

# **Delta Group CSR Report 2011**



www.deltaww.com

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## Letter from the Chairman



Dear friends and colleagues:

The frequency of extreme weather events has increased significantly in recent years. The disasters associated with these events have led to widespread loss of life and property. Progress in international negotiations on carbon reduction has been glacial compared to the accelerating pace of global warming. In December, 2011, the United Nations Climate Change Conference (COP17) held in Durban, South Africa, extended the "Kyoto Protocol" that was originally set to expire in 2012. The extension was intended to give all parties more time to discuss and implement a new climate agreement before 2012. The lack of commitment shown by more than 190 countries around the world to emission reduction and their conservative action plans are quite troubling. We must step forward as a corporate citizen and leverage our core capabilities to reduce the emission of greenhouse gases and slow the onset of global warming.

Letter from the Chairman

Delta Group's mission is "To provide innovative, clean and energy-efficient solutions for a better tomorrow." Delta has long been committed to constantly improving the efficiency of our products as part of our everyday operations. Today, most of Delta's power management products have surpassed 90% energy efficiency, such as our photovoltaic (PV) inverters with a conversion efficiency of over 98%, and telecom power supplies with 97% efficiency. Apart from continuing to improve the efficiency of our power supply products even further, we are also actively moving towards total solutions that integrate Delta software and hardware to create smart green life applications that are more energy-efficient and easy to use. An example of this is our display solutions. Besides maintaining our lead in high-end projection systems, we have integrated hardware, system software and advanced display technologies with the humanities and the arts. At the National Grand Theater in Beijing last year, two of Delta's 30,000 lumen high resolution projectors displayed the main scenery for the performance of the "The Peony Pavilion", a Chinese Kun opera composed by the great literary master, Mr. Kenneth Hsien-yung Pai.

We also continue to promote green buildings for their significant environmental benefits. The Delta Taoyuan Technology Center completed at the end of 2011 introduces our company's energy-saving and industrial automation products and control systems. The green building also makes use of solar panels, LED lighting, water resource processing and renewable energy equipment. The energy-saving installations are expected to save more than 5 Million NTD in electricity costs, cut water consumption by 75% and reduce  $CO_2$  emissions by more than 1,000 tons. The new Min-Chuang Elementary School in the Namasia District of Kaohsiung City, rebuilt after Typhoon Morakot, is expected to be 65% more energy efficient than conventional school buildings of the same size. By using Delta's solar and wind power generation systems, the school library can achieve "sustainable zero energy consumption" and will provide students with a comfortable and green learning environment.

Looking back on 2011, Delta received the "Distinguished Accomplishment Award" from the Chinese Professional Management Association, the 2011 Top Three "Best CEO" for technology/hardware in Asia from Institutional Investor magazine, an A+ rating in



transparency and information disclosure from the Securities & Futures Institute, the "Annual CSR Championship Award" from Global Views Magazine as well as the "Corporate Citizenship Award" and "Most Admired Company in the Electronics Industry" from CommonWealth magazine. Delta was also chosen for the first time for the DJSI World Index and DJSI Asia/Pacific Index of the 2011/2012 Dow Jones Sustainability Indexes (DJSI). The inclusion signified recognition by international investors that the sustainable development of Delta now rivals that of leading global enterprises.

The environmental crises of the 21<sup>st</sup> century represent green opportunities for business. Delta will leverage our strengths in environmental protection and energy saving to create both company and product value. At the same time, we will harness these strengths to spur on continued growth and innovation at Delta.

Founder and Chairman First Chief Environmental Officer in Taiwan Delta Group

Buice Cheng

## Letter from the CEO



Dear friends :

Delta has long been committed to our business mission: "To provide innovative, clean and energy-efficient solutions for a better tomorrow" as well as fulfilling our Corporate Social Responsibility (CSR). For Delta, CSR means more than just being an effective business, it is also about leveraging our core capabilities to give back to society and make concrete contributions to the environment.

Delta continues to improve the efficiency of the energy consumption and management systems in the daily operations of our sites around the world. In July, 2011, Delta's Dongguan plant in China became the first power and components electronics enterprise in the world to officially pass the conformity evaluation for the Energy Management System of the International Organization for Standardization (ISO) 50001. Our Thailand plant also passed ISO 50001 certification that September, making it the first company in



Thailand to do so. Generally speaking, the efforts of Delta employees at our global sites as well as Delta's implementation of energy-saving solutions saw our electricity intensity (electricity consumption per unit of output value) drop by 30% compared to 2009, far surpassing our original target of 20% reduction. For the future, Delta will continue to improve the energy efficiency of our global sites and apply our successful experience with energy management to provide customers with greener and more efficient energy solutions.

To increase our value to customers and shareholders, Delta believes that we must not only continue to improve our design and manufacturing capabilities but also move towards a DMS (Design, Manufacturing, Solutions) approach. By integrating our energysaving technologies, products, and services we can provide customers with total solutions to their problems. We will also step up our promotion of the Delta brand and continue to build brand value. 2010 was Delta's "brand inauguration year". After just one year, our efforts saw Delta named as one of Taiwan's Top 20 Global Brands. We shall continue to learn and improve to enhance the value of the Delta brand.

2011 marked the 40<sup>th</sup> anniversary of Delta's founding. Over the past year, the CSR efforts of all employees resulted in Delta's selection for the DJSI World Index and DJSI Asia/Pacific Index of the 2011/2012 Dow Jones Sustainability Indexes (DJSI) for the first time. We were also awarded by SAM (Sustainable Asset Management) as the only electronics equipment company to receive their top "Gold Class" ranking and "Sector Mover" in 2012. Delta's efforts have been recognized by the international investment community and we are now considered a global leader in sustainable management. Delta was also presented with the "Annual CSR Championship Award" by Global Views Magazine in Taiwan, awarded the "Corporate Citizenship Award" and "Most Admired Company in the Electronics Industry" by CommonWealth magazine in Taiwan, and rated as A<sup>+</sup> in transparency and information disclosure by the Securities and Futures Institute. In addition to the above, Delta has now been named one of "China's Top 100 Green Companies" for two successive years, providing clear recognition of our CSR efforts as well as promoting information disclosure at all of our business locations.

Letter from the CEO

We believe that fulfilling CSR will be the key to the sustainable growth of our business for the 21<sup>st</sup> Century. Delta promises to continue to pursue higher standards in corporate governance, to make active contributions to society, to remain dedicated to energy conservation and environmental protection as well as to work with stakeholders for our mutual prosperity.

Vice Chairman and CEO Delta Group

Yomey Hai



## **CSR** Highlights

Triumph of Excellence

2011 "Distinguished Accomplishment Award" from the Chinese Professional Management Association

Delta Electronics' Founder and Chairman Mr. Bruce Cheng received the 2011 "Distinguished Accomplishment Award" from the Chinese Professional Management Association and met with President Ma Ying-Jeou on December 17, 2011. This award is in recognition of Mr. Cheng's outstanding achievements in leading Delta Electronics as a global green energy company with a focus on R&D and energy-saving solutions, as well as for his efforts in environmental education and green buildings.



CSR Highlights



"Most Admired Company" for 10th Consecutive Year from CommonWealth Magazine

Delta's Vice Chairman and CEO Mr. Yancey Hai received Delta's 10th consecutive CommonWealth magazine award for "Most Admired Company in the Electronics Industry" from Taiwan's Vice President Mr. Vincent C. Siew.



#### Delta Electronics Selected for 2011 Dow Jones Sustainability Indexes

Delta was named to two of the prestigious 2011/2012 Dow Jones Sustainability Indexes (DJSI) the DJSI World Index and the DJSI Asia/ Pacific Index. Following selection by the DJSI Indexes, Delta Electronics was presented with SAM (Sustainable Asset Management) awards as the only electronics equipment company to receive the highest "Gold Class" rating and distinction as a "Sector Mover".



#### Global Views Magazine Annual CSR Championship Award

Delta won Global Views magazine's CSR Championship Award for its "Tainan Plant Green Building" project, which fully confirms Delta's leadership in CSR and the promotion of green buildings. Delta Electronics' President and COO Mr. Mark Ko received the CSR award on behalf of Delta in May, 2011.



Delta Electronics Won "Corporate Citizenship Award" from CommonWealth Magazine

Delta Electronics won the "Corporate Citizenship Award" for large-scale companies for the 5th consecutive year. Representing Delta Electronics, Vice President & General Manager of Corporate Communications Mr. R.T. Tsai receives the medal from Taiwan's Vice President Wu Den-yih.

#### Green Building Promotion

CSR Highlights

#### Taoyuan Plant 3 and R&D Center

Delta's Taoyuan Plant 3 and R&D Center opened in December, 2011. The new plant employs Delta's own energy saving and industrial automation products and control systems. Eco-friendly features of the plant include solar panels, LED lighting, water resource processing and renewable energy equipment.

The planning and design of the Taoyuan Plant 3 and R&D Center was initiated in 2009. By adopting American LEED standards, the plant is expected to apply for LEED Gold-rated certification in 2012 and will also earn EEWH Gold-rated certification by Taiwan's Ministry of the Interior. The new plant fulfills the Delta Group mission : "To provide innovative, clean and energy-efficient solutions for a better tomorrow."





#### New Green Office Building in Gurgaon, India

On May 10<sup>th</sup>, 2011, Delta India held the inauguration for its new corporate building in Gurgaon. The new Gurgaon building is designed using energy efficient architecture, eco-friendly building materials, and building management systems that provide a vibrant clean, healthy and safe workplace for employees. It achieves 35% energy savings and 40% reduction in water compared to a conventional building. Delta India Electronics has applied for a platinum rating for this new corporate office in accordance with the guidelines of the Indian Green Building Council's LEED standards.



#### Contribution to Society

CSR Highlights

#### 2011 Flood Relief Actions in Thailand

In response to the massive relief actions called by the Thailand government for the most serious floods in Thailand in 50 years, Delta Electronics (Thailand) Plc. donated money and materials to help flood victims recover from the disaster. Over 200 of Delta Thailand's managers and employees volunteered to clean-up, repaint and improve areas, buildings and library which were heavily damaged by the severe floods.





#### DEJ's Relief Action on Earthquakes and Tsunamis

When Delta Electronics learned of the catastrophic earthquakes and tsunamis that devastated Japan on March 11, we immediately took action. Within a few days, 2,000 blankets were delivered to disaster areas in Japan. Delta Japan quickly organized an "Emergency Team" that met daily to make sure our colleagues and their families were safe, and to help deliver relief supplies.



#### Delta Sunshine Elementary School, Yangjiazheng, Mianyang, China

Delta Sunshine Elementary School, the first elementary school rebuilt by the Delta Group after the tragic earthquake in Szechuan province, was inaugurated on Earth Day, April 22, 2011. This is the first green elementary school building in the Szechuan disaster area. The architecture of the Sunshine School takes into account the hot humid summers and cold damp winters of the Mianyang region. The latest energy-saving and green building techniques were used in ingenious ways to provide local students with a greener, healthier and more comfortable learning environment.







#### A Fusion of Technology and the Humanities

## "Huang Gongwang and Dwelling in the Fuchun Mountains" Exhibit at the National Palace Museum

Delta Group sponsored "Huang Gongwang and Dwelling in the Fuchun Mountains" Exhibit at the National Palace Museum. Through Delta's high-end projectors, 3D technology and advanced Delta display fusion technology, the two sections of the "Dwelling in the Fuchun Mountains" work were digitally merged and vividly brought to life after 360 years of separation.



CSR Highlights

# Photographic exhibition of the Chinese Kun opera "The Peony Pavilion"

Delta sponsored the photographic exhibition of the opera "The Peony Pavilion" at the Grand National Theater in Beijing. Delta's advanced display projection technologies such as 3D, glassesfree 3D, and short throw projection presented art's amazing beauty at the photography exhibition.





## **Delta Group Overview**

#### Established : 1971 Worldwide revenues in 2011: US\$7081 Million

Delta Electronics Group is a global leader in power supply and thermal management solutions, as well as energy-saving and new energy solutions, video conferencing systems, industrial automation, network communications, solar power, LED lighting and electric vehicle control systems, with markets across the world. Delta's worldwide revenues have grown at a compounded annual growth rate of 35.3% since 1971. The Delta Group is headquartered in Taipei <sup>1</sup>, Taiwan, with offices, manufacturing facilities and R&D laboratories throughout Europe, Asia, the Americas, and Africa. At the end of 2011, there were over 80,000 Delta employees throughout the world.



Note 1. The parent company Delta Electronics, Inc. is publicly listed on the Taiwan Stock Exchange (Stock Ticker: 2308)

Delta Group Overview

With our corporate mission "To provide innovative, clean and energy-efficient solutions for a better tomorrow", Delta was the Climate Savers Computing Initiative's (CSCI) first member in Taiwan. Delta also participates in sustainability-related associations such as Business Counsel for Sustainable Development, Taiwan (BCSD-TW), Taiwan Corporate Sustainability Forum (TCSF), Taiwan Corporate Governance Association (TCGA), Chinese Business Ethics Education Association and Taiwan Electrical and Electronic Manufacturers' Association (TEEMA). We strive to do our utmost to help slow global warming and reduce our environmental impact. We believe in fulfilling Delta's CSR goals through sound corporate governance, balancing stakeholder interests, and supporting social progress.





## **Group Organization**

There were no major changes to the organization of the Delta Group during 2011 compared to the previous year. The Delta Group is organized as follows :



Delta Group Overview

### 2011 Delta CSR Report

The Delta Group publishes a CSR report every year. The report covers Delta's CSR activities and developments from the preceding year. The period and scope of this report are as follows :

Reporting Period	January 1, 2011 ~ December 31, 2011
Scope	All sales offices, plant sites and R&D labs of Delta Group

This report is compiled based on Global Report Initiative Sustainability Reporting Guidelines version 3.0 (GRI 3.0) and has received third party assurance. The assurance statement is on page 111 of this report.





#### Communication with Stakeholders

Communication with stakeholders is fundamental to CSR fulfillment. As a corporate citizen, Delta communicates with stakeholders through a variety of channels to understand and respond to their needs in a timely manner. Delta has adopted the following mechanism for communication with stakeholders. Materiality analysis is also used to identify the key issues for stakeholders and Delta so the necessary measures can be taken and information disclosure enhanced.

The communication process and mechanism between Delta and stakeholders is as follow:

#### Stakeholder Identification

Stakeholders in Delta's operations include customers, suppliers, investors (shareholders), government organizations, communities, the media, industry associations, non-profit organizations, research organizations and employees. Based on local and international trends in sustainable development as well as the needs of business operations, The Delta CSR Board has defined our stakeholders to be employees, customers, suppliers, investors (shareholders) and the community.

#### Stakeholder Issues and Interest

Delta uses online stakeholder surveys on the company website to learn about the issues important to stakeholders and their level of interest in various issues. These then undergo practical analysis with reference to their impact on business operations.

