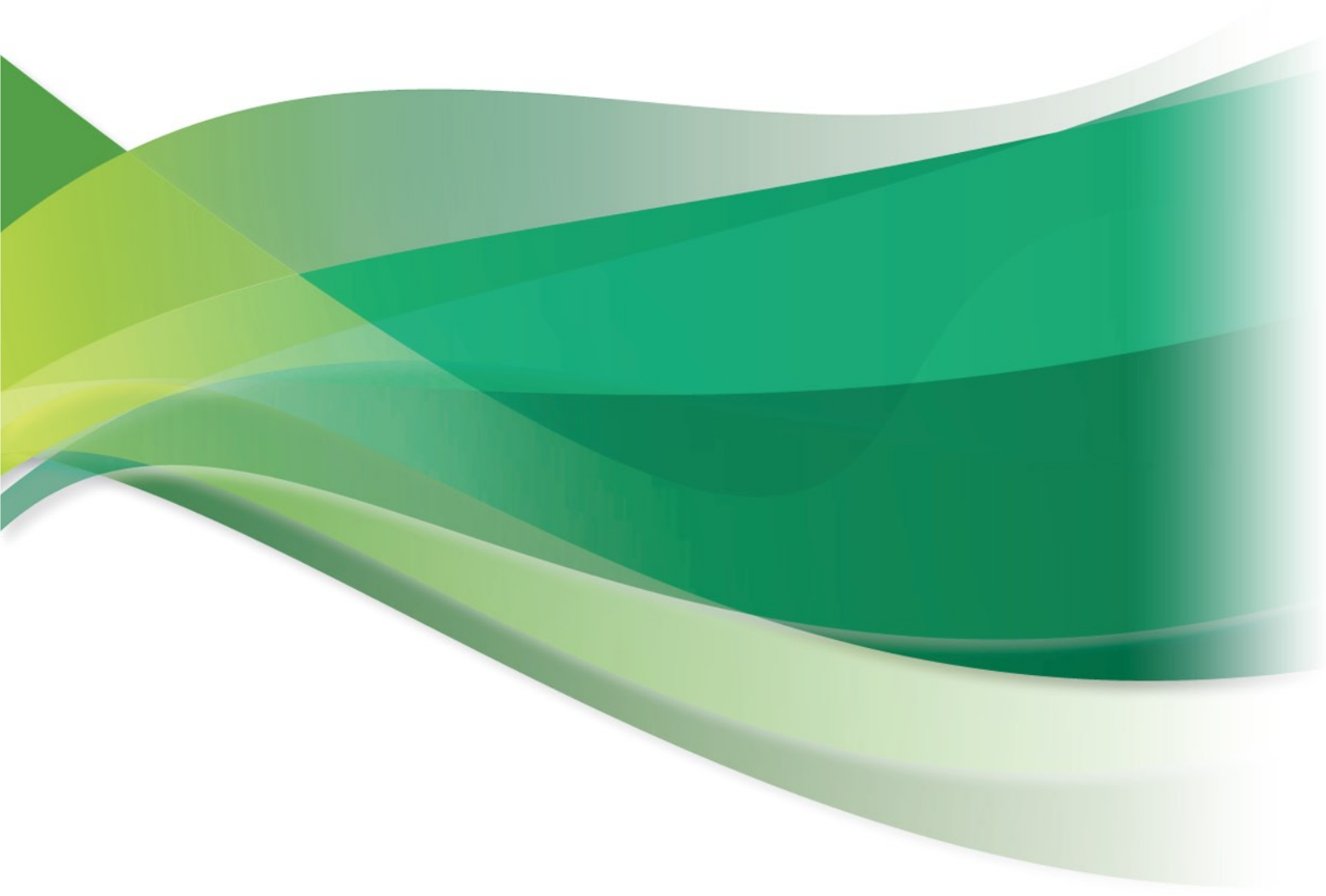
‘eco ideas’ Report 2011

Panasonic Group



Panasonic
ideas for life

Company profile

As of March 31, 2011

Company Name: Panasonic Corporation

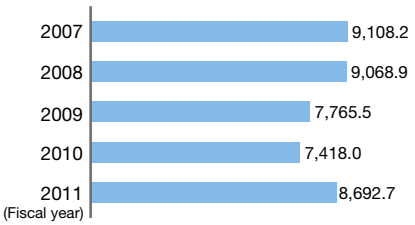
Head office Location: 1006 Kadoma, Kadoma City,
Osaka 571-8501, Japan
Tel: +81-6-6908-1121

Founded: March, 1918
(incorporated in December, 1935)

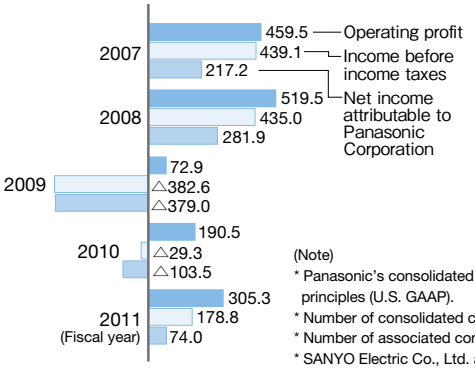
Representative: Fumio Ohtsubo, President

Common Stock: 258.7 billion yen

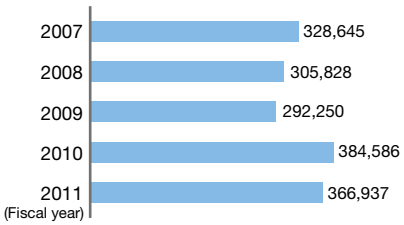
Sales (billions of yen)



Profit (Loss) (billions of yen)

