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A landscape photograph showing rolling green hills under a blue sky with white clouds. In the foreground, there is a field of yellow flowers. On the left side, there is a large green leaf graphic.

# CSR Report 2005



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# Letter from the Chairman

## Dear Friends,

I am pleased to present this first annual Corporate Social Responsibility (CSR) report from Delta Group. CSR is gaining ground in corporations around the world and Delta Group wholeheartedly endorses the principles behind this most worthy movement. Our corporation is not an island; we are a part of society at large. As such, we have a responsibility to run our business in an ethical manner and to take into account our impact on the world around us, including the earth's environment, the community, and our shareholders, customers, employees, suppliers, and other stakeholders.

**While this is** our first attempt at codifying our responsibilities, Delta is no stranger to many of the concepts that are published here. For corporate governance, Delta has long made efforts to increase transparency and accountability to our shareholders. I am delighted to say that the esteemed Asset Magazine presented their Corporate Governance award to Delta in 2004. In regards to employee welfare, Delta has always endeavored to maintain a safe and rewarding workplace, and we have held OHSAS 18001 certification for many years.

**Since Delta** is a company that specializes in energy-related products and solutions, environmental issues have always been especially dear to my heart. A recent study by 1,300 experts from 95 countries called the Millennium Ecosystem Assessment revealed that 60 percent of the ecosystems that support life on earth are being used unsustainably, and will seriously affect human progress and well-being. We must address these issues with particular urgency before it is too late.



Bruce C. H. Cheng, Chairman and Founder



Delta Headquarters, Taipei, Taiwan

**At Delta** we realize our special responsibility to the environment and we are involved on many fronts. Delta has steadily increased the efficiency of our power supply products and has introduced energy saving features in ballasts, AC motor drives, renewable energy inverters, and fuel cell components. In manufacturing, Delta has implemented green, lead-free production and recycling and waste management programs for many years, and we are a certified Sony Green Partner.

**Environmental and energy** issues are not only a major focus of our product development and manufacturing; they have also become a part of our daily lives. For example, to reduce Delta's energy consumption we have solar panels on the roof of our headquarters to generate electricity, and solar heating systems and recycling systems for burn-in processes at our production facilities. We are also actively pursuing green building structures for the construction of our new design centers in Taiwan and Shanghai. In 2004 Delta furthered environmental efforts by forming a joint venture with ITRI to aggressively enter the solar cell business and contribute to the development of alternative energies.

**We at Delta are determined** to fulfill our responsibility to our stakeholders, society, and to the earth's environment. In this report you will read about the issues we face and the solutions we provide. I look forward to hearing your candid opinions on our CSR efforts and your suggestions on how we can improve. I am confident that our newly initiated CSR program will bring about many positive and beneficial changes to our organization, and help Delta become an even better global citizen.

Chairman  
Chief Environmental Officer



# Letter from CEO

## Dear Friends,

I am proud to share with you Delta Electronics' first Corporate Social Responsibility (CSR) report. This initial edition presents the policies that guide Delta in our interactions with society and our stakeholders, and provides a brief overview of Delta's approach to the major CSR issues: management, people, and the environment. I sincerely believe CSR is beneficial to Delta and our stakeholders, and our progress in these areas will make a positive contribution to our financial results and market value.

**Delta is** continuously striving to strengthen management systems and to improve corporate governance and transparency. Our responsibility to our shareholders is to provide effective management that maximizes Delta's value. We are dedicated to maintaining efficient and transparent operations, and managing Delta in the best interests of all stakeholders.

**People issues** have gained the attention of the global electronics industry, and it is on the top of the agenda for many of our customers. As the world grows smaller, Delta must uphold global standards that are meant to ensure the welfare of not only our company's employees, but also the employees of our suppliers and other partners. We are strongly committed to addressing these issues.

**As a world-leading** power management company, Delta has a special interest in the areas of environmental protection and energy saving. Of all the problems facing the world today, the need for energy resources is the most critical. Oil prices are rising at an astounding rate and people everywhere are feeling the pressure. Many people are concerned about whether global energy production can possibly keep up.



Yancey Hai, Vice Chairman and CEO



Green Energy From the Sun at Delta Headquarters

**Delta Electronics** made its name in power supplies and has prospered as a maker of power products. Today the world is facing a crisis of an accelerating depletion of non-renewable energy resources, which we cannot ignore. Delta is striving to provide increasingly efficient and environmentally-friendly solutions by developing new products and technologies. Saving energy and contributing to a greener environment is both our starting point and our goal; this is the belief we are instilling throughout our organization.

**While this is Delta's first CSR report,** in the past we have long maintained a commitment to the issues of the environment, corporate governance, and social responsibility. This and subsequent CSR reports are intended to document our progress in these vital areas. I assure you that Delta Electronics is working hard to fulfill both our corporate mission and the expectations of all of our stakeholders.

  
Vice Chairman and CEO



**Delta Electronics recognizes that our business has a direct impact on many sectors of society and on the global environment, and that responsible business practices are a key element of our continued success.**

**With this first CSR report Delta continues to define our responsibilities and to pursue our goal of making the world a better place for all.**



Fishpond at the Entrance of Delta Headquarters



# CSR Policy

## As a responsible global citizen, Delta strives to:

- Comply with all applicable laws and regulations wherever we do business
- Increase corporate value through innovation and sound business practices
- Enhance and maintain high standards of corporate governance
- Provide our people with a safe and rewarding workplace
- Be good neighbors and make positive contributions to our communities
- Advocate environmental policy as part of our general management process, which includes:
  - Minimizing our overall impact on the environment
  - Manufacturing energy-saving products to conserve the earth's resources
  - Promoting recycling and reusing materials whenever possible
  - Eliminating hazardous substances from our products
  - Preventing pollution through waste and emissions management
  - Communicating environmental issues through company-wide programs
- Improve CSR activities through continuous effort and follow-up
- Monitor our CSR performance regularly and communicate our progress to all interested parties.