Delta Group Overview

#### Delta Stakeholder Issues and Channels for Communication

Stakeholder	Important Issue to Stakeholder	Communication Channel
Employees	Employee-employer relationship Salary and welfare Human capital development Labor rights Corporate governance	Delta corporate website
		Delta global intranet
		Delta E-news
		Employee Welfare Committee
		Communication meetings
		Employee satisfaction survey
	Product stewardship	Customer satisfaction survey
	Environmental policy/Management system	Regular customer review meeting
	Water resources management	Customer audits
Customers	Corporate governance	Channel partner meeting
	Green operation	Delta corporate website
	Customer relationship management	Delta CSR website & CSR report
	Brand management	Brand News Bi-Monthly
	Green operation	Supplier e-commerce system
Suppliers	Climate strategy	Supplier training program
ouppliers	Occupational health and safety	Supplier audit
	Supply chain management	Delta CSR website
		Delta corporate website
	Corporate governance	Annual financial report
	Risk management	Investor Services email
Investors (Shareholders)	Innovation management	Annual shareholder meeting
	Codes of Conduct	Institutional investors' conference
	Customer relationship management	Investor forum
	Brand management	Visit to institutional investors
		Visit of institutional investors
		Delta CSR website & CSR report
	Green operation	Delta Electronics Foundation official
Community	Water resources management	website
	Social contribution and philanthropy	Volunteer activities
	Environmental policy/Management system	Public welfare organizations
	Product stewardship	Delta official website
	Climate strategy	Delta CSR website & CSR report





#### The result of the stakeholder materiality analysis :

The results of stakeholder materiality analysis showed that the 7 issues most important to stakeholders and Delta include corporate governance, innovation management, product stewardship, green operation, customer relationship management, risk management and brand management. A detailed description is provided in the following chapters as listed :

Most important issue	Detailed description	
Corporate governance	Corporate Governance (page 28)	
Innovation management	Perseverance in Technical R&D and Pursuit of Innovation (page 44) New Business Development and Brand Management (page 55) Green Products and Services (page 79)	
Product stewardship	Green Design (page 79)	
Green operation	Green Operation (page 64)	
Customer relationship management	Delta and Customers (page 43)	
Risk management	Risk Management (page 29)	
Brand management	New Business Development and Brand Management (page 55)	

## Delta's CSR Commitment

To Delta, CSR encompasses sound corporate governance, balancing of stakeholder benefits, protecting the Earth's environment and social contribution. As a global corporate citizen, Delta supports the international standards such as the "Electronic Industry Code of Conduct" (EICC), the "Universal Declaration of Human Rights", the "International Labor Office Tripartite Declaration of Principles" and the "OECD Guidelines for Multinational Enterprises". We also place a strong emphasis on corporate governance. Through continued innovation, developing high value-added products and building a work environment where employees can live up to their full potential, we create the maximum benefits for our employees, shareholders and society as a whole. We are committed to the following :

- Maintain sound corporate governance and strictly abide by commercial and ethical standards
- Comply with laws and regulations
- Provide employees with a safe and healthy work environment where they can live up to their full potential in return for reasonable remuneration and benefits
- Support environmental protection and energy conservation education and encourage employees to take part in community activities
- Create company value and enhance shareholder value
- Promote CSR ideals and practices throughout Delta's supply chain and work together for better performance
- Develop environmentally-friendly, energy saving products and implement sound practices to reduce our impact on the environment
- Invest in innovation and research, develop intellectual property rights, and devote ourselves to the progress of human culture and technology, the development of society and the economy, as well as the sustainable development of the Earth and its environment



## Delta's CSR Organization

The top CSR organization within Delta is the CSR Board. The CSR Board is chaired by Founder and Chairman Mr. Bruce Cheng, and its membership includes Delta Electronics' Chief Executive Officer, Chief Operations Officer as well as the top and deputy executives for China and Thailand. It is the responsibility of the board to define Delta's CSR vision and primary stakeholders, review the policies set by the functional committees and supervise overall performance.

The CSR Board oversees the advisory organizations and implementation units. The "CSR Office" serves as the secretariat for analyzing international trends in sustainable development and understanding stakeholder expectations in order to identify the risks and opportunities for Delta on relevant issues. The office also works with the functional committees to plan response strategies and execute action plans. The other advisory organization is the Delta Electronics Foundation. The Foundation is mainly responsible for communicating and interacting with the external community and non-profit organizations with a particular focus on environmental protection, technological innovation and education promotion.

Implementation consists of the Electronic Industry Code of Conduct (EICC) Committee, the Green Product and Supply Chain Management Committee and the Green Operations Committee. The three functional committees are made up of heads from the business groups/units, region/site directors and the relevant department directors. The committees have the responsibility for formulating Delta policy, defining indicators, developing tools/processes and reporting on implementation performance. Under each committee are various working groups, each with their own particular theme. The working groups are responsible for inter-departmental coordination and execution.

Delta's CSR Organization





## **Corporate Governance**

Delta believes that high quality corporate governance is the best way to ensure that the company always delivers excellent performance and provides an optimum balance for all stakeholders' interests.

The Board of Delta Electronics currently consists of nine directors and two supervisors, including one independent director and one independent supervisor <sup>2</sup>. The board chairman does not hold an administrative position within the company.

The "Rules for Director and Supervisor Elections" require the appointment of directors to take into account of the Board's overall composition. The members of the Board are also expected to possess the knowledge, skills and expertise to perform their duties. For supervisors, they must possess professional knowledge and understand financial reports and are expected to be honest, practical and impartial. According to the "Articles of Incorporation of Delta Electronics, Inc." <sup>3</sup>, the remuneration for directors and supervisors is no more than 1% of the distributed balance.

To enhance the board's responsibility and trust, it convenes at least once quarterly to review the company's performance and discuss important strategic issues. The board convened on eight occasions in 2011, and the overall attendance rate was 94%. Key resolutions passed by the board are published in a timely manner on the Market Observation Post System of the Taiwan Stock Exchange and in the corporate governance section of the Delta website <sup>4</sup>. The Article of Incorporation, board meeting regulations and election rules for the directors/supervisors are also provided online for reference <sup>5</sup>.

Apart from the board meetings, the independent director and supervisor also take part in Delta Electronics' internal strategy meetings to ensure they are familiar with the company's current activities and can provide appropriate advice when necessary. Meanwhile, the Board organized the Compensation Committee to evaluate the overall compensation policy and the compensation of the company's directors and officers. The compensation committee <sup>6</sup> must be made up of no less than three people and is appointed by the Board. At least one of the committee members must be an independent

Note 2. One of the directors and supervisors is female (as the non-independent supervisor). She does not hold an administrative position within the company (nonexecutive).

<sup>3.</sup> The "Articles of Incorporation of Delta Electronics, Inc." is available on http://www.delta.com.tw/ir/ir\_govern.asp.

<sup>4.</sup> The key resolutions passed by the board in 2011: http://www.delta.com.tw/ch/ir/download/govern/100.pdf

<sup>5.</sup> Please see the Annual Report for avoiding conflicts of interest in 2011.

Corporate Governance

director. If there is more than one independent director, the independent directors should elect one of their number as the convener and chairman.

#### **Risk Management**

Our company's core activities are R&D, manufacturing and sales. We do not participate in high-risk and highly leveraged investments. The charter of the compensation committee also specifically advises against the committee setting remuneration policies that encourage directors and managers to exceed the company's capacity for risk in search of higher remuneration.

The Delta organization includes an independent internal audit team that reports directly to the Board. Risk maps are used by the internal audit team to analyze the severity and frequency of business risks. The information is submitted to the Board and supervisors then tracked for improvements. In addition to the audit team submitting a monthly report to the supervisors for review, the audit supervisor is also required to report major discoveries to the Board of Directors.

Detailed risk assessments are carried out by each department based on their own particular field of expertise. Also, management policies and response plans that reduce, transfer or avoid risks are developed to effectively reduce business risks.

Examples include :

Financial risk management – Strict controls and legal tax planning, credit risk management and financial risk prediction models are used to reduce risks. Market capital and bank interest rates are also regularly assessed to determine appropriate fund raising strategies. Hedging measures are used to minimize the impact of current fluctuations on our company.

Corporate investment risk management – The benefits of medium and long-term investments are assessed with strategic targets identified in conjunction with business units. Non-core investments are disposed of as necessary. Re-investments are also

Note 6. Compensation Committee Charter can be download on http://www.delta.com.tw/ir/ir\_govern.asp



assessed, reviewed, supervised and managed to strategically reduce, transfer or avoid risks.

Information risk management – A sound corporate IT management system is used to monitor and protect the safety of the information network. The system also provides the management with fast, effective and transparent business management information to reduce the risk of IT security threats.

Legal and intellectual property right risk management – This is provided by reviewing all contracts, providing internal legal consultations, extending product liability insurance, dealing with legal disputes and lawsuits, helping business units handle patent, trademark and other intellectual property items. Anti-trust training and consultations are also provided to reduce, transfer and avoid risks.

Environmental risk management – Regulatory requirements, current management, internal/external environmental impact and priority of improvements are taken into account when defining management plans and indicators. Regular reviews and assessments are also performed.

Safety and health risk Management – Factors such as hazard frequency, employee operating frequency and hazard severity are used to identify the levels of risk. The relevant plant departments are then required to define control measures based on risk severity.

Delta continued to receive outside recognition for our efforts in corporate governance in 2011. Not only were we selected for the DJSI World and DJSI Asia/Pacific indexes of the 2011/2012 Dow Jones Sustainability Indexes (DJSI) but also given the highest "Gold Class" rating and named "Sector Mover" in the electronics equipment sector of Sustainable Asset Management (SAM) 2012. We were certified to the CG6006 corporate governance standard of the Taiwan Corporate Governance Association, awarded the "Most Admired Company in the Electronics Industry" by CommonWealth magazine and received a rating of A<sup>+</sup> for transparency and disclosure by the Securities and Futures Institute in Taiwan. Delta's founder and Chairman Mr. Bruce Cheng was awarded the

Corporate Governance

5th "Distinguished Accomplishment Award" by the Chinese Professional Management Association while CEO Yancey Hai was named among the Top 3 "Best CEO" in the technology/hardware field of Asia for 2011 by Institutional Investor magazine. Delta continues to strengthen the organizational functions and activities of our Board of Directors to better ensure sound corporate governance at Delta.

#### **Ethical Standards**

The "Delta Code of Conduct" describes our expectations of all Delta employees around the world. The Code provides guidelines for employee conduct and asks all employees to protect Delta's assets, rights and image by engaging in legal and ethical behavior so the company can continue to develop in a sustainable manner. Where an employee interacts with company customers, suppliers, partners and any other third-party due to the demands of business, they must obey the Code of Conduct. All behavior that reflects negatively on the company's reputation and interests including bribery and graft are strictly prohibited. In addition to obeying the applicable laws and corporate policies, implementing the principles of "Care for the Environment, Energy-saving and Our Green Earth" as well as maintaining "Integrity" are stated at the very beginning of the Code.

Key provisions in the Delta Code of Conduct include the following :

- Delta employees should not take advantage of their position inside the Company to accept or demand business-related third parties or their relatives to provide services unrelated to Company business.
- Delta employees shall not bribe the competent authorities or other government officials by offering, for example, cash, gift coupons, check, stock, present or kickback, gratuity or special treatment of value.
- Delta employees shall not actively or passively, directly or indirectly accept or solicit cash, gift coupons, checks, stocks, presents or any other kickback, gratuity or special treatment of value (including meals, travel or entertainment) from business-related third parties.



- Delta employees should avoid any conflict with Delta's interests
- Delta employees should maintain the security of the company's assets, and are strictly prohibited from improperly or illegally using Delta assets
- Delta employees should protect the company's information, business data, technical materials, trade secrets and other confidential business information
- Delta employees are prohibited from acquiring others' confidential business information in an illegal manner, or infringing others' intellectual property rights
- Delta employees have to comply with copyright laws
   Alignment
   Alignment
- Earning personal gains through insider information is prohibited
   A second second
- Delta employees should observe the provisions of the Fair Trade Act and refrain from offering, enticing, entering agreement with competitors, or engaging in concerted action to jointly determine prices, monopolize the market, agree on resale prices, impede others to compete, or undertake bid rigging, and refrain from lessening competition or impeding fair competition by coercion, enticement, or other improper means.
- Comply with environmental, health and safety regulations, and promote Delta's relevant commitments and policies to stakeholders (such as suppliers)

The Code also governs education, training, complaints and disciplinary action. The Delta Code of Conduct is a core part of recruit orientation training. In addition to the hosting of actual classes and campaigns on a regular basis, digital classes are also provided in Taiwan and China.

It is the responsibility of every employee to protect Delta's reputation by maintaining the highest ethical standards. Any behavior that violates the Code shall be considered as misconduct. We require all employees to follow the contents of the Delta Code of Conduct to safeguard the rights of Delta and all stakeholders. When finding that another

Corporate Governance

Delta employee could be involved in activities that violate the law or the Code, all Delta employees have the obligation to report the matter to the head of the unit the employee belongs to, head of the audit department, head of human resources department or head of legal and intellectual property department, or local employee communication channel (e.g., general manager mailbox). If an employee is reported or found during routine audits as having potentially violated the Code of Conduct, auditors will immediately gather evidence and conduct an in-depth investigation to determine if illegal behavior has occurred. An internal report is then produced and the necessary action taken by the relevant departments. If necessary, the relevant procedures and employee permissions are also revised to prevent any future reoccurrence. Moreover, Delta's policy is not to directly or indirectly make political donations.



## **Delta and Employees**

#### **Employee Overview**

At the end of 2010, the Delta Group employed more than 80,000 people around the world. By business cluster, 69% of global employees are working in Power Electronics. Geographically speaking, more than 72% are located in Mainland China. For 2011, the distribution of employees in main business clusters is shown below.



The recruitment, employment and development of employees at Delta is based on merit. All employees are treated equally regardless of race, religion, color, nationality, age, gender, sexuality and disability. Female employees account for 63.4% of all Delta employees at major sites in Taiwan, China and Thailand. Direct labors account for 62.5% of all employees as well. 64.4% of supervisors over the grade of assistant manager are local nationals and 16.2% are female.

#### **Global Major Sites**




# **Employee Policy**

As a world enterprise and a responsible corporate citizen, Delta Group (the Company) is committed to offering our employees an environment to develop their capabilities. To fulfill this commitment, Delta Group constantly strives to comply with local regulations and to meet international labor and human rights standards, including the Electronic Industry Code of Conduct (EICC), Universal Declaration of Human Rights, International Labor Office Tripartite Declaration of Principles, OECD Guidelines for Multinational Enterprises, and more. To accomplish this objective, the Company has implemented the Delta Group Employment Policy.

Law Compliance : To comply with applicable labor or employment laws and international standards wherever it operates.

Freely Chosen Employment : To prohibit hiring forced labor or child labor. All jobs shall be taken voluntarily and employees can voluntarily leave the company with a reasonable period after giving notice.

Humane Treatment : To prohibit any form of harassment and inhumane treatment, including any sexual harassment, abuse, slavery, corporal punishment, threatening, exploitative, mental or physical coercion or verbal abuse of employees.

Non-Discrimination : To hire employees based on capabilities, and to not discriminate based on race, religion, color, nationality, age, gender, sexual orientation, disability,



or other reason which is protected by law in recruitment, training, awards, promotion, termination, retirement, or other employment condition.

Working Hours : To establish a management mechanism for working hours in line with labor laws and regulations. Unless for special operating conditions, employees shall be allowed at least one day off for each seven working days.

Compensation and Benefits : To provide employee compensation and benefits to meet the applicable laws, including minimum wages, holidays with pay and welfare provided in the law.

#### Freedom of Association:

To respect the rights of employees to associate freely on a voluntary basis and to organize labor unions, and to establish employee communication channels according to local regulations.

Training Opportunity : To ensure equal opportunity for employee development and provide job-related training to enhance employee capabilities and skills

Health and Safety : To provide a safe and healthy working environment in accordance with applicable safety and health regulations, and to establish and maintain an occupational safety and health and safety management system that defines operational procedures and monitors the implementation of continuous improvements in safety and health performance.

