

Sustainability Data Book **2015**

Panasonic Corporation



About the Sustainability Data Book 2015

The Sustainability Data Book takes into account the importance of sustainability management and is published as a communication tool for reporting on Panasonic's initiatives, attitudes, and annual activities relating to society and the environment.

When communicating on its social and environmental initiatives, Panasonic reports primarily on the "materiality" (important themes) that it has established for each area of its activities. For the company's environmental activities, Panasonic reports based on the items it has set for itself in its environmental action plan, Green Plan 2018.

This data book scrutinizes the themes that are of great interest to all of Panasonic's valued stakeholders, and it presents basic information and related data for each theme. For omitted themes, specific examples of initiatives, and more details in general, please refer to the Panasonic Sustainability website.

► Sustainability Site

<http://www.panasonic.com/global/corporate/sustainability.html>

Scope of Reporting

Except when noted otherwise, results are calculated based on the following:

Fiscal year: Fiscal 2015 (April 1, 2014 to March 31, 2015)

Organization: Panasonic Corporation and consolidated subsidiaries

Data:

- Data concerning manufacturing business sites cover all the manufacturing business sites (totaling 278) that constitute the Panasonic Group's environmental management system
- From fiscal 2014, Panasonic's policy has changed; there is now no revision of past data when the scope of what counts toward totals is amended.

Fiscal 2014 data: Data from all relevant business sites (296 sites) in fiscal 2014

Data for fiscal 2013 and prior: Data from all relevant business sites (300 sites) as of fiscal 2013

- Data for which the fiscal year and region are not expressly stated are global results for fiscal 2015

Assurances

Main data relating to the environment have been assured by KPMG AZSA Sustainability Co., Ltd. For details on the indicators covered by the assurance, please refer to the Independent Assurance Report on P107.

Reference Guidelines

GRI "Sustainability Reporting Guidelines G4"

Japanese Ministry of the Environment, "Environmental Reporting Guidelines 2012"

Sustainability Data Book 2015 Contents

About the Sustainability Data Book 2015 ...1

Corporate Profile 4

Our Unchanging Management Philosophy and Sustainability 5

System for the Promotion of CSR Activities 6

Risk Management 8

Environment

Policy11

Environmental Governance16

Environmental Management Systems18

Environmental Risk Management19

Environmental Information Systems22

Overview of Environmental Impact and Environmental Accounting23

Eco-conscious Products and Factories26

CO₂ Reduction30

Energy-saving/creating/storing Products33

Global Warming Prevention at Factories and Offices35

Green Logistics39

Resources Recycling42

Reduction in Resources Used44

Product Recycling45

Use of Recycled Resources49

Factory Waste Management – Zero Waste Emissions52

Water Resource Conservation54

Chemical Substance Management56

Biodiversity Conservation62

Collaboration across the Supply Chain65

Human Resource Development67

Environmental Communication68

History of Environmental Activities69

Raising Quality Levels and Ensuring Product Safety (Excerpts)

Management System72

Policy72

Regulations72

Responsible Executive and Framework73

Customer Relations (Excerpts)

Management System74

Policy74

Responsible Executive and Framework75

Information Security and Protection of Personal Information

Policy76

Information Security Management System76

Fair Operating Practices

Management System77

Policy77

Compliance Training79

Responsible Executive and Framework79

Participation in Industry/Academic Alliance Activities Aimed at Preventing Improprieties79

Performance Evaluation80

Whistleblowing Systems81

Fair Trade (Cartels)82

Respect for Human Rights

Management System83

Policy83

Education83

Responsible Executive and Framework83

Human Rights Support Desk84

Performance Evaluation85

Efforts Concerning Fundamental Human Rights86

Initiatives Relating to Global Standards, Legislation, Regulations, and So Forth90

Occupational Health and Safety

Management System92

Policy92

Responsible Executive and Framework94

Occupational Health and Safety Support Desk94

Initiatives Relating to Health Issues94

Performance Evaluation95

Responsible Supply Chain

Management System	96
Policy	96
For Suppliers	96
Responsible Executive and Framework	96
Regulations	96
Response Regarding Conflict Minerals	99

List of Social Performance Data.....102

Independent Assurance Report by KPMG AZSA Sustainability Co., Ltd.....107

Reports on Business Activities of Panasonic.....108

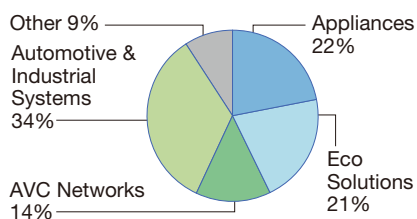
Company Name: Panasonic Corporation
Company Headquarters:
 1006 Oaza Kadoma, Kadoma City, Osaka 571-8501, Japan
 Tel: +81-6-6908-1121
Incorporated: December 15, 1935

Founded: March 7, 1918
President: Kazuhiro Tsuga
Common Stock: ¥258.7 billion yen

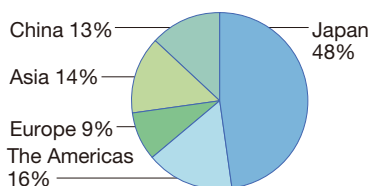
FY2015 Financial Result

Net sales: ¥7,715.0 billion yen **Operating profit:** ¥381.9 billion yen **Income before income taxes:** ¥182.5 billion yen
Net income attributable to Panasonic Corporation: ¥179.5 billion yen **Number of Employees:** 254,084

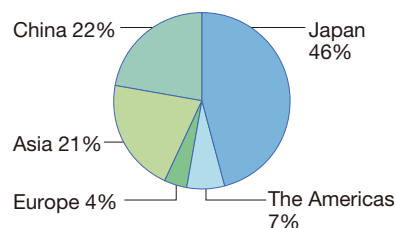
Sales by Segment (FY2015)



Sales by Region (FY2015)



Employees by Region (End of FY2015)



Main Products and Services

The Panasonic Group's major products and services, by segment, are as follows:

Appliances

Flat panel TVs, air-conditioners, refrigerators, washing machines, personal-care products, microwave ovens, home audio equipment, video equipment, vacuum cleaners, rice cookers, bicycles, electric motors, compressors, showcases, large-sized air-conditioners, fuel cells, etc.

Eco Solutions

Lighting fixtures, lamps, wiring devices, solar photovoltaic systems, water-related products, interior furnishing materials, ventilation and air-conditioning equipment, air purifiers, nursing-care-related products, etc.

AVC Networks

Aircraft in-flight entertainment systems, PCs, projectors, digital cameras, mobile phones, surveillance cameras, fixed phones and faxes, social infrastructure systems equipment, etc.

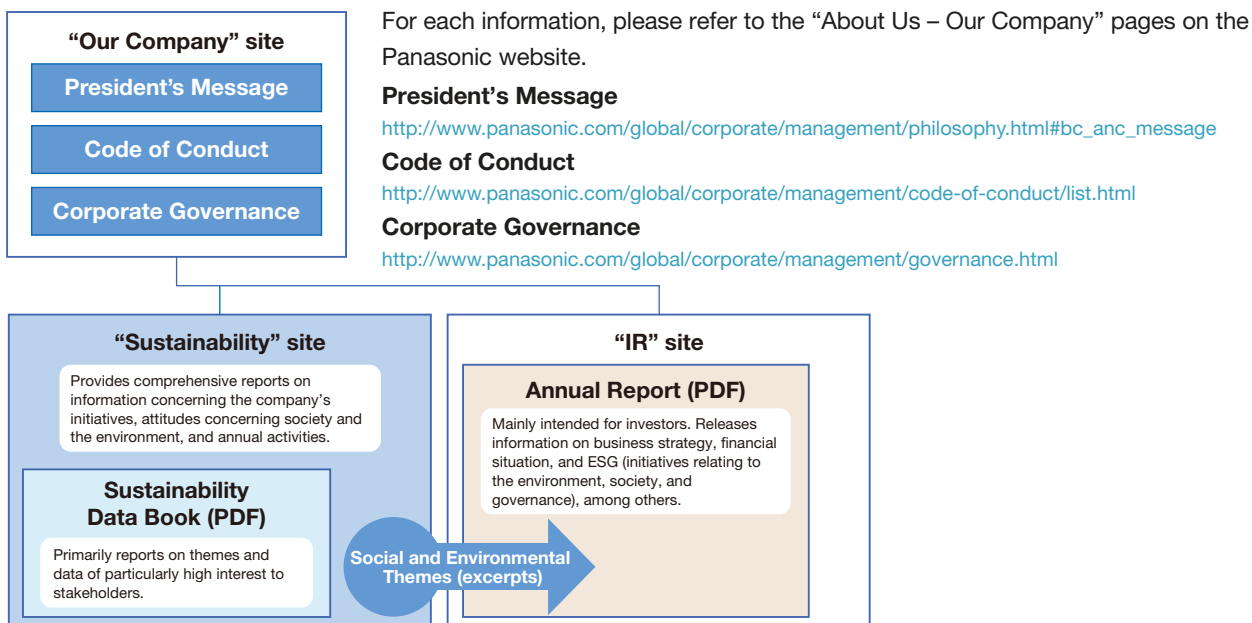
Automotive & Industrial Systems

Car-use-multimedia-related equipment, electrical components, lithium-ion batteries, storage batteries, dry batteries, electronic components, electronic materials, automation controls, semiconductors, LCD panels, optical devices, electronic-components-mounting machines, welding equipment, etc.

Other

Detached housing, rental apartment housing, land and buildings for sale, home remodeling, imported materials and components, etc.

Structure of Reporting on Social and Environmental Initiatives



Our Unchanging Management Philosophy and Sustainability

Our mission at Panasonic is to contribute to the advance of world culture by working to improve society through the products we produce and sell. Panasonic's Basic Management Objective clearly expresses the purpose of our business activities as well as the purpose of our existence.

Since the company's founding in 1918, this management philosophy has formed the foundation of all our business activities. As the key element of this philosophy, we have the basic concept of the "company as a public entity of society." All the management resources of a company-including the people, money, and commodities-all come from society.

While the company engages in business activities using the resources entrusted by society, it also develops along with society, and so the company's activities must be transparent, fair, and just.

The entire Panasonic Group takes care to ensure that our management and business activities are appropriate for "a public entity of society," and we will continue to implement this management philosophy through manufacturing as our primary business. This is also the very essence of the Panasonic Group's sustainability. As we stand at historical turning points in many areas today-society, economy, global environment-the Panasonic Group will continue to promote sustainability management globally and to contribute to the future of society and the world by proposing the lifestyles of tomorrow.

Basic Management Objective

Recognizing our responsibilities as industrialists, we will devote ourselves to the progress and development of society and the well-being of people through our business activities, thereby enhancing the quality of life throughout the world.



Konosuke Matsushita, Founder of Panasonic Corporation, My Management Philosophy (issued in June 1978)

"There is much discussion today regarding 'social responsibility,' but while the meaning of that concept can be wide-ranging depending on social conditions at a particular time, the fundamental social responsibility of a corporation, in any era, should be to improve society through its business activities. It is extremely important to manage all business activities based on this sense of mission."

Konosuke Matsushita,
founder of Panasonic Corporation

The Panasonic Code of Conduct was formulated in 1992 as a specific guide to the practice of the Company's management philosophy. (Subsequently revised and updated, the 2014 edition is the current standard.)

<http://www.panasonic.com/global/corporate/management/code-of-conduct/list.html>

Panasonic formulated its Sustainability Policy in 2013 as a written record of its efforts to contribute to today's society and to fulfill its corporate social responsibility (CSR).

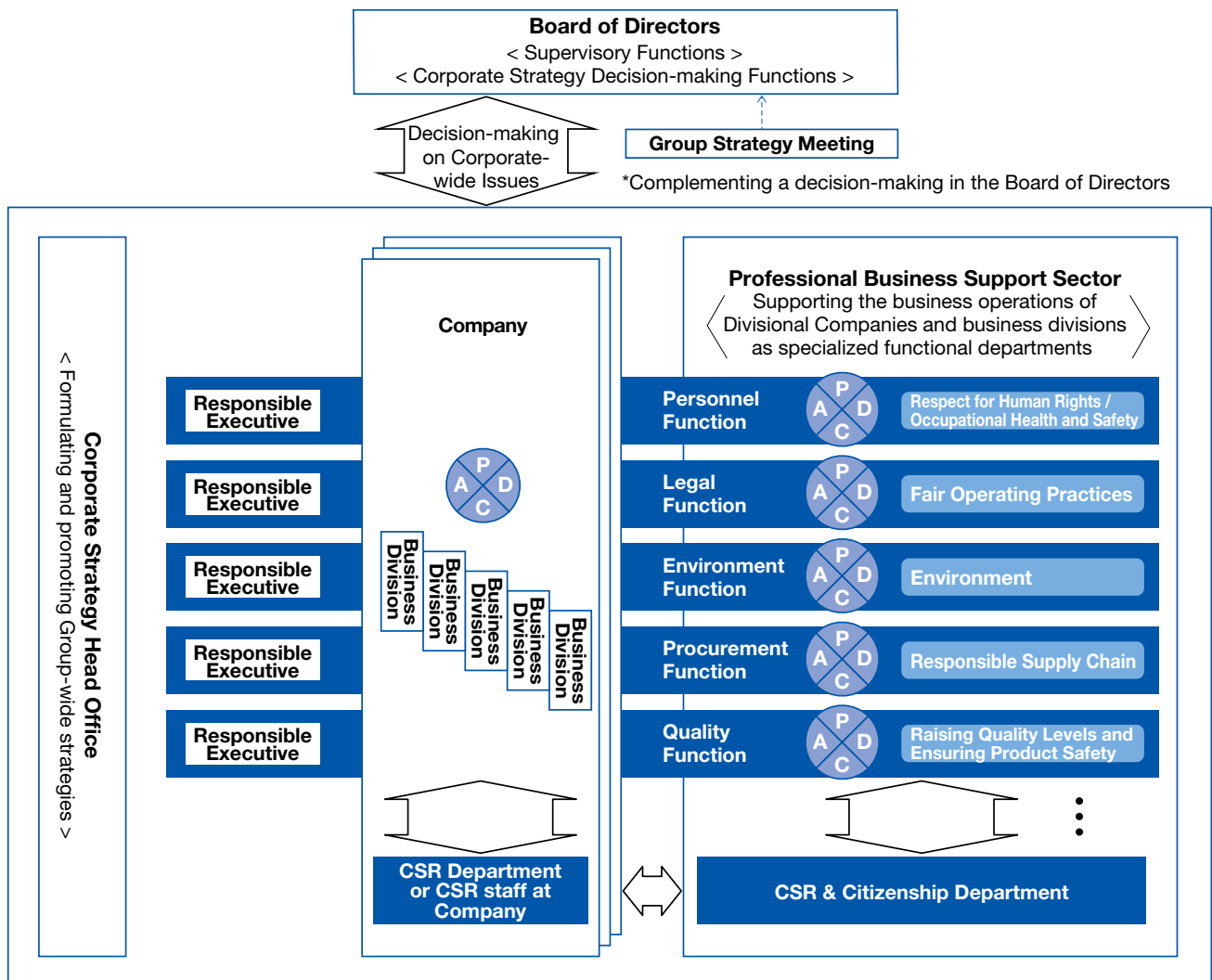
<http://www.panasonic.com/global/corporate/sustainability/management/policy.html>

System for the Promotion of CSR Activities

Continuously and Organizationally Managing Issues and Progress Relating to Sustainability

For each area of activity relating to CSR—including human rights, fair operating practices, and the environment—Panasonic establishes responsible executives and functional divisions. Each Company, business division, regional office, and functional division has created various group meetings and opportunities for stakeholder engagement, the results of which are incorporated into everyday activities. Using PDCA cycles, these Panasonic Group constituents monitor their progress and act autonomously.

For issues affecting the entire group for which there are strong demands from society for us to respond, including by contributing to climate change mitigation and adaptation, as well as to water-related issues, decisions are made at board of directors' meetings and at Group Strategy Meetings. Concerning issues that are deemed the most material, the company creates lists of such issues for each area of activity, makes decisions, and incorporates these important issues into its operational policies. For material issues in each area of activity and the background to their selection, please refer to the items on "Management System" for the respective area ("Policy" for the environmental area). Panasonic conducts its CSR activities with respect for worldwide guidelines and stakeholders' voices as a fundamental concept.



Respecting Global Standards, Norms, Guidelines, and Initiatives

Panasonic conducts its business based on global standards, specifications, norms, guidelines, and various initiatives. These concepts are reflected in the Panasonic Code of Conduct and the Sustainability Policy that form the guidelines for the company's business activities.

Global Standards, Norms, Guidelines and Initiatives

Universal Declaration of Human Rights	ILO Fundamental Labour Standards
Organisation for Economic Co-operation and Development Guidelines for Multinational Enterprises	Guiding Principles on Business and Human Rights
Japan Business Federation (Keidanren) Charter of Corporate Behavior	Industry specific codes of conduct, such as the Electronic Industry Citizenship Coalition (EICC), and others
ISO 26000	Global Reporting Initiative (GRI) Guidelines

Promoting Initiatives Based on Dialogs with Stakeholders

Panasonic conducts dialogs with its wide range of stakeholders around the world—including customers, investors, suppliers, governments, industry bodies, NPOs, NGOs, local communities, and employees—on various aspects of its business. The company incorporates the opinions it receives into its business activities and product creation.



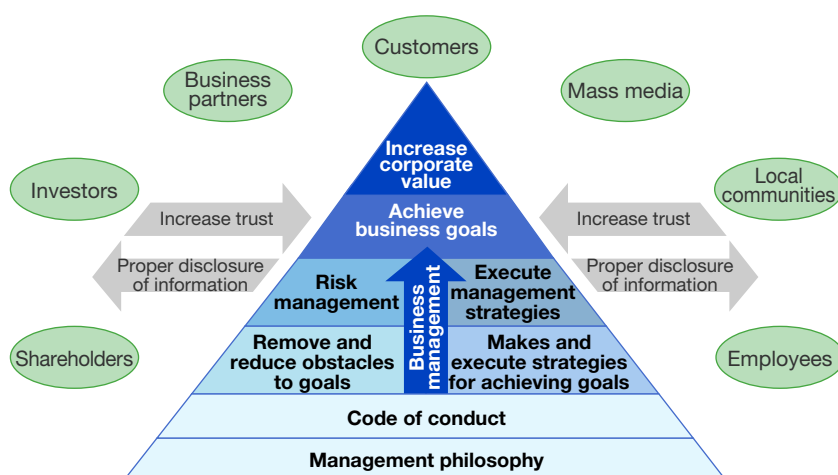
Risk Management

Fundamental Stance

Panasonic’s founder, Konosuke Matsushita, coined numerous aphorisms which are still used at the company: “Hardship now, pleasure later,” “The source of our failures is within us,” “There are signs before all things,” and “Small things can create big problems; one must be alert to signs of change and act accordingly,” among many others. Using these ideas as a cornerstone in its thinking, the company conducts groupwide risk management activities covering its operations around the world, with the aim of taking preemptive actions to eliminate “sources of failure”—that is any factors that could impede the accomplishment of business goals.

At Panasonic, risk management functions in parallel with the development and execution of management strategies. The company believes that by combining these two functions, it is better positioned to accomplish its business objectives and to increase its corporate value. Furthermore, by disclosing appropriate information concerning risks to the public, improving the transparency of its management, and reducing risks through preemptive measures, the company gives its customers and other stakeholders—as well as local communities and the public as a whole—greater confidence in its organization.

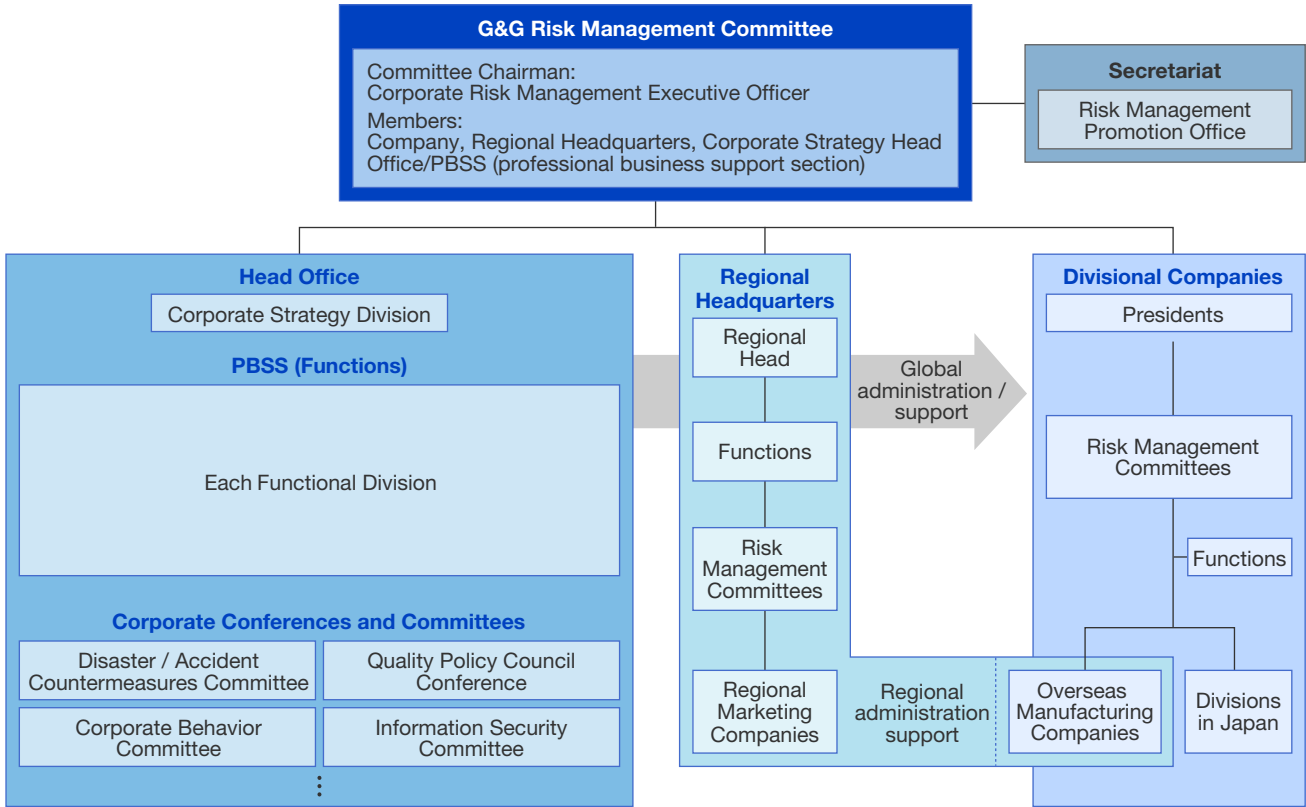
Role of Risk Management in Business Management



Organizational System Promoting Risk Management

In April 2005, Panasonic established the Global & Group Risk Management Committee (G&G Risk Management Committee), which promotes risk management throughout the whole Panasonic Group. The Corporate Risk Management Executive Officer chairs the committee, and its membership consists of Company Chief Risk Officers (CROs), regional headquarters, and managers from the Corporate Strategy Head Office and functional divisions. The Risk Management Promotion Office serves as the committee’s secretariat. The G&G Risk Management Committee also coordinates with various other committees and bodies whose functions are relevant to risk management. It promotes groupwide administrative activities for responding to risks and assists the four Panasonic Companies and regional headquarters. Each Company and regional headquarters has established a similar risk management committee, in total constituting an organizational system capable of responding to risks globally and across group divisions.

Panasonic Global and Group Risk Management Promotion Framework



Basic Framework

Panasonic has three levels of management cycles for risk management: the G&G Risk Management Committee, four Panasonic Companies, and business divisions. Each year, an assessment of the impact of risks that could affect the business management of Companies and affiliated business divisions is undertaken using a single, global set of standards incorporating the potential impact on business operations, probability of risk occurring, and other factors. Steps are then taken to identify major Company risks and to ensure that appropriate countermeasures are implemented. Taking into consideration these major Company risks, the G&G Risk Management Committee considers and identifies those major risks that require attention from a Group-wide perspective. The G&G Risk Management Committee also monitors progress made concerning countermeasures as a means to improve and strengthen Group-wide risk management.

Basic Framework for Risk Management

	Plan		Do	Check	Action
G&G RM Committee	Risk assessment	Selecting corporate major risks and monitor measures	Promoting measures	Monitoring	Developing and promoting improvement measures
Companies/ Regional Headquarters	Risk assessment	Selecting Company's major risks and formulate measures	Promoting measures	Monitoring	Developing and promoting improvement measures
Divisions	Risk assessment	Selecting Division's major risks and formulate measures	Promoting measures	Monitoring	Developing and promoting improvement measures

Corporate Major Risks for FY2016

- Natural disaster (earthquakes, tsunamis, weather-related disasters, etc.)
- Quality problem
- Cartels
- Cyberattack

Corporate Major Risks for FY2015

- Natural disaster (earthquakes, tsunamis, weather-related disasters, etc.)
- Quality problem
- Cartels
- Cyberattack

Initiatives Relating to Business Continuity Management (BCM)

As a public entity of society, Panasonic management philosophy includes a commitment to contribute to the advancement of world culture by working to improve the quality of life for all of society through the products that it produces and sells. Since 2005, the company has been keenly aware of the necessity to practice business continuity —one of the company's duties to society. The goal of these activities is to prevent a break in the supply of products or the provision of services when contingencies such as disasters have occurred, or, in the rare eventuality that service has halted, to restart operations as quickly as possible.

It is predicted that a major earthquake will probably occur in the relatively near future directly under the Tokyo metropolitan area or in the Nankai Trough. Responding to these predictions, Panasonic has established a cross-Company task force, which promotes disaster response capabilities based on the latest government damage predictions, and reviews the company's BCM. More specifically, the task force conducts annual groupwide disaster preparedness training drills, and has established emergency measure headquarters at every level groupwide, within the four Companies, and within business divisions. The task force is also tasked with maintaining and improving Panasonic's initial response capabilities—including confirmation of the safety of employees and coordinating among different emergency measure headquarters on the degree of damage. To address potential fires, the task force conducts periodic fire risk assessments, fire prevention self-checks, and fire prevention audits and promotes accident prevention by sharing case studies of response measures for fire-related accidents. To assess risks of natural disasters overseas, the task force has conducted a hazard survey covering various risks—earthquakes, floods, tropical depressions, tsunamis, naturally occurring fires, landslides, tornadoes, and volcanic eruptions. The task force has communicated its findings to each of the four Companies. In addition, the task force uses hazard maps to visualize the risks that Panasonic locations face and promotes priority-based response measures.

Environmental Policy

Contributing to society has been the management philosophy for Panasonic ever since its founding, and we have been taking measures against pollution since the 1970s. We announced the Environmental Statement in June 5, 1991, clarifying our approaches to address global environmental issues as a public entity of society. Since then we have been carrying out initiatives including matters on global warming prevention and resources recycling corporate-wide, aiming to attain a sustainable, safe, and secure society.

In fiscal 2014, the Panasonic Group introduced a new brand slogan, “A Better Life, A Better World,” aiming to realize a “better life” for all its customers, and are promoting environmental initiatives as an important element in achieving that goal. In production activities, exhaustive energy-saving measures have been implemented in all factories worldwide, pushing for further CO₂ emissions reduction in our production activities. We are also pursuing Recycling-oriented Manufacturing for effective utilization of resources. One example is the development of a resources recycling and trade scheme together with our supplier, in which scrap iron from used home appliances is recycled into steel plates to be used as material for products by our Group.

In addition, Panasonic has introduced its own indicator called “the size of contribution in reducing CO₂ emissions” to strengthen CO₂ reduction efforts during actual product use. Until now, the size of contribution in reducing CO₂ emissions had been disclosed to represent the volume of our direct contribution to CO₂ emissions reduction by cutting down power consumption during product use through energy-saving designs for our key consumer products. Now, we are also engaged in business development in the areas of housing, automotive, and BtoB solutions. Accordingly, more of our products are being integrated into finished goods and services of other companies, contributing to their energy-saving performances. For this reason, we have defined the CO₂ emissions reduction effect in these business areas as “the size of indirect contribution to reduction,” and start disclosing the figures from the fiscal 2015 results.

Furthermore, we define our products and services that accelerate the transition to a sustainable society through the reduction of environmental impact as Strategic Green Products (GPs). Of these, we call the products that deliver the industry’s top-class environmental performance “Super GPs.” By promoting Green Products, we will contribute to further reduction of CO₂ emissions.

Environmental Statement

Fully aware that humankind has a special responsibility to respect and preserve the delicate balance of nature, we at Panasonic acknowledge our obligation to maintain and nurture the ecology of this planet. Accordingly, we pledge ourselves to the prudent, sustainable use of the earth's resources and the protection of the natural environment while we strive to fulfill our corporate mission of contributing to enhanced prosperity for all.

Environmental Action Guideline

Toward achieving a sustainable society, we will strive to develop our business through the creation of environmental value. For this purpose, we will address environmental challenges through our business activities and will expand our environmental initiatives based on collaboration with stakeholders.

(1) Initiatives to address environmental challenges

- We will reduce CO₂ emissions through production activities and products/services.
- We will work to efficiently use resources by pursuing Recycling-oriented Manufacturing.
- We will conserve water resources through efficient use of water and prevention of contamination.
- We will reduce the impact of chemical substances on human health and the environment.
- We will consider and conserve biodiversity.

(2) Initiatives based on collaboration with stakeholders

- We will provide products and services that create environmental value for customers with our technical strengths.
- We will expand our environmental contributions with our partner companies.
- We will deepen communications with local communities and work as a team to address environmental challenges.

Environmental Action Plan

We strive to grow and develop our business through the creation of environmental value for customers with our technical strengths while each and every employee follows the Environmental Policy to address environmental challenges. Therefore, collaboration with stakeholders including our partners is essential. We will continue to sincerely work on environmental sustainability management through further collaboration with stakeholders.

Environmental Action Plan “Green Plan 2018”

After the completion of the Green Plan 2010 which was established in 2001, the Green Plan 2018 was established in 2010 to clarify our targets for fiscal 2019 (from April 1, 2018 to March 31, 2019) and actions to be taken in order to achieve the targets. Furthermore, the Green Plan 2018 was revised in July 2013, followed by the newly-established Environmental Action Guideline.

The Green Plan 2018 will continue our initiatives in five areas: CO₂ reduction, resources recycling, water, chemical substances, and biodiversity. We are focusing on maximizing the size of contribution in reducing CO₂ emissions, which is an indicator that represents our efforts for CO₂ reduction, to contribute to making net CO₂ emissions from the international community peak and decline thereafter at an earlier timing. As for resources recycling, we promote higher recycled resource utilization ratio and factory waste recycling rate, as well as create more Resources Recycling-oriented Products to materialize Recycling-oriented Manufacturing. In addition, with respect to eco-conscious products and businesses, we will expand the range of activities to products, services, and solutions in the BtoB sector while keeping strengths in the home appliances field, to provide products and services that create environmental value for our customers. Panasonic will deepen the collaboration with various partners across the supply chain and accelerate environmental initiatives to extend better impacts on the society.

We will steadily execute this Environmental Action Plan towards achieving our fiscal 2019 targets.

Environmental Action Plan “Green Plan 2018”

Environmental Action Guideline		Targets for 2018	Pages
(1) Initiatives to address environmental challenges			
CO ₂ Reduction	We will reduce CO ₂ emissions through production activities and products/services.	<ul style="list-style-type: none"> • Maximize the size of contribution in reducing CO₂ emissions from production activities and product use (Size of contribution in reducing CO₂ emissions: 47 million tons in 2015) • Reduce CO₂ emissions per basic unit in logistics (Reduction in CO₂ emissions per basic unit of weight: By 46% or more in 2018 compared to 2005 (Japan and international)) • Reduce CO₂ emissions from offices (Reduction by 2% or more on yearly average until 2018 compared to 2007 (Self-owned buildings in Japan)) • Increase the Business of Energy Conservation Support Service for the Entire Factory 	pp.30-41 and website ¹
Resources Recycling	We will work to make the best use of resources by pursuing Recycling-oriented Manufacturing.	<ul style="list-style-type: none"> • Reduce total resources used and increase recycled resources used (Recycled resource utilization ratio: 16% or more in 2018) • Achieve “zero waste emission” from production activities at sites both in and outside Japan (Factory waste recycling rate: 99.5% or more in 2018) • Expand the creation of Resources Recycling-oriented Products 	pp.42-53
Water	We will conserve water resources through efficient use of water and prevention of contamination.	<ul style="list-style-type: none"> • Increase products to save water and contribute to water recycling • Reduce water consumption in production activities and increase the use of recycled water 	pp.54-55
Chemical Substances	We will reduce the impact of chemical substances on human health and the environment.	<ul style="list-style-type: none"> • Develop alternative technologies for environmentally hazardous substances • Discontinue the use of substitutable environmentally hazardous substances in products • Minimize the release of environmentally hazardous substances from factories 	pp.56-61
Biodiversity	We will consider and conserve biodiversity.	<ul style="list-style-type: none"> • Increase products contributing to biodiversity conservation • Use green areas in business divisions to contribute to biodiversity conservation • Promote green procurement for wood toward sustainable utilization of forest resources 	pp.62-64

Environmental Action Guideline		Targets for 2018	Pages
(2) Initiatives based on collaboration with stakeholders			
Customers	We will provide products and services that create environmental value for customers with our technical strengths.	<ul style="list-style-type: none"> Offering products, services, and solutions that improve people's lifestyles, reduce burden on the environment, and help to make our society more sustainable Promote 'eco' marketing firmly rooted in each region and country 	pp.26-28 and website ^{*2}
Supply Chain	We will expand our environmental contributions with our partner companies.	<ul style="list-style-type: none"> Increase environmental contributions through the promotion of Green Procurement with suppliers (Establish environmental management systems and address five major environmental challenges) Promote the ECO-VC (Value Creation) Activity aimed at simultaneously achieving environmental contributions and cost reductions 	p.63 and pp.65-66
Local Communities	We will deepen communications with local communities and work as a team to address environmental challenges.	<ul style="list-style-type: none"> Communicate our approaches to environmental contribution to society in the form of an 'eco ideas' declaration Participate in presenting proposals for environmental policies by the government, aimed at the creation of a sustainable society Implement initiatives contributing to local communities and educate children who will be the major players in the next generation (Promote Panasonic Eco Relay for Sustainable Earth) (Provide environmental education to 2 million children around the world by 2018) 	p.68 and website ^{*2,3}

Note: 2005, 2007, 2015 and 2018 here refer to fiscal 2006 (April 1, 2005 – March 31, 2006), fiscal 2008 (April 1, 2007 – March 31, 2008), fiscal 2016 (April 1, 2015 – March 31, 2016), and fiscal 2019 (April 1, 2018 – March 31, 2019), respectively.

*1 Business of Factory Energy Conservation Support Service
<http://www.panasonic.com/global/corporate/sustainability/eco/co2/service.html>

*2 Environmental Sustainability Management across the World
<http://www.panasonic.com/global/corporate/sustainability/eco/globalprojects.html>

*3 Contribution to Local Communities and Education for the Next Generation
<http://www.panasonic.com/global/corporate/sustainability/eco/community.html>

Our performance in fiscal 2015 compared with the numerical targets in the Green Plan 2018 is shown below.

Numerical Targets and Performance Levels under Green Plan 2018

Numerical targets	Results in 2014	Pages
Size of contribution in reducing CO ₂ emissions ^{*4} : 47 million tons in 2015	Size of direct contribution: 43.14 million tons	pp.32-36
	Additional size of indirect contribution ^{*5} : 11.01 million tons	
Reduction in CO ₂ emissions per basic unit in logistics ^{*6} : By 46% or more in 2018 compared to 2005 (Japan and international)	36%	p.39
Reduction in CO ₂ emissions from offices: By 2% or more on yearly average until 2018 compared to 2007 (Self-owned buildings in Japan)	6%	p.38
Recycled resource utilization ratio ^{*7} : 16% or more in 2018	16.3%	p.43
Factory waste recycling rate ^{*8} : 99.5% or more in 2018	98.8%	p.53
Provide environmental education to 2 million children around the world by 2018	2.411 million children ^{*9}	website ^{*10}

*4 The size of contribution in reducing CO₂ emissions is defined as the amount achieved by deducting the actual emissions from the amount that would have been emitted without the improvements by the energy-saving performance of our products and productivity from fiscal 2006, and this amount is combined with the emission reduction resulting from power generation by energy-creating products (see pages 30-32). "47 million tons" represent the size of direct contribution in reducing emissions, and "products" refer to key consumer products.

*5 Size of contribution in reducing CO₂ emissions through "air conditioning load reduction effects from improved insulation performance in Panasonic housing," "energy-saving effects from products by other companies equipped with Panasonic energy-saving compressors and motors," and "improved fuel economy effects from electric vehicles (EVs), plug-in hybrid vehicles (PHVs), and hybrid vehicles (HVs) equipped with Panasonic automotive batteries."

*6 CO₂ emissions per basic unit in logistics = CO₂ emissions in logistics/Transportation weight

*7 Recycled resource utilization ratio = Recycled resources used/Total resources used

*8 Factory waste recycling rate = Amount of resources recycled/ (Amount of resources recycled + Amount of landfill)

*9 Cumulative total from 2009 to 2014. Results for 2014 alone is 418,000.

*10 Contribution to Local Communities and Education for the Next Generation

<http://www.panasonic.com/global/corporate/sustainability/eco/community.html>

Note: 2005, 2007, 2009, 2014, 2015 and 2018 here refer to fiscal 2006 (April 1, 2005 – March 31, 2006), fiscal 2008 (April 1, 2007 – March 31, 2008), fiscal 2010 (April 1, 2009 – March 31, 2010), fiscal 2015 (April 1, 2014 – March 31, 2015), fiscal 2016 (April 1, 2015 – March 31, 2016), and fiscal 2019 (April 1, 2018 – March 31, 2019), respectively.