Rooftop Garden at Delta Headquarters

# Management

**Delta has experienced broad success and rapid growth over the past decades due to effective management. Maximizing corporate value on behalf of all stakeholders is a major part of Delta's social responsibility. To this end, Delta is strengthening all management systems, including corporate governance, to enhance responsive decision-making, transparency, accountability, and sound management.**



Delta's Boardroom with Global Videoconferencing

# Corporate Governance

To Delta, quality corporate governance is our primary responsibility to ensure the Company is operating in the best and balanced interest of all stakeholders. We believe that stakeholders' rights can be best protected through not only an independent and accountable board but also through timely disclosure of accurate information. As a result, Delta has reconfigured its board composition and separated the roles of Chairman and CEO to enhance the functioning of the board. In addition, we have initiated the disclosure of consolidated financial information and have institutionalized periodic analyst meetings to ensure information is accurate and delivered to all investors in a timely manner.

## Introduction of Independent Directors and Supervisors

Delta reorganized its board composition in 2003 by introducing two new independent directors, Mr. Lo, Y.C. and Dr. Fred Lee, and one new independent supervisor, Professor Huang, Chung-Hsing. Mr. Lo served on the board of Philips for several years and has extensive experience and insight into international business management. Dr. Lee is president of Delta Power Electronics Center (DPEC) in Shanghai. A widely respected expert in power electronics with extensive knowledge of the power industry, Dr. Lee is also a distinguished professor at Virginia Polytechnic Institute and State University and director of the Center for Power Electronics Systems in the U.S. Professor Huang, now with the College of Management at National Taiwan University, has both industry experience and excellent academic achievements in business and operational management.

Delta's board now consists of nine directors and two supervisors. To enhance responsibility and accountability of the board, board meetings are held at least once every quarter to review business performance as well as address major strategic issues.



Corporate Governance Award for 2003  
from Asset magazine



## Separation of Chairman and CEO Roles

With the appointment of the new CEO, Yancey Hai, on January 1, 2004, Delta officially separated the role of CEO from the Chairmanship to empower the board with sufficient independence to oversee management on a structural basis. As the tasks of the chairman and the CEO are different and potentially conflicting, we believe by separating these two roles the function of the board is significantly enhanced and the management of the Company is more objectively supervised.

## Timely and Transparent Information Disclosure

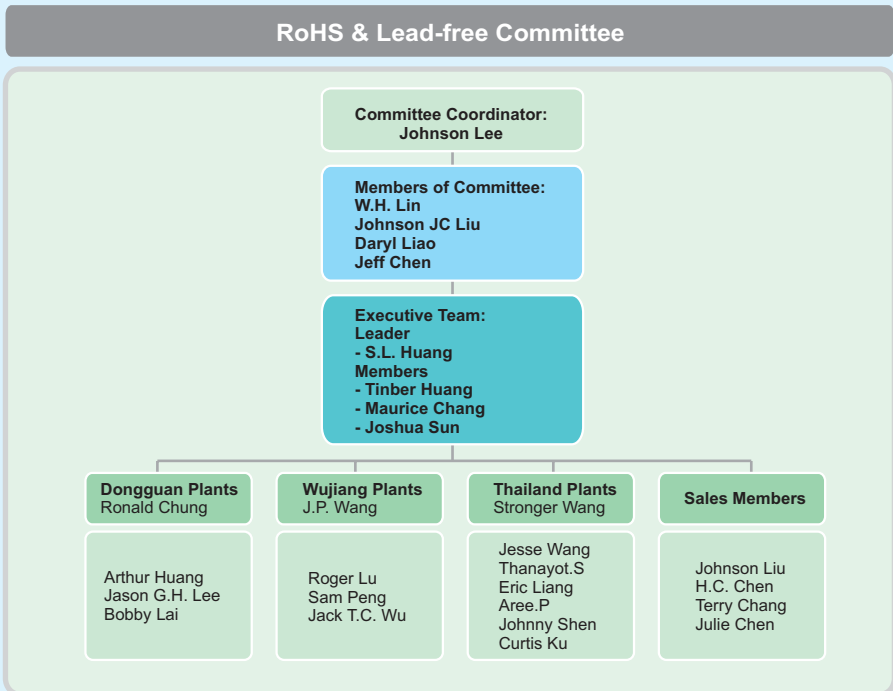
Besides complying with all reporting requirements ordered by the Taiwan Stock Exchange, Delta is the first and so far the only listed company in Taiwan to publish semi-annual consolidated financial statements to give investors a complete and accurate picture of the Company's operational results. In addition, analyst meetings are held quarterly to discuss business performance and exchange information with institutional investors to ensure accurate information is delivered to all shareholders in a timely manner.

Our efforts in realizing quality corporate governance are widely recognized. Delta was rated as one of the companies having the best corporate governance in the Asia Pacific region by Asset Benchmark Research in December 2003. Going forward, Delta will continue to enhance our practice in corporate governance to sustain our commitment of efficient and transparent operations to all stakeholders.



Delta Headquarters Entrance

# CSR Organization



# Delta Group Overview

## Corporate Data

Established 1971

Worldwide revenues US\$ 3,012 million (Year ended December 31<sup>st</sup>, 2004)

- Delta Group is the world's leading switching power supply manufacturer and a major supplier of video displays and electronic components for the computer, telecommunications, networking, and other industries.
- With vigorous business growth over the past decade, Delta Group expects to achieve US\$3.621 billion in worldwide sales in 2005. Currently, Delta Group has sales offices worldwide and manufacturing plants in Taiwan, Thailand, China, Mexico and Europe.