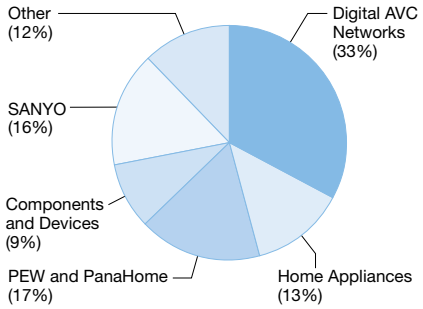


Number of employees (persons)

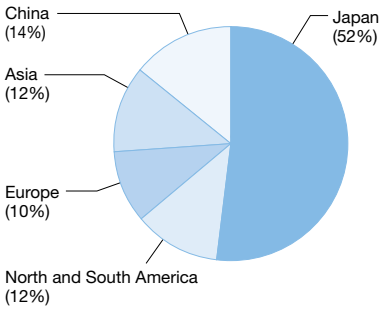


(Note)
* Panasonic's consolidated accounting conforms to U.S. generally accepted accounting principles (U.S. GAAP).
* Number of consolidated companies: 634 (including parent companies)
* Number of associated companies under the equity method: 114
* SANYO Electric Co., Ltd. and its subsidiaries became subsidiaries of Panasonic in December 2009. The operating results of SANYO Electric Co., Ltd. and its subsidiaries are not included in Panasonic's consolidated financial statements for the period before December 2009.
* The symbol '△' indicates loss.

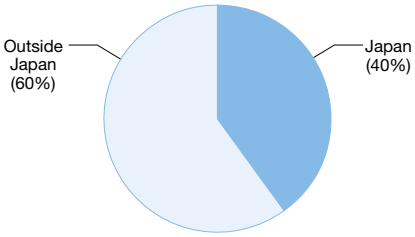
Sales by business segment (fiscal 2011)



Sales by region (fiscal 2011)



Rate of employees by region (at the end of fiscal 2011)



Main products and services

As of March 31, 2011

Panasonic Group's main products and services by business segment are as below.

Digital AVC Networks

Plasma and LCD TVs, Blu-ray Disc and DVD recorders, camcorders, digital cameras, personal and home audio equipment, SD Memory Cards and other recordable media, optical pickup and other electro-optic devices, PCs, optical disc drives, multi-function printers, telephones, mobile phones, facsimile equipment, broadcast- and business-use AV equipment, communications network-related equipment, traffic-related systems, car AVC equipment, healthcare equipment, etc.

Home Appliances

Refrigerators, room air conditioners, washing machines and clothes dryers, vacuum cleaners, electric irons, microwave ovens, rice cookers, other cooking appliances, dish washer/dryers, electric fans, air purifiers, electric heating equipment, electric hot water supply equipment, sanitary equipment, electric lamps, ventilation and air-conditioning equipment, compressors, vending machines, electric motors, etc

PEW and PanaHome

Lighting fixtures, wiring devices, personal-care products, health enhancing products, water-related products, modular kitchen systems, interior furnishing materials, exterior finishing materials, electronic materials, automation controls, detached housing, rental apartment housing, medical and nursing care facilities, home remodeling, residential real estate, etc.

Components and Devices

Semiconductors, general components (capacitors, tuners, circuit boards, power supplies, circuit components, electromechanical components, speakers, etc.), batteries, etc.

SANYO

Solar photovoltaic systems, lithium-ion batteries, optical pickups, capacitors, digital cameras, LCD TVs, projectors, showcases, commercial air conditioners, room air conditioners, compressors, medical information systems, biomedical equipment, washing machines, refrigerators, car navigation systems, etc.

Other

Electronic-components-mounting machines, industrial robots, welding equipment, bicycles, imported materials and components, etc.

Contents

Publication objective and editorial policy

- Panasonic started publishing the Environmental Data Book in fiscal year 2006 to supplement information disclosed in the Panasonic Report for Sustainability. In consideration of the increasing importance of the environmental sustainability management, Panasonic changed the name of the report to the 'eco ideas' Report from fiscal 2010 to report our initiatives towards the environment and the annual data.
- This report is composed of contents based on the Green Plan 2018, an environmental action plan aiming to achieve our group-wide vision looking to the 100th anniversary of our founding, and the final settlements of the year in terms of environmental sustainability management as well as initiatives at frontlines are introduced in detail.
- Data reported in this report refers to a global result and the name of a country or region is indicated when disclosing data specific to a particular country or region. More detailed information or those by region is disclosed in the Environmental Activities page on our website
  ▶http://panasonic.net/eco/

Reporting period and boundary

Reporting period: Fiscal Year 2011 (April 1, 2010 – March 31, 2011)
Organization covered: Panasonic Corporation and consolidated subsidiaries

- Data related to manufacturing sites covers all manufacturing sites (346 sites) that have established Environmental Management Systems.
- In fiscal 2011, SANYO Electric and Panasonic Liquid Crystal Display (PLD) were newly included in the scope of data.
- When companies included in the scope of tabulation are changed, data is in principle corrected in a retrospective manner.
- Data without any indications of fiscal years or regions refers to global results in fiscal year 2011.

Reference guidelines

- Environmental Reporting Guidelines 2007 by the Ministry of the Environment, Japan
- Sustainability Reporting Guidelines 2006 by the Global Reporting Initiative (GRI)

Top Message

First I would like to express my sincere sympathy to those affected by the Great East Japan Earthquake. At the present time, reconstruction efforts are gradually beginning to be made, and we believe that we must go forward looking at this as a starting point toward building a new Japan. In the wake of the recent disaster, there is a great need to realize a “disaster-resistant society,” one which is better prepared than in the past. There is also an urgent need to address the shortage of electric power. Panasonic is determined to take a leading role in the reconstruction effort using the technology it has accumulated over the years, and offering solutions related to a “sense of security and safety as well as energy,” solutions that only Panasonic can offer.