Promoting Corporate-wide Environmental Sustainability Management Centering on PDCA

Striving for the creation of a sustainable society, we are working to fulfill our corporate social responsibility through eco-conscious business activities and to resolve environmental and social issues through products and services.

Panasonic Group formulates its annual environmental management policy in accordance with the Group business policy, Environmental Action Guideline, and the environmental action plan, “Green Plan 2018.” The annual environmental policy is shared across the entire organization through the Operation Policy Meeting led by the executive officer in charge of environmental management, who has the authority delegated from the president. Companies, business divisions, and Regional Headquarters outside Japan establish their own environmental policies and targets based on this Group policy, and plan and promote their activities accordingly.

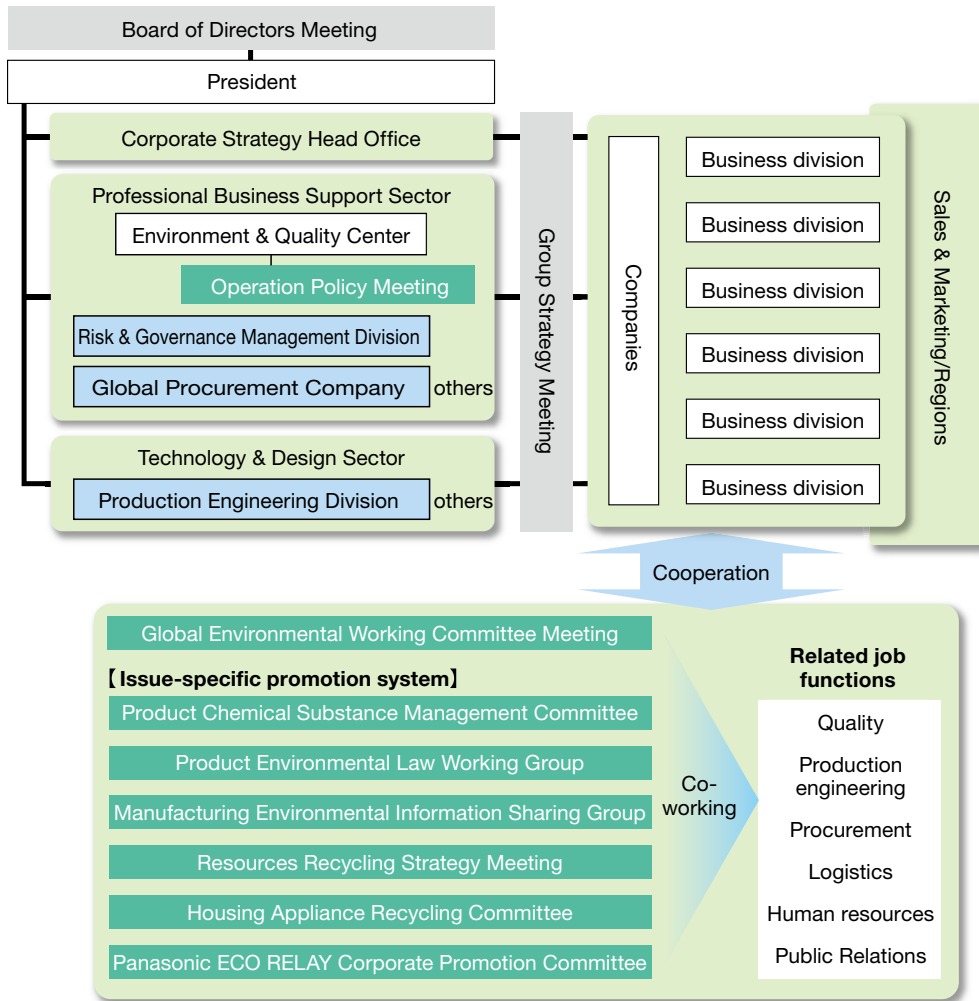
Successful practices, challenges in implementation, and approaches to mid-term to long-term targets at Companies and various regions are shared and discussed at the Global Environmental Working Committee Meeting, held twice a year, which consists of environmental compliance administrators at Companies and Regional Headquarters, seeking to enhance the level of corporate-wide environmental sustainability management through the PDCA management cycle. The progress and results of activities for the environmental targets we pledged achieving to society under the Green Plan 2018 are examined in the Group Strategy Meeting. This meeting is attended by the presidents of Panasonic Corporation and the four Companies as well as other members of senior management, for reviews of policy directions, issues, and, particularly important measures to be adopted.

In principle, results of activities are gathered and assessed on a monthly basis as environmental performance data, to identify the achievements, and additional measures are taken as needed. Feedback of annual performance data is given internally and disclosed externally after review, onsite audits, and independent assurance by a third-party. Moreover, reviews and feedback from stakeholders are utilized in subsequent measures to ensure further continuous improvement.

Promotion System for Environmental Sustainability Management

To implement key measures across the entire company, theme-specific committees and working groups are formed to set a promotional structure that enables coordinated action across Companies, related job functions, Regional Headquarters outside Japan. Specific examples include the Product Chemical Substance Management Committee which deliberates and ensures the implementation of chemical substance management guidelines, and the Product Environmental Law Working Group which engages in information sharing regarding product-related legislation and reviews the actions to be taken.

Promotion System of Environmental Sustainability Management in Fiscal 2016



Environmental Sustainability Management Founded on Environmental Management Systems (EMS)

As the foundation of environmental sustainability management, Panasonic established EMS in all of our manufacturing sites across the world in fiscal 1999, and has continued to have the sites ISO14001 certified since then.

In order to further reinforce environmental sustainability management globally, we have established EMS in all our sites including non-manufacturing sites across the world, and these sites have certified ISO14001 in principle. In October 2011, we published the Environmental Management System Establishment Guidelines that summarize EMS concepts for different business forms such as manufacturing, sales and services, and head office administration, aiming to build EMS in accordance with the Basic Rules for Environmental Affairs on a global scale. Based on the Guidelines, Group-wide action is underway to achieve the goals set out in the Green Plan 2018.

Furthermore, in preparation for the ISO 14001 amendments in 2015, in-house seminars on ISO 14001 amendments were held for environmental operation administrators of Companies and factories in December 2014 and March 2015. Lecturers were invited from the Japan Audit and Certification Organization for Environment and Quality (JACO) to the seminars, which included use of teleconference systems, etc., with more than 250 people attending. The amended ISO 14001 is expected to impose more rigorous demands in environmental management development through business activities, identification of environmental risks not limited to compliance violations, and environmental management of such risks. The participants of the seminar not only learned about before and after the amendments of ISO 14001, but also shared information and challenges through communication with the lecturers and discussions among operation administrators. The seminar participants reported they were able to understand the key points of the amendment and gain deeper understanding through the discussions, and expressed their wish to further study actual cases including more practical content. Seminars for practical application and for training internal auditors are also scheduled even after the ISO 14001 amendment. Activities will be organized on a continual basis to enable the Environmental Management System to function as a more effective scheme.



Discussion during the in-house seminar

Obtainment of ISO 14001 Certification (as of end of March 2015)

Region	Number of certifications obtained*1		Total
	Manufacturing	Non-manufacturing	
Japan	21	15	36
North America & Latin America	17	6	23
Europe & CIS	12	3	15
Southeast Asia, & Oceania	43	9	52
China & Northeast Asia	58	3	61
India, South Asia, Middle East & Africa	6	1	7
Total	157	37	194

*1 Including multi-site certifications. Depending on the consolidation and closure of sites and promotion of multi-site certifications, the number of certifications obtained varies each year.

► Obtaining of ISO 14001 Certification

<http://www.panasonic.com/global/corporate/sustainability/eco/governance/ems/isolist2015.pdf>

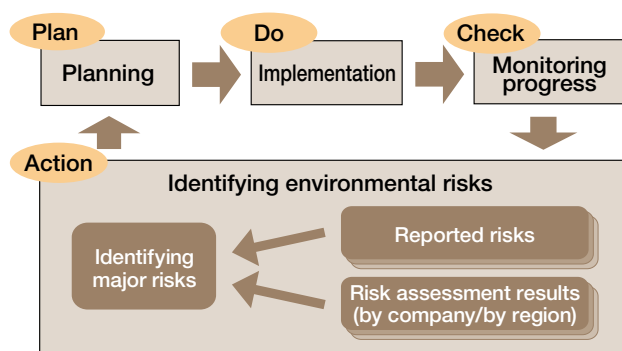
Group-wide Systems to Manage Environmental Risks

As a tool to continuously reduce environmental risks, Panasonic has established an Environmental Risk Management System specific to each Company. In accordance with the basic risk management policy for all Companies (see page 8), we promote (1) identification of environmental risks and group-wide risk management each year, and (2) ensuring quick responses to reported environmental risks.

To identify environmental risks and implement the management system, environmental risks are identified for each Company and for each region in the world each year. From these risks, environmental risks on a group-wide level are selected. The risks that show a high level of frequency or seriously impact business management are designated as major risks and prioritized in planning and executing risk-reducing measures. These measures are implemented for each major risk, and progress is monitored and followed up on a quarterly basis in the PDCA cycle.

When an environmental risk is found, the relevant Company, related job functions, and Regional Headquarters collaborate to promptly implement emergency measures and recurrence prevention measures adapted to the risk level. Also, the management flow in case of risk discovery is standardized to prevent the occurrence of secondary risks as a result of confusion.

Classification of Environmental Risks and Countermeasure Implementation



Environmental Compliance Management at Factories

Panasonic manages its environmental systems in full compliance with laws and regulations. We regularly measure emissions of gas, wastewater, noise, odor, etc., and introduce preventative measures for cases that may lead to serious violations.

Furthermore, key human resources are developed for information sharing among the Companies/Business Divisions, environment-related job functions, and Regional Headquarters, to ensure exhaustive compliance with legislation related to factory environment management in respective countries where Panasonic manufacturing sites are located. Specifically, activities to share information as well as specialized training is conducted for factory management officers in charge of the management of chemical substances, waste, wastewater and exhaust gas, either by country or by region in Japan, Europe, China, and Southeast Asia.

In fiscal 2015, there were 2 violations of environment-related legislation in Japan and 4 outside Japan. In response, they were reported promptly to the administrative authorities, and measures to address the causes were implemented. We will continue to ensure compliance with legislation as well as prevent recurrence.

Cases of Violations of Laws and Ordinances Related to Environmental Pollution (such as exceeding the standard legal level, etc.) in Fiscal 2015

Region	Air	Water quality	Noise	Odor	Waste	Total
Global (including Japan)	2	2	0	0	2	6
Japan	(0)	(1)	(0)	(0)	(1)	(2)

Measures Against Soil and Groundwater Contamination

In the latter half of the 1980s, soil and groundwater contamination due to chlorinated organic solvents was detected at some of Panasonic sites. In response, we have conducted anti-contamination activities across the company. Specifically in 1991 we created the Manual for Preventing Contamination of Soil and Groundwater and began conducting necessary surveys and measures. In 1995 we discontinued the use of chlorinated organic solvents, and in 1999 created Guidelines on the Prevention of Environmental Pollution to ensure there would be no recurrence of similar problems at our sites. In fiscal 2003 we began enhancing our surveys and measures to comply with relevant laws and regulations, including the Soil Contamination Countermeasures Act, which was enforced in Japan in 2003, and in fiscal 2004 started implementing measures to place all our bases across the globe under management supervision with regard to soil and groundwater.

Specifically, we conduct onsite inspections and interviews at the bases, in addition to surveying their use of VOCs and heavy metals. Furthermore, we implement surface soil surveys within the premises. For the sites where contamination was detected beyond the regulatory pollution standards, we conduct detailed borehole surveys to identify the boundaries of the contaminated areas and take remedial measures.

As a result of these efforts, we were able to place all our bases under management supervision in 2008. Furthermore, in fiscal 2011, the management supervision scheme was purpose-specifically reorganized and reinforced to establish a new management supervision scheme. With the highest priority given to preventing dispersion of pollution beyond our premises, this new scheme is implemented across all operating sites to further improve the level of measures against contamination.

In fiscal 2015, three new soil contaminations were detected at Panasonic sites as a result of soil surveys in land utilization reviews. We confirmed that there is no possibility of external dispersion, however, we are conducting measures to complete the purification.

Soil and Groundwater Risk Management Policy

Conditions subject to management supervision	Procedure
Pollution dispersion prevention beyond Panasonic premises	<ol style="list-style-type: none"> 1. Conduct historical surveys 2. Determine and install monitoring wells at the premises' borders 3. Analyze groundwater at the borders 4. Check possibility of pollution from external sources 5. Report to management department 6. Determine the external pollution dispersion prevention methods 7. Install the external pollution dispersion prevention methods 8. Install assessment wells 9. Begin assessments (monitoring)
Thorough pollution source elimination	<ol style="list-style-type: none"> 10. Conduct brief status check 11-1. Horizontal direction detailed analysis 11-2. Vertical direction detailed analysis 12. Determine the magnitude of pollution 13. Discuss the areas and methods of purification 14. Conduct purification and install pollution dispersion prevention measures 15. Monitor pollution source (groundwater) after purification 16. Report purification completion to management department

Soil and Groundwater Pollution Surveys and Remedial Measures for Fiscal 2015

Region	Number of sites that completed remedial measures	Number of sites currently taking remedial measures
Global (including Japan)	10	46
Japan	(10)	(40)

Initiatives for PCB Pollution

Panasonic discontinued the production of equipment containing polychlorinated biphenyls (PCBs) in Japan in 1972 and has since been strictly managing its PCB waste. With the enforcement of the Law concerning Special Measures for Promotion of Proper Treatment of PCB Waste in July 2001, optimized storage, decontamination, and notifications are being practiced in compliance with the law. 2,074 of 2,281 units (91% completed), including transformers and capacitors using PCBs submitted under the early registration scheme were treated as of March 31, 2015, by Japan Environmental Storage & Safety Corporation (JESCO) as our subcontracted PCB waste disposal operator. Additionally, approx. 11 tons of stabilizers and other waste with a high PCB concentration were consigned for treatment to JESCO, and approx. 158 tons of low-concentration PCB waste was contracted to a private incineration facilities certified by the Japanese Ministry of the Environment. We will continue to treat PCB waste towards March 31, 2027, which is the legally designated deadline by which decontamination is to be completed.

Integrated Management of Corporate Environmental Information

In order to implement the PDCA cycle for environmental sustainability management, it is essential to collect a significant amount of environmental performance data on energy, waste, chemical substances, and water, etc. at each business site in a prompt and accurate manner.

Panasonic has built and introduced an environmental performance system, the Eco System (Factory), to globally collect and manage environmental data from all of our business sites. With this system, the monthly size of contribution in reducing CO₂ emissions are managed in particular, allowing checking the progress of initiatives and identifying issues. The system plays an important role in achieving the targets of the size of contribution in reducing CO₂ emissions by sharing the information and taking measures.

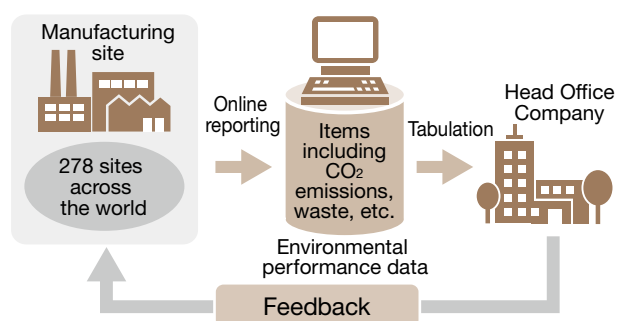
The Eco System (Factory) is also functioning as a scheme for sharing information on the status of compliance among sites across the world. In the event of complaints from local community residents or when a specific value exceeds ordinance-regulated levels, the person in charge at the business site enters such data, which is instantaneously e-mailed to relevant persons at the Company and the Head Office. This enables swift information-sharing and appropriate action.

Panasonic has developed and implements its own chemical substance management system, GP-Web, which is compatible with industry standards for information disclosure in this area. Through this system, we gather information from about 10,000 suppliers of components and materials for our products, both in and outside Japan, and promptly respond to investigation requests by customers concerning the chemical substances used in our products.

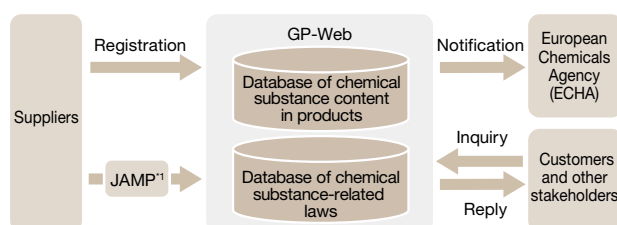
Also, we aim to cut down CO₂ emissions during product use by improving the energy-saving performance of our products.

For this reason, the Eco System (Product) is used to globally assess the size of contribution in reducing CO₂ emissions by linking product performance data such as annual power consumption for each product category with other data such as sales volume and CO₂ emission factors in each region.

Mechanism of the Eco System (Factory)

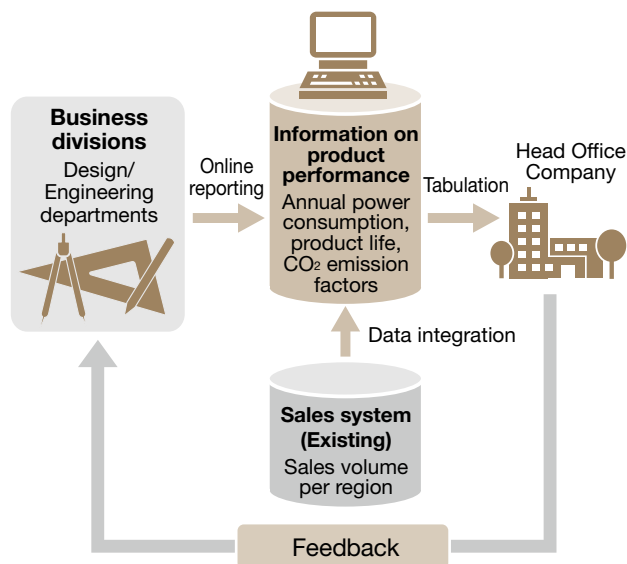


Mechanism of the GP-Web



*1 Joint Article Management Promotion Consortium.

Mechanism of the Eco System (Product)



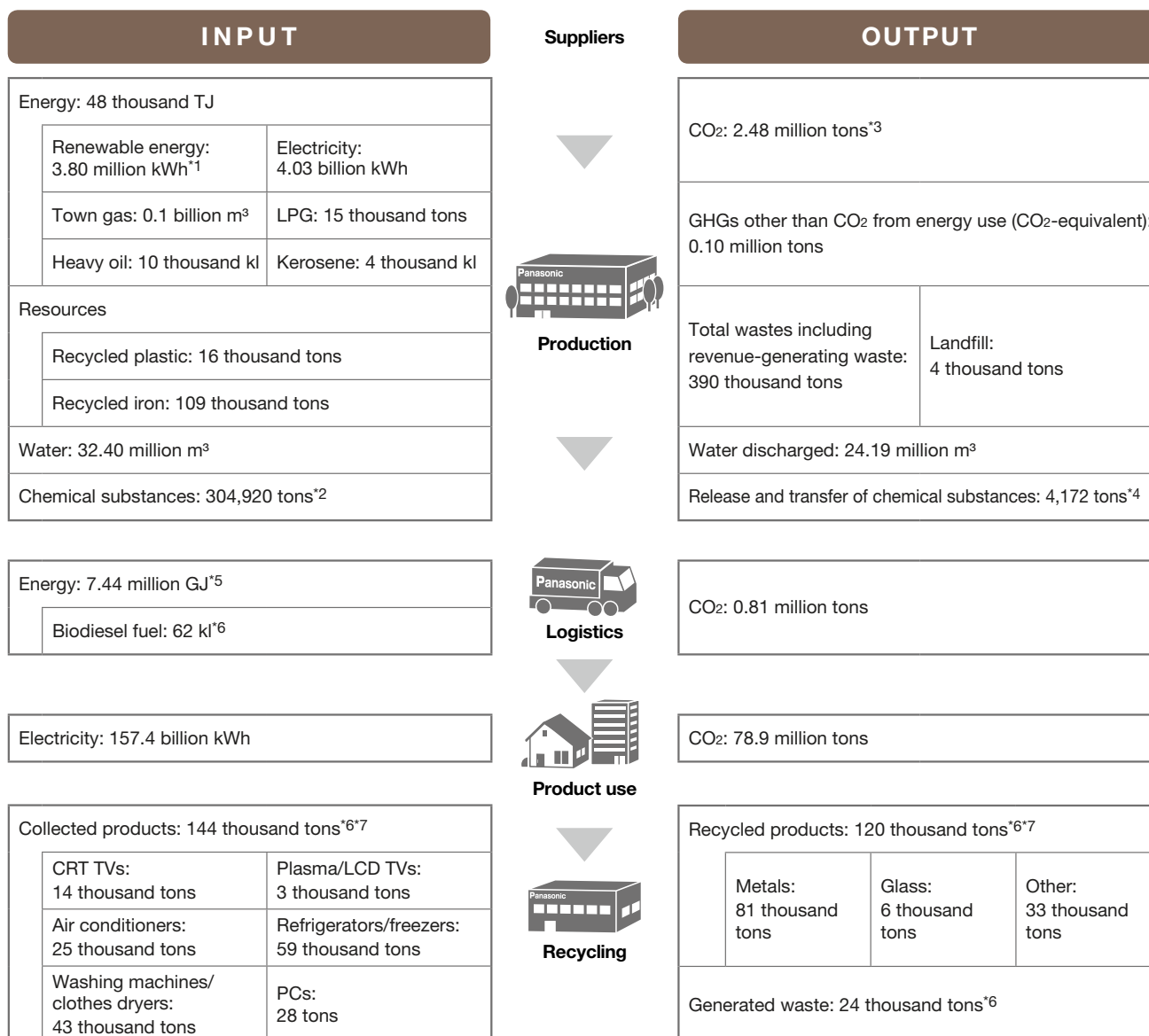
Environment: Overview of Environmental Impact and Environmental Accounting



Overview of Environmental Impact from Business Operation

In order to mainly manufacture and market electrical and electronic products, Panasonic consumes petroleum and electricity as energy sources and resources as raw materials of parts and components. As a result, we emit CO₂ and waste into the environment. This diagram maps the environmental impact from our business operation from a procurement stage to recycling activities. Also, GHG throughout the entire supply chain is classified into Scope 1, Scope 2, and Scope 3, and assessed according to the GHG Protocol, the international calculation standard.

Overview of Environmental Impact from Business Operation



Production: 278 manufacturing sites

Logistics: Logistics stage of procurement, production, marketing and waste by partner companies and Panasonic.

Product use: Lifetime power consumption (a) of major products^{*8} with large amounts of energy use and CO₂ emissions (b) associated therewith.

a = Annual power consumption of a model sold^{*9} x Sales quantity x product life^{*10}

b = Annual power consumption of a model sold^{*9} x Sales quantity x product life^{*10} x CO₂ emission factor^{*11}

Recycling: Recycling of products means to use by oneself or to make into a state available for sale or free of charge the components and materials of a separated product.

*1 Figures from photovoltaic and biomass sources. Heat pumps not included.

*2 Target substances include all substances in the Panasonic Group Chemical Substances Management Rank Guidelines (For Factories).

*3 The factors related to fuels are based on the Guidelines for Calculation of Greenhouse Gas Emissions (version 2.2) published by the Japanese

Ministry of the Environment. The CO₂ emission factor for electricity purchased in Japan (kg-CO₂/kWh) is fixed at 0.410. The factors above are also used for electricity purchased from power producers and suppliers (PPS). The GHG Protocol factors for each country are used for electricity purchased outside Japan.

*4 Release amount: Includes emissions to air, public water areas, and soil.

Transfer amount: Includes transfer as waste and discharge into the sewage system. Recycling that is free of charge or recycling where Panasonic pays a fee for treatment under the Waste Management and Public Cleaning Law is included in "Transfer." (Different from the transferred amount reported under the PRTR Law.)

*5 Intra-region outside Japan not included.

*6 Figures for Japan.

*7 Air conditioners, TVs, refrigerators/freezers, washing machines/clothes dryers, and PCs.

*8 Household air conditioners, commercial air conditioners, fluorescent lamps, LED lamps, household refrigerators, commercial refrigerators, LCD TVs, washing/drying machines, fully-automatic washing machines, clothes dryers, dish washer and dryers, IH cooking heaters, EcoCute, bathroom ventilator-dryers, humidifiers, dehumidifiers, air purifiers, extractor fans, vending machines, electronic rice cookers, microwave ovens, warm-water washing toilets, clothing irons, hair dryers, under-rug heaters, vacuum cleaners, electric thermal pots, extractor hoods, telephones, security cameras etc.

*9 For each product category, the model that was sold in the largest quantity in the region was selected.

*10 Number of years during which spare parts for the product are available (defined by Panasonic).

*11 Regional CO₂ emission factors (kg-CO₂/kWh) used: 0.410 (Japan); 0.487 (Europe); 0.579 (North America); 0.740 (China & Northeast Asia); 0.927 (India & South Asia); 0.527 (Southeast Asia & Oceania); 0.332 (Latin America); and 0.599 (Middle East & Africa).

GHGs from the Whole Supply Chain (by Scope)

Category		Emissions(10,000 tons)	
		FY2014	FY2015
Scope 1 ^{*12}		61	47
Scope 2 ^{*13}		247	211
Scope 3 ^{*14}	1. Purchased goods and services	1,327	1,280
	2. Capital goods	61	65
	3. Fuel- and energy-related activities	17	14
	4. Upstream transportation and distribution	81	81
	5. Waste generated in operations	2.1	1.8
	6. Business travel	2.4 ^{*15}	2.2 ^{*15}
	7. Employee commuting	7.7 ^{*15}	3.4 ^{*15*16}
	8. Upstream leased assets	1.5 ^{*15}	0.6 ^{*15*17}
	9. Downstream transportation and distribution	16 ^{*15}	2.1 ^{*15*18}
	10. Processing of sold products	–	–
	11. Use of sold products	8,300	7,890
	12. End-of-life treatment of sold products	138	124
	13. Downstream leased assets	–	–
	14. Franchises	–	–
	15. Investments	–	–

*12 Direct emissions from facilities owned and controlled by Panasonic (e.g. emissions from use of town gas or heavy fuel oil).

*13 Emissions from production of energy consumed at facilities owned and controlled by Panasonic.

*14 Other indirect emissions, excluding Scope 1 and Scope 2.

*15 Figures for Japan.

*16 The principal factor in the decrease since fiscal 2014 comes from calculation using the latest basic unit defined in the guideline published by the Japanese Ministry of the Environment and the Ministry of Economy, Trade and Industry.

*17 The principal factor in the decrease since fiscal 2014 comes from the decrease in the number of sites covered in the calculation, due to operational changes of leased assets resulting from business structural reforms.

*18 The principal factor in the decrease since fiscal 2014 comes from the change in transport distance between the distribution center, the retailer, and the consumer from Panasonic standards to the scenario defined in the Guideline on Calculating Household Appliance Life Cycle CO₂ Emission by the Japan Electrical Manufacturers' Association.

Environmental Accounting

Panasonic globally collects data on its environmental conservation costs and economic benefits obtained through its environmental activities in relation to generated/controlled environmental impact. This data is internally utilized as basic information for our continuing environmental sustainability management.

Environmental Accounting for Fiscal 2015

Environmental conservation in factories	
Investments* ¹⁹	7,830 million yen
Expenses* ^{19,20}	551 million yen
Economic benefit	2,972 million yen

*¹⁹ Includes all investments relating to environmental conservation. The difference or appropriate portions (divided proportionally) are not calculated.

*²⁰ Expenses include a cost of capital investment depreciation. For example, if latest energy-saving facilities were installed, the value includes depreciation for the first year but not for the second year and later.

Environmental Conservation Benefits for Fiscal 2015 (in physical terms)

Categories	Emission reduction	Reference indicator: environmental impact	
		Fiscal 2014	Fiscal 2015
CO ₂ emissions from production activities	0.44 million tons	2.92 million tons	2.48 million tons
Human Environmental Impact	46 thousand counts	631 thousand counts	585 thousand counts
Final disposal of waste	0.7 thousand tons	4.6 thousand tons	3.9 thousand tons
Water consumption	10.26 million m ³	42.66 million m ³	32.40 million m ³

Fiscal 2015 data on the reduced amount of electricity and effect of reduced electricity costs through our energy-saving products are as shown in the chart below. We are also engaged in R&D of new products that create environmental value. The R&D expenses related to environmental management were approx. 3.3 billion yen in fiscal 2015.

Economic Effects for Customers for Fiscal 2015

Electricity cost reduction from product usage (global)	
Reduced amount of electricity* ²¹	65.3 billion kWh
Reduced electricity costs * ²²	1,336.3 billion yen

*²¹ Calculated under the same conditions as when determining the size of contribution in reducing CO₂ emissions through energy-saving products (see page 30).

*²² Electricity costs were set for each region based on IEA Statistics.

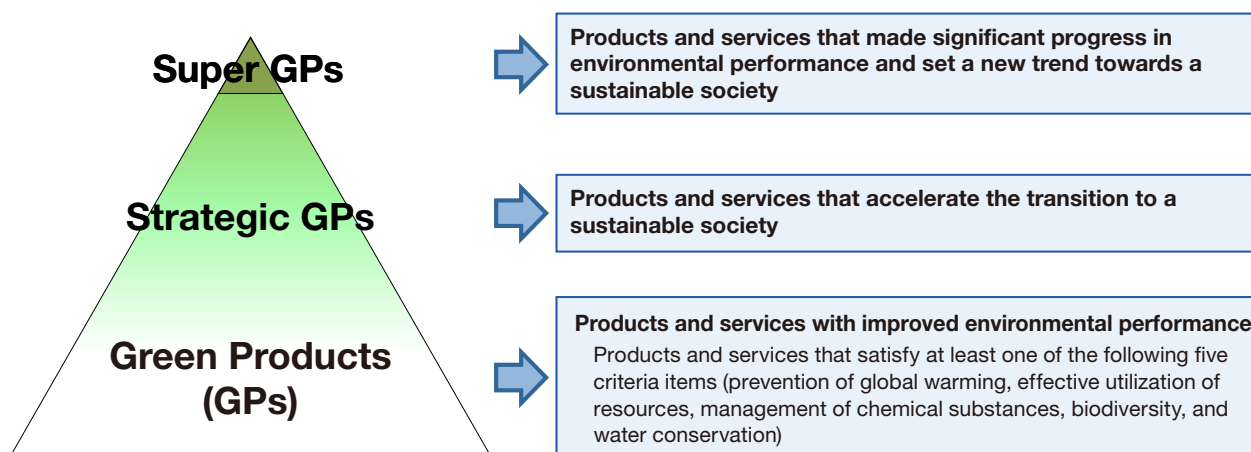
Initiatives for Eco-conscious Products (Green Products)

Panasonic uses a product assessment system that evaluates the environmental impacts of our products and services starting at the planning and design stages. Based on our criteria, we accredit our products and services that achieved high environmental performance as Green Products (GPs). At the same time, starting in fiscal 2014, the existing Superior GPs^{*1} have been enhanced to designate products and services that accelerate the transition to a sustainable society as Strategic GPs. Of these products, products that particularly create new consumer trends are certified as Super GPs.

In the GP accreditation criteria, we assess the performance of our products in terms of prevention of global warming, effective utilization of resources, and management of chemical substances by comparing not only among our own products but also with competitors' products. In fiscal 2012, we took steps to further enhance our accreditation criteria by adding biodiversity and water conservation to existing items. This has in turn enabled the creation of a wider range of GPs.

^{*1} Products and services that showed superior environmental performance to products in the same category in the industry.

Green Product Structure

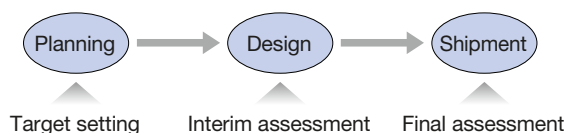


Definition of Strategic GPs

Products and services that accelerate the transition to a sustainable society:

- (1) Products and services that reduce environmental impact with top-level environmental performance in the industry**
(Energy-/Resources-/Water-saving products, etc.)
- (2) Products and services whose promotion and dissemination lead to reducing environmental impact**
(Recyclable or energy-creating products, energy-storing products, energy management systems, Smart Houses and Smart Cities, products/services that support next-generation vehicles and environmental performances of stores, next-generation power meters, next-generation lighting equipment, etc.)
- (3) Products and services that reduce environmental impact on a specific region, or support measures to address environmental impact**
(Air filtration devices, water filters, environmental engineering service, etc.)

Products Assessment System



Product Environmental Assessment		
Items for assessment		Assessment criteria
(1) Products	Prevention of global warming	CO ₂ emissions and energy saving
	Effective utilization of resources	Resource saving, light weight/downsizing, number of reused parts, durability, amount of recycled resources used, structure to recovery/recycling, etc.
	Water and biodiversity conservation	Water saving, consideration for biodiversity
	Comparison with competitors' products	
(2) Production process (of relevant products)	Prevention of global warming	CO ₂ emissions and energy saving
	Effective utilization of resources	Resource saving, mass of packaging materials to be wasted, amount of resources used, amount of waste from factories, etc.
(3) Packaging	Effective utilization of resources	Resource saving, light weight/downsizing, amount of foamed plastic used, amount of recycled resources used, etc.
(4) Instruction manual	Effective utilization of resources	Resource saving, light weight/downsizing, amount of recycled resources used
(1) (2) (3) (4)	Management of chemical substances	Panasonic's Chemical Substances Management Rank Guidelines (for products and factories)
LCA*2		Global warming
Information management		Green procurement, information provision across the supply chain, etc.

Laws/regulations and criteria, guidelines, and environmental action plan of Panasonic

*2 Life Cycle Assessment: Method of quantitatively assessing the environmental impact of products at each life cycle stage.

Expanding the Scope of Strategic GPs

Panasonic has been devoting much of its energies into the creation of No. 1 eco-conscious products (Superior GPs) until fiscal 2013. In the course of business reorganizations such as expansion of BtoB businesses, Panasonic has decided not only to pursue environmental performance of consumer products but also to work on further expansion of products and services that lead to the mitigation of environmental impact. Starting in fiscal 2014, the concept of Strategic GPs has been introduced for the creation of such products and services. In addition to alleviating impact on the global environment with top-level environmental performance, we aim to accelerate the drive to shift to a sustainable society through a variety of business operations, including those that are expected to reduce impacts through wider dissemination and those directly cutting impact in specified regions.

The ratio of Strategic GPs rose from approx. 17%*3 in fiscal 2014 to 19% in fiscal 2015. We will work to further push up this ratio in the future.

*3 Although the Sustainability Report 2014 published in July 2014 indicated the ratio for Strategic GPs in fiscal 2014 as 22%, closer scrutiny showed the result to be 17%.

Of the Strategic GPs, the following three were named Super GPs for fiscal 2015—namely, tankless toilet New A La Uno, for its environmental performance ranking at the top class in the industry, solar module HIT that can cut down environmental impact dramatically, and VRLA Battery Pack System for Forklift Truck Application which are EV lead-acid batteries that support addressing regional environmental impact.

In addition to top-class energy-saving performance in the industry^{*4}, the New A La Uno introduced a new shape that not only prevents scattering but facilitates cleaning even when it becomes dirty, thus cutting down the quantity of cleaner and water used. HIT utilizes its large power output in promoting the wider use of photovoltaic power generation in the housing market that demands outstanding power generation efficiency. The VRLA Battery Pack System for Forklift Truck Application contributed to electrification of forklifts by overcoming challenges such as capability of rapid charging and electrolyte replacement, longer life, etc. It eliminates generation of exhaust gasses in warehouses, etc., and helps improve the work environment.



Tankless toilet New A La Uno



EV lead-acid batteries VRLA Battery Pack System for Forklift Truck Application

*4 Source; The Energy-saving Performance Catalog published by the Energy Conservation Center, Japan.

▶ List of Certified Super Green Products (Super GPs)

http://www.panasonic.com/global/corporate/sustainability/eco/gp_gf/super_gp.html

Initiatives for Eco-conscious Factories (Green Factories)

Panasonic is working on Green Factories (GF) activities in its efforts to cut down environmental impact caused by manufacturing. Specifically, based on legal compliance, each factory develops a variety of plans for reducing environmental impact in production activities, focusing on CO₂ emissions, total waste generation, water consumption, and chemical substance releases and transfers. Progress control is implemented and improved through total emissions reduction and specific unit management to achieve both environmental impact reduction and business management.

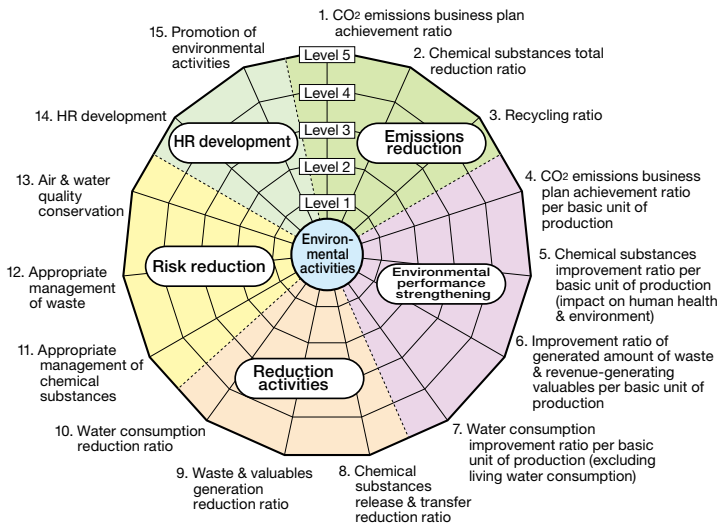
The GF assessment system was introduced in fiscal 2011, aiming for further advancement by visualizing the activity levels at factories. Under the system, the factories evaluate themselves on a one-to-five scale across 19 environmental activity items classified into six basic groups: emissions reduction, environmental performance enhancement, reduction activities, risk reduction, human resource development, and management. Comparing the progress with other sites and implementing relative assessment enables the factory to identify issues and voluntarily review/promote measures for improvement. In fiscal 2014, the system was upgraded to enable the addition of further assessment items to the existing 19, based on the Company's needs.

