

**Environmental and Social Report 2009** 



## **Corporate Profile**

Company name: Tokyo Electron Limited (TEL)

Address: Akasaka Biz Tower, 5-3-1 Akasaka,

Minato-ku, Tokyo 107-6325, Japan

Tel.: +81-3-5561-7000

Established: November 11, 1963

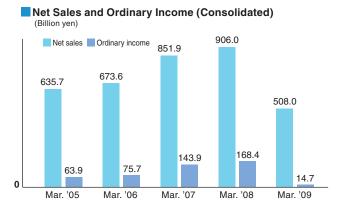
Capital: ¥54,961,190,000 (as of April 1, 2009)

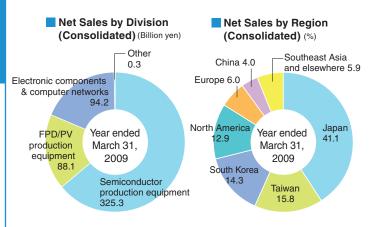
Main products: Semiconductor production equipment and Flat

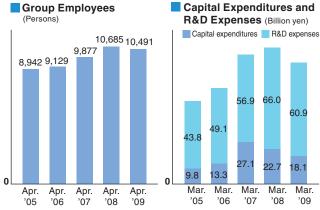
panel display (FPD) production equipment, Photovoltaic (PV) production equipment

**Employees:** 1,036 (non-consolidated, as of April 1, 2009)

10,491 (consolidated, as of April 1, 2009)







## **TEL Values**

Tokyo Electron Limited (TEL) summarized the values and codes of conduct of the Tokyo Electron Group as TEL Values in April 2006. We will share TEL values with all employees of the Group around the world, which will in turn drive us toward new growth in the future.



#### TEL Values

#### Pride

We take pride in providing high-value products and services.

#### TEL Values

#### Challenge

We accept the challenge of going beyond what others are doing in pursuing our goal of becoming number one globally.

#### TEL Values

#### Ownership

We will keep ownership in mind as we think things through, and engage in thorough implementation in order to achieve our goals.

#### TEL Values

#### Teamwork

We respect each other's individuality and place a high priority on teamwork.

#### TEL Values

#### **Awareness**

We must have awareness and accept responsibility for our behavior as respectful members of society.

#### TEL has been a constituent of the FTSE4Good Global Index.

Since September 2003, TEL has been listed in the FTSE4Good Global Index, a CSR index compiled by FTSE Group. The FTSE Group is a world-leading index firm, a joint venture between the Financial Times and the London Stock Exchange.



## **Editorial Policy**

This report is intended to explain the Tokyo Electron Group's stance on corporate social responsibility and report on our initiatives concerning the global environment and society.

- In the section entitled "Commitment by Top Management," the chairman and president discuss the roles and mission that the Tokyo Electron Group should perform with respect to environmental and social issues from a global perspective, as well as the Group's stance on those roles and mission and its direction in carrying them out (pp. 4–5).
- The feature entitled "Highlights" presents an overall image of the Group's business and its initiatives concerning social issues; as well as the prospects for the development of a low-carbon economy in the future (pp. 6–9).
- We invited Ms. Fusako Matsuda, president of the Environmental Economics Institute, Inc., to visit the Yamanashi Plant and review the group's activities; and she has presented a third-party opinion detailing her observations (p. 31).

In preparing this report, we referred to the "Environmental Reporting Guidelines" (FY2007 version) issued by Japan's Ministry of the Environment and the 2006 Sustainability Reporting Guidelines published by the Global Reporting Initiative.

It is our hope that this report will serve to enhance communication between the Tokyo Electron Group and its stakeholders; and we hope to make use of such communication in our future activities.



The results of environmental accounting for FY2009 are available on Tokyo Electron's website.

http://www.tel.com/eng/citizenship/index.htm

## **Scope of Report**

Organizations covered: Tokyo Electron Group

#### Japan

- Tokyo Electron Ltd.
- Tokyo Electron AT Ltd.
- Tokyo Electron Tohoku Ltd.
- Tokyo Electron TS Ltd.
- Tokyo Electron Kyushu Ltd.
- Tokyo Electron Technology Development Institute, Inc.
- Tokyo Electron Software Technologies Ltd.
- Tokyo Electron FE Ltd.
- Tokyo Electron PS Ltd.
- Tokyo Electron BP Ltd.
- Tokyo Electron Agency Ltd.
- Tokyo Electron PV Ltd.
- Tokyo Electron Device Ltd.

#### **United States**

- Tokyo Electron U.S. Holdings, Inc.
- Tokyo Electron America, Inc.
- TEL Technology Center, America, LLC
- TEL Venture Capital, Inc.
- Timbre Technologies, Inc.
- TEL Epion Inc.

#### Europe

- Tokyo Electron Europe Ltd.
- Tokyo Electron Israel Ltd.

#### Asia

- Tokyo Electron Korea Ltd.
- Tokyo Electron Korea Solution Ltd.
- Tokyo Electron Taiwan Ltd.
- Tokyo Electron (Shanghai) Ltd.
- Tokyo Electron (Shanghai) Logistic Center Ltd.
- Tokyo Electron India Private Ltd.

Period covered: FY2009 (April 1, 2008 to March 31, 2009)

Topics covered: Areas related to the environment, society, and economy

#### **Contents**

Corporate Profile, TEL Values	2
Editorial Policy, Scope of Report, Contents	3
Commitment by Top Management	4

#### HIGHLIGHT

I	Tokyo Electron's Businesses and Initiatives Related to Social Issues	6
Ш	Development of PV Production Equipment Business	8

#### **MANAGEMENT REPORT**

Corporate Governance	10
Compliance	11

#### **EHS REPORT**

EHS Management	12
50% Reduction in Environmental Impact by 2015	14
Product-related Initiatives for the Environment	16
Plant and Office Initiatives for the Environment	20
Health and Safety	24

#### **SOCIAL REPORT**

Corporate Social Responsibilities (CSR)	29
Relationship with Suppliers	28
Relationship with Employees	26

31

## **Commitment by Top Management**



## Tokyo Electron's mission remains unchanged even amid the economic crisis.

Higashi: I feel that there is already a global drive towards achieving sustainable societies that are environmentally considerate and make use of energy-saving products.

The current financial crisis appears to have revealed a rift between the direction that the real economy is aiming for and the direction that the finance-driven economy has been taking.

Takenaka: Up to now, Tokyo Electron has enjoyed continued growth as the result of the growth in the real economy, regardless of the state of the financial economy, but the current economic crisis has really had an impact on us. Despite this, I believe that nothing has changed with respect to our responsibility, or mission, to enhance the social infrastructure and contribute to finding solutions to environmental issues so that society can develop in a healthy direction.

Higashi: The TEL Missions were announced in 2008, but around January and February there were already signs the economy was faltering. At such a time, it seems like an extremely important move on the part of Tokyo Electron to have demonstrated, both to its employees and those outside of the Group, that it would take the lead in proceeding with its commitments from a long-term perspective.

Takenaka: It is extremely significant that the Group's senior management explicitly formulated a clear policy regarding the TEL Missions; and experiencing the current economic crisis allows me to again sense the importance and immensity of those missions.

**Higashi:** The Group's culture has always been one of understanding society's needs and issues and then taking the necessary action.

Takenaka: I think that the Group's approach of listening to people's opinions and directly pursuing what it feels is needed is something that has been passed down in its corporate DNA. Both management and employees work with a sense of mission, feeling pride in the contributions that they make to society from a long-term perspective. I believe that it is vital, in my own case as well, to thoroughly internalize this corporate culture.

#### We will play a leadership role in society through our energy-saving technologies.

Takenaka: When I entered the company some 25 years ago, I never thought, that the use of semiconductors would grow to the extent that it has. Semiconductors are employed in a variety of different goods that support modern lifestyles, including everything from PCs, mobile phones, home electronics and automobiles to the social infrastructure. In the future, there is no question that there will be an increasing demand for semiconductors in the highly populated emerging countries.

Higashi: In emerging countries we can also apply energy-saving technologies and alternative energy technologies, such as photovoltaic (PV) cells. I'm certain that we can contribute to economic growth in such nations, while limiting the burden on the environment by energetically advancing technological innovation. I feel that this will lead to balanced development for the entire planet; and that we are capable of providing society with value by displaying our strengths in such areas.

Takenaka: Whether in hybrid vehicles or sensor-operated power management systems, semiconductors have been incorporated into products to enrich people's lives. And when seeking to introduce such technologies in emerging countries, I think that it will be possible to develop them from the outset as environmentally-considerate products. I believe that by taking the lead as an equipment manufacturer we can expect to further develop our technologies for manufacturing semiconductors and our future direction. In the sense of addressing social issues through business activities, I feel that our role in society is growing ever more important.

Higashi: Moving ahead, we must join with our customers in considering the future. Within the company, I think that the awareness of this responsibility is increasing.

**Takenaka:** As with PV cells, the use of semiconductors is expanding more and more, to include the fields of social contribution and safety. Up to now, semiconductors have mainly been used in PCs and mobile phones, but now that

they are moving beyond the realms of "convenience" and "entertainment" to become an integral part of people's lives (in devices related to security, medical equipment, and so on), we need to become better aware of how our roles relate to society.

In our business we will strive to achieve a sustainable society by reducing environmental impact at manufacturing plants and producing PV production equipment.

Higashi: We have established the objective of developing equipment capable of halving the total environmental impact at our customers' factories scheduled for completion by 2015 or later, as part of the medium- to long-term environmental goals in the TEL Missions. Since about 80% of the total environmental impact of our products over the course of their entire lifecycle is generated when the products are used at our customers' factories, we believe that the greatest contribution that we can make is to reduce impact in that area.

Takenaka: In the future, we must formulate a more specific roadmap and numerical targets. We also intend to actively make new proposals in collaboration with parts manufacturers and other business partners to reduce the environmental impact at all of our customers' factories, as part of our after-service support for purchasers of our equipment.

**Higashi:** Regarding the PV cell field that we entered in 2008, there's still a great deal of scope for technological innovation in terms of conversion efficiency and other factors.

Takenaka: Photovoltaic power generation is certain to become part of the social infrastructure one day.

Technological innovation is essential for establishing PV production equipment as the core of a new business, and we will still need to accumulate knowledge and expertise.

Higashi: As for how we will be able to incorporate social contribution activities into our operations when creating the society of tomorrow, the energy-saving products and PV cells that we are currently developing are perfectly suited to this task. This is really interesting, I think.

**Takenaka:** We need to open up our future path through our own efforts. I would like for us to take the lead in achieving growth by finding solutions to environmental issues through various types of innovation.

#### HIGHLIGHT I

# **Tokyo Electron's Businesses and Initiatives Related to Social Issues**

This section introduces Tokyo Electron's businesses and approach to the solution of social issues.

The Tokyo Electron Group supplies equipment for manufacturing semiconductor devices, which form the core of PCs, mobile phones, and digital devices; equipment for manufacturing LCD panels used in large-size TVs and PCs; as well as equipment for manufacturing PV cells, a product which will play a key role in preventing global warming and reducing energy consumption. We also distribute electronic components and computer networks made by the world's leading companies. Through our provision of cutting-edge technologies, we offer value to society.

Tokyo Electron is contributing to the healthy development of industry and society and the resolution of environmental problems by recognizing the social problems related to our business activities, communicating with the rest of society, and taking steadfast action to address those issues.