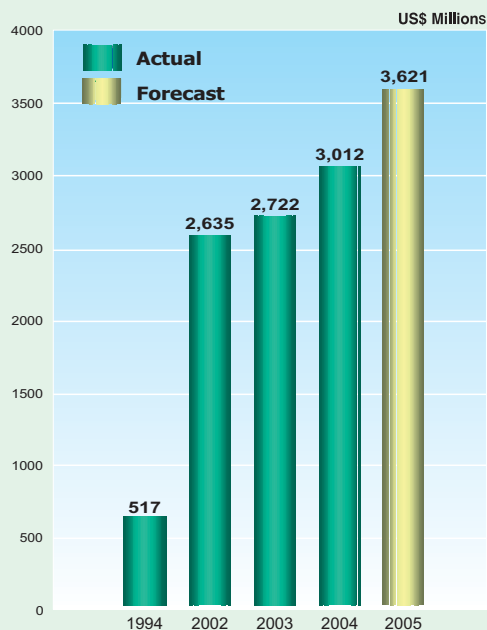
The Delta Group is a leading world-class provider of:

- Power management solutions (World's No.1 in switching power supplies)
- IT, telecom, consumer, and automotive electronics components
- Visual displays including microdisplay PTVs
- Networking and wireless solutions

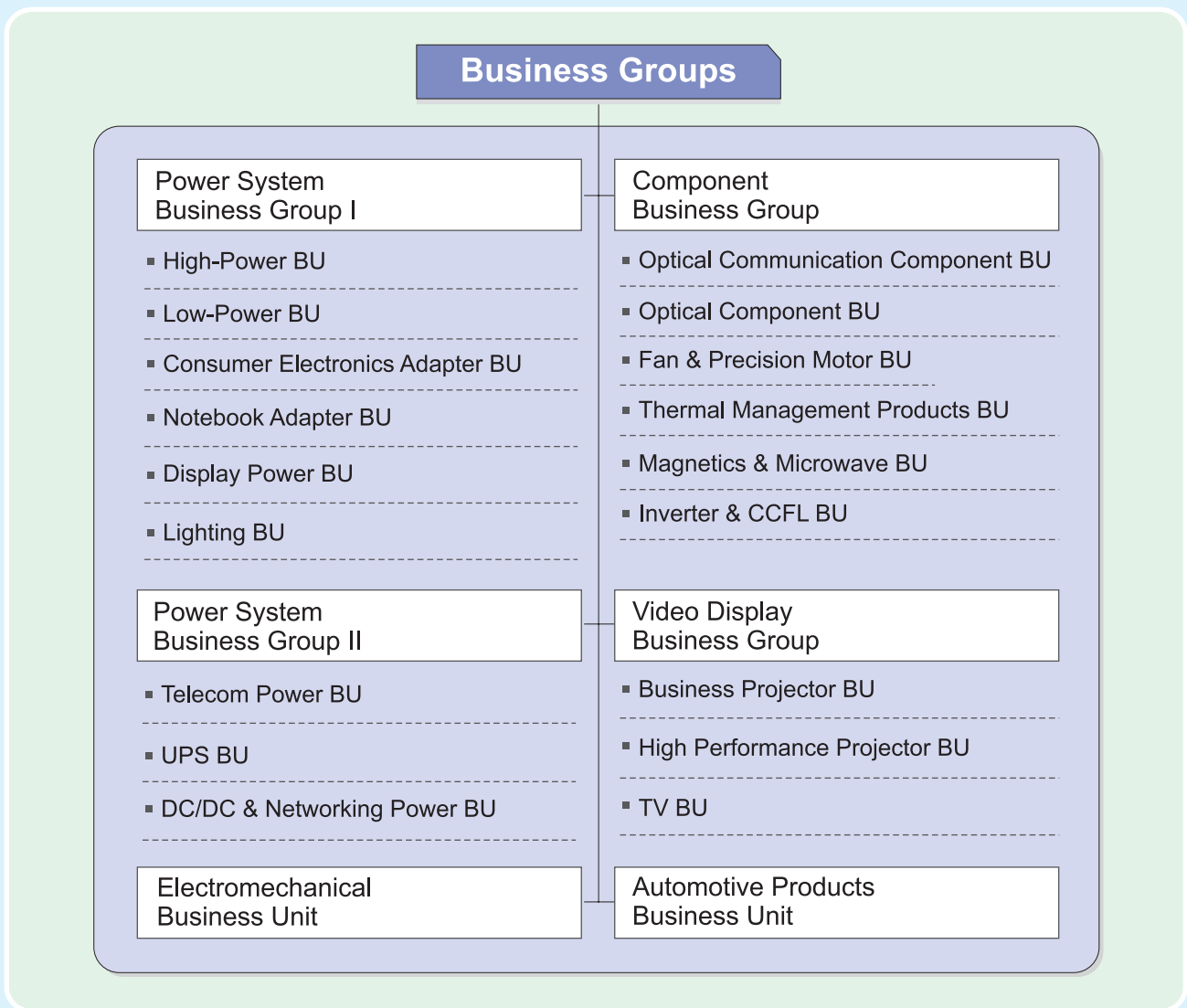
### Worldwide Revenues

**CAGR : 18%**

Revenues have increased  
over **seven** times since 1994



## Delta Business Groups





## Customer Recognition



2005  
SONY  
Special Quality Recognition



2005 & 2004  
Microsoft  
Premier Vendor



2004  
Cisco  
Supplier of the Year



2004  
Microsoft  
Vendor of the Year



2004  
HP  
Certificate of Appreciation



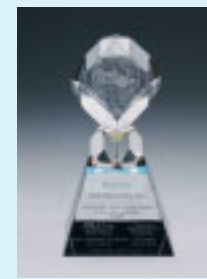
2004  
Cisco Systems appreciation  
award



