



Management foundation

In recent years, the role played by companies has become more important for establishing a sustainable society. Furthermore, in the area of investment, ESG investment, which emphasizes corporate environmental, social, and governance initiatives, is becoming mainstream. In these circumstances, companies are required to steadily develop highly effective governance, to build a solid management foundation that forms the basis of business activities, to contribute to solving environmental and social issues, and to creating new value. Tokyo Electron (TEL) is working to further improve its governance system, including a review of the Board of Directors, and to ensure compliance throughout the Group, recognizing that corporate governance is essential to sustainable growth. In regards to the environment, the company is conscious of exacerbation of climate change and abnormal weather, and has established a new medium- to long-term environmental vision, and is proactively working to reduce the environmental impact of business activities. In addition, the company is promoting activities in compliance with global standards to achieve sustainable operations not only within the company, but throughout the supply chain. TEL endeavors to build a strong and sound management foundation and aims to further enhance its corporate value.

Medium-term goals (5)

Build a management foundation for increasing value

Priority themes, Main activities



- **Corporate governance**  
Supervision and evaluation of strategic decision-making, profit sharing policy, design and results of director compensation system, process of effectiveness evaluation of Board of Directors, management issues
- **Risk management** ■ **Compliance** ■ **Respect for human rights**
- **Supply chain management** Procurement initiatives
- **Environmental management**  
Global warming prevention/energy-saving initiatives, renewable energy initiatives, water consumption reduction initiatives, waste reduction initiatives, chemical substance management, promotion of green procurement
- **TEL FOR GOOD** Social contribution activities

SDGs initiatives

- Steadily developing highly effective governance and establishing a solid management base in order to contribute to the development of society in order to improve corporate value
- Promoting compliance as an important business strategy, and developing operations in consideration of the environment and human rights, in order to contribute to the creation of a sustainable, fair, and equal society



Decent work and economic growth      Climate action      Peace, justice and strong institutions

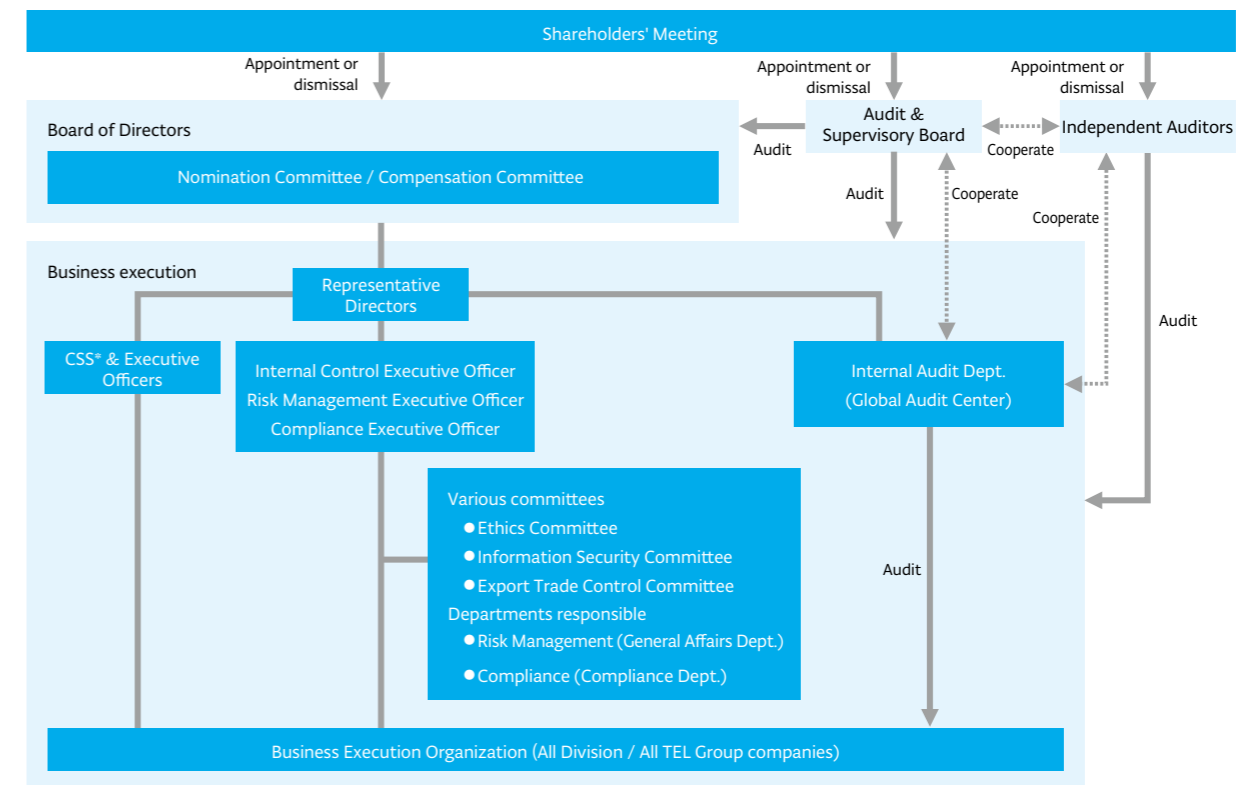


Corporate governance

Sustainability of a Board of Directors appropriate for resolution of management issues

