# NYPCB

Nan Ya Printed Circuit Board Corporation 2012 Corporate Social Responsibilities Report

#### 2012 NYPCB Corporate Social Responsibilities Report



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# About the report

# **Overview**

This report is the first corporate social responsibility report that Nan Ya Printed Circuit Board Corporation has ever published. The report, first published in May 2013, includes the company's profile, governance, environmental sustainable development, employees wellness programs, and charity work that took place at or involved its plants No.1, 2, 5, 6 and 7 (Address: No.388, Sec. 1, Nankan Rd., Luchu Township, Taoyuan County) and plants No.8 (Address: No.57, Weiwang St., Shulin Dist., New Taipei City 238, Taiwan) between Jan. 1 and Dec. 31 of 2012. The financial figures cited in this report were from financial reports verified and signed by accountants.

NYPCB will regularly publish its corporate social responsibility report in the future. The next edition is due for publication in August 2014.

# **Report Guideline**

The report is based on the G3 Guidelines of the Global Reporting Initiative.

# Methods

To integrate and promote corporate social responsibility, NYPCB has established a "corporate social responsibility team," led by President, Otto Chang, in 2012. Chang and Associated General Manager Lyu, Lian-ruei, who is the Company' s Management Representative, have been responsible for the strategic planning, monitoring, and evaluation of the Company' s performance in terms of corporate social responsibility. The organization chart is shown on the right side:

# **Contact Information**

Please contact us through the following channels if you have any suggestion or question. Investor Relations Unit of the General Manager' s Office, Nan Ya Printed Circuit Board Corporation

Tel:+886-3-3223751 ext.1014 E-Mail:jameshan@nanyapcb.com.tw Website:http://www.nanyapcb.com.tw Picture 0.1 CSR Organization chart



Board includes the areas of corporate governance, environmental protection, and social welfare. We have continuously strived to meet the responsibilities of our long-term commitment to our shareholders, customers, suppliers, employees, country, environment, resources, communities, and society. As a subsidiary of Formosa Plastics Group, NYPCB has followed the Group's CSR policies and focused on five directions, which are corporate governance, environmental protection, procurement policy, labor and ethics, and social welfare.

# 1. Corporate Governance

- (1)Abide by all laws and business ethics, and establish a comprehensive corporate system to maintain positive corporate governance.
- (2)Adopt international standards and practices, continuously improve and enhance competitiveness to benefit our shareholders.

- (3)Steadily supply high quality products at a low price and help our downstream customers to develop new products and increase their competitiveness.
- (4)Provide employees with a safe and healthy working environment, quality training programs and systems, and clear targets that they can follow so they can reach their full potential.

# **2. Environmental Protection**

- (1)Continuously improve production processes to reduce energy consumption and carbon emissions.
- (2)Introduce lead-free technology and comply with the RoHS directive of the EU.

# **3. Procurement Policies**

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(1)Procure green materials and reduce resources consumption in order to increase rate of recycling and reusing of resources.

(2)Enforce strict inspection on raw material supplies to prevent conflict minerals from entering production processes.

# 4. Labor and Ethics

- (1)Provide employees with a safe and healthy working environment, and have high quality training programs and systems, and clear targets that they can follow so they can reach their full potential.
- (2)Abide by laws and business ethics, establish and improve the enterprise system to maintain a sound corporate governance system.
- (3)Strive to attain perfection and do good deeds. Make continuously improvements, enhance competitiveness and give back to the society.

# **5. Social Welfare**

- (1)Address various social issues, and participate in appropriate community and social welfare activities to foster a kind and compassionate society.
- (2)Use our corporate spirit of striving for perfection to create efficiency and success in our social welfare endeavors.

To honor our commitments in corporate social responsibilities, Nan Ya Printed Circuit Board upholds a principle of giving back what we gain from

society. The Company strongly believes that such responsibilities are part of our valuable assets, an everlasting brand, and a cultural beacon. The Company pledges to shoulder more social responsibilities, take part in more social welfare activities, help minority and disadvantaged groups, promote environmental protection and strive to achieve zero pollution, zero carbon emission, and zero accident target as well as establish a diverse and convenient communication with stakeholders to create the greatest benefit to the Company' s investors, employees, society, and country.

Nan Ya Printed Circuit Board Corporation (NYPCB) Overview

# **1. NYPCB Overview**

# 1.1 Company profile

Nan Ya Printed Circuit Board Corporation began operation in 1985. It was a printed circuit board division of Nan Ya Plastics Corporation, belonging to the Formosa Plastics Group, before being separated from the Nan Ya Plastics Corporation. Nan Ya Printed Circuit Board Corporation became an independent company in 1997. The firm has specialized in researching, developing, manufacturing, and selling printed circuit boards and IC substrates (Wire Bond Substrates and Flip Chip Substrates).

In its business operation, NYPCB has focused on improving manufacturing processes and conducting research and development in order to meet customers' needs for high quality products. The Company has gone through a vertical integration in order to reduce production costs and enhance productivity. It also firmly believes that a company cannot

Name	Nan Ya Printed Circuit Board Corporation
Establish	October 28,1997
Address	Headquarters: 3F., No.201-36, Dunhua N. Rd., Songshan Dist., Taipei City Tel:02-2712-2211 Jing Hsin factory: No.338, Sec. 1, Nankan Rd., Luchu Township, Taoyuan County Tel:03-322-3751 Shulin factory: No.57, Weiwang St., Shulin Dist., New Taipei City Tel:02-2680-6311
Paid-in capital	NTD 6.462 billion
Number of common shares in the market	646,165,487 shares
Employees	7,035 employees (as of December 2012)
Products	Manufacture and sell conventional PCB, HDI board, Rigid-Flex board, Flip Chip Substrate and Wire Bond Substrate
Production bases in Taiwan	Jin Hsin factory, Shulin factory

meaningfully exist without generating reasonable profits and contributing to the society. Therefore, NYPCB has contributed to social welfare activities for minority and disadvantaged groups while continuously expanding its scale to enhance quality and profits, and upholding corporate responsibilities.

NYPCB has built factories in two locations in Taiwan. The Jing Hsin factory is located in the Luchu

1.NYPCB Overview

Township in Taoyuan County while the Shulin factory is in the Shulin District in New Taipei City. As of Q4 of 2012, the Company has 7,035 employees in Taiwan, including 326 employees in senior and mid-level positions, 1,113 primary supervisors, 4,802 entrylevel employees, 222 administrative coordinators, and 572 foreign employees. The 1,439 management personnel accounts for 20.5% of the Company's total workforce.

Nan Ya Printed Circuit Board Corporation is a member of the Formosa Plastics Group. It has stringently upheld its founder's ideas and protected shareholders' interests. The Company believes a stringent and effective governance mechanism ensures that its operations are lawful, financially transparent, and efficient. To achieve this mechanism, NYPCB's organization has been designed as follows:



#### Figure 0.2 Corporate organization chart

#### **1.2 Market Position**

As the popularity of handheld devices increases, the development of printed circuit boards is heading towards high layer counts, high density, and fine-line design. The boards are being created slimmer so that they can be installed in portable devices. Since the entry threshold for the industry is relatively low, many manufacturers have entered into the PCB industry; the most intense competition is in the market segment of 4 to 10-layer printed circuit boards used in computers and communication devices. In terms of IC packaging substrate market, as the semiconductor industry has shifted its attention to multi-function, high-density, and smaller chips, and smart phones and tablets, using significant amounts of IC packaging substrates, have become the best-selling products in the user-end electronics markets, the demand for IC packaging substrates is expected to continually increase in the future.



Figure 1.1: Global Offices

1.NYPCB Overview

NYPCB's products have been sold to assembly factories around the world and used by world-class companies that manufacture computers, communication and internet devices, consumer electronics, and automobile parts.

NYPCB has conducted research and development in its three main product lines, which have been wellreceived in the market. Its three main products include high-level High Density Interconnection boards, high layer boards, and advanced substrates; they have entered the supply chain of major global manufacturers. In recent years, the demands for high-level High Density Interconnection boards, Wi-Fi modules, Rigid-Flex boards, chipsets, and EC-CSP substrates have been greatly boosted by the rapid growth of the mobile device market. NYPCB has thereby conducted research and development for this market trend, in order to generate stable revenues. The Company has dedicated to researches

for the technology of manufacturing flip chip substrates as the demand for more powerful processors used in desktops and laptops has grown substantially. The Company aims to produce substrates designed for processors with multiple cores to increase its revenues and technological achievements.

# 1.3 Prospects, Opportunities and Challenges to the Industry

There are short and long term sales and development plans in NYPCB. NYPCB's short-term goal is to develop technologies for highdensity and thinner circuit boards and enhancements in IC substrates since demands for light, thin, small, and multi-functional electronics continue increasing. The Company has adjusted its product portfolio by evaluating market acceptance and increased high-value productivities to increase production output and profit. In the long run, NYPCB will focus on developing portable communication, internet devices and consumer electronics while continuing to uphold its belief in sustainability and innovation, and commitment to environmentalfriendly product development and production expansion. The long-term goal of its business operation will also focus on widening its customer base by providing high quality and technological advantages.

# (1)Supplies and demands and market growth

NYPCB' s revenue growth fell in 2012 due to the impact on the global economy from rising commodities prices caused by QE3, the Israeli-Pakistani conflict, the US fiscal cliff, the European sovereign debt crisis, the Diaoyu/Senkaku Islands dispute, and slower economic growth in China. Due to these uncertainties, sales growth of consumer electronic products, except smart phones and tablets, were low or even contracted. Therefore, NYPCB' s revenue growth

1.NYPCB Overview

in 2012 was severely affected by fewer orders because of weak demand, and PC-centered production. However, 2013 has been predicted as a period of recovery for the global economy. The yield rate of high-end laptops has also increased significantly, bringing laptop prices down to a figure much closer to consumers' expectation, which could spur an increase in the number of orders from customers. NYPCB has also actively made transformation on its business model and developed niche products to increase profit. It has upgraded its factories in Kunshan City in China to produce multilayer boards and highdensity products.

#### (2)Competitive Advantages

As a member of the Formosa Plastics Group, NYPCB has undergone a vertical integration with the group, which has made the Company not only an upstream substrate supplier

but also obtains the ability to supply other even higher-upstream PCB raw materials such as epoxy, copper foil, and glass fiber materials. They have become the foundation of support in NYPCB' s growth in the printed circuit board industry. The Company has also completed its construction projects in Taiwan and China. They will not only provide flexible capacity and balanced product development, but also meet customers' needs for a wide range of printed circuit boards. With its profound experiences and advanced technologies, NYPCB has increased its competitiveness through product price and technology advancement.

# (3)NYPCB' s Competitive Edge of the Future

NYPCB' s three long term competitive edges include:

A.Outstanding technologies, quality, and the ability for mass production:

NYPCB is one of the first few companies to produce IC substrate and has accumulated significant experience in product development. Its capability in producing quality products and mass production has been recognized by major global manufacturers. As such, NYPCB has become one of few main global suppliers of comprehensive printed circuit boards.

# B.NYPCB has built a large customer base:

The Company's quality products have earned the trust of many multinational electronics producers. Thus, many of them have cooperated with NYPCB in new product development in order to help themselves meet the productivity targets and expand market share.

C.The stringent and sustainable management system from Formosa Plastics Group:

NYPCB is a member of the Group and has inherited its superior management system, style, and philosophy. The Company has maintained stringent management and control on production and costs, and has achieved stable supply of raw materials through resources integration and workforce collaboration in with the Group as well as the ability to negotiate procurements with external parties.

# (4) Disadvantages and Obstacles

NYPCB has continued to offer high quality products and technologies to its customers. However, since the printed circuit board industry has matured, competition has intensified and the electronics market is changing rapidly. The Company has implemented the following policies to generate reasonable profits and secure sustainable development:

A.Enhance yield rate and technologies, help customers to produce various niche products, and carry out improvement projects to reduce costs and increase margin. The Company also has increased its efforts in research and development to streamline manufacturing processes and increase capacities to maintain NYPCB' s competitive edge in technologies and costs.

B.Invest in advanced technology development and expand the capacity in order to reach niche products, widen customer base and business opportunities, and increase capacity utilization.



1.NYPCB Overview



# 1.4 Major products and Research & Development

NYPCB has conducted extensive research and development. The Company has achieved multiple patents but continue developing new products. The following products are developed successfully by NYPCB and their uses:

# (1)Printed circuit boards

# A.High Density Interconnect Substrate:

The Company has developed high-level blind-buried holes, Any layer stacked via and electroplating filled via technology and produced various materials used to roduce substrates. These products are applicable on handheld devices such as tablets, smartphones, handheld game consoles, and high-end laptops.

#### **B.Multilayer PCB**

Technologies to pair multiple layers of PCB and perform high aspect ratio electroplating and impedance matching have been developed. These technologies can be used for roduce servers and workstations.

# C.Rigid-Flex board

NYPCB has developed the board in various sizes and has controlled production processes. Products utilizing this technology include smartphones, tablets, and MP3 players.

# (2)IC packaging substrate

The Company has produced Wire Bond and Flip Chip Substrates through various packaging methods, which all aims to produce substrates with finer wires and thinner and higher layer count devices.

#### A.Wire Bonding

The Company's fine-bonding-fingerpitch wire bonding board is already mass production. NYPCB has been increasing its effort in producing advanced multiplayer packaging substrates such as FC+WBCSP, FC+WBCSP+PoP, and Bump on trace, and developing ultrathin PoP substrates. These products can be applicable on smartphones, tablets, chips for televisions, and standard logic IC. NYPCB also prepares to mass-produce its SIP products, which are applicable on the RF module in smartphones, internet and communication chips, flash card controllers, and many more products.