2004  
NEC appreciation award  
for outstanding quality



2004  
Eaton appreciation award



2003  
Intel vendor award  
in recognition of excellent  
support



2003  
Rockwell appreciation award  
for outstanding performance



2002  
SONY appreciation award  
for supporting PS2  
manufacturing



2001  
Fujitsu vendor award  
in appreciation of  
outstanding contributions



2000  
HP innovation award



2000  
GE appreciation award  
for distinguished supplier



1999  
DELL platinum supplier  
award for best overall  
performance

# Delta and People

**Delta has an obligation to all the people who hold a stake in our business, including our shareholders, customers, suppliers employees, and local communities. Whether it is increasing corporate value, creating innovative high-value products, or providing a safe and rewarding workplace, Delta strives to fulfill our commitments to our stakeholders.**



Employees at the Delta Lab in Research Triangle Park, NC, USA



Chairman Bruce C.H. Cheng Addressing the Annual Shareholder Meeting

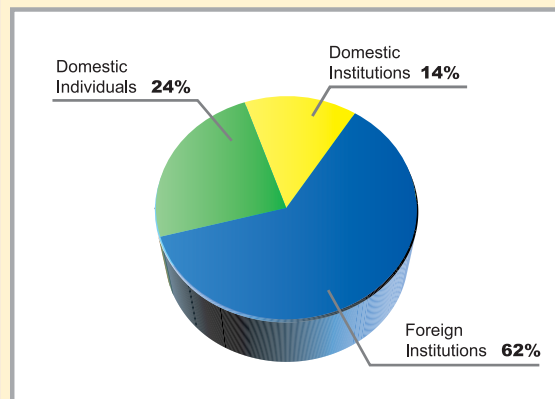
## Shareholders

**Delta Electronics** is obliged to provide timely, fair, and accurate disclosure of corporate information to shareholders in compliance with legal requirements and to actively communicate with shareholders. This increases transparency of management and its strategies, and strengthens the investment community's understanding of Delta and its corporate value.

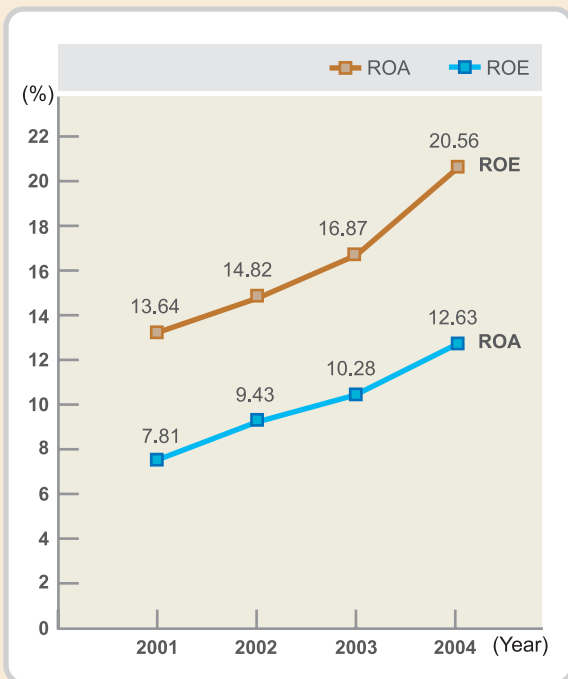
**Delta Electronics, Inc.** listed its shares on the Taiwan Stock Exchange in December 1988. As of the end of March 2005, Delta had a total of 54,349 shareholders, 62% of the shares were owned by foreign institutional investors, 14% by local institutions, and 24% by local individual investors. Foreign ownership is among the highest of Taiwanese listed stocks, which indicates the high regard of professional investors for Delta Electronics.



**To provide timely,** fair and accurate information is Delta's basic disclosure policy. Delta was the first to voluntarily prepare consolidated quarterly financial reports for investors before all other Taiwan listed companies. In an effort to broaden the audience for our Investor Relations information, we set up a dedicated IR website in both English and Chinese, structured to emphasize communication with investors, offering up-to-date corporate news, financial numbers, and share price information, with IR contact information.



Shareholder Distribution (2005/04)



ROA-Return on Asset  
ROE-Return on Equity

**Delta conducts analyst** meetings each quarter after quarterly financials are approved by the Board of Directors, which provides an opportunity for direct dialogue between the investment community and management. Any feedback from investors is used to improve our management and IR activities.

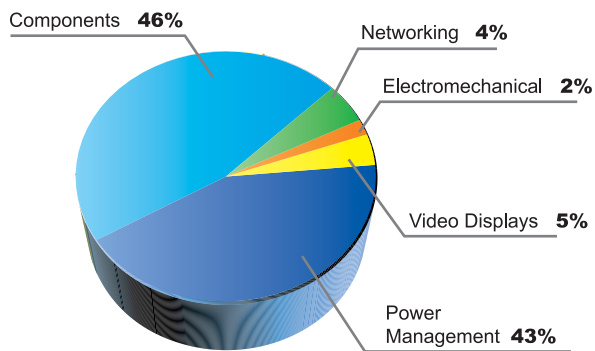
**At the same time,** Delta pays substantial attention to corporate governance. Currently, an independent director and an independent supervisor hold seats on the board and provide continuous input on how corporate strategies can create maximum long-term benefits for shareholders. The board members also attend programs for corporate governance laws on a regular basis. Last but not least, the Company has set up internal control rules and a dedicated internal audit team to comprehensively review any risk the Company may be facing.



# Employees

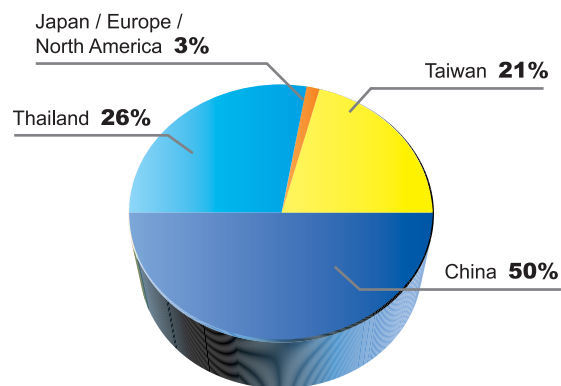
**Delta Electronics'** employees are involved in the following business sectors: power management, components, video displays, networking, and electromechanical. Employees are located mainly in Taiwan, China, and Thailand, with a small percentage in Japan, Europe, and North America.