## Product- and Service-related Initiatives to Respond to Global Environmental Issues



pp. 8-9

We are using our technologies to contribute to the solution of environmental issues, such as global warming.



We will strengthen our PV production equipment business

#### Reducing the Environmental Impact of Our Products



Tokyo Electron is engaged in efforts related to the use-phase of our products, the phase with the greatest environmental impact within their lifecycle, including enhancing energy efficiency.



We are making progress, during the use of our products, in saving of energy and reducing the use of regulated chemicals

#### Reducing the Environmental Impact of Plants and Offices



With the goal of reducing the environmental impact of our business activities, we are actively taking steps to prevent global warming, conserve resources, and reduce the amount of waste generated.



ISO 14001 audit

#### **Labor Safety and Health**



As one aspect of our corporate social responsibilities, we are promoting measures to ensure the health and safety of everyone involved in our corporate activities.



Hands-on Safety Training at the Tokyo Electron Group

## Semiconductor production equipment





PV production equipment



Oerlikon Solar's Fab 1200 system

#### **Creating an Employee-friendly** Working Environment

p. 26

We strive to create an employeefriendly workplace that will enable all of our employees to reach their full potential.



We are expanding our childcare leave system

#### **Developing Human Resources**



p. 27

With the goal of fostering our employees' development and increasing the vibrancy of our organization, Tokyo Electron is committed to developing human resources from a medium- to longterm perspective, motivating our employees, and valuing their selfreliance.



TEL University Learning Facility: Karuizawa Club

#### **Cooperation with Suppliers**

p. 28

In order to achieve our corporate mission, which includes purchasing products that are safe, healthy, and environment-friendly, we have established relationships of trust and cooperation with our suppliers, achieving growth together with them



Discussion with suppliers

#### **Building Trust with Local Communities**



We strive to coexist in harmony with the local communities where we engage in business activities, both in Japan and overseas, while also fostering relationships of trust with them.



Participation in volunteer activities of a US-based NPO

## Electronic-component and computer-network industries

Single-wafer CVD system



Xilinx Virtex™-6

**FPD** production

equipment

FPD coater/developer

Crystal spinner series

FPD plasma etch/ash system

## **Development of PV Production Equipment Business**

Tokyo Electron is strengthening its PV production equipment business as the new pillar of its business strategy, thereby contributing to the creation of a low-carbon society.

#### The Tokyo Electron Group and its PV Production **Equipment Business**

Solving the problem of climate change and global warming is one of the most pressing tasks for humanity today. We need to shift from being dependent on fossil fuels to becoming a low-carbon society by utilizing renewable energy. Renewable energy is expected to make a significant contribution to the prevention of global warming because it can be used almost perpetually, while emitting fewer greenhouse gases than current mainstream energy sources. PV power generation using solar energy is the leading type of such renewable energy. However, in order for this green energy to come into common use, further technological innovation and cost reduction are necessary to overcome the current challenges related to cost and efficiency, such as increasing the efficiency of converting solar energy to electricity and overcoming the shortage of materials to produce related equipment.

The Tokyo Electron Group set up a joint venture company with Sharp Corporation (Sharp) in February 2008 to begin cooperative development of plasma CVD systems for use in thin film silicon PV cells. In February 2009, we also entered an exclusive sales representative agreement with Oerlikon Solar Ltd. (Oerlikon Solar)\* for end-to-end thin-film silicon PV production line and equipment in the regions of Asia and Oceania. The Tokyo Electron Group is also engaging in its own independent development of technology. Based on our belief that we must employ technology to tackle environmental issues, we are striving to make the PV production equipment business the third pillar of our Group, following the semiconductor manufacturing equipment and FPD production equipment businesses.

\*Oerlikon Solar Ltd.: One of the world's top manufacturers of end-to-end thinfilm silicon PV production lines and equipment. Oerlikon Solar equipment has manufactured more than 800,000 thin-film silicon PV panels around the world. Oerlikon Solar is known for its outstanding, reliable performance. Oerlikon Solar's end-to-end production line of thin-film silicon PV provides its customers with the shortest delivery time and the most appropriate PV production capacity.

#### Strengthening the PV production equipment business

Tokyo Electron's business expansion

#### **SHARP** Joint development with Sharp

- Plasma CVD systems for use in thin-film silicon PV cells
- Tokyo Electron: Joint development, manufacturing, and sales

#### perlikon Collaboration with Oerlikon Solar

- End-to-end production line for thin-film silicon PV cells
- Tokyo Electron: Sales representatives in Asia



Independent development by Tokyo

#### Sales Representative Agreement with Oerlikon **Solar for PV Production Equipment**

Tokyo Electron entered into an exclusive sales representative agreement for end-to-end thin-film silicon PV production equipment in the regions of Asia and Oceania, and began the sales and support of the end-to-end thin-film silicon PV production line and equipment.

PV is now the focus of attention as a solution to current issues related to the environment and energy conservation. In the future, the PV market is expected to expand globally. The Asian market, in particular, can expect the largest growth.

We are determined to provide our customers with the equipment and support they need through our partnership with Oerlikon Solar, the world's top manufacturer of end-toend thin-film silicon PV production lines, and by utilizing our strengths in terms of technology and service support.



Oerlikon Solar's KAI PECVD system boasts of outstanding processing capability and operation time.



Oerlikon Solar's Fab 1200 is a complete end-to-end PV production line



Takashi Ito
Senior Vice President
General Manager, PVE BU
FPD/PVE Division
Tokyo Electron Ltd.

We are striving to contribute to a low carbon society by strengthening our PV production equipment business, while delivering new technical innovation.

The PV business is still in its initial development stage and a business model has yet to be built. In the PV business market, where various companies are creating new technologies, we have focused on the thin film silicon PV, for which technical innovation is expected that will ensure stable supply in the future while reducing costs and improving conversion efficiency. Tokyo Electron signed an exclusive sales representative agreement in February 2009 with the Switzerland-based company Oerlikon Solar for thinfilm silicon PV production equipment in the regions of Asia and Oceania. The company has sophisticated technology for PV development and processing. We believe that this partnership with Oerlikon Solar, the top maker of thin-film silicon PV production equipment, will enhance our global competitiveness.

In forming an alliance with Oerlikon Solar, we recruited engineers and sales people within our company. As a result, we were able to draw together employees that were highly motivated and proud to work for a new business directly related to the environment. The expectations within our company towards the new business are high; and we have already begun to receive orders, providing us with a greater understanding of the demand in Japan and other parts of Asia.

Moving forward, we will try to achieve a low carbon society by providing the highest quality products and services, while drawing on the sophisticated technologies of Oerlikon Solar and the unique know-how and technologies of Tokyo Electron's equipment businesses.



Jeannine Sargent CEO Oerlikon Solar Ltd.

#### Join Forces for a Bright Solar Future

Oerlikon Solar's mission is to make solar power an economically viable alternative to conventional sources of electricity. In order to reach this goal in the near future, all R&D efforts are being dedicated to raising efficiencies while driving down the production costs of thin film silicon solar PV modules. Identifying partners that offer synergies and joining forces is one of the mayor keys to achieving this goal.

In Tokyo Electron we have found such a partner!
Our partnership is based on TEL's extensive sales and customer support network in various geographies, semiconductor experience and highly respected market leadership; and on Oerlikon Solar's proven, industry-leading PV technology. This strategic cooperation is creating a new solar powerhouse, unlocking the enormous potential of the Asian solar PV market. By forming this cooperation with TEL, Oerlikon Solar will be able to provide its customers with outstanding equipment and support, while drawing upon the knowledge and technology acquired in the semiconductor and FPD production equipment markets. Together, TEL and Oerlikon will promote and expand the adoption of thin film silicon PV technology in Asia, Oceania and Japan, areas which are already leading in solar adoption and export.

While the viability of Oerlikon Solar's equipment and end-to-end solutions receive growing attention from customers around the globe, potential high growth markets such as Japan, Taiwan or Korea are showing enormous interest in Oerlikon Solar's leading edge technology. These markets can be precisely addressed by such a well respected company as TEL. The global footprint of TEL's sales and customer support teams provide a platform for the substantial growth of Oerlikon Solar's leading thin film silicon solar PV technology, leading to a win-win situation for both companies.

Both companies are well positioned for the growth of this industry. With this strategic partnership we are reinforcing our regional sales and customer service structures, and providing TEL with leading-edge PV module production technology.

## **Corporate Governance**

The Tokyo Electron Group is improving and reinforcing its internal control systems and risk management structures, with the aim of maximizing its corporate value.

#### **Corporate Governance Policies**

The Tokyo Electron Group is seeking to enhance its corporate governance through a variety of measures to promote management focused on maximizing corporate value and raising shareholder satisfaction. We have established and operate optimal and highly effective structures of governance that are based on our three basic principles for reinforcing corporate governance.

#### **Basic Principles of Corporate Governance**

- Ensuring the transparency and soundness of business management
- Facilitating quick decision-making and the efficient execution of business management
- 3. Disclosing information in a timely and suitable manner

#### **Corporate Governance Structures**

The members of the Tokyo Electron Group are companies that have statutory auditors. In April 2003, an executive officer system was introduced to clarify the roles of the Board of Directors and executive bodies and to facilitate faster decision-making, as well as to propose and implement timely business strategies.

#### **Board of Directors**

The Board of Directors has 13 members, of whom two are outside directors. The term of office for directors is set at one year to enable the Board to make timely and flexible responses to changes in the business environment and to create structures in which managerial responsibilities are clear.

The Board has a Compensation Committee<sup>1</sup> made up of all directors, excluding representative directors (chairman & CEO and president), and a Nomination Comittee<sup>2</sup> to further improve governance.

- 1 Compensation Committee: Makes a draft remuneration plan for the chairman & CEO and the president and presents the draft to the Board of Directors
- 2 Nomination Committee: Selects candidates for directorships for submission to the annual shareholders' meeting and a candidate for CEO, to be approved by the Board of Directors

#### **Board of Statutory Auditors**

The Board of Statutory Auditors is comprised of four statutory auditors, of whom two are outside auditors. Statutory auditors attend meetings of the Board of Directors and other key meetings, conduct business audits, financial audits, and risk management evaluations, and also audit the performance of duties by directors. The Board of Statutory Auditors met six times in the fiscal year ended March 2009.

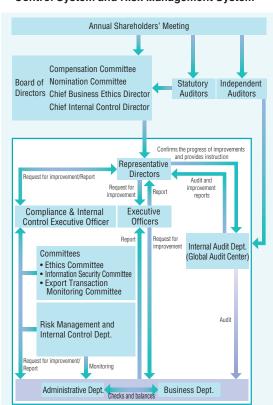
#### Internal Control Systems and Risk Management System

The Tokyo Electron Group is taking measures to reinforce internal control systems to make them more effective, with the goal of raising corporate value and engaging in responsible conduct towards all stakeholders. The Group engages in practical activities in accordance with the basic policy on internal controls (established in May 2006 and revised in April 2008) and complies with the internal control requirements concerning financial reporting pursuant to the Financial Instruments and Exchange Act.

In order to construct and reinforce more internal controls and risk management structures so that they become more effective, a Chief Internal Control Director was appointed in June 2008, and then in April 2009 an Executive Officer in charge of Compliance & Internal Control was appointed and the Risk Management & Internal Control Department was established.

In addition, the Global Audit Center was established as an internal audit organization in order to perform business audits of domestic and overseas group business sites; perform compliance audits; assess whether internal control systems are functioning effectively; and provide support to workplaces when necessary for operational improvements.