For regular checks on the progress state of subordinate factories and to lead to greater improvements, Companies share the best practices implemented at similar factories as well as management knowhow corporate-wide, to upgrade the efforts to higher levels through continuous improvement. The case studies on reduction implemented at each factory are registered in the Before/After (BA) Chart Search System and updated for application at other factories. Presently, more than 2,500 cases are registered.

Additionally, information exchanges among factories within each country, human resource development, and GF promotion activities on regional issues such as in Asia and Europe, are underway. Through the Manufacturing Environmental Information Sharing Group, information on global activities for environmental impact reduction, legislation, and social trends are shared, and discussions are held to resolve issues in GF promotion. Outside Japan, information exchanges are promoted within each country and region where Panasonic factories are located, such as in Europe, Southeast Asia, and China. Especially in Southeast Asia, where there are many Panasonic plants and diverse legislative frameworks and issues that vary by country, competitions in best practices for environmental impact reduction (presentation of awards for best practices and activities for horizontal promotion) covering all factories in the region are held to boost and accelerate action in this direction.

Furthermore, in order to support these GF activities, respective Regional Headquarters, Companies, and related divisions in each region are working on various human resource development programs every year in their respective regions. Training programs are being organized, including those on energy conservation, management of chemical substances, and waste management, which are in great demand in China and Southeast Asia where Panasonic has many sites. Special training programs on environmental laws and regulations are being held especially in China, to ensure compliance with the legislation being strengthened at great speed.

Indicators for GF Assessment System



Management

- 16. CO₂ emissions management/activity level
- 17. Chemical substances management level
- 18. Waste management level
- 19. Water management level.

Essential items

Continuous acquisition of ISO14001
Compliance with environmental legislation
Promotion of measures against soil and groundwater contamination
Monthly data registration

Examples of eco-conscious factories are also introduced in the following website.

http://www.panasonic.com/global/corporate/sustainability/eco/gp_gf.html#factory

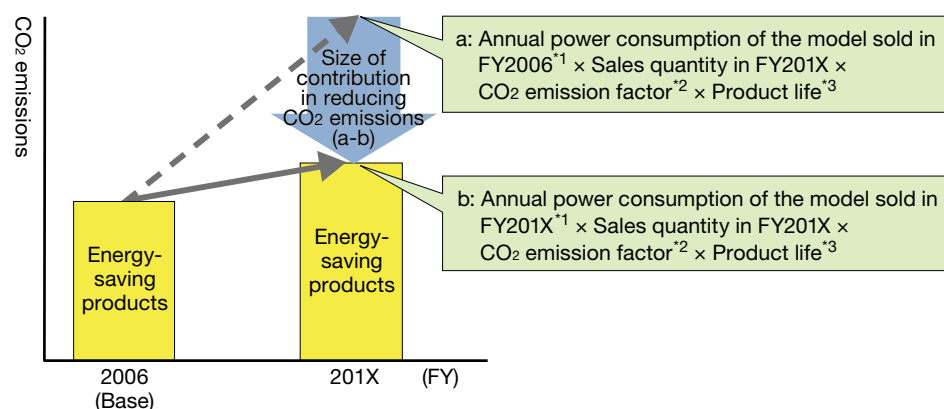
Size of Contribution in Reducing CO₂ Emissions

One of the long-term environmental targets set by the international community is to reduce emissions of CO₂ and other GHGs by 50% from the 2005 level by the year 2050. To achieve this, CO₂ emissions should “peak out” (reach a peak and decline thereafter) during the period from 2020 to 2030. With this background, companies are asked to contribute to reducing CO₂ more than ever.

Panasonic has introduced a unique indicator “size of contribution in reducing CO₂ emissions” to accelerate emissions reduction, targeting both our products (for energy saving and energy creation) and production activities. The size of contribution in reducing CO₂ emissions is defined as the amount achieved by deducting the actual emissions from the amount that would have been emitted without the improvements by the energy-saving performance of our products and productivity from fiscal 2006, and this amount is combined with the emission reduction resulting from power generation by energy-creating products. In other words, it reflects the continuous efforts being made to reduce CO₂ emissions. Panasonic will continue to maximize the size of contribution in reducing CO₂ emissions.

We will improve the energy-saving performance of our products to reduce the energy consumed in using the products. The more energy-saving products are introduced and promoted, the size of contribution in reducing CO₂ emissions will further increase.

Size of Direct Contribution in Reducing CO₂ Emissions through Energy-saving Products



*1 For each product category, the model that was sold in the largest quantity in the region was selected.

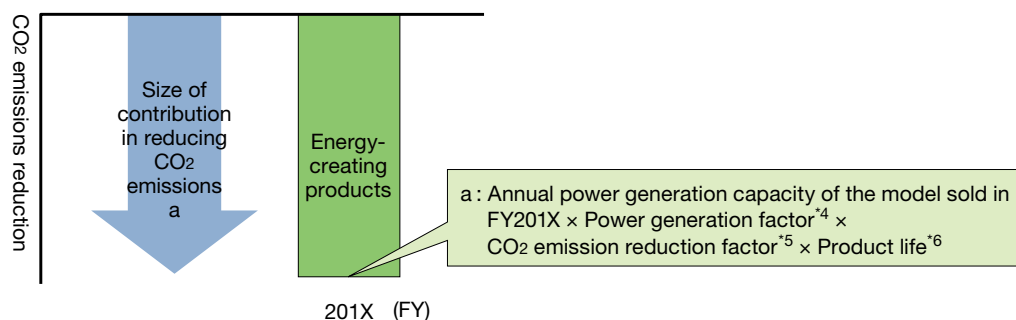
*2 Regional CO₂ emission factors (kg-CO₂/kWh) used: 0.410 (Japan); 0.487 (Europe); 0.579 (North America); 0.740 (China & Northeast Asia); 0.927 (India & South Asia); 0.527 (Southeast Asia & Oceania); 0.332 (Latin America); and 0.599 (Middle East & Africa).

*3 Number of years during which spare parts for the product are available (defined by Panasonic).

Meanwhile, since fiscal 2014, Panasonic has been reinforcing its housing, automotive, and BtoB solution businesses, and is disclosing the CO₂ reduction effect results in these areas from fiscal 2015. Specifically, the data represents “air conditioning load reduction effects from improved insulation performance in Panasonic housing,” “energy-saving effects from products by other companies equipped with Panasonic energy-saving compressors and motors,” and “improved fuel economy effects from electric vehicles equipped with Panasonic automotive batteries.” As with the calculation of energy-saving effects of our home appliances, the trial calculation of the size of contribution in reducing CO₂ emissions through these effects is based on comparison with the performances of fiscal 2006. We regard the effects as “indirect” contribution to reducing CO₂ emissions, to distinguish them from the direct contribution from products under the Panasonic brand such as home appliances.

By using electricity generated by solar power generation and such, we can reduce CO₂ emissions from thermal power plants. Panasonic will further foster its energy creation business to increase the size of contribution in reducing CO₂ emissions.

Size of Contribution in Reducing CO₂ Emissions through Energy-creating Products



*4 For photovoltaic power generation: 1,204 kWh/kW (fiscal 2015), 1,193 kWh/kW (fiscal 2014 and prior). Considering sunshine conditions, system loss, and other variables.

*5 For photovoltaic power generation: 0.360kg-CO₂/kWh (Source: Voluntary Rules on Indication (2010) by the Japan Photovoltaic Energy Association).

*6 For photovoltaic power generation: 20 years.

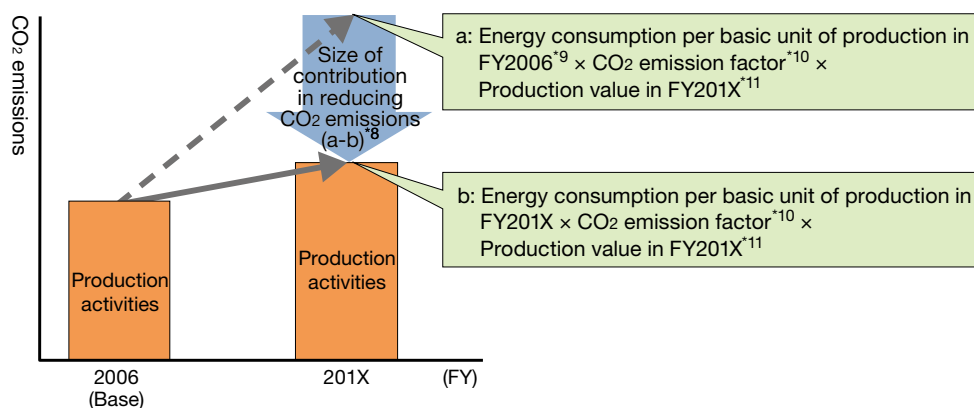
Note: From fiscal 2014, the calculation method for the size of contribution in reducing CO₂ emissions through energy-creating products has been modified in accordance with the policy approach of Keidanren's Action Plan for Achieving a Low Carbon Society.

For more accurate calculation of the size of contribution in reducing CO₂ emissions, the calculation method was changed in fiscal 2015 to use the latest power generation factor of solar cells and fuel cells for each term.

The smaller amount of CO₂ emissions per unit of production (tons/100 million yen),^{*7} the more efficient productivity is, the size of contribution in reducing CO₂ emissions in production activities will increase.

*7 Productivity indicator (Energy consumed in manufacturing products whose total monetary value is 100 million yen, converted to the amount of CO₂ emissions).

Size of Contribution in Reducing CO₂ Emissions through Production Activities



*8 Factories whose nominal energy consumption per basic unit of production had increased from the fiscal 2006 level due to sharp declines in product prices recorded negative figures in the size of contribution in reducing CO₂ emissions. For the size of contribution made by factories consolidated or sold in fiscal 2007 onwards, CO₂ emissions in fiscal 2006 were used for the calculation. For factories purchased, CO₂ emissions in fiscal 2006 were not deemed as a negative contribution.

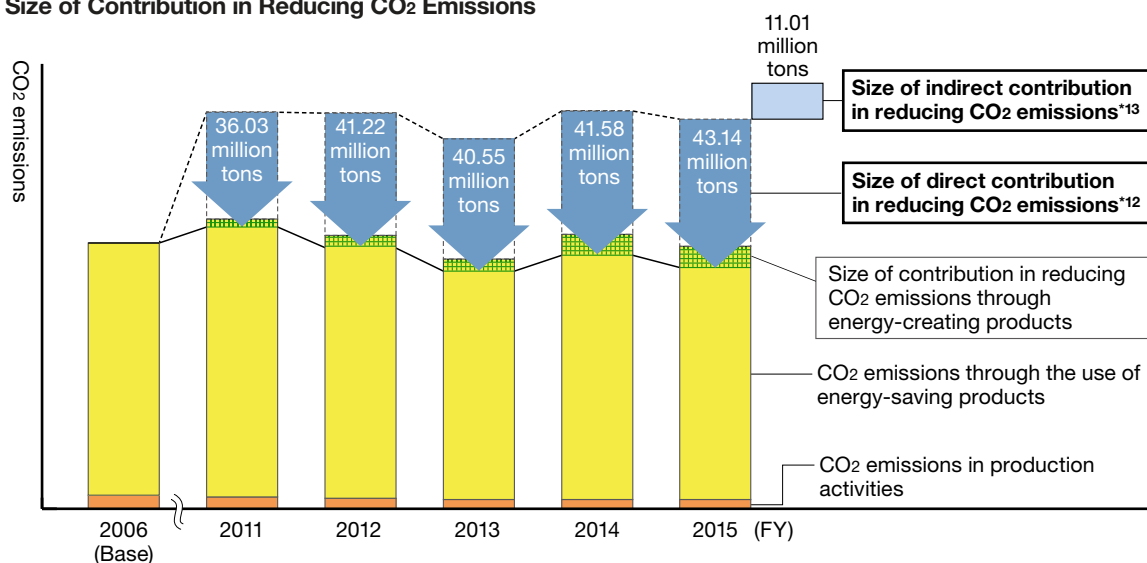
*9 CO₂ emissions per basic unit for fiscal 2006 were used for factories acquired; while for factories newly constructed, the CO₂ emissions per basic unit for the fiscal year in which they were constructed were used.

*10 The factors related to fuels are based on the Guideline for Calculation of Greenhouse Gas Emissions (version 2.2) published by the Japanese Ministry of the Environment. The CO₂ emission factor for electricity purchased in Japan (kg-CO₂/kWh) is fixed at 0.410. The factors above are also used for electricity purchased from power producers and suppliers (PPS). The GHG Protocol's factors for each country are used for electricity purchased outside Japan.

*11 Nominal production value.

In fiscal 2015, the size of contribution in reducing CO₂ emissions came to 43.14 million tons. In addition, the size of indirect contribution in reducing CO₂ emissions through Panasonic products marked 11.01 million tons.

Size of Contribution in Reducing CO₂ Emissions



----- Trend of estimated CO₂ emissions without improvements in energy-saving performances of products and productivity from fiscal 2006
 — Trend of total CO₂ emissions through production activities and energy-saving products, minus the size of contribution in reducing CO₂ emissions through energy-creating products.

*¹² Amount achieved by deducting the actual emissions from the amount that would have been emitted without the improvements by the energy-saving performance of our key consumer products and productivity from fiscal 2006, and this amount is combined with the size of contribution in reducing CO₂ emissions resulting from power generation by energy-creating products.

For more accurate calculation of the size of contribution in reducing CO₂ emissions, the calculation method was changed in fiscal 2015 to use the latest power generation factor of solar cells and fuel cells for each term. The size of contribution in reducing CO₂ emissions in fiscal 2015 came to 43.02 million tons with the conventional calculation method.

*¹³ Size of contribution in reducing CO₂ emissions in the housing, automotive, and BtoB solution businesses. Specifically, the data represents “air conditioning load reduction effects from improved insulation performance in Panasonic housing,” “energy-saving effects from products by other companies equipped with Panasonic energy-saving compressors and motors,” and “improved fuel economy effects from electric vehicles equipped with Panasonic automotive batteries.”

Direct Contribution in Reducing CO₂ Emissions through Energy-saving Products

The size of direct contribution in reducing CO₂ emissions in fiscal 2015 through our energy-saving products resulted in 32.65 million tons. This was due to a fall in sales of TVs which particularly have a high contribution ratio, despite the increase in sales of a number of consumer products. In the breakdown of the size of contribution in reducing CO₂ emissions by global product category, 80% was from air conditioners, TVs, and lighting equipment. By region, Japan, Southeast Asia & Oceania, China & Northeast Asia made up 78%. CO₂ emissions from the use of our major products^{*1} in fiscal 2015 was estimated to be approx. 78.9 million tons. We will continue to further reduce the CO₂ emissions from the use of major products by making energy-saving products even more widely available.

*1 Lifetime CO₂ emissions from major products^{*2} with large amounts of energy use.

$$\text{Lifetime CO}_2 \text{ emissions} = \text{Annual power consumption of a model sold}^{*3} \times \text{Sales quantity} \times \text{Product life}^{*4} \times \text{CO}_2 \text{ emission factor}^{*5}$$

*2 Household air conditioners, commercial air conditioners, fluorescent lamps, LED lamps, household refrigerators, commercial refrigerators, LCD TVs, washing/drying machines, fully-automatic washing machines, clothes dryers, dish washer and dryers, IH cooking heaters, EcoCute, bathroom ventilator-driers, humidifiers, dehumidifiers, air purifiers, extractor fans, vending machines, electronic rice cookers, microwave ovens, warm-water washing toilets, clothing irons, hair dryers, under-rug heaters, vacuum cleaners, electric thermal pots, extractor hoods, telephones, security cameras, etc.

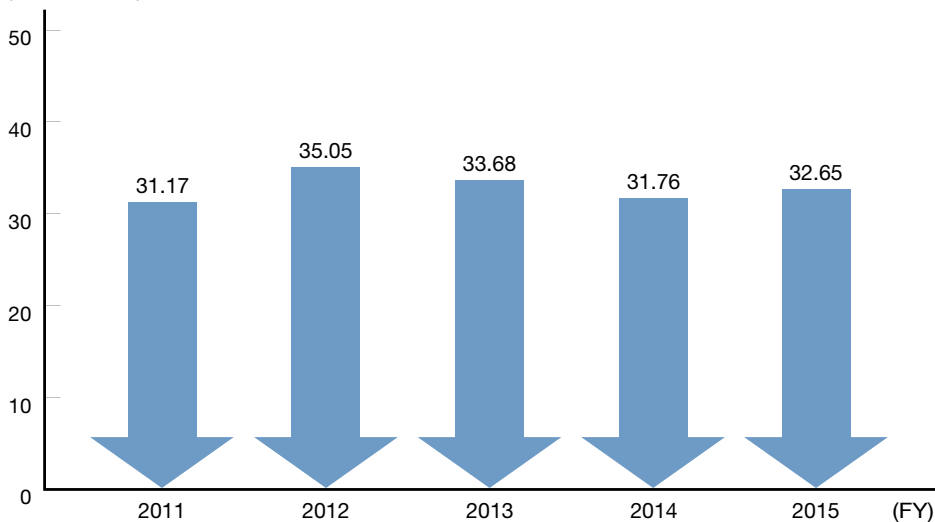
*3 For each product category, the model that was sold in the largest quantity in the region was selected.

*4 Number of years during which spare parts for the product are available (defined by Panasonic).

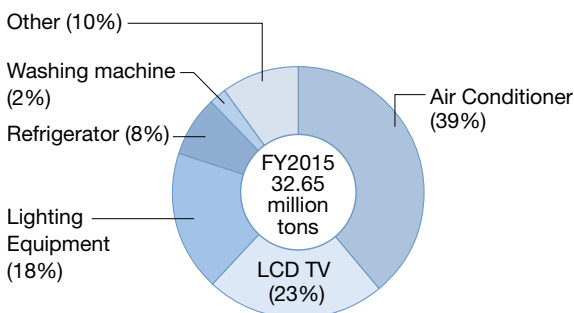
*5 Regional CO₂ emission factors (kg-CO₂/kWh) used: 0.410 (Japan); 0.487 (Europe); 0.579 (North America); 0.740 (China & Northeast Asia); 0.927 (India & South Asia); 0.527 (Southeast Asia & Oceania); 0.332 (Latin America); and 0.599 (Middle East & Africa).

Size of Contribution in Reducing CO₂ Emissions through Energy-saving Products

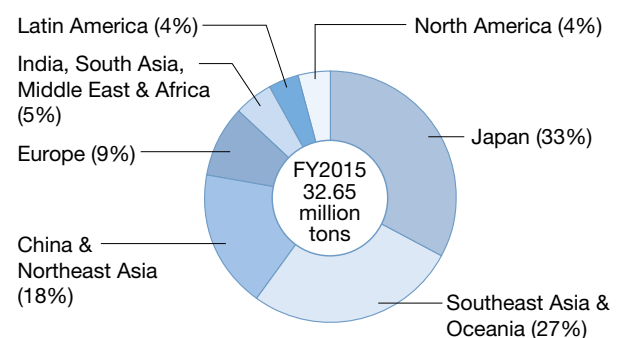
(million tons)



Size of Contribution in Reducing CO₂ Emissions through Energy-saving Products (by product)



Size of Contribution in Reducing CO₂ Emissions through Energy-saving Products (by region)



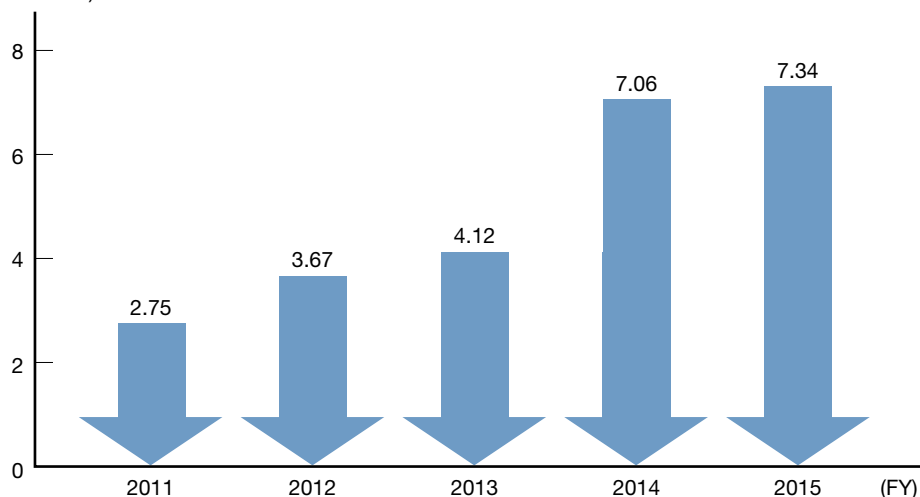
Contribution in Reducing CO₂ Emissions through Energy-creating Products

We actively develop our energy creation business to maximize the size of contribution in reducing CO₂ emissions. By delivering photovoltaic power generation systems and household fuel cell cogeneration systems as means to create necessary electricity with few CO₂ emissions, we reduce CO₂ emissions in society.

The size of contribution in reducing CO₂ emissions through energy-creating products in fiscal 2015 was 7.34 million tons through a slight increase in the sales of photovoltaic power generation systems, our major product in this category. By region, Japan accounts for the vast majority.

Size of Contribution in Reducing CO₂ Emissions through Energy-creating Products

(million tons)



Note: For more accurate calculation of the size of contribution in reducing CO₂ emissions, the calculation method was changed in fiscal 2015 to use the latest power generation factor of solar cells and fuel cells for each term. The size of contribution in reducing CO₂ emissions through energy-creating products in fiscal 2015 came to 7.21 million tons with the conventional calculation method.

Initiatives for Energy-storing Products

Energy-storing products such as lithium-ion batteries can be used in various situations for electric power storage and contribute to CO₂ reduction through installation in offices, homes, etc. Panasonic is actively engaged in the development of energy-storing products.

Examples of Energy-saving/creating/storing products are also introduced on the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/co2/product.html>

Solutions for Global Warming Mitigation and Adaptation

Panasonic offers a range of solutions that contribute to mitigating and adapting to climate change, with the four concepts of “saving energy,” “creating energy,” “storing energy,” and “managing energy”, which is to link and control energy use.

Examples of solutions for global warming mitigation and adaptation are also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/co2/solution.html>

Contribution in Reducing CO₂ Emissions through Production Activities

Panasonic is working to reduce CO₂ emissions in factories with the aim of contributing to climate change mitigation, as well as improving production efficiency in factories and reducing energy costs.

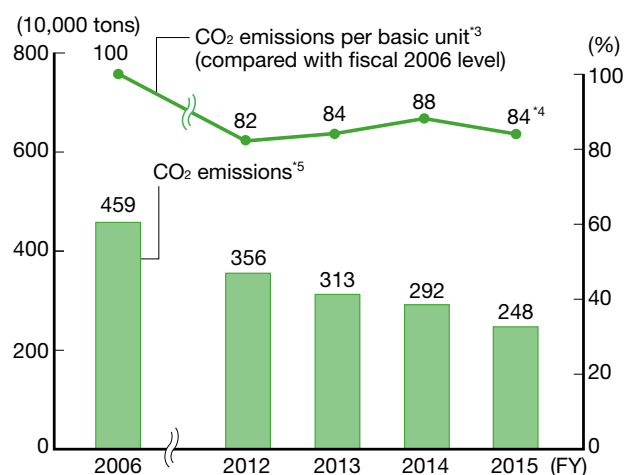
In fiscal 2008, we set a company-wide business goal to reduce CO₂ emissions by 0.3 million tons in fiscal 2010 compared to fiscal 2007. As a result of our unified efforts, we achieved 0.84 million tons in CO₂ emissions reduction, surpassing our target figure. Since fiscal 2011, we have been using our unique indicator, the size of contribution in reducing CO₂ emissions (see pages 30-32), to further improve our energy management capabilities and reduce the CO₂ emissions per basic unit, aiming towards maximizing the size of contribution in reducing CO₂ emissions in production activities. In addition to individual efforts implemented in each factory, energy-saving and CO₂ emission reduction measures including horizontal introduction of good examples across the company, specialist training, and CO₂ ITAKONA initiatives*¹ are promoted. The size of contribution in reducing CO₂ emissions in production activities achieved in fiscal 2015 was 3.15 million tons (compared with the fiscal 2006 level). Furthermore, we are also reducing energy consumption. Our investment in CO₂ emissions reduction in fiscal 2015 was 3.3 billion yen*².

We also take part in the Keidanren's Commitment to a Low Carbon Society, a voluntary action plan for global warming prevention targeted at 2020 in Japan. Specifically, we are steadily implementing energy-saving measures in factories and offices in order to achieve the goals set by the electrical and electronics industry in Japan, aiming "improvement in energy consumption rate in factories and large offices at an annual rate of 1% on average towards 2020."

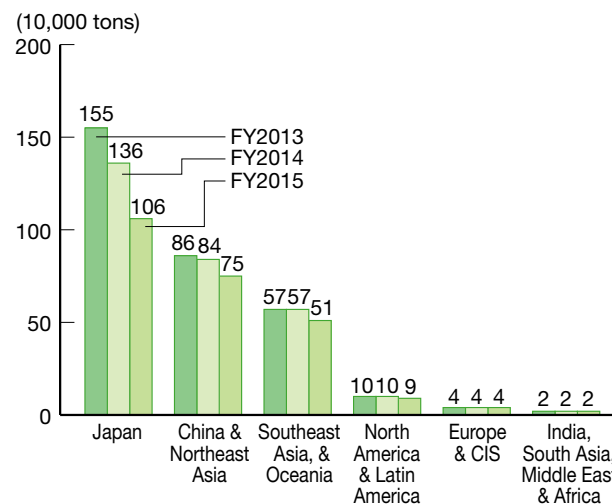
*¹ ITAKONA is a term unique to Panasonic which refers to a process by which we review stages prior to production to study raw materials to ensure waste is minimized and quality is maintained. We apply a similar review process for our CO₂ emissions reduction efforts and call these our CO₂ ITAKONA initiatives. The activity is aimed at discovering energy conservation measures from a new viewpoint through continuous display of energy consumption levels (energy consumption per basic unit), and analyzing the factors that influence the variables in each basic unit.

*² Includes all investments concerning CO₂ emissions reduction. Differences or appropriate portions are not calculated.

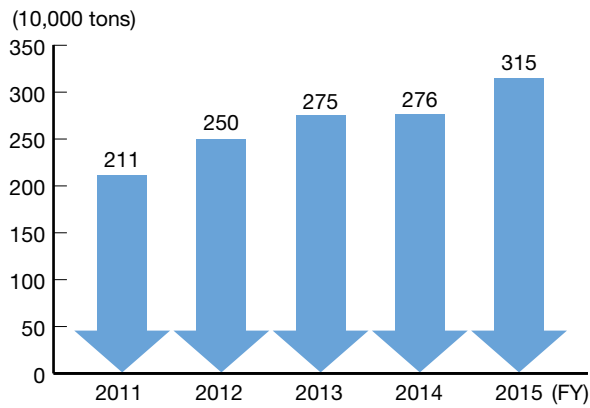
CO₂ Emissions in Production Activities and CO₂ Emissions Per Basic Unit



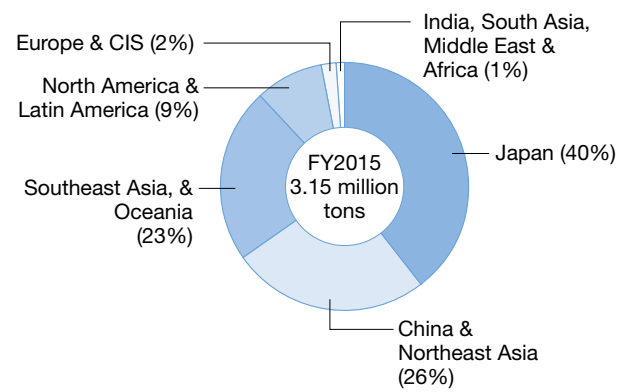
CO₂ Emissions in Production Activities (by region)



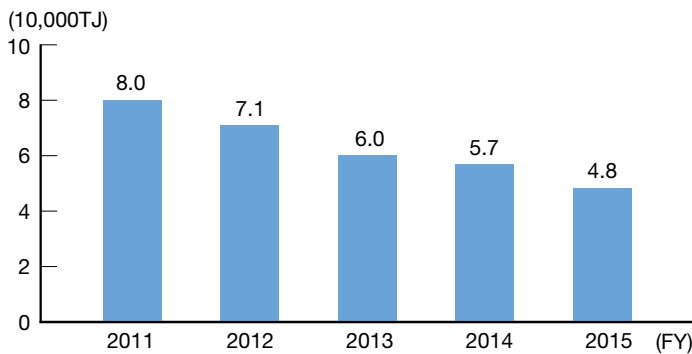
Size of Contribution in Reducing CO₂ Emissions through Production Activities



Size of Contribution in Reducing CO₂ Emissions through Production Activities (by region)



Energy Consumption in Production Activities



*3 Calculated with the weighted average of the improvement rate for CO₂ emissions per basic unit of nominal production for each factory. The amount of CO₂ emitted from each factory was used for weighting cases that had no improvements. Basic unit of fiscal 2006 was converted into an index as 100.

*4 Increase in CO₂ emissions per basic unit in fiscal 2012, 2013, and 2014 is due to the decline in production volume.

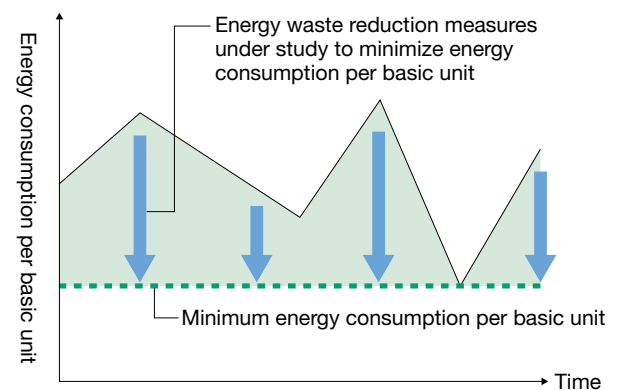
*5 The factors related to fuels are based on the Guidelines for Calculation of Greenhouse Gas Emissions (version 2.2) published by the Japanese Ministry of the Environment. The CO₂ emission factor (kg-CO₂/kWh) for electricity purchased in Japan in each fiscal year is fixed at 0.410 to accurately reflect efforts for CO₂ emissions reduction. If the factors set for each fiscal year are used instead (0.425 for fiscal 2006, 0.476 for fiscal 2012, and 0.487 for fiscal 2013, 0.57 for fiscal 2014 and 2015), total CO₂ emissions will be 4.63 million tons for fiscal 2006, 3.81 million tons for fiscal 2012, 3.35 million tons for fiscal 2013, 3.18 million tons for fiscal 2014, and 2.80 million tons for fiscal 2015. The factors above are also used for electricity purchased from power producers and suppliers (PPS). The GHG Protocol factors for each country are used for electricity purchased outside Japan.

Promotion of CO₂ ITAKONA Initiative

To ensure the reduction of CO₂ emissions at our factories, it is important to track the energy consumption of each factory and the effects of specific emissions reduction measures to visualize reduction effects. To date, we have introduced more than 40,000 measurement systems and Factory Energy Management Systems (FEMS) at all of our global manufacturing sites, and we have continued to promote our CO₂ METAGEJI^{*6} initiative.

Based on this scheme, the CO₂ ITAKONA initiative has been implemented since fiscal 2011. The activity is aimed at discovering energy conservation measures from a new viewpoint through continuous display of energy consumption per basic unit of production, and analyzing the factors that influence the variables in each basic unit.

Concept of the CO₂ ITAKONA Initiative



In order to accelerate action under the CO₂ ITAKONA initiative, we developed the SE-Navi software that displays energy and production data simultaneously and analyze energy consumption per basic unit. The “energy-saving navigation function” of this software quantitatively extracts energy loss per device as well as loss per factor, based on the automatic energy loss analysis results through CO₂ ITAKONA analysis. With this function, energy-saving efforts prioritizing processes with large energy loss have been made easier .

Conventionally, energy consumption and other data had been analyzed manually by specialists in order to develop energy conservation measures. This function automatically analyzes data and enables users to consider energy conservation measures based on the energy-saving measure database. Not only did this contribute to a reduction in working time but also to the identification of energy-saving measures without the assistance of specialists.

▶ An example of factory energy conservation support service is introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/co2/service.html>

In our semiconductor plant in Suzhu, China, minimum measurement instruments were installed in processes/facilities subject to energy saving, and based on that data, local employees conducted analyses on loss per production volume per basic unit using the SE-Navi energy-saving navigation function. As a result of efficiently working on energy-saving measures, an energy saving of approx. 18% was achieved in the cold water pumping facility within about a month after introduction. Going forward, the factory will utilize the device-/factor-specific energy loss identification function in compressors and production facilities in order to increase the efficiency and effects of energy-saving activities.

*6 METAGEJI is a term unique to Panasonic which refers to visualizing energy consumption and implementing measurable reduction initiatives by introducing measurement instruments, such as meters and gauges.

Utilization of Renewable Energy

As countermeasures against global warming, we globally promote utilization of renewable energy, such as photovoltaic power generation. The annual amount of power generated from renewable energy in fiscal 2015 reached 3.8 million kWh^{*7} across Panasonic.^{*8}

*7 Includes photovoltaic and biomass power but not power from heat pumps.

*8 Includes power generated from renewable energy at non-manufacturing sites.

Working toward the Emissions Trading Scheme in China

In China, a pilot program of the Emissions Trading Scheme (ETS) is currently being conducted in two provinces and five cities (provinces of Guangdong and Hubei and cities of Beijing, Tianjin, Shanghai, Chongqing, and Shenzhen). Sanyo Energy (Beijing) Co., Ltd., and Panasonic Industrial Devices Taiko (Shenzhen) Co., Ltd. are included in the list of pilot enterprises. In response to this, we are accelerating our drive to cut CO₂ emissions in manufacturing, a measure that was already underway.

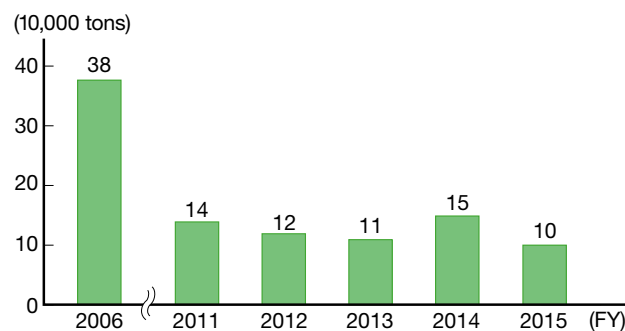
Reducing the Emissions of GHGs Other than CO₂ from Energy Use

GHGs other than CO₂ from energy use emitted by Panasonic include HFCs used in air conditioner factories as refrigerants for products and NF₃ used as a cleaning gas in LCD factories. To reduce these gases, we implement a variety of measures, such as preventing leakage of refrigerants, recovering waste refrigerants, decomposing at external parties, and installing removal devices.

GHG emissions other than CO₂ from energy use in fiscal 2015 amounted to 0.1 million tons (CO₂ equivalent), reduced by 0.05 million tons compared to the previous fiscal year. A reduction of 0.04 million tons was derived from the transfer of management of the wafer manufacturing process in the Hokuriku semiconductor diffusion plant to a joint venture from fiscal 2015.

With nitrogen trifluoride (NF₃) being newly added to the fiscal 2014 measurements due to the new GHG coverage in the second commitment period of the Kyoto Protocol, the Global Warming Potential (GWP) was reviewed, resulting in the increase of 0.04 million tons.

Emissions (CO₂-equivalent) of GHGs Other than CO₂ from Energy Use in Production Activities

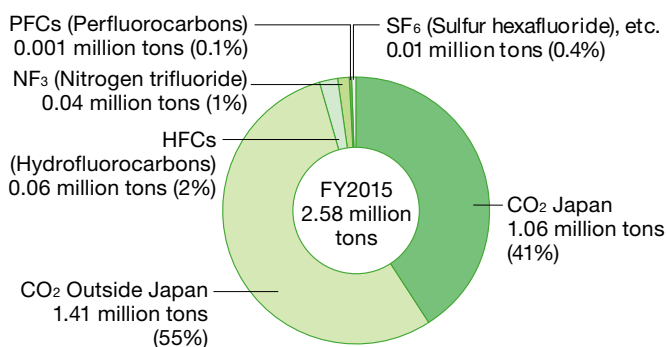


Breakdown of Total GHG Emissions (by gas and by scope)

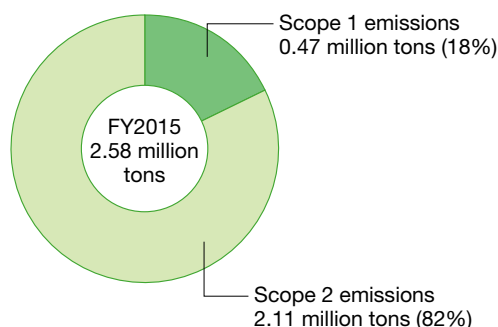
Our GHG emissions, including emissions from energy sources and other sources, reached 2.58 million tons in fiscal 2015, the breakdown being 18% for Scope 1 emissions⁹ and 82% for Scope 2 emissions⁹ (see page 24 for Scope 3 emissions).