At the same time, if we look at what is happening around the world, we find that, while emerging countries are achieving spectacular development and many people are striving to attain a higher standard of living, we are also facing many serious social problems, such as the depletion of resources and energy, shortages of food and water, and loss of biodiversity. In this regard, we need to speed up our efforts toward achieving sustainable development throughout society. Panasonic has always followed a management philosophy of contributing to society through its business activities, and has established a close relationship with people around the world by providing truly useful everyday products. In light of the problems we are facing today, we gave consideration to the role we should play, and decided to become the No.1 Green Innovation Company in the Electronics Industry, looking to 2018, the 100th anniversary of our founding. With this vision, we will focus on energy solutions for the entire home, building and town through energy creation, energy storage, energy saving, and energy management, and we will make proposals to people around the world for sustainable, secure, and comfortable green lifestyles. In this way, we want to bring about an environmental revolution with “lifestyles” as the starting point. In addition, we will make continued efforts to reduce CO_2 emissions in all processes of our business activities and work to achieve recycling-oriented manufacturing to make the best use of resources.

In April of this year, Panasonic Electric Works Co., Ltd., and SANYO Electric Company, Ltd., became wholly-owned subsidiaries of Panasonic Corporation. With this new organization, we will make the most of the unique abilities and talents of all of our employees worldwide to create more value in a wider area, and thus integrate our environmental contribution with our business growth. Going forward, we will continue to open our hearts and minds to the needs of the people in order to fulfill our role as a public entity of society.

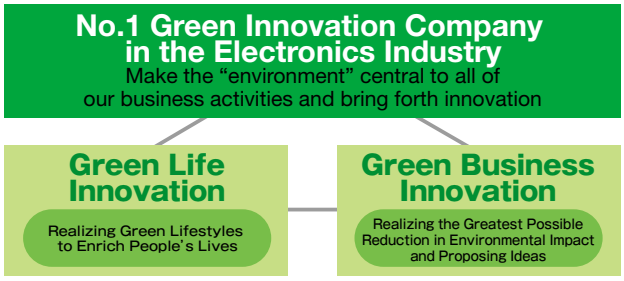
Panasonic Corporation
President
Fumio Ohtsubo

Vision Looking to the 100th Anniversary of Our Founding

As global warming becomes more serious, and there arises concern about the depletion of resources, and about the ecosystem being in crisis, global environmental issues have become the biggest social problems we have to address as a global community. We have long been carrying out our business activities following a management philosophy of "contributing to society." In this regard, we at Panasonic want to lead the industry in bringing about a "green revolution," and we also want to make a contribution starting in an area which affects the day-to-day lives of people, a contribution worthy of Panasonic. Having such a goal firmly in mind, we set our vision looking to the 100th anniversary of our founding, and announced it at our Annual Management Policy Meeting on January 18, 2010. By fiscal 2019, the 100th anniversary of our founding, we aim to become the No. 1 Green Innovation Company in the Electronics Industry. We will make the "environment" central to all of our business activities and bring forth "Green Life Innovation" and "Green Business Innovation."

Vision ▶http://panasonic.net/vision/

■Vision looking to the 100th anniversary of our founding



When we made our vision looking to the 100th anniversary of our founding, we set down "Indexes for the No.1 Green Innovation Company in the Electronics Industry," consisting of two kinds of management indexes. The first is "Global Excellence Indexes," which contain our global management targets, such as our sales and operating profit ratio. The second is "Green Indexes," which consist of four items, namely our "contribution to reducing CO_2 emissions," our "contribution to recycling resources," the "size of our Energy Systems Business," and the "percentage of sales for No.1 eco-conscious products." We will work to always meet the "Global Excellence Indexes," and at the same time we aim to become industry No.1 for the four items in the "Green Indexes" taken as a whole. By simultaneously pursing these indexes, we will integrate our environmental contribution and our business growth throughout the entire Group.

■Indexes for No.1 Green Innovation Company in the electronics industry

Be industry No.1 in **Green Indexes**		Always meet **Global Excellence Indexes**
• Contribution to reducing CO_2 emissions • Contribution to recycling resources • Size of Energy Systems Business • Percentage of sales for No.1 eco-conscious products	+	• Sales: 10 trillion yen or more • Operating profit ratio: 10% or more • ROE: 10% or more • Having multiple key products with a No.1 global market share

Toward the attainment of our 100th anniversary vision, we have renewed our 'eco ideas' Declaration to focus on 'eco ideas' for Lifestyles and 'eco ideas' for Business-styles.

■Our 'eco ideas' Declaration

The Panasonic Group strives to be a Green Innovation Company with a global perspective

'eco ideas' for Lifestyles

We will promote lifestyles with virtually zero CO_2 emissions all throughout the world

'eco ideas' for Business-styles

We will create and pursue a business-style which makes the best use of resources and energy

For the period from fiscal 2011 to 2013, during which we will take the first steps toward achieving the vision looking to the 100th anniversary of our founding, we will implement our midterm management plan, GT12 (Green Transformation 2012) to make a paradigm shift for growth and to lay the foundation to be a Green Innovation Company. During those three years we will strive to increase our profitability and make more environmental contributions through the growth of our six key businesses including our flagship Energy System Business, thereby meeting the Global Excellence Indexes and laying the groundwork to become No. 1 in terms of Green Indexes.

Moreover in April 2011, we made Panasonic Electric Works and SANYO Electric our wholly-owned subsidiaries, with a view to speeding up and maximizing synergy creation in order to achieve the GT12 plan. Based on this new organizational structure, we will carry out the entire Panasonic Group's reorganization and promote a new growth strategy. Starting from January 2012, under the new business domain organization, we will accelerate the expansion of our business related to photovoltaic power generation, lithium-ion batteries, energy management systems, etc.

In fiscal 2011, we formulated the Green Plan 2018 as our new environmental action plan. In order to achieve the 2018 targets set for various environmental items including Green Indexes, all our Group employees will proactively conduct environmental activities.

For these environmental initiatives to bring about great innovations, we need to have active communication, where we put forth various ideas one after the other and receive frank opinions from all the stakeholders involved. Panasonic calls such relations "'eco ideas' Relations (eR)," and by means of activities such as the 'eco ideas' Forum held on October 6, 2010, it has been conducting a range of initiatives to communicate more with its stakeholders through various opportunities.

