAX
Common Clark Louisin atom	32.4 million sheets	Nan Ya Electric Materials (Kunshan)	86-512-57357080 #3188	86-512-57357081 #31861
Copper Clad Laminates	25.2 million sheets	Nan Ya Electric Materials (Huizhou)	86-752-6926780	joeshih@npc.com.tw
cl. El.:	324 million meters	Nan Ya Electric Materials (Kunshan)	86-512-57357080 #3333	86-512-57357081 #33332
Glass Fabrics	90.6 million meters	Nan Ya Electric Materi- als (Huizhou)	86-752-6928701	86-752-6926262
Copper Foil	60,000	Nan Ya Electric Materials (Kunshan)	86-512-57357080 #3213	86-512-57357081 #32132
Epoxy Resin	237,000	Nan Ya Electric Materials (Kunshan)	86-512-57357080 #3410	86-512-57357081 #34152
Electronic Fiber Glass Yarn	129,800	PFG Fiber Glass (Kunshan) Co., Ltd.	86-512-57357080 #3506~3508	86-512-57369016
Chopped Strand	15,000	PFG Fiber Glass (Kunshan) Co., Ltd.	86-512-57357080 #3506~3508	86-512-57369016
Printed Circuit Board, IC Substrate	22,770KSF	Nan Ya Printed Circuit Board (Kunshan)	86-512- 57357080#5900	86-512-57369002
Polyester POY	31,130	Nan Ya Draw-Textured Yarn (KUNSHAN) CO., LTD.	86-512-57357080	86-512-57357081
Polyester Spin Drawn Yarn	8,690	Nan Ya Draw-Textured Yarn (KUNSHAN) CO., LTD.	86-512-57357080	86-512-57357081
Polyester Textured Yarn	23,650	Nan Ya Draw-Textured Yarn (KUNSHAN) CO., LTD.	86-512-57357080	86-512-57357081
Polyester Dyed Yarn	7,200	Nan Ya Draw-Textured Yarn (KUNSHAN) CO., LTD.	86-512-57357080	86-512-57357081
Knitted Fabric	3,970	Nan Ya Draw-Textured Yarn (KUNSHAN) CO., LTD.	86-512-57357080	86-512-57357081
РТА	2,700,000	Formosa Chemical Industries (Ningbo)	86-574-86902999 #2506	86-574-86902953
PIA	200,000	Formosa Chemical Industries (Ningbo)	86-574-86902999 #2506	86-574-86902953
MX	135,000	Formosa Chemical Industries (Ningbo)	86-574-86902999 #2506	86-574-86902953
ABS	700,000	Formosa ABS Plastics (NINGBO)	86-574-86902999 #2119	86-574-86029999
PS	300,000	Formosa PS (NINGBO)	86-574-86902999 #2119	86-574-86029999
Phenol	400,000	Formosa Chemical Industries (Ningbo)	86-574-86028931	86-574-86029999 #2931
Acetone	246,000	Formosa Chemical Industries (Ningbo)	86-574-86028931	86-574-86029999 #2931
IIR	50,000	FORMOSA SYNTHETIC RUBBER(NINGBO) CO.Ltd.	86-574-86902999 #6618	86-574-86029999- 6620