⁹ GHG emissions defined by the GHG Protocol, an international calculation standard for GHG emissions. Scope 1 emissions refer to all direct GHG emissions from facilities that are owned or controlled by the reporting entity (e.g. emissions from usage of town gas or heavy oil). Scope 2 emissions refer to GHG emissions from manufacturing of the energy that is consumed in facilities owned or controlled by the reporting entity (e.g. emissions from generation of electricity that the reporting entity purchased).

Breakdown of Total GHG Emissions (CO₂-equivalent) in Production Activities (by category)



Breakdown of Total GHG Emissions (CO₂-equivalent) in Production Activities (by scope)

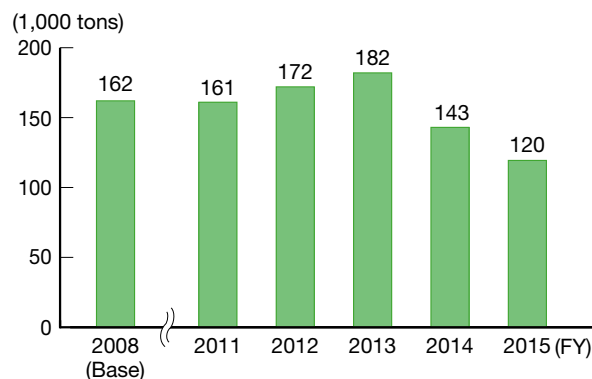


CO₂ Emission Reduction at Non-manufacturing Sites

We also focus on measures aimed at curtailing emissions at non-manufacturing sites, including offices and research centers. We have set a company-wide target of reducing CO₂ emissions by an average of 2% or more each year, over a baseline year of fiscal 2008, at 54 self-owned office buildings in Japan. To meet this goal, major sites have formulated energy conservation plans and taken steps such as conducting energy conservation diagnoses by specialists. As a result, we have reached our goal for fiscal 2015, reducing our CO₂ emissions to 12 thousand tons, marking an annual average reduction of 6%^{*10} compared with the fiscal 2008 baseline level. Furthermore, our original tool for energy conservation self-assessment, Green Office Assessment, is employed to inspect the status of activities in this area, based on 40 specific energy-saving items, in order to upgrade management levels. We also implement initiatives in utilizing renewable energy, such as installing solar panels on the roofs of offices and research buildings.

^{*10} Figure representing CO₂ emissions for the base year (fiscal 2008; 185,000 tons) is one wherein the figure of past fiscal years were corrected based on the sites covered in fiscal 2015.

CO₂ Emissions from Non-manufacturing Sites (self-owned office buildings in Japan)



Note: The sites covered by this information are non-manufacturing sites (owned by Panasonic) with 100 or more employees in each fiscal year. For the CO₂ emission factor of purchased electricity, 0.410 kg-CO₂/kWh was used.

An example of global warming prevention at offices is also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/co2/site.html>

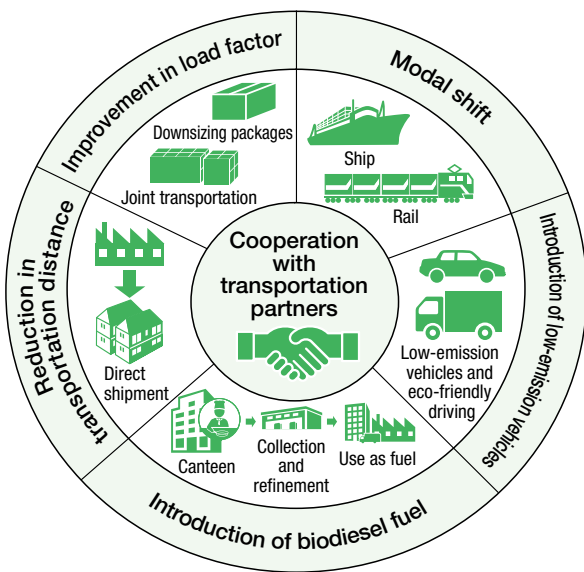
Reducing CO₂ Emissions in Logistics

To contribute to the prevention of global warming as well as to improve transportation efficiency while reducing costs, Panasonic is working to reduce CO₂ emissions in logistics. We have set the targets of reducing CO₂ emissions per basic unit*1 by at least 1% year-on-year, and by 46% from the fiscal 2006 level by fiscal 2019, focusing on modal shift, introduction of low-emission vehicles and biodiesel fuel, reduction in transportation distances, and improvement in load factor.

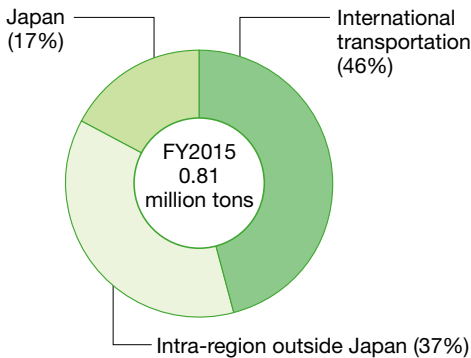
In fiscal 2015, our global CO₂ emissions from logistics activities came to 0.81 million tons across the world, of which international transportation was 0.37 million tons (46%), and domestic transportation within Japan was 0.135 million tons (17%). Although CO₂ emissions per basic unit increased by 8% from the previous fiscal year due to the increase in international air freight, this is still a reduction of 36% from the fiscal 2006 level.

*1 CO₂ emissions per transportation weight; the scope covers both international and domestic transportations.

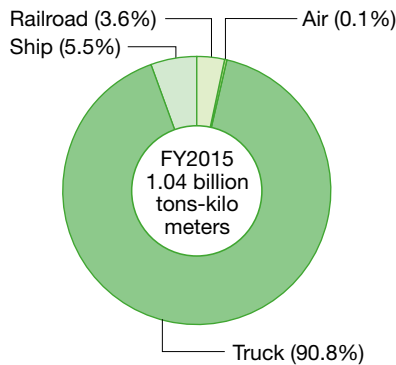
Major Initiatives Taken for Green Logistics



CO₂ Emissions from Logistics



Transportation Amount by Transportation Method (Japan)



Modal Shift^{*2} Initiative in Collaboration with Logistics Partners

Panasonic promotes modal shift in transportation from trucks to railroad in order to reduce CO₂ emissions.

In fiscal 2015, Panasonic took the initiative in modal shift, collaborating with our logistics partners, including Japan Freight Railway Company, Nippon Express Co., Ltd., and Kintetsu Panasonic Trading Service Co., Ltd.

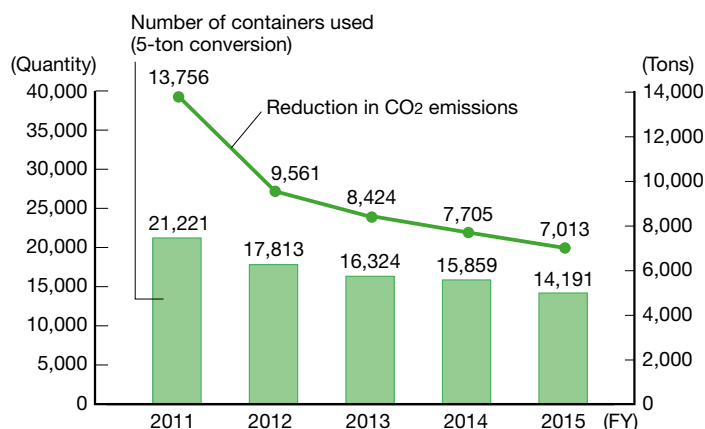
One of such initiatives is the transportation of security cameras from Suzhou in China to Urayasu City in Chiba Prefecture, Japan. The conventional transportation method was via air freight directly from Suzhou to Haneda Airport in Tokyo or Narita Airport in Chiba Prefecture. This was changed to a method where the products were transported to Hakata Port in Fukuoka Prefecture by ship, and then to a freight center near Urayasu City via railroad. Although there was an issue that transportation took longer than before, it was overcome by using high-speed freight vessels. CO₂ reduction effects from this initiative reach 61 tons per year.

We also realized another modal shift in the transport of POS systems from Shanghai, China, to Tosu City, Saga Prefecture, Japan. POS systems were conventionally transported via air freight from Shanghai to Fukuoka Airport in Fukuoka Prefecture, and then carried by truck for approx. 40 km from Fukuoka to Tosu. This was changed to high-speed vessel transportation from Shanghai to Hakata Port in Fukuoka Prefecture, then to the Tosu Freight Terminal by railroad. Changing the transportation method from truck to railroad would generally cost more if the distance is less than 500 km. However, we made this change possible by a variety of arrangements, such as by using smaller containers and utilizing the temporary storage service offered by the railroad transport. The CO₂ emission reduction effect is equivalent to 74 tons per year.

As a result of such efforts, our railroad freight transportation within Japan in fiscal 2015 became equivalent to 14,191 five-ton containers, which resulted in a reduction of 7,013 tons of CO₂ emissions.

^{*2} Switch from truck and air transport to railroad and sea vessel transport that has less environmental impact.

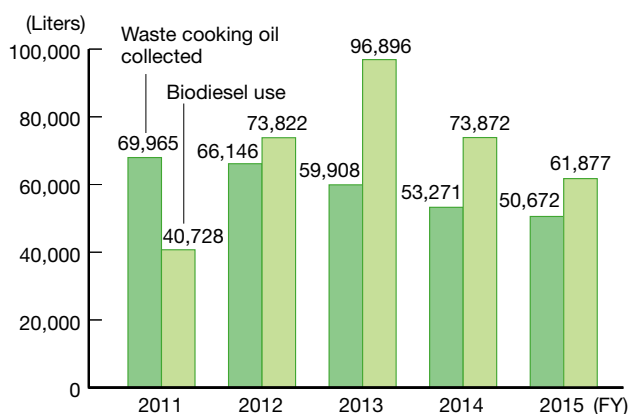
CO₂ Emissions Reduction Effect by Railroad Transportation (Japan)



Use of Biodiesel Fuel (Japan)

Panasonic promotes transforming waste cooking oil collected from its business sites into biodiesel fuel and utilizing it for vehicles used in production, procurement, and marketing activities. Since fiscal 2010, we have been using 100% biodiesel fuel for the joint transportation with the Asahi Shimbun Company in the Tokai and Tokyo Metropolitan areas to enhance further usage of biodiesel fuel. However, biodiesel usage decreased in fiscal 2015 due to decrease in joint transportation with the Asahi Shimbun Company.

Changes in Volume of Collected Waste Cooking Oil and Biodiesel Fuel Use (Japan)



Recycling of Stretching Film Used in Transportation

As an effort to reduce logistics waste, we jointly entered into a full recycling scheme for used stretch film with Nozoe Industry INC. (hereafter Nozoe) in fiscal 2015. The stretch film used for our transport was previously discarded, but is now recycled by Nozoe as a material for plastic garbage bags, which we then purchase. We recycled a total of 62 tons of stretch film in fiscal 2015. We will continue to make effective use of used stretch film and reduce logistics waste.



Recycling-oriented Manufacturing

With swift economic growth advancing worldwide and bringing heightened attention to concerns over resources, the sourcing of new resources and materials not only significantly impact the environment, but mineral resource depletion and material pricing run-up have also become issues.

To address these concerns, and as a responsibility of a manufacturer that uses a large volume of resources, Panasonic has been propelling Recycling-oriented Manufacturing under the theme of recycling resources since 2010, placing it as an important issue along with CO₂ emissions reduction.

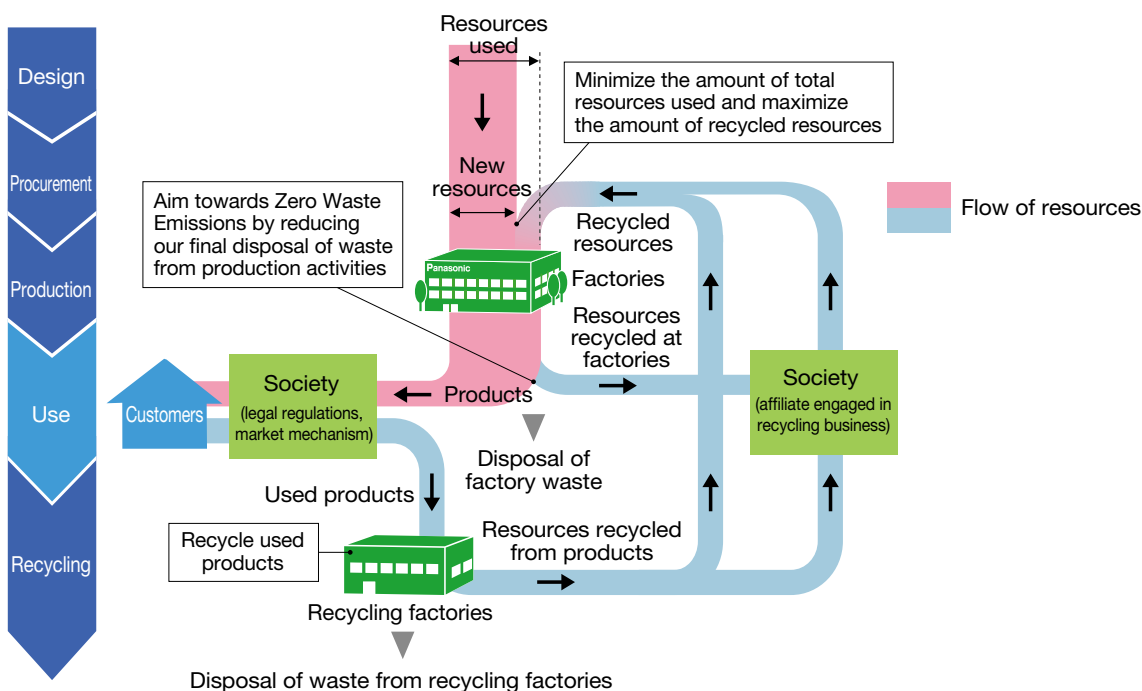
Recycling-oriented Manufacturing has three aspects under this concept, which are to minimize the amount of total resources used and maximize the amount of recycled resources, aim towards Zero Waste Emissions by reducing our final disposal of waste from production activities, and recycle used products.

We have been working on the weight reduction and downsizing of products to minimize the total resources used, and are continuing to increase resource collection through introduction of new recycling technologies and systems to expand the usage of recycled resources.

Furthermore, by reducing the amount of factory waste and thoroughly recycling resources from waste, we are working to eliminate the amount of waste treated in landfills to as close to zero.

In addition to utilizing the resources that were previously wasted across the entire production process, we have established a process where resources are recovered from used products, recycled into products, and further delivered to customers, to realize sustainable business activities throughout the product life cycle.

Goal of Recycling-oriented Manufacturing



We use many kinds of resources, including iron (27% of total resources used) and plastic (10% of total resources used), due to our wide range of products and businesses, from home appliances, components such as semiconductors and batteries, to housing. In Recycling-oriented Manufacturing, it is important to promote the reduction of total resources used, and at the same time develop a recycling process according to the specific characteristics of each resource for expansion of our usage of recycled resources.

Furthermore, we clarify recycled resource utilization issues by identifying the volume of each type of resource used across the Panasonic Group. For example, in the case of recycled plastic, we used approx. 16,000 tons of recycled plastic in our products in fiscal 2015 by identifying the characteristics required in the materials used, securing a stable supply, researching how to recycle it in production, and developing new recycling technologies. By promoting the use of recycled resources in products, a number of different products that incorporate recycled resources have been launched since fiscal 2014.

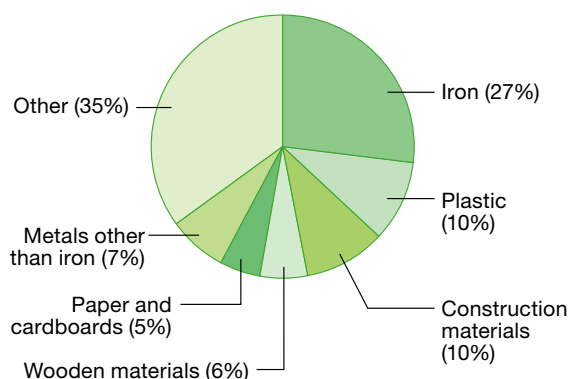
The total volume of recycled resources used decreased due to a less lumber use deriving from a drop in demand for construction materials, and other factors. As a result, the recycled resource utilization ratio*1 became 16.3%. We will continue to work on further reducing total resources used and maximizing utilization of recycled resources, to maintain and improve our recycled resource utilization ratio.

In addition, as for the recycling rate of waste at factories, we had traditionally set different targets for Japan and countries outside Japan according to the relevant local infrastructures. However, with the awareness of the importance of zero waste emission activities, we have set a globally standardized target since fiscal 2011 and are taking steps to improve the standard level of waste recycling across the entire Group. The factory waste recycling rate*2 was 98.8% for fiscal 2015 against the target of 99.5% or more in fiscal 2019. (see page 52)

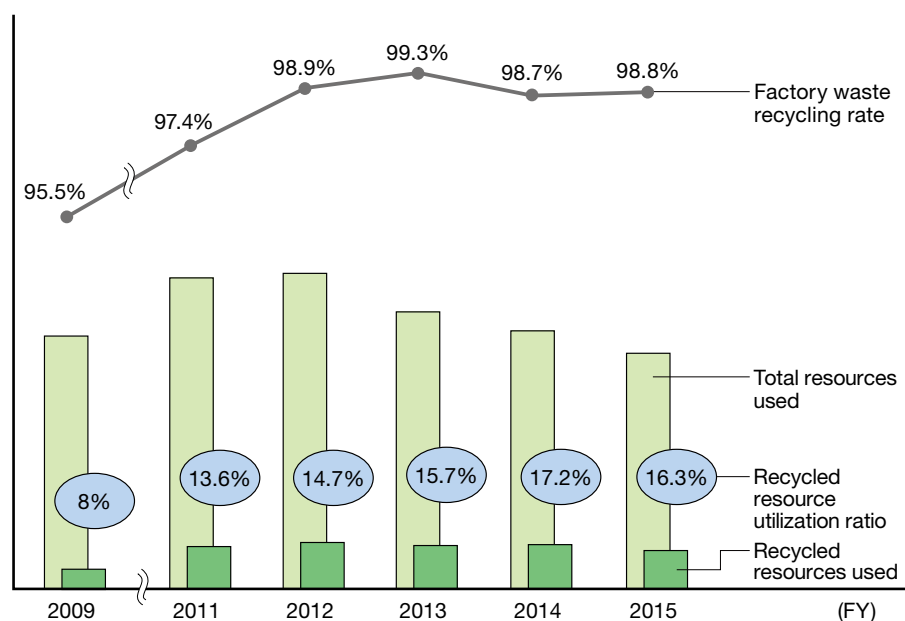
*1 Recycled resource utilization ratio = Recycled resources used/Total resources used

*2 Factory waste recycling rate = Amount of resources recycled/(Amount of resources recycled + Amount of final disposal)

Breakdown of Total Resources Used in Fiscal 2015 (by category)



Recycled Resource Utilization Ratio and Factory Waste Recycling Rate



Reducing Product Mass

To minimize the use of resources for production, we continuously look to reduce the weight of our products.

Through the Product Environmental Assessment (see page 27), Panasonic has been promoting resource saving from the product planning and design stage, such as using less resources, making our products lighter and smaller, and using less components. We also implement various measures from the standpoint of resource recycling throughout the product life cycle, such as component reuse, longer durability, use of recycled resources, easier battery removal, and labels necessary for collection/recycling.

Examples of weight reduction and recyclable product design are also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/resource/reduce.html>

Global Initiatives for Used Product Recycling

Aiming toward the effective use of natural resources and the prevention of environmental pollution, a growing number of recycling laws have been enacted in various countries throughout the world. Examples include the Law for Recycling of Specified Kinds of Home Appliances (Home Appliance Recycling Law) and the Act on the Promotion of Effective Utilization of Resources in Japan, the WEEE Directive in the European Union, and recycling laws in many states in the United States. In China as well, a similar law has been taking effect since 2011. In addition to complying with relative laws in respective countries, we strive to establish the most efficient recycling system in each country in view of its local recycling infrastructure.

FY2015 Results

Japan	Recycled approx. 120,000 tons of four kinds of home appliances
Europe	Collected approx. 34,000 tons of used electronic products
USA	Collected approx. 16,000 tons of used electronic products

Product Recycling Initiatives in Japan

In response to the Home Appliance Recycling Law of 2001, which covers four specified kinds of home appliances, we established Ecology Net Co., Ltd. jointly with Toshiba Corporation, which manages a geographically dispersed recycling network through the effective use of existing recycling facilities nationwide. The recycling management company operates all the recycling-related services, which includes supervising 360 designated collection sites (shared with “Groups A and B”) and 32 recycling facilities, on behalf of the “Group A” manufacturers (19 companies including Panasonic). Our recycling factories, Panasonic Eco Technology Center Co., Ltd. (PETEC), Panasonic Eco Technology Kanto Co., Ltd. (PETECK), and Chubu Eco Technology Co., Ltd. (CETEC)*1 conduct unique research to improve our recycling processes for more efficient treatment of the four kinds of home appliances*2 and for the recovery and supply of more resources. In fiscal 2015, we recycled approx. 120,000 tons of the four specified home appliances.

Amendment of the Home Appliance Recycling Law was considered in 2014 in order to make recycling charges clearer and lower, as well as to improve recycling rates.*3 As a result, the statutory recycling rate*4 was revised in April 2015. Each of our recycling factories implemented measures to further enhance resource recycling, aiming to improve the recycling rate of the entire “Group A.”

At PETEC, while the resin selection equipment with near-infrared spectroscopy installed in 2012 originally identified only one type of resin at a time, a newly-adopted technology has enabled simultaneous identification of three types of resin, thereby significantly increasing the volume of recyclable resources (see pages 49-50). This new equipment and technology have also been installed in PETECK, and are planned to be introduced in other recycling factories.

Additionally, in the recycling of refrigerators at PETECK, a refrigerator-processing line incorporating new technologies has been installed, which include a POS (PETECK Omnipotent Server) System that controls the in and out of refrigerators corresponding to two types of insulating fluorocarbons, a laser cutter for refrigerator bodies and a vacuum insulation material remover that uses induction heat to reutilize vacuum insulation materials. PETECK strives for higher recycling process efficiency and expansion of resource recycling.



New refrigerator disassembly line in PETECK



Refrigerator POS system in PETECK

*1 PETECK and CETEC are joint ventures between Mitsubishi Materials Corporation and Panasonic.

*2 Air conditioners, TVs, refrigerators/freezers, and washing machines/clothes dryers.

*3 Recycling rate = Valuable resource weight/Total weight of used home appliances.

*4 The amended statutory recycling rates are at least: 80% for air conditioners, 55% for CRT TVs, 74% for LCD and plasma TVs, 70% for refrigerators and freezers, and 82% for washing machines and clothes dryers.

► Overview of Recycling of Specified Home Appliances

<http://www.panasonic.com/global/corporate/sustainability/eco/resource/recovery/recycling.html>

► Panasonic Eco Technology Center Co., Ltd. (PETEC) <http://panasonic.net/eco/petec/>

Recycling Efforts in the Europe / CIS Region

Since its establishment, we have been closely involved in the operations of the Recycling Electrical Products Industry Consortium (REPIC), a compliance scheme for electrical appliance recycling in the UK. It was more than 10 years ago that the UK originally started discussing legislation concerning Waste Electrical and Electronic Equipment (WEEE). We examined how to establish a recycling system and other related issues, and eventually established a nonprofit compliance scheme, known as REPIC, in collaboration with other corporations. REPIC manages almost a half of the total weight of WEEE in the UK, which is processed in the UK WEEE system.

Over the years, we have contributed to the revised WEEE regulations put into effect in 2014 through working with REPIC, the UK government, and other stakeholders. The UK WEEE regulations previously allowed trading of “evidence notes,” which is proof of treated WEEE, between schemes. However, the limited visibility of such trading became an issue, and the revised 2014 regulations resulted in evidence trading being abolished. The change enabled schemes to have a full audit trail of which treatment company was being used, so helping to improve treatment quality and reduce unnecessary costs. We will continue to contribute to the sustainable operation of the electrical appliance recycling system in the UK through an industry association.

In 2014, we collected approx. 34,000 tons^{*5} of used products covered by the WEEE Directive across Europe.



Panasonic employee presenting accomplishments of law amendment at a UK Parliamentary event

Russia is currently discussing WEEE legislation, and Panasonic is working on developing appropriate regulations through an industry association, RATEK. The Russian government is planning to collect the recycling fee of the products subject to WEEE regulations uniformly from manufacturers in a form similar to a tax. As actions against this plan, RATEK is working towards building efficient recycling schemes under the initiative of manufacturers.

^{*5} Calculated by multiplying the weight of collected products per collection system by Panasonic market share in terms of weight per collection system.

Promoting Recycling Activities in North America

Panasonic is taking a leading role in establishing and operating a recycling system for waste batteries and consumer electronic products in North America. Following the start-up of a state recycling law in Minnesota in July 2007, we established the Electronic Manufacturers Recycling Management Company, LLC (MRM), jointly with Toshiba Corporation and Sharp Corporation in September of the same year, and began recycling TVs, PCs, and other electronic equipment. With collaborative ties to four recycling companies, each with a nationwide network, we are running a recycling program that covers the entire United States. Through more than 1,600 collection bases, Panasonic collected approx. 16,000 tons of used electronic products according to each state mandate and by our voluntary efforts in 2014.

Panasonic is actively involved in a range of recycling activities. For example, in June 2014, we joined Sustainable Electronics Recycling International (SERI), a nonprofit organization aimed at environment-oriented electronics recycling, as a founding member. In the following month, we received the Gold Tier Award for our participation in the Sustainable Material Management Challenge, a campaign to promote appropriate recycling organized by the US Environmental Protection Agency. Under the SMM Challenge, we committed to using only third-party certified electronic product recyclers in our e-waste recycling programs in the US.

As for waste batteries, we established Call2Recycle in 1994 jointly with other leading battery manufacturers, and now provide recycling programs for rechargeable batteries throughout the US and Canada.



Gold Tier Award received in the Sustainable Management Electronics Challenge

Out of ten provinces and three territories in Canada, nine currently have WEEE regulations. However, the programs run by local management organizations in each province and territory differ from each other. Panasonic is a member of all of these local organizations, contributing to effective recycling activities. There are now more than 1,700 permanent collection sites in Canada and we are currently working to standardize the operation of these programs on a national basis.

WEEE legislation is currently under discussion in the Yukon, Northwest, and Nunavut territories in Northern Canada. In those areas, we are also presenting our ideas for manufacturer-led “producer responsibility” programs for treatment of used consumer electronic products.

Recycling Business in China

The Regulation for the Management of Recycling and Disposal of Waste Electrical and Electronic Products was enforced in January 2011. Under this regulation, we established a joint recycling company in Hangzhou named Panasonic Dadi Dowa Summit Recycling Hangzhou Co., Ltd. (PDSH), with Chinese and Japanese Companies, and its operation started in February 2014. This new company aims at becoming an advanced model for home appliance recycling in China in accordance with the above regulations. Utilizing the methods of advanced and practical technology and a contemporary control system that have developed through our recycling business in Japan for more than a decade, the company engages in collecting and disassembling used appliances as well as selling resources from used appliances. Through these businesses, the company will contribute to environmental conservation and the effective use of resources in the country.



New TV disassembly line in PDSH

International Collaboration in Southeast Asia and Oceania

We commenced Phase II of the Heartland E-waste Recycling Programme in January 2015. This voluntary waste reclaiming activity in Singapore is an initiative to provide a recycling platform of home appliances and electronic waste based on a shared responsibility concept among manufacturers, recyclers, retailers, local communities, and the government. The program aims to raise recycling awareness among the community by offering an integrated platform for recycling waste home appliances through diverse channels. During Phase I, from July 2013 to February 2014, approx. 1,800 home appliances, exceeding 10 tons in total weight, were collected in two neighborhoods in southeast Singapore. The scope of Phase II, which runs for nine months from February 2015, has been expanded to cover seven neighborhoods. In addition, a survey on residents’ awareness of e-waste recycling will also be conducted by students and volunteers at the collection points. Such insights will assist in mapping out Singapore’s e-waste landscape.

Regulators in Vietnam, Malaysia, and Thailand are gearing towards the global trend of mandating responsible end-of-life product recycling. Discussions with regulators and industry bodies are in progress. Such examples include Malaysia Department of Environment-Japan International Cooperation Agency (JICA) e-waste management system feasibility study, Joint initiative between Japanese and Vietnamese governments, and Thailand local industry association. Continuous discussions with the Australian government to support the review of the existing e-waste recycling regulation are also in progress. Through such engagements between the government and industry bodies, Panasonic hopes to contribute to the formulation of sustainable e-waste management policy in each country.

Recycling Efforts in India

In India, the recycling law was enforced in May 2012, requiring manufacturers to form their own recycling systems. In response to this enforcement, we established the “I Recycle” program that collects and treats waste home appliances. Panasonic has also been taking part in the Consumer Electronics and Appliances Manufacturers Association (CEAMA) to help develop the white paper to reports on an analysis of current recycling activities in India, and a medium to long-term plan for waste problem solutions. The white paper was submitted to the Ministry of Environment, Forests and Climate Change in January 2015.

The market penetration of home appliances is expected to continue to grow at a fast pace in India. We will hold further negotiations with the Indian government through various industry associations to help establish an even more efficient and robust recycling system.

Recycling Initiatives in Latin America

As the trend of reinforcing environmental laws progresses in Latin American countries, discussions on legislating recycling laws and actual enforcement are being conducted.

We are having dialogues with the Brazilian government, jointly with an industry association and retailers, about the establishment of local recycling systems. We are also actively engaged in a resource collection campaign in major cities. Our efforts also include participation in the improvement program of reverse logistics systems in Brazil through an industry association to reinforce the system and making it more effective. The project is planned to run for three years with technical support from JICA, following a request by the Brazilian government.

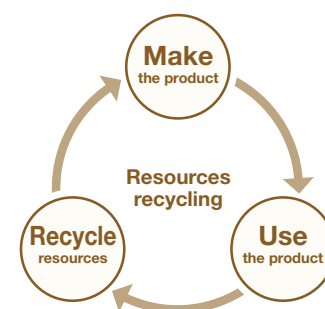
In Colombia, we also formed a recycling management organization under an alliance of manufacturers liaising with governmental organizations and industrial groups. The first step was collection of refrigerators aiming at mitigating ozone depletion. In Mexico and Peru, we conducted e-waste collection campaigns while working towards enforcement of optimum recycling regulations for each country. We are also actively discussing with governments in Costa Rica and Argentina about the best recycling legislation, while also working on planning practical recycling systems.

Products Using Recycled Resources

Under the concept of “product-to-product,” we are enhancing our initiatives of utilizing resources recovered from used products. As for resin, we promote the reuse of resin recovered from our used home appliances (refrigerators, air conditioners, and washing machines) for our products. We also started recycling scrap iron recovered from used home appliances in our products in 2013.

► Our approaches to Resources Recycling

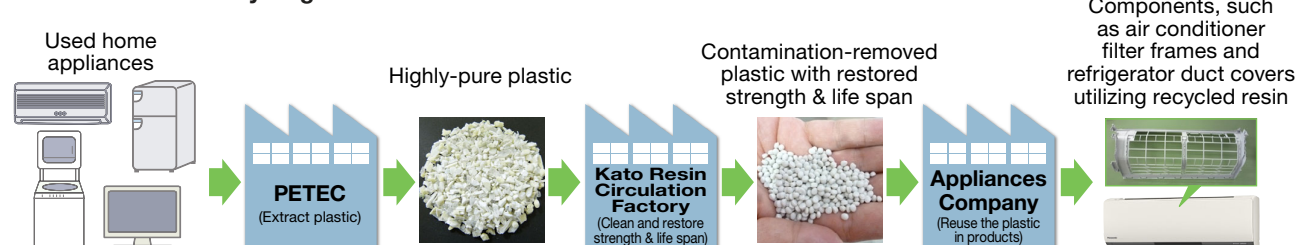
http://www.panasonic.com/global/corporate/sustainability/eco/resource_sp.html



Enhanced Use of Recycled Resin in Home Appliances

To efficiently utilize resin recovered from collected waste home appliances in addition to metals such as iron, copper, and aluminum, our recycling factory, Panasonic Eco Technology Center Co., Ltd. (PETEC), and Kato Plastic Recycling Factory of the Appliances Company work together for resin recycling.

Process of Resin Recycling



PETEC is capable of sorting three major types of resins with different purposes and properties—polypropylene (PP), acrylonitrile butadiene styrene (ABS), and polystyrene (PS)—from shredder residue of waste home appliances, with an accuracy of at least 99%. This precision separation is realized by our original near-infrared identification technology. Conventionally, shredder residues were generally discarded or used as fuel, however, this technology has enabled the sorting and recovering of single resins.

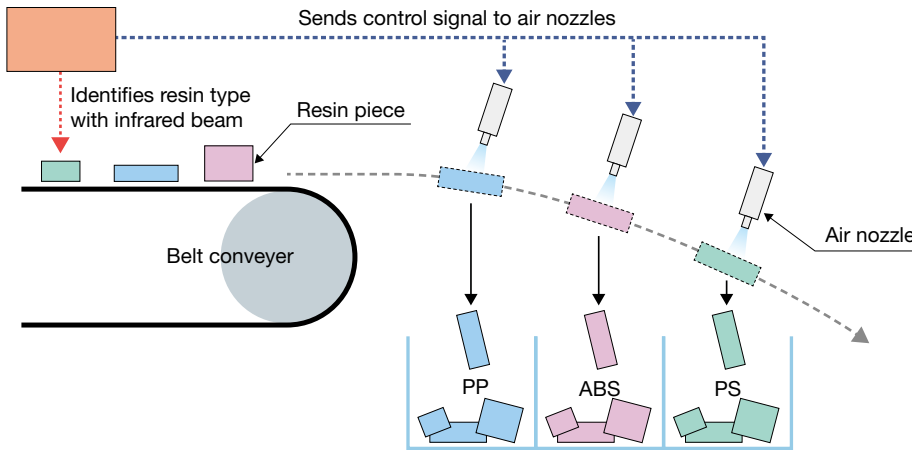
PP, ABS, and PS were conventionally sorted by each type at a time over three processes, but in fiscal 2015, we developed new technologies to sort these three types of resin simultaneously. The first of the new technologies is airflow control technology, which is used to blow resin pieces of different shapes and sizes after their types have been identified. The technology reduces the impact of aerodynamic drag caused when blowing the pieces into the air from the conveyor and stabilizes the trajectory of the resin pieces. The second is the air discharge technology to instantaneously optimize the duration of the air jet and nozzle position to shoot down the flying resin pieces. The third is high-speed signal processing technology to instantaneously detect the type of resin of the flying piece that is moving at 3 m/second, and ensures continuously shooting the piece down using more than 700 air nozzles.

These three technologies have significantly improved the resin sorting efficiency. Through development and introduction of such technologies, we are striving to improve recycling treatment efficiency and to enhance the scope of resource recycling. The technology also detects and removes specific hazardous substances during sorting, which keeps the substance content significantly lower than regulated by stringent European legislation. Moreover, because no water is necessary for this sorting process and there is no need for effluent treatment, it contributes to reducing environmental impact caused by wastewater after the recycling process.



Near-infrared sorting machine that can sort three types of resin simultaneously

Diagram of Near-infrared Simultaneous Sorting Machine for Three Types of Resin



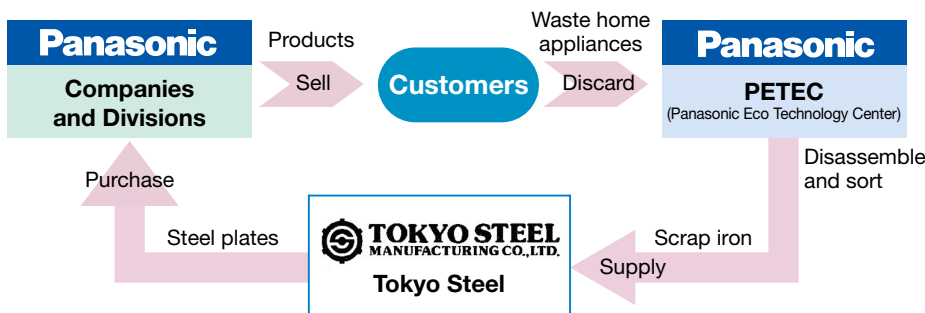
The recycled single resins sorted and recovered at PETEC are then transferred to the adjacent Kato Plastic Recycling Factory to be washed and processed to recover their chemical properties. Kato Plastic Recycling Factory is a manufacturing and development site that demonstrates promotion of use of recycled resin at our Appliances Company, a home appliance manufacturer and seller. The factory plays an important role in enhancing recycled resin utilization by developing recycling technologies, such as a more efficient method for cleaning recycled resins. Recycled resin is generally weaker in strength and has a shorter life than new resin. This is why its chemical properties have to be recovered to the level of new resin to make them usable as materials and components in new products. Different properties are required for different resins. We have established techniques that make full use of the properties optimal to each resin such as PP, ABS, and PS, which include adding antioxidants or mixing recycled and new resins.

Recycled resin processed and quality-assured by PETEC and Kato Plastic Recycling Factory are reborn in our manufacturing factories as filter frames for air conditioners or internal parts in IH cooking heaters and refrigerators according to the resin type to serve the right functions in the right places.

Building a Recycling Scheme for Scrap Iron

Jointly with Tokyo Steel Co., Ltd., we started a recycling scheme for scrap iron in July 2013. In this scheme, we recover the scrap iron from used home appliances and Tokyo Steel makes it into steel sheets. We then purchase the sheets back as a material for our products. Supplying scrap iron for recycling and repurchasing the recycled iron is the first scheme of its kind in the Japanese electrical manufacturing industry.