#### B.Flip Chip

NYPCB has been developing lightweight, thin, short and small form factor and has mass-produced advanced 2.5D and 3D processors. In addition, the Company also develops a highly-accurate multilayered PCB pairing technology for high-level communication substrates. Research has also been carried out on high speed I/O and 90um solder ball pitch technologies to face the technological challenges of new products. The Company has also established mid- and long-term R&D projects to secure its leading position in technological development. Furthermore, experimentation with new materials is in process, such as highly reliable base materials and ink, large ultra-low CTE core materials with low roughness surfaces, and new dielectric materials.

#### (3) Major products and their usage

#### A.Printed circuit boards

The board is a key component in electronic products and is the carrier of a wide range of electronic parts that serves as an interconnection to facilitate communication between parts. It is widely applicable on desktop computers, laptops, workstations, servers, smartphones, tablets, and game consoles.

#### B.ICpackaging substrate

The substrate is used to carry ICs.The signal will transmit by internal and external lead to communicate between the IC and the system. The product can reduce heat generated by the IC, and has been used on a wide range of electronics including CPU, chipsets, 3G smart phones, RF modules, internet and communication chips, digital television, and the chipsets of set top boxes.

Figure 1.2 Products



# **1.5 Awards and Recognitions**

NYPCB has followed the Formosa Plastics Group's corporate spirit in conducting final analyses and improving continuously until accomplishing perfection. We face problems head on and resolves them using practical solutions, and believe in hardwork, sincerity and honesty, society contribution, and sustainable development. This is the reason that we have continuously made improvements in corporate governance, environmental protection, and public welfare, and upheld our commitments to make the society better. NYPCB' s efforts have been recognized by the Taiwanese government as well as by non-governmental organizations. The following certifications and awards have encouraged the Company to keep streamlining its management and emphasizing environmental protection and reservation.

Types Items Date Certification		Certification	
	1	1993	ISO9001 Certification
	2	1996	ISO14001 Certification
	3	1998	UL-QS-9000 Certification
	4	2001	OHSAS-18001 Certification
	5	2002	TL-9000 Certification
	6	2003	Green Product/RoHS Certification
Recognitions	7	2004	TS-16949 Certification
	8	2009	TOSHMS Certification
	9	2010	ISO-14064-1 Certification
	10	2010	EICC Certification (Grade: yellow)
	11	2011	A bronze medal from the Taiwan Training Quality System
	12	2012	EICC Certification (Grade: green)

Types	ltems	Date	Awards
	1	1998	Won an award from Intel for obtaining Secc certifications
	2	1999	Honored by Xerox as one of its world-class certified suppliers
	3	1999	Won a Preferred Quality Suppliers award from Intel
	4	1999	Won the Supplier Continuous Quality award from Intel
	5	1999	Won an award from Intel for obtaining Secc certifications
	6	2000	Won the Strategic Supplier Award from Jabil
	7	2000	Won a Preferred Quality Suppliers award from Intel
	8	2005	Won AsusTek's Environmental-friendly Management System award
	9	2005	Won Outstanding Substrate Supplier Certification from Intel
	10	2003	Won as a Sony Green Partner
Awards	11	2003	Won an award from Intel for contributing to the development of Calexico
7.11141445	12	2004	Won an Outstanding Service and Support award from AMKOR
	13	2004	Won a Preferred Quality Suppliers award from Intel
	14	2005	Recognized as a Sony Green Partner
	15	2008	Received the Taiwan Ministry of Economic Affairs award for achieving the fastest export growth in Malaysia, one of the key markets selected by the Ministry
	16	2008	Received the Taiwan Ministry of Economic Affairs award for achieving the second fastest export growth to South Korea, one of the key markets selected by the Ministry
	17	2008	Received the Taiwan Ministry of Economic Affairs award for rapid export growth in key markets
	18	2010	Won a corporate social responsibilities award from Taiwan's Global Views magazine.
	19	2010	Won the Taiwan Executive Yuan's Entrepreneurship Award in Q1 2010
	20	2011	Won the Taiwan Executive Yuan' s Entrepreneurship Award in Q4 2010.

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# 1.6 Engage with External Associations

To enhance its technologies and competitiveness, NYPCB has actively participated in various major industrial organizations in Taiwan such as the Taiwan Printed Circuit Association and the Taiwan Electrical and Electronic Manufacturers' Association (TEEMA). The Company has also attended major seminars held both domestically and overseas in order to keep it updated with the latest global trends and to seek opportunities for further exchange and cooperation.

#### **1.7 Stakeholder Dialogue**

Since globalization has significantly changed the society, environment, business, and economy, and has profoundly affected the lives of people across different sectors and from all pace of life such as agriculture, transportation, economy, trade, finance, safety, hygiene, and gender equality,



NYPCB believes that establishing a friendly and convenient environment for communication is the responsibility of an outstanding corporation.

To create such an environment and show the Company's determination, a constructive dialogue has been facilitated with stakeholders such as NYPCB suppliers, shareholders, customers, and employees — the most valuable asset for any company operating in Taiwan. The following chart is the information of NYPCB' s stakeholders and their communication channels with the Company.

1.NYPCB Overview

# Stakeholder, Communication Channels

Stakeholder	Communication Channels
Employees	<ol> <li>Internal announcements</li> <li>Representatives from the Human Resource Department</li> <li>Regular meetings such as union core members seminars/education seminars/safety conferences /various training seminars/cafeteria quality review conferences</li> <li>Irregular meetings</li> <li>The Administration Department has established communication channels such as suggestion boxes. Medical professionals stationed at the factory provide emergency medical assistance.</li> <li>Internal publications, online platforms and questionnaires (e.g. questionnaires on training satisfaction).</li> </ol>
Shareholders and investors	<ul> <li>NYPCB has appointed a spokesperson and deputy spokesperson system, and a specialized unit for handling investors' affairs. The Company has also communicated with its shareholders and corporate shareholders by setting up the following communication channels:</li> <li>1. Shareholders <ul> <li>(1)Annual shareholders' meetings</li> <li>(2)Published annual financial reports as requested and provided them to shareholders during the annual shareholders' meetings</li> <li>(3)Shareholders can make inquiries through phone calls and emails.</li> </ul> </li> <li>2. Corporate shareholders <ul> <li>(1) Investment seminars in Taiwan and overseas</li> <li>(2) Investor forums held by securities companies (not held regularly)</li> </ul> </li> </ul>

Customers (Corporate clients)	<ol> <li>Audited by customers</li> <li>Meeting with customers and dealers</li> <li>Regular technological support</li> <li>Surveyed client satisfaction</li> <li>Provided educational training for customers</li> </ol>
Suppliers	<ol> <li>Established an information platform for suppliers</li> <li>Held regular meetings and reviewed reports face to face</li> <li>Conducted supplier surveys through questionnaires, and provided audits and consulting services</li> <li>Reviewed material supply stability and quality</li> </ol>
Communities	<ol> <li>Communicated and informed communities through NYPCB's website</li> <li>Established charity clubs and participated in community volunteering activities</li> <li>Held donation campaigns and provided assistances in light of major natural disasters in Taiwan</li> </ol>
Government and authorities	<ol> <li>Official documents</li> <li>Meetings introducing and explaining new laws</li> <li>NYPCB's financial statements</li> <li>Provided reports and information as requested by the government, authorities, and regulations.</li> <li>Communicated with government or authorities through industrial associations</li> </ol>
Non-profit organizations	NYPCB charity club has participated in non-profit organization volunteer activities.

# Governance •

# 2.Governance

#### 2.1 Governance overview

# (1)Operation of board of directors

The board of the directors, entrusted by shareholders, is the highest-level governance body of the Company. It is responsible for executing the decisions made in annual shareholders' meetings in accordance with the Company Act, corporate regulations, and board procedures. It also follows the Formosa Plastics Group principles and code of conduct for chairpersons, supervisors and managers, and requires its staff to abide by the code in operations and avoid behaviors that may damage the Company and the interests of its shareholders. The main task of the board is to ensure the Company maintains information transparency and is law-abiding as well as following the requirements of the management team. It is also responsible for allocation of profits and supervises the Company's operation. The directors of the board were elected by shareholders and they are:

Title	Name	Education	Concurrent positions in NYPCB or other companies
Chairman	NYPCB representative Wu Chia-chau (Since July 1, 2013)	Business administration, National Cheng Chi University	Chairman of Nanya Technology CorporationPresident of Nan Ya Plastics Corporation
Director	NYPCB representative Wang Wen-yuan	Industrial engineering, University of Huston	Chairman of Formosa Chemicals & Fibre Corporation, Formosa Taffeta and Formosa Advanced Technologies
Director	NYPCB representative Liou, Yuan-shan	Chemistry, National Taiwan University	Senior Vice President of Nan Ya Plastics Corporation
Director	Jhang, Jia-fang	Automatic control engineering, Feng Chia University	NYPCB's President Executive Assistant General Manager of Nanya Technology Corporation
Director	Tang, Andy	Electrical engineering, National Taiwan University of Science and Technology	Vice President of NYPCB
Independent director	Wang, Jheng-yi	MA in Public Finance, National ChengChi University	None
Independent director	Hou, Bo-lie	Applied Economics, National Chung Hsing University	None
Independent director	Jhan, De-he	Economics, National Taiwan University	None

(2)Shareholders/employees can provide suggestions for business operations to management teams through the following channels

#### A.Shareholders

NYPCB has established a spokesperson system to facilitate communication between the Company and its shareholders. The system allows shareholders to communicate with the Company' s legal representative face to face. Their suggestions and questions to the Company would receive a detailed response, and be handled by specialists who document and forward the issues to senior managers. The system makes the Company' s operation and financial status more transparent to shareholders and increases communication between them and the Company.

#### **B.Employees**

NYPCB values harmonious employerlabor relations and respects the rights of employees to express their opinions. The Company has installed suggestions boxes in areas frequented by employees and set up online ones on the intranet. These boxes are managed by specialists who are responsible for facilitating a smooth communication channel. They would seek information to understand more about questions from employees before replying. Employees can submit their questions or suggestions on the Company's regulations or systems if they have any by filling out a Management System Suggestion Form. The form will be forwarded to their supervisors to the most senior management team, facilitating an effective communication channel between employees and the Company.

#### (3)Corporate Governance Structure

NYPCB's governance is designed in accordance with its organization chart and their responsibilities are outlined as follows:

Departments		Responsibilities	
Auditing Office		Review internal control systems and regulations to ensure the system has been effectively enforced.	
	Human Resource Unit	Establish a human resource system and carry out required planning. Handle employee transfers, performance evaluations, recruitment, and training. Ensure fair management. Communicate with employees. Analyze and respond to employee opinions and questions.	
	Management Analysis Unit	Organize board meetings and annual general meetings. Plan and implement tax exemptions. Review and compile data. Evaluate performance and analyze costs.	
	Management Unit	Oversee production, sales, and operation.	
	Investor Relations Unit	Collect industry information. Analyze the market competitiveness of NYPCB. Analyze IPO and investments. Engage with investors and organize institutional investor conferences.	
	Equipment Unit	Establish and implement maintenance systems.	
President' s Office	Material Procurement and Management Unit	Plan the usage of raw material. Purchase raw material and control inventory. Ensure the usage of raw material is reasonable and cost-effective. Manage inventory and warehouses.	
	Mainland China Projects Unit	Oversee the construction and expansion of plants in China. Plan and arrange new production and install new equipment, conduct trials, and manage production.	
	Flip Chip Production and Sale Unit	Oversee the expansion of the flip chip project, mass production, trial production, and delivery. Estimate the consumption of jigs and raw materials.	
	Legal Affairs Unit	Manage the Intellectual Property Rights and legal affairs of NYPCB. Apply for patents.	
	EHS Unit	Implement and manage measures to prevent pollution. Organize required training on workplace safety, environmental protection, and hygiene.	
	Expansion Unit	Improve and implement flip chip projects.	

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2.Governance

# Departments, Responsibilities

Accounting Department	Establish, plan, supervise, and implement an auditing system. Review the legality and legitimacy of transactions. Handle daily accounting reports, file taxes, and analyze the profit and loss of products.
Information Technology Department	Oversee the Management Information system, establish an intranet, and manage Company websites. Evaluate and develop information systems, manage the intranet, and develop applications.
Research and Development Department	Establish and review production regulations, new materials, and technologies. Establish and review new product production processes. Evaluate and execute plans to satisfy customer requirements for processing technologies and tests. Conduct trial production for new products before entering mass production.
Product Design Department	Design, produce, and improve jigs. Integrate and review production technologies. Manage and execute trial production of films and screen plates. Compile new customer data.
Sales Department	Carry out marketing initiatives and analyze the market. Plan and implement sales plans. Expand the customer base. Responsible for customer service. Analyze markets for new products.
Quality Assurance Department	Establish a quality control system, audit customers, obtain UL certification, conduct reliability tests, analyze quality, and make timely improvement. Make quality control plans and review results.
Construction Department	Plan and analyze engineering projects. Manage parts and materials for construction. Supervise construction projects. Develop competitive products. Subcontract, examine, and verify expansion projects.
Manufacturing Plants	Plant No.1: back-end processing of flip chip substrates. Plant No.2: manufacture IC package substrates such as PBGA and CSP. Manufacture High Density Interconnection boards. Plant No.5, 6 and 7: manufacture flip chip substrates. Plant No.8: back-end processing of flip chips substrates

2.Governance

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## (4)Board of Directors

# The board of the directors, entrusted by shareholders, is the highest level of governance institution in the Company. It is responsible for executing the decisions made by annual general meetings in accordance with the Company Act, corporate regulations, and board procedures. It also follows the Formosa Plastics Group principles and codes of conduct for chairpersons, supervisors, and managerial officers, and requires its staff to abide by the code in operations and avoid behaviors that may damage the Company and the interests of its shareholders.