## Employees by Business Segment



Global Employees per Business Segment

## Staff by Geographic Segment



Global Staff Distribution



# Employment Policy



Delta Coffee Shop

**Delta believes that all employees should be treated with dignity and respect. It is Delta's policy to adopt sound labor and employment practices and to treat any employee or applicant in compliance with the applicable laws and regulations of the countries and regions in which it operates. In accordance with this, Delta is committed to upholding the internationally recognized human rights of workers as follows:**



Delta Snack Bar

## Labor

- 1) Forced labor and child labor is prohibited. Workers should be free to leave upon reasonable notice. Workers under the age of 18 should not perform hazardous work.
- 2) The workforce shall be free of harassment and unlawful discrimination. Any employee or applicant shall not be discriminated against based on race, religion, color, national origin, age, sex, disability or other factors that are unrelated to the legitimate business interests of Delta.
- 3) Compensation paid to workers shall comply with all applicable wage laws and local practices. This includes those relating to minimum wages and legally mandated benefits.

## Work environment and occupational health & safety

- 1) Occupational injury and illness procedures and systems are in place to manage, track and report occupational injury and illness. Worker exposure to chemical, biological and physical agents is to be identified, evaluated, and controlled.
- 2) Worker exposure to workplace safety hazards (e.g., electrical and other energy sources, fire, vehicles, slips, trips and fall hazards) are to be controlled through proper design, engineering and administrative controls, preventative maintenance and safe work procedures.
- 3) Emergency situations and events are to be identified and assessed, and their impact minimized by implementing emergency plans and response procedures, including: worker notification and evacuation procedures, worker training and drills, appropriate fire detection and suppression equipment and adequate exit facilities.



Delta Employees Participate at a Sports Meet



# Training & Development



Technology Sharing at a Delta Seminar

Delta values people as our most important asset and provides training and development programs to enable employees to perform up to their potential. We offer programs designed to satisfy a variety of needs and employees working in different countries and areas of our business, from the training aimed at improving the skills set of individual workers to the leadership competency development of management.

## Objective

We offer training & development programs to foster essential knowledge, skills, attitudes and competencies of employees for achieving business goals and to enable employees to reach their career goals at Delta.

## Training & Development System

- 1) **Orientation**—  
Newcomer Orientation, New Manager Orientation
- 2) **Professional/Functional Training**—  
Marketing/Sales, Development & Engineering, Finance/Administration, Logistics/Purchasing, IT etc.
- 3) **Management Development**—  
Middle Management and Senior Management Programs
- 4) **Generic Training**—  
Company Values, Customer Satisfaction, Quality, Safety & Health
- 5) **Shop Floor Training**—  
Workstation Skills Set Training
- 6) **Issue-oriented Training**—  
Business Issue Workshop/Seminar
- 7) **Self Development**—  
Language Programs, E-learning



Award Presentation at the Annual Employee Dinner



# Delta and the Environment

**As a world leader in power management solutions,  
Delta Electronics has a unique perspective on  
the importance of our natural resources.**

**We realize that Delta has a special responsibility in  
preserving the earth's bounty to ensure that human progress  
continues into the future.**

**Our corporate mission:**

**"To provide innovative energy-saving products for a better  
quality of life."**



Delta Headquarters, Taipei, Taiwan



# Environmental Policy



Solar Panels on the Rooftop of Delta Headquarters

As a power management company with products manufactured and sold throughout the world, Delta Electronics recognizes our special responsibility to the global environment. Delta strives to make environmental policy an integral part of our general management process. The basic environmental principles to which we adhere include the following:

## **Minimizing our overall impact on the environment**

Delta is continuously working towards minimizing the impact of our enterprise on the environment by cutting the waste from our manufacturing processes, reusing and recycling materials, and improving the environmental-friendliness of our products. We are committed to reducing the negative environmental changes and increasing the positive environmental changes that result from Delta's activities.

## **Manufacturing energy-saving products to conserve the earth's resources**

As a world-leading power management company, Delta has a special responsibility towards developing and manufacturing energy-saving products. This is acknowledged directly in the corporate mission statement that guides Delta: "To provide innovative energy-saving products for a better quality of life."

## **Reducing and eliminating hazardous materials in our products**

Delta is making a systematic effort to reduce and eliminate hazardous materials from our products. We work with suppliers and customers to define needs and implement solutions to track, manage, and discontinue the use of these substances.



### Promoting recycling and reusing materials whenever possible

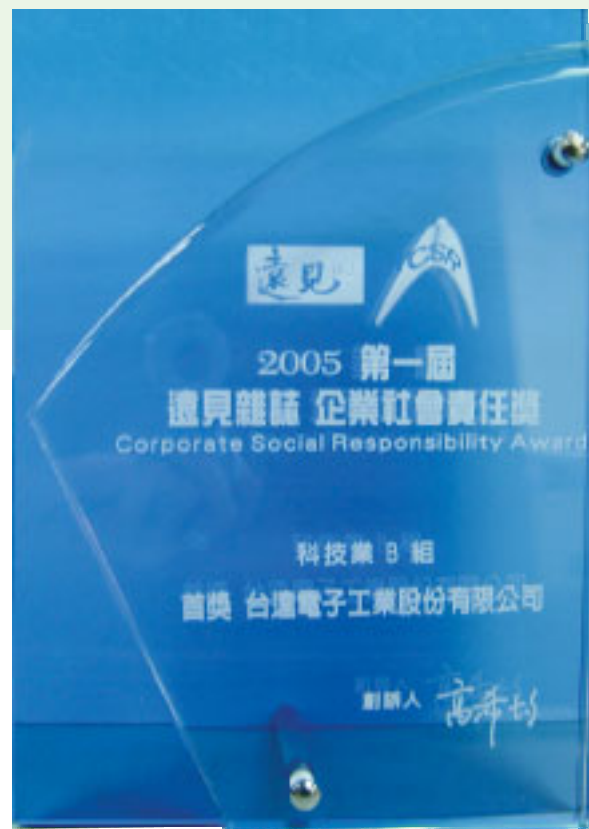
Delta strives to recycle and reuse as much waste and materials as possible. We consider waste as a resource and waste management as an opportunity for community development and environmental improvement. Reducing waste is the responsibility of every Delta business unit and employee.