Self-recycling Scheme for Electric Steel Plates



Specifically, scrap iron from home appliances collected and treated at PETEC is supplied to Tokyo Steel’s Okayama Plant, where the scrap iron is processed into electric steel plates.^{*1} Panasonic procures the recycled steel plates and utilizes them in products. Discussions with Tokyo Steel commenced in 2010, and we have worked together since then to improve the quality of recycled iron to a level sufficient for production use, as well as developing the technology to improve the applicability of the recycled iron. From this we identified the optimum application of the electric steel plates, and refined its specific features (e.g. shape, strength, and weldability) to meet application-specific requirements. Use of thin electric steel plates in our products was first made possible in 2011. Through this close collaboration, we materialized this recycling scheme in 2013, a scheme where a home appliance recycling company that we own supplies scrap iron to be used to make electric steel plates.

The amount of scrap iron we initially supplied to Tokyo Steel was about 50 tons per month. In fiscal 2015, it reached over 2,100 tons, and the recycled steel is being used in our products, including washing machines and ceiling materials for housing.

Self-recycling Scheme Process



The increase in electric steel plate usage leads to an increase in the usage of scrap iron, which is one of the most important resources in Japan. In addition, producing steel plates from scrap iron emits much less CO₂ compared with producing steel plates from scratch. This scheme also stabilizes the procurement price, because the price of scrap iron supplied from PETEC and the price of electric steel plates procured from Tokyo Steel are determined by the scrap iron fluctuation rate agreed between the two companies. We will further expand this recycling scheme for more efficient resource utilization, CO₂ emissions reduction, and stabilization of procurement prices.

*1 Steel produced from scrap iron melted and refined in an electric arc furnace.

Examples of use of recycled resources are also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/resource/reuse.html>

Improving Factory Waste Recycling Rate

From the viewpoint of effective usage of resources, we believe that generation of waste and revenue-generating waste at factories must be minimized, even if such waste could be sold as valuable commodities. Based on this belief, we identify the amount of generated waste (including both revenue-generating waste and factory generated waste) and classify it into: (1) recyclable waste (including those that can be sold and those which can be transferred free of charge or by paying a fee), (2) waste that can be reduced by incineration or dehydration, and (3) landfill (waste with no option other than being sent to landfills).

We reduce the emission of waste by boosting yield in our production process and increasing the recycling rate of our waste materials. Accordingly, we strive globally toward achieving our Zero Waste Emissions from Factories *1 goal by reducing the amount of landfill to nearly zero.

We have reinforced our efforts in China and other Asian regions, as well as in Europe. The recycling scheme in a new factory that caused the overall recycling rate to fall in fiscal 2014 entered into full operation in February 2015. This resulted in the fiscal 2015 recycling rate reaching 98.8%, an increase of 0.1 point over the previous fiscal year. We will continue our initiatives to achieve the factory waste recycling rate target of 99.5% by fiscal 2019.

As a means to reduce the generation of waste, we are fostering resource-saving product design. In our production activities, we are engaging in resource loss reduction, employing our own unique material flow analysis methods. We consider materials that do not become products and excessive use of consumables as resource losses, and make the material flow and lost values for each process visible in order to resolve the issues with the involvement of the design, manufacturing, and other relevant business divisions. In the future, we will promote further reductions in resource losses through the Resource Loss Navigation, our original system developed to automatically display information to help reduce resource losses.

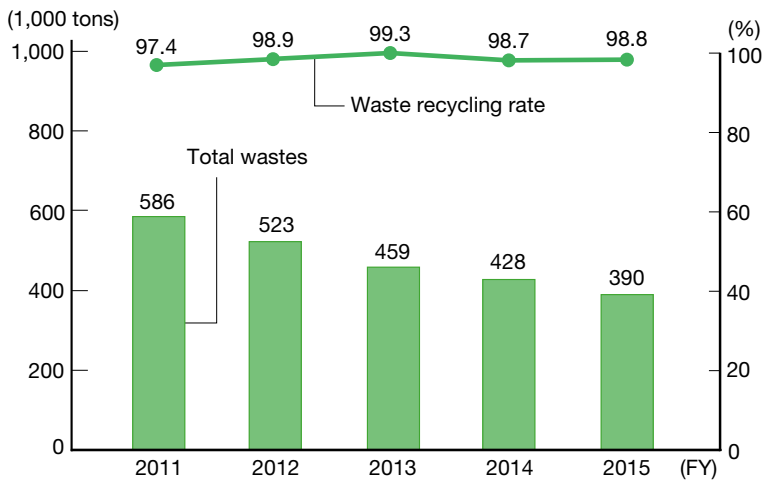
As measures to reduce the amount of landfill of waste and revenue-generating waste, we constrain the amount of waste materials that are particularly difficult to recycle, such as thermosetting resin. We are also strictly adhering to waste sorting practices in production processes to further expand the reuse of resources.

Because waste recycling rates in our overseas factories lag behind those in Japan, we have worked to improve the average level of recycling activities by sharing information within and between regions outside Japan. Specifically, in addition to accelerating the information sharing on waste recycling issues between our local factories and group companies in Japan, we also promote the sharing of excellent examples and know-how among our factories across regions by utilizing BA Charts*2 prepared by each region, following our long-standing approach toward CO₂ reduction activities.

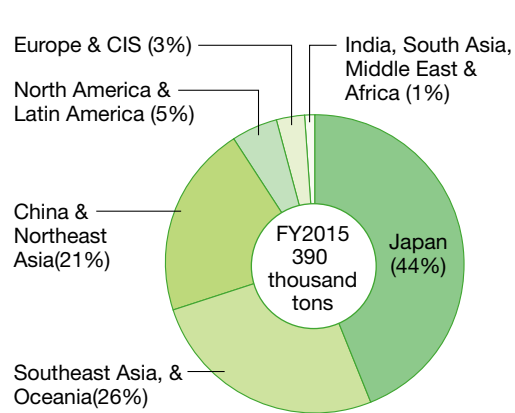
*1 Definition by Panasonic: Recycling rate of 99% or higher. Recycling rate = Amount of resources recycled/(Amount of resources recycled + Amount of landfill).

*2 A chart-format summary of comparisons between “before and after” implementation of waste reduction and recycling measures.

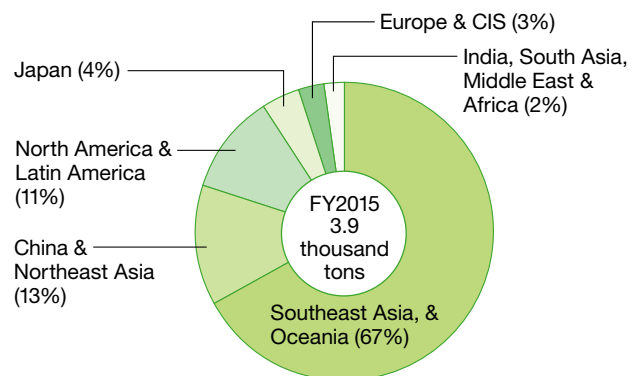
Amount and Recycling Rate of Total Wastes Including Revenue-generating Waste



Breakdown of Total Wastes Including Revenue-generating Waste (by region)



Breakdown of Landfill (by region)



Breakdown of Total Wastes Including Revenue-generating Waste for Fiscal 2015 (by category)

(1,000 tons)

Items	Total wastes	Recycled	Landfill
Metal scrap	158	149	0.3
Paper scrap	41	39	0.1
Plastics	38	34	0.3
Acids	46	38	0.001
Sludge	21	16	1.5
Wood	25	20	0.02
Glass/ceramics	7	6	0.08
Oil	16	12	0.2
Alkalis	22	18	0.001
Other *3	17	15	1.5
Total	390	346	3.9

*3 Combustion residue, fiber scraps, animal residue, rubber scraps, debris, ash particles, items treated for disposal, slag, infectious waste, polychlorinated biphenyls (PCBs), waste asbestos.

An example of factory waste reduction is also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/resource/zero.html>

Approaches to Water Resource Conservation

It is said that available fresh water is only about 0.01% of the Earth's total water resources. According to the Global Risk Report published by the World Economic Forum in January 2015, the water crisis is listed as the top risk with a global impact. In order to save this limited resource, Panasonic aims at manufacturing in which water is recycled endlessly in the manufacturing processes of parts, materials, and products. We also provide customers with products that help save water, and are working on the conservation of water resources throughout our business activities.

In order to identify and mitigate the impact of water risk on business activities, we also started assessing the scope of impact of water risks at all our factories across the world, utilizing a global water risk mapping tool Aqueduct created by the World Resources Institute (WRI). Because the levels of water risk vary according to region, we will place our focus on water conservation initiatives in regions where the risk is particularly high.

In addition, Panasonic participates in the Water Project, which was established under the initiative of the Ministry of the Environment in Japan in 2014, and is a joint promotion project between the government and the private sector to maintain sound water recycling and encourage water environment recovery. We are working together with the Japanese government and other companies to preserve our valuable water resources.

Water Resource Conservation through Products

By thoroughly analyzing the use of water through our products, we have developed functionalities that allow a considerable amount of water conservation by utilizing water at a maximum level through improvement of water flow control and cyclic use. In fiscal 2012, we enhanced one of the criteria, water conservation, in our Green Product accreditation criteria (see pages 26-28), and are speeding up the development of industry-leading products that contribute to water saving.

▶ Examples of water-saving products are introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/water.html>

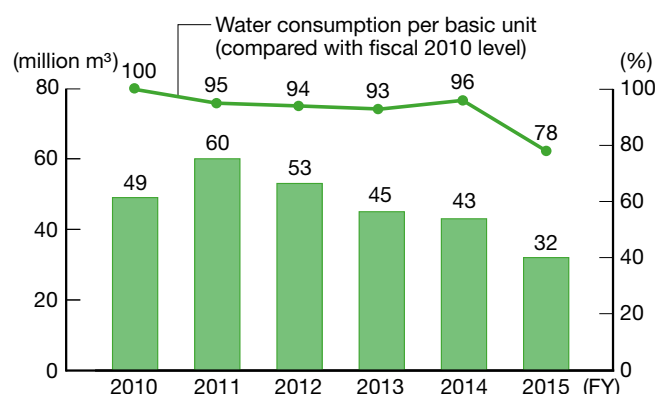
Initiatives for Water Resource Conservation through Production Activities

By collecting and reusing wastewater from our manufacturing processes and air conditioning systems, we reduce the amount of water use and wastewater effluent. This reduces the impact of the intake and effluent of water in production activities on water resources. With many regions around the world threatened by water shortages, we focus on certain regions to address our use of water in our activities. Water used at factories in fiscal 2015 resulted in 32.40 million m³, reduced by 24.4% compared to fiscal 2014. The water used at factories per basic unit of production*1 improved year-on-year due to structural reform and other reasons. Use of recycled water*2 in fiscal 2015 amounted to 8.77 million m³.

*1 Water used at factories per basic unit of production = Water used at factories / Production volume.

*2 The calculation excludes the water circulating for a single purpose (e.g. water in a cooling tower).

Water Consumption in Production Activities and Water Consumption Per Basic Unit



Note: Then-SANYO Electric and Panasonic Liquid Crystal Display not included in fiscal 2010.

FY2015 Breakdown of Water Consumption (by region)

 (10,000 m³)

Region	Consumed				Discharged		
		Municipal water/ industrial water	Groundwater	Rivers/lakes		Sewer systems	Waterways
Japan	1,974	748	1,227	0	1,594	306	1,287
China & Northeast Asia	622	613	9	0	390	276	114
South East Asia, & Oceania	564	501	57	6	387	189	199
North America & Latin America	47	35	12	0	26	25	0
Europe & CIS	21	10	11	0	21	10	11
India, South Asia, Middle East & Africa	11	2	9	0	3	1	2
Total	3,240	1,908	1,326	6	2,421	807	1,614

The Nishikinohama Factory of Panasonic Corporation Eco Solutions Company, which manufactures solar panels, set the fiscal 2015 target to reduce water usage while increasing production volume. In fiscal 2015, the factory reused the wastewater discharged when creating pure water, by filtering the impurities in the wastewater using another water purifier. Through such efforts, the water usage in the factory has been reduced by 0.4%, and water usage per basic unit improved by 23.6% compared to the previous year. We will continue to promote water usage reduction activities with targets while increasing production volume in fiscal 2016.



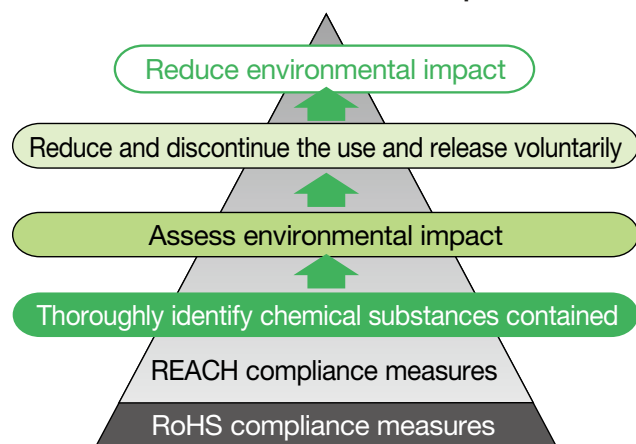
Eco Solutions Company, Nishikinohama Factory

Initiatives to Reduce the Environmental Impact of Chemical Substances

As represented by the enforcement of the REACH regulation*1 in the European Union, the world is moving toward the goals agreed at the World Summit on Sustainable Development (WSSD) held in 2002, which is to produce and use all chemical substances in a manner that minimizes their impact on human health and the environment by 2020. In support of the precautionary approach proposed in the Rio Declaration made at the Earth Summit in 1992, we have been manufacturing products in line with our basic policy of reducing the use of chemical substances that might adversely affect human health and the environment throughout their lifecycles. As specific initiatives, we aim to reduce the environmental impact of our products by (1) identifying hazardous substances contained in our products, (2) evaluating these substances on their environmental impact, and (3) voluntarily reducing or discontinuing their use in case of any environmental risks.

*1 Regulations on the registration, evaluation, authorization, and restriction of chemical substances.

Process to Reduce the Environmental Impact of Chemical Substances



To promote our initiatives clearly, we set forth our Chemical Substances Management Rank Guidelines, which prohibit or specify certain substances for management in terms of our products and factory activities. Companies in the Panasonic Group are requested to follow the Guidelines, and suppliers are also requested for support as necessary. In fiscal 2013, we added Level 3 to the Chemical Substances Management Rank Guidelines (For Products) to review the timing for the prohibition of further substances that may adversely affect humans and the environment, in addition to the current and forthcoming prohibitions.

► Green Procurement (Chemical Substances Management Rank Guidelines)

<http://www.panasonic.com/global/corporate/management/procurement/green.html>

Chemical Substances Management Rank Guidelines (For Products)

Rank		Definition
Prohibit	Level 1	(1) A substance contained in products that is prohibited by existing laws and regulations; or a substance where the upper limit of concentration is specified. (2) A substance that will be prohibited in products by laws and regulations or where the upper limit of concentration will be specified within one year of the revision of these Guidelines.
	Level 2	(1) Substances other than those specified as the Level 1 Prohibited Substances that will be prohibited in products after a certain period by a treaty, law, or regulation. (2) Substances that are prohibited in products by the Panasonic Group prior to the effective period specified by a treaty, law, or regulation. (3) Substances whose use is voluntarily restricted by the Panasonic Group.
	Level 3	Any substance other than those specified as a Level 1 or Level 2 Prohibited Substance that is reviewed for prohibition by legislation etc., and the clarification of substitution-related issues as well as the timing for prohibition is reviewed by the Panasonic Group in light of future legislation trends.
Manage		Substances whose consumption needs to be monitored and for which consideration needs to be given to human health, safety and hygiene, adequate treatment, etc. The intentional use of these substances is not restricted, but their use and contained concentration must be monitored.

Note: Covered legislation and chemical substances include: Class I Specified Chemical Substances under the Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc.; substances whose manufacture etc. is prohibited by Article 55 of the Industrial Safety and Health Act; EU RoHS Directive; and Annex XVII of the EU REACH Regulation. For more details, see the chapter on Specified Managed Substances in the Chemical Substances Management Rank Guidelines (For Products).

Chemical Substances Management Rank Guidelines (For Factories)

Rank	Definition
Prohibit	Use of the following substances should be immediately discontinued: Carcinogens for humans Ozone depleting substances Substances whose use is prohibited by Panasonic Chemical substances designated as Class I Specified Chemical Substances by the Japanese Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. Substances whose manufacture is prohibited by the Japanese Industrial Safety and Health Act Substances whose manufacture and use are prohibited by international treaties
Reduce	Substances whose use, release and transfer should be identified and reduced. Substances other than prohibited substances that might pose risks to human health and the environment.

Note: Covered legislation include: PRTR Act (chemical substances), environmental criteria under the Basic Environment Act; the Industrial Safety and Health Act; and the Stockholm Convention. For more details, see the chapter on The Aim of Establishing the Chemical Substances Management Rank Guidelines (For Factories) in the Chemical Substances Management Rank Guidelines (For Factories).

History of Our Initiatives to Reduce the Environmental Impact of Chemical Substances

Social trends	1989: The Montreal Protocol entered into force	1992: Earth Summit in Rio de Janeiro— Agenda 21	1996: Discontinuance of the use of specified chlorofluorocarbons by industrialized countries	2002: WSSD in Johannesburg	2006: The RoHS Directive entered into force	2007: The REACH Regulation entered into force		
	1990	1995	2000	2005	2010			
Panasonic								
All products		1992: Discontinued use of PVC resin in packaging materials		March 2003: Discontinued use of lead in solders globally ^{*2}	October 2005: Discontinued use of six RoHS substances globally ^{*2}	March 2009: Discontinued use of PVC in internal wiring of new products to be sold in Japan ^{*2}	March 2011: Will discontinue use of PVC in internal wiring of new products globally ^{*2}	
Individual products	1991: Released mercury-free manganese dry cells	1992: Released mercury-free alkali dry cells	1995: Discontinued use of CFC refrigerant in refrigerators globally	2002: Discontinued use of HCFC refrigerant in air conditioners (Japan)	2004: Refrigerators in Japan market became fluorocarbon-free (Japan)	2006: Released lead-free plasma display panels	2010: Released fluorocarbon-free freezers using CO2 refrigerant and compatible display cases	2013: Released air conditioners using new refrigerant R32 with low Global Warmer Potential (GWP) (Japan)
Chemical substances used at factories		1996: Discontinued use of chlorinated organic solvents	1997: Began identification work for PRTR	1999: Launched the “33/50” reduction activity ^{*3}	2004 (Japan): Achieved Voluntary Action Plan Reduced use by 75% Reduced release and transfer amount by 62% compared to fiscal 1999 level	2010 (Global): Achieved Voluntary Action Plan Reduced release and transfer amount of key-reduction target substances by 46% compared to fiscal 2006 level		

*2 Excluding applications where the quality such as safety cannot be ensured, or applications where the material is designated by laws and regulations.

*3 A reduction activity that promotes cutbacks in the use, release, and transfer of chemical substances by 33% in three years and by 50% in six years, compared to the fiscal 1999 level.

Management of Chemical Substances in Products

To minimize the environmental impact of chemical substances contained in products, we endeavor to identify chemical substances used in the components and materials of our products. In addition, for substances that are prohibited in products in major developed countries due to legislation such as the European RoHS Directive, we specify prohibited substances to globally ensure that they are not used or contained in our products, except in certain cases where substitution of the substances are infeasible. Moving forward, we will conduct environmental impact assessments for managed substances contained in our products, take steps to reduce the use of substances where the impact on human health and the environment cannot be ignored, and create plans to eventually prohibit the use.

Identifying Chemical Substances in Products

To contribute to the achievement of the global goals set at the WSSD, it is important for us to disclose and communicate information on the chemical substances used in our products across the supply chain, for which we must promote cross-industrial initiatives to establish and disseminate an effective system. We are a member of the Joint Article Management Promotion consortium (JAMP) together with about 440 major companies from various industries, such as chemical,

component, and equipment manufacturers. We are proactively formulating, utilizing, and disseminating chemical substance management standards and systems through this organization. Since fiscal 2005, we have been using a chemical substance management system, GP-Web, to gather data concerning the chemical substances contained in the components and materials for our products from our suppliers. In July 2009 we asked our suppliers to submit the data in a common format by the Joint Article Management Promotion Consortium (JAMP), and approx. 10,000 suppliers are currently using this format.

Because only the manufacturer of a certain part knows what substances are contained therein, it is necessary to request information not only to our suppliers but also to further upstream suppliers who do not have direct transactions with Panasonic. In order to ensure that the communication of this information flows efficiently, we have created an online e-learning site regarding chemical substance management in Japanese, Chinese, and English. In February 2014 we discontinued the authorization process required to use the e-learning site to make the site more conveniently available to a wider audience, including our suppliers and their customers.

In addition, to deepen the understanding on the handling of chemical substances among our suppliers outside Japan, we have conducted practical seminars to provide attendees with a general overview as well as training on the preparation and submission of data since fiscal 2011 in China, Southeast Asia and Europe.

Furthermore, from fiscal 2015, we started posting the schedule of JAMP seminars on the GP-Web top page to promote them among our customers. These seminars are held across China by SGS-CSTC Standards Technical Service Co., Ltd., a counterpart of JAMP in China, and are free of charge.

▶ JAMP <http://www.jamp-info.com/english>

▶ Seminars by SGS-CSTC http://rsts.cn.sgs.com/en/seminar_en.asp

Companies that procure electronic components may need to have a full understanding of the substances contained in the components at the point of selection or usage in order to adhere to the EU RoHS Directive and REACH regulation.

Particularly, as the REACH Substances of Very High Concern (SVHC) List is updated every six months, those companies expect their suppliers to provide the latest substance data to demonstrate compliance with the list.

Also, as a company supplying electronic components to other companies, we have published a table of RoHS and REACH compliance status on our website since November 2012 so that our clients can obtain relevant chemical substance information from us quickly and efficiently. The table covers our RoHS Directive compliance information and the substances designated in the REACH SVHC List for all our major generic electronic components.

▶ Table of RoHS and REACH compliance status <http://industrial.panasonic.com/ww/downloads/rohs-reach-confirmation-report-download>

Assessing the Impact of Chemical Substances

Scientifically identifying the impact on human health and the environment of products containing chemical substances is vital to the development of products with low environmental impact. We are engaging in activities designed to assess the levels to which customers are exposed to substances of very high concern (SVHC), as well as safety at the time of product use.

To date, we have undertaken assessments on the impact of phthalate ester contained in power supply cables and ceramic fibers used in some models of professional microwave ovens. As part of our efforts to comply with the EU REACH regulation which requires preparing information for the safe use of products containing SVHC we have created and disclosed a safety assessment document for both cases. In each case, exposure was considered to be nominal with little concern for any impact on human health.

▶ Management of Chemical Substances in Products <http://www.panasonic.com/global/corporate/sustainability/eco/chemical/reach.html>

Reduction in Usage and Emissions of Chemical Substances

Fluorocarbons used as a heat insulator and a refrigerant for freezers and air conditioners can damage the ozone layer and cause global warming. We developed the technology to utilize CO₂, which has much smaller impact than fluorocarbons, as a refrigerant and have been supplying a home boiler using CO₂ refrigerant since 2001. Although the CO₂ refrigerant is suitable for heating purposes, it was difficult to apply to refrigerators and freezers, especially in large professional equipment due to insufficient cooling efficiency and size problems. However, with support from the New Energy and Industrial Technology Development Organization (NEDO), we developed a refrigeration system using CO₂ refrigerant and now supply these fluorocarbon-free freezers and refrigerator display cases to supermarkets and convenience stores in Japan.

Further, new development of a dedicated CO₂ refrigeration system has enhanced the product lineup from 272 models to 651 models, and we started accepting orders from May 2015.

In addition, as measures against ozone depletion caused by HCFCs, a refrigerant called R410 that does not deplete the ozone layer was used in compact air conditioners, but this substance has a very high Global Warming Potential (GWP). Panasonic then developed a model that uses a new refrigerant R32, which has a lower GWP, and introduced it to the market in 2013. Panasonic then developed a model that uses a new refrigerant R32, which has a lower GWP, and introduced it to the market in 2013. Furthermore, PT. Panasonic Manufacturing Indonesia, which owns our only factory for manufacturing compact air conditioners in Indonesia, redesigned its production facility that used an ozone-depleting HCFC refrigerant R22 to one using R32 in fiscal 2015, and commenced supplying new R32-based air conditioners. Panasonic is contributing to the Indonesian government's initiative to eliminate the use of HCFCs.



OCU-CR1001VF, a fluorocarbon-free freezer using CO₂ refrigerant



FPW-EV085, a display case compatible with a fluorocarbon-free freezer

Reducing the Use of PVC Resin

Polyvinyl chloride (PVC) is a material of concerns to the generation of hazardous substances from inappropriate disposal, as well as the harmful effects of certain additive agents (phthalate ester) used to render PVC more pliable. In light of the significant potential for inappropriate disposal of the PVC resin used in the internal wiring of products-due mainly to difficulties associated with the sorting of this resin from used products-we have switched our new products launched from April 2011 to non-PVC.

▶ List of Our PVC-free Products <http://www.panasonic.com/jp/corporate/sustainability/pdf/pvclist2014.pdf>

Management of Chemical Substances at Factories

Panasonic is working to minimize environmental impact by identifying the hazardous substances used in our products, assessing the impact of such use, and voluntarily discontinuing the use or reducing the release of such substances. Since 1999, we have been conducting the 33/50 Reduction Activity to materialize reduction by 33% in three years and by 50% in six years. In Japan, we started promoting cutbacks in the use, release, and transfer of chemical substances at our factories in fiscal 2000. Against the target in our voluntary action plan, a reduction by 50% from the fiscal 1999 level, we achieved a 75% reduction in chemical substance use and a 62% reduction in release and transfer in fiscal 2005. Since then we have been continuing the activity, focusing on substances with particularly large amounts of release and transfer, setting a voluntary action target of reduction by 30% compared to the fiscal 2006 level. As a result, we achieved a 46% reduction in the amounts of release and transfer of specified key reduction-target substances across all factories worldwide in fiscal 2011.

Reflecting international trends in chemical substance management, our reduction measures have focused increasingly on particularly hazardous substances from fiscal 2011. Under our Chemical Substances Management Rank Guidelines (For Factories), we have focused our management on select chemical substances that are hazardous to human health and the environment.

Further, we have created a unique indicator, the Human Environment Impact,^{*4} which is used globally in all our factories. Conventionally the chemical substances were managed by "quantity," such as usage amount or emissions/release. However, such quantity-based management has a problem that some highly hazardous substances do not become subject to reduction or management if the usage amount was small, and therefore would fall out of the scope of impact assessments. In addition, the toxicity criteria varied according to substance types and regional legislation, which made standardized management across the Group difficult. To address this issue, Panasonic worked together with experts from both within and outside the company, reclassified chemical substances based on an overall assessment of their hazardousness, and specified a hazardousness factor for each classification. This enables us to place higher priority on those highly hazardous substances that have greater impact, such as carcinogenic and ozone depleting substances, which should be reduced first according to the risk level. We use this indicator as the Human Environmental Impact to promote efforts to ensure reduction of highly hazardous substances.

^{*4} Human Environmental Impact = Hazardousness factor x Release and transfer amount.

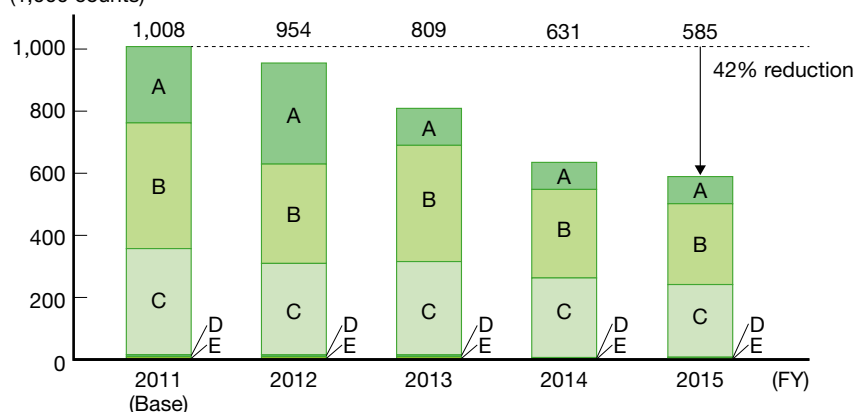
Classification of Hazards

Classification	Hazards* ⁵	Hazardousness factor
A	Carcinogenicity/Ozone layer depletion	x 10,000
B	Serious or direct impact	x 1,000
C	Medium impact	x 100
D	Small or indirect impact	x 10
E	Minor impact or not assessed	x 1

*⁵ In addition to carcinogenicity, hazards to human health include genetic mutation, reproductive toxicity, and acute toxicity. In addition to ozone depleting substances, hazards to substances with impact on the environment include ecological toxicity, substances that impact global warming, and substances that generate photochemical oxidants.

Human Environmental Impact

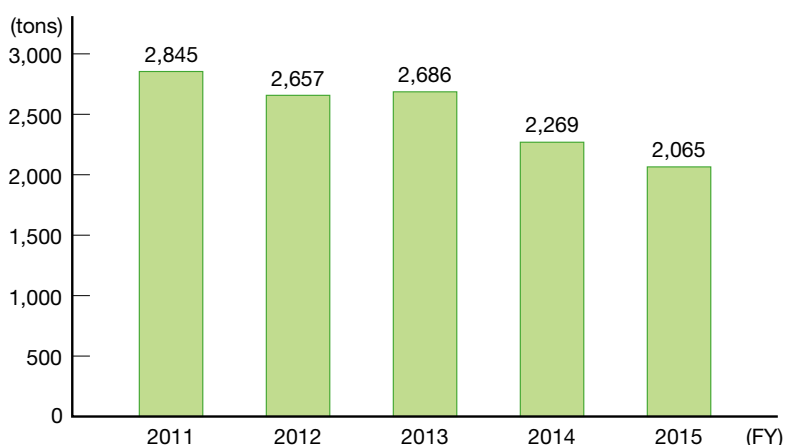
(1,000 counts)



Note: Overseas sites of former SANYO Electric not included in fiscal 2011 through 2012.

In fiscal 2015, we were able to reduce VOC emissions by 42% compared to fiscal 2011 by substituting highly hazardous substances in paints, improving yields, promoting recycling, introducing substances with low-solvents and hazards, and improving processes, including reviewing the amount of paint or the number of washing cycles, as well as improving the efficiency of removal/deodorization equipment. We will continue our initiatives to minimize the amount of substances with environmental impact released through our production activities.

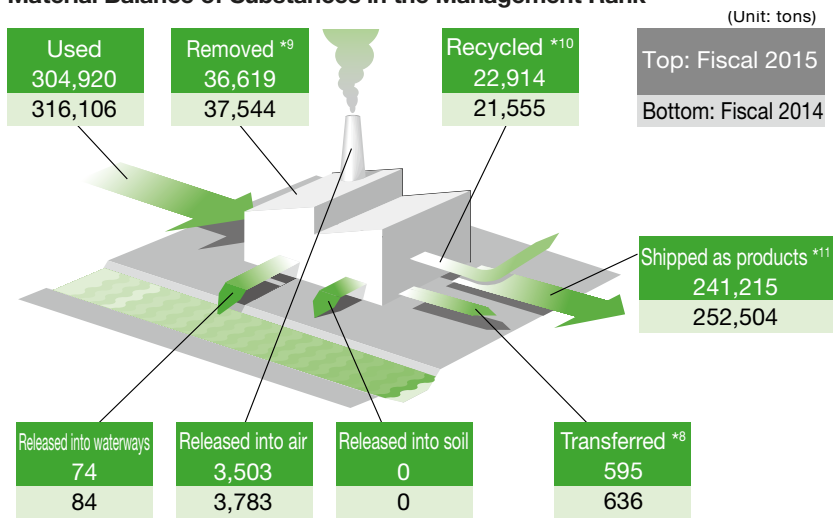
VOC*⁶ Emissions



Note: Overseas sites of former SANYO Electric not included in fiscal 2011 through 2012.

*⁶ Emissions of Volatile Organic Compounds (VOC) into the air caused by use. The calculation covers 100 major VOC substances that Panasonic selected from those listed in the Air Pollution Control Act.

Material Balance of Substances in the Management Rank*7



*7 Based on the Chemical Substances Management Rank Guidelines (for factories). Includes all substances specified in the Pollutant Release and Transfer Register Act.

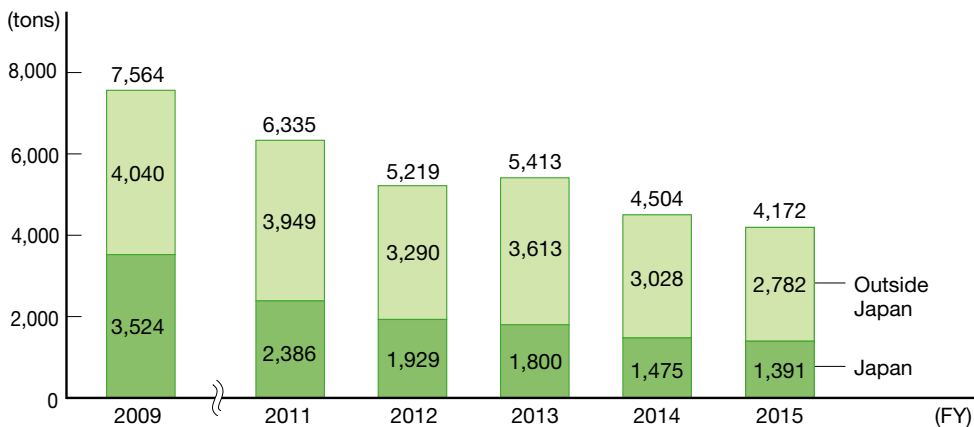
*8 Includes substances transferred as waste, as well as those discharged into the sewage system. Recycled amount which is free of charge or accompanies treatment cost under the Waste Management Law is included in "Recycled." (Different from the transferred amount reported under the PRTR Law.)

*9 The amount of substances converted into other substances through neutralization, decomposition, or other chemical treatment.

*10 The amount of substances recycled with revenue, as well as those recycled free of charge or with any payment.

*11 The amount of substances that have been changed to other substances as a result of chemical reactions, and/or those that are contained in or accompanied with products and shipped out of factories.

Release/Transfer of Substances Requiring Management



Note: A number of substances were added to the scope of the Management Rank in fiscal 2011. Former SANYO Electric is not included in fiscal 2009. Overseas sites of former SANYO Electric are not included in fiscal 2011 through 2012.

Approach to Biodiversity

Business management and human life in our society is founded on the ecosystem services—a multitude of nature's blessings provided by our natural capital, including soil, air, water, and animals and plants. It is important to preserve biodiversity to sustain the benefits derived from this natural capital towards the future; however, this biodiversity is experiencing significant damage at an unprecedented speed. Accordingly, corporate enterprises are now expected to address the issues of conservation and sustainable use of resources.

We are committed to properly understanding the impact of our business activities on biodiversity and contributing to conservation. To this end, we are promoting initiatives in cooperation with local governments, environmental conservation NGOs, and specialized agencies. Specifically, in 2009, we launched a biodiversity project focusing on the three key areas of land use, procurement, and products, in order to promote biodiversity conservation as an initiative incorporated into our businesses. In promoting the key areas, we formulate a biodiversity action plan (BAP), which is the basic concept of Article 6 of the Convention on Biological Diversity, and implement measures, check the achievement progress, and improve the initiatives.

Initiatives in Land Use

Green areas in our business sites can potentially contribute to conserving biodiversity in that area. In particular, hardly any natural environments where wild animals can live and breed remain in urban areas. Therefore, even small areas of green in corporate premises can become a precious environment for a variety of living organisms if they retain indigenous vegetation and a watery environment, since such areas are often closed from the outside world and hard for foreign species to blend in.

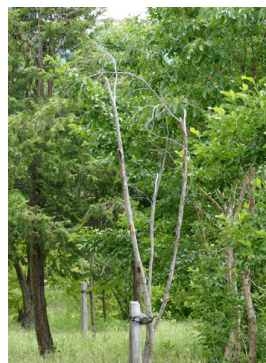
In terms of biodiversity, these green areas take on the roles of reinforcing the ecological network and protecting threatened wild fauna and flora.

Preservation of Biotopes in Collaboration with Governments and Experts

An ecological network refers to the organic relationship between ecological spaces such as the greenery and waters where a variety of creatures lives and breeds. The greenery in our sites helps expand the overall space where wild animals including birds, butterflies, and dragonflies live, as they can fly from one green area to another dotted in the area. In addition, protecting wild fauna and flora in local areas is an activity in collaboration with governments and with help and advice of experts, to preserve endangered species designated by the Ministry of the Environment or local government that are deemed to be disappearing from that area. Our business sites that promote such activities include: the Ecological Network at the Kusatsu Factory of Appliances Company in Kusatsu City, Shiga Prefecture; the Biotope at Eco Solutions Company in Kadoma city, Osaka Prefecture; and Tsunagari no Hiroba at the PanaHome headquarters in Toyonaka City, Osaka Prefecture.

External Certification Based on Quantitative Evaluation

In October 2010, the Matsumoto Factory of the Automotive & Industrial Systems Company became the first factory green space in Japan to obtain the JHEP Certification (future prospect type), which is based on the biodiversity quantitative evaluation method developed by the Ecosystem Conservation Society - Japan. Efforts such as revising the factory green space management policy, and plans of placing deadwood in forests and changing a part of the lawn into sawgrass were certified as prospective contributions to biodiversity conservation in terms of creating a suitable environment for local wild life. This certification not only recognizes our efforts towards biodiversity conservation objectively, but also gives a significant meaning for further implementation.