Midterm Management Plan ▶http://panasonic.net/vision/midterm/
Annual Business Policy Fiscal 2012 ▶http://panasonic.net/vision/amp/

Environmental Action Plan – Green Plan 2018

Green Plan 2018 is Panasonic's environmental action plan that outlines initiatives for all Panasonic Group employees to carry out. Following our previous action plan, the Green Plan 2010, which was established in 2001 and completed in fiscal 2010, our new Green Plan 2018 provides a clear action plan to take our company forward from fiscal 2011 through fiscal 2019. Our action plan consists of a set of goals and targets including the four core items from our Green Indexes, as well as goals for water conservation, use of chemical substances, and other environmental challenges such as biodiversity. Panasonic employees are committed to the Green Plan 2018 and we will continue to work together with everyone in society to address shared global environmental issues.

■ Concept of Green Plan 2018

Of total CO_2 emissions from our business activities, emissions from the actual use of our products by customers account for a large proportion. We will cut CO_2 emissions by setting targets to reduce the amount of CO_2 emitted from the use of our products in people's daily lives, in addition to endeavoring to reduce emissions from our production activities across the world. Specifically, we will deliver even more energy solutions by providing energy-creating/storing equipment and energy management systems, and also by fostering business related to eco-cars. We aim for CO_2 emissions from our business activities to reach a peak in 2018 and then decline by providing more advanced products and systems towards the global minimization of CO_2 emissions.

Since fiscal 2011 we have also been enhancing measures to deal with the depletion of resources. We are committed to decreasing the amount of resources used and increasing recycled resources as our basic policy, and are pursuing recycling-oriented manufacturing from the procurement of materials and through the design, manufacture, and transportation of products. As for the recycling of waste from factories, which we have been promoting by setting specific targets, we will further enhance activities outside Japan while continuing the activities we started in fiscal 2011 to further increase the percentage of recycled resources within the total resources used by our factories.

Water will increase its importance as a resource. In response, we will globally foster the recycling of water within our factories, in addition to continuing to reduce the use of water. We will also develop more products that will contribute to water saving and recycling.

As for the management of chemical substances, we have been implementing measures based on an initiative to target all countries, including those where the use of chemical substances is not regulated by law. For example, for the RoHS Directive enforced in Europe, we have met the criteria earlier than planned and on a global scale. Towards 2018 we will of course identify all the chemical substances used in our products and at our factories, assess their environmental impacts, and voluntarily reduce or discontinue the use of chemical substances with significant environmental impact.

Although we have been addressing biodiversity in our social contribution activities, we will begin implementing measures to conserve biodiversity in our business activities towards 2018, focusing on the following three fields: land use, procurement, and products.

With regard to our No. 1 eco-conscious products, we have been globally fostering development activities to increase the number of eco-conscious models. However, for CO_2 emissions reduction, it is essential that these products are actually used by customers. We will foster the development of No. 1 eco-conscious products using more strict criteria while promoting the sales of these products in every category. We aim to double the sales share of these products in our total sales by 2018, compared to the fiscal 2010 level.

These targets cannot be achieved by Panasonic alone. We will ask for the understanding of all our partner companies and build closer relations with them to accelerate our contributions to the environment. Moreover, we will foster the Panasonic ECO RELAY for Sustainable Earth campaign in which employees of the Panasonic Group will cooperate with people across the globe. We will foster collaboration with society at large in a range of aspects, including the development of human resources and proposals for green lifestyles.

Vision and Strategy

■Details of Green Indexes

Items				Results	Targets			
				FY2011	FY2012	FY2013	FY2019	
Contribution to reducing CO_2 emissions	Size of contribution in reducing CO_2 emissions			35.18 million tons	37.00 million tons	50.00 million tons	・Increase the size of contribution in reducing CO_2 emissions to 120 million tons ・Make net CO_2 emissions peak and decline thereafter (Emissions from production activities and product use)	Be industry No.1 as a whole
		Products		33.07 million tons	35.00 million tons	48.30 million tons		
			Energy saving	31.17 million tons	32.00 million tons	45.00 million tons		
			Energy creation	1.90 million tons	3.00 million tons	3.30 million tons		
		Production activities		2.11 million tons	2.00 million tons	1.70 million tons		
Contribution to recycling resources	Total recycled resources used/Total resources used			13.6%	>12% in FY2013		>16%	
	Waste recycling rate			97.4%	98.5%	≥99%	≥99.5%	
Size of Energy Systems Business				¥550.8 billion	¥850 billion in FY2013		¥3 trillion or more	
Percentage of sales for No.1 eco-conscious products				Approx. 10%	30% in FY2019 (Double FY2010 level)			