### Preventing pollution through waste and emissions management

Delta strictly manages chemical substances and waste materials to prevent environmental pollution. We actively reduce waste emissions at our plants to minimize environmental impact and improve resource productivity.

### Communicating environmental issues through company-wide programs

Delta implements environmental training programs throughout the company to address regulatory issues and minimize Delta's impact on the environment. Personnel in jobs that affect the environment are provided with effective education, training, and experience.



Delta Received Global Views Magazine  
First Annual CSR Award In 2005

# Products for the Environment



Energy-saving Bulk DC Power Plant

## Power Management

Delta's power management solutions, from Bulk DC Power Plants to laptop adaptors, are all engineered for maximum energy savings. Other products include lighting ballasts that store energy for later use, and solar inverters for utilizing the sustainable energy of the sun.



Radiation-free Video Wall

## Visual Displays

The microdisplay-based visual display products provided by Delta offer many benefits to the consumer as well as the environment, including low energy consumption and no harmful UV light emissions.



DLP TV

## Components

Delta's brushless fans and precision motors are used in a wide range of applications, including IT devices, audiovisual equipment, home electric appliances, industrial machinery, and automobiles. We are active in improving the environmental friendliness of these products by lowering power consumption, increasing operating life, and reducing running noise.

Delta manufactures backlight devices for LCDs used in televisions, computer monitors, automotive monitors, and portable DVD players. These devices use cathode fluorescent lamps (CCFL) which in addition to high brightness, offer low energy consumption and a long product life. Longer and larger CCFLs are required for today's large screen televisions. Delta has responded by developing transformers to significantly lower power consumption and improve reliability.



DC Brushless Fans

## Industrial Automation

Variable speed AC motor drives and programmable logic controllers have thousands of energy-saving applications for industrial and commercial use, such as in air conditioning. Temperature controllers are found in many industrial processes saving energy where precise heating and cooling control is required.



AC Motor Drives

# New Technologies for the Environment

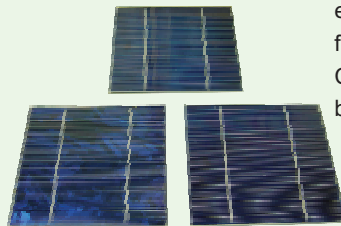
## Solar Energy

DelSolar Co. Ltd. is a new subsidiary of Delta Electronics established to explore a vast and renewable resource of power— solar energy. In strategic cooperation with the Industrial Technology Research Institute (ITRI), DelSolar has the most advanced and experienced solar cell technology team in Taiwan. DelSolar's product line has extended from incumbent PV inverters upward to solar cell production. Initial products include single crystalline and poly-crystalline solar cells, and production capacity is projected for 25 Mega Watts in 2005 and 55 Mega Watts in 2006.



Solar Inverters

**Note:** A 1kWp solar energy system with 9m<sup>2</sup> solar panels can produce 1095kWh/year saving 272L/year of crude oil as well as reducing CO<sub>2</sub> emissions by 0.767 tons/year, which is equivalent to 1,000 square meters of forest.



Solar Cells



Polymer Light Emitting Displays (PLED)

## Flat Panel Displays

Delta Optoelectronics, Inc. (Delta-Opto), a subsidiary of Delta Group, develops highly power efficient and environmentally friendly technologies for the dynamic flat panel display market. These technologies include polymer light emitting displays (PLED) and flat fluorescent lamps (FFL).

### PLEDs

PLEDs are power efficient self-emission display devices that are thin and lightweight, feature a high contrast ratio, and produce no radiation. Self-emitting displays with good image performance, PLEDs are used in a wide range of electronic display applications including information management, communications, and entertainment. Delta licensed the technology from the original device structure patent-owner Cambridge Display Technology in 1998 and began manufacturing monochrome PLEDs in

2001. Delta-Opto has also developed many PLED technology patents involving process, device structure, and production equipment. In April 2005, Delta-Opto established Taiwan's first pilot line for manufacturing full color PLEDs using novel ink jet printing technology.

### FFLs

FFLs are high luminance and mercury-free fluorescent light source devices that are flat, slim, and highly stable. With high luminance ( $>15000 \text{ cd/m}^2$ ) and rich color saturation, FFLs are an alternative solution for LCD backlighting that improves image performance. FFLs are environmentally friendly mercury-free light sources that also provide long product life. Owning the original technology patents and manufacturing FFLs since 2002, Delta-Opto is the first company in the world to commercialize and manufacture mercury-free FFLs.



Flat Fluorescent Lamps (FFL)



Fuel Cells



Fuel Cell Inverters

### Fuel Cells

Fuel cells are based on innovative technology that is highly energy efficient, minimally polluting, and provides a multi-use energy source. Delta Electronics is developing fuel cell technology for integration into a wide variety of power applications and systems. Like solar energy, fuel cells are a new technology that offers a clean and efficient way of producing energy.



## RoHS and WEEE



Heavy Metal Testing Systems

As a global supplier of electrical and electronic equipment and components, Delta Electronics is committed to developing products that meet global environmental regulations and customer requirements.