The main task of the board is to ensure the Company maintains information transparency and is law-abiding, and follows the requirements of the management team. It is also responsible for allocation of profits and supervises the Company' s operation. The directors of the board were elected by shareholders.

2012 Corporate Social Responsibilities Report of NYPCB 2.Governance

#### (5)Follow Corporate Regulation

NYPCB has followed the Formosa Plastics Group principles and codes of conduct for board members, supervisors and management, and requires its management to abide by the code in operations and avoid unethical behaviors that may damage the Company and the interests of its shareholders. The Company has adopted an online platform for procurement, which increases efficiency as well as ensures a fair and reasonable procurement process that could avoid malpractice. The platform provides a win-win situation for both NYPCB and its suppliers. In addition, a comprehensive auditing system has been established to maintain financial transparency and legality. Audit reports are submitted to the board. The Formosa Plastics Group Headquarter, formed by the subsidiaries of Formosa Plastics Group,



is an independent auditor and thus increases the profession and efficacy of the auditing system. The independent auditing facilitates the effectiveness of supervision.

NYPCB firmly believes in honesty, accountability, and abiding laws, and as such, its management, operations and strategies have been made in accordance with domestic and foreign laws, regulations, and policies. The Company has held irregular law-related trainings and seminars for employees and has established a regulation to obey anti-trust laws. A list of summaries and prohibited conducts for each regulation has been produced, and Company requires employees to read and sign it which is the principle of all business activities. NYPCB strictly requests employees, management, and board members to obey all regulations.

The Company also strives to ensure all commercial activities and sales strategies in compliance with the laws, trade conventions, and social norms to against any illegal, unfair and injustice affairs. The Company has never been fined nor punished for violating any regulations. NYPCB never involves in any political activities and maintains neutral and objective political stand.

#### (6)Commission of Salaries

NYPCB established the commission in December 27, 2011 and appointed an independent director, Wang Jhengyi, to be the convener and chairman of meetings, as well as appointing Hou, Bo-lie and Jhan, De-he as commissioners. The appointment is in compliance with the regulations of the Securities and Futures Bureau of the Financial Supervisory Commission. The Commission has made suggestions for the salaries of the Company's chairman, supervisors and managers, and board directors. This approach prevents the chairman and managers from exposing the Company to risks from salary disputes.

#### (7)Internal Audits

The Company has established an internal auditing unit, reporting exclusively to the board of directors, with the task of hiring professional internal auditors. Recruited staff members have to attend auditor training programs held by professional auditing institutions every year to continuously improve their auditing skills.

Internal audits are not the sole responsibility of the independent audit unit. Every department has to conduct audits for specific items and regularly audit their operations. The independent audit unit reviews their audits and conducts additional regular and irregular audits to ensure that the department has conducted the audit effectively.

# (8)Employee Behaviors and Code of Ethical Conduct

NYPCB has defined employees' and employer's rights and obligations to maintain order in the workplace. Pursuant to the law, a code of conduct has been established and was published after having been reviewed by relevant authorities. The Code has acted as the guideline for employee management. It has specified clear regulations regarding employee transfers, working hours, salaries, regulations and punishments, dismissal, severance pay, retirement, training, performance appraisals, and compensation for occupational injury and disease, and social welfare.

In order to ensure staff members following the Code of conduct, NYPCB has required that engineers, managers, and the management team sign a statement that specifies the operational policies that NYPCB employees should follow. The policy summary is as follows:

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# A.lllegal competition is banned (Antitrust policy):

Employees must abide by all regulations of the Fair Trade law. They should always gain profit through honest means and ensure their conduct is in compliance under the law.

#### B.Conflict of interest policy:

Employees should avoid damaging the interests of the Company during operation. They should never directly or indirectly request or accept gifts, entertainment, or any form of personal gain from the customers or competitors of the Company.

# C.Data security policy:

Employees handling the Company' s data should not reveal confidential data or other information that has not been published without NYPCB' s written permission. They should not use the information for personal gain or use it for any purpose that is not relevant to the Company' s operation. Employees should hand over all technological information that they worked on leaving the Company.

# D.Participation in political activities:

Employees should not directly or indirectly donate money, provide services, or give valuable items to any candidates or political parties. They should not conduct any behavior forbidden by the law or give any illgotten gain to legislators, political figures, or government officials that may prevent them from performing their duties.

# (9)Policies to Maintain Operational Integrity

NYPCB has always been a law-abiding and ethical corporation. It has abided by the Company Act, Securities and Exchange Act, and the Business Entity Accounting Act, and firmly believes in diligence and frugality. It has operated under the principles of honesty, fairness, transparency, and discipline, and implemented various ethics policies. The Company has also established comprehensive corporate governance and risk control mechanisms to ensure sustainable development. It has forbidden its chairman, supervisors, managers, employees, and controllers to directly or indirectly provide, promise, request, or accept any illgotten gain or conduct any behavior that is dishonest, illegal, or breaks their obligations. NYPCB' s policies to maintain operational integrity are as follows:

A.A Code of ethical conduct has been established for directors of the board, supervisors, and managers to prevent unethical behaviors that may damage the Company and the interests of its shareholders.

# B.A strict code of ethical conduct and regulations has been established to prevent employees from making fraudulent personal gain, engaging in corruption, leaking confidential information, or making false reports. NYPCB has also forbidden its employees from accepting gifts, money, or entertainment from other companies. It has routinely switched the shifts of employees working in units such as sales, procurement, inventory control and warehouse, construction management, and budgeting in order to avoid corruption.

C.A public and fair procurement and subcontract mechanism has been established. All of its procurements and subcontracts are conducted through a public bidding process via the Formosa Plastics Group' s digital trading, procurement, and subcontract platform.

# D.A comprehensive and effective accounting and internal control system has been established. Its six main units, human resource, finance, sales, production, inventory control, and construction, are interconnected by computers so that they can perform audits for each other, thus limiting potential irregularities. NYPCB has also established an independent three-level internal auditing system; the first layer is the auditing office of the board of directors; the second layer is the routine and independent auditing performed by the General Managing Department of the Formosa Plastics Group; and the third layer is the internal auditing performed within departments. The Company also requires its entire departments to routinely self-audit their operation since internal auditing is a responsibility shared by the whole company, and is required in order to ensure internal control systems are effectively implemented.

#### **2.2 Financial Performance**

NYPCB is a professional printed circuit board manufacturer. As of Q4 of 2012, the Company' s cumulative revenue reached NT\$28.804 billion with a debt ratio of 21%, suggesting a very stable financial condition.

To maintain a stable operation, NYPCB has appointed supervisors to oversee its operations and conduct financial audits. Professional external auditors have been brought in to conduct financial auditing to ensure the financial status remains transparent. In addition, NYPCB' s monthly revenue report is published by the 10th of each month on the Market Observation Post System as required by law. The information is also updated onto NYPCB' s website at the same time. The Company holds an annual general meeting in Q2 every year to inform shareholders of its operational and financial status, and show the Company' s commitment to safeguard the interests of its shareholders.

# **2.3 Internal Control**

# (1)Prevent insider trading

NYPCB's board of directors, supervisors, managers, employees, and consultants, have upheld their obligations and ethics as prudent administrators. They have signed non-disclosure agreements to keep crucial internal information in confidence prior to official Company announcements. If any leak of information is discovered, the abovementioned personnel should immediately report it to internal auditing department. Upon receiving such reports or after personally discovering a leak, the audit department would prepare a response policy under legal advisement and help from the finance department. The incident would be documented for future reference.



In order to avoid leaked information affecting stock prices and to ensure all employees follow the regulations against insider trading, NYPCB has followed Article 8 of the Regulations Governing Establishment of Internal Control Systems by Public Companies to establish an anti-insider trading regulation, and has included it in its internal control system to ensure it is effectively enforced.

2.Governance

## 2.4 Shareholders

NYPCB has established a spokesperson and deputy spokesperson system, and a unit specializing in handling investor affairs. The following communication channels have also been established for shareholders and institutional shareholders.

# (1)Shareholders

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- A. Annual general meeting
- B. Compile annual financial report and distribute it to shareholders during the annual general meeting
- C. Shareholders can make inquiries through phone calls and emails.

# (2) Corporate shareholders

A. Participate in investment seminars in Taiwan and overseas.

2.Governance

B. Participate in investor forums held by securities companies (not held regularly).



## **2.5 Customers**

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# (1)Customer satisfaction surveys

NYPCB regularly conducts customer satisfaction surveys investigating aspects such as technology, quality, response, delivery, and cost. Units related to these aspects would seek more information and communicate with customers on items that receive poor scores, bring up improvement plans according to their analysis result, and update customers on the improvements made to raise customer satisfaction.

We realize improvements of internal production process and operations as well as customer satisfaction with PDCA (Plan, Do, Check and Action) management model in all activities to ensure all departments have a common principle to follow.

# Process of customer satisfaction surveys

Identify target  $\rightarrow$  distribute questionnaires  $\rightarrow$  collect and analyze questionnaires  $\rightarrow$  discuss during internal meetings  $\rightarrow$  make necessary improvements  $\rightarrow$  inform customers about the improvements.

# (2)Customer Service

NYPCB has always been a trustworthy business partner who has grown side by side with its business partners. To enhance customer service, we are not only providing products with quality that exceeds customer expectation, but also establishing an outstanding communication system to provide timely responses to customer requests, and to ensure on time delivery of shipments.

Furthermore, in the aspect of understanding customers' valuable evaluation, the sales visit customers regularly to communicate and exchange opinions. Meanwhile, we also participate in Taiwan Printed Circuit Association exhibition every year to meet customers face to face and obtain information about the latest trends and products in the market. Such communications with customers are valuable information which will be taken into consideration of the Company's Operation.

2.Governance

NYPCB has strived to maintain good relations with its customers with the aim to increase its competitiveness along with the customers, raising customers' loyalty, developing potential customers, and achieving final goal- enlarge the company' s profit.

# 2.6 Supplier and Contractor Management

# (1)Supplier Management

NYPCB executes procurements through "public bidding" via the Formosa Plastics Group's online platform, where suppliers can request quotes and make offers, place orders, and make deliveries.

The Company considers its suppliers as important partners, and therefore, it strives to facilitate long-term cooperation with them to establish a stable and sustainable supply chain. Suppliers are not only required to offer quality products, timely delivery and reasonable price, but also shall protect the environment, improve health and safety, respect human rights, fulfill their corporate social responsibilities, manage their risks, and establish sustainable operation plans.

# A.Quarterly Operation Evaluations

NYPCB evaluates its operations with the senior management of key suppliers every quarter, and discusses the supplier's performance in terms of technology (T), quality (Q), response (R), delivery (D), costs (C), environment (E), and finance (F). The Company evaluates suppliers through these qualities and requires them to make continuous improvements to meet NYPCB's requirements for suppliers. The supplier base is evaluated and published in quarterly evaluation reports every year, which leads to replacement of unsuitable suppliers and ensures maintaining long-term partnerships with outstanding suppliers. Suppliers are required to make improvements

based on NYPCB's evaluation reports, and are regularly audited by the Company to ensure improvements have been made. The reports will be reviewed by the procurement department as future reference.

#### B.Management System Certification

NYPCB requires that its raw materials suppliers follow the TS 16949 standard. Suppliers are also required to achieve ISO 9001 and other international certifications.

#### C.Evaluation

NYPCB visits its major suppliers every year according to its annual plan and review supplier quality. As a result, suppliers are required to make improvements if non-compliances are found. The suppliers would be given a clear schedule and target to make improvements.

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#### D.Suppliers and labor rights (EICC)

The Electronic Industry Citizenship Coalition (EICC) has been promoting labor rights in the electronic industry and suppliers in recent years. NYPCB has adopted the EICC Code of Conduct and requires its suppliers to meet the code' s requirements in environmental protection, health and safety, labor rights, and labor conditions.

#### E.Conflict minerals management

NYPCB requests its suppliers to promise not to use mineral and metals mined from conflict zones. Suppliers must disclose the information of its smelters to obtain a new material certificate prior to commencement of supply. Suppliers who do not provide complete information or work with illegal smelters to make improvements may be replaced. Smelters are encouraged to participate in the Conflict-Free Smelter Program as a way of achieving third party certification.

#### (2)Contractor Management

NYPCB establishes the following systems for its contractors to enforce safety management measures, monitor contractor quality and construction, and avoid occupational injury and illness.

The Company collects information about contractors and audit their workshops, equipment and workplace safety measures, techniques and previous projects to rate their capabilities and performances according to three levels: A, B and C. The cost of safety and health management is also included as a compulsory item when setting budgets. Contractors must make a list of equipment they used to ensure safety and maintain health. The list will be included in their contracts with NYPCB to ensure the costs will not be left out of the budget. NYPCB' s computer system would automatically include the safety and health management costs into its

budget. Offers that set the cost lower than NYPCB' s budget are not accepted in order to prevent contractors from sacrificing safety and health for the sake of winning a bid.