■Details of Green Plan 2018

Targets for 2018		Our Actions	Page(s)
CO_2 Reduction	Make net CO_2 emissions peak and decline thereafter (Emissions from production activities and product use)	● Maximize a size of contribution in reducing CO_2 emissions from production activities and product use (120 million tons compared to FY 2006) ● Reduce CO_2 emissions per basic unit in logistics (Reduction in CO_2 emissions per basic unit of weight: By 46% or more compared to FY 2006) ● Reduce CO_2 emissions from offices (Self-owned office buildings in Japan: Reduction by 2% or more on yearly average) ● Promote CO_2 reduction in cooperation with procurement partners ● Promote the Business of Energy Conservation Support Service for Entire Factory	9-16, 32
	Expand the sales of Energy Systems Business to three trillion yen or more	● Globally develop energy management systems for the entire home and building ● Win the world's top-class share in solar cell business (Top three rank in 2015) ● Win the world's top share in fuel cell cogeneration systems ● Globally expand stationary lithium-ion battery systems ● Vastly expand eco-car related business (Batteries, thermal management systems, power supply management systems and power charging infrastructure)	10, 12
Resources Recycling	Pursue the recycling-oriented manufacturing to make the best use of resources	● Reduce total resources used and increase recycled resources used (Ratio of total recycled resources used to total resources used: more than 16%) ● Achieve Zero Waste Emissions from production activities at all sites (Waste recycling rate: 99.5% or more) ● Promote resources recycling together with procurement partners	17-21, 32
Water	Minimize the amount of net water consumption	● Increase products to save water and contribute to water recycling ● Reduce water consumption in production activities and increase the use of recycled water	22
Chemical Substances	Minimize environmental impact caused by chemical substances	● Develop alternative technologies for environmentally hazardous substances ● Discontinue the use of substitutable environmentally hazardous substances in products ● Minimize environmentally hazardous substances released from factories	23-25, 32
Biodiversity	Identify impact on biodiversity and contribute to conservation	● Increase products contributing to the biodiversity conservation ● Encourage greening in business sites and surrounding areas ● Promote the sustainable use of forest resources ● Promote biodiversity conservation together with procurement partners	26
Increase the percentage of sales for No.1 eco-conscious products to 30% (Double FY 2010 level)		● Provide top-class eco-conscious products in all business areas ● Promote eco marketing firmly rooted in each region and country	7
Increase environmental contribution through collaboration with stakeholders		● Research and propose green lifestyles ● Foster human resources leading green innovation ● Promote Panasonic ECO RELAY for Sustainable Earth ● Provide environmental education to two million children around the world ● Plant ten million trees around the world together with stakeholders ● Accelerate environmental contribution through collaboration with suppliers	27-32

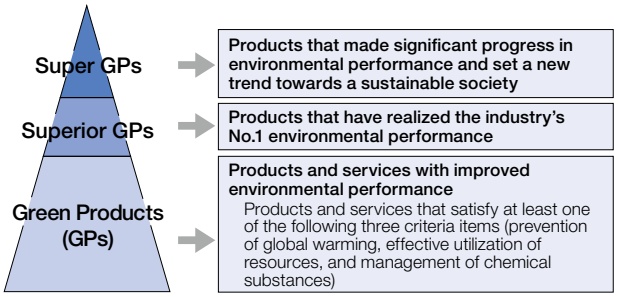
Foundation of Activity Promotion (Products)

Initiatives for eco-conscious products (Green Products)

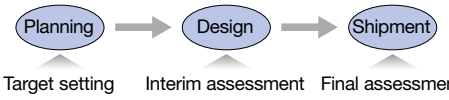
Panasonic uses a product assessment system that evaluates the environmental impacts of our products and services starting at the planning and design stages. Based on our criteria, we accredit our products and services that achieve high environmental performance as Green Products (GPs). Furthermore, we accredit our products that have achieved top environmental performance in the industry as Superior GPs. Products with trend-setting environmental performance toward achieving a sustainable society are accredited as Super GPs.

In the GP assessment system, 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. From fiscal 2012 our accreditation criteria will be enhanced with the product performance in water conservation and biodiversity to enable a wider range of GPs.

■ Green Product accreditation criteria



■ Green Product assessment system



Product Environmental Assessment (Version 6)		
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, etc.
	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*		Global warming, acid rain, air pollution
Information management		Green procurement, information provision across the supply chain, etc.

Laws/regulations and Panasonic's criteria, guidelines, and environmental action plan

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

No.1 eco-conscious products (Superior GPs / Super GPs)

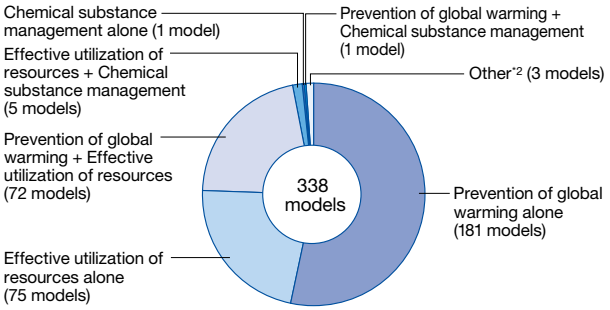
After first certifying 19 models in fiscal 2005, we achieved 338 Superior GP models in fiscal 2011 as a result of promoting Superior GP development. In order to maintain the Industry No. 1 state as long as possible, we also raised our standards in fiscal 2011 to gain a 10% and more eco-performance advantage compared to competitors when products are launched. We will work to maintain and expand the number of Superior GPs while focusing on increasing the sales ratio of Superior GPs. Toward achieving one of our Green Indexes, which is the 2018 target to increase the percentage of sales for No.1 eco-conscious products to 30%, we achieved approx. 10% in fiscal 2011.

In addition, the HIT® solar cell module (HIT-N240SE10), which achieved the world's No.1*1 cell conversion efficiency of 21.6%, was accredited as a Super GP.

*1 As of December 3, 2010 (surveyed by Panasonic).

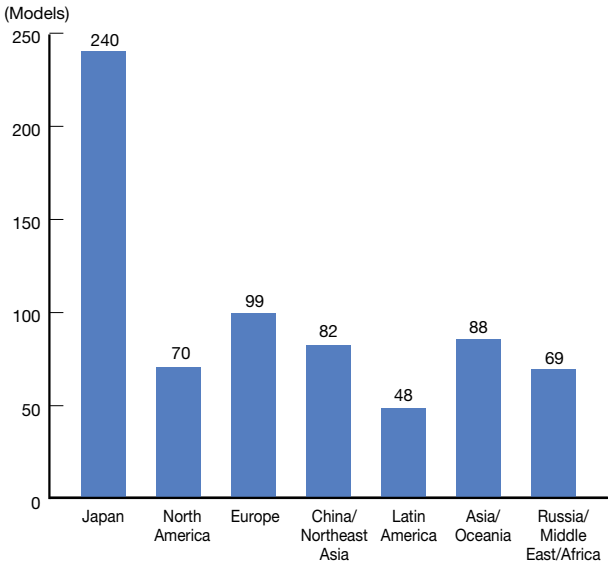
List of certified Green Products
▶http://panasonic.net/eco/products/gp/list/

■ Number of Superior GP models (by feature)



*2 Other products that have unique environmental performance.