The European Union has recently enacted legislation on environmental requirements for electrical and electronic equipment placed on the EU market, effective July 1, 2006, including the following:

### **RoHS = Restrictions on Hazardous Substances**

The RoHS directives ban any new electrical and electronic equipment that contains more than established levels of six substances:

- Lead (Pb)
- Cadmium (Cd)
- Polybrominated diphenyl ethers (PBDEs)
- Mercury (Hg)
- Hexavalent Chromium (Cr<sup>6+</sup>)
- Polybrominated biphenyl (PBBs)

## WEEE = Waste Electrical and Electronic Equipment

The WEEE directives seek to prevent the generation of electrical and electronic equipment waste by promoting reuse, recycling, and other measures such as enhancing product life cycles.

Delta Electronics already provides or is preparing to provide RoHS and WEEE compliant products based on these directives. Delta's plants have adopted the use of Lead-free alloys using tin with greater than 95% content. Delta has also upgraded product materials to sustain the higher melting temperatures of Lead-free solder alloys.

With the majority of Delta's products already manufactured RoHS-compliant, we are on track to reach complete corporate-wide compliance by the fourth quarter of 2005.



Sony Green Partner Certificate



Heavy Metal Lab Staff Members are Certified by the SGS Organization



Sony Special Recognition for Quality Award

# Environmental Overview of Plant Operations



Delta Showroom

**Environmental protection** has become an important issue at each of Delta's manufacturing plants. Following Delta environmental principles, their top priorities are to minimize environmental impact and conserve natural resources, to develop green products, to implement waste management, and to conduct environmental training.



Safety Testing Facilities

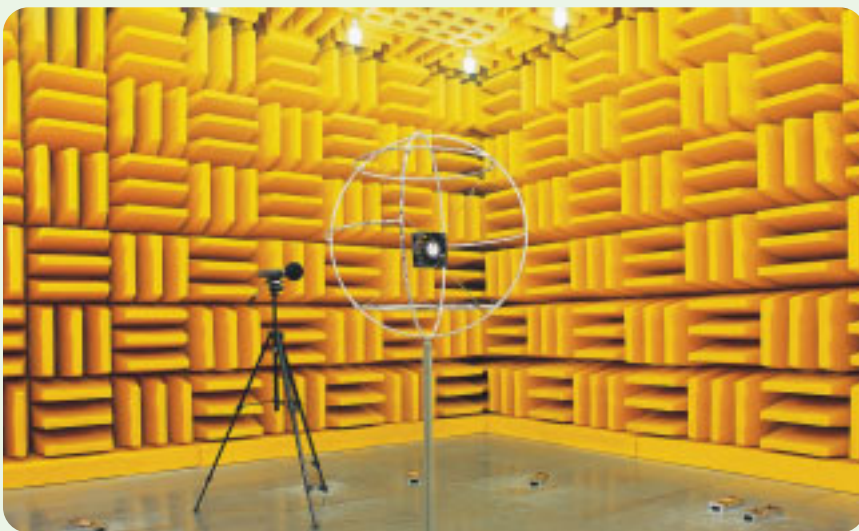
**Delta is making** great strides in developing environmental awareness at our factories. In addition to developing green products and reducing pollution and waste from manufacturing processes, Delta is taking action to improve the environment in all aspects of plant operations. The following provides a brief description of each plant and examples of their environmental measures.



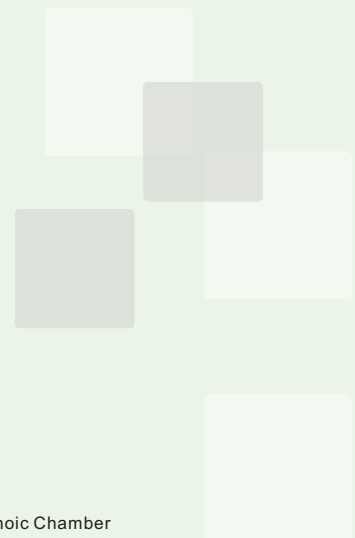
Environmental and Quality Testing Facilities



Shielded Room for EMI Testing



Anechoic Chamber







Wujiang Plants 1 &amp; 2, China

## Wujiang Operations, China

Delta established manufacturing plants in Wujiang, China in September, 2001. Today the Wujiang site has three plants on 124 acres of land. Plant 1 produces fiber optical transceivers, magnetics, DC fans, DC-DC converters, and components for the optical, telecom and networking industries. Plant 2 makes adapters, UPS, and telecom power products. Plant 3 manufactures projection displays, and AC motor drives. The total production space of the three plants equals 1,313,397 sq. ft. (122,000 m<sup>2</sup>). The Wujiang plants have received Sony's Certificate of Green Partner and are certified with ISO 9001, ISO 14001, TL 9000 and OHSAS 18001.

## Certifications



Sony Green Partner



ISO 14001



OHSAS 18001

## Recent Environmental Measures

The following are recent environmental measures at the Wujiang plant :

- Upgraded water tank components to save water
- Changed over to water-saving faucets
- Reduced electric lighting in hallways
- Consolidated trips and reduced frequency of freight elevator use
- Changed to electronic ballasts for green lighting on the production lines
- Adjusted variable speed motors in the clean rooms
- Installed solar water heating systems
- Managed air conditioning and heating for energy-savings
- Used energy recycling systems for burn-in testing
- Reused and recycled discarded pallets



Wujiang Plant Site, China



Plant Site Landscaping



Dongguan Plants, China

## Dongguan Operations, China

Delta established its first plants in China at Dongguan in August 1992. There are five plants at the site producing magnetics, DC-AC inverters, switching power supplies, electronic ballasts, server and redundant power switching units, DC fans, DC motors, as well as thermal management, telecom, and networking products. Total production space for the five plants is 1,406,800 sq. ft. (126,700 m<sup>2</sup>). The plants have received the Sony Certificate of Green Partner as well as ISO 9001, ISO 14001 & OHSAS 18001 and QS 9000 (Plant 1 and 4) certification.