Based on an effective governance structure that supports improving corporate value over the medium- to long-term, in order for the Board of Directors to fulfill its roles and responsibilities, Tokyo Electron (TEL) is committed to both assembling talented people with a good balance of knowledge, experience, and skills and ensuring diversity, as well as working to nurture the next generation of management personnel. In addition, by operating a Board of Directors capable of properly overseeing and evaluating (monitoring) the strategic decision making of the management team responsible for business execution, TEL is putting effort into maintaining the sustainability of a Board of Directors appropriate for resolving management issues.

Diagram of the corporate governance framework, internal control system, and risk management framework



\* CSS: Corporate Senior Staff

Corporate governance framework

TEL adopts the Audit & Supervisory Board System, consisting of a Board of Directors and an Audit & Supervisory Board.

Currently, among the 16 members who attend the Board of Directors meeting, which includes Audit & Supervisory Board members, there are six outside directors and statutory auditors, including three independent outside directors, and three outside Audit & Supervisory Board members. Independent outside directors and outside Audit & Supervisory Board members express frank opinions from an independent standpoint so that discussions by directors coming from within the company do not tend toward homogeneity. This guides discussion within the Board of Directors in an appropriate direction so that the company can be competitive and succeed globally. TEL believes the lively exchange of opinions arising from proactive comments by independent outside directors and Audit & Supervisory Board members is the foundation supporting optimal decisions at TEL's Board of Directors meetings. The Board of Directors works to achieve sustainable growth and to increase corporate value over the medium- to long-term based on its fiduciary responsibility to shareholders. Furthermore, it strives to achieve an appropriate sense of productive tension and constructive debate through the presence of executive directors, who possess diverse experience, knowledge, and achievements, and outside directors, who maintain objectivity.

The Audit & Supervisory Board provides a structure that enables its board members to obtain sufficient information necessary for audits by collecting information through on-site surveys conducted by full-time Audit & Supervisory Board members, and by ensuring appropriate coordination with the Internal Audit Department and Independent Auditors.

Established to ensure fair, effective, and transparent management, the Nomination Committee and the Compensation Committee support growth-oriented governance for TEL by making proposals to the Board of Directors regarding the election of candidates for the management team and regarding compensation.

### Skills and diversity of the president and management team

In the selection of executive directors, the Nomination Committee emphasizes people with outstanding execution capabilities backed by experience, knowledge, and achievements as a manager. They must also possess high sensitivity to all risks and the ability to accurately analyze and judge them. Furthermore, they are required to be able to directly express their honest opinions in meetings. At the same time, in order to ensure constructive discussion incorporating diverse backgrounds and expertise, personnel with an in-depth knowledge of all departments are proposed to the Board of Directors as director candidates, taking into consideration the balance between Sales and Service, Manufacturing, R&D, and Corporate Administration.

In addition, based on the TEL Succession Plan, we endeavor to nurture successor candidates, in particular from among executive officers, who will be responsible for the next generation of executive management. Furthermore, through the execution of daily duties, the CEO and Representative Director assesses successor candidates from various perspectives, including capability, character, quality, and discernment, and provides constant support for them by arranging opportunities such as job rotation and training.

### Skills and diversity of outside directors

With regards to independent outside directors or outside Audit & Supervisory Board members, they are required to express frank opinions from an independent standpoint whereby they can guide discussion within the Board of Directors in an appropriate direction so that the company can be competitive and succeed globally. In making these selections, TEL aims to assemble talented people with a balance of knowledge of global business, broad insight into related industries, an extensive network of personal contacts, objectivity from the social, capital market, and other perspectives, knowledge of finance and accounting, broad legal knowledge. In addition to requirements under the Company Act, TEL has established separately specified Independence Requirements to avoid conflicts of interest with general shareholders, and to ensure the independence of outside directors and outside Audit & Supervisory Board members.

### Supervision and evaluation of strategic decision-making

The TEL Board of Directors convenes approximately nine times per year by ensuring sufficient time for debate. The Board of Directors meeting annual schedule is set in an effort to provide sufficient time for debate and to increase the attendance by all directors, including outside directors. In addition, prior explanations are provided to outside directors and outside Audit & Supervisory Board members in a timely manner from the administrative office. TEL strives to provide sufficient information to and dialog among independent outside directors and Audit & Supervisory Board members, and, for example, in regards to matters of particular importance, TEL establishes a venue for dialog with TEL executive management in advance.

### Policies for allocation of earnings

TEL's basic approach is for appropriate allocation of company earnings to all stakeholders.

TEL's basic policy of allocation to shareholders is to link dividend payments to business performance on an ongoing basis for a payout ratio of around 50% based on net income attributable to owners of the parent company.