## Framework for Corporate Governance, Internal Control System and Risk Management System



The Tokyo Electron Group acts in strict compliance with corporate ethics and applicable laws to ensure that its corporate activities are fair and reliable.

#### **Stance on Corporate Ethics and Legal Compliance**

The lifeline of the Tokyo Electron Group is trust. The basis for maintaining this trust is for each individual employee and organization within the Group to strictly conform to our corporate ethics standards and comply with applicable laws and regulations. In carrying out our business activities, we have placed the highest priority on compliance with strict ethical standards and laws.

#### **Adopting Ethical Standards**

Based on the belief that shared standards are necessary for the creation of a globally excellent company, we adopted a "Code of Ethics" in 1998 as a detailed statement of our stance on ethical standards; and that same year we established the Ethics Committee as an operational organization.

We revised the Code of Ethics in June 2007 in response to the results of a survey on the status of compliance. We made the code easier to understand and made certain changes that reflect the current business environment.

To enhance understanding of the Code of Ethics, we also revised a booklet that contains the code and explains its content in a Q&A format, which we distributed to all Group officers and employees, including overseas personnel.

#### The Code of Ethics of Tokyo Electron Group

#### Introduction

- 1. Compliance with Applicable Laws
- 2. Acting in Accordance with Social Conscience
- Maintaining Harmonious Relationships with Local Communities

#### II. Honest and Fair Business

- II -1 Technology, Safety, and the Environment
- 4. Ensuring Safety and Pursuing Quality 5. Promoting Environmental
- Preservation Activities
- 6. Ethics in Manufacturing II -2 Fair Trade
- Implementing Fair and Open Competition
- Fair Business with Suppliers
- Handling of Confidential Information
- 10. Strict Export/Import Controls
- 11. Reasonable Exchanges of Gifts and Entertainment within the **Bounds of Common Sense**

- **I**I -3 Relationship between the Company and Individuals
- Prohibition of Conduct Causing Conflicts of Interests
- 13. Prohibition of Improper Use of Company Assets
- 14. Prohibition of Conduct of

#### III. Being a Good Corporate Citizen

- 15. Prohibition of Insider Trading
- 16. Prohibition of Political Activities and Contributions
- 17. Prohibition of Involvement in
- Antisocial Forces
- 18. Respect for Individuals Implementation of the Code of

#### \* The "Implementation" section provides specific matters and procedures.

#### **Measures to Reinforce Compliance Systems**

The Tokyo Electron Group adopted Compliance Regulations specifying basic matters regarding compliance. These

regulations are intended to ensure proper understanding of applicable laws and regulations, international rules, and internal rules by all persons engaged in the business operations of the Group, while also ensuring that conduct accords with those guidelines at all times.

The Group also has a hotline (internal reporting system) for use by employees and others to directly report on suspected violations of the Code of Ethics or applicable laws and regulations. Matters are dealt with fairly and in good faith by the Chief Business Ethics Director and the Business Ethics Committee Chairman in the case of matters regarding the Code of Ethics, and by the Director of the General Affairs Department in the case of matters concerning compliance, taking into consideration the employee who made the report and other factors.

In August 2008, the Compliance Regulations were adopted for overseas group companies and hotlines were established at overseas sites. In addition, the Group appointed an Executive Officer in charge of Compliance & Internal Control in April 2009 to raise awareness of compliance and strengthen enforcement within the Group.

We are also distributing information concerning these compliance-related activities via our intranet, conducting Web-based training and carrying out other programs to ensure that employees understand compliance policies, thereby raising awareness of compliance and strengthening our compliance systems.

#### **Protection of Personal Information**

When the Act on the Protection of Personal Information came into full effect in April 2005, the Tokyo Electron Group adopted a basic policy and regulations concerning the protection of personal information, while preparing various guidelines and manuals regarding the handling of personal information. We are also conducting Web-based training for employees, distributing information via our intranet, and taking other measures to ensure the proper implementation of these policies and regulations when conducting business operations. In addition, we identified personal information stored on PCs loaned to employees using software to better understand the current status of personal information.

The Group has also taken a variety of measures to reinforce the management of personal information, including: installing servers specially equipped to handle the storing of personal information, storing important personal information exclusively on those servers. restricting employees' individual access to PCs by using IC cards, changing passwords periodically, introducing encryption functions, and using auxiliary storage units with password-based access control.

## **EHS Management**

Environment, Health, and Safety (EHS) activities are always a top priority for the TEL Group.

#### **Basic Idea behind EHS Activities**

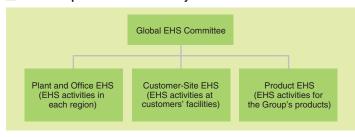
The Tokyo Electron Group views caring for people's health and safety and the global environment as top business priorities. We are therefore committed to being a company capable of earning the trust of all involved in our business operations. We also believe that EHS activities will lead to long-term benefits for the entire Group. As a responsible member of society, we strive to help develop a more affluent society through our EHS activities.

#### **EHS Promotion System**

We are building an EHS promotion system in order to foster EHS activities throughout the entire TEL Group.

Our EHS activities are conducted with respect to three core elements: Product EHS, related to products; Customer-Site EHS, related to operations for product delivery and design; and Plant and Office EHS, related to our plants and offices. The TEL Group companies, and TEL's manufacturing subsidiaries in particular, began developing and implementing environmental management systems based on ISO 14001 in 1997 and obtained ISO 14001 certification.

#### ■ TEL Group's EHS Promotion System



#### ■ ISO 14001-Certified Plants and Offices

Company name	Plant/Office name	Certification date	Certification number	
Tokyo Electron PS Ltd./Tokyo Electron AT Ltd.	Sagami Plant	December 10, 1997	1110-1997-AE-KOB-RvA Rev.1	
Tokyo Electron Tohoku Ltd.	Tohoku Plant	February 19, 1998	1118-1998-AE-KOB-RvA	
Tokyo Electron Kyushu Ltd.	Kumamoto/Koshi/ Ozu/Saga Plants	March 26, 1998	1120-1998-AE-KOB-RvA	
Tokyo Electron AT Ltd.	Yamanashi Plant (Fujii/Hosaka area)	May 15, 1998	1124-1998-AE-KOB-RvA	
	Miyagi Plant	March 1, 2005	01245-2005-AE-KOB-RvA	
Tokyo Electron Device Ltd.	Yokohama Office	July 14, 2004	EC04J0144	

#### **Environmental Steering Committee**

Recognizing the increasing necessity of addressing global warming and climate change, we established the Environmental Steering Committee in October 2007 to intensify and accelerate our green efforts. This highest-level internal organization on environmental activities is comprised of the executive officer in charge of development as well as members from the corporate marketing, corporate strategic planning and corporate communications divisions.

The Environmental Steering Committee is comprised of two working teams: the Product Working Team, which examines the Group's products; and the Office/Logistics Working Team, which examines its offices and plants and distribution practices. Under the slogan of "Technology for Eco Life," the committee is promoting various activities designed to advance TEL's environment-related commitments throughout the entire TEL Group. In FY2009, the committee formulated standards and roadmaps for achieving those commitments.

#### **■** Environmental Steering Committee



#### **EHS Activities Monitoring System**

In order to increase the effectiveness of our EHS management system, we continually increase the level of auditing that verifies the system functions and results. Auditing is performed from multiple viewpoints, within plants and offices, within the Group, or by third parties. We are focusing in particular on the Tokyo Electron Group Internal Audit, a program of mutual EHS evaluations by representatives of each plant or office, which was instituted in FY2003. In FY2007, in response to the increasing need to manage chemical substances contained in products across the entire supply chain, and in compliance with the revised Japanese Industrial Safety and Health Act, we added new audit items to ensure that EHS was implemented appropriately in cooperation with our suppliers and partner companies. (The revised law requires the enhancement of safety instructions and messages provided by a primary employer\* to the related contractors.) Under this expanded scope, we will continue to monitor our EHS management system and check our EHS activities in an even stricter manner.

\* Primary employer: According to the revised Industrial Safety and Health Act, a "primary employer" is a primary company that arranges for the employees of its contractors to carry out a part of the company's work at a single location in cooperation with the company's own employees.

#### **EHS Risk Management System**

At manufacturing subsidiaries of TEL, environmental and safety risks are estimated based on ISO 14001, OHSAS 18001, and OSHMS (in accordance with the guidelines of the Ministry of Health, Labor and Welfare of Japan). These subsidiaries are implementing measures to first eliminate the highest risks, while are also endeavoring to reduce some risks that they are not legally required to reduce. With regard to the environment, we believe that it is essential to implement measures that help prevent global warming.

The TEL Group operates in strict compliance with the law. We closely keep track of new environmental laws and emissions regulations; and for some substances we have enacted our own voluntary requirements. In FY2009, we were not involved in any environmental accidents, violations, fines or complaints; nor were we subject to any legal actions with regard to any such incidents.

#### **EHS Training**

The TEL Group offers EHS training based on the policy of the "necessary training for the necessary people." Training courses are grouped by rank and are open both to Group employees and to employees of partner companies who work at the Group's facilities.

The curriculum for newly hired employees also includes an EHS training program as a required subject.

#### **EHS Seminars for Customers**

Tokyo Electron Taiwan Ltd. (TET) held its 5th EHS seminar for customers at the Science Park Life Hub, located inside the Hsinchu Science Park in Taiwan. The seminar focused on the environment, providing an overview of the TEL Group's EHS activities and the environmental measures that have been implemented in various systems, as well as offering hands-on safety training using virtual-reality images. Feedback from seminar participants included comments that "the seminar made it easier to understand Tokyo Electron's environmental initiatives" and "the virtual-reality training was very effective."



EHS seminar in Taiwan

#### Goals and Results for EHS Activities in FY2009

	Action item	Goals for FY2009	Results for FY2009	Achievement level	Plans and goals for FY2010 onward	Related pages
EHS Management	EHS internal audit	Perform EHS internal audit at plants and offices across the supply chain	Conducted an audit at one site with an additional supply chain-related audit item and made corrections based on the findings	0	Continue to conduct audits	pp. 12–13
		Achieve the TEL Roadmap* targets, formulate standards for achieving	Achieved progress in formulating standards for realizing the Technology for Eco Life commitments	0	Clarify in detail the standards for realizing the Technology for Eco Life commitments; and promote	
	Energy-saving equipment	the Technology for Eco Life	Encouraged application to existing equipment	0		pp. 16–17
Product-related initiatives for the environment		commitments, and promote the necessary activities	300-mm products: Achieved the FY2010 targets for two of the six products	0	the necessary activities	
environment	Measures to reduce the use of regulated chemical substances in equipment	lated (compliance and support in Regan shipments in October 2008		0	Increase the number of products in compliance; continue to examine regulations and implement measures for compliance	p. 18
Logistics initiatives for the environment	Measures to reduce the burden on the environment in the area of logistics	Formulate standards for realizing the Technology for Eco Life commitments; and promote the necessary activities	Clarified the achievement standards and ran a simulation for goal achievement; accurately assessed the logistics volume in Japan and promoted modal shift; began proposing a modal shift to customers for overseas exports	0	Promote modal shift in Japan and overseas in order to achieve the Technology for Eco Life commitments; improve packaging methods	p. 19
	Concerning energy	Reduce energy consumption (1% decrease in CO <sub>2</sub> emissions per unit of sales, as based on the Act Concerning the Rational Use of Energy)	Electricity usage declined by 7.6%, but the total CO <sub>2</sub> emissions increased by 2.6% and emissions per unit of sales also deteriorated, partly due to a worsening electricity coefficient	the Technology for Eco Life		n 20
Environmental activities at each plant or office	each Technology for E commitments; a	Formulate standards for realizing the Technology for Eco Life commitments; and promote the necessary activities	Clarified the achievement standards and began considering the introduction of more energy efficient equipment	0	commitments, along with the details to be implemented, and implement them	p. 20
	Waste reduction	Continue zero emission efforts at manufacturing plants	Achieved zero emissions at manufacturing plants The recycling rate of the entire Group was as high as that of the previous fiscal year	0	Continue zero emission efforts and examine reduction in the total amount of waste	p. 22
Health and safety	Reduction in the number of accidents involving injuries or fatalities  Reduction in the number of accidents involving injuries or fatalities  30% year-on-year reduction in the number of accidents involving injuries or fatalities		The number of accidents involving injuries or fatalities was reduced year-on-year by 18%, falling short of the target	×	Target a 30% reduction of accidents involving injuries or fatalities in FY2010, compared to the FY2009 level	pp. 24–25

<sup>\*</sup> TEL Roadmap: Environmental policies and plans for the Group's products; 🔾 Achieved target; 🛆 Achieved 80% of target; 🗙 Achieved less than 80% of target; 🗕 Item for which no goal was set

## 50% Reduction in Environmental Impact by 2015

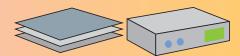
The TEL Group has assessed the impact of its products on the environment throughout their entire lifecycle—from procurement of major components, manufacturing and logistics to product use. Based on this assessment, we established a goal for the year 2015 and are promoting measures to reduce environmental impact.