Through relevant procedures and management processes we have implemented the aforementioned employee policy. At our China plants, we have taken the following procedures and measures to confirm proper age requirements :

1. The company has implemented a procedure to filter possible child laborers that all employees and interviewees are well aware of and understand.

2. The qualifications of labor agencies undergo a rigorous review process and Delta's

Delta and Employees

hiring policies are explicitly passed to these agencies. We demand a signed guarantee by which the agencies promise that they do not conceal the laborers' age or provide false documentation.

3. With a combination of identification card detecting devices, interviews, and personnel document filing systems, we have taken significant measures in eliminating child laborers from entering our plants.

## **Employee Communication**

Our employee policy recognizes employees' right to freedom of association and unionization. We have also established channels of communication with our employees in accordance with local law. In Taiwan for example, the quarterly labor-management meetings as well as the regional welfare committee enable employee representatives to provide feedback and suggestions on certain issues. The issues are discussed during the meetings so a consensus can be established with the company. In China, communication consists of talk panels as well as employee-management meeting led by human resources. The meetings are organized independently by each plant and held once per quarter. Employees can raise any issues they have regarding work or lifestyle for the relevant departments and managers to answer and propose improvements.

Apart from our basic employee policy, Delta also offers a variety of channels for communications for cultivating positive labor relations. For example, employees can use written letters, e-mails or the 24-hour service hotline to make suggestions to the company. Our sites also have documented processes such as the "Internal and External Communications Procedure", "Employee Rights Protection Procedure" and "Employee Complaints Management Procedure" to ensure that each channel of communication remains open.

Employee feedback on their work environment as well as the various services and facilities provided by the company is also taken seriously by Delta and used as a reference for future improvements. Employee opinion surveys are conducted by each region based on their local requirements to learn how employees feel about their overall



work environment. At the Taipei head office for example, the September 2011 survey showed that employees were generally satisfied with their overall environment and 31% of responses also included suggestions. In the future, Delta will use these suggestions as a basis for making improvements to the software and hardware of the work environment.

## Salary and Benefits

We also intermittently adjust the compensation structure and benefits based on local laws and markets. We have designed incentive schemes to attract and retain talented personnel to maintain our competitiveness in the job market and show employees that Delta values talent.

The overall remuneration strategy at Delta is formulated at the company level by the compensation committee based on the competitive environment, company performance and benchmark markets. Recommendations for management salaries are then based on team performance, personal potential and actual performance. The recommendations are submitted to the Board of Directors for confirmation in order to attract, retain and encourage outstanding employees. Remuneration is not influenced by personal factors such as gender, race, nationality or age.

As for employee performance reviews, Delta has adopted the Performance Management and Development (PMD) system to link the company's strategy targets, personal performance targets, company values and abilities as well as individual career development. The system effectively reflects individual responsibilities in their performance review and all Delta employees are governed by this scheme. The performance of managers in plant management, labor safety, factory administration and human resources, for example, are all closely linked to labor safety, environmental protection and labor indicators. The salaries also fully reflect the link with performance. In principle, the higher a manager is in the hierarchy the more closely their remuneration is linked to performance. Besides the above, Delta not only provides insurance, benefits and pension contributions in accordance with local laws or practice, but also provides group insurance that exceeds legally mandated levels to protect the safety of employees at work and at home.

## **Employee Training and Development**

Delta considers our employees to be our most important asset and has always placed a strong emphasis on personnel cultivation and development. Training courses are provided to meet the needs of employees in different countries and regions.



## Learning and Development Framework

We also provide a range of learning environments to improve the effectiveness of learning, including :

- 1. A high-tech training system to help managers develop their subordinates' abilities and improve their work performance. Employees can find out about available courses online and set up their own flexible learning program.
- 2. World-class technical symposiums and seminars. Held regularly every year these provide R&D centers around the world with a platform for networking and learning.



- 3. Support for external training courses and in-service learning.
- 4. Take related groups as a basic platform to create an atmosphere of learning and sharing.
- 5. Establish knowledge management websites for employees to search for internally approved knowledge about quality and technology.
- 6. Compilation of Delta case studies as well as the sharing of internal best practices.
- 7. Delta has established and promoted an internal instructor scheme with executives setting an example for the principle of "Leaders Develop Leaders".

In 2011, the total training hours at Delta's major plants in Taiwan and mainland China and Thailand exceeded 2.16 million hours. On average, each person receives 35 hours of training. We are training "internal experts and instructors" in Taiwan and China for subjects such as sales, course planning and project management. By providing a better match for the requirements of the company organization and processes, we can help employees settle more quickly into their work and make a difference.

#### Leadership Development

Outstanding high-level talent is critical to the globalization process at Delta. With the guidance and assistance of a consulting company (DDI), we have made the cultivation of high-level talent a strategic part of Delta Group's operations as we build up a systematic training and development framework. Starting in 2009 a complete system has been implemented with the support of the Delta Leadership Committee that is targeted at outstanding employees with great potential. The system ensures that the quality and ability of high-level talent (BU/BG and MFG managers) will meet the needs of Delta's future development.

Leadership development aims to develop a common management language and personnel development scheme that will enable all Delta executives to demonstrate the abilities and behaviors expected of of "Leadership@Delta". To establish a

Delta and Employees

Leadership Pipeline, in addition to performance reviews objective evaluation tools such as the 360-degree survey and Leadership Inventory Index (LII) are also used to identify individual differences in management competencies. The information is used for developing the Individual Development Plan (IDP) and blueprint for learning & development. After the "Delta Phase 1" talent development plan was held in 2010, the 360-degree survey was conducted for each talent so they can identify the gaps in their own abilities. Under the guidance of consultants and mentors, they completed their Phase 1 IDP. Due to adjustments to some of the core competencies in 2011, Delta conducted a 360-degree survey again to review the results of each IDP over the past year and modify their directions as necessary.

Apart from the development of high-level executives, Delta will progressively introduce a training framework for the competencies required in individual functions (e.g., R&D engineering, marketing and support).



#### Leadership Development Framework





# **Employee Retention**

Employees are Delta's most important assets. Delta provides a variety of employee communications channels, competitive salaries and benefits, comprehensive training framework and a comfortable, safe work environment to encourage employees to stay with the company. If an employee submits their resignation, Delta immediately organizes a separation interview with the applicant in order to understand their reasons for leaving. We then do our best to offer our support and persuade them to stay. In 2011, the turnover rate for indirect labor employees in Taiwan was 11%.

# **Delta and Customers**

The global push for green energy means that customers now have a greater demand and higher expectations for energy saving solutions. With the corporate mission of "To provide innovative, clean and energy-efficient solutions for a better tomorrow", Delta now defines its brand value as a provider of customized reliable energy saving solutions. By leveraging our core competency in power electronics and combining it with advanced energy-saving technologies we can now provide our customers with cleaner and more efficient solutions. While lowering our customers' operation costs and capital costs, we also reduce the consumption of the Earth's resources and emissions of greenhouse gases at the same time to create even more value for customers.

To fulfill our commitment to customers, Delta not only studies the needs of customers but also observes our end-customers' working environments and habits to identify opportunities for continued improvement and to propose best solutions. End-customer relations management at Delta emphasizes listening to the voices of our customers. Apart from conducting large-scale customer surveys we also commission consultants to conduct end-customer satisfaction surveys, focus groups interviews, individual interviews and online surveys. The in-depth understanding of customers' requirements and expectations serve as the basis for improvement in technical R&D, system design and solutions concepts. Also by accepting the results of our customers' quarterly business reviews (QBR), we strive to provide total solutions that exceed customer expectations while also looking for opportunities to develop new products and services. In addition, each business unit has a defined procedure in place for customer feedback or quality issues. The contact windows for each product category provided on the official website as well as our sales personnel ensure that these problems are dealt with in a timely manner. In 2011, nearly 290 customers provided their feedback through the surveys or QBRs, the overall satisfaction was around 73%.

Delta is also introducing customer relations management (CRM) systems in developing markets with strong potential such as China and India. The system will help meet the growing demand for CRM from Delta's global diversification and reinforce the Delta brand identity through efficient, effective and high-quality interactions with the customers. Once the system is in place, all Delta customer data and market resources can be integrated to deliver more effective customer service.



In addition to the above, our distribution partners are now spearheading Delta's global market expansion. With industrial automation products for example, we now have over 700 distributors on five continents helping us provide customer consultation, product installation, technical support and product training services. Our distributors also help communicate the Delta brand value and corporate mission. Delta regularly hosts distributor events for India, North America, South America, China and Europe. Besides sharing overall market trends and product planning with distributors, Delta also rewards outstanding distributor partners so they will continue to move forward with Delta. Delta is now promoting a certification system for channel partners to help them establish an after-sales support capability. Strong support is also given for advertising and marketing events to give our channel partners the backing they need. The goal is to establish a basis for long-term sustainable development as well as deliver timely and effective support services to customers and end users so our channel partners can work with Delta to build a unique brand experience. The "Mission Critical Infrastructure Solutions Business Unit" (MCIS) for example set up an online platform for channel partners around the world selling Delta's "InfraSuite" smart modular data center solution and uninterruptible power supply (UPS) products. The online platform provides Delta partners with documentation and training information for Delta products, technologies and solutions so they can troubleshoot end-user problems. The platform also incorporates a feedback function for receiving feedback from channel partners and end users.

#### Perseverance in Technical R&D and Pursuit of Innovation

Technology and talent are Delta's twin foundations. We believe that deep roots achieve a solid foundation. For this reason, the corporate culture at Delta accepts the possibility of failure during the innovation process. We are willing to endure short-term labor pains in return for the possibility of giving birth to breakthrough technologies. This is the key to continued innovation by Delta, and investment in R&D is not sacrificed even when the market is in a recession. In 2011, Delta's global R&D spending amounted to 5% of revenues.

To promote our corporate culture of teamwork and recognize outstanding teams in innovation during the year, Delta renamed the existing Da Vinci Innovation Award as the "Delta Innovation Award" in 2011. The 11 prize-winning teams demonstrated their innovation as a

Delta and Customers

team in terms of product & technology, process improvements and new business models while also living up to our corporate philosophy of "To provide innovative, clean and energy-efficient solutions for a better tomorrow". The Taoyuan Technology Center Automated Smart Green Building was one of the prize-winning projects and this was Delta Group's newly completed plant & office building. Delta's energy-saving, industrial automation products and control systems are used throughout this new flagship building. The Taoyuan Technology Center is a demonstration for Delta's green building solutions as well as an important proving ground for validating the real-world performance of building automation control and energy-saving systems.

Another prize-winner was the "Qumi Pico-Projector", the smallest LED projector that the Delta Group has put into mass production to date. Weighing in at just 470g, the high-performance, low-energy, light and easy to carry pico-projector is the brightest in the industry with a projection efficiency of 300 lumens. The pico-projector was not just a demonstration of innovation by Delta's R&D team. The circuitry, software, light engine and mechanical design were all developed in-house by Delta as well. The development of its high-efficiency fan and transformer drew on inter-departmental sharing of design experience and resources, successfully leveraging the synergies of the Delta Group technologies.



The 2011 Delta Innovation Award winning team and Delta top management



The continued pursuit of innovation has won Delta products numerous outside accolades. Apart from the Delta Voice receiving the 2011 Speech Technology Excellence Award, our LED street lighting product was also awarded the only distinction award for "Excellence in Outdoor Illumination Facilities" by the Illuminating Engineering Society of Taiwan. Besides the above, a total of ten Delta products including an AC motor, touch-control human-machine interface, programmable logic controller, international power supply and USB charger, UPS and outdoor/indoor LED lighting were judged on their merits in R&D, design, quality and marketing and received the 2011 Taiwan Excellence Awards. The prize-winning products have also been licensed by the Ministry of Economic Affairs to use the Taiwan Excellence mark registered in more than 90 countries and regions around the world.



Delta's AC motor, touch-control human-machine interface, programmable logic controller, international power supply and USB charger, UPS and outdoor/indoor LED lighting were each given a 2011 Taiwan Excellence Awards.

Delta and Customers

Apart from products recognized with innovation awards, Delta is also actively developing green energy products and looking for green business opportunities. By maintaining our outstanding business performance, Delta has received awards recognizing businesses for their overall achievements in innovation as well. Delta was among the first "Top 20 Innovative Organizations in Taiwan" organized in 2011 by the MOEA Industrial Development Bureau. This was a non-industry-specific survey in Taiwan based on the framework used by Boston Consulting to select the top 50 most innovative companies in the world. More than 1000 professional managers from the top 5000 enterprises in Taiwan as well industry experts, academics and researchers were surveyed and the results weighed against business performance indicators. Delta Electronics Thailand (DET) also clinched the Runner-up position in its first attempt at the "Association of Southeast Asian Nations Business Award 2011" in the Innovation category for large companies. These awards recognize the diversity of Delta products and patents.

Beyond establishing our technical capabilities, Delta also adopts an attitude of open cooperation. We work closely with schools, suppliers, customers, and government agencies to create strategic investments in which we combine strengths from both parties to develop innovative products.

# Improving Quality and Pursuing Excellence

Quality is one of the core values of Delta's culture. Besides ISO-9001 certification of plants in Taiwan, China, Thailand, India and Slovakia, Delta has also established a Corporate Quality Division (CQD). The CQD continually pursues high quality, strengthens organizational quality planning and execution, and boosts training and competitiveness. With the integration of quality assurance methods, technologies, and systems, CQD aims to increase product quality, increase productivity and realize our corporate vision. Starting from selected business units, Delta combines accumulated experience in the field with best practices to pursue superior business performance.

The Production Technology Upgrade (PTU) at the Dongguan plant in 2011 was introduced with the support of the CQD department. The Dongguan plant underwent four phases: preparation, discovery, learning and implementation. The production process



was expanded in detail to identify the key output and input variable that influenced production quality. Controls were then put in place for prediction & prevention and reoccurrence prevention. The project produced a total of 318 improvements including those transferred from other plants and self-innovations. A completion rate of 92% was achieved with 25 projects not yet fully introduced or still being fine-tuned. Delta executives including CEO/COO all took part in the project diagnosis meetings. PTU will hopefully expand quickly to other plants and integrate with existing improvement activities so resources can be effectively used and synergies realized.

Along with the quality assurance activities, since 2005 Delta has held quality diagnosis meetings a total of 10 times at various plants. The most recent quality diagnosis activity was held at the Wujiang plant. Management teams and various business unit leaders separated into four groups to investigate production lines over two days. The groups focused on improving production automation and operations processes. All of the executives praised the creativity shown in the plant's automation equipment and renewable energy as well as major breakthroughs in process expansion and control. They also expressed hopes that improvements will continue in the direction of more simple operations, lower operating costs, higher efficiency and greater manpower savings. The quality diagnosis activities allowed Delta to find and rectify problems, while encouraging communication between plants and business units.

At the same time, the Chinese electronics manufacturing industry will be leading the development of the "Specification for Assembly Level Applied Automatic Optical Inspection Characterization and Verification" standard of the "Association Connecting Electronics Industries" <sup>7</sup> (IPC) for the first time. Delta Electronics' Chief Quality Officer China and Vice President of Technology, Mr. Wang Zhiping, has also been invited to serve as the chairman of the technology group. At the moment, academic organizations such as the Southwest Jiaotong University, the Jiangsu Institute of Electronics, Guangdong Institute of Electronics and the Sichuan Institute of Electronics, Wistron, Flextronics International, Pegatron, Foxconn, CETAQ as well as other well-known local and foreign AOI manufacturers have all joined the technology group. The opportunity to participate in and direct the defining of a new IPC international standard not only validates the quality and sophistication of Delta Electronics but will also give the company a greater voice in the SMT industry. The old model of "The West sets the standards for China to follow" has now been reversed.