■ Number of Superior GP models (by region)*3



*3 Global models sold in multiple regions are counted as one in each region.

Foundation of Activity Promotion (Production activities)

Initiatives for eco-conscious factories - Green Factories

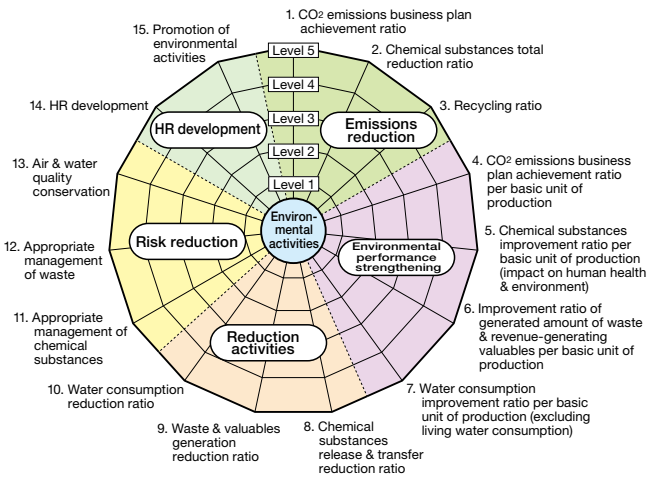
We aim to reduce our environmental impact to as close to zero as possible in all our factories worldwide, and our Green Factories (GFs) are engaged in activities that will help us achieve this goal. Specifically, we include plans to reduce the environmental impacts in our production activities focusing on our factories' CO_2 emissions, total waste generation, and chemical substance releases and transfers in our midterm business plan and business goals, and implement those plans as well as progress control.

We started our internal GF accreditation system in fiscal 2006 to evaluate the activities of our factories and we certify factories that meet certain standards as GFs. After achieving a fiscal 2011 target of 90% or higher GF accreditation rate for all factories in fiscal 2009 and 2010, we upgraded the GF accreditation system to the GF assessment system to further improve the standard of measures implemented across our factories.

Under the upgraded system, our factories evaluate themselves on a one-to-five scale across 15 environmental activity items classified into five groups, and visualize the progress to address issues and make improvements. In addition to the existing indicators of "emissions reduction" and "reduction activities," "environmental performance strengthening," "risk reduction," and "HR development" have been added to promote GFs with a wider view.

In fiscal 2011, we achieved a "Level 3.8" average score across the entire Panasonic Group, and we continue to make progress toward achieving a "Level 4" average score across the Group in fiscal 2013. We are determined to reduce environmental impacts and at the same time enhance our management structure through the PDCA of these activities.

■ **Indicators for GF assessment system**



Advanced examples of eco-conscious factories

● Kasai Green Energy Park (GEP)

In October 2010, Panasonic opened the Kasai Green Energy Park (GEP)—its newest production factory for lithium-ion batteries for environmentally-conscious vehicles—a leading example of an eco-conscious factory that uses advanced environmental technologies and systems. At Kasai GEP, we installed a one megawatt Mega Solar System comprising our industry-leading HIT® solar battery, the world's top-class* 1.5 megawatt-hour lithium-ion Mega Battery System, an energy management system that controls each piece of equipment, and a smart energy system that links and coordinates all systems to optimize the performance of these "energy creating," "energy storing," and "energy saving" equipment. Substantiative experiments on efficient energy utilization at Kasai GEP are conducted, and we also use Kasai GEP as a place for product and system development, as well as a place to showcase innovations to customers.

* Based on battery systems for power storage that combine lithium-ion batteries for consumer use. As of October 2010 (surveyed by Panasonic).

A symbol of Kasai GEP. The solar charging station "solalib" is equipped with solar and lithium-ion batteries.

● Panasonic LCD Himeji Plant

Panasonic Liquid Crystal Display's Himeji Plant, another example of a leading eco-conscious factory, started mass production of the IPS Alpha liquid crystal display panels in April 2010. The Himeji Plant aims to be the "most advanced recycling eco-factory," delivering high production efficiency while achieving environmental contributions and business growth. The Himeji Plant increases production efficiency by implementing the latest equipment to yield 18, 32-inch panels, streamlining processes with an "exposure process," and reducing the overall number of core processes.
As a result, the Himeji Plant has dramatically improved processing times and yields. Compared to our existing plant, the Himeji Plant has shown a 1.6 times greater return on investment, has reduced CO_2 emissions by 33% and water consumption by 35%. In addition, initiatives to achieve a recycling rate of 100% in water conservation is underway.

Additionally, both factories have received the highest evaluation rank of "S" based on the CASBEE (Comprehensive Assessment System for Built Environment Efficiency) scale, a methodology to comprehensively assess and rank the environmental performance of buildings.

CO_2 Reduction

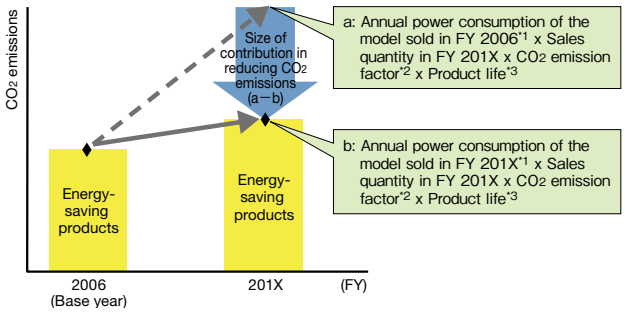
Size of Contribution in Reducing CO_2 Emissions

One of the long-term environmental targets set by the international community is to reduce emissions of CO_2 and other GHGs by 50% from the 2005 level by the year 2050. To achieve this, CO_2 emissions should "peak out" (reach a peak and begin decreasing) during the period from 2020 to 2030.