TEL effectively uses internal capital reserves to raise corporate value through earnings growth by concentrating investment in high-growth areas and provide returns directly to shareholders by linking dividend payments to business performance and earnings. Furthermore, the company flexibly implements share buybacks as part of shareholder returns.

#### Dividend payout ratio: 50%

Annual DPS of not less than 150 yen

Review dividend policy if the company does not generate net income for two consecutive fiscal years.

### Planning and outcomes of the director compensation system

#### Compensation Committee

In order to secure transparency and fairness in management and appropriateness of compensation, the company has established the Compensation Committee, which is composed of three or more directors (excluding representative directors), including an independent outside director. The Compensation Committee obtains advice from external experts, and analyzes and compares compensation levels and other details with high-tech companies inside and outside Japan. Based on this analysis, it makes proposals to the Board of Directors regarding the compensation policy for directors and executive officers, the most appropriate, globally competitive compensation system for the TEL Group, as well as individual compensation amounts for the Representative Directors.

#### Annual performance-linked compensation

In regards to Corporate Director compensation, TEL uses a profit-sharing style method of calculating compensation that determines the level of annual performance-linked compensation linked to the actual net income attributable to owners of the parent company. In addition, from fiscal year 2019, TEL has decided to have the Compensation Committee assess the individual performance of Representative Directors and to reflect this in the individual annual performance-linked compensation amount.

#### Medium-term performance-linked compensation

TEL has introduced a medium-term performance-linked compensation system in order to link Corporate Director compensation amounts to medium-term corporate value improvements. The payout rate varies between 0% and 150% according to performance goal achievement levels for the three-year period covered, relative to a base amount calculated based on the position and responsibilities of each Corporate Director. The consolidated operating margin and consolidated ROE are used as performance indicators.

#### Process for evaluating the effectiveness of the Board of Directors and management issues

TEL discusses and evaluates the effectiveness of the Board of Directors every year in accordance with the TEL Corporate Governance Guidelines. In fiscal year 2019, TEL again conducted a questionnaire of all directors and Audit & Supervisory Board members regarding the effectiveness of the Board of Directors, the Nomination Committee, and the Compensation Committee. In addition to the results of this questionnaire, exchange of opinion and deliberation was held, mainly among outside directors and outside Audit & Supervisory Board members, which was shared with the whole Board of Directors in order to evaluate the effectiveness of the Board of Directors. For this questionnaire, in its effort to obtain highly objective supervisory insight and evaluation, the company seeks perspective and input from external consultants, and analyzes the results. Issues which became apparent as a result of analysis and evaluation are debated in depth by the Board of Directors, and efforts are taken to make improvements as appropriate. Based upon this, TEL believes that the Board of Directors, including the Nomination Committee and Compensation Committee, is functioning effectively and fulfilling its role as stipulated in the TEL Corporate Governance Guidelines "Establishing management strategy and vision," "Making major operational decisions based on strategic direction," and "Engaging in constructive, open-minded debate."

Management issues identified through the process of evaluating effectiveness are discussed at Board of Directors meetings by Corporate Directors and Audit & Supervisory Board members with a diversity of opinions and experience. Aside from Board of Directors meetings, separate off-site meetings are also held as an opportunity for focused discussion away from individual matters for resolution.



Off-site meetings are held at outside facilities.

## Risk management

### Approach to risk management

Reflecting changes in society and the business environment, the risks facing businesses are growing increasingly complex and diverse. Tokyo Electron (TEL) considers understanding and appropriately addressing the risks that it may face in its businesses, as well as their impacts, to be a crucial factor to sustainable corporate growth.

### Risk management system

In order to promote more effective risk management, TEL carries out enterprise risk management through a body established within the General Affairs Department at its headquarters. This body supervises risk management, analyzing a wide range of risks arising in business activities (such as compliance risk, human resource and labor risk, and business continuity risks) to identify key risks. It then monitors the management of these risks by the respective departments responsible and supports their risk management activities. The status of these activities is regularly reported to the Board of Directors and the Audit & Supervisory Board.

### Auditing by the internal audit department

The Global Audit Center serves as the internal audit department for the entire Group and implements audits based on the audit plan. Based on the results of these audits, the Center then gives instructions for making improvements as needed, follows up on progress toward these improvements and provides support. The Group's internal control over financial reporting in fiscal year 2019 was evaluated as effective by the independent auditors.

### Risk management initiatives

Each year, we set priority management targets and strive to steadily reduce risk. In fiscal year 2019, we reinforced measures in the following areas.

### Compliance

We appointed people responsible for compliance at key overseas bases and established a system whereby they report the progress of compliance-related activities to the Group headquarters each month. In addition, compliance risk audits are conducted through systematic visits to overseas subsidiaries.

### Business Continuity Plans (BCPs)

TEL is improving its plans based on lessons from past disasters and is surveying the earthquake risks at its overseas locations. We are also working, on an ongoing basis, to establish alternate production structures within our network and to develop multiple sources of important parts.