# Technology for Eco Life

In May 2008, the TEL Group spelled out its environmental commitments, under the environmental action slogan: "Technology for Eco Life."

As part of these commitments, a goal was established to develop products that will enable customers to reduce the overall environmental impact at their factories by 50% and the decision was also made for the TEL Group to seek to reduce the environmental impact associated with its business and logistics activities by 50% by 2015. This page provides an overview of the environmental impact within each phase of the product lifecycle in FY2008, which is the baseline of comparison for the 2015 goal, as well as introducing activities related to reducing that impact, and information on TEL's environmental commitments.

#### **Material Procurement**



- TEL procures from suppliers the materials and parts necessary for its semiconductor and FPD production equipment. In order to supply products that satisfy customers, TEL is working with its suppliers to ensure that procurement of materials is environmentally considerate by comprehensively evaluating functions, performance, quality, price, and delivery lead-time.
- Environmental impact in each product lifecycle phase in FY2008
  - CO<sub>2</sub> Share of CO<sub>2</sub> emissions in each lifecycle phase (%)

Approx. 200,000 tons of CO<sub>2</sub>

8%

CO₂ emissions estimated by TEL

Environmental impact during material manufacturing

#### **Plants and Offices**



Products are manufactured and assembled inside clean rooms that are kept free of dust. TEL is working to reduce environmental impact at its plants and offices through measures that include reducing the energy and resource requirements of its clean rooms by improving operational management of air-conditioners and introducing energy-saving devices, conserving resources, and reducing the volume of waste generated.

115,000 tons of CO<sub>2</sub>

5%

Energy use in plants and offices

#### ■ Steps that TEL Group is taking to achieve its environmental commitments

Lifecycle phase	Activity description	Steps being taken to achieve commitments			
Material procurement	Working with suppliers to reduce regulated chemical substances contained in suppliers' products and reduce energy requirements for those products	Request cooperation from suppliers to achieve those reductions their business activities and products			
Plants and offices	Reducing CO <sub>2</sub> emissions from plants and offices through energy conservation measures	Aim to reduce the total CO <sub>2</sub> emissions per unit of sales from the Group's plants, offices, and logistics operations by 50% compared			
Logistics	Promoting a modal shift in Japan and overseas, and improving packaging materials	to the 2007 level by 2015 (monitor goals and improvements for both total emissions and emissions per unit of sales)			
Product use	Promoting reductions in the overall environmental impact at customers' factories by reducing the environmental impact of TEL's products	Develop equipment that will enable customers to reduce the overall environmental impact at their new plants to be built in 2015 by 50% compared to the 2007 level; establish comprehensive standards on environmental impact (including energy usage by production equipment, impact on facilities, chemical substances used in semiconductor production processes, and generated waste at customers' factories)			

Tokyo Electron supports a strong global community and strives to achieve a society in harmony with the environment.

We are committed to creating an environmentally-benign society together with our customers by providing advanced technologies and services.



#### **Tokyo Electron's Commitment**

- We aim to develop equipment that enables a 50% reduction—compared to the 2007 levels—of the total environmental impact of new customer factories scheduled for completion in 2015 or later.
- We aim to reduce the impact of our business and transportation activities on the environment by 50%, by 2015, compared to the 2007 levels.
- We will strive to achieve these commitments in partnership with our stakeholders.

#### Logistics



Manufactured products are kept clean and protected against vibration and shock when transported to customer sites via truck, ship, or aircraft. TEL is aiming to reduce the impact on the environment of its logistics operations by switching to transportation means that have a lower environmental impact.

145,000 tons of CO<sub>2</sub>

6%

Logistics operations in Japan and overseas

#### **Product use**



Following installation and inspection, equipment begins to be used to produce semiconductor devices and FPDs. TEL is focusing on measures that will reduce the environmental impact of each piece of its equipment during its use. In addition, after equipment is sold, TEL takes steps to extend its service life through repair and maintenance, and implements modifications that contribute to energy conservation.

81%

Approx. two million tons of CO<sub>2</sub>

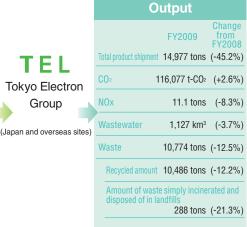
Environmental impact from one-year use of the Group's products (calculations assume the use of 300-mm systems)

## **TEL Group's Input/Output**

The figures on the right show the energy and resource input/output at the Tokyo Electron Group's manufacturing plants and offices in FY2009. We accurately assess and analyze the Group's environmental impact and are striving to reduce it through improvements in efficiency.

In FY2009, a substantial reduction in the volume of shipments led to reductions in environmental impact for nearly all items. Our 2015 goal focuses on reducing  $\text{CO}_2$  emissions, but we will continue to reduce other types of environmental impact as well.





## **Product-related Initiatives for the Environment**

The TEL Group strives to reduce the impact of its products on the environment through various improvements, such as reducing energy requirements during the usage phase of a product's lifecycle, which is the stage when most of the environmental impact occurs, and minimizing the use of regulated chemical substances.

#### Initiative for Products with Less Environmental Impact during Use

## Approach to Reducing the Environmental Impact of Our Products

We believe it is important to promote environmentally conscious designs, as we have clearly stated in the TEL Group "Credo and Principles on Environmental Preservation." We give top priority to the provision of energy-saving equipment and to reducing or finding alternatives for the regulated chemical substances contained in our product's.

#### **Organizations for Reducing Environmental Impact**

Two working groups are in place to promote our efforts to reduce the environmental impact of our products: the Chemical Substances Steering Team and the Product Working Team. The former team works to reduce or substitute the use of chemical substances subject to applicable regulations in our equipment parts and components. The latter, established under the Environmental Steering Committee, has developed a roadmap for each business unit to reduce its environmental impact. In preparing the roadmap, the business units were required to address the following mandatory items: reducing energy requirements in their products, addressing chemical substance-related matters, reducing the number of parts and processes required, reducing the use of processing gases and liquid chemicals, and improving the environmental performance of existing equipment. In addition, they were encouraged to cover voluntary items such as reducing the number of processes required for equipment installation. Progress toward achieving the defined goals is being reviewed under the Group's mediumto long-term plans. In addition, in January 2009, the TEL Group held its 11th Technology Exchange Conference at the Tokyo Electron Nirasaki Arts Hall, which included seven presentations on environmental technologies. A poster area was also set up at the conference to enable the divisions and departments to engage in a lively exchange of ideas and information.





Tokyo Electron Group Internal Technology Forum

#### **Energy-saving Measures for Products**

We are examining measures to reduce the energy that our products consume when used and have set the five following targets: (1) Reduce energy used by the product itself; (2) Reduce energy used by peripheral devices; (3)

Manage the product in an energy-saving manner; (4) Reduce energy used by the clean room; and (5) Manage the clean room in an energy-saving manner (planned operation and proper management). The energy-saving management of the clean room necessarily involves our cooperation with customers and facility manufacturers. Such close cooperation will allow us to further reduce the energy consumed by our products during their use phase. In addition, we are advancing the policy of accurately gauging the amount of energy consumption of devices that use electricity, water, dry air, cooling water, and exhaust heat, as well as supplementary devices (e.g. vacuum pumps and cooling equipment), by employing the SEMI S23\* guidelines.

\*SEMI S23: A guideline for energy conservation for semiconductor production equipment issued by the Semiconductor Equipment and Materials International (SEMI), an international industry organization of semiconductor/FPD production equipment and material manufacturers

#### Environmental Roadmap Items for Each Division

- 1. Reducing the energy requirements in our products
- 2. Addressing matters related to chemical substances
- 3. Reducing the number of parts and processes required
- 4. Reducing the use of processing gases and liquid chemicals
- 5. Improving the environmental performance of existing equipment

#### **ISMI Energy Conservation Award**

At the Energy Conservation Workshop held on October 20, 2008 in Austin, Texas, under the sponsorship of the International SEMATECH Manufacturing Initiative (ISMI), TEL received the 2008 ISMI Award for Excellence in Equipment Energy Reduction. The ISMI consists of 14 leading semiconductor manufacturers from Japan, the U.S., Europe, and Asia; and its mission is to improve the productivity of semiconductor manufacturing. Receiving the Excellence Award recognizes TEL's efforts with regard

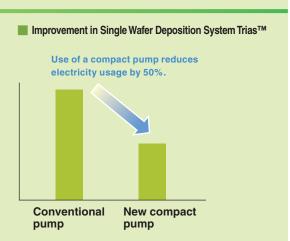
to energy conservation for its products and serves to motivate further efforts in this area.



ISMI Award for Excellence in Equipment Energy Reduction

#### **Initiative for Single Wafer Deposition System**

A single-wafer deposition system is a device that uses heat and plasma to form metal or barrier films. The system utilizes chemical vapor deposition (CVD) to deposit and form thin films. It uses a vacuum pump to maintain a vacuum state inside its chamber. We were able to reduce the pump size to an optimal level by rethinking the entire vacuum-pumping system. As a result, the electricity used by the pump itself was significantly reduced. Furthermore, the reduction in pump size lowered the space requirement, decreasing the amount of resources required, which in turn reduced cost and improved productivity through a shorter exhaust time.



#### Improvements in Cleaning Systems

With regard to cleaning systems, TEL is implementing measures to reduce VOC\* emissions, which are considered one of the most important issues in the semiconductor industry and are tightly regulated under Japan's Air Pollution Control Law. IPA (isopropyl alcohol), which is used in cleaning systems, is a volatile organic solvent. A large volume of IPA is used, and because of its high volatility, its concentration level in the exhaust discharged tends to be high. In order to deal with this issue, TEL installed an IPA scrubber that sprays pure water, refrigerated cooling water, or tower-cooled cooling water, thereby reducing the IPA concentration in the exhaust.

\*VOC (Volatile Organic Compounds): A major cause of photochemical oxidants and suspended particulate matter, thought to cause pollution and damage health.