Panasonic will endeavor to ensure that CO_2 emissions from its entire business operations—not only from its own production activities but also from the use of its products by customers—peak out by 2018, the 100th anniversary of its founding. To this end, we must continue making even greater efforts in emissions reduction. Based on this recognition, we have introduced a unique indicator "size of contribution in reducing CO_2 emissions" to accelerate emissions reduction, targeting both our products (for energy saving and energy creation) and production activities. The size of contribution in reducing CO_2 emissions is defined as the amount achieved by deducting the actual emissions from the amount that would have been emitted without improvements such as the energy-saving performance of our products and productivity from fiscal 2006. In other words, it ref ects the continuous efforts being made to reduce CO_2 emissions. Panasonic will maximize the size of contribution in reducing CO_2 emissions and achieve the "peak-out" as early as possible.

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 CO_2 emission will further increase.

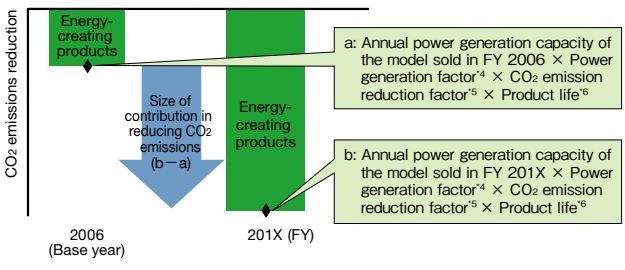
■Size of contribution in reducing CO_2 emissions through energy-saving products



*1 For each product category, the model that was sold in the largest quantity in the region was selected.
*2 Regional CO_2 emission factors (kg- CO_2/kWh) used: 0.410 (Japan), 0.487 (Europe); 0.579 (North America); 0.740 (China); 0.927 (India); 0.527 (Asia/Oceania, Northeast Asia); 0.332 (Latin America); 0.327 (other regions).
*3 Number of years during which spare parts for the product are available (defined by Panasonic).

By using electricity generated by solar power generation and such, we can reduce CO_2 emissions from thermal power plants. Panasonic will further foster its energy creation business to make an even greater contribution to CO_2 emissions reduction.

■Size of contribution in reducing CO_2 emissions through energy-creating products

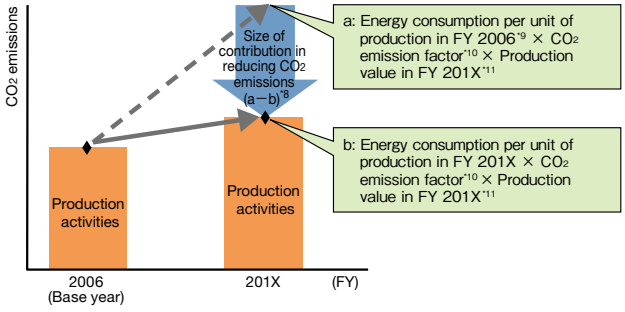


*4 For photovoltaic power generation: 1,193 kWh/kW (considering sunshine conditions, system loss, and other variables).
*5 For photovoltaic power generation: 0.3145 kg CO_2/kWh (considering energy used in the manufacturing process; by the Japan Photovoltaic Energy Association).
*6 For photovoltaic power generation: 20 years.

The smaller amount of CO_2 emissions per unit of production (tons/100 million yen),*7 the more efficient productivity is, and the size of contribution in reducing CO_2 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 CO_2 emissions).

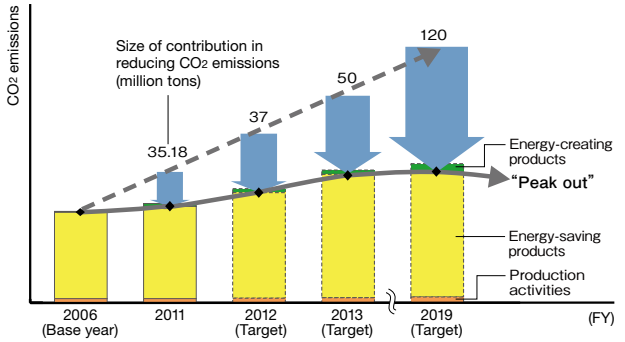
■Size of contribution in reducing CO_2 emissions through production activities



*8 Factories whose nominal energy consumption per 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 CO_2 emissions. For the size of contribution made by factories consolidated or sold in fiscal 2007 onwards, CO_2 emissions in fiscal 2006 were used for the calculation. For factories purchased, CO_2 emissions in fiscal 2006 were not deemed as a negative contribution.
*9 Per-basic CO_2 emissions for fiscal 2006 were used for factories purchased; while for factories newly constructed, the per-basic emissions 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 CO_2 emission factor for electricity purchased in Japan (kg CO_2/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.

The size of contribution in reducing CO_2 emissions came to 35.18 million tons in fiscal 2011. We aim to increase the amount to 37 million tons and 50 million tons in fiscal 2012 and 2013, respectively, and eventually to 120 million tons in fiscal 2019.

■Medium to long-term targets and actual results for FY 2011



Contribution in Reducing CO_2 Emissions through Products

Energy-creating Products

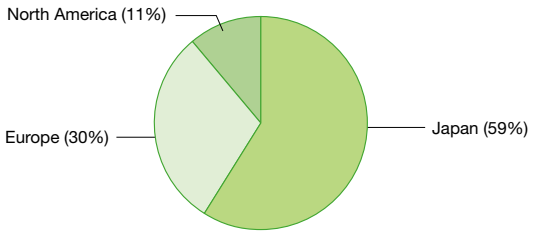
Approach to energy creation

We actively develop our energy creation business to maximize the size of contribution in reducing CO_2 emissions. By delivering photovoltaic power generation systems and household fuel cell cogeneration systems as means to create necessary electricity with few CO_2 emissions, we reduce CO_2 emissions in society.