#### Requirements for Social and Environmental Responsibility

Restrictions on environment-related substances in products, labor safety & health and human rights, climate change, water management, as well as conflict minerals/metals have all become important CSR issues in recent years. For the electronics industry, environment-related substances in products require controls at the source of materials supply. For labor safety & health and human rights, the focus is on suppliers scattered across the world as well as the company's own practices. The emphasis on climate change and water management is on the carbon / water footprint of the product lifecycle, while the conflict mineral / metal issue needs to be tracked all the way to the original mines. Indeed, these all require close cooperation with the entire supply chain to utilize companies' purchasing power and achieve optimal results.

Using the Code of Conduct promoted by the Electronic Industry Citizenship Coalition (EICC) as a reference, Delta has compiled online training materials for promoting standards for labor rights, safety & health and the environment. These materials help to improve the performance of Delta plants and suppliers in social and environmental responsibility. We have also set our policy on conflict mineral / metal issues. However, we know there is still a lot of work to do. We will keep working on these by benchmarking business leaders or customers that demonstrate great CSR performance.

At the same time, a CDP Supply Chain Program and EICC member companies conduct annual surveys of suppliers on climate change and water related risks, opportunities and corporate strategies. The information is used to determine whether these issues will have a potential impact on the enterprise itself. Delta attaches great importance to our communications with customers on this issue. Apart from responding to the survey each year we also use the questions as a guide to identifying potential improvements.

Note 7. The Association Connecting Electronics Industries (www.IPC.org) is a global industry association dedicated to boosting the competitiveness of more than 3000 member enterprises as well as helping them achieve commercial success. IPC members come from all fields of connecting electronics including design, PCB manufacturing, electronics assembly and testing. As a member-created organization, IPC's mainly provides industry standards, certification training, market research and policy promotion services. It also lends its support to various initiatives to meet the needs of this US\$1.85 Trillion global industry.



# **Customer Recognition**

Our innovation, quality and responsive service over the years have resulted in a high level of customer satisfaction and recognition. This is the main reason Delta's market share and business continues to grow. We also receive outstanding supplier awards from our customers every year. In 2011, we received most outstanding / best supplier awards from Sony, Netgear, Indus, Asus, Pegatron, and more. We share these honors with all Delta employees and continue to enhance the quality of our products and services to ensure our customers' satisfaction.



Indus Towers, the world's largest telecom Delivery in 2010" awards from Netgear. infrastructure company.

Delta received the Outstanding Achievement Delta Networks won "Supplier of the Year 2010", "Best Cost Efficiency for Delivery Performance Award from in 2010", "Best New Product Implement in 2010" and " Best On Time



Delta received Sony VAIO Partner Award



Delta received the ASUSTek Best Partner Award

# **Delta and Suppliers**

Our thousands of suppliers around the world are Delta's business partners, and they are essential to our efforts in addressing environment-related substances in products, climate change, labor safety & health, human rights as well as issues such as conflict minerals / metals and water footprint. Through the activities of our "Green Product and Supply Chain Management Committee", Delta is committed to using our influence to promote the relevant concepts or practices throughout our upstream supply chain.

## Supplier Selection Strategy

Honesty and integrity are the most important criteria when Delta chooses suppliers. Delta thinks of our suppliers as long-term partners. For the partnership to endure, our suppliers must have a similar corporate culture. For suppliers or contractors delivering or providing services to Delta plants in Taiwan, China and Thailand, they are required to sign a "Declaration of Ethics". The declaration not only requires vendors to carry out all transactions in good faith to avoid damage to Delta's interests or image, but it also insists that vendors must not allow Delta employees or their relatives to receive improper benefits, or provide them with any non-business related loans, rentals or investments. The declaration includes a Delta hotline and mailing address where vendors can report Delta employees that violate purchasing rules. This ensures that vendors' rights and interests are protected as well.

To ensure high quality and low risk in our suppliers, we traditionally place a strong emphasis on "critical suppliers" and "critical parts" in our supplier management framework. Apart from evaluating the price, quality, technology, delivery performance and services of the supplier, we also focus on managing the supply and demand of critical parts by connecting to end customers, system integrators and suppliers through an information platform. The comprehensive information flow management and logistics management helps us reduce risk by providing us with up-to-date change information as well as a mechanism for long-term inventories and production planning. Generally, local suppliers to Delta production lines enjoy an advantage in delivery time and cooperation but must meet our standards for technology and quality. For China where the majority of our production sites are located, around 70% of our suppliers have plants in China.



The floods in Thailand as well as Japan's earthquake and nuclear disaster in 2011 led to a massive loss of life and property. Many factories in the disaster areas were also badly affected, leading to difficulties in supply and transportation. Delta conducted an indepth analysis of our suppliers' operations after the global financial crisis several years ago. This time, we reviewed our supply chain diversification as well as the geographic distribution of our suppliers' production lines to reduce the risk of parts shortages caused by extreme climate conditions or major disasters in the future.

## Environmental Protection and Environment-Related Substance Management

The environment-related substances (or restricted hazardous substances) issue is one of the key responsibilities of Delta's Green Product and Supply Chain Management Committee. The committee is made up of employees from the materials department of each business unit and meets with the "Environment-related Substance Management Working Group" from each plant to review the process for materials acceptance. Particular emphasis is given to the standard authority on non-conformity management and responses to establish a consistent management system and management standards between plants.

The scope of environment-related substances is getting broader. Delta not only sets up the QC080000 hazardous substance management system at our own production sites but also encourages our suppliers to introduce the system to ensure the proper control of environment-related substances, which is in addition to their existing ISO9001 quality management system. Through our Guarantee Letter Regarding Environment-Related Substances, we clearly notify suppliers of Delta's related documents such as10000-0162, 10000-0222, and 10000-2003, all downloadable from Delta's GPM system. The letter and documents ask suppliers to guarantee they will restrain environment-related substances contained in accessories, packaging, and others from delivery to Delta and its subsidiaries or affiliated companies directly or via any third party. At the same time, we provide training courses and training materials, and also note Delta's environmental technical requirements on the purchase orders as a reminder to suppliers.

**Delta and Suppliers** 

Besides requesting documents like test reports, we implement incoming material control based on suppliers' risk levels. When non-compliance occurs, the actions that follow are regulated in Delta's "Supplier Management Procedure", including an increase of sampling frequency, on-site audits, and more. We consider assisting suppliers improve as a priority, and their risk level is adjusted based on how they actually improve. If the suppliers are not cooperative, we have procedures for disqualifying suppliers.

In addition to environment-related substances standards, in Delta's purchase agreement there are articles that ask suppliers to comply with relevant environmental laws, regulations, and technical standards, such as pollution prevention, waste disposal, and others. If a supplier does not comply, Delta's procurement department will deal with the situation based on severity.

## EICC and Other Environmental/Social Issues

As previously noted, the cooperation and participation of the entire supply chain is needed to achieve optimum results for CSR issues. Delta not only conforms to the Electronics Industry Code of Conduct (EICC) but we are also committed to making the most of our influence by promoting the EICC throughout our supply chain. The Delta supplier management procedure explicitly requires suppliers to sign a declaration of conformity for the EICC. Suppliers are also expected to follow the relevant guidelines in practice. Suppliers' cooperation and performance on environmental/social issues such as environment-related substances and EICC are now a part of our Quarterly Business Review (QBR) for suppliers. Delta is using our buying power to require suppliers to follow the environmental and social standards expected by Delta. Around 52% of our main suppliers have now signed our EICC declaration.

The CDP Supply Chain Program surveys suppliers on greenhouse gas emissions and controls to determine the potential impact on the enterprise itself. In 2011, Delta and several corporate members of the Taiwan Corporate Sustainability Forum helped around 50 Taiwanese suppliers complete their Greenhouse Gas (GHG) inventory <sup>8</sup>. The assistance helped the suppliers set up their own independent self-inventory capability for



future carbon footprint calculations and carbon emission reductions.

Delta has also adopted a conflict metal free policy that restricts the use of conflict metals mined from the DRC and its adjoining countries. Delta requires suppliers to sign the "Metal Source Survey" and "Declaration on Non-use of Conflict Metals" as part of our supplier management procedure. Around 52% of our main suppliers have now signed our declaration on the non-use of conflict metals.

As for contractors, we mainly arrange training courses and promote Delta's environmental and safety & health codes to ensure that any negative safety and environmental issues are avoided during their onsite operations.

Note 8. 18 were Delta suppliers

# **Delta and Shareholders**

Looking back on 2011, the united efforts of our employees not only consolidated our leadership in power supply and components but also saw our years of investment in pioneering businesses such as energy management and video projection bear fruit. The key foundations for our long-term development are now in place. Apart from continuing to maintain our leadership in the ODM industry, Delta is now aggressively expanding into total solutions. By integrating the software and hardware of Delta technologies and products, we aim to create smart green lifestyle applications that are more energy-efficient, convenient and comfortable. This will boost the value of the Delta brand.

### New Business Development and Brand Management

How to sustain the company's future growth is an important topic for Delta. We have studied the practices of international 100-year old enterprises and introduced the New Business Development (NBD) scheme. The NBD management framework consists of "Management System" and "Lifecycle" to ensure that new business targets are matched to growth strategy, to promote inter-business unit integration and cooperation, and to establish key performance indicators (KPI) for new businesses and a budget measurement mechanism.

We regularly review the development of each new business. Portfolio management for new businesses is also practiced to optimize the allocation of resources. At the same time, we are hosting NBD-themed training courses in different locations to familiarize employees with the relevant schemes.

Brand differentiation is another key to business success. How to win the customer's favor over the many 100-year old international brands and competitors represents a core target for brand management. Since Delta's "Brand Inauguration Year" in 2010, the Total Brand Management (TBM) project has continued to build up internal consensus among management. The "Brand Management Department" is now responsible for planning and executing Delta branding strategies aimed at building a Delta brand image for excellence. The first task was to clarify the scope of business activities so the market and customers can have a clear picture of Delta. At the same time, objective market surveys were used to establish Delta's brand position. The "Corporate Identity System Guidelines" and bilingual



Delta Brand News (English/Chinese) were also published to provide brand training to all employees. The results have been very encouraging and after one year of hard work we were named one of "Taiwan's Top 20 International Brands" in September, 2011. Brand benchmark learning, brand interpretation and the sharing/passing on of each department's brand experience will help create a new era for the Delta brand.

### Delta Brand Milestones (2009.11~)

2009	) Nov	Launch TBM Project
2010	Jun Sep Dec	Inauguration Year of Delta Brand Brand Management Office Established Supporting RUBU for Extemal Communication Message
2011	Feb Mar May Aug Sep Dec	Global Market Research of Delta Brand Supporting IABU for Extemal Communication Message Extemal Brand Communication Architecture Set Up Corporate Identity Guidelines Released Awarded Taiwan Top 20 Global Brands Premiere Issuance of Delta Bi-monthly Brand News
2012	<b>Jan</b>	Extemal Brand Communication Message Developed

# Transparency and information disclosure

Information disclosure has always been an important focus for Delta. Parent company Delta Electronics began submitting semi-annual consolidated financial reports to accountants for audit and publication even before the relevant requirements became law. Delta Electronics' announcements to the Taiwan Stock Exchange are also updated in real-time. From Delta's website, the chairman's report to shareholders, financial statements, annual report, corporate governance regulations, relevant committee regulations, share price and dividend information, as well as the content of analyst meetings can be downloaded.

#### Delta and Shareholders

Additionally, Delta hosts analyst meetings on a regular basis where we announce and explain each quarter's consolidated financial data, business performance and future plans. These meetings are webcast live over the Internet. Our efforts once again saw parent company Delta Electronics receive an A+ rating in transparency and information disclosure from the Securities and Futures Institute in Taiwan in 2011.

In the Institutional Investor magazine's 2011 All-Asia Executive Team rankings, Delta Electronics was recognized with the Top 3 "Best CEO – Mr. Yancey Hai", "Best Investor Relations" and "Best IR Professionals – Mr. Rodney Liu" in the technology/hardware sector for meeting the needs of analysts and investors. A total of 522 portfolio managers and investors, as well as 348 analysts participated in this sector-based survey. Six investor relations attributes were involved in the rankings, including accessibility of senior management, creditability and candor of IR departments, quality and depth of answers to inquiries, transparency of financial reporting and disclosure, and more.

As foreign investors hold the greater part of all Delta shares, communicating with foreign investors is especially important to us. We participate in a wide range of investors' forums each year and visit foreign shareholders directly in Asia, Europe and the United States. Apart from providing them with updates on the company's operations, we also welcome constructive feedback on our operations, finances and governance. At the same time, Delta welcomes visits from local and foreign investors, and we also arrange visits to our major manufacturing sites.

Individual investors are just as important to us as institutional investors. We have staff dedicated to answering inquiries from individual shareholders in detail. We also actively respond to questions and suggestions raised by shareholders at the annual shareholder meeting.

In the past few years, key international institutional investors have begun looking beyond financial statements and at sustainable development strategies, and potential risks and opportunities using tools such as the Dow Jones Sustainability Index (DJSI) questionnaire and Bloomberg Sustainability Survey. Other initiatives include the "Carbon Disclosure Project



(CDP)" that asks thousands of participating enterprises to disclose their climate change related information each year using a standard survey and database. Investors can then use the information to assess investment risks and opportunities. The investor communications related to these issues are important to Delta and during the communications process we look for areas that may require improvement.



Delta hosts analyst meetings on a regular basis to interact with institutional investors.

# Dedication to Energy Conservation and Environmental Protection

### Environment, Safety and Health Policy and Risk Management

Delta Electronics has made "To provide innovative, clean and energy-efficient solutions for a better tomorrow" our business philosophy since our founding. All of our main global sites are required to achieve ISO 14001 and OHSAS 18000 international certification as well as practice the following Environment, Safety and Health (ESH) policies :

- Manufacture green products and conserve the Earth's resources
- Conform to ESH regulations and promote ESH awareness
   A second secon
- Practice total participation and reduce occupational risks
- Practice proper waste management and reduce environmental impact
- Regulate management of hazardous materials and promote an accident-free workplace
- Continuous improvement to create a safe and healthy environment

#### **Response to Climate Change**

In the 2007 Report on Climate Change, the Intergovernmental Panel on Climate Change pointed out that human activity was the main cause of global warming and that national governments should adopt effective measures to solve the problem of GHG emissions. Delta Electronics not only requires all global sites to progressively complete GHG inventories but also includes climate change as one of the key items in the company's risk analysis of sustainable management to be closely monitored and managed. Delta Electronics' climate change efforts have included the promotion of green buildings/plants, introduction of energy management systems, completing GHG emission inventories for business sites as well as the carbon footprints of notebook adaptors, DC fans and PV inverters.





#### **Climate Change Risk Analysis**

Delta Electronics has identified 10 environmental risks due to climate change. The importance and frequency of the risks are represented in the environmental risk map below. Among these, the eco-tax (e.g., energy tax, carbon tax) that are currently under discussion in major trading zones, energy cost increases (e.g., electricity costs, fuel surcharges) as well as increased GHG emissions due to increasing production output are the three areas that Delta Electronics is actively managing. Concrete measures taken include continuing to practice energy management at our key sites, improving energy efficiency, and practicing low-carbon purchasing and low-carbon transportation.