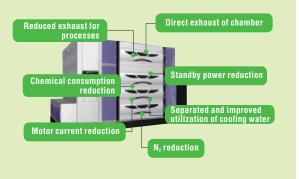
## Reduction in the IPA concentration in the exhaust



#### Improvements in Coater/Developer

For its coater/developer, TEL is taking actions to reduce the environmental impact from the systems that have already been delivered to customers. Targeting the CLEAN TRACK LITHIUS Series released in 2004, TEL is offering customers a package of six enhancements (including direct exhaust of chamber, standby power reduction, separated and improved utilization of cooling water,  $N_2$  reduction, and motor current reduction) as a LITHIUS Environmental Program. We are also examining ways to cut the volume of resist and developing solution used and also reduce exhaust for processes. Our estimate shows that implementing all these measures would reduce the energy consumption by approximately 15%. We are also looking to expand these enhancements to include other systems, and are working on a VOC-reduction program.

#### LITHIUS environmental program



#### **Initiatives Related to Regulated Chemical Substances in Products**

## Reducing the Use of Regulated Chemical Substances in Equipment

Against the backdrop of growing concerns over the impact that harmful substances contained in parts and materials have on the environment and ecosystems, many countries are working to regulate the use of such substances in automobiles and electrical products. The TEL Group is also promoting measures to reduce the amount of regulated chemical substances contained in its products. One of the best-known regulations on chemical substances is Europe's RoHS Directive', which came into effect in July 2006. Although semiconductor and FPD production equipment is currently exempt from the directive, we are taking proactive measures to comply with it. We have already met all of the requirements for China RoHS², which was issued in March 2007 and applies to TEL's products.

In order to meet regulatory requirements in a prompt manner, we established the Chemical Substances Steering Team, made up of representatives from TEL's headquarters and manufacturing subsidiaries. The team shares necessary information and investigates the use of regulated chemical substances in our products, in cooperation with our suppliers, and also promotes alternatives to replace regulated chemical substances. In addition, the team uses a dedicated database to manage the chemical substances contained in units and the parts used in our products. In FY2007, we voluntarily developed a timetable to phase out the use of the regulated substances used in our products (excluding certain products). We had been scheduled to begin shipping and increasing products containing fewer regulated chemical substances in stages from the second half of FY2009, with 98.5% or more of the products' constituent parts meeting the EU RoHS standards.

- 1 RoHS: Restriction of the use of certain Hazardous Substances in Electrical and Electronic Equipment
- 2 China RoHS: Officially name is "Management Methods for the Prevention and Control of Pollution from Electronics Information Products"

#### Chemical Substances to be Reduced

#### First Priority

Cadmium	Pigments, stabilizers, and resins
Hexavalent chromium	Chrome plating
Lead	Solders, paints, electrical wire coating, and free-cutting metal
Mercury	Batteries and fluorescent lamps
PBBs	Resin parts
PBDEs	Resin parts

#### **Second Priority**

Substances designated as Level A substances in JIG\*
(We have already implemented measures for many of these substances)

\* The Joint Industry Guide for Material Composition Declaration for Electronic Products (JIG) was prepared by Japanese, American and European private trade associations. The Guide lists the chemical substances for which conservation measures should be implemented. It classifies the substances into Level A and Level B: 16 substances are listed as Level A substances, including cadmium, hexavalent chromium, lead, mercury, PBBs, and PBDEs. More than 400 substances are listed as Level B substances.

#### System to Reduce the Use of Regulated Chemical Substances

The TEL Group operates a chemical substances management system that can be used to register and view information on the use of chemical substances according to individual parts. This system allows us to check with ease whether parts to be used in our products contain regulated chemical substances or not, and control the manufacture or shipment of products containing chemical substances regulated by the EU/China RoHS and other law.



Dedicated database screen

#### **Activities to Reduce the Use of Other Chemical Substances**

With regard to chemical substances, most nations have begun to implement the Globally Harmonized System of Classification and Labeling of Chemicals (GHS)¹ based on a recommendation from the United Nations. In order to comply with this system, the TEL Group has begun to obtain the chemical substance safety information (e.g., MSDS) classified and created according to the GHS and has made it available within the Group, and has also begun distributing labels for chemical substance containers.

In Europe, companies will be increasingly required to fulfill their responsibilities as manufacturers and follow the principle of taking precautions, under such regulations as REACH<sup>2</sup> (which mandates evaluation, registration, authorization, and restriction of safety information on almost all chemical substances sold on the market), the new Batteries Directives<sup>3</sup> and the PFOS<sup>4</sup> Directives. All of the TEL Group departments are making concerted efforts to comply with these regulations, from those departments engaged in product development, design and manufacture to procurement, quality assurance, and environmental and safety performance. We will also explore optimal management of chemical substances by participating in the activities of JAMP<sup>5</sup> and other forums.

- 1 GHS: A globally harmonized system related to classification and labeling of chemicals, which provides globally standardized rules by harmonizing various countries' classification standards in terms of harmfulness and toxicity of chemicals, labeling standards, and MSDS details.
- 2 REACH: Stands for "Registration, Evaluation, Authorization and Restriction of Chemicals"; it is a set of rules related to the registration, evaluation, authorization, and restriction of SVHC (Substances of Very High Concern) in particular. Manufacturers are required to provide information on the SVHC contained in their products, as well as information to ensure the safe use of their products.
- 3 The EU's new Batteries Directive: Regulates the disposal of batteries that are collected from used electronic and electric devices in compliance with WEEE. It also requires labeling with a designated recycling mark to facilitate collection and recycling.
- 4 Perfluorooctanesulfonic acid (PFOS) has the property of being waterrepellent and waterproof and is used in resist, metal coating, and grease oil.
  The EU's directive, which came into effect on June 27, 2008, prohibits the use
  of PFOS in quantities larger than those designated (with some exceptions).
  In Japan, a revision in the Chemical Substances Examination and Regulation
  Law will place a total ban on the use of PFOS (resists and other products are
  exempt from the law with some restrictions).
- 5 JAMP: Joint Article Management Promotion-consortium

#### **Logistics-related Initiatives**

#### **Approach to Environmental-friendly Logistics**

In terms of logistics-related environmental initiatives, we set up the Logistics Working Team under the Environmental Steering committee, and the relevant divisions and departments have created action plans and are implementing them.

In April 2006, Japan's Act Concerning the Rational Use of Energy was revised and regulations on logistics were strengthened, with the aim of reducing global warming. Accordingly, there is now greater demand for reducing the environmental impact of logistics operations. In response, the TEL Group has been actively reducing the environmental impact caused by the transport of its products. For example, we are making a modal shift\* for domestic and overseas transport and adopting packaging methods with less environmental impact.

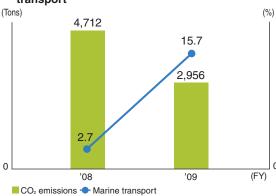
 $CO_2$  emissions from the TEL Group's logistics activities were estimated to account for 6% of the total  $CO_2$  emissions in the lifecycle of our products in FY2008, which is still a significant amount. We will continue to promote measures to reduce emissions in order to achieve our environmental commitments.

\*Modal shift: A shift in the mode of transportation (e.g. switching from conventional freight transportation by truck or aircraft to marine and rail transportation)

## **Environmental Impact from Product Transportation**

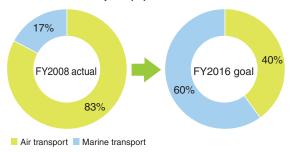
In FY2009, TEL transported 16.91 million ton-km of freight in Japan (on a non-consolidated basis), resulting in 2,956 tons of  $CO_2$  emissions. In FY2009, marine transport accounted for 15.7% of the total freight volume, which was a significant jump from FY2008. Some of the contributing factors behind this increase included the use of new shipping routes and an increased use of ships for transporting FPD production equipment, which is particularly heavy. We estimate that this modal shift helped reduce  $CO_2$  emissions from our logistics activities by 430 tons.

#### ■ CO₂ emissions from logistics operations in Japan and trends in the percentage of marine transport



We also estimate that our export-related logistics activities emitted approximately 140,000 tons of  $CO_2$  in FY2008 and 30,000 tons in FY2009. In FY2009, reductions in our total sales volume, coupled with an increase in the percentage of FPD production equipment, most of which uses marine transport, led to a sharp reduction in our  $CO_2$  emissions. We estimate that increasing marine transport to 60% of our total transport needs would enable us to meet our goal; and therefore we plan to suggest to our customers that they switch to marine transport and also plan to optimize packaging methods.

## Percentage of overseas shipments that uses marine transport (%)



#### **Green Packaging**

Products of the TEL Group are precision machines, which means that they require special packaging to maintain their precise and clean condition. We use wooden frames and steel-reinforced corrugated cardboard as packaging materials. As a measure to reduce the resources used in packaging, we have begun using reusable corrugated cardboard boxes when shipping large parts to customers inside Japan. After the parts are delivered to customers, the reusable packaging materials are returned to us for reuse. We also collect casters used for moving products and bring them back to our plants for reuse, thereby reducing resource usage.



Reusable corrugated cardboard packaging

## Plant and Office Initiatives for the Environment

The Tokyo Electron Group is proactively undertaking various initiatives at each of its business sites to reduce environmental impact, including measures to help prevent global warming, conserve resources, reduce waste, and strictly manage substances. Some of the activities at manufacturing sites (plants) and offices are discussed below.

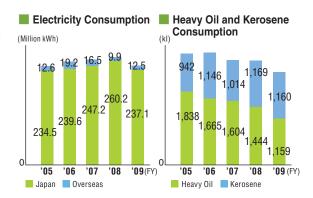
#### **Measures to Help Prevent Global Warming**

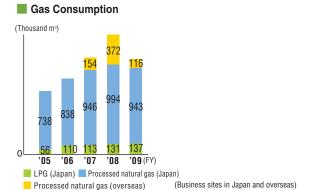
#### **Reducing Energy Consumption**

The TEL Group is working to reduce energy consumption in accordance with the provisions of the Law concerning the Rational Use of Energy. Each business site has established specific targets for air conditioning temperature settings and for cutting power consumption for lighting and office equipment; and they are taking active measures to reduce energy consumption. Tokyo Electron U.S. Holdings, Inc. has been purchasing green electricity since 2001. As of FY2009, the company has purchased approximately 57 million kWh of power, resulting in an approximate 3,500ton reduction of CO<sub>2</sub>. Manufacturing sites in Japan are also taking measures to reduce energy consumption for cleanrooms, which account for a substantial portion of total energy usage. One example is the effort to conserve energy at the Tohoku Plant, which has reduced cleanroom energy consumption by approximately 40%, while maintaining the same degree of cleanliness. We have adopted a policy of further accelerating such measures to fulfill our environmental activity commitments.

#### Energy Consumption and CO<sub>2</sub> Emissions

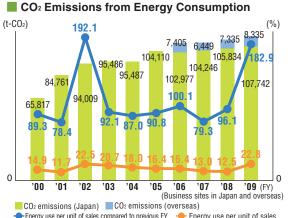
For our energy consumption in FY2009, electricity usage declined by 7.6% and heavy oil usage dropped by 19.7%, thanks to energy conservation measures conducted in all regions and a decrease in production activities. CO<sub>2</sub> emissions from energy consumption, however, increased by 2.6% because of a change in the electric power coefficient. Unfortunately, CO<sub>2</sub> emissions per unit of sales\* did not achieve the target of a 1% year-on-year reduction because of the decrease in net sales. We remain committed to reinforcing our energy-saving measures.