### Mental health, long work hours, and harassment

TEL carries out mental health-related measures based on employee stress checks and multiple seminars aimed at helping managers look after their employees. In addition, we have introduced a mechanism to monitor excessive work hours that lead to health risks. TEL also holds harassment prevention seminars led by lawyers.

### Management of confidential information

The Human Resources Department and the Intellectual Property Department cooperate to strengthen measures to prevent leaks of confidential information, particularly targeting employees who leave the company to ensure the proper return and destruction of confidential information.

## Compliance

### Approach to compliance

Stakeholder trust is essential to business activities. In order to maintain this trust, it is essential to ensure compliance and enhance corporate ethics continuously. The Fundamental Policies concerning Internal Controls within the Tokyo Electron (TEL) Group and TEL's Code of Ethics (Code of Ethics) stipulate that all TEL Group executives and employees must comply with laws and regulations and act with high ethical standards and a strong awareness of compliance.

### Compliance systems and initiatives

#### Compliance system

TEL has built a structure to implement its compliance program globally. Under the head of the Legal, Compliance Division, compliance representatives have been newly appointed at major overseas bases to create a system for direct reporting through the chain of command to the Legal, Compliance Division. The company has restructured its compliance system. Specifically, compliance-related issues are immediately reported by the head of the Legal, Compliance Division to the CEO, Board of Directors, and the Audit & Supervisory Board so that they can be addressed quickly and effectively.

#### Corporate ethics

TEL has established the Code of Ethics as a standard of conduct by which employees and executives should abide. To ensure awareness of this code, we distribute it in the form of booklets in Japanese and four other languages to all employees. TEL revises its Code of Ethics as needed, in response to changes to external and internal conditions. In addition, an Ethics Committee has been established to support and supervise the activities of Group companies in Japan and overseas aimed at more effectively promoting and raising awareness of compliance and corporate ethics. Furthermore, directors, officers, and senior executives sign an oath to uphold the Code of Ethics and comply with corruption-related laws every year.

#### Compliance regulations

Based on its Code of Ethics, each Group company in Japan and abroad has established its own compliance regulations to ensure that every individual taking part in the business activities of the Group clearly understands the pertinent laws, regulations and internal company rules, and consistently apply these in all of their activities.

#### Compliance education

TEL conducts online education and face-to-face training on topics including corporate ethics and the basics of compliance, export compliance, insider trading prevention, the Act for Subcontracting, and the prevention of harassment. Depending on the topic, this education is implemented for specific levels or across the board. We also implement ongoing testing to check the degree of understanding among employees. From fiscal year 2020, we will deploy a more comprehensive, systematic education program, advancing multilingual support in an effort to foster compliance awareness and reinforce behavior-oriented awareness-building activities among all Group employees.



Percentage of employees who have received web-based training

99.2%

#### Internal reporting system

As a means for employees to provide information outside the chain of command about behavior that may be in violation of laws or corporate ethics, we have established a hotline (organized around the tenets of confidentiality, anonymity, and prohibition of retribution) to receive internal reports. In addition, we established an external contact point for employees and another contact point specifically for suppliers and third parties. Each overseas location has its own internal reporting hotline, and we are building a unified internal reporting system for all overseas bases.

As a result of these initiatives, in fiscal year 2019, there were no reports or cases of noncompliance with laws, regulations, or the Code of Ethics that could have had a material impact on the TEL Group's business or local communities.



## Respect for human rights

### Approach to human rights

Conscious of its corporate social responsibility, Tokyo Electron (TEL) recognizes that it is important to conduct itself with a strong sense of integrity. Based on this recognition, TEL has firmly upheld human rights since its founding as reflected in the spirit of its Corporate Philosophy and Management Policies. For TEL, respecting human rights means a significant undertaking, not only to fulfill its responsibility for eliminating adverse impacts on people caused through business activities, but to respect those people who support the company's business activities, and contribute to the realization of a sustainable dream-inspiring society. TEL incorporates the concept of respect into every aspect of its business activities, and strives to nurture a dynamic corporate culture where each person can realize his or her full potential.

### Commitment

In fiscal year 2018, TEL published its Human Rights Policy, summarizing the company's approach to human rights in business. TEL has specified the human rights it believes are particularly important in business activities as Freedom; Equality & Non-Discrimination; Freely Chosen Employment; Product Safety & Workplace Health and Safety; Freedom of Association; and Appropriate Working Hours & Breaks/Holidays/Vacations. In preparing the Human Rights Policy, the company referred to the United Nations' Guiding Principles on Business and Human Rights in addition to the International Bill of Human Rights and the ILO Declaration on Fundamental Principles and Rights at Work which are referred to therein. Additionally, in order to understand the demands of the times and human rights issues in the industry, the company also refers to the Ten Principles of the UN Global Compact and the Responsible Business Alliance (RBA)\* Code of Conduct.