Dedication to Energy Conservation and Environmental Protection

The environmental risks and the management dimensions they affect :

Environmental Risk	Finance	Operation	Supply Chain	
Environmental regulations compliance		0	Δ	
Disruption of the supply chain		Δ	0	
Climate change adaptation		0	Δ	
Persistent extreme weather		0	Δ	
Rising greenhouse gas emissions		0	Δ	
Rising energy cost	0	Δ		
Rising ecological taxation	$\odot$	Δ		
Water supply crisis		0	Δ	
Environmental information disclosure		0	Δ	
The legal risks from third parties		0	Δ	
Note  ◎ Direct Impact  △ indirect impact				

	Monitor	Prevent At Source			
Likelihood	<ul> <li>The legal risks from third parties</li> </ul>	<ul> <li>Rising greenhouse gas emissions Rising ecological taxation Rising energy cost</li> </ul>			
Likell	Environmental disclosure	Climate change adaptation Persistent extreme weather Disruption of the supply chain			
	Water supply crisis	Environmental compliance			
	Low Control	Detect and Monitor			
	Signifi	cance			

#### Environmental Risk Map



#### Climate Change Opportunities and Sustainable Business Strategy

Through our long-term monitoring of climate change trends as well as the managing of climate change risks, Delta has now identified the following opportunities and sustainable business strategies :

Climate Change Opportunity	Sustainable Business Strategy
Develop Clean Energy	<ul> <li>Delta's key developments in clean energy include solar power systems, wind power systems, super capacitor technology and polymer battery technology.</li> <li>In the transportation field, we believe that solving high-energy consumption transportation offers major environmental business opportunities. The future is in electric vehicles so Delta has developed a range of EV</li> </ul>
	power systems and EV charging stations.
Improve Energy Efficiency	• Rising energy prices have seen Delta focus on continuing to improve the efficiency of power supply products as well as developing more energy-efficient indoor and outdoor LED lighting fixtures, high-end projectors, electric vehicles and automotive electronics.
Provide Energy-Saving	• Delta has consolidated our core products into three main applications: "Power Electronics", "Energy Management", and "Smart Green Life". We are also working actively to become a green energy-saving solutions provider.
Services and Solutions	•We continue to apply and demonstrate our own green energy-saving projects at our business sites around the world. We are also integrating them into green energy-saving solutions (e.g. smart green building monitoring systems) to provide energy-saving services and solutions in the future.

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#### Carbon Disclosure and Emission Reduction

In 2007, Delta Electronics began taking part in the Carbon Disclosure Project (CDP) set up by leading international institutional investors in 2003. In accordance with "Greenhouse Gas Protocol" (GHG Protocol) issued by the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute, Delta began inventorying the direct GHG emissions (scope 1) and indirect GHG emissions (scope 2) of major business sites. Since 2009, Delta's main sites have progressively achieved ISO 14064-1 GHG report verification. In 2010, Delta selected notebook adaptors, DC fans and PV inverter products for product carbon footprint inventory.

To effectively manage GHG emissions at major sites, we defined GHG intensity (tons of carbon dioxide equivalent/US\$1 million output value) as our GHG management indicator and set 2009 as the baseline year for energy-saving and carbon reduction. In 2011, the direct GHG emissions from our major sites<sup>9</sup> were 16,137 tons  $CO_2e$ , and the indirect GHG emissions were 300,716 tons  $CO_2e$ . The GHG intensity was 51.3, a 30.9% reduction compared to 74.2 in 2009.

At the same time, we began cutting back on unnecessary business flights in 2010. The mileage of employee business flights was also recorded to estimate their GHG emissions (scope 3). In Taiwan for example, in 2011 Delta employees' business flights produced 3,500 tons  $CO_2e$  GHG emissions, a reduction of 6.3% compared to the 3,735 tons  $CO_2e$  in 2010.

GHG inventory scope	GHG emission source
Scope 1	Stationary combustion: boilers diesel generators, restaurants, etc.
Direct GHG emission	Mobile combustion: cars, trucks forklift trucks, etc.
	Others: municipal wastewater, refrigerants, etc.
Scope 2 Indirect GHG emission	Externally purchased electricity and steam
Scope 3 Other indirect GHG emission	Traveling

Note 9. GHG emission scope 1 and scope 2 covered the China plants (Dongguan, Wujiang, Wuhu, Chenzhou, Tianjin), Taiwan plants (Taoyuan plant 1, Taoyuan plant 2, Tainan plant) and Thailand plant. Scope 3 covered business flights by employees from Taiwan.





# **Green Operations**

In 2011, the total inputs (materials, energy, water resources) and total outputs (GHG, air pollutants, waste, wastewater) at Delta's major sites<sup>10</sup> around the world were as shown in the following graph :



Dedication to Energy Conservation and Environmental Protection

#### **Energy Management**

Energy used by Delta at our major sites around the world included fossil fuels, externally purchased steam, and externally purchased electricity.

#### **1.Fossil Fuels**

In 2011 fossil fuels were mainly used by the plant generators, forklifts, official vehicles and boilers in the living areas (including employee dormitories and cafeterias). When sorted by heat value (million kcals), natural gas accounted for 58.5%, diesel for 34.1%, gasoline for 7.3% and heavy oil for 0.1%. The most significant change compared to 2010 was the conversion of all boilers in the living areas from burning LPG to more clean natural gas. The other change was an increase in diesel consumption by power generators (24% increase) due to the imposition of power restrictions throughout China during the summer months.

#### 2. Externally Purchased Steam

Among the major sites, only the Tianjin plant in China purchases steam to provide hot water to the employee dormitory. Starting in 2010, the Tianjin plant collaborated with the local government to convert the dormitories to a parallel solar and steam system. Excess rooms were also rented to other local workers.



Note 10. The major sites in this section referred to the China plants (Dongguan, Wujiang, Wuhu, Chenzhou, Tianjin), Taiwan plants (Taoyuan plant 1, Taoyuan plant 2, Tainan plant) and Thailand plant.





#### 3. Externally Purchased Electricity

The manufacturing process at Delta's major sites consists mainly of system assembly and externally purchased electricity formed the largest source of GHG emissions (95%). The main energy management indicator was set as electricity intensity (MWh/MUSD output value) to facilitate effective energy management. In addition to reaching the shortterm target of reducing the overall electricity intensity by 20% in 2011 compared to the baseline year 2009, we have also designated a competitive five year goal of lowering electricity intensity by 50%, in the hopes of further enhancing efficiency in our use of electricity.

Starting in 2010, Delta follows the ISO 50001 energy management system as a blueprint to gradually introduce the energy management system to our main sites in China, Thailand and Taiwan. In 2011, a trans-regional energy management committee was set up to implement a Plan-Do-Check-Action (PDCA) management mechanism that integrated energy management with routine operations. In July, 2011, Delta's Dongguan plant in China became the first power and component electronics enterprise in the world to pass ISO 50001 Conformity Evaluation. The Thailand plant passed the same evaluation in September, 2011, as well, making it the first company in Thailand to do so.

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We also began introducing the energy management information system developed inhouse by the Delta Group and integrated with digital metering technology at our main sites in China, Thailand and Taiwan since 2011. The real-time monitoring and analysis functions provided by the system helped with identifying more opportunities for energysaving and carbon reduction. Through the continued efforts of all sites, in 2011 the electricity intensity was 58.3, a reduction of 29.7% compared to 82.9 in 2009. The result also surpassed the target of 20% reduction in electricity intensity set for 2011.



#### ISO 50001 energy management system framework





The significant gains in energy-savings made in 2011 came mainly from the efforts made by the main sites in seven key energy-saving areas: heating, ventilation, and air-conditioning (HVAC) systems, air compressor systems, injection molding machines, lighting systems, burn-in energy recovery, process improvements and others. More than 135 energy-saving initiatives (see table below) were carried out, resulting in electricity savings of 42,400,000 kWH and a reduction of GHG emissions by 37,908 tons  $CO_2e$ .

To spread sound energy-saving practices at each plant to all other plants, we also set up an energy-saving technology team in 2011 that worked with external expert consultants, experts from Delta's R&D center and that drew on the practical experience of plantbased energy-saving teams. The team worked to select energy-saving projects with shorter payoff times and better energy-saving results to set up a database of the best energy-saving practices. Over the course of 2011, a total of 27 best energy-saving practices were compiled from various plants.

Energy Saving Topic	Effect of 2011 energy saving improvement	No. of 2011 projects	No. of best practices
HVAC	Electricity reduction : 4,530 Mwh/Year GHG emission reduction : 3,911 ton CO <sub>2</sub> e/Year	20	5
Air Compressor	Electricity reduction : 1,690 Mwh/Year GHG emission reduction : 1,437 ton CO <sub>2</sub> e/Year	13	1
Injection Molding machine	Electricity reduction : 8,650 Mwh/Year GHG emission reduction : 7,844 ton CO <sub>2</sub> e/Year	7	2
Lighting System	Electricity reduction : 7,480 Mwh/Year GHG emission reduction : 6,522 ton CO <sub>2</sub> e/Year	17	4
Burn-in Recovery System	Electricity reduction : 13,410 Mwh/Year GHG emission reduction :12,060 ton CO <sub>2</sub> e/Year	15	5
Process Improvement	Electricity reduction : 3,380 Mwh/Year GHG emission reduction : 3,048 ton CO <sub>2</sub> e/Year	29	4
Others	Electricity reduction : 3,270 Mwh/Year GHG emission reduction : 3,086 ton CO <sub>2</sub> e/Year	34	6

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#### **Material Management**

The main materials used by Delta included : 1. Metallic materials (including iron, steel, aluminum, copper and iron cores); 2. Plastic materials (used for casings, insulation and sockets); 3. Chemicals (mainly organic solvents including thinners, cleaners and fluxes); 4. Packaging or transportation materials (including paper/cardboard, cartons, paper palettes, filling materials and timber); and 5. Other materials (epoxy resin used for bonding electronic materials and insulation, and asphalt used in electronic ballasts). No substances harmful to the ozone layer are used during our production processes.

To track trends in material consumption, we used material intensity (tons of material used/MUSD revenues) as an indicator. In 2011, revenues grew by 7.1% compared to 2010 but total materials consumption grew by just 2%. Material intensity of 2011 was therefore slightly lower than 2010 by 4.9%.





#### Water Resource Management

Most of the water used by Delta's major sites in 2011 was for domestic use (95%). Municipal water was the main source and no ground water was used. Using the Global Water Tool developed by WBCSD, we also checked to see if our main plants were located in water-stressed regions. At the moment, the Tianjin plant in China and the Taoyuan plant 2 in Taiwan are at higher risk of water shortages. These plants have
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now formulated countermeasures for insufficient water supply, rising water prices, and conflict between stakeholders over water access in potential short-, medium- and long-term water shortage scenarios. In 2011 all major sites adopted various water-saving and process wastewater recovery measures. The measures included upgrading to water-saving taps or water saving devices, using water-saving toilets, reducing water output from taps and the water level of cisterns, managing the excess water of cooling towers as well as reusing the wastewater from water purifiers. Water consumption was reduced by a total of 284,500 m<sup>3</sup> over the course of the year, a 5.6% reduction compared to 2010. If water intensity (km<sup>3</sup>/MUSD output value) is used as an indicator, water intensity in 2011 was 0.78, a reduction of up to 27.4% compared to 1.07 in 2009.

### **Pollution Prevention**

### 1. Wastewater Management

The wastewater at all key Delta sites is processed by appropriate sewage treatment facilities or directly channeled to the industrial zones' wastewater treatment plants. Wastewater discharge is estimated to be 80 to 90% of total water usage. The quality of all discharges conforms to current regulations and wastewater is regularly tested to ensure that it has no significant environmental impact on the surrounding water bodies. In 2011, there were no significant leaks or spill incidents at any Delta site.





### 2. Waste Management

Delta sites separate waste into three types for waste management: general waste, recyclable waste and hazardous waste. Recyclable waste includes metallic wastes, waste plastic, waste palettes and waste paper/cartons. These are sorted and delivered to qualified local recycling companies for recycling. Hazardous waste includes electronic wastes, waste glass tubes/glass and waste solvents. These are sorted and then delivered to qualified local firms for disposal. General waste is transported to government-designated incinerators or landfills. In 2011, waste totaled 36,916 tons with 72.1% being recyclable waste, 22.2% being general waste and 5.7% being hazardous waste. The amount of general waste generated in 2011 was 8% lower compared to 2010. The amount of general waste sent to landfill also dropped from 87.5% in 2009 to 86% in 2011.



#### 3. Air Pollutant Management

Since the Taoyuan plant 2 ceased production of Cold Cathode Fluorescent Lamps (CCFL) in 2010, the production processes at major Delta sites have all been mainly assembly-based. Currently there are no fixed pollution sources that require approval,

regular inspection or reporting. We continue to monitor the air quality around our plants to ensure that we generate minimum environmental impact on the surrounding atmosphere. Air pollutants generated by major sites include Volatile Organic Compounds (VOCs), Nitrogen Oxides (NOx) and Sulfur Oxides (SOx). VOCs are mainly given off by asphalt (used as the filler in electronic ballasts) during heating, and evaporation of organic solvents (e.g. flux, isopropanol). In 2011 the amount of VOCs generated was approximately 17.9 tons. NOx and SOx came mainly from the testing or emergency use of power generators, hot water boilers in the living areas and cafeteria cooking, but the quantities were minute.

### Green Buildings/Factories

Ever since Delta built its first green building/factory at the Southern Taiwan Science Park in 2006, Delta has understood that green building can effectively reduce environmental and ecological impact. Delta has promised to adopt green building design concepts and techniques in all future plants and office buildings. We have also taken the next step by referring to the Leadership in Energy and Environmental Design (LEED) system for the energy-saving standard of new future buildings/factories or existing building retrofits.

To date, Delta has progressively commissioned the following green buildings/factories around the world. The Rudrapur plant, in particular, has received the U.S. LEED Gold certification, while the Delta Tainan plant was the first building in Taiwan awarded the certification for all nine indicators of Taiwan Ministry of Interior's Green Building EEWH Rating System.



#### Green Building/Green Factory

#### China Shanghai R&D Center (2011)



Taiwan Taoyuan Technology Center (2011)



India Gurgaon plant (2011)



China Wuhu plant (2008)



India Rudrapur plant with LEED



Taiwan Tainan plant with Taiwan Green building - Diamond rating (2006)



#### Green Building/Green Factory techniques

- Applies energy-efficient building construction methods and uses natural lighting, ventilation and rainwater harvesting system design
- Uses Delta's energy-saving products such as solar photovoltaic systems, wind power, cloud computing data center, LED indoor and outdoor • Save 600 ton water per year lighting, elevators, air conditioning inverter equipment, and more.
- Uses Delta's energy-saving industrial automation products / control system
- Installed solar panels and LED lighting • Water treatment system, water-saving
- appliances and rainwater harvesting system • Renewable and energy-saving devices
- Uses ecological building materials, solar power, LED lights
- Natural lighting and high-efficiency HVAC system
- Anaerobic sewage treatment equipment ; Uses recycled water for plumbing fixtures and irrigation
- Installed drainage sump and open-grid pavement. Adapts native water-efficient landscaping
- Roof cornice and exterior recessed shade; Atrium and staircases natural lighting / ventilation, multiple doors at the entrance
- Air intake and ventilation at underground ventilation level
- Use Low-E Glass for all windows
- High energy-efficient structure
- Natural lighting and ventilation
- Water harvesting and reuse of recycled water
- Overall thinking of building orientation
- Optimizes the use of advanced air-conditioning
- systems, ventilation systems • Uses solar photovoltaic systems
- Uses high-efficiency lighting system

- Electricity/Water Saving **Benefits**
- Save NTD 2.5 million electricity fee per year
- Reduce 260 ton CO<sub>2</sub>e per year
- Save more than NTD 5 million electricity fee per year
- Reduce 1,000 ton CO<sub>2</sub>e per year
- Save 75% water use per year (approx. 3,000 ton)
- Save approx. 35% energy compared to conventional buildings
- Save 40% water than conventional buildings
- Reduce about 70% of the HVAC load at perimeter
- Summer cooling 8°C; Winter warming 4 °C
- Reduce 35% power consumption compared to traditional plants
- Reduce 2,000 ton CO<sub>2</sub>e per year
- Save 30% power consumption than comparable plants
- Reduce 10% waste
- Save 50% water usage (340 ton)

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Foundation is now actively promoting the energy volunteer project as well as working with local environmental groups to promote environmental education and energy-saving ideals with the general public. Examples of classic energy-saving designs in Delta's green building/plants are listed below :



### **Green Office**

In 2011 Delta's major sites continued to practice the following energy-saving measures in the office:

### 1. Lighting System:

All plants have progressively upgraded to LED lights, adjusted the lighting in each work area, turned off lights after working hours and during breaks, installed independent switches for lights in office areas, or added light- or time-control devices for lighting systems. Such measures save around 500,000 kWH in electricity consumption a year.