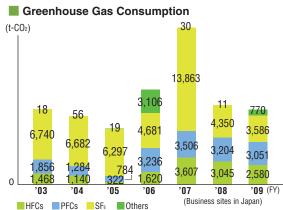




## Reducing the Use of Greenhouse Gases Other than CO<sub>2</sub>

In developing our manufacturing processes and evaluating equipment (e.g., dry etching and cleaning processes) we use hydrofluorocarbons (HFCs), perfluorocarbons (PFCs) and sulfur hexafluoride (SF $_6$ ), which are greenhouse gases. In FY2009, we used 9,987 tons of greenhouse gases (CO $_2$  equivalent), which is a slight decline from the 10,610 tons used in FY2008.





<sup>\*</sup> Energy consumption per unit of sales=Energy consumption ÷ Sales

#### **Initiatives to Conserve Resources**

#### **Our Approach to Resource Conservation**

The TEL Group is working to minimize our use of limited resources. Specifically, we are reducing the use and purchase of copier paper and stationery and implementing green procurement practices, giving preference to environmentally-conscious products.

We have replaced printer toner cartridges with ones made from recycled materials and cooperated with the manufacturers in the recovery of end-of-life cartridges. At some offices, we have established an intranet-based system, under which extra stationery can be used by other departments, thereby promoting the reuse of resources across the organization. In addition, a proactive effort is made to donate excess office supplies, shelves, and the like to local governments and non-profit organizations.

Continuing our donations from 2008, in March 2009 the Group donated 10 used laptops to Aizu Technical High School and to Kitakata Technical High School, which are member schools of the Aizu Craftsmanship Training Project in Japan.



Ceremony for donation of laptops

#### **Efforts to Reduce the Use of Paper**

We are making a group-wide effort to reduce paper consumption. Our employees are encouraged to practice duplex copying, to copy at a reduced size, and to digitize information and internal circulars. As a result, the Group's total use of copier paper in FY2009 dropped dramatically year-on-year by over 60%, equivalent to about 50 million sheets. It is thought that one of the major factors behind the decrease is the reduction in the amount of documents needed, corresponding to the decline in shipments.

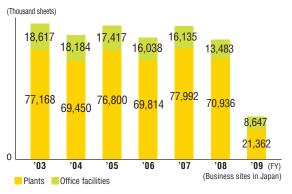
We are encouraging the use of environmentally-friendly paper and conducting activities that lead to resource conservation by introducing products such as paper cups made from a bamboo-derived material. We are also working to raise employee awareness so that they use fewer paper cups and bring their own cups to work.

Moving forward, we will continue to reduce the amount of copier paper used and also minimize paper-based records and accounting forms to further reduce our total paper consumption.



A poster encouraging employees to use their own cups

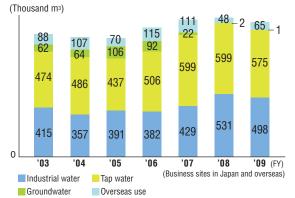
#### Copier Paper Consumption



#### **Efforts to Reduce Water Consumption**

At our manufacturing plants, various measures are underway to reduce water consumption. For example, the plants have installed a water re-circulating system to reuse cooling water. They have also installed automatic faucets in restrooms and other facilities. These touch-free automatic faucets prevent water waste by automatically shutting off the supply when the user's hands are removed from the sensor range. In FY2009, water consumption fell by approximately 3% because of lower production.

#### Water Consumption



#### **Initiatives for Reducing Waste**

#### **Our Approach to Waste Reduction and Recycling**

The TEL Group strives to reduce and recycle waste. We work according to our firm policy of minimizing waste first and foremost, recycling whatever waste is generated to the greatest extent possible, and disposing of non-recyclable waste in a proper manner.

In recent years, landfill costs have surged due to a shortage of sites, which means that waste reduction also leads to cost reduction. We separate recyclable waste from non-recyclables, use new manufacturing processes which do not involve waste generation, manage the qualifications of contract waste disposal companies, periodically review final waste disposal practices, and also focus on educational activities related to the sorting of waste and other topics. For instance, the department that handles single-wafer deposition systems at our Yamanashi Plant adopted the slogan of "Let's become sorting experts" and worked to make employees aware of the costs of processing waste by preparing a table with sorting standards and the costs of processing waste (e.g., general waste, mixed paper, classified documents, and plastic bottles) as well as the sale prices of eleven types of valuable materials (e.g., high-quality paper and cardboard), while also preparing materials using animations to explain sorting techniques. Some business sites have begun using electronic manifests to ensure proper management of waste materials.

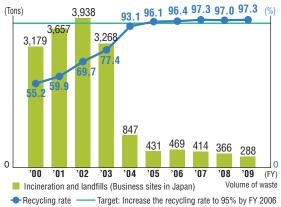


## Volume of Waste Generated, Recycling Rates, and Classification of Waste

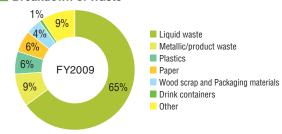
In FY1999, the TEL Group set the target of increasing its average recycling rate to 95% by FY2006. In FY2009, as a result of recycling measures, the recycling rate was 97.3%; and compared to the previous year incinerated and landfill waste fell by 21% and total waste (including recycled waste) declined by 13%. The largest percentage of waste generated by the Group comes from liquid waste resulting

from the chemicals used in the product-development and evaluation processes, but 99% of that liquid waste is currently being recycled.

#### Recycling Rate and Generation of Waste



#### Breakdown of Waste



#### **Zero Emissions**

We define plants where less than 2% of waste generated is incinerated or put into landfills as "zero emission plants" and encourage all plants to achieve zero emissions. In FY2009, all of our manufacturing plants strived to attain this goal; and they achieved zero emissions.

## ■ Recycling Rate of Waste for the Group' Plants in Japan

Plants	Recycling rate
Tohoku Plant	99.2%
Miyagi (Matsushima) Plant	98.4%
Sagami Plant	99.4%
Yamanashi Plant (Hosaka area)	100%
Yamanashi Plant (Fujii area)	100%
Kansai Technology Center	100%
Saga Plant	99.9%
Koshi Plant	100%
Ozu Plant	100%

Note: Rate of recycling of industrial waste (including industrial waste subject to special control)

#### **Management of Chemical Substances**

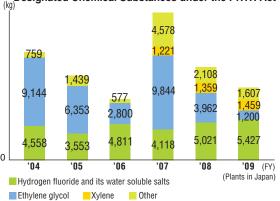
#### **Our Approach to the Management of Chemical Substances**

The TEL Group uses chemical substances mainly in developing and manufacturing products. When developing products, we sometimes adopt new chemical substances that have not been used before, or use chemical substances in a way that is different from their traditional usage. In such cases, we look closely at the development facilities and methods, assess the environmental and operational risks associated with the use of the substances, and implement necessary measures before using the substances. We are also replacing dangerous and harmful chemicals used in the manufacturing process with safer substances.

#### **Compliance with the PRTR\* Act**

In accordance with the provisions of the Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof (PRTR Act), we rigorously control the specific chemical substances regulated under the PRTR Act and continually identify the use and emissions of those

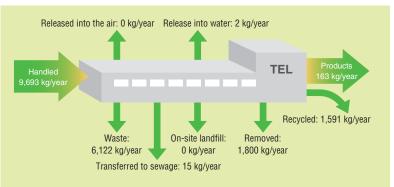
Handling of Substances Regulated as Class I
Designated Chemical Substances under the PRTR Act



substances. Among the substances regulated under the PRTR Act, we use a large amount of hydrogen fluoride, mainly for cleaning test wafers. The hydrogen fluoride waste is either disposed of by an external company or we dispose of it in an approved manner within our premises. Ethylene glycol, which is primarily utilized as a refrigerant for cooling water, is another heavily used regulated substance. Moving forward, we will continue to appropriately monitor risks, while advancing our response to the PRTR Act. We will continue to properly manage all risks associated with the use of chemical substances.

\*PRTR: Pollutant Release and Transfer Register. Under the PRTR system, the use of chemical substances that may be hazardous to human health and the ecosystem, their release into the environment, and transfer (contained in waste) outside of the business premises are identified, tabulated, and disclosed.

#### Material Balance of Chemical Substances Regulated under the PRTR Act



#### **PCB Storage**

Based on the Law Concerning Special Measures against PCB Waste, we report on the storage and disposal of waste containing polychlorinated biphenyl (PCB) to the prefectural governor on an annual basis. The TEL Group presently stores two waste transformers and four waste capacitors that contain PCB in a strict and secure manner.

#### In Focus

#### **Risk Communication with Local Communities**

All of our business sites that use chemicals conduct rigorous management to prevent leaks and other mishaps. We believe that it is extremely important to gain the understanding of residents of communities located near those business sites, with regard to our activities, in order to give them peace of mind.

Sites, with regard to our activities, in order to give them peace of mind.

The Tohoku Plant held a community meeting to report on environmental issues on October 31, 2008, attended by a total of 40 people, including residents



living in the vicinity of the plant (such as representatives of neighborhood associations) and representatives of local businesses and administrative agencies. The meeting was intended to share information concerning environmental initiatives and build partnerships for developing mutual understanding, as part of a joint effort to help preserve the environment. After an explanation that provided them with an overview of company, the participants toured plant facilities (including the liquid waste processing building) and observed the manufacturing lines. Later, the participants had the opportunity to make comments and express their opinions. One participant said: "I feel better knowing that the smoke coming from the cooling tower is actually steam"; while another commented: "I am grateful that Tokyo Electron Tohoku established a site at Mizusawa-Esashi and is contributing to the economic development of the community."

## **Health and Safety**

The Tokyo Electron Group promotes a variety of measures to contribute to the health and workplace safety of everyone associated with the Group.

#### Our Approach to the Safety of All

As part of our CSR activities, the TEL Group places a great emphasis, on the health and safety of its customers, employees, and everyone else involved in our business, in order to contribute to workplace safety, safe products, and the healthy lives of our stakeholders.

Ten years have passed since the TEL Group, in December 1999, added a section entitled "Health, Safety, and Environment" to its management philosophy, based on our belief in the crucial importance of health and safety. And that belief remains a key aspect of our EHS activities. We also believe that dealing with the issues of health, safety, and the global environment leads to positive business results. Our commitment to profit and delivery times should never take precedence over human life or the



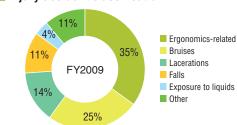
Safety-First Initiative booklet

safety of our facilities and equipment. In order to for all of our stakeholders, including customers, to gain a better understanding of that concept, and of the Tokyo Electron Group's approach to safety, we have created a booklet entitled "Safety-First Initiative" and have been distributing it to our stakeholders.

#### **Preventing Accidents**

In FY2009, the TEL Group achieved a 18% year-on-year decline in the number of injury-related accidents (excluding minor accidents), due in part to the decline in sales and product shipments compared to the previous year, although this result fell short of the goal of a 30% year-onyear reduction. An analysis of the injury-related accidents that occurred in FY2009 revealed that a large percentage of accidents and minor injuries were related to ergonomics, so the focus in FY2010 will be on preventing those cases.