### Awareness and education

TEL is implementing on-site efforts to communicate principles relating to human rights not only within the company, but also with its suppliers. In fiscal year 2019, TEL also implemented a human rights e-learning program targeting all TEL executives and employees.

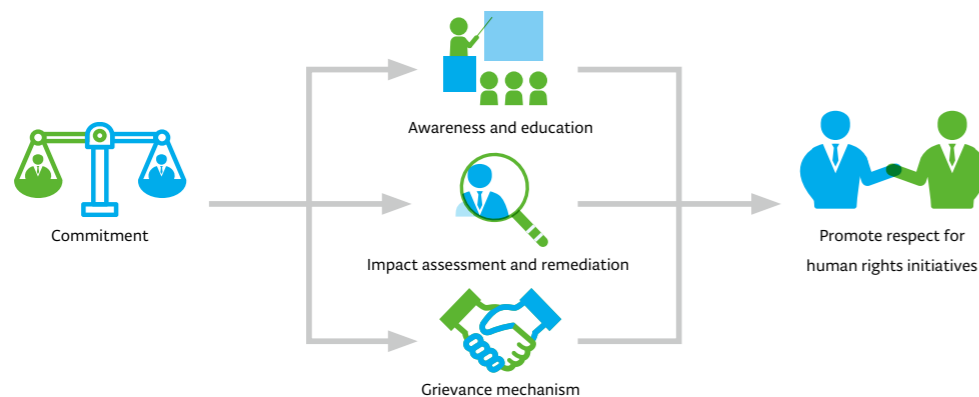


### Impact assessment and remediation (Human rights due diligence)

TEL is currently identifying and evaluating risks and impacts relating to human rights and, based on the results, is promoting corrective action aimed at eliminating those risks. Within the company, it utilizes self-assessment questionnaire (SAQ) based on the RBA Code of Conduct and, for suppliers conducts a CSR survey in order to evaluate human rights risks throughout the value chain. It analyzes and evaluates the results of these surveys conducted once per year, and implements corrective action as required. By continuing the impact assessment and remediation process in the future, the company will eliminate medium- to long-term human rights risks, leading to the creation of opportunities.

### Grievance mechanism

TEL has constructed a framework for impact assessment and remediation, and is striving to establish an effective business-level grievance mechanism. To date, the company has established hotlines in Japan and overseas for employees and suppliers, and it continues to develop initiatives for grievance mechanism in-house and in the supply chain.



\* Responsible Business Alliance (RBA): The RBA establishes a set of standards for supply chains in the electronics industry for a safe labor environment, to ensure that workers are treated with respect and dignity, and that companies take responsibility for environmental impact in the manufacturing process.

## Supply chain management

### Supply chain principles and system

#### Procurement principles and system

The high-value manufacturing that Tokyo Electron (TEL) strives for is based on the functions of all materials and components that make up the products and the pursuit of high quality. TEL values communications with suppliers and seek to grow manufacturing on a global scale with its suppliers based on ongoing trusting relationships.

TEL engages in procurement activities in line with a procurement policy which the company formulated based on the laws, regulations, and social norms of each country as well as the RBA Code of Conduct, and which it has disseminated internally and to its suppliers. Under the leadership of the TEL Representative Director, President & CEO as the top of the procurement system, issues identified during procurement activities are shared with the manufacturing company presidents' council and the purchasing department manager council for consideration of specific improvements.

### Procurement initiatives

#### CSR procurement

With an aim of keeping track of its suppliers' engagement in CSR activities, TEL has conducted a CSR Survey since fiscal year 2014. The survey is in accordance with the RBA Code of Conduct. TEL analyzes the responses and provides feedback to suppliers in an effort to build on improvements. In fiscal year 2019, the company made extensive revisions to the survey content based on auditing standards stipulated by the RBA and implemented the survey targeting materials suppliers,<sup>1</sup> from which the company procures parts and raw materials for products.

According to the survey results, no suppliers were engaged in any of the practices given particular emphasis in the RBA code of conduct, namely child labor, forced labor, bonded labor, inhumane treatment, false reports, falsification of records, or bribery. Neither were any suppliers of a sufficient size<sup>2</sup> to be considered high risk in terms of compliance.

Furthermore, from fiscal year 2019, the company has begun surveying staffing and logistics suppliers, focusing on major logistics/customs clearance operators.

#### Supply chain CSR process



#### Responsible procurement of minerals (conflict minerals)

TEL regards taking action against conflict minerals (3TG)<sup>3</sup> obtained through illegal exploitation, including sources with human rights violations or poor working conditions, an important part of corporate social responsibility. The company's resolute goal is to eliminate the use of raw materials made from these conflict minerals as well as any parts or components containing them.

In fiscal year 2019, TEL conducted its fifth annual survey on countries of origin and smelters of potential conflict minerals, using the reporting template (CMRT)<sup>4</sup> developed by the RMI.<sup>5</sup> As a result, TEL identified 253 RMAP<sup>6</sup> conformant smelters, providing the company confidence that 3TG sourced from these smelters were conflict-free. None of the materials procured were found to contain conflict-affected 3TG.