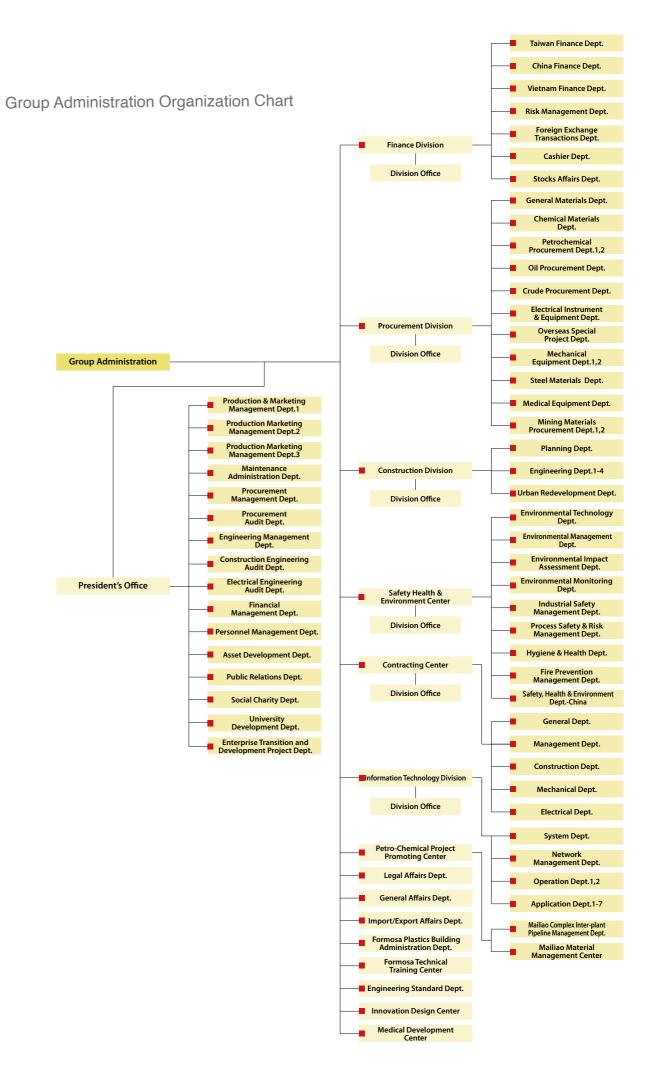
#### **MAJOR PRODUCTS OF VIETNAM COMPANIES**

Product	Capacity(MT/Y)	Company	Tel	FAX
Blended Spun Yarn	426,000 bales	Formosa Industries	84-251-3560309#2901	84-251-3560667
Polyester Staple Fiber	100,000	Formosa Industries	84-251-3560309#5901	84-251-3560666
Polyester Chips	220,000	Formosa Industries	84-251-3560309#5901	84-251-3560666
SPP Chip	162,000	Formosa Industries	84-251-3560309#5901	84-251-3560666
Polyester POY	61,512	Formosa Industries	84-251-3560309#5901	84-251-3560666
Polyester Spin Drawn Yarn	24,948	Formosa Industries	84-251-3560309#5901	84-251-3560666
Polyester Textured Yarn	62,920	Formosa Industries	84-251-3560309#5901	84-251-3560666
PU Leather	4,800 ky	Formosa Industries	84-251-3560309#7407	84-251-3560995
BOPP Film	90,000	Formosa Industries	84-251-3560309#7901	84-251-3560665
PVC Film	18,000	Formosa Industries	84-251-3560309#7906	84-251-3560665
Flexible PVC Film	24,000	Formosa Industries	84-251-3560309#7301	84-251-3560995
Nylon-6 Chips	38,400	Formosa Industries	84-251-3560309#1006	84-251-3569190
Nylon-6 Filament	30,000	Formosa Industries	84-251-3560309#1006	84-251-3569190
Hot Rolled Coil Hot Rolled Band	5,100,000	Formosa Ha Tinh Steel Corporation (Southern Vietnam)	84-2854-138-688	84-2854-138-689
		Formosa Ha Tinh Steel Corporation (Nothern Vietnam, Da Nang included)	84-2432-393-393	84-2432-353-637
		Formosa Ha Tinh Steel Corporation (Oversea )	886-2-2712-2211	fhs exports a les@fhs. com.vn
Wire Rod	1,200,000	Formosa Ha Tinh Steel Corporation (Southern Vietnam)	84-2854-138-688	84-2854-138-689
		Formosa Ha Tinh Steel Corporation (Nothern Vietnam, Da Nang included)	84-2432-393-393	84-2432-353-637
		Formosa Ha Tinh Steel Corporation (Oversea )	886-2-2712-2211	fhsexportsales@fhs. com.vn
Billet	1,150,000	Formosa Ha Tinh Steel Corporation	84-239-3722-123	84-239-3722-112