Deadwood planted in forests



Current sawgrass field

Efforts in Procurement

In an effort to address biodiversity conservation and sustainability, we consulted extensively with World Wide Fund for Nature (WWF) Japan and formulated Panasonic Group Green Procurement Guidelines for Wood. In fiscal 2015, the total procurement of timber and wood materials was measured at approx. 370,000 m³. By category, this breaks down to 82.3% meeting Category 1 “Priority” procurement standards (a 0.3-point year-on-year increase), 17.7% in Category 2 “Acceptable” (a 0.3-point year-on-year decrease), and 0% in Category 3 “Avoiding” (a .002-point year-on-year decrease). Since the establishment of the Procurement Guideline, efforts to achieve zero procurement for Category 3 have been implemented, and it was realized for the first time in fiscal 2015. We will continue our efforts and maintain zero procurement for Category 3.

Green Procurement Guidelines for Wood Consulted and Formulated with WWF



Implementation of Consistent PDCA, Achievement Check, and Measure Review

In green procurement for wood, we implement the PDCA cycle based on development of the annual plan, and confirm the progress status at the end of the fiscal year as well as review the measures for the subsequent fiscal year. We are also engaged in the reduction of the use of natural raw materials, from the perspective of preserving timber resources. Flooring materials (woody flooring material) Fit Floor Natural Wood Type (heat resistant & non-heat resistant) and Fit Floor (heat resistant & non-heat resistant) use “Fit Board,” our unique new material made of 100% recycled wood material (excluding adhesives).



Fit Floor Natural Wood Type (heat resistant & non-heat resistant) & Fit Floor (heat resistant & non-heat resistant)

Initiatives in Products

Together with the NGO BirdLife International, we have established a third-party assessment system to provide customers with information about product contributions to biodiversity. Through this system, we have assessed products which are closely linked to biodiversity.

We have also enhanced our Green Product accreditation criteria (see pages 26-28) by adding biodiversity to the existing items. We define products that contribute to biodiversity conservation as those that use biodiversity-conscious materials in their major components and those that include functions to help biodiversity conservation.

In fiscal 2014, Panasonic Environmental Systems & Engineering Co., Ltd. developed ATPS-BLUEsys, a Ballast Water Management System (BWMS) to reduce disturbance from maritime transportation of the marine ecology of local sea areas. Ballast water is sea water used to retain the balance of a freight vessel at sea when it is not carrying shipment. Because the ship travels across the sea taking sea water from one port and then draining the water into another port, the impact of foreign organisms such as plankton and bacteria on the local ecology, environment, and resources is becoming an increasingly serious problem. ATPS-BLUEsys treats microorganisms in the water with inline electrolysis without using filters, which is the first in Japan. The system can treat the water to a level lower than the standards by the International Maritime Organization IMO, and successfully acquired the IMO G9 Basic Approval (G9BA).

▶ Ballast Water Management System ATPS-BLUEsys

<http://news.panasonic.com/press/news/official.data/data.dir/2014/01/en140128-2/en140128-2.html>

Partnership with the World Wide Fund for Nature (WWF)

From July 2007 to March 2015, we promoted the Yellow Sea Ecoregion Support Project, in cooperation with WWF Japan. China, South Korea, and Japan cooperated as partners and worked on the conservation of the rich natural environment as well as sustainable management of the natural resources in the Yellow Sea (ocean surrounded by China and the Korean Peninsula, possessing one of the largest continental shelves in the world).

The project was executed at 23 Potential Priority Areas selected by WWF in 2006. During the first 2 years, we supported

the awareness promotion activities led by local communities in China and South Korea and assisted in the public invitation to participate in habitat preservation activities. In the next 3 years, one location in both countries was chosen as model areas (Yalu River Estuary Coastal Wetland, Liaoning province, China and Muan Tidal Flat Wetland Protected Area, South Jeolla Province, South Korea) to implement conservation activities suitable for the regional characteristics. From April 2013, general assessment of past activities and results was conducted and activities in the model areas were promoted through publicity to appeal similar activities to the world. Through local research and conservation activity support, we were able to contribute to the improvement in skills of groups engaged in the activities in the Yellow Sea Potential Priority Area and promote exchanging information. Furthermore, we implemented model conservation activities in the two areas that contribute to regional development from the standpoint of environmental education and ecotourism (to think about the sustainability of an area in terms of its natural environment, culture, and history as tourism) and contributed to sustainable growth of fisheries, the main industry in these areas.



Panasonic Korea employees participate in the Muan Tidal Flat Wetland Workshop in October 2012

Collaboration With Suppliers and Transportation Partners

As a company backed by a number of suppliers, we must consider the environmental impacts of our entire supply chain, and not just of our own operations. Through our coordination efforts with suppliers and transportation partners, who form an integral part of our business operations, we strive to minimize our environmental impact across the entire supply chain, focusing on the reduction of CO₂ emissions, resource recycling, chemical substance management, and biodiversity conservation.

Measures for Green Procurement

Since the publication of the Green Procurement Standards in 1999, we have been promoting the manufacture of eco-conscious products in partnership with our suppliers. Furthermore, in the Green Procurement Standards, we set out the establishment of a group of suppliers who support our Environmental Policy in supplying products and goods in order to materialize the targets in supplier collaboration stated in our Green Plan 2018. In addition to cooperation in “reducing environmental impact in supplier business operations” and “sharing achievements through collaboration,” we are asking our suppliers to “seek the cooperation of upstream business partners” to expand the scope of activities of reducing environmental impact throughout the entire supply chain.

Also, based on the Green Procurement Standards, we have been conducting the Green Procurement Survey, where we monitor the implementation status of our suppliers regarding our requests, to promote environmental impact reduction activities more effectively with our suppliers. In fiscal 2013, we conducted a trial survey targeted at our major global suppliers. We received responses from 415 companies, and were able to confirm the level of activity in areas such as “environmental management system development,” “thorough implementation of chemical substance management,” “reduction of greenhouse gas emissions,” “promotion of resource recycling,” and “biodiversity conservation.”

From fiscal 2014, we have replaced surveys conducted on a group-wide scale with surveys at a site level as a means of communication with our suppliers.

In response to the enhancement of regulations such as EU RoHS Directive, we have been engaging in continual environmental quality assurance audits of our suppliers since 2005 to improve the management level throughout the entire supply chain. In fiscal 2015, we assessed the environmental quality assurance systems of some 1,800 suppliers and have supported their efforts to upgrade their management levels.

▶ Green Procurement Standards <http://www.panasonic.com/global/corporate/management/procurement/green.html>

Estimation of Environmental Impacts in Business Activities by Suppliers

In order to assess greenhouse gas (GHG) emissions across the entire supply chain (scope 3^{*1}), we made our original calculations based on the Greenhouse Gas Protocol, the international accounting standard for GHG emissions. Since fiscal 2012 we have conducted assessment surveys on four occasions, with the cooperation of 185 suppliers in the areas of raw materials, electrical and electronic components, and processed parts.

Our GHG emissions in the upstream range were estimated using the GHG emissions per basic unit by resource type, based on the volume of materials purchased and on the Input-Output Table published by the Japanese government. The estimation results based on fiscal 2014 data is 12.8 million tons, roughly five times the GHG emissions of our own production activities.

*1 Other indirect emissions, excluding Scope 1 (direct emissions from facilities owned and controlled by Panasonic) and Scope 2 (emissions from production of energy consumed at facilities owned and controlled by Panasonic).

Sharing Achievements through Collaboration

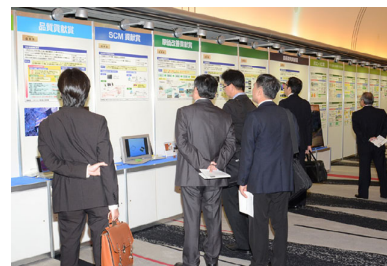
Since fiscal 2010, we have been implementing the ECO-VC² Activity with our suppliers. This program is a collaboration between Panasonic and our suppliers, aimed to both “reduce environmental impact” and “reinforce product capability & achieve further rationalization” for our products and our suppliers. In fiscal 2010, the target for reducing environmental impact was limited to energy saving (CO₂ emission reduction). However, this was extended in fiscal 2011 to Recycling-oriented Manufacturing aiming at saving resources and using recycled materials. The geographical range of our activities has also extended. Initially centered in Japan, actions accelerated to China and other parts of Asia in fiscal 2013, and later

extended to a global scale in fiscal 2015.

ECO-VC activities are stored in a database for effective use within the Panasonic Group. Furthermore, exemplary activities are recognized through awards at the Panasonic Excellent Partners Meeting held every autumn. These activity presentations are also shown at the meeting venue to be shared with participating suppliers for use and application in future activities.

In fiscal 2015, 1,445 cases, exceeding the number in the previous year, were presented by suppliers, and resulted in greater accomplishments compared to the previous year in terms of energy saving (CO₂ emission reduction), resource saving (reduction in resources used) and use of recycled materials (use of recycled resources), as well as in rationalization of costs. Outstanding practices were selected, including Development of a New Magnetic Steel Sheet for Greater Motor Efficiency.

Continuing efforts will be made together with as many suppliers as possible in realizing reduction of environmental impacts, product capability reinforcement & further rationalization through ECO-VC activities, and further strengthen partnerships with our suppliers.



Exhibition of outstanding ECO-VC practices

*2 VC:Value Creation

Environmental Achievements Made through Proposals

Items	FY2012	FY2013	FY2014	FY2015
Number of proposals	901	866	1,077	1,445
CO ₂ reductions derived from proposals	323,000 tons	412,000 tons	483,387 tons	512,675 tons
Use of recycled resources derived from proposals	16,521 tons	17,011 tons	19,353 tons	21,323 tons
Reduction in resources used derived from proposals	16,231 tons	18,431 tons	21,211 tons	24,311 tons

Collaboration with Environmental NGOs

Panasonic has more than 50 manufacturing sites in China. With environmental issues in China becoming more serious due to its economic development, we are working to improve the environmental challenges through coordination and communication with environmental NGOs.

In November 2014, an information exchange meeting was held with the Chinese environmental NGO network “Green Choice Alliance (GCA),” Chinese government representatives, and experts to discuss the current situation and problems in environmental management in the upstream range of the supply chain as well as future measures. In March 2015, we communicated directly with the Institute of Public and Environmental Affairs (IPE), which is a Chinese environmental NGO and member of GCA.

Based on the list of environment-polluting companies released by the IPE, we screen and evaluate our suppliers and work to prevent environmental pollution in the upstream range of the supply chain.

In Greening the Global Supply Chain issued by GCA in July 2014, our environmental management scheme for suppliers was highly evaluated and was ranked ninth of 147 companies (ranking No. 1 among Japanese companies).



Meeting with Green Choice Alliance

Encouraging All Employees to Become Practitioners of Environmental Activities

We believe that the development of human resources is important in laying the foundations and promoting environmental sustainability management. To put this into action, a training curriculum is in place for each specialty and position. General Programs are organized for all employees to acquire environmental knowledge as well as learn about our environmental policy and activities. Specialized Programs are designed to bring employees' environmental skills to an advanced level.

General Programs are held every year at each business site for employees to acquire a wide range of knowledge, such as energy problems, trends in global society, and environmental activities by Panasonic. Additionally, training catered to the distinctive features of each operation is organized to provide information directly linked to business and operational activities. Other creative initiatives that we continue include environmental sustainability education to new employees and engineering-related employees using exclusive textbooks specific to their respective job experiences and skills to enable them to practice environmental action in their job activities.

Specialized Programs feature courses on ISO 14001 internal environmental auditor training course, environmental legislation, chemical substances management, as well as factory energy conservation diagnosis. In fiscal 2015, a total of 83 employees participated in the training. The programs are not limited to employees in environment-related job functions, and allow attendance of those in related divisions to expand the scope of practitioners of environmental activities.

Fostering Environmental Awareness and Skills through Global Competitions and On-site Training

To develop leading employees with high skills as the core of environmental activities, the Panasonic Group Manufacturing Skills Competition, which has the categories of Eco Mind Skills and Energy Conservation Diagnosis Skills, is held annually for all employees on a global scale.

The Eco Mind Skills Competition tests the participants' capabilities in overall environmental knowledge and expertise including global environmental issues and environmental sustainability management by Panasonic, as well as environmental improvement skills of proposing and implementing improvement measures that cut down environmental impact. Aiming to gain and enhance their knowledge, 1,048 employees competed in fiscal 2015, utilizing exclusive text materials on Eco Mind Skills Competition.

In China, which is one of the major regions where we focus business strategies on, the Eco Mind Skills Competition China has been held since fiscal 2012 at the Manufacturing Technology Learning Center (our in-house center for manufacturing education) in Hangzhou. The questions in the competition incorporate regional matters, aiming to further enhance environmental awareness of employees.



Eco Mind Skills Competition

In the Energy Conservation Diagnosis Skills Competition, 46 employees participated in fiscal 2015 and competed in various fields such as air-conditioning, furnace & heat, etc. In the competition, participants are required to possess both practical skills in energy conservation improvement and advanced expert knowledge in environmental technologies, and compete on determining energy losses through analysis of the state of operation of facilities and energy use. We award outstanding performers in the competition, and continue to promote further development of human resources capable of more advanced practices to raise the overall level of the company



Energy Conservation Diagnosis Skills Competition

Promoting Environmental Communication

Panasonic has been focusing on maintaining close communications with stakeholders. We are actively engaged in environmental communication with our customers, business partners, local communities, governments, investors, employees, NGOs, experts, etc., through a variety of perspectives, including products and services, factories, and cooperation in environmental activities, as well as advertising, exhibitions, and website communication.

Proposals on Environmental Policy

In addition to publicity through Keidanren (Japanese Business Federation) and other industrial organizations, we submit environmental policy proposals not only to the Japanese government but also to governments of other countries through a wide range of opportunities. We joined in policy deliberations on environmental issues that the society is facing today: a future vision for national governments, industry, and people's lives aimed at the creation of a sustainable society, and information sharing and exchange related to international activities. Through this approach we established a deeper understanding of government policy. Based on this, we are engaging in a drive to promote environmental management with an awareness of preventing business risks as well as creating opportunities, through actively presenting proposals from the standpoint of manufacturing, marketing, and technology development.

Engagement with Third Parties

Panasonic actively conducts a number of dialogues with experts from both within and outside Japan, and utilizes their comments in its environmental strategies. With the Natural Step, in particular, we have built a partnership since 2001. We hold an annual meeting with them to share the most advanced environmental information in Europe and seek their opinions on our environmental strategies and activities to assist us in further improvements.



Meeting with the Natural Step

Publishing Environmental Information

Although Panasonic had been publishing its environmental reports in paper format since 1997, these reports were shifted to solely web-based publication in 2010. In fiscal 2014, our environmental activity website was integrated with the CSR website for all-round and exhaustive corporate communication from the standpoint of sustainability. Starting from FY2016, major information disclosed on the web, such as Environmental Policy and approaches, performance data, etc., is provided in a PDF file titled Sustainability Data Book.

► Sustainability Data Book 2015

<http://www.panasonic.com/global/corporate/sustainability/downloads.html>

Other examples of environmental communication and major environmental-related awards in fiscal 2015 are also introduced in the following website.

<http://www.panasonic.com/global/corporate/sustainability/eco/communication.html>

Environment: History of Environmental Activities



Era	Year	Panasonic Group	World	Japan
~1970s	1967			<ul style="list-style-type: none"> • Basic Law for Environmental Pollution Control enacted
	1968			<ul style="list-style-type: none"> • Air Pollution Control Law enacted
	1970	<ul style="list-style-type: none"> • Pollution Survey Committee established 		<ul style="list-style-type: none"> • Water Pollution Control Law enacted • Waste Disposal and Public Cleansing Law enacted
	1971			<ul style="list-style-type: none"> • Environment Agency established
	1972	<ul style="list-style-type: none"> • Environmental Management Office established 	<ul style="list-style-type: none"> • U.N. Conference on Human Environment held in Stockholm (Declaration of Human Environment adopted) 	
	1973		<ul style="list-style-type: none"> • First oil shock occurred 	
	1975	<ul style="list-style-type: none"> • Environmental Management Regulations enacted 		
	1979		<ul style="list-style-type: none"> • Second oil shock occurred 	<ul style="list-style-type: none"> • Energy Conservation Law enacted
1980s	1985		<ul style="list-style-type: none"> • Vienna Convention for the Protection of the Ozone Layer adopted 	
	1987		<ul style="list-style-type: none"> • Montreal Protocol on Substances that Deplete the Ozone Layer adopted • World Commission on Environment and Development (the Brundtland Commission) advocated the concept of sustainable development 	
	1988	<ul style="list-style-type: none"> • CFC-reduction Committee established 		<ul style="list-style-type: none"> • Ozone Layer Protection Law enacted
	1989	<ul style="list-style-type: none"> • Environmental Protection Promotion Office established 		
1990s	1991	<ul style="list-style-type: none"> • Matsushita Environmental Charter (Environmental Statement and Code of Conduct) enacted • Matsushita Product Assessment adopted and implemented 		<ul style="list-style-type: none"> • Keidanren Global Environment Charter enacted by Japan Federation of Economic Organizations • Law for Promotion of Effective Utilization of Resources enacted
	1992	<ul style="list-style-type: none"> • Environmental Policy Committee established 	<ul style="list-style-type: none"> • The Earth Summit held in Rio de Janeiro, Brazil; Agenda21 and Rio Declaration on Environment and Development adopted • United Nations Framework Convention on Climate Change adopted 	
	1993	<ul style="list-style-type: none"> • Matsushita Environmental Voluntary Plan (Year 2000 targets) adopted • Matsushita Group' global environmental internal audits launched 		<ul style="list-style-type: none"> • The Basic Environment Law enacted
	1995	<ul style="list-style-type: none"> • Acquired Environmental Management System Certification at AV Kadoma Site (first in the Matsushita Group) 	<ul style="list-style-type: none"> • First Conference of Parties to the U.N. Framework Convention on Climate Change (COP1) held in Berlin 	<ul style="list-style-type: none"> • Containers and Packaging Recycling Law enacted
	1996		<ul style="list-style-type: none"> • ISO 14001 International Standard on Environmental Management Systems launched 	
	1997	<ul style="list-style-type: none"> • Corporate Environmental Affairs Division (CEAD) established • Environmental Conference established (held semi-annually) 	<ul style="list-style-type: none"> • COP3 held in Kyoto and adopted the Kyoto Protocol 	<ul style="list-style-type: none"> • Keidanren Appeal on the Environment announced by Japan Federation of Economic Organization
	1998	<ul style="list-style-type: none"> • Love the Earth Citizens' Campaign commenced • Recycling Business Promotion Office established • First environmental report (1997) published 		<ul style="list-style-type: none"> • Home Appliance Recycling Law enacted (took effect in 2001) • Law Concerning the Promotion of the Measures to Cope with Global Warming enacted • Energy Conservation Law revised: Top Runner Approach introduced
	1999	<ul style="list-style-type: none"> • Green Procurement launched • Chemical Substances Management Rank Guidelines established • Acquired ISO14001 Certification in all manufacturing business units 		<ul style="list-style-type: none"> • PRTR (Pollutant Release and Transfer Register) Law enacted

Era	Year	Panasonic Group	World	Japan
2000s	2000	<ul style="list-style-type: none"> Lead-free Solder Project commenced Held first environmental exhibition for general public in Osaka 	<ul style="list-style-type: none"> Global Reporting Initiative (GRI) issued The Sustainability Reporting Guidelines 	<ul style="list-style-type: none"> Basic Law for Establishing the Recycling-based Society enacted Law for Promotion of Effective Utilization of Resources enacted
	2001	<ul style="list-style-type: none"> Environmental Vision and Green Plan 2010 adopted Held Environmental Forum in Tokyo and Freiburg, Germany Panasonic Eco Technology Center launched 	<ul style="list-style-type: none"> Reached final agreement on the actual rules of Kyoto Protocol in COP7 held in Marrakesh 	<ul style="list-style-type: none"> Reorganized into the Ministry of the Environment Law Concerning Special Measures against PCBs enacted
	2002	<ul style="list-style-type: none"> Panasonic Center Tokyo opened 	<ul style="list-style-type: none"> Johannesburg Summit (Rio+10) held 	<ul style="list-style-type: none"> Kyoto Protocol ratified Vehicle Recycling Law enacted Law for Countermeasures against Soil Pollution enacted
	2003	<ul style="list-style-type: none"> Declared 'Coexistence with the Global Environment' as one of the twin business visions Factor X advocated as an indicator for Creating Value for a New Lifestyle Completely introduced lead-free soldering globally Super GP Accreditation System launched Achieved zero waste emissions in Japanese manufacturing business sites (ongoing program) Held Environmental Forum in Tokyo 	<ul style="list-style-type: none"> EU's WEEE Directive was enacted 	
	2004	<ul style="list-style-type: none"> Environmental Vision and Green Plan 2010 revised PCB Management Office established Superior GP Accreditation System launched 		<ul style="list-style-type: none"> Prohibited manufacturing and use of products containing asbestos in principle
	2005	<ul style="list-style-type: none"> Participated in Expo 2005 Aichi, Japan as an official sponsor Green Plan 2010 revised Continued with the nationwide Lights-out Campaign 3R Eco Project launched Completed the elimination of specified substances (6 substances) in products Matsushita Group's Green Logistics Policy established CF Accreditation System introduced Panasonic Center Osaka opened Eco & Ud HOUSE opened Installed the first commercial household fuel cell cogeneration system in the new official residence of the Japanese Prime Minister Won the first place in Nikkei Environmental Management Survey 	<ul style="list-style-type: none"> Kyoto Protocol entered into force 	<ul style="list-style-type: none"> Expo 2005 Aichi, Japan held National campaign against global warming "Team -6%" launched Marking for the presence of the specified chemical substances for electrical and electronic equipment (J-Moss) established
	2006	<ul style="list-style-type: none"> Environmental specialist position established ET Manifest introduced into all manufacturing sites of Panasonic in Japan Realized lead-free plasma display panels and introduced them to the market Full-fledge introduction of biodiesel fuel in logistics 	<ul style="list-style-type: none"> Restriction of Hazardous Substances (RoHS) Directive took effect in EU 	<ul style="list-style-type: none"> Relief Law for Asbestos Victims enacted Energy Conservation Law revised: new cargo owner obligations, widened product scope of its application, and top runner standard revision
	2007	<ul style="list-style-type: none"> Energy conservation activities at our factories in Malaysia approved as CDM project by the U.N. A new environmental mark 'eco ideas' introduced Panasonic Center Beijing opened Environmental Forum in China held "Declaration of Becoming an Environmentally Contributing Company in China" announced Panasonic 'eco ideas' Strategy announced 	<ul style="list-style-type: none"> The Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC) released Registration, Evaluation, Authorisation and Restriction of Chemicals entered into force in EU Framework for CO₂ reduction agreed at Heiligendamm Summit (G8) The Bali Road Map for the post Kyoto Protocol agreed at COP13 Administration on the Control of Pollution Caused by Electronic Information Products (China RoHS) came into effect 	<ul style="list-style-type: none"> 'Cool Earth 50' announced by Prime Minister Abe '21st Century Environment Nation Strategy' formulated 'The Third National Biodiversity Strategy of Japan' formulated 'Ministerial ordinance partially amending the Enforcement Regulation of the Waste Management and Public Cleansing Law' promulgated 'Domestic Emissions Trading Scheme Review Committee' established 'The Second Fundamental Plan for Establishing a Sound Material-Cycle Society' formulated
	2008	<ul style="list-style-type: none"> Established the Corporate CO₂ Reduction Promoting Committee Held environmental exhibitions, 'eco ideas' World Home Appliances Company announced environmental statement in which named its Kusatsu site as 'eco ideas' Factory Announced 'eco ideas' Declaration in Europe Established Environmental Strategy Research Center 	<ul style="list-style-type: none"> G20 (conference of key countries' environmental and energy ministers) held Hokkaido Toyako Summit held 	<ul style="list-style-type: none"> Cool Earth Promotion Program announced by Prime Minister Fukuda Mislabeled incident of waste paper pulp percentage Long-term Energy Demand and Supply Outlook announced Japan's Voluntary Emission Trading Scheme started
	2009	<ul style="list-style-type: none"> Opened the 'eco ideas' House to demonstrate a lifestyle with virtually zero CO₂ emissions throughout the entire house Announced the Asia Pacific 'eco ideas' Declaration Announced 'eco ideas' factories (in Czech, Malaysia, Thailand, and Singapore) Sanyo Electric joined the Panasonic Group 	<ul style="list-style-type: none"> China WEEE law promulgated New framework for countermeasures against global warming on and after 2013 (post-Kyoto Protocol), the Copenhagen Accord, was adopted at the COP15 (Copenhagen conference) Seeking to emerge from the Lehman collapse, countries throughout the world accelerated actions for the Green New Deal 	<ul style="list-style-type: none"> Energy Conservation Law amended: Covered area expanded from factories to commercial sector facilities Flat-panel TV and clothes dryer added as covered products under the Home Appliance Recycling Law 'Eco point' system started

Era	Year	Panasonic Group	World	Japan
2010s	2010	<ul style="list-style-type: none"> Announced "Vision looking to the 100th anniversary of our founding in 2018" Announced new midterm management plan, "Green Transformation 2012 (GT12)" Announced 'eco ideas' Declarations (Latin America, Asia Pacific, and Russia) Established 'eco ideas' Forum 2010 in Ariake, Tokyo Launched Panasonic ECO RELAY for Sustainable Earth Kasai Green Energy Park eco-friendly factory completed 	<ul style="list-style-type: none"> COP10 held in Nagoya—Nagoya agreement made APEC meeting held in Yokohama Ruling party lost in US midterm election—changes in anti global warming policy Cancun agreement made in COP16—Post-Kyoto framework still to be discussed 	<ul style="list-style-type: none"> Draft legislation of Basic Law of Global Warming Countermeasures submitted but remained in deliberation Obligatory greenhouse gas emissions reduction started as a part of Tokyo Emissions Trading Scheme Waste Management and Public Cleansing Law amended: self treatment regulations tightened Act on the Evaluation of Chemical Substances and Regulation of Their Manufacture, etc. (CSCL) and Law concerning Pollutant Release and Transfer Register (PRTR) amended
	2011	<ul style="list-style-type: none"> Announced North America & Taiwan 'eco ideas' Declarations Announced establishment of Panasonic Dadi Dowa Summit Recycling Hangzhou Co., Ltd. Announced the Fujisawa Sustainable Smart Town Project Established Corporate Electricity Saving Division that bridges functions across the organization 	<ul style="list-style-type: none"> Rare earth prices soared Revised RoHS directives enforced in EU COP17 (Durban Climate Conference): Agreement made on long-term future of the scheme, and the second commitment period for the Kyoto Protocol (Japan announced non-commitment) 	<ul style="list-style-type: none"> Home appliance eco-point incentive program finished The Great East Japan Earthquake Revised Air Pollution Control Act and Water Pollution Control Act enforced Act on Special Measures Concerning Procurement of Renewable Electric Energy by Operators of Electric Utilities enacted (Feed-in tariff system to be enforced July 2012)
	2012	<ul style="list-style-type: none"> Business reorganization due to full acquisition of Panasonic Electric Works and SANYO Electric Commenced sales of Resources Recycling-oriented Product series Terminated production of household incandescent light bulbs Establishment of Environmental Management Group, Environment & Quality Center, Global Manufacturing Division Communication of 'eco ideas' Declaration (Vietnam) 	<ul style="list-style-type: none"> United Nations Conference on Sustainable Development (Rio +20) "Doha Climate Gateway" adopted at COP 18 Doha 2012, to lay down a future legal framework in which all nations can participate by 2020 and onwards Revised WEEE Directive implemented in Europe 	<ul style="list-style-type: none"> The Recycle Resource Project, national campaign by Ministry of the Environment, commenced 2012 Japan Tax Reform Bill enacted (Environment tax came into force in October 2012) Feed-in tariff for recyclable energy put into effect
	2013	<ul style="list-style-type: none"> Announced new midterm management plan Cross-Value Innovation 2015 Announced new brand slogan "A Better Life, A Better World" PETEC's home appliance recycling reached a cumulative total of 10 million units Announced 'eco ideas' factory (Philippines) 	<ul style="list-style-type: none"> Phase I of the Kyoto Protocol ends. Japan's target expected to be achieved in combination with forest CO₂ absorption and application of the Kyoto Protocol mechanisms. GRI announced G4, the next guidelines for CSR reports Minamata Convention on Mercury to internationally regulate import and export of mercury adopted at UN conference IPCC Fifth Assessment Report (Working Group 1) announced the possibility of human activity being the principal cause of global warming observed since the mid-20th century is "extremely high." Global average surface temperature is expected to rise as high as 4.8°C COP 19 Warsaw reaffirmed participation of all nations in the future framework of the Convention for 2020 and later. Nations were asked to submit emission pledges well in advance of 2015. 	<ul style="list-style-type: none"> Home Appliance Recycling Law for small household appliances enforced Basic Plan for Establishing a Recycling-Based Society implemented Keidanren's "Action Plan Towards Low-Carbon Society" started (until FY 2021) Amended Law Concerning the Rational Use of Energy and Amended Law Concerning the Promotion of the Measures to Cope with Global Warming established. Amended Act on the Rational Use and Management of Fluorocarbons promulgated (June) Voluntary Action Plan by the electric and electronics industry terminated. Achieved improvement by 48% in CO₂ emissions per basic unit in average actual production output for fiscal 2009–2013 (compared with fiscal 1991 level) to the target of 35% Japan announced in November its fiscal 2021 reduction target of 3.8% over fiscal 2006 and registered this with UNFCCC Office (but with a possible review of the tentative target, which does not include possible resumption of nuclear power plant operations)
	2014	<ul style="list-style-type: none"> Panasonic DADI DOWA Summit Recycling Hangzhou Co., Ltd., started operation Opening of Fujisawa Sustainable Smart Town Announced Eco Declaration (Southeast Asia & Pacific) Communication of housing & town development at the International Greentech & Eco Products Exhibition & Conference (IGEM) (Malaysia) 	<ul style="list-style-type: none"> Targets for product environmental regulations in Europe begin to shift from energy saving to resource efficiency and environmental impact EU Parliament reelection results in the appointment of Mr. Jean-Claude Juncker as President of the European Commission. Review of the circular economy package was decided. IPCC 5th Assessment Report analyzed that the current multiple ways to achieve control of global temperature rise to less than 2°C cannot be materialized unless the target becomes nearly zero by the end of the century. Attention to "adaptation" is growing. COP12 Convention on Biodiversity, PyeongChang concluded the interim assessment of the Aichi Biodiversity Targets as "progress has been made but remains inadequate" UNESCO Conference on Education for Sustainable Development (ESD) was held in Nagoya, confirming the activity results for the "United Nations Decade of ESD" COP 20 (Peru) reached agreement on the policy of developing reduction targets based on common rules for publication of "a new legal framework beyond 2020 applicable to all Parties" 	<ul style="list-style-type: none"> The amended Energy Conservation Act was enforced, incorporating action on power conservation during peak periods into existing qualitative reduction targets Phase II of the Commitment to a Low Carbon Society, a voluntary program promoted by Keidanren as measures against global warming, was newly established in response to government request, setting the target year to 2030 Toyota Motor launched fuel-cell vehicle MIRAI into the commercial market
2015	<ul style="list-style-type: none"> Won Zayed Future Energy Prize 2015 Wonder Japan Solutions (Tokyo) held for the first time 			

Raising Quality Levels and Ensuring Product Safety (Excerpts)

Management System

Based on the management philosophy that its founder espoused—that the company should strive “to contribute to society through its products and services while always placing the customer first”—Panasonic engages in manufacturing while continuously improving its various systems and mechanisms involved in raising quality levels and ensuring product safety.

Panasonic has established a basic policy relating to quality and has installed, under the responsibility of the executive in charge of quality, quality managers at its Companies, business divisions, and overseas subsidiaries. Using the Panasonic Quality Management System, the company is engaged in continuously improving the quality of its products.

Panasonic expresses profound regret for the accidents involving FF-type kerosene heaters and reflects the lessons it has learned when ensuring the safety of its products. The company regards product safety to be its top management priority. Furthermore, to improve the level of safety of its products, Panasonic strives to ensure product safety with a groupwide General Product Safety Committee playing a leading role.

Policy

Panasonic’s Groupwide Quality Policy states that the company will “truly serve customers by way of providing products and services that continuously meet and satisfy the needs of customers and society.”

The company has also established a basic policy regarding an autonomous code of conduct for product safety.

*This basic policy was approved at a meeting of the board of directors of what was then called Matsushita Electric Industrial Co., Ltd., held on June 27, 2007.

▶ Basic Policy Regarding the Autonomous Code of Conduct for Product Safety

<http://www.panasonic.com/jp/corporate/management/code-of-conduct/quality-policy.html>

* Japanese only

The Panasonic Code of Conduct also states that the company will strive to ensure the safety of its products.

▶ Panasonic Code of Conduct, Chapter 2: Implementing the Code in Business Operations; II-2. Product Safety

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-2.html#section2-2>

Based on these foundational policies, each of the four Companies and each business division has established quality policies, which have been thoroughly implemented in all subsidiary organizations.

Regulations

Quality Management System

To establish self-regulated quality assurance processes in each group company, Panasonic published Quality Management System Development Guidelines in 2004. Each group company then implemented the Panasonic Quality Management System (P-QMS).

P-QMS complements the requirements of the ISO9001 standard with Panasonic’s own quality assurance methods and experience to create a quality management system that aims to deliver the level of quality that the company demands.

Based on its implementation of the P-QMS, Panasonic continuously improves the quality of its products, and it is bolstering its efforts to prevent quality problems from happening in the first place and to achieve more consistent quality.

In December 2014, Panasonic drew up and began applying the Automotive Quality Management System Development Guidelines (the Automotive P-QMS), which compile Panasonic’s fundamental stances on the quality of components installed on board motor vehicles.

Customer Relations (Excerpts)

Management System

Panasonic has established a set of Basic Rules for Response to Customers (compliant with ISO 10002 and JIS Q 10002) for responding appropriately groupwide to inquiries and complaints from customers. The Head Office CS Center oversees the implementation of these regulations, which apply to all work relating to customer relations in Japan by Panasonic or by affiliates that handle products bearing the Panasonic brand. In those business sites in Japan, the company has implemented a Customer Management System as a mechanism for utilizing information in management that is received from customers. These sites conduct periodic self-audits and make other efforts to improve the quality of customer relations.

Overseas, the company has implemented ISO-compliant management systems based on the Basic Rules for Response to Customers and tailored to the legal system in each country or region.

Policy

Fundamental Stance on Customer Satisfaction (CS)

Since its foundation, Panasonic's management philosophy has been to contribute to society through its products and services while always putting the customer first. Based on this philosophy, the company strives to improve customer satisfaction and offers products, solutions, and services that enrich the lives of people around the world.

When providing customer service, Panasonic strives for sincerity, accuracy, and speed, and acts with humility and appreciation. This finds its basis in the principle of "true service" that the company's founder handed down through his words. The company's fundamental stance is thus to provide customers trust, peace of mind, and satisfaction.

The Fundamental Concept of Customer Satisfaction (The Pursuit of Customer Satisfaction)

The only way for those of us engaged in business to earn trust is to have everyone, regardless of whether they are working in the manufacturing division or the sales division, cater completely to the demands of the customers on all points and work strictly under the basic rule of producing or selling not even one product that cannot perform its function well.

Perfection can be reached only by paying careful attention not only to the manufacturing details but also to where our products are going and making efforts to completely satisfy the customers and provide flawless service.

Konosuke Matsushita

August 1940 statement calling for a quality products campaign
(From Matsushita Electric's 50-Year History)

Service Philosophy (True Service)

The customer's satisfaction is our satisfaction.

True service resides in mutual satisfaction.

Service is an integral part of any business. A business that does not provide service is no business at all. Service, therefore, is the duty and obligation of any business person. But there's nothing more aggravating than service provided only out of a sense of duty. Customers can sense it.

Service means satisfying customers, and when we satisfy our customers, we in turn find satisfaction in a job well done.

Satisfied customers and satisfied employees: This is what constitutes true service.

Konosuke Matsushita

August 1967 issue of PHP Magazine

Responsible Executive and Framework

Panasonic's executive officer in charge of CS is Executive Vice President Kazunori Takami. (as of July 2015)

The CS Center established at the Panasonic head office and the CS departments established at each of the four Panasonic Companies (Appliances, Eco Solutions, AVC Networks, and Automotive & Industrial Systems) cooperate to implement Panasonic's customer satisfaction initiatives. Overseas, the CS departments of Panasonic's sales companies around the world collect local information concerning services and quality, as well as customer requests and so forth. This information is used to ensure the quality and safety of products and to help develop products that match the needs of customers in each market.

CS staff in Japan and abroad share the knowledge and experience that they have accumulated to endeavor to provide better customer service around the world.

Information Security and Protection of Personal Information

Policy

Panasonic Code of Conduct

Chapter 2: Implementing the Code in Business Operations; II-4. Use and Control of Information

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-2.html#section2-4>

Panasonic Privacy Policy

Panasonic Corporation (hereinafter referred to as “Panasonic”) aims to ensure the satisfaction of customers and gain their confidence by providing superior products and services, guaranteeing transparency based on the Basic Business Philosophy.

To achieve these goals, Panasonic will strive to establish a better relationship not only with our customers but also stakeholders such as business partners, shareholders, employees, etc.

As part of its efforts, Panasonic will implement the following policies to protect and handle Personal Information appropriately.