#### (3)Contractor Safety

Contractor safety is an important part of corporate safety and health management. NYPCB values its contractors as if they were its own employees, and appreciates and admires their professional skills, their equipment, and their assistance in construction and maintenance projects. In order to ensure trouble-free construction, NYPCB has paid extra attention to quality, construction progress, and workplace safety, and has established a contractor operational safety management method, an evaluation system on contractors' safety management, and held construction safety training. The

Company also evaluates workers' mental and physical states before construction begins, and has held training programs to ensure workers follow workplace safety regulations to reduce the chance of disasters and accidents.

NYPCB has adopted the Formosa Plastics Group's methods and regulations for contractors, and requires its contractors to meet the same safety and health standards as its own employees. Computers are used to control and manage construction designs, budgeting, contract, and operations. Excellent contractors are selected to take part in expansion projects or annual maintenance. Contractors are also required to take professional tests and training to enhance their skills and raise their work safety awareness to reduce occupational illness and injury. NYPCB also informs contractors of safety and

health measures they must take during construction and at the workplace, and requires contractors to implement the measures effectively. Toolbox talks are held before construction begins every day to remind workers of the regulations and measures. Construction is not allowed to proceed if workplace safety cannot be ensured at any time. Temporary safety and health facilities used during construction, pollution prevention measures, and the disposal of wastes and waste construction soil should be dealt with following relevant laws and corporate regulations. Contractors are not allowed to proceed with construction and will be replaced if accidents occurr due to non-compliance of regulations by the contractors.

Outsource	<ul> <li>* Place order</li> <li>* Provide a construction safety checklist. Establish workplace safety measures and identify potential risks</li> </ul>
Budget	*Include safety measures into construction plan and budget *Provide the checklist to contractors and negotiate costs
Inform contractors NYPCB's safety requirements	Inform contractors NYPCB's requirements for safety after finalization
Apply entry permit	<ul> <li>* Contractors who has digitized their systems can apply permit online</li> <li>* Those who have not fill out application forms. Their information would be digitized in computers by construction management unit</li> </ul>
lssue entry permit	* Provide contractors a construction safety check list (contract number) *Hold safety education training for contractors (Employee number)
# **Environmental sustainability**

# **3.Environmental sustainability**

# 3.1 Commitments to Environmental Sustainability

#### (1)Environmental protection policy

NYPCB is aware of the importance of the environment for human beings. It believes the environment is as important as the economy, and has actively participated in and promoted various environmental protection programs. Measures such as procurement of green raw materials, green product design, production process improvements, factory management, the process of packaging and shipments, and so on have been implemented. Through setting up performance evaluation indicators, annual targets, and a strict monitoring system on energy and resources consumption, NYPCB has continuously made improvements and upheld its founder's philosophy to strive for good deeds and perfection.

To fulfill social responsibility, control risks, reduce energy consumption and emission, and protection of the environment, NYPCB has established the following environmental, safety and health policies:

Cherish resources, reduce pollution and wastes, ensure safety and health, and prevent accidents. Abide by the law, follow standards, facilitate communication, consult and maintain good neighborly relations. Shoulder responsibility, prepare for crisis, discover the truth, and make improvements continuously.

# (2)Organization chart and Responsibility of the EHS Unit

To enforce safe, healthy and environmentally friendly management, and to secure sustainable development, NYPCB established a unit that reports directly to the President' s Office. The unit is responsible for setting up, integrating, and enforcing environmental policies within the Company and with other companies. The Environmental Safety Units of NYPCB' s plants are responsible for enforcing workplace safety, health, and environmental protection measures. The units hold monthly meetings such as Safety and Health Management Meetings, and Energy Management Meetings as well as a guarterly meeting of the Safety and Health Commission (participated by over one third of labor representatives as required by law) to discuss and review workplace safety and health, with the goal of eliminating the possibilities of accidents and hazards, and achieving zero pollution.



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# (3)Environmental, Health, and Safety Management System

NYPCB has strived to protect the environment and ensure the safety of employees, and promote their health. The Company has achieved the ISO 14001 certification of the environmental management system in November 1996, and passed the OHSAS 18001 assessment in 2001. Since then, NYPCB has established an EHS Management System to promote and manage the environment and occupational health and safety within the company. In 2007, the Company consulted the TOSHMS regulation and integrated it into its existing Environmental, Health, and Safety Management System. The TOSHMS certification has also been achieved, and continues to enhance its comprehensive care and management methods to its stakeholders.

NYPCB' s Jing Hsin plant was certified by the Electronic Industry Citizenship Coalition in November 2010, and



Figure 3.2 Chinese and English ISO 14001 certifications

its Shulin plant was also certified in November 2012. Such recognition highlights NYPCB' s efforts in environmental protection and social issues. The Company has pledged to continue the stringent management to monitor industrial impact on the environment to fulfill its social responsibilities, and create a win-win situation.







Figure 3.4 Jing Hsin Plant' s Front Gate

# (4)NYPCB environmental protection history

NYPCB has implemented various relevant environmental protection jobs in pollution prevention, operation management, monitoring management and reporting. No violation of any environmental protection regulation has been made, nor has any major leakage that damages the environment occurred in 2012. The Company has participated in the government's environmental improvement programs, promoted waste reduction, reuse of resources, and reduced green house gas emissions. Furthermore, the Company has been developing eco-friendly products and managing them to follow the growing eco-friendly trend.

### **3.2 Environmental Accounting**

NYPCB has computerized its management and operations system. To computerize its environmental management, the Company has integrated Environmental Accounting to its systems and to control relevant expenses and evaluate costs, analyze the cost effectiveness of environment protection measures, and inform stakeholders of NYPCB's contributions to environmental protection accurately and clearly. The accounting system identifies and quantifies the impact of corporate operations on the environment as well as the cost of measures undertaken by corporate operations to alleviate, reduce or prevent their environmental impact. NYPCB adopted the accounting system in 2008, and has divided its environmental expenses into six categories per the diagram below in accordance with environmental accounting. The Company has also listed accounting items and coded them so that its units can categorize their budgets, costs, and expenses accordingly. The data showed the Company' s environmental costs had increased gradually along with its environmental protection works between 2010 and 2012. Its environmental expenses in 2012 reached NT\$307,855 million.









Figure 3.6 Administrative Office Building

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# 3.3 Water and energy conservation and greenhouse gas reduction

# (1)Environmental Data

NYPCB' s 2012 total input (raw materials, energy and water resources) and total output (greenhouse gas, air pollutant, wastes and wastewater) are shown in the following diagram.

Energy		Water		Materials	
LPG	18.10 Mt	City Water	1,607,029 Mt	Substrate	5,365 Mt
Gasoline	3.87 KI	Canal Water	1 544 366 Mt	Sulfuric acid	5,315 Mt
Diesel Fuel	34.38 KI	Canal Water 1,544,366 MIT		Hydrochloric acid (HCl)	2,723 Mt
Biodiesel	0.74 Kl			Copper Clad Laminate	1,996 Mt
Electricity	358,867 MWh			Hydrogen peroxide (Hydrogen Peroxide)	1,014 Mt
Steam	102,449 Mt			Sodium Persulfate (Micro-corrosion agent) 678 N	
				Copper Balls	604 Mt
				Sodium Carbonate (developer)	299 Mt
				Photographic ink	146 Mt
				(Main Raw Materia	al Usage)



<b>Greenhouse Gases</b>		Wastewater	Waste	
Directly Emission	s 7,525 Mt	Treated Water 3,826,048 Mt	Total Waste 20,546 Mt	
Indirectly Emissions	391,106 Mt	Effluent Water 2,477,454 Mt	Outsourced Processing Waste 3414 Mt	
Air Pollutants		Recovered Water 1,348,594 Mt	Export Waste 359 Mt	
VOCs	32.07 Mt		Recyclable Waste 16,773 Mt	
Sulfuric Acid Mist 1.58 Mt		Note 1: VOCs stands for Volatile Organic Compounds		
Hydrogen Chloride 0.14 Mt				
Nitric Acid	2.58 Mt	ozone-depleting substances.		

Figure 3.7 Substance Flow Analysis 🕨

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### Amount and Percentage of Direct Energy





Figure 3.8 Amount and Percentage of Direct Energy

Figure 3.9 Consumption of Purchased Electricity and Steam

Usage

# (2)Improve energy management and reduce energy consumption

## A.Energy management

Greenhouse gas emissions have become one of the most important issues on Earth. Since energy use generates carbon dioxide and causes global warming and climate change, effective management of energy use has become NYPCB' s priority. The Company' s

energy usage includes fossil fuels, and purchased steam and electricity, we also keep track of usage.

### B.Direct energy consumption

Most of the fossil fuel consumed by NYPCB in 2012 was used for the emergency power system, forklift trucks, Company cars, ambulance, fire trucks, and the cafeteria (kitchen). Bio-diesel fuel, gasoline, liquefied natural gas, and

diesel amounted to 1%, 5%, 45% and 49% of total fossil fuel consumption, respectively.

#### C.Indirect energy consumption

NYPCB' s production is focused on printed circuit boards, which are mostly powered by purchased electricity and steam. The two energy sources are also the biggest source of the Company's greenhouse gas emissions (over 98%

in 2012). They are purchased from Nan Ya Plastics Corporation' s Jing Hsin and Shulin plants. Electricity and steam consumption declined in 2012 due to lower capacity utilization and effective energy management.

#### D.Reduce energy consumption

NYPCB has strived to reduce energy costs and increase energy efficiency. Annual environmental management targets and incentives have been established to encourage employees to review and improve the efficiency of their energy usage. In addition, an energy management unit has been established to manage and implement measures, as well as hold monthly energy management meetings to examine whether employees have reduced their energy usage or not. NYPCB saved 2,214 joules of energy a day, which is equivalent to NT\$1,697,000 a year and 772 tons of carbon dioxide, in 2012.



2012 Corporate Social Responsibilities Report of NYPCB Environmental management targets between 2010 and 2013

Туре	Items	Targets
	Water consumption per unit of output (ton/NT\$ million)	2% annual reduction since 2010
Water conservation	Effluent recycle ratio	Increase 2% between 2010 and 2011; increase 1% between 2012 and 2013)
Energy conservation	Greenhouse gas emissions per unit of output (ton/ NT\$ million)	2% annual reduction since 2010
Waste reduction	Waste produced per unit of output (kg/ NT\$ million)	1% annual reduction since 2010

Energy consumption has been reduced since 2012

0

Plant	Improvement	Electricity reduced(KWh/hour)	CO <sub>2</sub> reduced (ton/year)	Cost reduced (NTD\$1,000/year)
	Reduced energy consumption during production	20.78	184.55	382.23
Jing Hsin plant	Energy management	5.95	52.86	109.48
	Increase public facility efficiency	45.02	399.87	828.19
Shulin	Reduced energy consumption during production	19.45	127.69	357.88
plant	Increased production facility efficiency	1.03	6.76	18.95
	Total	92.23	771.73	1,696.73

# (3)Water resource management and water conservation

#### A. Water resource management

Production activities consumed the most water in NYPCB. The main water sources include city water, canal water, recycled water, and back-up reservoirs. Since NYPCB does not use groundwater, it has strived to reduce water consumption by reducing water used during production and recycle the water used in cleaning during production process. The Company has also invested heavily on an effluent recycling and treatment system, and has reduced wastewater in all of its plants. Recycled water that is neutral or alkaline is reused in pollution prevention. Purified recycled water is directly reused by plants and stored at pure water storage reservoirs to reduce water recharge. Water-saving devices have also been installed on the faucets in offices to reduce office water use and cultivate water-saving culture.

NYPCB has established policies to mitigate impact from potential shortterm, mid-term, and long-term drought, and to respond to insufficient water supplies, water price hikes, and water conflicts with stakeholders. Water-saving measures have been implemented to reduce consumption and secure water supply. As a result, costs associated with purchased water have reduced in recent years.

Figure 3.10 Past Water Consumption

Water	Reduce water consumption during production
conscivation	Reduce office water use
Increase water sources	Recycle wastewater and purify water
	Recycle alkaline waste water and reuse it on acidic scrubbers
	Recycle waste water that is neutral and reuse it for toilet flushing



# B. Water conservation policies yield positive results

After persistently improved and promoted water-saving measures, NYPCB has reached its targets to reduce water consumption per unit of output (ton/NT\$ million) for three consecutive years as of 2012. The Company only failed to reach its water consumption target in 2009 since its output and effluent recycle ratio plunged rapidly in that year, which reduced the amount of wastewater and reclaimed water significantly. The ratio increased steadily between 2010 and 2012, of which the amount of water saved in 2012 was 63 tons per day, equivalent to NT\$274,000 a year. NYPCB has pledged to continue promoting and enforcing water conservation, and striving to reduce water consumption and recycle wastewater.

#### Figure 3.11 Water consumption per unit of output trend







# Water consumption has been reduced since 2012

Plant	Methods	Costs reduced (NT\$1,000/year)
Jing Hsin	Reduce water consumption during production	182.11
plant	Recycle and reuse waste water	70.64
Shulin plant Recycle and reuse waste water		21.40
	Total	274.15



# 3.4 Protect the environment around plants

# (1)Air pollution prevention

The main source of air pollutants generated in NYPCB' s plant came from the use of neutral, acidic, alkaline chemicals and volatile organic compounds during production processes. These chemicals have been separated by collecting exhausts during the processes. Specific equipment such as scrubbers, bag filters, and activated carbon towers has been installed to handle each type of exhaust. To enhance air quality and eliminate odors around the plant, NYPCB purchased a UV-C reactor and VOC treatment system in 2011, and installed a pH monitoring system on the scrubber in 2012 to increase the efficiency of exhaust reduction. The Company also ensures the equipment are maintained regularly so that they can effectively prevent pollution per the following chart. If new equipment is installed or if existing equipment is upgraded, NYPCB has Environmental Protection Administration-certified companies to test air pollutants in their stacks to make sure air pollution prevention is effective. Past test results show NYPCB' s air pollutant emissions are far lower than national emission standards.