#### Injury accident classification



#### Frequency of Occupational Accidents and **Number of Injury Accidents**



- Average for all industry accidents in Japan Average for Japan's manufacturing industry
- pan's electromechanical manufacturing industry
  EL Group —Target for the number of injury accidents TEL Group

Note: The number of injury accidents is shown, taking the number in FY2001 as

Frequency of occupational accidents: based on the number of occupational accidents per one million labor hours

#### **Safety Education**

Since July 2000, the TEL Group has been promoting the concept of safety education throughout the entire Group. For example, we have created a textbook for Group employees that is used as a tool for conducting basic safety education; and we provide more advanced safety education for our technical employees, such as those who work in cleanrooms. Our educational efforts make use of the SEAJ recommended service safety training textbook, created by

## In Focus

#### Placing of Environment and Safety Idea Box

With the goal of incorporating employees' ideas into future environmental and safety initiatives, we placed Environment and Safety Idea Boxes and encouraged all employees to submit their environment- and safety-related suggestions. The suggestions, which were made during a period limited to three months, were submitted anonymously to ensure that employees would be able to precisely describe problems. Many suggestions were received, spanning a wide range of topics, from ideas on improving the workplace environment (related to air conditioning, etc.) to those



concerning methods for safely transporting heavy objects. The suggestions that employees made about conserving resources and energy at the workplace, and making the workplace more comfortable, were very valuable, and will be incorporated into our future environmental and safety activities.



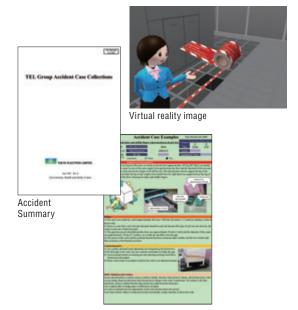
Advanced safety education

the Semiconductor Equipment Association of Japan (SEAJ); follow that textbook's guidelines; and include hands-on training during the first educational session. In the case of the SEAJ guidelines the training received is valid for three years, whereas the TEL Group divides the educational content into three separate sessions that are conducted online every year. We are aiming to raise the risk awareness of those attending the course and provide them with content that is useful for their everyday work situations by including case studies of accidents or nearmisses that have occurred within the Group. Conducting the safety courses online allows our employees to take them at their convenience; and since their progress in completing the course can also be tracked online, supervisors can easily verify that the employees required to take the courses are actually doing so. We are also planning to include hands-on sessions in the courses.

#### **Learning from Past Accidents**

In order to prevent the reoccurrence of accidents, the TEL Group provides an illustrated summary of past accidents that have occurred within the Group. The Japanese and English versions of the summary are distributed to employees and also made available in our intranet to be shared globally within the Group. The summary is also being used as a safety education tool for various types of

safety seminars in order to prevent accidents during work performed near large openings in the floor and in high places as well as work involving heavy lifting. Furthermore, in the case of accidents that cannot be easily described through words or illustrations, we are employing 3D virtual reality technology to realistically reproduce a visual image of workplace accidents, thereby providing an overview of the accident, its cause, and the sequence of communication that took place. In this way, trainees can see, hear, and feel the actual measures that were implemented. We are also planning to share these accident descriptions and statistical data with others in the industry. We believe that these activities will lead to improved safety awareness within the industry as a whole, while also fostering a workplace where engineers working at worksites throughout the world will be able to work safely and comfortably, thereby fulfilling one of the TEL Group's CSRrelated tasks.



## n Focus

#### **Promoting Health through Walking**

As part of its effort to prevent lifestyle-related illnesses, the Tokyo Electron Health Insurance Society (HIS) is encouraging employees in Japan, as well as their spouses and parents, to participate in a walking program. Participants set their own goals, with a total of 600,000 steps or more in a 90-day period as the general guideline. Using pedometers provided by the HIS, they can record their daily step counts and report the total to HIS. Those who achieve 600,000 steps receive a prize. In FY2009, 2,252 people participated, of whom 71% achieved the 600,000-step goal.

Positive feedback was received from the participants, with comments such as: "The program motivated me to walk every day"; or: "Using the pedometer to record my progress helped me adopt a lifestyle that is more focused on health."

## **Relationship with Employees**

We are striving to foster a workplace that enables all of our employees to reach their full potential, based on respect for their enthusiasm, autonomy, and willingness to undertake challenges.

#### **Approach to Human Resources**

The Tokyo Electron Group respects the autonomy of its employees and their willingness to undertake challenges. In order to be a corporate group that allows employees to pursue their full potential, our workplace environment ensures (1) Fair evaluation of employees who take reasonable risks in creative endeavors; (2) Fairness in handling our personnel; and (3) Equitable compensation in order to attract and retain the most qualified applicants and employees.

Our personnel system is designed to motivate the organization and help each employee achieve self-development. The system focuses on results and also emphasizes the process leading up to results. Our goal is to fairly evaluate employees' total job performance based on the following three main criteria: Competency in terms of evaluating processes leading up to a result; the individual employee's mission; and performance based upon the employee's mission. The competency of an employee is a way of measuring that individual's growth in terms of the skills and abilities required for accomplishing a variety of tasks.

#### Concept of Our Personnel System



#### **Assisting Employees' Career Development**

The TEL Group provides support to its employees in response to the wide variety of their career ambitions.

Once a year, employees fill out a "Self-Declaration Questionnaire" to communicate their preferences regarding job transfers or to discuss certain problems. These employee requests are taken into consideration and decisions on transfers are made. In addition, in order to provide employees with opportunities to create their own career paths and increase the vibrancy of the corporate group, the Open Job Posting System was introduced. In FY2009, this system successfully matched 36 eager and motivated employees with appropriate hiring departments within the Group, to which they were then transferred. On top of that, eight employees in the general job category

were successfully promoted to management positions, in line with their wishes, after they were evaluated for those positions using an aptitude test.

#### **Creating a Comfortable Workplace Environment**

The TEL Group is committed to providing employees with a comfortable workplace. As part of these efforts, we revised our childcare leave system in April 2007 and introduced a parenting benefit program the following October. Under the program, employees can now take extended periods of leave for child care' and choose to work shorter hours (one hour less than regular hours) for a longer period of time<sup>2</sup>. In FY2009, a total of 57 employees took childcare leave. Our regular employees are also eligible to receive financial assistance when their children are born, turn three years old, and enter elementary school or junior high school.

In addition, we have also instituted a "refreshment vacation" system, which allows employees to take a two-week to one-month holiday when their term of service has reached 10, 15, 20, or 25 years. We are also taking active steps to prevent on-the-job mental health problems, which have increased recently in Japan. For example, we have enhanced our healthcare staff and are offering education on mental health issues.

We also conduct an annual survey of employee awareness of the TEL Values to gauge the degree to which employees have assimilated those values, what effect they have on their motivation, and the attitude of employees toward their workplace and supervisors. The results of this survey are utilized to improve the workplace environment, organizational management, and the personnel system.

- \*1 In the past, employees were eligible for childcare leave until their children turned one year old (or 18 months in exceptional cases); however, now they can take leave until the end of the April following the date on which their child turns 18 months old (or until their children are three years old in some exceptional cases).
- \*2 Eligible employees can use this system until the end of the fiscal year when their children graduate from elementary school; whereas in the past eligibility was limited to those with children aged three or younger.

#### **Raising My Child with Peace of Mind**

Hiromi Maeno, Information Systems Dept. Tokyo Electron Ltd.

I was able to take a maternity/ childcare leave from June 2007 until the end of March 2009. I had originally planned to return to work at the end of July 2008, when my daughter turned one, but I could not



find a nursery school for her so I took advantage of the company's system and extended my leave. As a result, I was able to stay home and focus on raising my daughter. This gave me the chance to see her turn over for the first time, begin to crawl, and take her first steps. I am very grateful to the company for allowing me to share this precious time with my daughter.

#### TEL's Basic Philosophy on Human Resource Development

Based on the belief "employees are our precious treasure," the TEL Group fosters a spirit of learning among its employees, characterized by the following three key principles: (1) The workplace must nurture employees (so that they grow through their work); (2) Self-motivation and a sense of responsibility are the basic requirements for developing one's talents and career; and (3) The company must build a platform or framework that provides its employees with the motivation to learn and the necessary information and knowledge. We believe that education and training only bear fruit when maintained over an extended period of time. For this reason, the Group is enhancing its management organization while continually maintaining its educational budget at the designated level.

#### **TEL UNIVERSITY**

The TEL Group established TEL UNIVERSITY in order to provide our employees with opportunities for continual learning, while at the same time fostering employees and enhancing their organizational abilities. TEL UNIVERSITY is designed to provide employees with opportunities to obtain the knowledge and skills necessary for each to become a world-class professional. Additionally, TEL UNIVERSITY is useful in developing employees' management capabilities and educating the next generation of leaders. TEL UNIVERSITY's role is to help employees fully develop their potential, while deepening their understanding of the TEL Values, which constitute the motivational force for the growth of the TEL Group.

TEL executives also attend TEL UNIVERSITY courses, participating in lively discussions with employees on how to address the issues facing the Group. Successful human resource development requires employees that are motivated to learn, as well as managers and a corporate culture that support employee growth. Employees actively

learning at TEL UNIVERSITY and applying what they have learned to their jobs and workplaces leads to the growth of both the individual employees and the organization as a whole. TEL UNIVERSITY is engaging in human resource development that contributes to the growth of the TEL Group and also contributes to the advancement of society.

#### **Fostering Next-generation Leaders**

TEL UNIVERSITY is also fostering the next generation of leaders. This includes, for instance, the BLP Basic Course, which is designed for potential next-generation group leaders among younger employees; and the BLP Advanced Course, which is intended for mid-level managers who are candidates for senior management positions. There is also executive training for senior managers who are candidates for executive-level positions. In this way, the TEL Group is selecting potential next-generation leaders from every level of the organization and supporting their development.

## Thoughts on Attending the BLP-B (Business Leader Course)

Yoshifumi Seo, Software Engineering Dept. Tokyo Electron Kyushu Ltd.

We all tend to spend each day focusing on the narrow work-related tasks to which we are assigned, but by attending the selected course and being exposed to the innovative ways of thinking and ideas of the



instructors and other participants, I was able to realize many things and had the chance to raise my own level of motivation. Although individual participants work on developing different products and there are differences in our business systems, we all share a common enthusiasm as TEL Group employees; and we have also developed a sense of unity. I am determined to work even harder to ensure that my personal growth will help enhance my workplace and our company as a whole.

#### Educational Framework

		Basic education		Specialized education	Manager education	Leadership training	Cross-cultural and language training	Support
	Company-wide (requisite)	Class (requisite)	Enhancement (selective)	Professional course	Management course	Business leader course	Global communication	OJT/Career
Senior management level	Company-wide			Mana Tec	Director training	Corporate manager Executive training	Progra self-st English	
Management level		Class-	General Bus	Management of Technology Champion	GroupLeader training	BLP Advanced Course	Program to si self-study of t English ability	
Mid-level	baseline educ	s-by-class b education	eral skills Business skills	of ipion seminar		BLP Basic Course	o support of English ity assessment	
Younger level	education	basic	<u> </u>	nar			ment test	
Introduction	New employ indivi	vee education (joint dual company educ	seminar and ation)	Hands-on manufacturing training				Trainer/Mentor system for freshmen

## **Relationship with Suppliers**

We view our suppliers as indispensable partners in the effort to provide society with real value.

Therefore, we strive to facilitate mutual growth by maintaining excellent communication with our suppliers.

#### **Approach to Procurement**

As part of its corporate message, the Tokyo Electron Group focuses on the following three items and strives to achieve the goals related to them:

People: We respect people and provide value that

is meaningful to them.

Technology: We strive to achieve the most advanced

technologies in the world.