1. Panasonic will appoint a personal information protection manager in each organization where personal information is handled, whose role will be to manage such information appropriately.
2. Panasonic will collect personal information with the consent of individuals after specifying the purpose of use, contact for inquiries, etc.
3. Panasonic will use personal information only within the scope of the purpose of use consented to by the information subject.
4. Panasonic will not provide or disclose personal information to any third party without prior consent from the information subject except when prescribed by laws and regulations.
5. Panasonic will respond properly to inquiries from the individuals about his/her personal information.
6. In order to prevent any unauthorized access to, and loss, destruction, falsification, or leakage of personal information, Panasonic will manage personal information safely and make efforts to guarantee and enhance its information security.
7. In addition to complying with the relevant laws and regulations, Panasonic will continue to improve its personal information protection activities, taking environmental changes into consideration.

Information Security Management System

Panasonic has obtained ISO27001 certification for all divisions that handle the personal information of individual customers. This will ensure that personal information received from customers is handled appropriately and that, in the unlikely event such personal information is leaked, the response will be swift.

ISO27001 certification is awarded to companies that qualify under ISO/IEC27001:2005 information security management system standards and that demonstrate appropriate handling of all information, including personal information.

Fair Operating Practices

Management System

We are striving to strengthen our “internal control, prevention, detection, and response” with regard to compliance, placing priority on abiding by antitrust laws and preventing corruption.

As corporate activity expands globally, improprieties occur with some frequency, due not just to deliberate dishonest and criminal acts but also to a lack of awareness and understanding. Employees doing business in countries and regions where legal systems are incompletely realized must perennially exercise a high degree of awareness of norms.

We at Panasonic have set down a clear set of rules for compliance with the law and corporate ethics. We strive to achieve thorough adherence to these rules, with the aim of promoting fair operating practices in all countries and regions of the world, and to realize a sustainable society. This is the “Panasonic Code of Conduct,” which incorporates the requirements of the OECD (Organisation for Economic Co-operation and Development) Guidelines for Multinational Enterprises and other norms.

In our observance of our own Code of Conduct, we have a global network of legal departments, directors, and executive officers in charge of ensuring adherence to the Code of Conduct, as well as managers in charge of export control and other persons responsible for supervising various other functions in our Companies, business divisions, and regional headquarters outside Japan.

Each year, we designate September to be “Compliance Awareness Month,” marked by efforts to strengthen our awareness of the need to observe ethical and legal requirements. We conduct a “Compliance Awareness Survey” to check the degree of compliance awareness dissemination among our employees around the world. Once each year, we check the status of observance and practice of the “Panasonic Code of Conduct” in our business locations around the world.

In addition, to prevent improprieties and achieve quick resolutions, we have established hotlines for whistleblowers in our domestic and foreign business locations, and for our business partners.

We strive to resolve, at the business location level, the issues that are identified through these efforts, but these measures are also collected in a unified, comprehensive manner at the Group Head Office level, so they are reflected in corporate-wide measures based on social conditions as well. Currently, our priority themes are abiding by antitrust laws and preventing corruption.

Policy

Panasonic Code of Conduct (Excerpts)

The Panasonic Code of Conduct defines our efforts to establish fair operating practices as a public entity of society.

Chapter 1: Our Core Values

An Enterprise as a Public Institution

Since our business is dependent on our customers and other stakeholders, we must remember that “an enterprise is a public institution,” that must strive to fulfill its social responsibilities. In addition to listening to stakeholders’ opinions, we must conduct our business activities transparently in order to be accountable. In short, we must continue to be fair, truthful, honest and swift in taking action to comply with our social responsibilities.

▶ Panasonic Code of Conduct, Chapter 1: Our Core Values

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-1.html>

Chapter 2: Implementing the Code in Business Operations

II-3. Compliance with Laws, Regulations and Business Ethics

(1) Compliance with Laws, Regulations and Business Ethics

We will conduct business with integrity, a law-abiding spirit, and the highest ethical standards.

We will fulfill our tasks by always observing not only applicable laws and regulations, but also the highest standards of business ethics. Compliance with laws, regulations and business ethics in all our business activities is essential to the survival of our business.

(2) Fair and Sincere Action

We will respect free and fair competition, and abide by all applicable antitrust (competition law) and other laws and regulations. All of our transactions shall be properly and fairly recorded.

We will not engage in bribery of any kind. We will be sensitive to, and shall abide by laws and regulations and social ethics that govern the offer of benefits of any kind, including gifts, meals and entertainment. In the same manner, we will not receive personal benefits from any of our stakeholders.

Moreover, we remain steadfast in our attitude to oppose any illegal group or organization.

(3) Thorough Observation of Relevant Laws and Regulations

To ensure that all employees observe applicable laws and regulations and respect their spirit, we will establish appropriate in-house codes and promote employee understanding through seminars and training.

(4) Prompt Redress and Strict Treatment for Violations of Laws and Regulations

If we suspect that our activities violate applicable laws, regulations or business ethics, we will report such information to a superior, or to the legal affairs section or other relevant section, or via an in-house notification hotline. Whistleblowers shall be protected from dismissal, demotion, or any other retaliatory treatment because of their well-intentioned reporting of possible violations of any law or regulation. We will ensure thorough and confidential treatment of information reported.

Once we have established that a law or regulation has been violated, we will immediately seek to remedy the violation, take appropriate action and prevent it from recurring.

Basic Policies Regarding Compliance with Antitrust Laws

Compliance with antitrust laws is one of our priority themes. We have established the following basic policies to prevent cartels and bid rigging.

- Contact with competitors is allowed only in absolutely necessary cases and subject to prior approval.
- Agreements and exchanges of information with competitors regarding prices, quantity, and other competition-related matters are strictly prohibited.
- One who encounters behaviors that may give rise to suspicions of cartel must make an objection, leave the room, and file an internal report.
- The company establishes whistle-blowing systems and internal leniency systems to improve its ability to self-regulate and conduct appropriate monitoring based on risk assessment, whereby maintains an effective anti-cartel system.

Based on these basic policies, we established the Rules Concerning Activity and Relationship with Competitors in 2008, which apply to all group employees.

Status of Observance of International Standards and Widely Known Initiatives

Throughout the year, we strictly observe the “Panasonic Code of Conduct,” which incorporates the requirements of the OECD (Organisation for Economic Co-operation and Development) Guidelines for Multinational Enterprises. Once each year, we check the status of observance and practice of the Code of Conduct in our business locations around the world.

Compliance Training

Each year, we designate September as “Compliance Awareness Month” to check up on our efforts to ensure that the mental attitude of strict adherence to ethics and the law has taken hold globally and to respond to risks. In recent years, as our business and the business environment have changed, this has presented opportunities to strengthen our efforts to accurately grasp signs of changing risks, legal violations, and improprieties in specific fields/units of business, countries and regions.

In this interval, the heads of Companies and business divisions, regional representatives, and other senior executives have clarified policies and positions on the observance of ethics and the law, ensuring the dissemination of the importance of compliance down to the ground level.

During this period, we also conduct a “Compliance Awareness Survey” among our employees.

In fiscal 2015, our Compliance e-Learning was conducted in six languages in 10 countries. Approximately 61,000 employees participated.

Responsible Executive and Framework

Executive in charge: Managing Director Jun Ishii (as of July 2015)

To ensure the dissemination of compliance and fair business practices at the ground level throughout the world, we have legal departments, directors, and executive officers in charge of ensuring adherence to the Code of Conduct, as well as managers in charge of export control and other persons responsible for supervising various other functions in our Companies, business divisions, and regional headquarters outside Japan.

Beginning in fiscal 2016, we are establishing a new organization whose aim will be to identify compliance, risk, and governance issues that span multiple work functions and to unify our response functions. This should help speed up our support for fair operating practices in all business units.

Participation in Industry/Academic Alliance Activities Aimed at Preventing Improprieties

Panasonic has been a member of the Business Ethics Research Center (BERC) since BERC was founded in 1997. Together with BERC and other member companies, we have engaged in research, practice, education, and promotional activities for management ethics through panels, study groups, information-exchange activities, and so on.

Fair Operating Practices: Performance Evaluation

To monitor the understanding of compliance policies, the effectiveness of measures, and the degree of adherence, once each year we conduct checks on the status of observance and practice of the “Panasonic Code of Conduct” in all our business locations around the world.

More specifically, at each group member company, a director/executive officer is appointed to be in charge of ensuring adherence to the Code of Conduct. Education and training are conducted regarding the Code of Conduct; written pledges regarding the observance of the Code of Conduct are obtained; and checks are made regarding the status of these items. Our auditor conducts an audit of internal control.

Once each year, employees fill out “Compliance Awareness Surveys.” These surveys include topics that are common globally, such as compliance, information security, and risk management, and also other topics that are specific to particular Companies, places of business, and regions. The survey results are analyzed from a variety of perspectives – region, company, employee rank, and so on – and are used in a wide variety of functions, such as the formulation of policies and measures regarding compliance and responses to specific issues.

In fiscal 2015, approximately 148,000 employees participated in these surveys globally.

For example, in Asia, which has been designated an overseas strategic region for our group, the results of the fiscal 2013 survey were used to formulate a mid-term action plan for fiscal 2014-2016. Within the Asian region, there exists a wide variety of legal systems in various countries, and there are high risks in terms of the need to prevent corruption. In this business environment, in order to develop fair and powerful solution business – including BtoB and BtoG – we were able to identify issues through this survey such as: (1) the need for ongoing efforts to instill compliance awareness, (2) the need for repetition of compliance education, and (3) the national differences in compliance awareness. Based on these results, various elements were incorporated in the mid-term action plan to practice in the daily business activities, including (1) the formulation of action guidelines and education campaigns at the level of the regional headquarter, (2) the strengthening of e-learning and training programs in each national language, and (3) the fortification of alliances involving legal departments in each region and the raising of the level of compliance through auditing.

Grave Violations and Responsive Measures

In fiscal 2015, there were no instances of legal violations of fair business dealings involving criminal penalties or administrative penalties.

Fair Operating Practices: Whistleblowing Systems

Within our company, we have established the following whistleblower hotlines as systems for receiving a variety of internal reports regarding compliance:

- “Business Ethics Global Hotline” for general information on compliance in Japan and abroad.
- “Equal Employment Opportunity Office” for consultations regarding sexual harassment, equitable treatment, and the like.
- “Fair Trade Hotline” for the reporting of legal violations concerning cartels, bribery, the Subcontract Act, and so on.
- “Internal Control Promotion Office Hotline” for accounting irregularities.
- “Fair Business Hotline” for receiving reports from our business partners.
- “Auditor Report System” for reports concerning our accounting and audits.

The Panasonic Code of Conduct stipulates that “Whistleblowers shall be protected from dismissal, demotion, or any other retaliatory treatment because of their well-intentioned reporting of possible violations of any law or regulation. We will ensure thorough and confidential treatment of information reported.” At all the hotlines above, mistreatment of whistleblowers is strictly forbidden and confidentiality is assured. In addition, reports can be made anonymously if there is no need to contact the whistleblower for additional information (some hotlines are excluded).

Outside Japan, in addition to the “Global Hotline,” region-specific reporting systems have been set up in North America, Europe, Asia, and Latin America.

In Europe in particular, we have a contract with an independent external service to provide round-the-clock third-party response, creating an environment that makes it easier for people to use the system.

Fair Operating Practices: Fair Trade (Cartels)

Rules Concerning Activity and Relationship with Competitors

In 2008, we established the Rules Concerning Activity and Relationship with Competitors for the purpose of preventing behaviors that could lead to cartels or bid rigging or cause suspicion of same, which apply to all group employees. These rules include items such as the following:

- Prohibition of agreements or exchanges of information regarding product pricing, quantity, performance or specifications that may cause suspicions of cartels or bid rigging
- Prior approval system under which contact with competitors requires prior approval of the head of the business group and the person in charge of legal affairs
- Responses to inappropriate activities
- Duty of reporting possible violations
- Measures taken in response to violations
- Internal leniency system

Preventing Corruption

Prevention of Bribery of Government Officials

In 2010, we established the Rules on Dealing with Government Officials for the purpose of preventing bribery of government officials or actions that may raise suspicions of such unlawful behavior.

These rules stipulate that no employee may offer, give, pay for, promise to pay for or authorize the payment or the grant of any benefit to any government officials in connection with obtaining or retaining business.

An approval process and specific standards were established such as for meals with government officials. These are intended to prevent the direct offering of benefit to government officials and also the indirect offering of benefit through consultants, distributors, lobbyists, or other business partners. Careful screening and designation of business partners must be conducted, and contracts must include provisions prohibiting bribery.

In cases of violations of these rules, swift steps must be taken to redress the situation, and strict measures must be taken against the violation.

In addition, regarding expenses for social interactions or gifts, prior approval is required, and detailed reports must be filed. There is also a process for ensuring that no government officials are involved, in an effort to preclude corrupt acts.

Respect for Human Rights

Management System

The Panasonic Code of Conduct expressly states that “we must respect human rights and do our best to understand, acknowledge and respect the diverse cultures, religions, mindsets, laws and regulations of people in the different countries and regions where we conduct business.” Panasonic supports the fundamental principles of the United Nations Universal Declaration of Human Rights, the International Labour Organization (ILO) Declaration on Fundamental Principles and Rights at Work, and the OECD Guidelines for Multinational Enterprises. The major parts of these principles are embodied in the Panasonic Code of Conduct.

Panasonic is also taking an active approach to reflecting ideas concerning global human rights in its management, including by making reference to the UN Guiding Principles on Business and Human Rights, which were adopted by the UN Human Rights Council in June 2011.

In fiscal 2015, Panasonic complemented the Code of Conduct by setting a “Global Human Rights and Labor Policies” and by implementing a management system for abiding by that policy. The management system consists of self-assessment checklists for properly evaluating risks involving, and the impact on, human rights and for identifying risks, a manual outlining the procedures for correcting the risks that have been identified and for carrying out continuous improvement, and other components. Starting in fiscal 2016, Panasonic will continue to apply this system to workplaces in Japan and overseas.

In addition to its efforts conducted with its employees, Panasonic will cooperate with its suppliers throughout the world to understand correctly laws and labor practices in different countries and to respect human rights.

Policy

As a company doing business globally, Panasonic treats, as a fundamental principle behind its business activities, interactions with not just its employees but all stakeholders with the maximum degree of concern and respect for their human rights. Panasonic’s policies concerning human rights are expressly outlined in Panasonic Code of Conduct and Global Human Rights and Labor Policies. These policies include items concerning such issues as working hours; wages; humane treatment; prohibition of discrimination; protection of privacy; concern for the human rights of foreign workers, trainees, and younger laborers; and the freedom of association plus labor-management dialogues, among others.

▶ Panasonic Code of Conduct, Chapter 3: Employee Relations

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-3.html>

Education

Panasonic conducts periodic training concerning its Code of Conduct—which sets forth its policies on respect for human rights—including when employees join the company or are promoted.

The company conducts “Overseas Employee/Pre-Overseas Appointment Training” for employees on assignment from Japan and posted at overseas subsidiaries. It provides education on issues of human rights that demand particular attention overseas, including fair treatment, the prohibition of employment discrimination, and respect for union activities.

Responsible Executive and Framework

The executive responsible (as of July 2015) for human rights-related matters is Managing Director Jun Ishii.

The departments responsible consist of the Human Resources & Industrial Relations Department established at the Panasonic headquarters, the human resources departments established at each of the four Panasonic Companies (Appliances, Eco Solutions, AVC Networks, and Automotive & Industrial Systems), and all business divisions and affiliated companies under the Panasonic umbrella.

Human Rights Support Desk

Panasonic has established an Equal Employment Opportunity Office at its headquarters and appointed full-time consultants to staff it. In addition, a consultation desk was established at each Company and business division, in an effort to provide a place for employees to go to discuss their concerns about sexual harassment, harassment based on power differentials, and a wide range of other topics relating to human rights.

The Equal Employment Opportunity Office also conducts activities aimed at resolving workplace problems and creating workplaces without barriers to employees performing their jobs. For example, in fiscal 2014, the office conducted training for managers concerning, among other things, creating a stimulating workplace culture; 97% of managers who attended the training responded that they “were able to change ways of thinking.” On more concrete terms, respondents provided positive opinions on the training, such that they reaffirmed the importance of initial responses and were able to clearly understand what efforts they needed to undertake; that the training had served as a good opportunity to once again re-evaluate their own actions and words; and that they wanted to work toward sharing with all workplace members respect for individuals, communication, and mutual support, and toward creating a workplace in which such shared ideals could be put into practice. In addition, some attendees provided suggestions for further improvements to the activities of the Office, including that the range of attendees for the training should be expanded while the training itself should be conducted periodically.

In its overseas subsidiaries as well, Panasonic is acting with all due attention to the privacy of those who seek consultation or report misdeeds, including by establishing consultation offices and suggestion boxes similar to those in Japan.

Respect for Human Rights: Performance Evaluation

As a company doing business in countries around the world, Panasonic strives to respect human rights and considers it a precondition for all its behavior to abide by international standards, the laws and regulations of each country or region, and the Panasonic Code of Conduct.

Further to these efforts, since 2007, the company has been conducting Overseas Human Resources and Labor Assessments intended to identify, comprehend, and resolve issues in personnel management and labor management overseas. The checklist used in the survey contains around 300 items, including those concerning proper implementation of labor management; compliance with local labor laws, employment systems, and business practices; and discovery of bad influences on business and of latent labor-related risks that could cause problems.

After the local affiliate has conducted a self-assessment based on the checklist, an assessor from a Company or business division in Japan performs a final check with the support of the regional headquarters. Efforts to resolve problems discovered via assessments are undertaken primarily by Assessor-Leaders (mainly managers in charge of human resources), who strive to raise the level of labor management. Panasonic periodically runs “Assessor Seminars” to systematically promote the education of assessors and to raise the levels of their checking skills.

As of fiscal 2015, assessments had been conducted at a total of 39 locations, consisting of 20 sites in China, 13 sites elsewhere in Asia, and 6 sites in other regions. Panasonic will continue to strive to improve labor management capabilities through close partnerships between its Japanese and overseas locations, thereby to improve the company’s ability to respect human rights in all its businesses.

Furthermore, from fiscal 2015, Panasonic has been testing, at some business sites, risk assessment and improvement efforts based on a “Self-Assessment Checklist” relating to human rights and labor that was established that year. Starting in fiscal 2016, Panasonic will begin to expand these efforts.

Respect for Human Rights: Efforts Concerning Fundamental Human Rights

Prohibition of Forced Labor, Effective Abolition of Child Labor, and Attention to Young Workers

When recruiting employees, Panasonic adopts a perspective of protecting fundamental human rights and engages in recruitment activities that comply with the laws and regulations of the respective countries. The Self-Assessment Checklist that was drafted in fiscal 2015 includes items checking whether Panasonic-related entities are confirming ages in order to prevent child labor; are not allowing temp agencies to collect improper fees or are themselves retaining workers' passports or identification documents; are providing workers with employment contracts, including terms of employment, in those workers' native languages; and other compliance requirements. The risk that child labor will be performed is thought to be especially high in China and elsewhere in Asia, and Panasonic is thoroughly implementing age checks in these regions. The company does not make employees under the age of 18 engage in heavy labor and offers them consideration and support so that they may have opportunities to receive education.

Employing Foreign Workers

Because there tend to be greater human rights and labor-related risks for migrant and foreign laborers, Panasonic has established items to be checked that include ensuring that Panasonic-affiliated entities are not allowing temp agencies to collect improper fees or are themselves retaining workers' passports or identification documents, as well as ensuring that they are providing workers with employment contracts, including terms of employment, in those workers' native languages. Panasonic recruits employees and accepts temporary workers based on the laws and regulations of the respective country, so that no employees are made to work against their will or are unduly subjected to disadvantageous working conditions.

Prohibition of Discrimination

Panasonic strives to create workplaces where diverse and talented individuals can respect one another as vital partners irrespective of such distinctions as race, sex, age, nationality, belief, religion, social status, or disability, and where they can work in a lively and active manner in a supportive environment.

The company has established recruitment standards that select employees based on the applicants' aptitudes, capabilities, and desires. To thoroughly implement these standards, the company in Japan, for instance, educates interviewers based on the handbook "Recruitment and Human Rights," which the "Hellowork" public employment stability office established by the national government has drafted for the purpose of promoting fair recruitment selection.

For employee discipline, Panasonic has, among other provisions in its work regulations, those mandating respect for human rights, those forbidding illegal behavior, and those forbidding sexual harassment in the workplace; in the event of a violation of any one of these provisions, expressly stated disciplinary measures are to be taken.

Furthermore, the company is engaged in the following efforts to prevent sexual discrimination, including sexual harassment as well as harassment based on power differentials:

- Establishment, publicizing, and thorough implementation of policies concerning sexual harassment
- Distribution of leaflets and manuals concerning sexual harassment
- Running of seminars and training on sexual harassment, harassment based on power differentials, and revitalizing workplace culture

Managing Working Hours

Based on labor standards legislation in the respective countries and on labor agreements, Panasonic has established in its work regulations provisions relating to appropriate working hours, break times, overtime work, holidays, leave, and so forth.

To abide by these provisions, the company operates a working-hours management system and is also engaged in comprehensive employee health management.

With a work management system, Panasonic has implemented a variety of measures with an eye to employees' health, including a mechanism by which warnings are issued and other steps are taken at the point when a certain length of overtime has been reached; optimal placement of personnel so that overtime is not overly imposed on only certain employees; and additional health checks performed in the rare event that an employee has worked excessively long hours.

Managing Wages

Based on labor standards legislation in the respective countries and on labor agreements, Panasonic has established in its employee wage regulations provisions for adequate wages, allowances for commuting and other expenses, bonuses, other compensation paid on occasional bases, retirement allowance, and so forth.

The company has implemented a "Role/Grade System" that determines compensation based on the work or role in which employees are currently engaged; there are no gender-based inequalities in this compensation system.

In Japan, to ascertain whether employees' wages are being paid correctly, labor unions conduct annual surveys of wage conditions among their members and check whether those members are being properly paid the salaries resulting from wage negotiations decided between labor and management.

Overseas, Panasonic establishes, by country, company regulations that comply with all wage-related laws and regulations pertaining to matters such as the minimum wage, statutory benefits, and overtime. The company conducts its operations based on these regulations and—for the specified period of payment and at the specified time of payment— notifies its employees through pay statements and electronic data, and pays them directly.

The Freedom of Association and Respect for the Right to Collective Bargaining

Panasonic believes that the freedom of association, combined with the right to collective bargaining, is one of the fundamental human rights that companies should respect.

In countries and regions that permit the formation of labor unions—for instance, in Japan—Panasonic and the Panasonic Group Workers Union Association have stipulated in their labor agreement that unions retain the rights to organize, to collectively bargain, and to strike.

In addition, even in countries and regions where the formation of labor unions is not permitted because of legislation, regulations, or conventional labor practices, the Panasonic Code of Conduct stipulates the de facto promotion of issue resolution through labor-management dialogues, which are the goals of the principles of the freedom of association and the right to collective bargaining. In addition, the company expressly lists these dialogues as one of the conditions for doing business with suppliers in its Standard Purchase Agreement and demands suppliers comply with this condition.

Panasonic Code of Conduct (Excerpts)

Chapter 3: Employee Relations

(Omitted)

(2) Respect for Human Rights

5) Taking into account the laws and labor practices of each country, the Company will try to foster a good relationship with its employees and to resolve issues of, among others, workplace and working conditions by constantly having a sincere and constructive dialogue.

► Panasonic Code of Conduct, Chapter 3: Employee Relations

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-3.html>

Structure of the Fundamental Human Rights that Panasonic Respects

The major structure of the fundamental human rights that Panasonic respects is shown in the following diagram:

Structure of the Fundamental Human Rights that Panasonic Respects



Standard Purchase Agreement (Excerpts)

(Demand on Suppliers to Respect Human Rights)

The Supplier shall try to foster a good relationship with its employees and to resolve issues by constantly having a sincere and constructive dialogue.

Japan

Panasonic has adopted a “union shop” system, whereby all full-time company employees automatically become labor union members upon being hired with that status, and it has concluded labor agreements and a basic agreement with the Panasonic Group Workers Union Association. Except for some employees engaged in work relating to management, all full-time Panasonic employees in non-managerial jobs belong to a labor union. In addition, the company respects the right of non-regular employees to join a labor union if they choose to do so. At Panasonic, important management issues are discussed in advance with the labor union, and Management-Labor Committees are established as a forum for people to express their opinions on these issues. Particularly, important decisions are explained to the labor unions, and Labor-Management Councils are held to provide an opportunity for people to express their approval or proposals for change.

Both Management-Labor Committees and Labor-Management Councils are held periodically and separately at the groupwide, Company, and business division levels. The groupwide-level Management-Labor Committee includes the Panasonic Group President, executives in charge of human resources, the head of the labor union’s Central Executive Committee, and others, and is held once per month. The groupwide-level Labor-Management Council includes all executives who are managing directors or above, all members of the labor union’s Central Executive Committee, and others, and is held twice per year.

There is no established minimum notification period when a vital matter for consideration, such as a structural change, has arisen. However, after the company has issued a proposal, there will be discussions, if necessary, every single day at every level—groupwide, Company, and business division—until both labor and management have reached complete agreement.

Europe

Following an EU directive* adopted in 1994, Panasonic set up a voluntary labor-management agreement to provide a venue for meaningful discussions between labor and management, and established the Panasonic European Employee Congress (PEEC).

In fiscal 2015, 26 employee representatives and 14 company representatives assembled in Madrid, Spain. They exchanged information concerning management strategy, business issues, and other matters, and had active discussions.

* EU directive: A directive that obliges all companies employing 1,000 or more employees in two or more countries of the European Union to establish a pan-European labor-management consultation committee

China

The unionization rate among private companies in China varies among different groups of firms, but nearly all Panasonic affiliated companies have organized labor unions (gōnghuì) and are actively engaged in labor-union related activities.

Specifically, Panasonic conducts—among other initiatives—periodic labor-management dialogues, proactive joint labor-management recreational events, and prior explanations to unions concerning important management decisions. The company is thus focusing its efforts on building good relations between labor and management—the basis for business development.

Respect for Human Rights: Initiatives Relating to Global Standards, Legislation, Regulations, and So Forth

State of Efforts Relating to the ILO Core Labour Standards

The International Labour Organization (ILO) has designated eight conventions in the following four areas to form the Core Labour Standards that are the minimum that should be observed: The state of Panasonic's compliance with these conventions can be viewed on the relevant web pages.

The freedom of association and the right to collective bargaining

No.87 (Freedom of Association and Protection of the Right to Organise Convention)

No.98 (Right to Organise and Collective Bargaining Convention)

▶ "The Freedom of Association and Respect for the Right to Collective Bargaining"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#freedom

Prohibition of forced labor

No.29 (Forced Labour Convention)

No.105 (Abolition of Forced Labour Convention)

▶ "Prohibition of Forced Labor, Effective Abolition of Child Labor, and Attention to Young Workers"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#labor

Effective abolition of child labor

No.138 (Minimum Age Convention)

No.182 (Worst Forms of Child Labour Convention)

▶ "Prohibition of Forced Labor, Effective Abolition of Child Labor, and Attention to Young Workers"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#labor

Rejection of discrimination in employment and occupation

No.100 (Equal Remuneration Convention)

No.111 (Discrimination (Employment and Occupation) Convention)

▶ "Prohibition of Discrimination"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#discrimination

Initiatives Relating to the California Transparency in Supply Chains Act

The California Transparency in Supply Chains Act of 2010 aims to make initiatives for the elimination of slavery and human trafficking visible to consumers. It went into effect in January 2012. The law covers all retailers and manufacturers that do business in California and have global annual sales of more than \$100 million. Such companies are required to release information publicly, such as on their website, concerning their initiatives aimed at preventing human trafficking. Panasonic uses the Panasonic Code of Conduct as its internal policy and checks its state of compliance with the code, as well as the state of relevant practical endeavors. In addition, the company makes demands on its suppliers through Standard Purchase Agreements and reviews annually what was confirmed at the evaluation conducted before starting business with the supplier. If a supplier is in serious breach of the Agreement, then, depending on the severity, Panasonic will provide guidance for making improvements, reconsider its dealings with the supplier, or take steps to cease doing business with that supplier, as appropriate.

Panasonic Code of Conduct (Excerpts)

Chapter 3: Employee Relations

(Omitted)

(2) Respect for Human Rights

2) The Company will not employ people against their will, and will not use child labor. The Company will comply with the employment laws and regulations of the countries and regions in which it conducts business.

▶ Panasonic Code of Conduct, Chapter 3: Employee Relations

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-3.html>

Standard Purchase Agreement (Excerpts)

(Demand on Suppliers to Respect Human Rights)

The Supplier shall not engage in forced or child labor, illegal employment of foreign workers, or other illegal or illegitimate employment practices; employment conditions, including wages and shift lengths, shall be based on the laws and regulations of the respective countries and regions in which the Supplier does business.

Initiatives Relating to Compliance with Matters Demanded by SA8000

SA8000 is an international standard concerning labor and human rights that has been issued by the US NGO Social Accountability International. The standard provides for voluntary requirements that employers should fulfill, including those concerning the rights of workers in the workplace, the working environment, and management systems. The eight requirements that SA8000 demands and the state of Panasonic's initiatives concerning each management system are publicly available from the following websites:

1. Child Labor

▶ "Prohibition of Forced Labor, Effective Abolition of Child Labor, and Attention to Young Workers"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#labor

2. Forced or Compulsory Labor

▶ "Prohibition of Forced Labor, Effective Abolition of Child Labor, and Attention to Young Workers"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#labor

3. Health and Safety

▶ Occupational Health and Safety

http://www.panasonic.com/global/corporate/sustainability/health_safety.html

4. Freedom of Association & Right to Collective Bargaining

▶ "The Freedom of Association and Respect for the Right to Collective Bargaining"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#freedom

5. Discrimination

▶ "Prohibition of Discrimination"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#discrimination

6. Disciplinary Practices

▶ "Prohibition of Discrimination"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#discrimination

7. Working Hours

▶ "Managing Working Hours"

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#hours

8. Remuneration

▶ Managing Wages

http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#wages

Occupational Health and Safety

Management System

The purpose of the Panasonic Group's occupational health and safety management is to promote a comfortable, safe workplace through efforts based on the most advanced best practices, which will contribute to the welfare of the group's employees and the development of its business. In addition, the group has established in its regulations that it will give careful consideration regarding the health and safety of subcontractors' employees who work full-time on Panasonic premises.

To maintain our efforts regarding occupational health and safety—and to improve on them continuously—Panasonic has implemented an occupational health and safety management system at nearly all its manufacturing locations globally (some of which are now under construction). The systems implemented at company locations consist primarily of the Panasonic Occupational Safety and Health Management System, which encompasses the OHSAS18001 standard, supplemented with the company's unique perspective. Upon customer request, Panasonic also acquires external OHSAS18001 certification for its locations.

Using the system, Panasonic gives all employees clear roles and responsibilities, promoting engagement in health and safety-related activities. The system also involves periodic reviews by the directors of business sites, thus allowing the company to revise these activities as needed. Panasonic periodically—at least annually—conducts risk assessments to uncover any remaining risks of workplace accidents or illnesses and to reduce these risks, which it does so decisively, in order of severity. Furthermore, when a workplace accident has happened within the company, Panasonic shares it as a case study through its corporate intranet so that it can implement steps to prevent re-occurrences at all business sites.

At all business sites in Japan, health and safety committees composed of members from both employee and management investigate and debate issues of health and safety management that could affect employees. Moreover, to achieve a similar level of protection for employees of partner companies, Panasonic has established occupational health and safety councils, which are involved in a variety of activities, including formulating occupational health and safety policy, as well as various forms of information sharing.

Panasonic Group staff in charge of health and safety participate in an annual Employee Health and Occupational Health and Safety Forum, where together they study case studies of efforts at different business sites, attend lectures by visiting instructors, and engage in other activities to increase their knowledge and put it into practice at each business site.

In addition, sites that have kept no accident during a certain period of time receive awards, as do those that have initiated activities relating to safety, health, or to the promotion of healthy lifestyles among employees, that can stand as models of behavior for other sites.

Policy

Panasonic Code of Conduct (Excerpts)

In its Code of Conduct, Panasonic has established that it will pay attention to the health of its employees and strive to secure a safe and comfortable workplace environment for them.

Chapter 3: Employee Relations

(2) Respect for Human Rights

4. The Company will give due consideration to the health of its employees and will maintain a comfortable workplace that meets all applicable safety standards.

► Panasonic Code of Conduct, Chapter 3: Employee Relations

<http://www.panasonic.com/global/corporate/management/code-of-conduct/chapter-3.html>

Panasonic Occupational Safety and Health Policy

Panasonic Occupational Safety and Health Policy consists of an Occupational Safety and Health Declaration, as well as a set of Activity Guidelines for Occupational Safety and Health. The company has set initiatives that it is thoroughly undertaking in eight areas.

Occupational Safety and Health Declaration

Based on the basic management philosophy of respecting people, Panasonic Corporation is committed to creating safe and both physically and mentally healthy workplaces through appropriate and careful attention, and consistent effort.

Activity Guidelines for Occupational Safety and Health

1. Legal and regulatory compliance

Each business unit should establish its own internal policies and procedures to fulfill the relevant legal and regulatory obligations relating to occupational safety and health and ensure compliance.

2. Management resources

Each business unit should devote staff, technology, and capital to creating workplaces that are safe and healthy.

3. Establish, maintain, and improve an occupational safety and health management system

Each business unit should establish an occupational safety and health management program and regularly maintain and improve it.

4. Definitions of roles, authorities, and responsibilities, and organizational maintenance

To administer the occupational safety and health management program and promote continuous autonomous improvement, each business unit should define the roles, authorities, and responsibilities of the elected head, legal staff, managers, and supervisors of the program.

5. Removal and reduction of hazards and potential causes of damage

Each business unit should assess risks, identify hazards and potential causes of damage, and remove or reduce them.

6. Setting goals and formulating and implementing a plan for occupational safety and health management

The management and employees of each business unit should work together to assess the occupational safety and health of workplaces, identify disasters and potential threats to health, establish goals, and formulate and execute a management plan for the occupational safety and health program.

7. Auditing, and review by management

Each business unit should conduct regular audits to monitor the occupational safety and health program. Management should review the audit results and recommend improvements to the program.

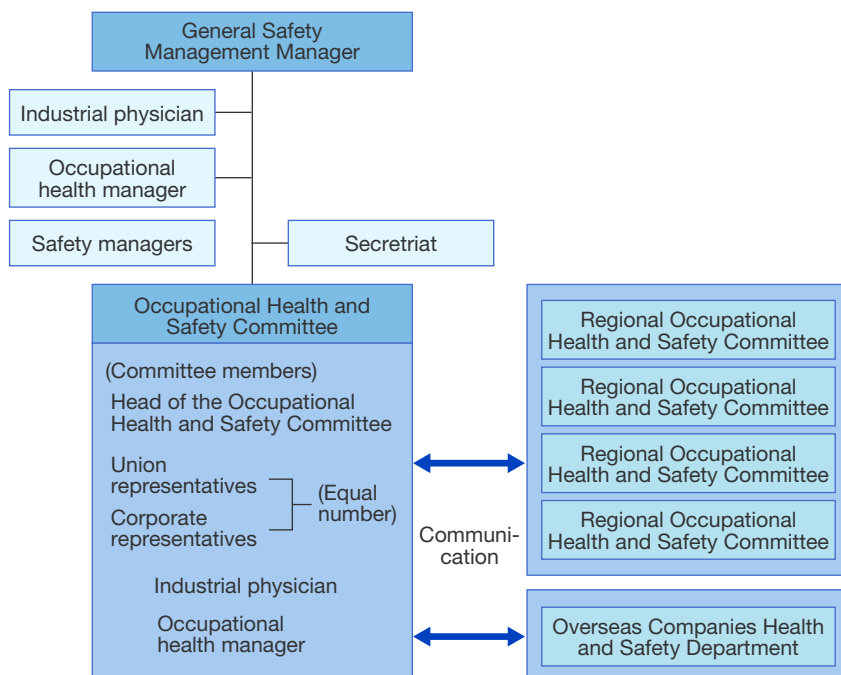
8. Education and training

Each business unit should provide its employees and those of its business partners on its premises with education and training in accordance with the occupational safety and health management program, and ensure that all relevant people are kept informed of and familiarized with the program's charter and management system.

Responsible Executive and Framework

The executive responsible (as of July 2015) for occupational health and safety-related matters is Managing Director Jun Ishii. Panasonic has organized health and safety committees composed of equal numbers of union and company representatives.

Division Occupational Health and Safety Management Organization (Japan)



Occupational Health and Safety Support Desk

Panasonic has established the following lines of support to help employees prevent or deal with mental or physical stress:

Employee Consultants (or the human resources department of the employee's place of work)

Since 1957, Panasonic has designated employees with abundant work experience as “consultants” and has implemented a “Consultant System” whereby other employees may consult with them. The consultants answer any questions other employees have concerning welfare systems and provide support aimed at helping employees take charge of resolving worries or problems that they face in their work or private lives.

EAP* Consultation Office

For this program, Panasonic has engaged specialist counselors to listen to the personal concerns of employees, who can rest assured that what they have discussed will not be disclosed to the company or to their health insurance association.

*EAP: Employee Assistance Program

Company Clinic

Panasonic staffs these offices with full-time occupational physicians and occupational health staff to provide a health support program that performs functions such as handling illnesses that manifest during work, consulting on mental and physical health, preventing lifestyle-related diseases, and helping smoking cessation.