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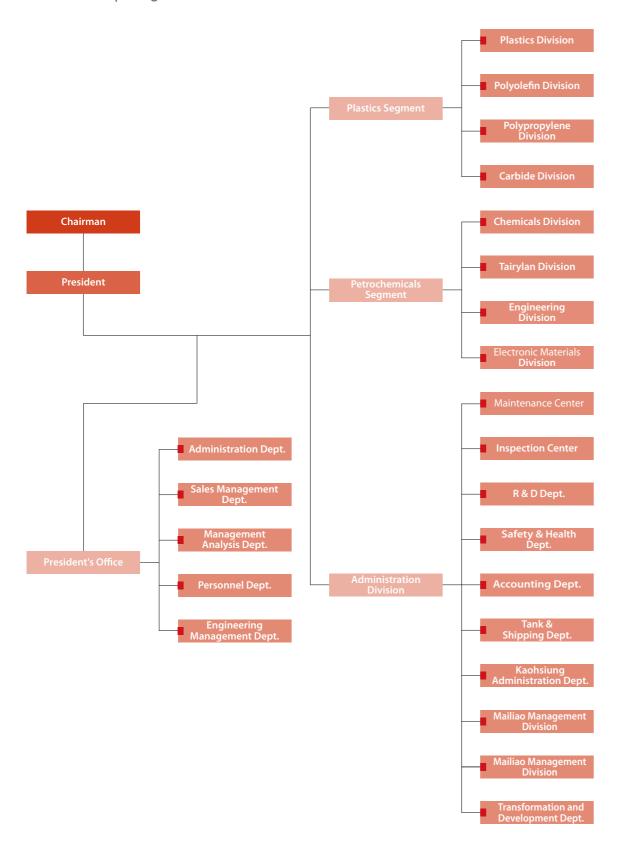
# **Organizational Chart**



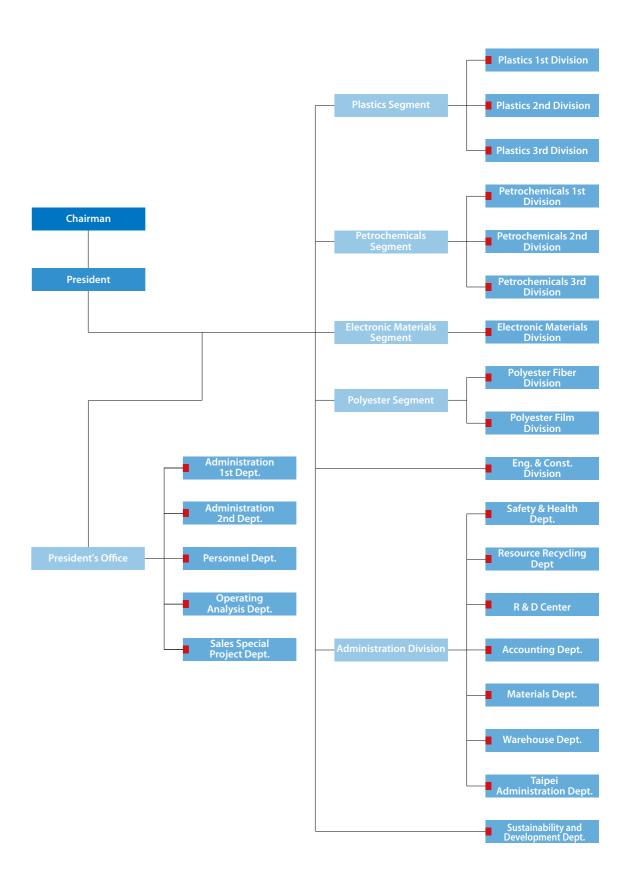


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Formosa Plastics Corp. Organization Chart