#### Procurement BCP

As part of its Business continuity plans (BCP), TEL collaborates with suppliers for disaster preparation. The company maintains a database of suppliers' production sites so that if a crisis arises, it can promptly identify impacted suppliers and quickly collaborate in recovery efforts. During fiscal year 2019, about 18,000 supplier sites were registered, and post-disaster impact surveys were conducted seven times.

In addition, for key suppliers accounting for more than 80% of the TEL's procurement spend, it conducts a BCP survey, analyzes their responses, and gives the results to suppliers as feedback to promote further improvement. In the fiscal year 2019 survey, improvements in overall rating level were observed at 19% of suppliers and improvements in the overall raw score were seen at 42%.

<sup>1</sup> Suppliers accounting for more than 80% of TEL's procurement spend  
<sup>2</sup> 500 employees or more

<sup>3</sup> 3TG: Tantalum, tin, tungsten, and gold

<sup>4</sup> CMRT: Conflict Minerals Reporting Template

<sup>5</sup> RMI (Remote Method Invocation): An organization that inspects 3TG smelters/refiners that do not use conflict minerals

<sup>6</sup> RMAP (Responsible Minerals Assurance Process): A program promoted and led by the RMI for auditing smelters/refiners that do not use conflict minerals

## Environmental management

### Environmental management system

To continuously improve its environmental activities, Tokyo Electron (TEL) has operated an environmental management system based on ISO 14001 since 1997, primarily at its manufacturing subsidiaries. In March 2017, TEL acquired multi-site ISO 14001 certification for its factories and offices in Japan that had previously acquired certification separately. Coinciding with the multi-site certification, the company has developed a standardized Group format for environmental impact assessments, the identification of useful environmental aspects, environmental management programs, and internal audit checklists. During fiscal year 2019, TEL established approximately 100 environmental goals for different levels across the entire company and carried out these improvement activities. Progress of activities and compliance with laws and regulations are confirmed through internal audits and third-party audits. The issues identified through these activities are reviewed by the EHS Council, reported to the Manufacturing Company Presidents' Council, and used in promoting environmental activities across the entire TEL Group. Under such a management system, fiscal year 2019 was again free from environmental incidents, accidents, violations, and associated legal proceedings.

### ISO 14001 certified factories and offices

Company name	Factory/Office name	Certification date
Tokyo Electron	EHS Promotion Center (Fuchu Technology Center)	May 1998
Tokyo Electron Technology Solutions	Yamanashi Office (Fujii/Hosaka) Tohoku Office	
Tokyo Electron Kyushu	Koshi/Ozu Office	
Tokyo Electron Miyagi	Taiwa Office	
Tokyo Electron (Kunshan)	—	March 2013
TEL FSI	—	March 2013
Tokyo Electron Korea	Balan Factory	July 2014
TEL Epion	—	May 2018

### Initiatives to prevent global warming and save energy

Each TEL plant and office has an established goal of reducing energy consumption by at least 1% year-over-year.

Initiatives to achieve this goal include energy-saving cleanroom operation, appropriate temperature settings for office cooling and heating, the introduction of highly energy-efficient equipment, and the adoption of renewable energies.

As a result of these initiatives, in fiscal year 2019, TEL reduced energy consumption per unit sales at its plants and offices by 5% year-over-year. However, an increase in its volume of production and an increase in energy consumption associated with product development and evaluation resulted in power consumption of 306 GWh in fiscal year 2019, up 8% year-over-year; and energy-derived CO<sub>2</sub> emissions\* of 159 kilotons, up 5% year-over-year. Based on the correlation between business operations and energy use, TEL changed to an appropriate metric at plants and offices in Japan, and standardized it across the company. Specifically, the company adopted a metric calculated using a complex weighting of data from each area on the number of evaluation units used in development, the number of units produced, total floor area and staff-hours. Of all 11 of its plants and offices, both those overseas plus those in Japan that had set goals based on this method, goals were achieved at five of them.

#### ■ Example initiative 1

When Tokyo Electron Kyushu produces pure water, it was heating the water first, using a gas boiler, because the water temperature was too low. Then, after the pure water had been used, it was disposed of while the temperature was still high. Using heat exchange between the two types of water enabled the elimination of the addition of heat before preparation of pure water, whereby it was possible to reduce the volume of boiler gas use by 70% or more.

#### ■ Example initiative 2

Tokyo Electron Miyagi is reusing waste oil from the staff cafeteria to produce biofuel, equivalent to approximately 500 kg/month in terms of CO<sub>2</sub>. In the future, they plan to use the biofuel produced in company cars.