Figure 3.14 Air Pollution Control Equipment (Scrubber, Bag Filter, UVC Reaction Tower and Activated Carbon Adsorption Tower)



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# (2)Water pollution prevention

NYPCB has taken into account the characteristics of wastewater and the stability and accessibility of wastewater treatment when designing its wastewater treatment procedures and facilities. A comprehensive treatment process and facilities and wastewater piping system were designed for production lines to treat, recycle, and purify wastewater effectively. Wastewater is stringently and immediately categorized when it is produced by production equipment and machinery. The water is collected through distribution channels to specific water treatment facilities. The Company tests effluents daily to ensure that the quality of treated water is far lower than national standards. The wastewater is not discharged to any body of water close to water sources or biologically sensitive areas. NYPCB pledges to persistently improve its production processes and equipment to reduce wastewater discharge and

enhance wastewater treatment to reduce its impact on the environment.

ltem Plant	Body of water receiving wastewater	Drinking Water source andwater conservation area	Dams and reservoirs	National parks	Wildlife conservation areas	Nature reserve	Protected coastline zone
Jing Hsin plant	Downstream sections of Nankang River	Х	Х	×	Х	Х	Х
Shulin plant	Downstream sections of Nankang River	Х	Х	X	Х	Х	Х





Figure 3.16 2012 Wastewater Discharge Quality Test Results

	Test Items	Unit	Regulations and Standards	Test Results			v	
	rest items	Onic	Regulations and Standards	Minimum	Average	Maximun	*	
Jina Hsin No. 1	рН	-	6~9	7.1	7.3	7.5	Yes	
Wastewater	COD	mg/L	<120	39.3	52.5	68.6	Yes	
Treatment	Suspended Solids(SS)	mg/L	<50	8.4	9.5	11.8	Yes	
Plant	Copper lons(Cu)	mg/L	<3	0.2	0.5	0.9	Yes	
Jing Hsin No. 2	рН	-	6~9	7.0	7.6	8,2	Yes	
Wastewater	COD	mg/L	<120	18.4	30.1	52	Yes	
Treatment	Suspended Solids(SS)	mg/L	<50	1.4	3.3	5.0	Yes	
Plant	Copper lons(Cu)	mg/L	<3	0.4	0.7	0.9	Yes	
Shulin	рН	-	6~9	7.4	7.8	8.0	Yes	
Wastewater	COD	mg/L	<120	12.3	25.8	39.6	Yes	
Treatment	Suspended Solids(SS)	mg/L	<50	4.0	9.8	16.2	Yes	
Plant	Copper lons(Cu)	mg/L	<3	N.D	0.03	0.03	Yes	

Note: **\*** = Whether the Sample Complies with Water Quality Standards?

Figure 3.17 Wastewater Treatment Equipment (biological treatment systems, chemical processing systems, and water recycling system)



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#### (3)Waste management

NYPCB has established multiple waste collection points within its plants to reduce wastes and make the best use of its resources and materials. The Company also continuously improves its production processes and operations for this purpose, reducing wastes from the beginning of the process as well as reusing and categorizing them. Certified Taiwanese recyclers have been commissioned to handle its wastes, which are mostly treated at certified waste treatment plants in Taiwan. Only a few of them have been treated abroad Those that have been transported to other countries have obtained legal permission from those countries and treated in accordance with local laws.

Figure 3.18 Waste Treatment Methods and Quantity

Waste Treatment	Treatment Quantity (tons)
Outsourcing Treatment	3,414
Recycling	16,773
Export	359
Total	20,546

Figure 3.19 Type, Quantity and Percentage of Disposal Wastes

Types of Waste Disposal	Quantity (tons)	Percentage of Total Waste
Printed Circuit Borrad Powder	80.7	0.39%
Copper Foil Scrap	6.3	0.03%
Printed Circuit Borrad Scrap	107.8	0.52%
Copper Plate Scrap	137.7	0.67%
Defective Printed Circuit Board Scrap	24.8	0.12%
Copper Clad Laminate Scrap	2.2	0.01%
Total	359.5	1.75%

NYPCB has strived to recycle its resources and reduce wastes, and has achieved its target for waste reduction per unit of production (kg/\$NT million) for three consecutive years as of 2012. The quantity of waste in 2012 was slightly higher than that of 2011 since its capacity utilization decreased during that period. The Company also produced a lot of waste due to multiple production processes and maintenance of public facilities during that period, which generated a higher amount of waste per unit of production. NYPCB has pledged to continue implementing waste reduction programs and resource recycling measures to minimize waste produced.

# Figure 3.20 Non-recycled Waste Disposal per Unit of Production



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#### Figure 3.21 Sort and Collect Waste



# (4)Examination and reduction of greenhouse gas emission

Global warming and climate change has become a key obstacle for sustainable development. Increase of greenhouse gases raises temperatures around the world and causes abnormal climate changes and unpredictable impact on the environment. NYPCB has recognized the importance of these issues and has conducted comprehensive examinations and evaluation of its greenhouse gas emissions since 2005 in accordance with the principles of ISO 14064-1 to reduce its greenhouse gas emissions and achieve sustainable development. As an electronic processing industry, over 98% of NYPCB' s greenhouse gas emissions were generated by the indirect discharge of its purchased electricity. Reducing electricity consumption thereby is the most effective way to reduce greenhouse gas emissions. The Company also adopted the Plan-Do-Check-Act management model to improve its facilities and reduce its emissions continuously and increase competitiveness.

#### A.Evaluation

The main source of greenhouse gas emitted by NYPCB came from indirect discharge of electricity use at its plants. To reduce greenhouse gas emissions, alleviate global warming, and fulfill its responsibilities as a global citizen and abide by the Kyoto Protocol that became effective in 2005, the Company has planned and promoted the reduction of greenhouse gas emissions and controlled its greenhouse gas source. It has also set reduction targets based on the plan every year, implemented measures to reduce energy consumption, and reviewed the results on a monthly basis. NYPCB also inspects the amount and quality of its direct and indirect greenhouse gas emissions (Scope 1 and 2) in accordance with the ISO 14064-1 standard. Scope 3 is only examined for its quality since it involves employee transportation between home and work and for business. NYPCB has also established a ridesharing system for business trips, encouraging the use of video

conferencing and production support to reduce the exhaust generated from the vehicles employees used for transporting goods or commuting.

Note: Scope 3 refers to the exhaust generated by employee commuting and business trips, outsourced waste treatment, and contractor vehicles.





### **B.Emission analysis**

#### Figure 3.23 Analysis of 2012 Greenhouse Gas Emissions

According to NYPCB's audits conducted in accordance with ISO 14064-1 standards, the Company produced 398,631.37 tons of CO<sub>2</sub>e in 2012, of which Scope 1 amounted to 7,525.49 tons, or 1.89% while Scope 2 amounted to 391,105.87 tons and 98.11%. All of these figures have been verified by thirdparty external audit institutions. The following diagram shows that NYPCB' s main source of CO<sub>2</sub> emission came from purchased electricity and steam. The entire quantity of electricity and steam used in NYPCB' s plants were purchased from Nan Ya Plastics Corporation's Jing Hsin and Shulin plants. Reducing electricity consumption may effectively decrease the amount of CO<sub>2</sub> emission from NYPCB.



#### Figure 3.24 Density of Greenhouse Gases

Gas Type	Emission Quantity (ton of CO <sub>2</sub> e)	Percentage
CO <sub>2</sub>	389,261.95	97.650%
CH <sub>4</sub>	647.48	0.162%
N <sub>2</sub> O	1,922.57	0.482%
HFCs	2,914.77	0.731%
PFCs	3,884.59	0.974%
$SF_6$	0	0%

Figure 3.25 Past Greenhouse Gas Emission Data



Figure 3.26 Greenhouse Gas Emissions per Unit of Production



The Company's greenhouse gas emissions produced per unit of production (ton/NT\$ million) were lower than its targets in 2010 and 2011. NTPCB failed to meet its target in 2012 since its average capacity utilization per unit of production dropped in 2011 and reduced its facilities and machinery's electricity consumption efficiency, causing the Company's greenhouse gas emissions per unit of production to exceed its target. NYPCB pledged to continue implementing various measures to reduce energy consumption and increase energy use efficiency to reduce greenhouse gas emission.

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# (5)Green supply chain

#### A.Management of green products

NYPCB introduced a hazardous substance management system in 2001, and has been promoting the concept and certification of Green Partners. The Company has since conducted internal audits for this purpose. To promote the concept of Green Partners, the Company established a Green Partner standard procedure and began implementing waste reduction plans and developing a hazardous substances management system in 2004, and regularly reviewed their enforcement.

- 2001- introduced the concept of Green Partners and defined hazardous substances.
  2004- established Green Partner SOP and updated relevant information.
- ·2005- achieved Green Partner certification. (2005-2007)
- +2006- the EU established Restricted of Hazardous Substances (RoHS) Directive
- ·2008- achieved Green Partner certification. (2008-2010)
- ·2009- Developed and adapted a RoHS management system
- ·2010- achieved Green Partner certification. (2010-2012)
- •2011- installed x-ray fluorescence devices to detect hazardous materials in products
- ·2012- achieved Green Partner certification. (2012-2014)

NYPCB has been promoting green procurement and has required its raw material suppliers to provide written assurances to ensure their products do not contain hazardous substances. They are also required to provide annual test reports to prove their products meet the requirements of customers and are in compliance with relevant laws.

# B.Restrict use of hazardous substances

NYPCB has produced documents and designed management principles for its green partners and effectively monitored the sources of its raw materials and other relevant materials to make sure they are in compliance with RoHS, REACH, international laws, customer requirements and the standards of green products, and to reduce their impact on the environment.

### C.Hazardous Substance Free policies

NYPCB has established a Hazardous Substance Free system and required its green partners to comply and enforce it:

The Company has set up groups and specified their responsibilities to

manage green partners effectively. Its environmental safety and quality assurance units are responsible for promoting green products and ensuring they comply with relevant laws and customer requirements. Other relevant departments were required to integrate the system into their operations in compliance with NYPCB' s HSF management target.

# D.XRF Analysis Process

XGT – 1000WR equipment

#### Figure 3.27 1000 WR Equipment Diagram



#### E.Procedures of managing hazardous substances

Figure 3.28 Hazardous substances Management Process



### F.XRF system can detect and measure hazard element accurately

Hazardous	Method of Analysis			
substances	Shipment Analysis	SGS Analysis		
Cadmium	X-ray	Inductively Coupled		
Lead	Fluorescence	Plasma-mass		
Mercury	Spectrometer	Spectrometry Analysis		
Hexavalent Chromium	X-ray Fluorescence Spectrometer	Use UV/VIS Spectroscopy to Measure Absorbance of Liquid Samples		
Halogens - Chlorine Halogen - Bromine	(analyzes chrome)	Ion Chromatography Analysis		

Figure 3.29 Hazardous substance Elemental Table

2012 Corporate Social Responsibilities Report of NYPCB The XRF system can accurately measure hazardous substances such as Cd, Pb, Cr, Hg, Br, and Cl. The system helps NYPCB to meet customer requirements to include such data in shipment reports, in order to be in compliance with EU RoHS regulations.

# G.RoHS regulations and product packaging

(A)Raw materials produced in compliance with RoHS regulations

NYPCB has monitored its suppliers to ensure the raw materials they supply are RoHS compliant. The substances that RoHS bans are cadmium, lead, mercury and mercury compounds, Chromium VI and Chromium compounds, and PBB and PBDE.

(B)Packaging of green products

NYPCB uses a specific label on RoHScompliant products to show customers they are green products. The trays that the Company use to carry shipments are made of recyclable materials. NYPCB has evaluated and tested a tray recycling management system and procedures to recycle the trays.



#### Figure 3.30 RoHS Labels

# H.SGS product testing

All of NYPCB's products are in compliance with SGS standards and do not contain hazardous substances to the environment.

# SGS

#### Test Report

NAN YA PRINTED CIRCUIT BOARD CORP. 338, SEC. 1, NANKAN ROAD, TING HSIN VILLAGE, LUCHU HSIANG, TAOYUAN COUNTRY, TAIWAN.

Test Item (s):	Unit	Method	MDL	Result
				No.1
PCBs(Polychlorinated Biphenyls)(CAS NO:001336- 36-3)	ppm	With reference to USEPA 8082A. Analysis was performed by GC/MS or GC/ECD.	0.5	N.D.
22.02	122323	100000	252235	Result
Test Item (s):	Unit	Method	MDL	No.1
Polychlorinated Naphthalene	ppm	With reference to USEPA 8081B. Analysis was performed by GC/MS.	5	N.D.
	-			Desult
Test Item (s):	Unit	Method	MDL	No.1
PCTs(Polychlorinated Terphenyls)	ppm	With reference to USEPA 8082A. Analysis was performed by GC/MS or GC/ECD.	0.5	N.D.
		-	_	
Test Item (s):	Unit	Method	MDL	No.1
Chromium VI (Cr+6)	ppm	UV-VIS(US EPA 7196A) after reference to US EPA 3060A.	2	N.D.
Mercury (Hg)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Lead (Pb)	ppm	ICP-AES after reference to US EPA 3052 or other acid digestion.	2	N.D.
Cadmium (Cd)	ppm	ICP-AES after reference to EN 1122, method B:2001 or other acid digestion.	2	N.D.