Commitment: We promise to contribute to our

customers', stakeholders' and local communities' success through corporate

social responsibility.

The foundation of these goals is our philosophy of "respecting people," which has been TEL's guiding principle since its inception. Applying this basic philosophy to our procurement activities as well, we have established the following Basic Procurement Policy and are striving to fully implement it:

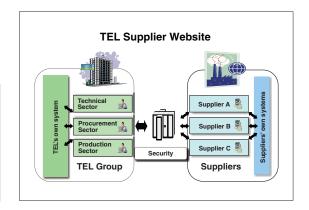
#### **TEL Group's Procurement Policy**

- We will seek suppliers throughout the world and provide them with opportunities for fair and equitable business opportunities.
- We will conduct our procurement activities by comprehensively evaluating functions, performance, quality, price, delivery lead-time, service, and stable supply.
- We will share our medium- to long-term vision with our suppliers, pursue technical innovations and profit based on mutual trust, and build partnerships that will continue to grow together.
- 4. We will comply with all legal and social codes of the countries in which we conduct business, and engage in business transactions that are safe and environmentally considerate.

#### **Communication with Suppliers**

The TEL Group uses EDI\* for procuring parts and materials, but also operates its own website as a two-way tool for communicating with suppliers. The website can be linked to the internal systems of both the TEL Group and the supplier. Utilizing the various types of content on the website, data and information required for day-to-day operations can be exchanged quickly and accurately in a paperless and bi-directional manner. In addition, the website also makes delivery/receipt history and progress management visible, thereby improving overall efficiency. For building this system, the Group has strived to put in place a secure environment that maintains a high level of security and allows for quick recovery after a system failure.

\*EDI (Electronic Data Interchange) is a framework to electronically exchange information among corporations that is related to commercial transactions, in a unified standard format.



#### **Strengthening the Supply Chain**

In order to strengthen our supply chain, the TEL Group has launched joint projects with our suppliers. In FY2009, for example, we held the annual presentation and discussion on growth strategies and environmental initiatives, addressing the specific topic of "Targeting medium to long term growth together in a new economic environment."



#### **Ensuring Future Growth**

The semiconductor and FPD production equipment industry, which constitutes a pillar sector of the TEL Group's business, is an extremely volatile market. TEL understands this market uniqueness as the opportunity for the next growth, and commit to increase share and improve our ability of development and manufacturing.

In pursuit of these goals, we have made many improvements as a result of repeated discussions with our suppliers; and we will consider their future suggestions as well, as we continue to work to create solid value for our customers and ensure their growth along with our own.

## Corporate Social Responsibility (CSR)

The TEL Group seeks mutual development with local communities in Japan and overseas through communication that fosters a relationship of trust.

#### **Our Approach to Corporate Citizenship Activities**

At the TEL Group, one of our tasks is to contribute to the sound development of society, while always adhering to social laws and norms. Guided by this outlook, we engage in a variety of activities in Japan and overseas as a good corporate citizen. We will continue to build and maintain a relationship of trust with the local communities in which we do business, while consistently aiming for mutual growth.

#### **Plant Tours (Japan)**

Tokyo Electron AT Ltd., Tokyo Electron PS Ltd., Tokyo Electron Tohoku Ltd. and Tokyo Electron Kyusyu Ltd. invite their local neighbors to participate in plant tours in the hope of boosting communication with local communities and ensuring that their neighbors are aware of the company's operations. We received a great deal of positive feedback from participants, including those who said: "Even though I live not too far from the plant, I've never had an opportunity to tour it. So thank you for providing this chance to see the plant"; or who said: "I see that the inside of the company is very clean and that you are very careful in handling your products. Thank you very much for enhancing communication with members of the local community despite your busy schedule."



A plant tour

## Junior High School Students Experience Real Jobs (at the Sagami Plant, Japan)

Tokyo Electron PS Ltd. has been offering a job-experience program that gives local junior high school students the chance to see what it is like to work in a semiconductor-related business. The program allows the students to learn more about the meaning of work and appreciate its importance, while considering what occupations are best suited to them. The program was held twice in FY2009, with a total of eight students participating. After receiving instructions on how to use different tools, students performed various tasks, such as making actual cables

according to production drawings and then inspecting them. We plan to continue this job-experience program in the future.



Job-experience program participants

#### Tree Planting (Japan and the U.S.)

Tokyo Electron Kyushu Ltd. (TKL) has been planting trees on Mt. Tawara in Aso. During the fourth year of the program, 211 people planted 1,000 trees. Elsewhere, in the Kawachi district of Tosu city in Saga prefecture, TKL concluded a Corporate Forestation Activity agreement with Tosu city, and 49 employees and their family members planted around 160 trees in the city. Over the next five years, tree planting and undergrowth clearing are planned for an area covering approximately 5,000 m² along the Kawachi Dam in the northern part of Tosu city.

TEL is also planting trees in the U.S. For example, at Tokyo Electron U.S. Holdings, Inc., headquartered in Texas, and at TEL Technology Center, America, LLC, located in the state of New York, employee volunteers are planting trees at the sites where their offices are located.



Tree planting in Kyushu



Tree planting in the U.S.

#### **SOCIAL REPORT**

#### Corporate Social Responsibility (CSR)

Cleanup Activities around Yodo River (Osaka, Japan)
The TEL Group's three business sites in the Kansai region
teamed up to clean up the Yodo River in Osaka City. This
activity was organized by the TEL Group jogging club,
which trains on the riverbank. A total of 57 employees and
their families participated. The participants were divided
into three teams, which competed with each other to see
who could collect the most garbage. The TEL Group is
committed to continuing to make contributions to local
communities through such activities.



Volunteers clean up the area around the Yodo River



## New Employee Training in Kyushu Incorporates Social Contribution Activities



Tokyo Electron Kyushu Ltd. has implemented activities designed to contribute to local communities as part of its new employee training.

During training conducted in FY2009, new employees were divided into six groups, with each group planning and

implementing activities centered on the topic of social welfare. Activities included visits to child welfare facilities and nursing homes for senior citizens, and volunteering to work at summer festivals or community blood drives. Many members of the community expressed their appreciation for these volunteer activities, which produced significant results.

#### **Activities in the United States**

As a part of its outreach activities to contribute to local communities, Tokyo Electron U.S. Holdings, Inc. introduced a program that allows employees to spend up to four hours every six months participating in volunteer activities during their working hours. More than 60 employees have already taken advantage of the program to engage in activities that include supporting nursing-care facilities, visiting local elementary schools to assist children in math and science, and working with local non-profit organizations.

The company also distributes information via its intranet and newsletters on a variety of topics, such as carpooling, to encourage employees to take action in their everyday lives to help the environment. In addition, the company is now promoting 4R activities, after adding the aspect of "rebuy" to its former 3R activities (recycle, reduce, reuse), and is encouraging employees to buy and sell unneeded items among themselves. Employees are also being asked to bring to work recyclable items that cannot be recycled at home (such as paper, cardboard, cans, glass and plastic bottles, batteries, and mobile phones) so that they can be recycled by the company.



Recycling box for mobile phones

## **Comments from a Third-Party Expert**



Fusako Matsuda President, Environmental Economics Institute, Inc. CEAR Registered EMS Lead Assessor

I believe that economic downturn triggered by the financial crisis will have a major impact on the real economy worldwide. The financial performance of many businesses has taken a turn for the worse, and firms with manufacturing facilities in particular are struggling amidst an uncertain future outlook. Tokyo Electron, which conducts business globally in Europe, the Americas, Asia and elsewhere, is no exception; and in the fiscal year ended March 2009 it saw its groupwide consolidated net sales fall by nearly half compared to the same period of the previous year and its operating income did not even reach 10% of the previous year's level. It was under these circumstances that I visited the Yamanashi Plant in Nirasaki City. Yamanashi Prefecture to prepare my third-party comment. I visited manufacturing sites, a cleanroom, and a water processing facility, but the manufacturing site was surprisingly quiet, and I inferred that it was not operating at full capacity. I got the strong impression that the semiconductor business is facing extremely difficult circumstances. Reading this report, however, I did not get any sense of desperation. On the contrary, throughout the report I perceived a determination by senior management to use the current economic crisis as a springboard to make capital investment in environmentrelated businesses and conduct research and development, with an eye to the future; and this attitude made me feel reassured.

The TEL Missions announced in FY2009 focus on innovation, growth, and the environment, conveying a powerful message of development, centered on new businesses in the environmental and clean energy fields, as well as tasks such as reducing the environmental impact of semiconductor and FPD production equipment and developing photovoltaic cell production equipment. In response to the announcement, this year's report shows that there are more activities related to the prevention of global warming and the management of chemical substances. One example is the move towards specific medium- and long-term environmental targets. The TEL Group has set targets to develop equipment that will make it possible to halve the total environmental impact of customer plants and also halve the environmental impact from the business activities

of its own plants and offices and from logistics by 2015. Of particular note is the Group's effort to identify which processes in the lifecycles of leading products (including materials procurement, manufacturing, logistics and product use) generate the greatest volume of CO<sub>2</sub>, with FY2008 as the baseline year for comparison, thereby making targets and the content of activities visible. The Group's plants and offices account for only about 5% of total emissions, while use of its products at customer plants accounts for about 80% of the total, which underscores the key importance for the Group of reducing the energy customers' consume when using those products.

Another significant development is the reinforcement of the photovoltaic cell production equipment business. The transition to a low-carbon society through the use of renewable energy has become one of the most important global issues. Technological innovations are needed to improve photovoltaic cell energy conversion rates and reduce costs. By conducting joint development with leading manufacturers and collaborating with key photovoltaic cell production equipment manufacturers around the world, the Group has adopted the proactive stance of developing new business by combining its own original expertise and the technological capabilities that it has accumulated as a production equipment manufacturer.

In addition to these environmental initiatives, the Group has bolstered the content of its social activities in such areas as health and safety, internal and external communications, human resource development, supply chain management, and activities as a corporate citizen; and it deserves high praise for its efforts to enhance its own visibility and transparency vis-à-vis the public. In the future, I would like to see more comments from employees and business partners, as well as more examples of specific activities concerning the efforts to reduce environmental impact and the social activities by overseas group companies in the U.S., Europe, and Asia from the perspective of having the TEL values shared by Group employees throughout the world. I expect even greater progress from Tokyo Electron as a leading company that is charting the course

to a future wherein the environment drives economic development.



Ms. Matsuda toured the TEL Group's Yamanashi Plant in preparation for writing her third-party comment

#### **Response to the Third-Party Comment**

I would like to express my deep appreciation to President Fusako Matsuda of the Environmental Economics Institute, Inc. for visiting the Yamanashi Plant, one of the TEL Group's development and production sites, in July 2009; and for making the effort to understand our environmental initiatives. We will endeavor to include more specific information on the environmental activities of overseas group companies in Europe, America, and Asia in future reports, as she recommended. We are committed to working towards achieving

our medium-term target of halving environmental impact by 2015, by focusing on innovation, growth, and the environment; and to preserving the corporate DNA of the TEL Group, which is based on recognizing what society truly needs and meeting those needs in a straightforward manner.

Satoshi Saito, Director Environment, Health & Safety Center Tokyo Electron Ltd.

























The Tokyo Electron Group held the TEL Eco-Life Painting and Photo Contest from April to June 2009 as part of its activities to raise environmental awareness.

The photographs and paintings above are some examples of the submissions received from Japan and other countries.





#### **TOKYO ELECTRON LIMITED**

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