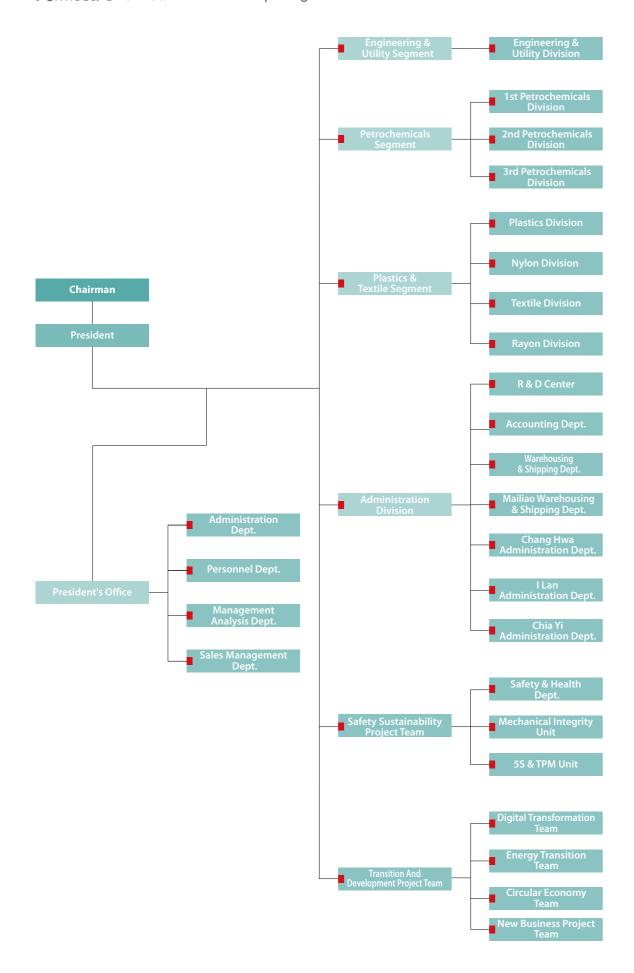


#### Nan Ya Plastics Corp. Organization Chart

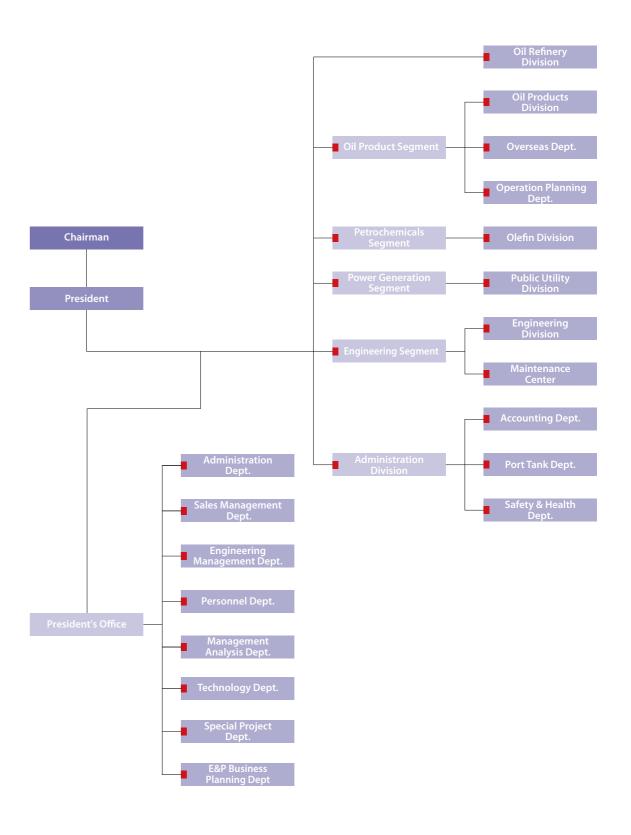


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Formosa Chemicals & Fibre Corp. Organization Chart