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#### Figure 3.31 Compliance Certifications

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# 3.5 Greening and tree-planting activities around plants

NYPCB has designed a comprehensive greening plan for its limited land resources. The plants and flowers planted in the Company include tropical foliage such as Chinese Banyans, Royal palm, Formosan Nato Tree, Chinese rain tree, weeping fig, Buddhist Pine, Blackboard tree, Indian rubber bush, Madagascar Almond, Common Garcinia, Sea Fig and cotton tree, and shrubs such as Pink Ixora, Rhododendron, Golden Dewdrop, Chinese hibiscus, China rose, umbrella tree and Golden Banyan tree as well as seasonal plants such as Impatiens walleriana, scarlet sage, Wax Begonia, petunia, New Guinea Impatiens, Torenia, and Egyptian Starcluster.

The greening plan divided the Company into three zones, the administrative zone, production and plant zone, and the dormitory and living zone. The 30-year-old Chinese Banyan trees in the plants and the habitats of wild birds such as wild quail, Chinese Bulbul, and Japanese White-eye have been preserved and protected. The production and plant zone has been afforested. Chinese Banyan trees were planted alone Nanjing 1st Road and Nanjing 2nd Road. The gardens along lanes, according to their sizes and characteristics, were planted with Hoop Pine, Terminalia mantaly H. Perrier, weeping fig, Common Garcinia, and round banyan trees. Seasonal plants and flowering shrubs were planted in front of the plant gate, improving surrounding landscape. To make the three men and women's dormitories



Figure 3.32 Chinese Banyans near the Offices 🕨



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in the dormitory and living zone more hospitable and more homely, the plants around these buildings were specially selected. Large tropic foliage such as the blackboard tree and Formosan Nato Tree as well as seasonal flowers and shrubs such as Impatiens walleriana, Bougainvillea, viola and China Rose were planted around these buildings. During their blooming seasons, their flowers are not only pleasant to employees' eyes but also help them to relax.

NYPCB' s greening plans at its plants and on its land are as follows:

◀ Figure 3.33 Blooming Ixora around the Plants

# (1)Greening

- A.The Chinese Banyan trees that have existed since 1983 when the plants were built will be preserved. The areas that have been left untouched will be planted with blackboard trees, Hoop Pine, and Indian rubber bush depending on the characteristics of the gardens there.
- B.Offer free tree seedlings through government departments such as the department of agriculture and forestry bureau.
- C.The gardens that became barren because of heavy shade will be planted with groundcovers such as the Singapore Daisy and boat lily to increase NYPCB' s ratio of green cover.

# (2)Gardening

- A.NYPCB has been growing its own seedlings since 1995 and has produced plants and flowers that are used in the gardens across its plants and buildings. The Company has made its plantation entirely selfsufficient, saving costs of purchasing flowers and plants every season.
- B.The lawns and gardens in the administrative zone were specially designed and are gardened carefully and planted with seasonal flowers and plants.
- C.The miss-planted rate of seasonal flowers and plants cultivated across the Company is kept below 10%. The percentage of flowers that blooms every season reach 80% and above.

Physical and metal strengths are muchneeded in technology industry. The strengths work its best in a workplace that is beautiful, full of culture, leisure, and relaxation. NYPCB's greening

management will continue to focus on creating a beautiful environment that values quality of life and nature of the future.



Figure 3.34 Viola Blossoms in front of the Cafeteria

# Employee welfare

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# 4.Employee welfare

# **4.1 Employment**

Employees are the most important asset of a company. Every company should strive to ensure every employee can work safely and are willing to contribute his/ her talent. To recruit talented employees, NYPCB offers stable and competitive salaries and benefits, comprehensive training, and promotion system.

NYPCB selects candidates for positions under the principle of fairness, justice, and equality. Every candidate has equal opportunity to apply for a job. The Company also ensures the personal qualities and ability of its newly-recruited employees fit the requirements of his/ her position. Taiwan' s Labor Standard Act specifies that employers are not permitted to hire workers aged below 15. Workers who have not reached the age of 16 are not permitted to do heavy and hazardous works. NYPCB has complied with the EICC code of conduct and pledged not to hire workers below the age of 16.

Year		2010	2011	2012
Number of employees	Men	4,728	4,888	4,694
	Women	2,249	2,331	2,341
	Total	6,977	7,219	7,035
Average age		32.70	33.01	34.00
Average seniority		7.50	7.80	8.90
Employee education	Doctorate	0.09	0.10	0.07
	Master's degree	3.88	4.09	4.36
	Bachelor's degree	10.63	7.21	7.32
	Senior high school	81.68	84.93	84.77
	Junior high school and below	3.72	3.67	3.48
	Total	100.00	100.00	100.00

### 4.2 Salaries and welfare

# (1)Employee welfare

NYPCB not only complies local labor laws but also joins local associations that survey salaries and welfare to ensure its salaries are competitive. In addition, it is ensured that employee salaries are not gender biased, therefore, the salaries of male and female workers are equal. The Company values its employees, respects their rights to work, and offers reasonable salaries. It also strives to alleviate employee concerns and burdens in their lives so that they can fully develop and utilize their talents and thereby enhance the Company' s performance. NYPCB offers the following welfare and benefits:

A.NYPCB has established an employee welfare committee in accordance with the Employee Welfare Fund Act,

4.Employee welfare

Regulations Governing Organization of Employee Welfare Committees, and Regulations Governing Organization of Employee Cafeterias. The committee has utilized welfare funds to establish the cafeteria, barbershop, laundry shop, grocery store, library, medical center, sports facilities, and movie theater, and provided holiday gifts, birthday coupons, travel subsidies, seminars, and offering funding for club activities such as hiking and traveling.

B. Year-end bonus and dividend

# C. Indemnity

## D. Wedding and funeral subsidies

E. Medical cost discounts for employees and their family members seeking medical services at Chang Gung Memorial Hospital.

# F. Labor and health insurances

#### Figure 4.1 Basement Dinning Area



Figure 4.2 Movie Theater



Figure 4.3 Table Tennis Room



4.Employee welfare

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#### Figure 4.4 Billiard Room



Figure 4.5 Computer/Internet Room





Figure 4.6 Welfare Committee Bulletin Board



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# G. Uniforms

H. Accommodation for employees who are single or married with children

I. Employee stock option



#### Figure 4.7 Cafeteria



Figure 4.8 Library



Figure 4.9 Counseling Room



- J. Funds and subsidies for the employee year-end dinner party
- K. Relief payments for employees hospitalized due to illness, gold coins and recognitions for senior employees.

#### Figure 4.10 Studying Room



Figure 4.11 Health Center



Figure 4.12 Basketball Court



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## 4.3 Training system

## (1)Training

NYPCB has established a comprehensive training system with quality working and learning environment, aimed to inspire employees' proactive attitudes and innovative views. In addition, a comprehensive training plan for different stages of each employee' s career has been created to facilitate gradual improvement, allowing him/ her to excel and become outstanding and practical professional. NYPCB's training program includes the College Management Association Program, basic training, professional training, manager training, and middle and senior management training. This program is integrated with online courses, job rotations, external training, and irregular seminars with guest speakers. NYPCB provides its employees with a working environment full of opportunities for continuous learning and development.

The Company also organizes management classes for its employees as well as the College Management Association Program, basic training, professional training, manager training, English and Japanese language courses, and external training courses to foster a high-quality learning and working environment to develop active and innovative talents. NYPCB has created a comprehensive training plan for different stages of each employee' s career to facilitate gradual improvement, allowing employees to excel and become outstanding professionals and managers.

# (2)Employee training and advanced courses

In 2012, NYPCB' s employee training course, excluding those held by individual units and the professional training and manager training organized by the President's Office, was conducted 378 times and participated by 10,391 employees. The total duration of the training was 25,176 hours and the cost of the training was NT\$751,210.



Figure 4.14 Photos taken during training



Figure 4.13 Photos taken during training



Figure 4.15 Photos taken during training

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### **4.4 Employee relations**

# (1)Negotiations between employer and employees

- A. Establish a complaint system to improve employer and employee relations.
- B. Establish clear regulations and a human resource management system to specify employees and employer obligations and administrative matters so that employees can understand and protect their rights.
- C. Organize regular physical examinations in accordance with labor safety and health law, assign a labor safety and health coordinator, and set up relevant management systems and regulations to avoid accidents and protect employees.

#### (2)Care for employees

Organize campaigns to encourage employees and improve their welfare. Encourage employees to seek a balance between work, health, and life.

- A. Diverse employee welfare: Provide medical fee discounts for employees and their family members at Chang Gung Memorial Hospital, scholarships for employees' children, encouragement bonus for stock purchasing, birthday coupons, wedding and funeral subsidies, holiday gifts and coupons, and comprehensive living facilities. The Company offers paid sick leave and indemnity that exceeds what is required by law. It also organizes various leisure activities such as sports game, domestic travel, and a variety of clubs.
- B. Salary: Offer reasonable salaries and bonuses that are competitive. Set up a regular salary adjustment system.

Provide bonuses during the Dragon Boast Festival, Lunar Festival, and at the end of a year depending on the Company' s overall performance.

- C. Communication: Hold regular management meetings and publish an internal magazine every quarter. Set up recommendation boxes and hotlines for employees.
- D. Encourage innovation: Offer
  incentives for good suggestions
  and encourage employees to report
  excursions at work and offer their
  improvement advises. Incentives are
  provided if the suggestions have
  made significant improvement.
  The Company has set up an online
  platform for its employees to discuss
  and exchange ideas, and rewards
  those who provide innovative ideas.
- E. Employee Assistance Program: NYPCB offers professional counseling services through the assistances of social workers and professional
counselors to senior managers and employees if they have management, psychological, family, or relationship problems. The Company offers services to reduce the damage caused by man-made, natural factors, or inappropriate treatments.

#### 4.5 Employee wellness program

# (1)Improve the health and wellness of employees

NYPCB has worked with the Chang Gung Medical Foundation offering regular physical examinations for employees. Those who have performed special operations are required to accept specifically tailored examinations. The Company also offers screening for common types of cancer in Taiwan for employees. Healthcare center has been established, and professional nurses and doctors are stationed in the campus to offer professional medical and consulting services. NYPCB also regularly holds health seminars and provides relevant information to educate employees.

In addition to organizing health examination for employees, NYPCB' s plants also offer breast-feeding rooms for female employees. Other workers can enjoy medical services and a smoking guitting assistance at the healthcare center in campus. Since NYPCB has partnered with the Chang Gung Medical Foundation, it is able to provide medical center-level services and health care. Employees and their family members can also enjoy discounts if they seek medical services, health examinations, or services not covered by health insurance at the Chang Gung Medical Foundation. The Company' s welfare committee also organizes irregular leisure activities to help employees relax and promote health. Group insurance has also been purchased for employees to offer financial support if employees suffers from serious illness or injuries due to accidents.



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#### Figure 4.16 Health Education Activities

Figure 4.17 Health Promotion Plan

2012 Medical Center Health Promotion Plan of Nan Ya Printed Circuit Board Corporation						
Theme	Season	Content	Activity	Duration	Instructors	
		Seminar: Burns, and Burn Injuries	Seminar	Feb	Luchu Township Public Health Center	
Family Life	1st Quarter	Activity: Blood Donations (jointly held with the Southern Taiwan Science Park)	Activity	Mar	Blood Donation Center in HsinChu/Taipei	
		Emergency Drills Held by the EHS Unit for Departments and Offices	Activity			
		Seminar: Fall Prevention	Seminar	Apr	Luchu Township Public Health Center	
Surrounding Environment	2nd Quarter	Health Checkup: Annual Employee Health Checkup	Activity	May-Jun	Chang Gung Memorial Hospital	
		Emergency Drills Held by the EHS Unit for Departments and Offices	Activity			
		Activity: AIDS/Colon Cancer Screening Testing (jointly held with the Southern Taiwan Science Park)	Activity	May-Jun	Public Health Center	
Balance	3rd	Activity: Pap smear (jointly held with the Southern Taiwan Science Park)	Activity	Aug	Chang Gung Memorial Hospital	
Nutrition	Quarter	Seminar: Three Highs: High Blood Sugar, High Blood Pressure, and High Blood Fat	Seminar	Sep	Luchu Township Public Health Center	
		Emergency Drills Held by the EHS Unit for Departments and Offices	Activity			
		Seminar: How to Prevent Cancer	Seminar	Oct	Luchu Township Public Health Center	
Cancer Prevention	4th Quarter	Activity: Blood Donations (jointly held with the Southern Taiwan Science Park)	Activity	Nov	Blood Donation Center in HsinChu/Taipei	
		Emergency Drills Held by the EHS Unit for Departments and Offices	Activity			

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# (2)Contingency plan for infectious diseases

NYPCB has established comprehensive reporting and preventing systems for infectious diseases:

#### 1.Prevention of infectious diseases -

Increase employee awareness to infectious diseases prevention and educate employees about the preventative measures against infections through air, droplets, and contact.

#### 2.Reporting of infectious diseases -

Report occurrence of infectious disease to local health bureaus and persuade the infected employees to receive medical attentions or have them hospitalized if necessary.

#### 3.Preventative measures -

Provide medical control and preventative leave, implement preventative measures on employees and visitors, and effectively separate infected patients from others.