### 2. Energy-saving Office Products :

Office and testing computers changed from 180W PCs to 30W low-power PCs (Atom CPUs) or desktop machines replaced by notebook computers. In addition, we purchased



Energy Star qualified office products such as computers, monitors and printers.

### 3.Water-saving Products :

All plants have adopted water-saving washing facilities, water-saving toilets, non-flush urinals or water-saving taps.

### 4. Elevator Energy-saving :

Some plants have installed the elevator energy recovery system developed by Delta to reduce heat generation and lower the air-conditioning demand for elevator machine rooms. Up to 50% energy savings were achieved.

### Reducing Environmental Impact from Our Operations

Delta had no significant violation of environmental regulations in 2011. As all major Delta sites are located in industrial parks, science parks or local industrial zones, this reduced the environmental impact on the local ecology to a minimum during our operations and avoided any significant negative impact on the local biodiversity. The commissioning of green buildings/factories with diverse plantings and eco-ponds has made a positive contribution to biodiversity.

As for reducing impact on local communities, some plants have worked with local environmental groups to promote environmental education and our green building design philosophy. We have also adopted some surrounding green areas (such as the No.3 Wende Park in Taipei, Taiwan) to promote better interaction with the local community.



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### **Green Production**

To live up to our business philosophy of "To provide innovative, clean and energyefficient solutions for a better tomorrow", Delta Electronics is continuing to promote green production measures as well as refine our research, development and innovations in manufacturing processes. Our main sites not only carried out over 135 energysaving improvements in 2011 but also achieved great strides in improving production, processes, tooling, logistics and automation :

Process Innovation	2011 actions	Effect
Process optimization	Main focus on production and processes	Save RMB 78,610,000 in operating cost
Automation	Implemented automation projects for process stations with high number operators	Save RMB 26,770,000 in operating cost
Process simplification	Main focus on simplifying traditional processes or complex processes	Save RMB 3,530,000 in operating cost
Jig optimization	Optimized the design of jigs	Save RMB 13,640,000 in operating cost
Logistics improvements	Main focus on changing material distribution and improving warehousing	Save RMB 1,160,000 in operating cost
Energy-saving improvements	Ildentified opportunities for energy saving, and implemented energy- efficient improvements for seven energy- saving themes: HVAC exhaust system, compressed air system, injection molding machines, lighting system, Burn- in test, energy recovery and process improvement	Save 42,400,000 kwh of electricity Save RMB 29,300,000 in operating cost



### Energy / Resource Recycling and Renewable Energy

### 1. Electricity Recycling

Burn-in testing for AC motors, power supplies or uninterruptible power supplies (UPSs) traditionally converts electricity into waste heat. The power was not only unrecoverable but the heat produced often needed to be dissipated using additional equipment, resulting in inefficiency and high cost. Delta's major sites have now adopted the self-developed Energy Recycling Systems (ERS) that can not only recycle the electricity used during burn-in testing but also reduce the heat generated and thus lower the loading of the air conditioner and the personnel and the plant square footage needed by traditional burning racks. By using Delta ERSs, (including the ERSs adopted in 2011 and before 2011), over 62,800,000 kWh of electricity was recycled in 2011, reducing GHG emissions by 53,089 tons compared to when the ERS was not in use.

### 2. Solder Recycling

Major Delta sites have solder recovery devices. Approximately 39.3 tons of solder were recycled in 2011.

### 3. Water Recycling

The majority of water recycling in 2011 came from recycling process water and rainwater recovery. An example of process water recycling was the Chenzhou plant in China where 1,800m<sup>3</sup> of wastewater was recovered from the water purifier in 2011. As for rainwater recovery and reuse, the Tainan plant recovered around 2,500m<sup>3</sup> of rainwater in 2011.

### 4. Solar Power Applications

The main renewable energy applications at Delta are solar PV systems and solar water heating systems. In 2011, the solar PV systems at our major sites generated 49,728 kWh of electricity while the solar water heating systems (11,376m<sup>2</sup> of heat collecting surfaces in total) produced nearly 6,826 million kcal. Total energy provided by solar power applications was 57.7MWH, reducing GHG emissions by 2,100 tons compared to when solar PV and water heating systems were not used.

# **Green Products and Services**

All Delta products conform to international safety standards. Products or product packaging are also labeled with conformity information in accordance with the environmental regulations of the target market (e.g. the EU RoHS and WEEE directives, China Measures for the Control of Pollution from Electronic Information Products). We also display environmental certification information such as the US Energy Star and 80 PLUS on our products that were required by our customers for green marketing purposes. In 2011, Delta did not violate the laws or regulations concerning the provision and use of products and services.

### **Green Design**

The Life Cycle Assessment (LCA) is a green design approach that systemically analyzes the environmental impact of a product from material extraction, manufacturing, shipping, product use, and disposal. The ISO 14040 international standard divided LCA into several key processes including the definition of the goal and scope, inventory analysis, impact assessment and interpretation. Due to the complex nature of supply chain relationships in the electronics industry, Delta knows that a complete LCA will consume enormous amounts of time and resources. Delta has drawn on research by the Society of Environmental Toxicology and Chemistry (SETAC) on LCA methodology and adopted the Screening, Simplified and Streamlined LCA (SLCA) to focus on the most significant environmental impact (e.g. GHG emissions) and reduce the amount of data that needs to be gathered. Additionally, we also use available LCA databases as supporting tools to further facilitate the SLCA process. By using the SLCA methodology, we can identify design or process areas for improvement.

### 1. Product Carbon Footprint

Product carbon footprint is the best example of SLCA in action. Delta has now completed the carbon footprint inventory and verification of several Business-to-Business (B2B) products based on the PAS 2050 Product Carbon Footprint Standards issued by the British Standards Institution (BSI) including notebook adaptors, PV inverters and DC fans. The notebook adaptor in particular was the first power supply product from Taiwan



to complete BSI PAS 2050 carbon footprint verification.



### 2. Strategies for Reducing Product Environmental Impact

We have aggressively utilized the following strategies to reduce the potential environmental impact from each phase of the product lifecycle :

(1) Reduce use of environment-related substances: Delta has implemented the Green Product Management (GPM) IT system based on the QC 080000 hazardous substance process management system. Apart from inspecting materials testing reports from suppliers, Delta manages parts/components based on their environment-related substance risk level to ensure the proper control of environment-related substances. Delta sites have also introduced lead-free processes and low-halogen materials to help customers develop greener and more eco-friendly products.

(2) Reduce carbon emissions from materials transportation: Delta has implemented lowcarbon purchasing principles and for non-critical components preference is given to local suppliers where possible. Take the power supply business group for example, 70% of the suppliers are based in China where our major production sites are located and carbon emissions during materials transportation are greatly reduced. (3) Adopt green packaging: In 2011, the product packaging materials (including corrugated paper/cardboard, cartons) contained over 80% recycled paper fiber and were 100% recyclable.

(4) Improve product energy efficiency: The continued improvement to product energy efficiency is a concrete expression of Delta's commitment to "To provide innovative, clean and energy-efficient solutions for a better tomorrow". Most of Delta's power management products have surpassed 90% energy efficiency, such as our PV inverters with a conversion efficiency of over 98%, and telecom power supplies with 97% efficiency.

(5) Design for recycle/ disassembly: We always strive to design our products for ease of recycling/disassembly. Apart from actively helping B2B customers improve the reuse rate and recycling rate of waste electronics products to conform to environmental regulations of the target region (e.g. EU's WEEE directive), for our own brand products, we are also working with local recycling organizations to ensure the proper recycling and ultimate disposal of waste products. For example, DelSolar, a Delta affiliate, has joined PV CYCLE ( http://www.pvcycle.org/ ) in Europe to participate in the recycling program for waste PV modules.

### **Environmental Product Declaration**

The experience from several product SLCAs showed us that the environmental impact from the usage phase of Delta's core products is most significant in their lifecycle. We are therefore promoting product environmental information disclosure and integrating this with "ISO 14021 product environmental labels and declarations" and the "ISO 14025 Environmental Product Declaration (EPD)". In 2010, we launched the "EnergE" program for rectifiers. An energy-savings calculator was provided on the product webpage to help customers understand the cost and energy-saving benefits they can achieve by using Delta products under different scenarios based on the type of power source, number of sites, average load per site and energy cost information.





### Green Product/Service Innovation

As part of our sustainable business strategy to respond to climate change and to live up to our business philosophy of "To provide innovative, clean and energy-efficient solutions for a better tomorrow," Delta has consolidated our core products/services into three main application groups: Power Electronics, Energy Management and Smart Green Life.



We are progressively introducing innovative green products and solutions through system-level product integration as listed below :

1. High-efficiency power management products : Most of Delta's power management products have surpassed 90% energy efficiency, such as our photovoltaic (PV) inverters with a conversion efficiency of over 98%, and telecom power supplies with 97% efficiency. Other products include high-efficiency outdoor/indoor/functional LED lighting.

2. Electric vehicle (EV) charging solutions: In November, 2011, Delta was awarded a grant from the US Department of Energy (DOE) for the development of a residential EV charging system with wireless network capacities that can connect the chargers directly to electric utilities. Delta has also released an EV charger system that integrates EV charger hardware (e.g., AC charging equipment and DC charging equipment) with software (e.g., charger station monitoring and management system). Delta's DC quick charger offers high energy efficiency of close to 95%, which is 5% higher than the industry standard.

3. Intelligent Energy-Saving Green Building Solution : Delta's Industrial Automation Business Unit (IABU) has integrated a set of sustainable energy-saving systems for buildings, including an energy consumption management system, an indoor environment control system, a water recycling system and an environmental protection system.

4. Green IT solutions: The green cloud data center solution integrates various energysaving techniques and equipment (e.g., high-efficiency power supply and cooling system) to maximize its overall energy efficiency. The power usage effectiveness (PUE) value of the data center is only 1.25, lower than the standard value of 1.5 of the U.S. LEED Green Data Center.

Delta constantly improves the energy efficiency of our products and helps our customers realize energy and cost savings. Based on the quantities of Delta's power supplies, DC fans, UPSs, ballasts, inverters, PV cells and more shipped by Delta in 2011 from its Taiwan, China and Thailand plants<sup>11</sup>, customers that used Delta's high-efficiency products saved nearly 3.3 Billion KWH of electricity and reduced carbon emissions by

b. Lighting (LT) and industrial automation (IA) products: the calculation was based on before and after the adoption of these products, with the assumption of load and hours at use under normal situations; For the IA products, we only estimated the energy-saving benefit of inverter products adopted in energy-saving applications (e.g. air-conditioning systems,



Note 11. The estimate is based only on energy-saving products in 2011. The estimation method was as follow :

a. Power supplies and DC fan products: the calculation was based on efficiency improvements compared to 2010, with the assumption of load and hours at use (or standby) mode under normal situations.

### 2.02 Million tons of CO<sub>2</sub>e.

Product Area	Green Products/Solution	Ratio of 2011 revenue
Power Electronics	Power management solutions : for example, the intelligent	
Energy Management	<ul> <li>Renewable energy products : such as solar cells, high-efficiency PV inverters, megawatt-class and small wind turbines, fuel cells, etc.</li> <li>Total industrial automation solutions : for example, multi-axis control system, and more.</li> <li>Electric vehicle charging solution: For example, electric vehicle supply equipment, site management system, charging network management system, and more.</li> <li>Wind power solutions : for example, electric pitch system for MW class wind turbines, pitch control system, and more.</li> </ul>	20.7%
Smart Green Life	<ul> <li>Smart Building solution : Visual factory management system that integrates Delta's energy-saving, renewable energy or industrial automation products.</li> <li>Green IT solutions : for example, a Green IT solution that integrates a UPS system, power configuration, environmental monitoring, air conditioning and other necessary equipment and services for a green data center</li> <li>LED energy saving solutions : Solar LED street lights that integrate wind power generation systems</li> </ul>	16.6%

# Occupational Safety and Health

### Occupational Safety and Health Management Organization

"Provide employees with a safe and healthy work environment" is one of Delta's most fundamental responsibilities as a corporate citizen. A dedicated labor safety department reporting directly to the regional top management was set up by Delta in China where our main production sites are located. For the R&D and administration-oriented offices in Taiwan, an environmental safety & health risk management center reporting directly to

injection molding machines, water treatment and elevator energy-saving).

c. PV cells: the calculation was based on total product capacity shipped in 2011 to estimate the electricity generated under normal conditions.

d. CO<sub>2</sub> emission coefficient: Thailand shipments were calculated by using an electricity emission coefficient of 0.6147kg/kWh. All other plants were calculated by using Taiwan's electricity emission coefficient of 0.612kg/kWh.

the COO is responsible for the planning, execution and auditing of plant safety & health management.

### Occupational Safety and Health Management System

All of Delta's main plants in Taiwan and China have achieved OHSAS 18001 certification. As environmental protection and workplace safety & health are two sides of the same coin in many management issues, Delta is gradually integrating our plants' environmental management system with the occupational safety & health management system. So far the five main plants in China (Dongguan, Wujiang, Wuhu, Chenzhou, Tianjin) as well as the Taoyuan plants in Taiwan have all achieved both ISO 14001 and OHSAS 18001 certification. Delta has also made Disabling Frequency Rate (F.R.)<sup>12</sup> and Disabling Severity Rate (S.R.)<sup>13</sup> the main safety & health management indicators. Annual plant and regional targets have been set along with safety & health audits, safety & health education, regular work environment inspections and improved information exchange in order to effectively reduce the frequency of safety & health incidents. At the monthly inter-plant safety & health meetings, safety & health representatives from each plant discuss incidents related to employees and contractors, analyze the reasons, propose improvements or engineering changes in order to prevent any further recurrence.

### Occupational Safety and Health Audit

Besides internal OSH inspections carried out at each plant in accordance with the law, we also organize cross site audits conducted jointly by OSH committee members and audit personnel. Through complete audit plans, the task force audits ESH documents, the results of risk assessments, ESH control and operations, monitoring and measurement, as well as the work environment, the equipment, and onsite operations to ensure the proper implementation of the OHSAS 18001 management system and identification of potential risks. Targeted accident prevention audits are also implemented at the plants for special or critical equipment. Examples include electrical safety audits using thermal imaging to check for potential electrical hazards, soldering pots, chemical use, surface mount technology (SMT) equipment, specialist equipment, ventilation equipment, contractors' specialist operations such as cranes and fire, EICC

Note 12. Disabling Frequency Rate (F.R.) = Number of disabling injuries x 1,000,000 / total work hours

13. Disabling Severity Rate (F.R.) = Number of days lost to disabling injuries x 1,000,000 / total work hours



- ESH execution, and other specialist checks. The executive directors on each site also convene monthly OSH meetings to review OSH performance.