Initiatives Relating to Health Issues

Prevention of HIV/AIDS and support for those infected and their families

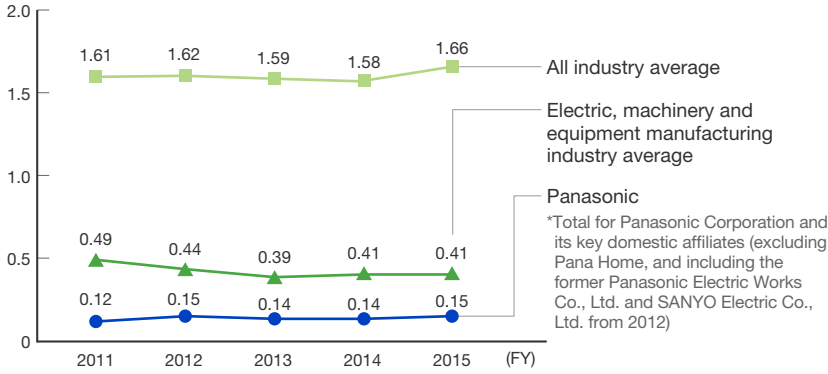
Panasonic believes that, armed with the proper knowledge, HIV/AIDS can be prevented, and unnecessary confusion and worry in the workplace can be avoided. Thus, the company has undertaken education of all its employees as the cornerstone of its initiatives in this area. When conducting human resources management, the company deems the protection of the human rights of all employees, including those who may be infected with HIV, as a foundational principle and adheres to four subsidiary principles: Panasonic keeps personal information confidential, prohibits discrimination in personnel matters, bans compulsory testing for HIV antibodies, and carries out educational activities.

Health and Safety: Performance Evaluation

Incidence of Occupational Accidents and Responses

Incident Rate of Work-related Accidents

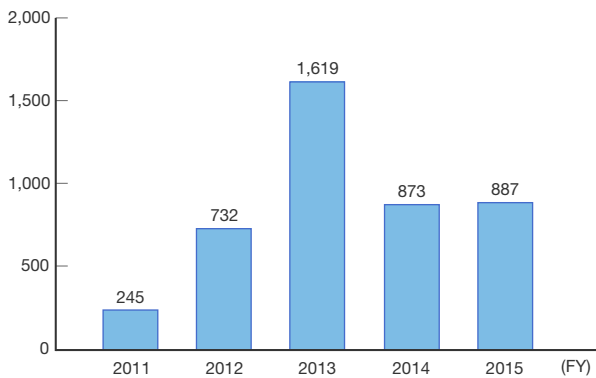
(Number of accidents per one million working hours)



Source: "All industry average" and "Electric, machinery and equipment manufacturing industry average" figures were from the website of the Ministry of Health, Labour and Welfare, Japan.

Time Lost due to Work-related Accidents

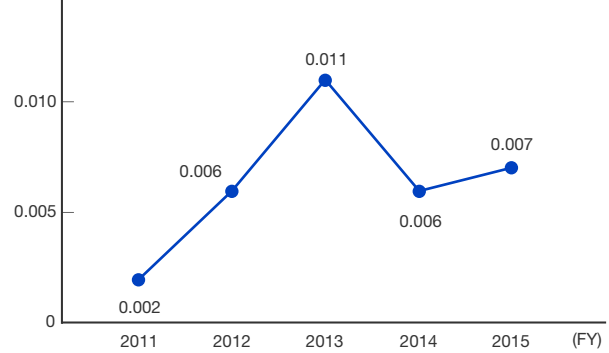
(Days)



Note: Total time-lost of victims due to labor accidents

Severity Rate of Accidents

(Days)



Note: Proportion of time-lost per 1,000 hours of total working hours

At business sites where workplace accidents have occurred, Panasonic investigates the causes behind the incidents, implements measures to prevent re-occurrence, and shares accident case studies groupwide, so that all business sites may implement preventive measures so as not to experience the same kinds of accidents themselves.

For special tasks, such as handling heavy materials or chemical substances, the company expends every effort to minimize the required amount of such work and, in accordance with laws and regulations, conducts additional health screenings and continuously monitors the situation to prevent negative health outcomes.

Concerning work in front of visual display terminals (VDTs) in indirect departments, as well, the company provides annual special health screenings for those employees who perform at least four hours of work in front of such displays and for whom they themselves, their bosses, or an occupational physician have determined screening to be necessary.

Responsible Supply Chain

Management System

In today’s world, people insist that companies respect certain social responsibilities, such as respect for human rights and the environment, in their procurement activities. Supplying outstanding quality and technologies is no longer sufficient. Beyond that, Panasonic strives to ensure that it does business only with suppliers that fulfill their social responsibilities in five areas: clean procurement; green procurement; compliance with laws and social norms; information security; and respect for human rights, labor, and occupational health and safety.

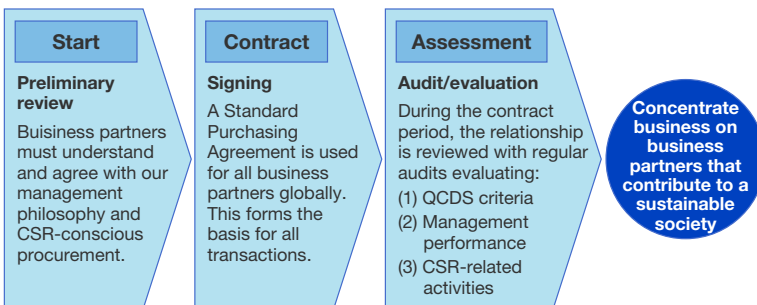
To ensure that employees involved in procurement activities better understand CSR procurement, and in order to raise their awareness of CSR procurement, we have created internal rules and manuals on CSR procurement, and disseminated the necessary information via handouts, our intranet, and training sessions.

We include CSR terms in our Standard Purchase Agreements with the suppliers who provide our parts and materials, those terms including items relating to human rights, items relating to providing a safe workplace, and items relating to concern for the environment. These agreements are premised on the understanding that the suppliers agree to abide by Panasonic’s management philosophy, CSR procurement guidelines, and the “For Suppliers” documents. In addition, we distribute information to our suppliers about the CSR principles we wish them to observe. Periodically, we evaluate their CSR efforts, in addition to evaluating their standards regarding quality, cost, delivery, and services (QCDS), and business execution.

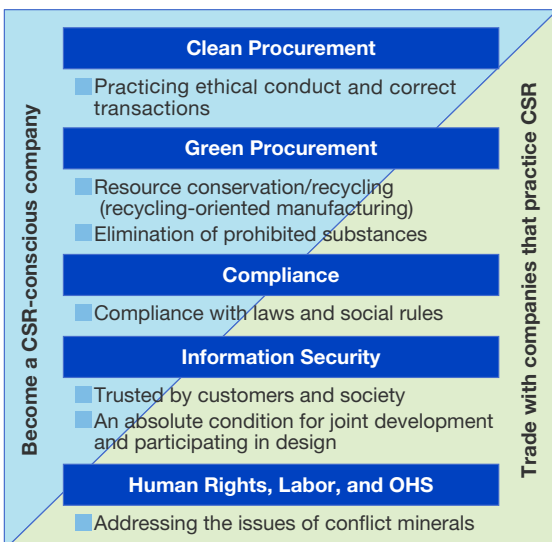
With regard to conflict minerals that fund organizations that behave without proper regard for human rights, engage in environmental destruction, practice corruption, and otherwise act unethically in conflict zones, we strive to adhere to the Organisation for Economic Cooperation and Development’s (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas.

Through these efforts, together with our suppliers, we strive to create sustainable supply chains.

Basic Stance on CSR Procurement



An enterprise that fails to practice CSR procurement will be neglected by society today



Policy

Panasonic has summarized its core thinking on procurement in a 10-item set of Procurement Policy. The fundamental basis of this policy is the concept that, based on relationships of mutual trust, and through diligent study and cooperation, our suppliers are invaluable partners in creating the value our customers demand.

1. Working together with Suppliers
2. Implementation Information Gathering and Purchasing during the Development Phase
3. Ensuring Product Quality and Safety
4. Implementation Cost Reduction Programs
5. Achieving Optimum Procurement by Shortening Lead-times
6. Living in Harmony with the Global Environment through Green Procurement
7. Improving Global Procurement
8. Enhancing Compliance
9. Better Utilizing Information and Enforcing Information Security
10. Respecting Human Rights and the Health and Safety of Labor

For details, please see our Procurement Policy regarding our procurement activities.

<http://www.panasonic.com/global/corporate/management/procurement/policy.html>

For Suppliers

In the interest of ensuring Corporate Social Responsibility (CSR) in our supply chain, we have established a set of requests to our suppliers regarding CSR items as “For Suppliers,” which we expect our suppliers to observe.

1. Agreement with Panasonic’s Clean Procurement Policy
2. Product Quality and Safety
3. Environmentally Consciousness Management (Green Procurement)
4. Compliance and Fair Trade
5. Information Security
6. Safeguarding of Human Rights and the Health and Safety of Labor

For details, please see our “For Suppliers” regarding our procurement activities.

<http://www.panasonic.com/global/corporate/management/procurement/for-suppliers.html>

Responsible Executive and Framework

The person responsible is Senior Managing Director Yoshiyuki Miyabe. (as of July 2015)

The department responsible is the Global Procurement Company. Each of our group Companies and their business divisions and other affiliated companies has its own procurement department.

The Global Procurement Company is responsible for CSR procurement activities at the company-wide level. It works together with the group Companies and their business divisions and other affiliated companies to strengthen our efforts in this area.

Each Company and business division draws up plans to follow and promote the company-wide rules and manuals, in order to keep the PDCA cycle in motion. Issues that arise in this process are addressed by the conference and other opportunities composed of executives responsible for the procurement functions in each Company and business division, which devises appropriate solutions.

Regulations

Clean Procurement

We ask that all our suppliers endorse Fair and Appropriate Procurement Activities (Clean Procurement Declaration), and that they engage in fair business practices.

1. Fair Transaction on an Equal Basis
2. Selection of our Suppliers
3. Practicing Appropriate Procurement Activities
4. Appointment of procurement ombudsman (fair business hotline)

▶ Our Company (Clean Procurement Declaration) <http://www.panasonic.com/global/corporate/management/procurement/declaration.html>

Green Procurement

Collaboration across the Supply Chain

<http://www.panasonic.com/global/corporate/sustainability/eco/supplychain.html>

Compliance

Our company embraces the concept that “a company is a public entity of society.” We abide by the law in countries around the world, and we strive to promote business activities that are based on higher ethical views. In order to ensure that we procure products and services from our suppliers on a fair basis, we conduct periodic audits and training sessions for our employees. We conclude Standard Purchase Agreements with our suppliers that include the following terms.

Standard Purchase Agreement

- Abiding by the law
- Bribery of, or provision of other illegal political donations are strictly forbidden. Suppliers should not offer nor accept monetary gifts or entertainment that exceed social courtesy.
- Refraining from connections to anti-social forces, etc.

Information Security

To ensure the correct management and handling of information assets such as customer information, personal information, and information regarding technologies, quality, products, services, we ask suppliers to implement the same level of security as we do. Thus, we present to them our information security standards and provide information-security self-check sheets.

Human Rights, Labor, Health and Safety

Panasonic respects the human rights of our suppliers’ employees and strives to promote procurement activities that protect their working environment and health and safety. Currently, we have begun the process of formulating and testing tools that will allow us to measure the degree to which our suppliers abide by CSR principles.

We conclude Standard Purchase Agreements with our suppliers that include the following terms.

Items Required by the Standard Purchase Agreements

- Observance of sufficient consideration for employees’ human rights
- Provision of a safe and appropriate working environment
- No discrimination. Suppliers should strive to provide equal employment opportunities.
- Engagement in proactive, honest dialog with employees in an effort to build healthy relationships and resolve issues
- No usage of forced labor, child labor, illegal employment of foreign workers, or other illegal employment practices
- Employees’ working conditions, including wages and working hours, must be in keeping with the laws of the country, or region, of business activity
- Suppliers must require and ensure that their suppliers and subcontractors also abide by these principles
- If violations are discovered, they must be reported without delay, and swiftly addressed, etc.

▶ Response Regarding Conflict Minerals http://www.panasonic.com/global/corporate/sustainability/supply_chain/minerals.html

Related Links

- ▶ The Freedom of Association and Respect for the Right to Collective Bargaining
http://www.panasonic.com/global/corporate/sustainability/human_rights/approach/#freedom
- ▶ Initiatives Relating to the California Transparency in Supply Chains Act
http://www.panasonic.com/global/corporate/sustainability/human_rights/global_standards

Responsible Supply Chain: Response Regarding Conflict Minerals

Basic Stance on Conflict Minerals

The issues of conflict minerals* are considered important by Panasonic. These minerals are mined in the Democratic Republic of Congo (DRC) and neighboring countries (hereinafter, “the covered countries”), and their extraction funds organizations that violate human rights, cause serious harm to the environment, perpetrate corruption, and are otherwise involved in illegal activity.

To fulfill our social responsibilities in our procurement activities, our policy prohibits the usage of illegally obtained conflict minerals as raw materials.

In the rare event that such use is discovered, efforts aimed at to terminate any usage must be made without delay.

To this end, a notice was issued in December 2010 to the entire group requiring a thorough approach to non-use. In February 2011, efforts began to require checks of our major suppliers’ sources for procuring minerals.

However, in the covered countries, there are also companies and individuals engaged in legal business activities, with no connection to any illegal activities. We also must strive hard to ensure that such companies or individuals’ business activities and livelihoods are not harmed by our efforts to avoid using minerals that are illegally obtained.

To this end, we need to cooperate with a wide range of stakeholders, including countries, companies, and Non-profit organizations (NPOs) that are taking measures to build fair supply chains of minerals in the covered countries. Based on these concepts, Panasonic has been participating in the Organisation for Economic Cooperation and Development’s (OECD) Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas, which began in August 2011.

Alongside our involvement in this project, we are also engaged in other efforts aimed at the implementation of the OECD guidance, building management processes that conform to global standards, with the aim of contributing to international efforts to resolve the problem of conflict minerals.

* Tin, tantalum, tungsten, gold

Panasonic’s Systems for Dealing with Conflict Minerals

Panasonic is making efforts to build company-wide systems, with ultimate responsibility residing with the executive officer in charge of manufacturing and procurement. With the start of the four-company system in April 2013, we designated a person at each company to be in charge of investigating and reporting on conflict minerals. Under the aegis of these individuals, each company is making efforts to build systems and carry out investigations based on the characteristics of its own business.

Due Diligence Efforts

We communicate our own policies to our suppliers, and we also ask them to make reasonable efforts to become DRC conflict-free, and to make their own procurement from conflict-free smelters (CFS), to the extent possible.

Investigations of conflict minerals require the cooperation of all suppliers, and all the refiners/smelters they work with. To reduce the burden on suppliers, and to enhance the efficiency of such investigations, we have found it effective to use common investigating tools and explanatory materials. Based on this realization, Panasonic uses, as an investigative tool, the Conflict Minerals Reporting Template (CMRT) issued by the Conflict-Free Sourcing Initiative (CFSI). We are also active participants at investigative briefings held by JEITA’s (Japan Electronics and Information Technology Industries Association) Responsible Minerals Trade Working Group, where we work as a presenter. We make active use of manuals and other handbooks jointly prepared by Japanese automobile makers and the Japan Auto Parts Industries Association for conducting investigations.

Status of Investigations

In fiscal 2015 we strengthened our scrutiny of response details to increase the accuracy of our investigative results. If we find a clear contradiction within the details of a response, for example if the list of smelters includes a name that is not a smelter, we have been asking the suppliers for reaffirmation of the response details. The suppliers' response details have themselves been improving since fiscal 2014. As before, however, names still appear on the list of smelters that are companies but not smelters.

Regarding metals for which we receive the response "originated in the covered countries," so far we have not identified any minerals that appear to have been funding armed insurgents, but we continue our efforts to verify and identify all the smelters in the area. Furthermore, through our industry activities, we have urged smelters to acquire CFS certification. Our suppliers continue to perform due diligence, but in the rare event minerals are discovered to have been supportive of conflict, we are asking that these suppliers strive to change their suppliers, or take other steps toward non-use.

Participation in Forums on Implementing Due Diligence for Responsible Mineral Supply Chains

Beginning in 2011, Panasonic has been participating in OECD Due Diligence Guidance for Responsible Supply Chains of Minerals from Conflict-Affected and High-Risk Areas projects (currently, the Forum on Responsible Mineral Supply Chains). At the forum in November 2013, we learned about ongoing efforts toward conflict-free minerals procurement, including mines, exchanges, and traceability systems for responsible minerals procurement, in Rwanda, and ways to identify mines through analysis of mineral composition and generation. We also participated in the forum in Paris in May 2015, where we were able to exchange views with other interested persons and learn about effective approaches to the problem of conflict minerals.

Industry Cooperation Initiatives

Investigations of conflict minerals require the cooperation of all suppliers in the supply chain. Accordingly, Panasonic has been working with JEITA as co-chair and co-leader of the Responsible Minerals Trade Working Group, engaging in educational activities and efforts to make the investigative process more efficient through industry cooperation.

More specifically, we have been working with industry groups both inside and outside Japan and holding seminars and briefings about investigations to promote correct efforts regarding conflict minerals. We have checked information on smelters/refiners, and helped plan the IPC-1755 standards for the sharing of U.S. data on conflict minerals. In November 2013, JEITA's Responsible Minerals Trade Working Group teamed up with Japanese automakers to create the Conflict-Free Sourcing Working Group, in order to engage in dialog with the smelting industry and to accelerate efforts to verify information about smelters/refiners. Panasonic was also a participant in this activity.

Support for Efforts in Democratic Republic of Congo and Neighboring Countries

Panasonic has engaged in due diligence initiatives to fulfill its social responsibilities as a downstream company, but we think the most important development towards resolving the problem of conflict minerals would be the establishment of mechanisms for responsible procurement of minerals in the covered countries.

Based on this thinking, since March 2013, we have been participating, with industry groups, the U.S. government, and citizen groups, in the Public-Private Alliance for Responsible Minerals Trade (PPA).

The PPA supports efforts to create mechanisms and develop capabilities for certification and traceability of minerals transactions that are unrelated to any conflict in the Africa's Great Lakes region. At the same time, it creates a platform for dialog and cooperation between participating organizations, in the interest of realizing sustainable, responsible minerals trade in the region.

Panasonic is a participant in PPA, and supports efforts aimed at responsible minerals trading, aiming to make a contribution to healthy economic development in the region.

Related Link

► PPA Web site: <http://www.resolv.org/site-ppa/>

Support for Sustainable Development of the Covered countries

As Panasonic's corporate citizenship activity in this region, in 2010 we began the Panasonic NPO Support Fund for Africa, as a means of supporting and strengthening the public relations foundation for NPOs/NGOs working to resolve issues in African nations. This is our way of supporting organizations working to resolve issues in African nations. The list of organizations we have assisted includes Terra Renaissance, an NPO working to resolve issues of land mines, small arms and child soldiers in Uganda and the Democratic Republic of Congo and elsewhere (2011-2013). Organizations we supported in 2014 included the NPO Reborn Kyoto, which supports the economic self-reliance of women in Rwanda by providing job-training opportunities.

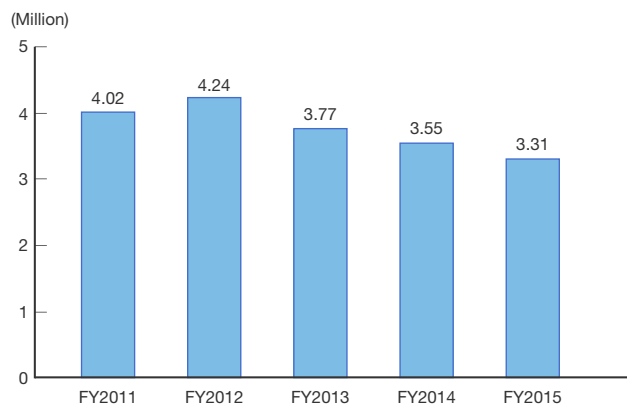
Dialog with NGOs

We are engaged in dialog with NGOs regarding handling of conflict minerals. In March 2015, we participated in an "ethical mobile phone campaign" seminar promoted by the international environmental NGO A Seed Japan, sharing our views on our handling of conflict minerals with representatives of corporations and NGOs. We also exchanged views regarding the importance of sector-cooperative efforts on the handling of conflict minerals. Going forward, we plan to continue this kind of dialog and cooperation.

List of Social Performance Data

Customer Relations

Number of Inquiries at the Customer Care Center (for Individual Customers) Over Time



Repair Service Organization

Number of Service Locations of the CS Company, Panasonic Consumer Marketing Co., Ltd.:
103 locations throughout Japan (as of March 2015)

Number of Service Locations of Panasonic Eco Solutions Techno Service Co., Ltd.:
40 locations throughout Japan (as of March 2015)

Numbers of Repair Service Sites (Overseas Numbers for FY2014)

Region	Number of Repair Service Sites
Japan	103
North America	1,900
Latin America	1,374
Europe & CIS	791
Southeast Asia & Pacific	1,733
India, South Asia, Middle East & Africa	1,133
China & Northeast Asia	849

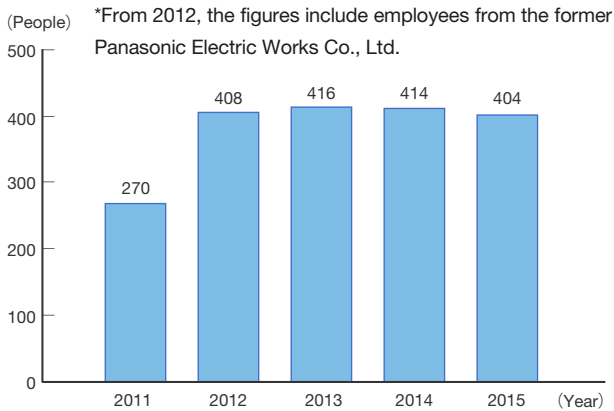
*Japan: CS Company, Panasonic Consumer Marketing Co., Ltd.



Initiatives Related to Improving Customer Satisfaction

Promoting the Acquisition of Consumer Affairs Advisor Credentials

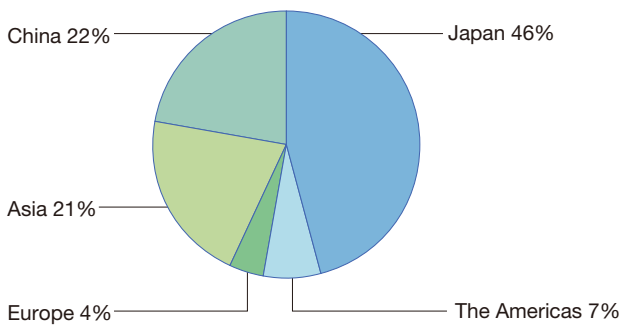
Number of Employees Certified over Time (as of April 2015)



Employees

Proportions of Employees by Region

Total Number of Employees on a Global Consolidated Basis: 254,084 (as of the end of March 2015)



Numbers of Trainees and Time Spent on Training

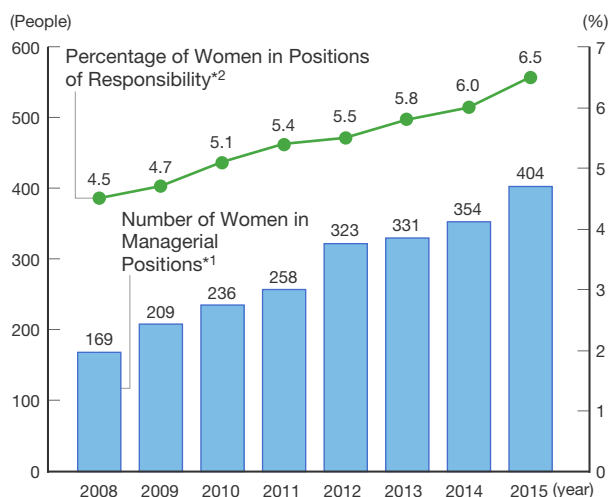
In FY2015, participation in human resources development at the Human Resources Development Company totaled 55,900 person-days.

The participation broken down by type of training was as follows:

- Global Management Training: 6,700 person-days
- Corporate Technology Training: 15,700 person-days
- Manufacturing Training: 19,500 person-days
- Marketing Development Training: 3,700 person-days
- Skill-Change Training: 10,300 person-days

*Person-days = number of people × number of days in training

Number of Women in Managerial Positions, Percentage of Women in Positions of Responsibility

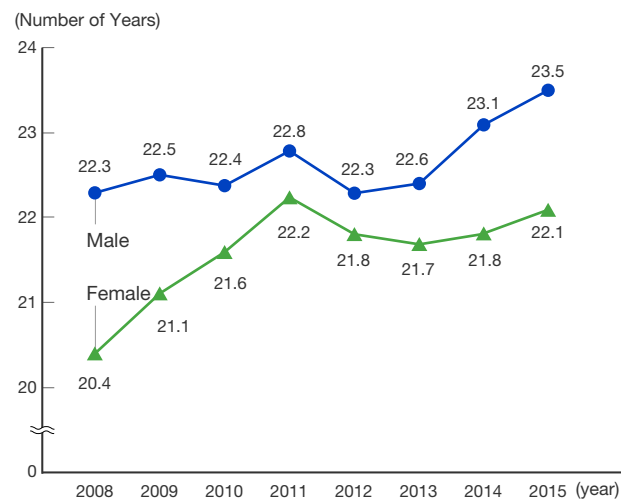


Note: Figures as of April in each year

*1: Managerial position is defined as section leader or higher. Total of Panasonic Corporation and its key domestic affiliates (excluding SANYO Electric Co., Ltd. [SANYO], and including the former Panasonic Electric Works Co., Ltd. [PEW] from 2012)

*2: Positions of responsibility include positions such as chief or assistant chief. Total of Panasonic Corporation and its key domestic affiliates (excluding SANYO, and including the former PEW from 2012)

Average Number of Years of Service



Notes:

Figures as of March in each year

Total of Panasonic Corporation and its key domestic affiliates (excluding SANYO, and including the former PEW from 2012)

Employment of Workers with Disabilities (Japan)

	June 2009	June 2010	June 2011	June 2012	June 2013	June 2014
Panasonic Corporation	1.93%	2.01%	2.07%	2.04%	2.15%	2.16%
Key Group Member Companies	2.16%	2.10%	2.08%	2.11%	2.21%	2.24%
Group (whole)	2.00%	2.07%	2.08%	2.06%	2.17%	2.18%

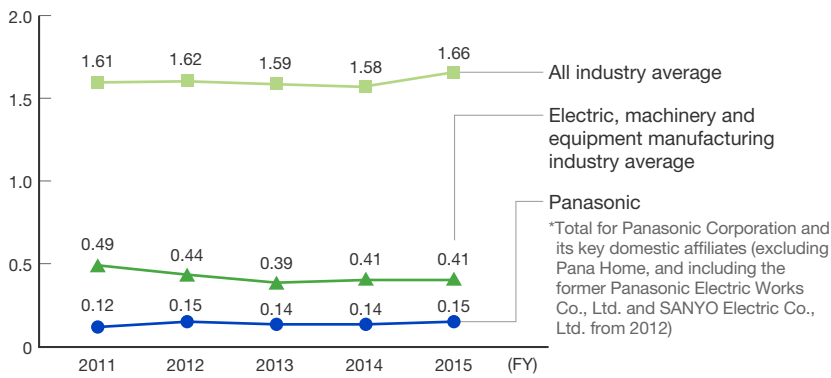
Special Subsidiaries (employee figures are as of June 2014)

Company Name	Year of Establishment	Number of Employees (Number of Persons with Disabilities)	Description of Business
Panasonic Kibi Co., Ltd.	1980	82 (34)	Assembly of video camera LCD units, video accessories
Panasonic Katano Co., Ltd.	1981	39 (31)	Assembly of avionics products, inspection and packaging of AV accessories
Panasonic Associates Shiga Co., Ltd.	1994	54 (31)	Assembly of electronic circuits (for massage chairs, shavers, etc.)
Panasonic Ecology Systems Kyoei Co., Ltd.	1980	31 (20)	Assembly of ventilating fan parts, printing of user manuals
Sanyo Heart Ecology Co., Ltd.	1998	73 (43)	Growing/selling orchids, distribution of company-internal mail
Harima Sanyo Industry Co., Ltd.	1982	44 (22)	Assembly of vacuum cleaner parts, maintenance of internal environment
Sendai Sanyo Industry Co., Ltd.	1992	41 (14)	Manufacture of LED products, light sensors

Work-related Accidents

Incident Rate of Work-related Accidents

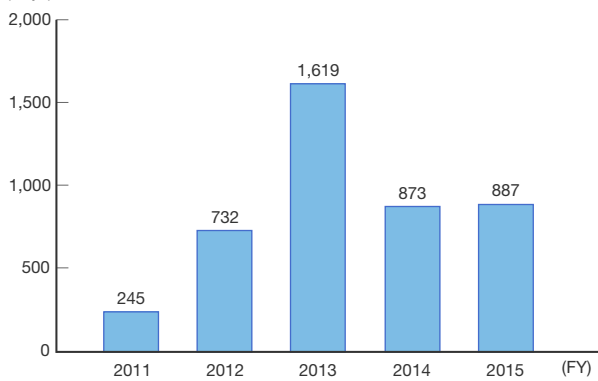
(Number of accidents per one million working hours)



Source: "All industry average" and "Electric, machinery and equipment manufacturing industry average" figures were from the website of the Ministry of Health, Labour and Welfare, Japan.

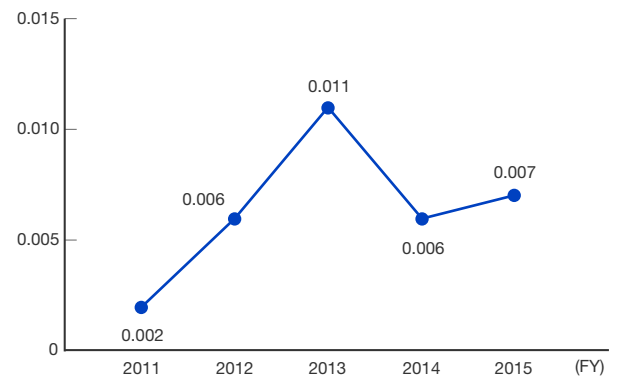
Time Lost due to Work-related Accidents

(Days)



Note: Total time-lost of victims due to labor accidents

Severity Rate of Accidents

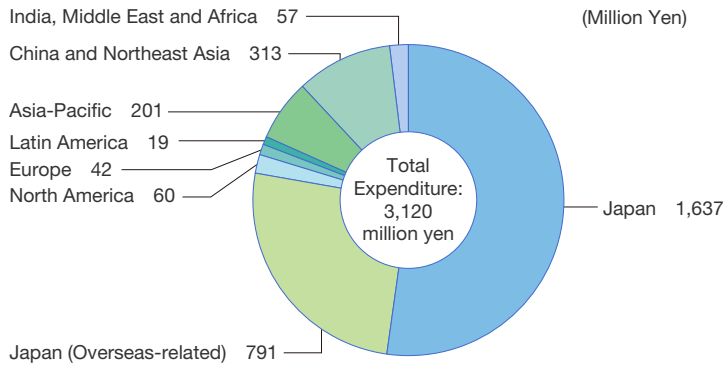


Note: Proportion of time-lost per 1,000 hours of total working hours

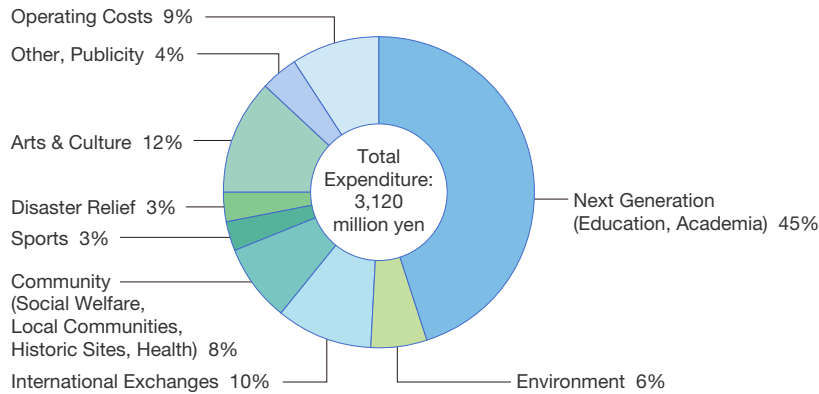


Spending on Corporate Citizenship Activities

Spending on Activities by Region (FY2015)



Spending on Activities by Area of Activity (FY2015)



Types of Donations

(million yen)

Type of Donation	Amount (million yen)	Percentage of Total Costs
Charitable Donations	886	28%
Community Investments	2,093	67%
Commercial Initiatives	141	5%
Total	3,120	100%

Methods of Donation

(million yen)

Method of Contribution	Amount (million yen)
Cash contributions	843
Time: employees volunteering during paid working hours	244
In-kind giving: product or service donations, projects/partnerships, or similar	1,719
Management overhead	314
Total	3,120



Independent Assurance Report

To the Board of Directors of Panasonic Corporation

We were engaged by Panasonic Corporation (the “Company”) to undertake a limited assurance engagement of the environmental indicators listed in the table below for the period from April 1, 2014 to March 31, 2015 (the “Indicators”) included in its Sustainability Data book 2015 posted in the Company’s website (www.panasonic.com/global/corporate/sustainability/downloads.html) (the “Data book”) for the fiscal year ended March 31, 2015.

Table: The Indicators subject to independent assurance and corresponding page number in the Data book

Indicators	Page	Indicators	Page
CO ₂ emissions from the use of major products	33	Total GHG emissions (CO ₂ -equivalent) in production activities (Scope 2 emissions)	38
Size of Contribution in Reducing CO ₂ Emissions through Energy-saving Products	33	CO ₂ Emissions from Non-manufacturing Sites	38
Size of Contribution in Reducing CO ₂ Emissions through Energy-creating Products	34	CO ₂ emissions from domestic transportation within Japan	39
CO ₂ emissions in production activities	35	Total Wastes Including Revenue-generating Waste	53
Size of Contribution in Reducing CO ₂ Emissions through Production Activities	36	Water Consumption in Production Activities	54
Emissions (CO ₂ -equivalent) of GHGs Other than CO ₂ from Energy Use in Production Activities	37	Release/Transfer of Substances Requiring Management	61
Total GHG Emissions (CO ₂ -equivalent) in Production Activities (Scope 1 emissions)	38		

The Company’s Responsibility

The Company is responsible for the preparation of the Indicators in accordance with its own reporting criteria (the “Company’s reporting criteria”), as described in the Company’s website (www.panasonic.com/global/corporate/sustainability/downloads.html), which are derived, among others, from the Sustainability Reporting Guidelines version 4.0 of the Global Reporting Initiative and Environmental Reporting Guidelines of Japan’s Ministry of the Environment.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the Indicators based on the procedures we have performed. We conducted our engagement in accordance with ‘International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information’, ‘ISAE 3410, Assurance Engagements on Greenhouse Gas Statements’, issued by the International Auditing and Assurance Standards Board, and the ‘Practical Guidelines for the Assurance of Sustainability Information’ of the Japanese Association of Assurance Organizations for Sustainability Information. The limited assurance engagement consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Data book, and applying analytical and other procedures, and the procedures performed vary in nature from, and are less in extent than for, a reasonable assurance engagement. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviewing with the Company’s responsible personnel to obtain an understanding of its policy for the preparation of the Data book and reviewing the Company’s reporting criteria.
- Inquiring about the design of the systems and methods used to collect and process the Indicators.
- Performing analytical reviews of the Indicators.
- Examining, on a test basis, evidence supporting the generation, aggregation and reporting of the Indicators in conformity with the Company’s reporting criteria, and also recalculating the Indicators.
- Visiting to the Company’s 2 production sites and 1 business domain company selected on the basis of a risk analysis.
- Evaluating the overall statement in which the Indicators are expressed.

Conclusion

Based on the procedures performed, as described above, nothing has come to our attention that causes us to believe that the Indicators in the Data book are not prepared, in all material respects, in accordance with the Company’s reporting criteria as described in the Data book.

Our Independence and Quality Control

We have complied with the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which includes independence and other requirements founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. In accordance with International Standard on Quality Control I, we maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Osaka, Japan
July 29th, 2015

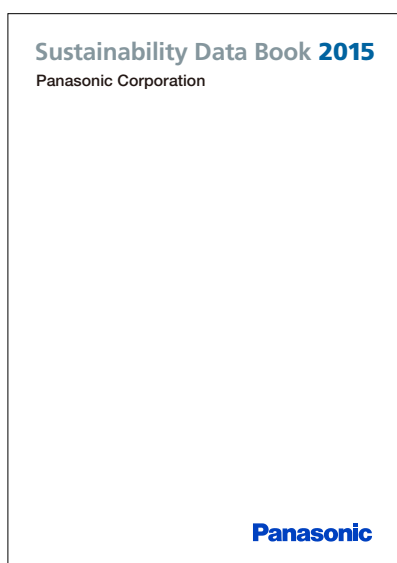
Reports on Business Activities of Panasonic

Please visit our Sustainability website for the detailed information on our CSR and environmental initiatives, and IR Information website for our business strategies and financial data intended for shareholders and investors.

Sustainability website

<http://www.panasonic.com/global/corporate/sustainability.html>

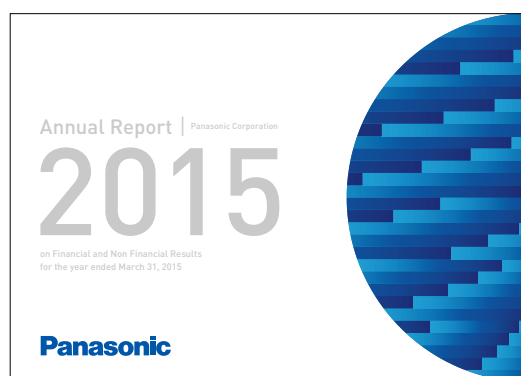
Sustainability Data Book [PDF] is also available on this website



IR Information website

<http://www.panasonic.com/global/corporate/ir.html>

Annual Report [PDF], covering business strategy; financial situation; and ESG (initiatives relating to the environment, society, and governance) among others, is also available on this website



Panasonic

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