#### Figure 4.18 Infectious Disease Contingency Procedures



4.Employee welfare

# (3)Health and safety education and contingency response training

Most accidents are caused by manmade mistakes and negligence. NYPCB thereby places priority on educating its employees to raise their safety awareness at workplace and to increase their contingency response skills.

Workplace safety courses held in 2012 and the number of employees trained:

- A. lonizing radiation safety training: 3 programs; 172 employees; 516 hours
- B. Emergency medical responder course:3 programs; 121 trainees; 363 hours

- C. Fire-fighting equipment training: 15 programs; 1,186 trainees; 2,372 hours
- D. Recruitment training: 17 programs; 268 trainees; 804 hours
- E. Contractor pre-work training: 24 programs; 1,867 trainees; 3,734 hours

NYPCB views contractors as one of its own employees; therefore, the Company organizes regular pre-work trainings for contractors. The Company holds daily toolbox meetings to promote pre-work employee protection ware inspection and physical and psychological health checks. Through the toolbox meeting, the Company will notify and remind workers about the specific dangerous of construction, process, and environment of the work on the day. Construction and maintenance departments need to coordinate and collaborate with each other to achieve the goal of zero incidents.

The Company has also established detailed contingency response policies and has held drills in preparation for various emergencies such as earthquakes, fires, chemical spills and leakages, and other natural disasters. The Company has trained its employees to be familiar with contingency response measures such as reporting, reaction, and containment of incident, and medical aid.



Figure 4.19 Training 🕨







Figure 4.19 Training

#### Figure 4.20 Occupational Health and Safety Measures



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## (4)Statistic of occupational disasters and accidents and the effect of health and safety management

NYPCB' s Serious Injury Frequency Rate, Serious Injury Severity Rate and Frequency-Severity Indicator in 2012 were 0.05, 0.3 and 0.004, far lower than the official average figures of printed circuit board manufacturers which were at 1.9, 34 and 0.25 respectively. There was no disabling injury took place at the firm's Shulin factory in 2012. To prevent disabling injury, the firm has initiated a management campaign to identify, review and remove potential causes of disasters and accidents to ensure workers are not exposed to dangerous working environment. NYPCB also compiled a textbook based on past occupational injuries to educate employees and raise their awareness on workplace safety. It also encourages employees to uncover and to remove potential causes of disasters and accidents to help the firm reaching its zero-disaster and zero occupationalinjury goals.

		201	0	201	1	201	2	Figures from	
		Date	Jing Hsin	Shulin	Jing Hsin	Shulin	Jing Hsin	Shulin	other PCB
	ltems		plant	plant	plant	plant	plant	plant	makers
	Serious Injury Frequency Rate (Incident/per 1,000,000 hours worked)		0.12	0	0.24	0	0.05	0	1.9
	Serious Injury Severity Rate (\	Vorking days lost/per 1,000,000 hours worked)	0.4	0	3.6	0	0.3	0	34
	Frequency-Severity Indica	tor	0.007	0	0.03	0	0.004	0	0.25
	Number of major occupational disasters and accidents	1.Death	0	0	0	0	0	0	
Unit		2.Disaster and accidents that caused more than three people injured	0	0	0	0	0	0	The figures
		3.Spills and leaks of Ammonia, Chlorine, Hydrogen fluoride, Phosgene, Hydrogen sulfide and Sulfur dioxide that resulted in hospitalization of more than one person	0	0	0	0	0	0	Council of Labor Affairs recorded from PCB
	Number of serious injury in disasters and accidents)	ncidents (excluding major occupational	2	0	4	0	1	0	makers
	Working days lost		6	0	60	0	6	0	

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#### 4.6 Human rights

NYPCB believes employee should be respected and treated equally. The Company provides equal job opportunity to every jobseeker and employee and protects individual' s basic human rights. The Company does not discriminate employees due to their race, skin color, age, gender, sexuality, disability, pregnancy, religious beliefs, political stance, club members, or marital status at work in terms of compensation, promotion, training or hiring. Employees are not forced to accept discriminatory medical examinations. In addition, recruitment is always conducted in a public way both internally and externally, and the firm does not restrain its employees or recruit forced labor through coercion, debt, fees, or contract. NYPCB also provides sexual harassment training to its managers and employees to prevent sexual harassment.

The Company has met all local government's laws and regulations regarding to employers and employees. The firm's employee handbook has also been reviewed and certified by the Taipei City Government before being distributed to all NYPCB employees. The Company has over 7,000 employees and has strived to do its best to peacefully resolve any labor disputes through fair, just, reasonable, and humane measures and to maintain a harmonious employer and employee relationship.

#### 4.7 Security control dynamics

#### (1)Personnel safety

 To ensure personnel safety in campus, NYPCB has requested it employees to wear uniforms and carry ID cards to enter and exit its campus in accordance with its factory entry and exit regulations. In addition, workplace safety training is provided to contractors to help them become familiar with NYPCB's security control system. Visitors are escorted within the campus by staff members of the unit they intended to visit.

- 2. NYPCB's security personnel were hired after security checks had been conducted and passed a strict selection process. Newly-recruited security personnel cannot begin performing duties before undergoing training on the entry and exit of employees, vehicles, and items in the campus.
- 3. To prevent burglars and criminals from entering the Company's premises and endangering employee safety, emergency response drills are regularly held in the campus. Security monitoring system has also been

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installed around the plant gates, perimeter, and key areas. The system can monitor employees and detect abnormalities in a timely fashion and respond appropriately.

#### (2)Supply chain safety

As a key parts supplier, NYPCB has ensured all raw materials used in production processes such as gold, tantalum, wolfram, tin and cobalt are in compliance with the Policy for Conflict-free Materials. The Company has required its suppliers to investigate the place of origin of materials supplied to ensure they are not obtained by nongovernment warlords or criminal rings, or excavated from conflict zones in the Democratic Republic of Congo or through illegal methods or smuggling. Metals exported from the Democratic Republic of Congo, Rwanda, Uganda, Burundi, Tanzania and Kenya are considered to be conflict minerals by the Policy of Conflict-free Materials. NYPCB has completed its examinations

on its raw material supplies and plans to enhance raw material control within the Company to prevent conflict minerals from entering its production processes in the long run. The Company will continue protecting customer rights, abiding by the EICC code of conduct and striving to fulfill its corporate social responsibilities.

Under the backdrop of globalization, major natural disasters or accidents occurring anywhere in the world could affect NYPCB. The Company thereby pays extra attention to potential risks of its supply chain and offers timely and proactive assistance to its suppliers. NYPCB has taken the following factors into account:

#### A.Business continuity management plan

NYPCB has requested its main suppliers to set up contingency policies and standard reaction procedures for potential natural disasters or manmade threats that may damage their operations in order to reduce the impact from such major incidents to NYPCB.

#### B.Risks exposed to natural disasters

NYPCB has identified the geographical connections between its suppliers around the world with past major disasters and accidents. The Company has reviewed and designed risk reduction plans with its suppliers and has requested them to increase the numbers of their plants. Suppliers have also been required to prepare contingency reaction policies such as making production in other countries and increasing inventory to reduce the impact of disasters and accidents.

#### C.Risks from the suppliers' suppliers

NYPCB requires its suppliers to manage the risks of their own supply chain and suppliers and helps them to establish

4.Employee welfare

a business continuity management policy to secure the stability of NYPCB's supply chain.

#### D.Manage IT disruption risks

NYPCB requires its suppliers to set up a remote backup system and ensure standard protection measures have been implemented on their data centers in order to reduce the impact of disasters and accidents.

In order to meet the international requirements of ISO 28000 in security management systems for supply chains and achieve the Taiwan Customs Authorized Economic Operator Certification, NYPCB has set up guidance and principles to ensure supply chain security and has provided written directives to its departments to follow. The requirements are implemented to ensure supply chain safety from receiving orders, raw material procurement, producing, processing, packaging and shipping as well as customer-related transportation, information, and logistic safety. The Company has also established a comprehensive and effective supply chain safety management system.

#### (3)Information security

NYPCB views protecting the communication and information exchanges with its customers and partners as its most important task and has implemented a management system for confidential information for a long time. Depending on the levels



of confidentiality of the information, the Company's management system preserves, views, authorizes, distributes, retrieves, and destroys its confidential information regarding R&D, production, sales, technological cooperation, business, outsourcing, and operation and management in order to protect customers and partners.

The Company has also continued enhancing and upgrading it information security technologies and has ensured the security of information, computer systems, and websites depending on their confidentiality, completeness and values. NYPCB also raises employee awareness in the importance of confidential information and relevant regulations through audits, consulting and educational training to ensure confidential information protection measures have been integrated into daily operation.

4.Employee welfare



## 5.Charity

The Formosa Plastics Group founder said "one can only hold so many things in his/her hands but if one opens the hands, he/she can hold the world." The remark stressed the importance of contributing to society which appears to be a one-way action; but in fact, people who can give more to the society will get more in return. The more they can contribute to the society, the more they can achieve. Therefore, the founder has helped many people in need with the same passion and zealousness he had while leading the Company. NYPCB has been contributing to society and engaging positively with neighboring communities. A fund raising campaign was held after the massive earthquake struck in Japan in 2011 and donated money to the victims to rebuild their homes. The Company also sponsored the low-carbon life exhibition and mountain hiking events held by the Taoyuan County government to promote energy saving and carbon

emission reduction awareness. NYPCB believes that people are depending on each other, and that the one who is strong should help the weak, and the rich should help the poor. If people contribute their strengths, society and the world would be a better place to live in day by day.

#### **5.1 Neighborhood relations**

#### (1)Engage with communities

The Jing Hsin campus has established a neighborhood public relations team to keep its environment clean, facilitate communication, and provide assistance to nearby residents. The team has organized volunteers to participate in local community activities such as temple fairs, activities at senior centers, neighborhood watch, weddings, and funerals. The team has also invited residents to take part in its activities to maintain a harmonious relationship with local communities.

Figure 4.21 Volunteer to Clean up the Environment

## (2)Organize an environmental protection day and adopt a garden program

The Jing Hsin campus has organized an environmental protection day since 2007. It gathers volunteers in a morning of one of the last ten days in a month to





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5.Charity

clean up the roads around the campus. Approximately 30 NYPCB employees wearing vests cleaned the streets around the campus including the front end of Nankan Road, and other roads around nearby communities. Some local residents have also taken a part in the cleaning activity. The activity has been well-received by nearby communities and has helped promote the Company's corporate citizen image. NYPCB has also adopted a triangular park by the Changrong Road near the campus since 2003, which has become a place for recreational activities for local residents. The Company regularly cleans, maintains, and performs other gardening activities in the park so that local residents can enjoy a clean and beautiful environment; thus, creating a harmonious atmosphere among the communities.

# (3)Hiking and mountain cleaning activities

Hiking is a great opportunity for NYPCB employees to enjoy beautiful scenery and to release stress as well as

#### Figure 4.22 Photos of Charity Events











5.Charity

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enhance relationships with coworkers and their families. Such activities have helped raising people's awareness to environmental protection and strengthening neighborhood relations.

# (4)Labor Day and Mother's Day fairs

The employee welfare committee of NYPCB organizes a Mother's Day fair every year. The activities include a flea market, charity groups, and art exhibitions of street artists. Employees can have an enjoyable time at the fair with their families.

#### 5.2 Charity plans

#### (1)Charity club

NYPCB's charity club regularly visits education and nursing institutions such as Xindeng, Ark, and Cherngshin. Around 40-50 employees joined these visits. The club has also donated laundry detergent, tissue, books, and mineral water to these institutions. The heads of these institutions have expressed their gratitude and awarded NYPCB appreciation certificates. They have also introduced their services and successes. NYPCB employees have taken a part in various activities such as dumpling making, a charity haircut service, nail art, and the cleaning of the environment, fans, windows and cars.

#### (2)Care for disadvantaged groups

Since November 2007, NYPCB' s union has encouraged its members to donate money to help pay for the lunches of elementary school students from disadvantaged families in Taoyuan County. About 560 students and 20 elementary schools (such as Jin-xing Elementary School, Tong An Elementary School, Nan-Mei Elementary School, Wen Shan Elementary School, and Gong-Pu Elementary School) have benefited from the donations, which reach NT\$100,000 in average monthly. The charity has increased the number of donors and become a perfect example to draw more people to participate in charity activities.







NYPCB responded to the Taiwanese government's call, donating materials and providing financial support to victims of the 311 earthquake in Japan.