### Renewable energy initiatives

TEL promotes the use of renewable energies. At the Tokyo Electron Miyagi (Taiwa) and Tokyo Electron Technology Solutions (Yamanashi), renewable energy generated from solar panels is used to power the factories, and monitors displaying their energy profile have been set up at the entrances to the factories. At its Tokyo Electron Kyushu (Koshi), generated energy is sold, helping to prevent global warming. In fiscal year 2019, TEL generated a total of 4,392 MWh of renewable energy in Japan. In addition, Tokyo Electron U.S. Holdings has continued to purchase green power, 3,834 MWh in fiscal year 2019.

\* In calculating CO<sub>2</sub> emissions, the emission factor for TEL's electricity consumption in Japan in fiscal year 2019 was substituted by adjusted emission factors for the electrical power providers concerned. The emission factor for TEL's overseas electricity consumption was substituted by estimated factors calculated by the Federation of Electric Power Companies of Japan based on values published by the International Energy Agency (IEA)

### Initiatives to reduce water consumption

With the growing importance of water resource preservation in global environmental initiatives, TEL Group has established a goal of keeping water consumption at the same level or below that of the baseline year (fiscal year 2012 for factories and offices in Japan and a fiscal year of their choosing for each overseas operation). TEL's ongoing efforts to achieve these goals include reusing pure water from its manufacturing operations, installing water-saving devices, watering lawns with rainwater, and implementing the intermittent operation of cafeteria faucets.

During fiscal year 2019, an increase in its volume of production and an increase in water consumption associated with product development and evaluation resulted in water consumption of 1,240,000 m<sup>3</sup>, up 8% year-over-year. Moreover, TEL achieves 12 of the 14 goals at its sites worldwide. It also discharged an estimated 905,000 m<sup>3</sup> of wastewater.

#### ■ Example initiative

In construction of the new development building completed at Tokyo Electron Miyagi in October 2018 (Development Building No. 2), facilities were installed to reuse water which is conventionally disposed of as sewage after processing to remove harmful substances. These water reuse facilities are also able to reuse wastewater from the existing development building. As a result, they expect to reuse approximately 15,000 m<sup>3</sup> of water annually.

### Initiatives to reduce waste

In an effort to curb the amount of waste generated and to recycle it wherever possible, TEL Group promotes initiatives for reducing waste. In addition to participating in the electronic manifest system<sup>1</sup> to ensure proper waste management, TEL is also engaged in maintaining an appropriate amount of parts inventory and in reusing cushioning material. The company is also achieving lower waste processing costs, by promoting waste sorting activities and by modifying and increasing the capacity of space used for storing waste so as to reduce the frequency that it is collected. In fiscal year 2019, the company conducted checks of waste disposal operators in Japan using a unified on-site checklist and shared the results. In fiscal year 2019, TEL generated 116 tons of incinerated and landfill waste in Japan. As a result of its waste-reduction initiatives, the recycling rate<sup>2</sup> at sites in Japan in fiscal year 2019 was 99.2%, achieving its goal of maintaining a recycling rate of 97% or higher for the 13th consecutive year since fiscal year 2007. The company has also maintained a high level of recycling at its overseas factories and offices of 90.0%.

#### ■ Example initiative 1

Tokyo Electron Taiwan revised its method of disposing sludge, which had been processed as landfill, to recycle it as material for cement, thereby increasing the base's recycling rate to 99%. Furthermore, the revision allowed them to significantly reduce the processing cost.

#### ■ Example initiative 2

As one aspect of reducing waste, the company is also proactively working to reduce the amount of copier paper used. Some factories and offices are switching from using paper to tablets for viewing and checking procedures and plans used at manufacturing sites. As a result of this initiative, the company not only reduced the amount of paper used, it also expects to reduce the environmental burden and cost of toner, shredder, and paper disposal.

### Management of chemical substances

TEL uses chemical substances in its product development and manufacturing phases. The use and release of chemical substances subject to the Japanese PRTR<sup>3</sup> law are constantly monitored and managed. Whenever TEL introduces a new chemical substance or change the way an existing substance is used, the company checks for environmental, health, and safety risks beforehand. It disposes of substances properly after use, either through expert waste disposal contractors or by using in-house processing equipment. In response to the Act on Rational Use and Proper Management of Fluorocarbons, TEL conducts simple, regular inspections based on the law in an effort to monitor the amount of fluorocarbons used and recovered. During fiscal year 2019, no TEL factories or offices exceeded the level of fluorocarbon leakage that requires reporting.



<sup>1</sup> Electronic manifest system: A system for electronically tracking the flow of industrial waste instead of using paper-based manifests (i.e. paper forms for tracking industrial waste). The system uses a communications network of data processing centers, businesses that generate waste, and waste collection/disposal companies.

<sup>2</sup> Recycling rate: (Recycled amount/Amount of waste generated) x 100

<sup>3</sup> PRTR (Pollutant Release and Transfer Register): A framework for tracking, tabulating, and disclosing quantitative data on chemical substances that may be hazardous to human health and the ecosystem, including the amounts used and discharged into the environment and the amounts transferred (as part of waste) off the original business's premises

# Social contribution activities

## Approach to social contribution

The social contribution activities of Tokyo Electron (TEL) aim to contribute to the development of local communities and the resolution of social issues through various initiatives while deepening relationships of trust with all stakeholders. With Innovation and Technology, Education, Environment, and Community Involvement as its four focus areas, TEL conducts activities according to the United Nations SDGs.