### Safety and Health Education and Emergency Response Training

Delta conducts ESH training at each of our plants to improve employees' knowledge of occupational safety and health issues. In 2011 for example, our major plants in Taiwan, China and Thailand organized occupational safety and health training, emergency response and firefighting training, and external specialist training for new and current employees. Over 188,000 attendances and over 394,000 man-hours of training were achieved to ensure personnel safety and reduce the impact of accidents.

### Occupational Safety and Health Information Exchange

In addition to regular OSH meetings, the OSH department uses the company intranet and suggestion boxes to convey OSH messages to employees and boost the exchange of OSH information in a timely manner. Employee feedback on OSH issues are also collected and studied. We hope the creation of a smooth, two-way communication channel will help increase employee safety awareness and involvement, and in turn, help ensure the safety and health of all employees.



Wujiang Factory held an emergency evacuation drill.

Dedication to Energy Conservation and Environmental Protection

### Work Environment Inspection

Based on the potential risks at each plant, not only are regular work environment inspections conducted but also the list of material used and exposure to hazardous substances are constantly monitored. The readings are used to correct work practices or make engineering improvements to reduce the risk of occupational illnesses.

### **Employee Health Promotion**

Apart from routine health examinations, Delta also partners with professional medical and health organizations to organize health seminars and consultation at Delta plants. The company also encourages and helps employees with setting up clubs and taking part in healthy sports. Employees can both focus on their work and keep an eye on their current health. Plants continue to promote greening initiatives so employees enjoy "living green" even in their offices. Delta also promises to follow green building principles in all new buildings to maximize employee productivity by providing a healthy and comfortable environment.



"Heart-to-Heart Station" organized lecture series about mind refueling which won the staff favorite. Lecture themes are about emotion management, pressure adaptation, interpersonal relationship to relieve staff pressure, elevating mental energy, and easily facing difficult situations.



The mental health of employees is important to Delta as well. Various facilities and methods are used to help employees relax and unwind. The "Happy Living" initiative at the Wujiang plant for example not only provides a medical clinic but also a library, employee cinema, billiards room, canteen, employee service center and a "Heart-to-Heart Station" staffed by professional psychological counselors. The facilities are aimed at helping employees relax, have fun or improve themselves outside of work.

To realize Delta's corporate mission of "To provide innovative, clean and energy-efficient solutions for a better tomorrow", environmental events are organized frequently by each plant. The Environmental Month Energy-Saving Knowledge campaign at Dongguan plant and the Environmental Protection, Energy-Saving and Safety Slogans Competition at Wuhu plant have all been been enthusiastically received by employees. To celebrate the 40<sup>th</sup> anniversary of Delta, Delta launched a global tree-planting initiative that employees enthusiastically took part in to do their part to help reduce carbon emissions outside of work.



Delta Electronics Group held a series of tree-planting activities to celebrate its 40th anniversary at its global main operational bases and factories. The photos shown are activities held at the Wujiang and Dongguan plants.

### Occupational Safety and Health Management Accomplishments

In 2011, Delta's F.R for the five main plants in China was 0.53 and S.R was 6<sup>14</sup>, realizing the target of F.R<0.8 and S.R<10 for the region. The results were also a significant

improvement on F.R=0.72 and S.R=14 from 2010. The Wujiang plant was also named the safe production unit of the development zone for 2011. Additionally, no occupational illnesses or work-related deaths were reported among the employees or contractors at the above plants.

Note 14. Definitions of F.R and S.R refer to Page 85, Note12 and Note 13.



# **Contributions to Society**

Delta strongly supports environmental protection, technological innovation and education promotion for the sake of human society's sustainable development. Delta is also seeking to make a contribution to society by promoting environmental education, raising awareness of the global warming crisis and popularizing green building concepts.



Delta's total social contributions in 2011 amounted to approximately NT\$370 Million with 67% going to charitable donations <sup>15</sup>, 19% to community investments <sup>16</sup> and 14% to collaborative research projects with universities <sup>17</sup>.

# Campus and Community Environmental Energy Education

### **Delta Energy Education**

2011 marked the fifth year of Delta's "Whole-School Energy Education" program. The program is aimed at providing schools with an integrated, cohesive and balance energy education promotion framework. The program requires the participation of all the different groups in a school including the students, teachers, parents, community, and

Note 15. This consisted mainly of Delta Electronics Foundation's funding to reconstruct the Min-Chuang Elementary School in Namasia district of Kaohsiung City as well as donations for the floods in Thailand and the Japanese Earthquake.

<sup>16.</sup> This consisted mainly of Delta Electronics Foundation's spending on promoting energy education, raising awareness of the global warming crisis, popularizing green building concepts and environmental scholarships.

<sup>17.</sup> This consisted mainly of spending on Delta and academic organizations' joint technology research projects.

Contributions to Society

non-government organizations. Resources from different sectors are therefore brought together to set up the "Whole School Energy Education Expert Team" to help schools adopt a whole-school approach to energy education.



Delta Foundation received 2011 Social Education Public Service Award

Delta has now established a close relationship with 11 elementary and junior high schools in Taiwan that have become Delta's energy education bases. These schools use 30% less energy than normal schools. The outstanding achievements in energy-saving made by the Bihu Elementary School in Taipei City, Minfu Elementary School in Hsinchu City and Jiachang Elementary School in Kaohsiung City led to the Ministry of Education designating them as their regional energy demonstration schools in 2011. At the end of 2011, the accomplishments of the Delta Foundation's projects were also reported at the Low-Carbon Technology Forum in the UK, putting the international spotlight on Taiwan's achievements in energy education.







Wen Elementary School at Taichung.

Bicycle generator set could start the fan, designed by Hui- Students of Min-Fu Elementary School at Hsinchu introduced the principle of power generated by bicycles in the renewable energy demonstration house.

### **Development of Local Energy Teaching Materials**

To introduce the importance of energy and climate change issues to the next generation early, the Delta Foundation, Earth Passengers and the Taipei Municipal University of Education drew on the materials of the overseas Whole-school Approach to Energy Education to develop localized teaching materials for the Taiwan Energy Education Program (TEEP). Starting from learning about the types of energies, students are encouraged to measure the electrical appliances in their everyday life as well as the energy consumed during product lifecycles. This is then used to introduce the concept of the carbon footprint so students can learn to take an active interest in energy-saving at home and at school. They may even help promote carbon reduction among their parents, relatives and friends. The TEEP has now been selected by Penghu County as the official school energy teaching material for developing a Low-Carbon Island.

In 2011, over one hundred Delta employees participated in the TEEP energy education volunteer activities. A total of 126 classes and 3,780 attendances benefited from the TEEP. At the end of 2011, over 50,000 attendances have received the energy education developed by Delta.

Contributions to Society



Delta energy education volunteers and students

### Zero-Carbon Classroom

To help students understand green energy applications, the Delta Foundation set up the "Zero-Energy Classroom" at the Wanfang Elementary School in Taipei City, the Minfu Elementary School in Hsinchu and Jiachang Elementary School in Kaohsiung in 2011. Unlike conventional classrooms powered by electricity from burning fossil fuels, the clean energy for the Zero-Carbon Classroom came from solar power. Each classroom had a capacity of 3.1 kWP and used monitoring software to record power generation and consumption. A carbon dioxide meter, lighting meter and temperature/humidity meter were also installed to log monitoring information and analyze results through an online platform. The data was then incorporated into the curriculum of that school.

As a practical teaching tool for energy education, the Zero-Carbon Classroom not only used the spare rooftop space for power generation but also introduced the concept of energy-saving into the teaching materials. Students were able to see for themselves that solar power is already feasible and also realize that a change in electricity usage habits was crucial to the development of a low-carbon society. Maintaining a good indoor environmental quality in the classroom also helped to boost learning effectiveness.



### 3D Low-Carbon Mobile Movie Truck

The environmental 3D animation "To Face The Truth In Taiwan" that attracted more than a million viewers during the Taipei International Flora Expo was installed in the "3D Low-Carbon Mobile Movie Truck", a joint project between Delta, the National Science Council and the National Taiwan Science Education Center. This was the first mobile 3D movie screening truck in Taiwan and was equipped with a 10,000 lumen high-definition projector manufactured by Delta. Apart from the internal 150" projector screen, back projection can also be used for external audiences, turning the truck into a high-definition movie theater. Screenings were held throughout Taiwan to help bridge the urban and rural divide in environmental education.



and Delta CEO

"Zero carbon" classroom launched by Taipei City Mayor Delta 3D low-carbon mobile movie truck with Delta renewable and energy-saving products

### Global Warming and Climate Awareness

### Energy and Climate Exhibitions

In 2011 Delta and the National Science Council worked jointly to organize the "Aiming High for a Low-Carbon Taiwan" and the "Technologies of the Future" exhibitions. The two exhibitions attracted approximately 500,000 attendances, providing more input on the impacts of climate change and future energy sources. Apart from making extensive use of Delta's projection equipment, Delta also provided advanced exhibits such as suntracking PV systems, pure electric vehicles, electric buses and EV charger stations.

Contributions to Society

Engineers were also stationed as exhibition guides to enhance the effectiveness of energy education.

In the second half of 2011, Delta and the National Palace Museum cooperated on the hosting of the "Dwelling in the Fuchun Mountains" exhibition. Besides the cultural implications, the exhibition coincided with a once-in-a-century drought along the lower reaches of the Yangtze River. The water levels of Poyang Lake and Dongting Lake both dropped to new record lows, making the painting from six centuries ago an unexpected witness to the effects of climate change.

### Large-scale Energy Musical

The energy musical "The Legendary Life of Michael Faraday" created to celebrate Delta's 40<sup>th</sup> Anniversary was written by Wei-hsin Sun, the Director General of the National Museum of Natural Sciences. Featuring a cast of top Taiwanese stage performers such as Berson Wang and Mei-ling Lo, the musical brought energy education to life.

In addition to attracting an audience of 12,000 at the C.K.S. Memorial Hall for Delta's 40<sup>th</sup> anniversary celebrations, two outdoor performances were hosted at the Fulfillment Amphitheater in Taichung and the Kaohsiung Municipal Cultural Center with the cooperation of the National Science Council, National Museum of Natural Sciences and Kaohsiung Bureau of Cultural Affairs. The performances attracted 32,000 attendances in total, making these the largest energy education events in 2011.



The scientific musical opera "The Legendary Life of President Ma visited Delta's electric vehicle show. Michael Faraday" elaborately presented during the celebration events is highly praised by the audience.



### Leveraging the Media

The "Low-Carbon Lifestyle Blog" managed by the Delta Foundation is currently one of the most frequently updated online information platforms for climate issues in Taiwan. The blog attracted around 600,000 views last year and has now been visited more than 2.1 million times. The blog has even expanded into the publishing field and the book "24 Lessons for Low-Carbon Living" was not only recognized with the "2009 China Times Book Review Award" but was also on the 2011 recommended reading list for Penghu County. So far, the book is on the recommended reading list for three local counties and cities <sup>18</sup>.

During all of 2011, the residents of the Taoyuan-Hsinchu-Miaoli region could receive the "Climate Wars in Taiwan" program hosted by the Delta Foundation on the radio station IC Broadcasting at Hsinchu Science Park. On-demand online streaming was also available. "Climate Wars in Taiwan" and another ten programs at IC Broadcasting took part in "The Next 100 Years – Discovering the New Taiwan". The project was named the Best Production for the 2011 Golden Bell Awards, a notable achievement for Delta's first foray into radio broadcasting.

# Promoting Green Building from Inside Out

### **Green Campus**

Energy consumption by buildings accounts for a sizeable proportion of all energy consumption and also produces large amounts of GHG emissions. Delta is not only committed to building only green buildings in the future but also to only donating green buildings. The Y.S. Sun Green Building Research Center (also known as the Green Magic School) built by Delta and National Cheng Kung University were completed in January, 2011, and it was the first zero-carbon building also received the U.S. Leadership in Energy & Environmental Design (LEED) organization's top Platinum certification, the first educational building in Asia to do so. The Y.S. Sun Green Building Center not only makes extensive use of green building materials but it has also achieved full scores from the LEED in "energy-saving", "water-saving" and "innovative design". The Kuo-

Note 18. The other two counties/cities are Kaohsiung City and Miaoli County

#### Contributions to Society

Ting Optics and Photonics Building commissioned in May, 2011, was the first green building at National Central University. The green building design and Central University Lake complement each other perfectly and provides excellent ventilation. The National Tsinghua University's Delta Building completed in October, 2011, not only emphasizes ventilation, natural lighting and sun shade in its energy-saving design but it also installed Delta's PV system and LED lighting equipment to reduce power consumption by at least 20%. The building has now been awarded a Green Building Bronze rating by the Ministry of the Interior.



The Y.S. Sun Green Building Research Center adopts 13 different green NCU Green Building building design methods, including 5 natural ventilation energy-saving methods, 2 equipment reduction methods, and 5 equipment energy-saving technologies and renewable energy technologies.



NTHU Green Building



### Solar Building Design Competition

The 2011 Delta-cup International Solar Building Design Competition asked for organizations around the world to submit their designs for applying solar building technology in the real world. The theme of "Low-carbon Life with Sunshine" was intended to instill the design ideals of solar buildings in the architects of tomorrow. The first prizes in different climate zones



went to the "Vertical Village" created by the School of Architecture at Southeast University and "Six Meters of Sunshine" from the Beijing Jiaotong University. The Vertical Village project will be realized at Tongli Lake in Suzhou, China. The high-tech and green design project will become truly inhabitable low-carbon housing, providing a tangible green building for inspection and validation.

### **Continued Promotion of Green Buildings**

Delta is working with regional community education groups (such as the Tainan School of Adult Education) to train green building guides and help local people understand the implications of green buildings. Even more importantly, this introduces and familiarizes children with green buildings to cultivate green building concepts at the grassroots level. The Delta Foundation is also actively participating in government planning initiatives such as low-carbon cities and communities. By providing past research on green buildings, climate and energy, Delta hopes this will encourage the government to use its budget in a reasonable and effective manner.

### Green Designer Workshop

The Green Designer Workshop organized by the Delta Foundation is the first professional course in Taiwan for training green architects and designers. Held in partnership with the National Taipei University of Technology and the Carbon Neutral Architecture Center, the course realizes the goals of sustainability, LOHAS, energy-saving and waste reduction in green design. The curriculum emphasizes both theory and practice in design. The theoretical component includes "Green Building Theory" and "Green Building Design Strategy" while the practical components include "Total Conversion to Green Building", "Green Building Evaluation System" and "Green Building Case Studies". Visits to actual green buildings are also organized. Towards the end of the course, students are given a real-world example like EMBA courses and asked to apply the knowledge they learnt during the course to propose a practical green building solution. Students are also asked to rate each other's drawings. The 30 students in the 3rd workshop held in 2011 completed 16 classes.

### Towards a Green Economy

### Scholarships and Academic Grants

The Delta Foundation set up an environmental scholarship in 2005 to encourage youths to look for solutions to the environmental issues that mankind is facing today in their own particular fields of expertise. Over the past seven years, the Foundation has sponsored 47 students to pursue master and doctoral degrees in environment-related fields in the UK and the Netherlands. We hope that cultivating environmental protection experts with an international perspective will produce solutions for global issues and boost industrial competitiveness. To encourage the descendants of Nationalist forces left in northern Thailand and to further their education, the Foundation also provides overseas scholarships for overseas compatriot students from Thailand to study in Taiwan. In 2011, a total of 10 overseas students from northern Thailand received scholarships to study in Taiwanese universities and colleges.