# Data table •

## Data table

## **Global Reporting Initiative (GRI) table**

	GRI Indicator	Corprate Social Responsibility Report 2012 Corresponding Topics	Pages	Others
1.Strate	gy and Analysis			
1.1	Statement from the most senior decision-maker of the organization.	Message from the Chairman	5	
1.2	Description of key impacts, risks, and opportunities.	1.3 Prospect, opportunities, and challenges to the industry	11	
2.Orgar	nizational Profile			
2.1	Name of the organization.	1.1 Corporate profile	8	
2.2	Primary brands, products, and/or services.	1.4 Major products and R&D	14	
2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	1.1 Corporate profile	8	
2.4	Location of organization's headquarters.	1.1 Corporate profile	8	
2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	1.1 Corporate profile	8	
2.6	Nature of ownership and legal form.	1.1 Corporate profile	8	

2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	1.2 Market position	10	
2.8	Scale of the reporting organization.	<ul><li>1.1 Corporate profile</li><li>1.2 Market position</li><li>2.2 Financial performance</li></ul>	8 10 31	
2.9	Significant changes during the reporting period regarding size, structure, or ownership.	1.3 Prospect, opportunities, and challenges to the industry	11	
2.10	Awards received in the reporting period.	1.5 Awards and recognitions	17	
3.Repo	rt Parameters			
	Report Profile			
3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	About the report	3	
3.2	Date of most recent previous report (if any).	About the report	3	
3.3	Reporting cycle (annual, biennial, etc.)	About the report	3	
3.4	Contact point for questions regarding the report or its contents.	About the report	3	
	Report Scope and Boundary			
3.5	Process for defining report content.	1.7 Stakeholder dialogue	19	
3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	About the report	3	

3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	About the report	3		
3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	1.1 Corporate profile	8		
3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	About the report	3		
3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g.,mergers/acquisitions, change of base years/periods, nature of business, measurement methods).	About the report	3		
3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	About the report	3		
	GRI Content Index				
3.12	Table identifying the location of the Standard Disclosures in the report.		88		
	Assurance				
3.13	Policy and current practice with regard to seeking external assurance for the report.	About the report	3		
4.Governance, Commitments, and Engagement					

	Governance			
4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	<ul><li>2.1 Governance overview</li><li>(3) Corporate Governance Structure</li></ul>	24	
4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	<ul><li>2.1 Governance overview</li><li>(4) Board of Directors</li></ul>	27	
4.3	For organizations that have a unitary board structure, state the number of members of the highest governance body that are independent and/or non-executive members.	<ul><li>2.1 Governance overview</li><li>(4) Board of Directors</li></ul>	27	
4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	1.7 Stakeholder dialogue 2.4 Shareholders	19 32	
4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	<ul><li>2.1 Governance overview</li><li>(6) Commission of Salaries</li><li>4.2 Salaries and welfare</li></ul>	28 66	
4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	<ul> <li>2.1 Governance overview</li> <li>(5) Follow Corporate Regulation</li> <li>(8) Employee Behaviors and Code of Ethical Conduct</li> <li>(9) Policies to Maintain Operational Integrity</li> </ul>	27 29 29	
4.7	Process for determining the qualifications and expertise of the members of the highest governance body for guiding the organization's strategy on economic, environmental, and social topics.	<ul><li>2.1 Governance overview</li><li>(4) Board of Directors</li></ul>	27	

4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	<ul><li>2.1 Governance overview</li><li>(4) Board of Directors</li><li>(5) Follow Corporate Regulation</li></ul>	27 27	
4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	<ul> <li>2.1 Governance overview</li> <li>(5) Follow Corporate Regulation</li> <li>(8) Employee Behaviors and Code of Ethical Conduct</li> <li>(9) Policies to Maintain Operational Integrity</li> </ul>	27 29 29	
4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	<ul> <li>2.1 Governance overview</li> <li>(4) Board of Directors</li> <li>(5) Follow Corporate Regulation</li> <li>(8) Employee Behaviors and Code of Ethical Conduct</li> <li>(9) Policies to Maintain Operational Integrity</li> </ul>	27 27 29 29	
	Commitments to External Initiatives			
4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	<ul><li>2.1 Governance overview</li><li>(7) Internal Audits</li><li>(8) Employee Behaviors and Code of Ethical Conduct</li></ul>	28 29	
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	1.7 Stakeholder dialogue 2.4 Shareholders	19 32	

4.13	Memberships in associations (such as industry associations) and/ or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	1.6 Engaging with external associations	19	
	Stakeholder Engagement			
4.14	List of stakeholder groups engaged by the organization.	1.7 Stakeholder Dialogue	19	
4.15	Basis for identification and selection of stakeholders with whom to engage.	1.7 Stakeholder Dialogue	19	
4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	1.7 Stakeholder Dialogue	19	
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	1.7 Stakeholder Dialogue	19	
5.Mana	gement Approach and Performance Indicators			
	Economic Performance			
EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	<ul><li>2.2 Financial Performance</li><li>4. Employee welfare</li><li>5. Charity</li></ul>	31 65 82	
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	<ul><li>3.4 Protect the environment around plants</li><li>(4) Examination and reduction of greenhouse gas emission</li></ul>	54	

EC3	Coverage of the organization's defined benefit plan obligations.	4.2 Salaries and welfare	66			
EC4	Significant financial assistance received from government.	2.2 Financial Performance	31			
	Market Presence					
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation.	4.2 Salaries and welfare	66			
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	2.6 Supplier and contractor management	33			
EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	1.1 Corporate profile 4.1 Employment	8 66			
	Indirect Economic Impacts					
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	5.1 Neighborhood relations	83			
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	2.2 Financial performance 4. Employee welfare 5. Charity	32 65 82			
6.Enviro	6.Environmental Performance Indicators					
	Materials					
EN1	Materials used by weight or volume.	2.6 Supplier and contractor management	33			
EN2	Percentage of materials used that are recycled input materials.	2.6 Supplier and contractor management	33			

	Energy			
EN3	Direct energy consumption by primary energy source.	<ul> <li>3.3 Water and energy conservation and Greenhouse gas reduction</li> <li>(1) Environmental Data</li> <li>(2) Improve energy management and reduce energy consumption</li> </ul>	43 44	
EN4	Indirect energy consumption by primary source.	<ul> <li>3.3 Water and energy conservation and Greenhouse gas reduction</li> <li>(1) Environmental Data</li> <li>(2) Improve energy management and reduce energy consumption</li> </ul>	43 44	
EN5	Energy saved due to conservation and efficiency improvements.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(2) Improve energy management and reduce energy consumption</li></ul>	44	
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	<ul><li>3.4 Protecting the environment around factories</li><li>(5) Green supply chain</li></ul>	58	
EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	<ul><li>3.4 Protecting the environment around factories</li><li>(5) Green supply chain</li></ul>	58	
	Water			

EN8	Total water withdrawal by source.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(3) Water resource management and water conservation</li></ul>	47	
EN9	Water sources significantly affected by withdrawal of water.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(3) Water resource management and water conservation</li></ul>	47	
EN10	Percentage and total volume of water recycled and reused.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(3) Water resource management and water conservation</li></ul>	47	
	Biodiversity			
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	3.5 Greening and tree-planting activities around factories	61	
EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	3.5 Greening and tree-planting activities around factories	61	
EN13	Habitats protected or restored.	3.5 Greening and tree-planting activities around factories	61	
	Strategies, current actions, and future plans for managing impacts	3.5 Greening and tree-planting activities		

EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	3.5 Greening and tree-planting activities around factories	61	
	Emissions, Effluents, and Waste			
EN16	Total direct and indirect greenhouse gas emissions by weight.	<ul><li>3.4 Protecting the environment around factories</li><li>(4) Examination and reduction of greenhouse gas emission</li></ul>	54	
EN17	Other relevant indirect greenhouse gas emissions by weight.	<ul><li>3.4 Protecting the environment around factories</li><li>(4) Examination and reduction of greenhouse gas emission</li></ul>	54	
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	<ul> <li>3.3 Water and energy conservation and Greenhouse gas reduction</li> <li>(2) Improve energy management and reduce energy consumption</li> <li>3.4 Protecting the environment around factories</li> <li>(4) Examination and reduction of greenhouse gas emission</li> </ul>	44 54	
EN19	Emissions of ozone-depleting substances by weight.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(1) Environmental Data</li></ul>	43	
EN20	NOx, SOx, and other significant air emissions by type and weight.	<ul><li>3.3 Water and energy conservation and Greenhouse gas reduction</li><li>(1) Environmental Data</li></ul>	43	

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EN21	Total water discharge by quality and destination.	<ul><li>3.4 Protecting the environment around factories</li><li>(2) Water pollution prevention</li></ul>	51	
EN22	Total weight of waste by type and disposal method.	<ul><li>3.4 Protecting the environment around factories</li><li>(3) Waste management</li></ul>	53	
EN23	Total number and volume of significant spills.	<ul><li>3.1 Commitments to environmental sustainability</li><li>(4) NYPCB environmental protection history</li></ul>	41	
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	<ul><li>3.4 Protecting the environment around factories</li><li>(3) Waste management</li></ul>	53	
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	<ul><li>3.4 Protecting the environment around factories</li><li>(2) Water pollution prevention</li></ul>	51	
	Products and Services			
EN26	Initiatives to mitigate environmental impacts of products and	1.4 Major products and R&D 3.4 Protecting the environment around	14	
	services, and extent of impact mitigation.	(5) Green supply chain	58	
EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	<ul><li>3.4 Protecting the environment around factories</li><li>(5) Green supply chain</li></ul>	58	
	Compliance			

EN28	Monetary value of significant fines and total number of non- monetary sanctions for non-compliance with environmental laws and regulations.	<ul><li>3.1 Commitments to environmental sustainability</li><li>(4) NYPCB environmental protection history</li></ul>	41		
	Transport				
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	<ul><li>3.4 Protecting the environment around factories</li><li>(4) Examination and reduction of greenhouse gas emission</li></ul>	54		
	Overall				
EN30	Total environmental protection expenditures and investments by type.	3.2 Environmental accountability	41		
7.Social	7.Social Performance Indicators				
	Employment				
LA1	Total workforce by employment type, employment contract, and region.	4.1 Employment	66		
LA2	Total number and rate of employee turnover by age group, gender, and region.	4.1 Employment	66		
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	4.2 Salaries and welfare	66		
	Labor/Management Relations				

LA4	Percentage of employees covered by collective bargaining agreements.	<ul><li>4.4 Employee relations</li><li>(1) Negotiations between employer and employees</li></ul>	72	
LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	4.6 Human rights	79	
	Occupation Health and Safety			
LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	<ul><li>3.1 Commitments to environmental sustainability</li><li>(2) Organization chart and Responsibility of the EHS Unit</li></ul>	38	
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region.	<ul><li>4.5 Employee wellness program</li><li>(4) Statistic of occupational disasters and accidents and the effect of health and safety management</li></ul>	78	
LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	<ul><li>4.5 Employee wellness program</li><li>(1) Improve the health and wellness of employees</li><li>(2) Contingency plan for infectious diseases</li></ul>	73 75	
LA9	Health and safety topics covered in formal agreements with trade unions.	<ul><li>4.5 Employee wellness program</li><li>(3) Health and safety education and contingency response training</li></ul>	76	
	Training and Education			
LA10	Average hours of training per year per employee by employee category.	4.3 Training system	70	

LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	4.3 Training system	70	
LA12	Percentage of employees receiving regular performance and career development reviews.	4.3 Training system	70	
	Diversity and Equal Opportunity			
LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	4.1 Employment	66	
LA14	Ratio of basic salary of men to women by employee category.	4.2 Salaries and welfare	66	
8.Huma	an Rights			
	Investment and Procurement Pratices			
HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.	4.6 Human rights	79	
HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	2.6 Supplier and contractor management	33	
HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	4.6 Human rights	79	
	Non-discrimination			
HR4	Total number of incidents of discrimination and actions taken.	4.6 Human rights	79	

	Freedom of Ass ociation and Collective Bargaining			
HR5	Operations identified in which the right to exercise freedom of association and collective bargaining may be at significant risk, and actions taken to support these rights.	4.4 Employee relations	72	
	Child Labor			
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	4.1 Employment	66	
	Forced and Compulsory Labor			
HR7	Operations identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor.	4.6 Human rights	79	
HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	4.7 Crisis management	79	
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	4.6 Human rights	79	
9.Society				
	Community			
SO1	Nature, scope, and effectiveness of any programs and practices that assess and manage the impacts of operations on communities, including entering, operating, and exiting.	5.1 Neighborhood relations (1) Engage with communities	83	

	Corruption			
SO2	Percentage and total number of business units analyzed for risks related to corruption.	<ul><li>2.1 Governance overview</li><li>(5) Follow Corporate Regulation</li><li>(8) Employee Behaviors and Code of Ethical Conduct</li></ul>	27 29 29	
SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.			
SO4	Actions taken in response to incidents of corruption.	(9) Policies to Maintain Operational Integrity		
	Public Policy			
SO5	Public policy positions and participation in public policy development and lobbying.	<ul> <li>2.1 Governance overview</li> <li>(5) Follow Corporate Regulation</li> <li>(8) Employee Behaviors and Code of Ethical Conduct</li> <li>(9) Policies to Maintain Operational Integrity</li> </ul>	27	
SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.		29 29	
	Anti-Competitive Behavior			
SO7	Total number of legal actions for anti-competitive behavior, anti- trust, and monopoly practices and their outcomes.	<ul><li>2.1 Governance overview</li><li>(8) Employee Behaviors and Code of Ethical Conduct</li></ul>	29	
	Compliance			
SO8	Monetary value of significant fines and total number of non- monetary sanctions for non-compliance with laws and regulations.	2.3 Internal control	31	
10.Product Responsibility				
	Customer Health and Safety			

PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	<ul><li>3.4 Protecting the environment around factories</li><li>(5) Green supply chain</li></ul>	58	
PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.		-	There is no any violation fact during 2012 year.
	Product and Service Labeling			
PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	2.5 Customers	32	
PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.		-	
PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	2.5 Customers	32	
	Marketing Communications			
PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	2.1 Governance overview (5) Follow Corporate Regulation	27	
PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.		-	There is no any violation fact during 2012 year.

	Customer Privacy		
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	-	There is no any violation fact during 2012 year.
	Compliance		
PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	-	There is no any violation fact during 2012 year.

#### **Contact information**

Please contact us through the following channels if you have any suggestion or question. Investor Relations Unit of the General Manager' s Office, Nan Ya Printed Circuit Board Corporation

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