### 4 focus areas and relevant SDGs

 <p><b>Innovation and Technology</b></p>	 <p><b>Education</b></p>	 <p><b>Environment</b></p>	 <p><b>Community involvement</b></p>
 	 	 	 
			

**TEL FOR GOOD.**

TEL FOR GOOD is the new brand name that represents TEL's social contribution activities. From fiscal year 2019, we are using it as a collective term for social contribution events and various programs, donations and volunteer activities sponsored by our company around the world.



### Special Topics

#### Support for areas affected by torrential rain in western Japan in July 2018 and the Hokkaido Eastern Iburi Earthquake

The number of victims resulting from torrential rain that occurred in western Japan in July 2018 was the largest recorded of all torrential rain disasters for the Heisei era (1989-2019).

In addition, the Hokkaido Eastern Iburi Earthquake that occurred in September of the same year, caused a large amount of damage, and much time is being spent in recovery efforts.


TEL sincerely hopes that the areas affected can realize a quick recovery, and made relief donations to this end.



## Initiatives around the world

**Japan Science Intercollegiate**

Science Intercollegiate is an event for university and technical college students to present findings of their own research. TEL has been a featured sponsor since the first competition. In providing an opportunity to present their research, the event aims to motivate students to undertake research and to foster richly creative scientists and engineers. The 8th Science Intercollegiate was held at Rikkyo University on March 2-3, 2019, bringing the total number of students presenting their research to more than 1,850 since the event's inception.




**Europe Corporate partnership activities with educational institutions**

TEL Europe has participated in corporate partnership activities with educational institutions for five consecutive years since 2015. Through to April 2019, TEL has provided opportunities for 360 teenagers to participate in the program, learning about science and the semiconductor industry while having fun. It was a comprehensive program, where TEL's periodic table was distributed to participants, and finally, a graduation ceremony was held.



**Japan Afforestation activities for groundwater recharge**

Approximately 80% of Kumamoto Prefecture's water supply resources are underground. For Kumamoto City in particular, because 100% of the waterworks are supplied by groundwater, preservation of groundwater is an important activity for securing future water resources. Since 2006, Tokyo Electron Kyushu has been working on broadleaf afforestation suited to groundwater recharge in Nishihara Village, in the outer rim of southern Mount Aso. Up to March 2019, 2,800 employees and family members have planted a total of 4.2 ha with 13,800 trees.




**Japan Earthquake memorial event**

Since 2013, Miyagi Prefecture and Kahoku Shimpo Publishing Co. have held the 3.11 Earthquake Memorial Event to encourage the prefecture's citizens to move on with positivity without letting the memory of the 2011 Great East Japan Earthquake fade. Endorsing the objective of the event, Tokyo Electron Miyagi has been sponsoring it since 2016. The event featured a cheering performance by the Miyagi Recovery Cheering Squad in collaboration with local children, and a concert by a local singer.



**U.S. SEMI High Tech U**

As an official Certified Partner of SEMI High Tech U, Tokyo Electron America (TEA) participates by dispatching instructors to this three-day program that teaches STEM\* skills to high school students who seek to pursue high-tech careers. TEA believes that linking STEM to real-world applications at SEMI High Tech U makes learning more enjoyable for students and contributes to their growth. \*STEM: General name for the educational category of Science, Technology, Engineering, and Mathematics




**China TEL Fudan Scholarship**

TEL established the TEL Fudan Scholarship Program at the School of Microelectronics at Fudan University in order to nurture human resources and to raise technical standards within China. In 2018, the first award ceremony was held at the school. Six students were presented with scholarships and honorary certificates, and shared their research and accomplishments. Tokyo Electron Shanghai has further expanded research projects with Fudan University, and building on their friendly relations, is working to nurture even more talented graduates.



**Taiwan Beach cleanup for preserving a beautiful coastline**

In June 2017, Tokyo Electron Taiwan held a charity event to coincide with its beach cleanup in Hsinchu City, pledging to make a donation proportionate to the number of participants and the volume of waste collected. On the day of the event, many ordinary residents who happened to be at the beach joined with the more than 150 employees and volunteers, collecting over 300 kg of waste. This resulted in a donation of TWD 450,000, which was given to the National Nantou Special School.



**Japan Food Bank Yamanashi, an authorized non-profit organization**

Since 2015, as part of its "Community Involvement" activities, Tokyo Electron Technology Solutions Yamanashi Regional Office has been participating in the activities of Food Bank Yamanashi, an authorized non-profit organization that delivers food items to families with children in need of assistance. During summer and winter school holidays, the office donates food items from the employees, with a matching gift of an equivalent amount of money from the company. This endeavor is ongoing.