The "Delta Corporate Environmental Ethics Research Grant"sponsored by the Delta Foundation and administered by the Chinese Business Ethics Education Association was also launched in 2011. The scholarship is the first research grant program targeted at business environment ethics in Taiwan. As part of the program, two outstanding teachers from business ethics-related disciplines are selected and sponsorship given for short-term overseas research. The assistance helps the candidates expand their knowledge and experience of business ethics and environmental sustainability issues. By promoting grassroots business ethics education in Taiwan, this will ultimately encourage the industry, government and universities to pay more attention to business and environmental ethics. This year's grants were won by Prof. Hsiang-lin Chih from the Department of Banking and Cooperative Management, National Taipei University, and Prof. Long-chuan Lu from the Graduate School of Marketing Management, National Chung Cheng University.





Award ceremony for the 1st "Delta Corporate Environmental Ethics Research Grant" organized by the Delta Electronics Foundation. (From the left) President Chen Sun, Prof. Shih-jyun Syu, Prof. Long-chuan Lu, Prof. Hsiang-lin Chih and Delta Electronics, Vice President & General Manager of Corporate Communications Mr. R.T. Tsai. The research of Prof. Hsiang-lin Chih focused on analyzing whether the inclusion of CSR by foreign institutions into their investment considerations helped to reduce corporate emphasis on short-term gains as well as the link with financial performance. Prof. Long-chuan Lu, the other grant winner, studied the impact of individualism, ethical beliefs and ecological considerations on social sustainability. A particular emphasis was placed on whether green consumer behavior can inspire businesses to use more environmentally-friendly production processes.

### **Delta Power Electronics Seminar**

In 2011, the 11 <sup>th</sup> Delta Power Electronics Seminar was held in Wuhan. More than 260 people including teachers and students from renowned institutions such as Zhejiang University, Xi'an Jiaotong University, Shanghai University, and Beijing Jiaotong University, guests, Delta's top executives and experts took part in the seminar and a total of 42 papers were submitted. Over the last decade, the seminar has served as a broad platform for academic exchanges and has been very influential on power electronics education in China.

Contributions to Society

### Delta Environmental Law Forum

The Delta Environmental Law Forum is an academic symposium on environmental resource and energy law. The mission of the Forum is to promote academic developments in cross-strait environmental resource and energy law. The Forum also hopes to help cultivate talented scholars in environmental law. The first forum was held in 2011 in Beijing. Notable environmental law scholars from both sides of the strait discussed "Environmental Law and Sustainable Development" in terms of current cross-strait developments.

During the Forum's opening ceremony, awards were presented to Prof. Wang Canfa as the "Delta Environmental Law Scholar of 2011" as well as Prof. Qin Tianbao and Assistant Prof. Deng Hai-feng for "Delta Young Environmental Law Scholar of 2011" in recognition of their academic contributions.

### Academic Research

As extreme rainfall caused by global warming poses a serious flooding risk to cities in Taiwan, the Foundation set up a partnership on "Storm Damage Reduction" with the Chinese Association of Low Carbon Environment. The project sought to calculate the vulnerability of Taipei City, Taichung City, Kaohsiung City and Yilan City to extreme rainfall. The Foundation also organized press conferences and seminars to lobby the government to set standards for building water retention and road retention. These would be coupled with an increase in runoff volume for sewer systems to solve the problem of extreme rainfall.

Due to the potential impact of global warming on bio-diversity, the Foundation also sponsored a post doctoral researcher to conduct research related to bird migration and climate change at Yale University. Particular emphasis was placed on the comparison between different islands in the hopes of using the impact on birds to raise the general public's awareness of global warming.

Delta is also working closely with top academic institutions on the development of



pioneering technologies. The joint NCKU-Delta research center set up in 2008 has been focusing its research efforts on medical technology, new energy, energy storage, energy-saving and their management applications. By leveraging the strengths of both parties, it is hoped that scientific and technology research of value to the industry can be developed and make a contribution to human scientific progress, socio-economic progress and the sustainable environmental development of the planet.

## Social Participation and Response

### Disaster Relief for Japan Earthquake

On March 11, 2011, the Tohoku region in Japan experienced a massive earthquake measuring 9.0 on the Richter Scale. The earthquake and the tsunami it triggered caused severe damage with more than 20,000 dead or missing. The nuclear disaster at Fukushima that followed led to widespread social unrest in Japan as well. After the disaster, employees at Delta's Japan subsidiary (DEJ) immediately donated 2 Million Yen to the Japan Red Cross. Donations of disaster relief supplies from Delta employees such as blankets, food and drinking water were also quickly delivered to disaster victims in Iwate and Miyagi Prefecture. The Delta Group also launched an employee fundraising drive that raised NT\$3,490,000 for the Delta Foundation. The donations went into the "Japan Disaster Relief Project" of the Delta Foundation that then worked closely with DEJ to assist with post-disaster reconstruction efforts in Japan's Tohoku region.



Delta Japan's general manager provided Delta products to Japan tsunami victims.

Delta donated dental care apparatus to the disaster area

Contributions to Society

### **Disaster Relief for the Thailand Floods**

In 2011, Thailand experienced its worst floods in half a century. Two straight months of torrential rains flooded 80% of the administration regions in Thailand, damaged more than 700,000 buildings, left more than a million people homeless and caused incalculable financial damage. The Delta Foundation and Delta Electronics Thailand (DET) launched a joint "Thai Floods Donation Drive" and raised more than NT\$1,000,000. The Foundation then set up a "Thai Disaster Relief Program" to work closely with DET to deliver aid from Delta employees to Thailand's disaster regions. DET employees also organized a volunteer group to help repair the Bang Pa-In Rachanukroh 1 School, one of the disaster-affected schools.



As a result of flooding, school classrooms were filled with mud, while the walls, tables and chairs were damaged and stained as well. Over 100 DET volunteers arrived early in the morning to repair the furniture and clean the classrooms. The thought of being able to help students get back to school as soon as possible gave DET volunteers a strong sense of achievement despite the backbreaking work.

# Post-Disaster Reconstruction of Min-Chuang Elementary School in Namasia, Kaohsiung

In 2009, Typhoon Morakot flooded southern Taiwan with nearly 3000 mm of rainfall. Delta founder Bruce Cheng believes that mankind must learn how to live in harmony with nature, and to this end, the Delta Foundation and Delta Group donated NT\$500 Million to help the government rebuild elementary/junior high schools in the disaster area and transform them into comfortable, healthy green buildings.

After conducting a safety assessment of the new site, Delta immediately set about rebuilding the Min-Chuang Elementary School in the Namasia district of Kaohsiung



City. As the Min-Chuang Elementary School is located 8km away from the village and only accessible by an agricultural road, this made the transportation of construction materials very difficult. Construction was also delayed when the No. 21 Taiwan Highway was washed out twice, cutting links with the lowlands. Eventually, Delta's active coordination as well as round-the-clock construction finally saw the building permits issued in 2011. In February, 2012, the new elementary school buildings were completed and commissioned. The rebuilt campus is not only expected to achieve the top rating of Green Building certification in Taiwan (Diamond rating) but also has a stand-alone library that incorporates solar and wind power systems provided by Delta. The library will be essentially "Net-Zero" in terms of energy consumption, setting an example for the next-generation "Green Campus". The construction team also paid attention to biodiversity indicators during design and construction. As indigenous townships usually enjoy relatively abundant ecological resources, local plants were left on campus where possible to preserve the local eco-system and reduce environmental impact. Methods used include no asphalt paving on campus, using local boulders in the foundation to tamp down the ground, setting up eco-ponds, providing habitats, introducing indigenous plants and preventing light pollution from buildings at night. Delta will continue to promote green building ideals and support reconstruction efforts in the disaster area.



Delta builds the first "sustainable zero energy consumption library"

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Environment	EN20	NOx, SOx, and other significant air emissions by type and weight.	Green Operations	64	
	EN21	Total water discharge by quality and destination.	Green Operations	64	
	EN22	Total weight of waste by type and disposal method.	Green Operations	64	
	EN23	Total number and volume of significant spills.			There was no significant spill in 2011.
	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	Green Design Green Product/Service Innovation	79-82 82-84	
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	Green Design	79-82	
	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	Reducing Environmental Impact from Our Operations	76	
	Labor Prac	ctices and Decent Work Management Approach	Employee Policy Employee Communication Employee Training and Development Occupational Safety and Health Management System	35-37 37-39 39-42 85	
	LA1	Total workforce by employment type, employment contract, and region.	Employee Overview	34	
	LA2	Total number and rate of employee turnover by age group, gender, and region.	Employee Retention	42	
Labor Practices and Decent Work	LA4	Percentage of employees covered by collective bargaining agreements.	Employee Communication	37-38	
VVOIK	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.			Delta is compliant with the local labor laws/regulations across all organizations.
	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of workrelated fatalities by region.	Occupational Safety and Health Management Accomplishments	88-89	
	LA8	Education, training, counseling, prevention, and risk- control programs in place to assist workforce members, their families, or community members regarding serious diseases.	Safety and Health Education and Emergency Response Training Employee Health Promotion	86 87-88	

#### Index of GRI G3 Indicators

Aspec	Indicator	Description	Section	Page	Note
	LA10	Average hours of training per year per employee by employee category.	Employee Training and Development	39-42	
Labor Practices and Decent Work	LA13	Composition of governance bodies and breakdown of employees per category according to gender, age group, minority group membership, and other indicators of diversity.	Employee Overview	34-35	
	LA14	Ratio of basic salary of men to women by employee category.	Salary and Benefits	38-39	
	Human Rig	hts Management Approach	Employee Policy Employee Communication Supplier Selection Strategy EICC and Other Environmental/ Social Issues	35-37 37-38 51-52 53-54	
	HR1	Percentage and total number of significant investment agreements that include human rights clauses or that have undergone human rights screening.			We consider geography, infrastructure, human resources, environmental regulations, labor regulations, labor union status and more in our significant investment agreements.
	HR2	Percentage of significant suppliers and contractors that have undergone screening on human rights and actions taken.	Supplier Selection Strategy	51-52	
Human Rights	HR4	Total number of incidents of discrimination and actions taken.	Employee Policy	35-37	There was no incident of discrimination in 2011.
	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.	Employee Policy Employee Health Promotion	35-37 87-88	
	HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor.	Employee Policy	35-37	
	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.	Employee Policy Employee Communication	35-37 37-38	
	Society Ma	nagement Approach	Ethical Standards Contributions to Society	31-32 90	
	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.	Reducing Environmental Impact from Our Operations Post-Disaster Reconstruction of Min-Chuang Elementary School in Namasia, Kaohsiung	76 103-104	
	SO2	Percentage and total number of business units analyzed for risks related to corruption.	Risk Management Ethical Standards	29-31 31-32	
Society	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	Ethical Standards	31-32	
	SO4	Actions taken in response to incidents of corruption.	Ethical Standards	31-32	
	SO5	Public policy positions and participation in public policy development and lobbying.	Promoting Green Building from Inside Out Towards a Green Economy	96-98 98-102	
	SO8	Monetary value of significant fines and total number of non-monetary sanctions for non- compliance with laws and regulations.			In 2011, Delta did not suffer any significant monetary fine and/or non- monetary sanction due to violation of laws or regulations.



Aspec	Indicator	Description	Section	Page	Note
	Product Re	esponsibility Management Approach	Perseverance in technical R&D and continued pursuit of innovation Green Products and	44 79-82	
			Services		
	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.	Green Products and Services	79-82	
Product Responsibility	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	Green Products and Services	79-82	
	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.			Our marketing communication complies with relevant laws such as Fair Trade Act. For example, we address antitrust/ anticompetitive policy in Delta's CoC and provide specific antitrust trainings to all employees around the world.
	compliance with la	Monetary value of significant fines for non- compliance with laws and regulations concerning the provision and use of products and services.	Green Products and Services	79	

In the 2012 CSR Report, we will describe our progress on CSR topics. If you have any comments or suggestions regarding this report or Delta's CSR activities, please do not hesitate to contact us at CSR@delta.com.tw. We will respond as soon as possible. Thank you.

# Third Party Assurance Letter



Our responsibility is to express an opinion on the text, data, graphs and statements within the scope of verification set out below with the intention to inform all DELTA's stakeholders.

The SGS Group has developed a set of protocols for the Assurance of Sustainability Reports based on current best practice guidance provided in the Global Reporting Initiative Sustainability Reporting Guidelines. These protocols follow differing options for Assurance depending the reporting history and capabilities of the Reporting Organisation.

This report has been assured at moderate level of scrutiny using our protocols for:

- evaluation of content veracity; and
- evaluation of the report against the Global Reporting Initiative Sustainability Reporting Guidelines (2006).

The assurance comprised a combination of pre-assurance research, interviews with relevant employees at headquarter of DELTA in Taiwan; documentation and record review and validation with external bodies and/or stakeholders where relevant.

Financial data drawn directly from independently audited financial accounts has not been checked back to source as part of this assurance process.

#### STATEMENT OF INDEPENDENCE AND COMPETENCE

The SGS Group of companies is the world leader in inspection, testing and verification, operating in more than 140 countries and providing services including management systems and service certification; quality, environmental, social and ethical auditing and training; environmental, social and sustainability report assurance. SGS Taiwan affirms our independence from DELTA, being free from bias and conflicts of interest with the organisation, its subsidiaries and stakeholders.

The assurance team was assembled based on their knowledge, experience and qualifications for this assignment, and comprised auditors registered with QMS, EMS, SMS, EnMS, GPMS, SA 8000, GHG Verification Lead Auditors and experience on the SRA Assurance service provisions.



#### **VERIFICATION/ ASSURANCE OPINION**

On the basis of the methodology described and the verification work performed, we are satisfied that the information and data contained within DELTA's Corporate Social Responsibility Report of 2011 verified is accurate, reliable and provides a fair and balanced representation of DELTA sustainability activities in 01/01/2011 to 12/31/2011. Some statements and data within the scope were not assured due to lack of accessible records during the timescale allowed for assurance, and these are clearly marked throughout the text.

The assurance team is of the opinion that the report can be used by the Reporting Organisation's Stakeholders. We believe that the organisation has chosen an appropriate level of assurance for this stage in their reporting. The report is the first to be assured by an independent assurance team and DELTA has taken a bold step by offering the report to evaluation against Global Reporting Initiative's G3 guidelines. This shows a deserved confidence in their reporting process.

In our opinion, the contents of the report meet the requirements of Global Reporting Initiative G3 Application Level  $A^*$ .

# GLOBAL REPORTING INITIATIVE REPORTING GUIDELINES (2006) CONCULSIONS, FINDINGS AND RECOMMENDATIONS

#### Principles, Standard Disclosures and Indicators

The report, DELTA's Corporate Social Responsibility Report of 2011, is adequately in line with the Global Reporting Initiative G3 application level A+. The principle of stakeholder inclusiveness may be further enhanced. Contents of Disclosure on Management Approach may have more clearly defined long-term and/or intermediate goals for each aspect. It is also recommended to have more disclosure on the performance of supplier chain management, by gender and by significant operational region.

Signed: For and on behalf of SGS Taiwan



Dennis Yang, Chief Operating Officer Taipei, Taiwan 28 May, 2012 WWW.SGS.COM

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