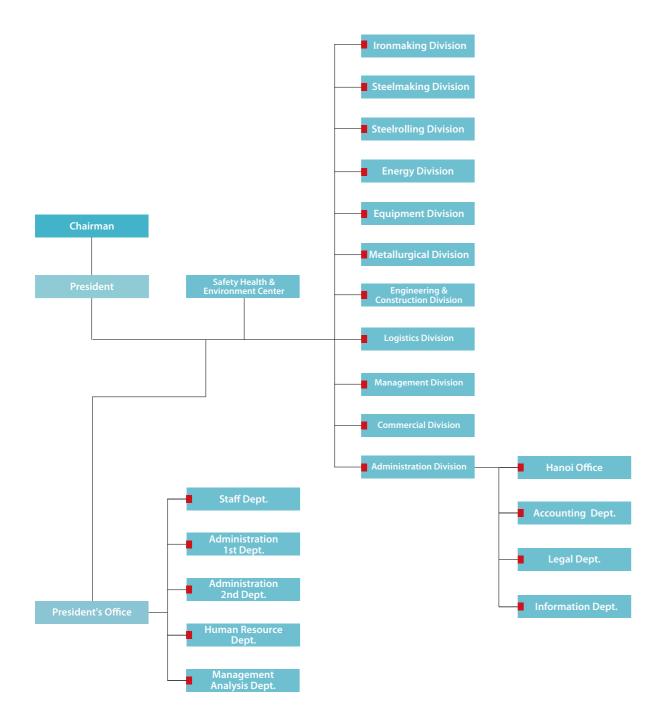


## Formosa Petrochemical Corp. Organization Chart



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Formosa Ha Tinh Steel Corporation Organization Chart



# **Business Overview in 2023**

(In Thousands of USD, persons)

Company	Capital	Assets	Equity	Sales	Income Before Income Tax	Number of Employees
Formosa Plastics Corp.	2,071,170	16,101,550	11,301,778	4,892,177	224,398	6,164
Nan Ya Plastics Corp.	2,580,388	18,494,435	11,717,725	3,938,205	186,673	12,333
Formosa Chemicals & Fibre Corp.	1,907,007	14,735,138	11,038,182	6,929,563	283,298	4,553
Formosa Petrochemical Corp.	3,099,385	13,227,715	10,943,038	23,110,795	800,618	5,198
Nanya Technology Corp.	1,008,011	6,258,224	5,431,077	963,393	-348,948	3,540
Nan Ya PCB Corp.	210,238	2,241,162	1,558,741	959,181	233,541	6,516
Formosa Sumco Technology Corp.	126,191	1,599,275	828,009	484,016	139,931	1,502
Formosa Taffeta Co., Ltd.	548,125	2,229,220	1,768,406	716,157	15,829	4,139
Formosa Advanced Technologies Corp.	143,882	431,542	384,163	248,856	20,279	2,303
Subtotal of Public Companies	11,694,397	75,318,261	54,971,119	42,242,343	1,555,619	46,248
Other Domestic Companies	2,485,596	21,961,484	18,680,256	6,803,144	1,025,787	32,276
Subtotal of Domestic Companies	14,179,993	97,279,745	73,651,375	49,045,487	2,581,406	78,524
Companies in U.S.A	1,510,281	16,853,654	13,298,723	6,348,120	93,135	4,267
Companies in China	5,919,387	12,994,863	8,413,088	8,524,763	-191,751	16,661
Other Foreign Companies	6,386,574	13,375,353	5,908,537	5,203,480	-672,820	13,169
Subtotal of Foreign Companies	13,816,242	43,223,870	27,620,348	20,076,363	-771,436	34,097
<b>Total of Formosa Plastics Group</b>	27,996,235	140,503,615	101,271,723	69,121,850	1,809,970	112,621

<sup>\*</sup>NOTE:The financial data shown above is extracted from the individual financial statements of each company.

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