## Certifications



Sony Green Partner



ISO 14001



OHSAS 18001

## Recent Environmental Measures

The following are recent environmental measures at the Dongguan plants :

- Installed fan with variable speed motor for Burn-in in Plant 3
- Built solar water heating system
- Added a variable speed motor for air conditioning
- Upgraded air conditioner in Workshop 1
- Installed water-saving rubber stoppers for faucets
- Used energy recycling systems for burn-in testing
- Changed to electronic ballasts for green lighting on production lines



Solar Water Heating Systems



Dormitory Landscaping





Power Supply Plant, Thailand

## Thailand Operations

Delta established the Bangpoo, Thailand plant in January 1990, and the Wellgrow, Thailand plant in February 2001. The Bangpoo plant produces visual displays, power supplies, and components, while the Wellgrow plant produces DC fans and EMI filters. The total production space for the three plants is 1,437,350 sq. ft. (133,525 m<sup>2</sup>). The plants have received Sony's Certificate of Green Partner, as well as certification in ISO 9001, ISO 14001, OHSAS 18001, TLS 8001, QS 9000 and TS 16949 (Components Plant).



Components Plant, Thailand

## Certifications



Sony Green Partner



ISO 14001



OHSAS 18001

## Recent Environmental Measures

The following are recent environmental measures at the Thailand plants :

- Used variable speed drive to control AHU motor pump to reduce energy consumption
- Installed motor load controller for injection machines
- Used carton paper trays and boxes for product transfer and transportation
- Installed room temperature control for whole building
- Increased implementation of Lead-free soldering
- Built waterfall and planted trees around factory buildings
- Installed UV glass for all windows and water sprayer on roof to reduce temperature
- Recycled hand-wash water for toilet flushing and watering flowers and grass
- Built pond to collect rain water for hand washing and flower watering
- Used electronic ballast for office and production floor lighting
- Installed lighting timer in toilets to save energy



Visual Display Plant, Thailand

# Taiwan's First Green Factory



Delta's Green Factory, Tainan, Taiwan  
(Operations to begin in Q4, 2005)

Delta Electronics completed Taiwan's first green factory in the 4th quarter of 2005. The 12,816 square meter building occupies 1.9 acres and accommodates 300 staff. The building is intended for research and design, manufacturing, and general office space. Built according to the Taiwan Green Building Evaluation System, Delta's green factory meets special criteria for environmental friendliness in four broad categories: Ecology, Energy-savings, Waste Reduction, and Health (EEWH).

## A Friend to the Ecology

Delta's green factory is friendly to its surrounding ecology in terms of biodiversity, greenery, and

soil water content. The building and grounds enhance the green network system of Tainan's South Science Park. The biodiversity of the area includes a wide variety of trees, shrubs, and ground plantings, and 80% of the plantings are species endemic to Taiwan. An ecology pond and various water plantings are also part of the landscape.

The building has gardens installed on terraces and rooftops, and an interior garden improves the working environment. On the grounds there are 170 trees, 1,480 m<sup>2</sup> of shrubbery, and 4,730 m<sup>2</sup> of ground plantings. Over the next 40 years, Taiwan's first green factory will fix over 3,042,400 kilograms of CO<sub>2</sub>.



Green Building Evaluation Label  
from the Ministry of Interior, R.O.C.

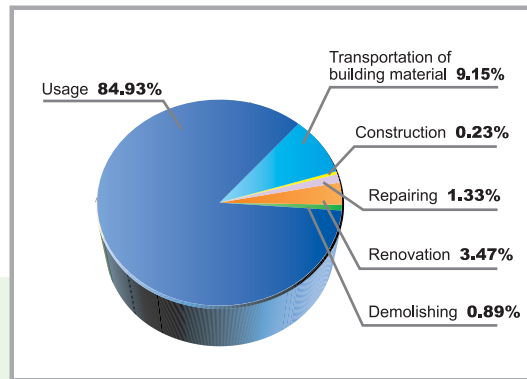
The surrounding soil water content is enhanced with the optimal number of plantings for this area's landscape. In addition, the factory design includes gardens on the factory roof that delay water flow from storm peaks, and reduce impermeable pavement and storm surface runoff.

### Energy Saving

Delta's green factory is built to conserve energy, starting with its energy-efficient building envelope for lower energy use. Heating, ventilation and air conditioning (HVAC) uses a high efficiency system, while buoyancy ventilation facilitates natural ventilation. The building's recessed openings are shaded to reduce direct solar heat gain, while the roof garden provides insulation and reduces vertical heat.

### Waste Reducing

The green building's construction was designed to reduce waste and minimize CO<sub>2</sub> emissions. Efficient and economical structure and spanning systems saved on building materials. Construction used recyclable metal and natural wood with the green logo and CO<sub>2</sub> emissions and waste were reduced using blast furnace cement from recycled products. Over 90% of the interior materials are recyclable. In addition, the building was designed for convenient of maintenance and ease of replacing HVAC systems.



Delta's Green Factory Reduces CO<sub>2</sub> Emissions by 40% According to the Proportions Above.

### Healthy Building, Healthy Employees

Delta's green factory is built with employees in mind, featuring a comfortable indoor environment, a water conserving design, and high quality sewage and garbage facilities.

The indoor environment is enhanced with interior materials that have the green logo. The building was sited to take advantage of natural ventilation, and the louvers were designed to reflect and utilize daylight. Interior noise is reduced with noise-preventing doors and windows.

The building facilitates water conservation using water saving faucets and other equipment. The outdoor sprinkler system uses water efficiently and rainwater is recycled for use on the grounds and other purposes.

Sewage is processed in high standard processing facilities and the plumbing system connects to the Science Park sewage system. The building also provides designated space for garbage disposal, storage, and recycling.

Delta's green factory, the first in Taiwan, provides a model for future green buildings on the island. The green factory seeks harmony with the environment and its employees, yet works to meet the demands of Delta's customers. Its mission is Delta's mission, to provide innovative energy-saving products for a better quality of life.





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