The size of contribution in reducing CO_2 emissions through energy-creating products that we achieved was 1.9 million tons in fiscal 2011. Approximately 99% of this was driven by our photovoltaic power products in Japan, Europe, and North America.

We will continue to make progress toward achieving our targets which are the size of contribution in reducing CO_2 emissions through energy-creating products of 3 million tons in fiscal 2012 and 3.3 million tons in fiscal 2013.

■Size of contribution in reducing CO_2 emissions (by region)[*1]



*1 The graph does not include data for China and the Asia/Oceania region (except India) since the amount of CO_2 emissions reduced falls below zero in the regions due to a decrease in sales quantities. Also, it does not include data for India and Latin America, because Panasonic does not sell these products in those regions.

● Photovoltaic power generation system

Photovoltaic power is generated by transforming solar light energy into electricity by semiconductors. The amount of power generation depends on season, weather, and time, but unlike thermal power generation in which fossil fuels are burned to generate electricity, no CO_2, exhaust gas or ash is emitted during photovoltaic power generation.

Panasonic Group's HIT®[*2] solar panels provide high-power generation efficiency and output per unit area and are lightweight and compact, allowing sufficient power generation even with narrow roofs. This lead to the contract with British Gas in February 2011 to offer our solar panels to their customers. In March 2011, we launched a residential solar power system, HIT230® Series, which is a line of household solar panels that has low energy-generation loss and current resistance, and boasts the world's highest energy conversion efficiency rate[*3] at 17.9%.


HIT230® series residential solar power system

*2 HIT® is a registered trademark and stands for "Heterojunction with Intrinsic Thin-Layer."

*3 Based on a production household model. As of January 2011 (surveyed by Panasonic).

● Fuel cell cogeneration system

Fuel cell cogeneration systems provide high-power energy efficiency and conservation by generating electricity through an electrochemical reaction between oxygen in the atmosphere and hydrogen extracted from city gas, and can heat water with the heat generated from the reaction at the same time.

In May 2009, we launched our household fuel cell cogeneration system named ENE-FARM in partnership with a domestic gas company to lead the world in bringing fuel cell cogeneration technology into the home for residential use. By January 2011, we shipped a total of approximately 5,000 units. As of April 2011, we have reached a power generating efficiency rate of 40% (LHV[*4]), the highest[*5] in the world, and have further simplified our system, as well as reduced the size of key components. As a result, we have begun selling an improved model that is also better priced and requires the least[*5] installation space in the industry.


Household fuel cell cogeneration system

*4 Lower Heating Value: The value determined by subtracting latent heat of the water vapor from the amount of heat generated when fuel gas is fully combusted.

*5 Based on a household fuel cell cogeneration system. As of February 9, 2011 (surveyed by Panasonic).

Energy-storing Products

Approach to energy storage

Energy-storing products, in which power is stored and used when needed, play an essential role for stable power supplies of power generation through renewable energy such as solar and wind power.

In December 2010, we provided a photovoltaic power generation system and a lithium-ion battery system for power storage to a convenience store, LAWSON, INC., in Kyotanabe City, Japan. The power generated by the solar panels supplements the energy requirements of the store during peak time. By storing less-expensive, night-time power for use during the day, the systems reduce the use of commercial power and lessen costs. Additionally, the energy stored in the battery system can be used as a backup power supply in times of emergency.

The LAWSON convenience store in Kyotanabe City


Lithium-ion battery system for power storage (DCB-102)

Contribution in Reducing CO_2 Emissions through Products

Energy-saving Products

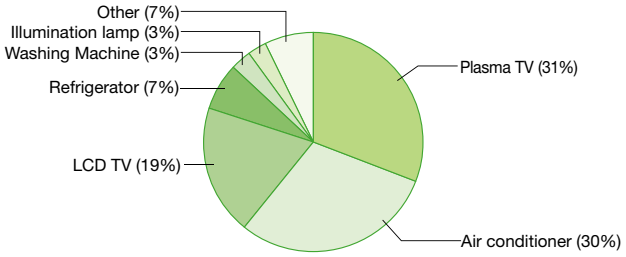
Contribution in reducing CO_2 emissions through energy-saving products

Our goal is to increase the size of contribution in reducing CO_2 emissions through energy-saving products to 32 million tons in fiscal 2012 and 45 million tons in fiscal 2013. In fiscal 2011, thanks to the eco-point incentive program by the Japanese government, we finally achieved 31.17 million tons.

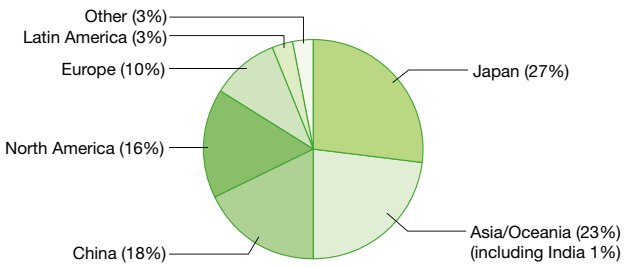
Our air conditioners, plasma TVs, and LCD TVs account for the major ratios of the size of contribution in reducing CO_2 emissions, and with our products we contributed the most in Japan, Asia & Oceania, and North America.

Since fiscal 2010, we have also been promoting our ECONAVI (eco-navigation) functionality in addition to increase the energy efficiency of our products. Home appliances equipped with Panasonic's original sensor technology and program control software ECONAVI can automatically identify the surrounding situation and save energy. As of March 2011, 16 Panasonic product lines have been equipped with the ECONAVI functionality, and we have also introduced this feature in products for the Asian market. We will continue to develop and disseminate energy-saving products and enhance our contribution to reducing CO_2 emissions.

■Size of contribution in reducing CO_2 emissions (by product)



■Size of contribution in reducing CO_2 emissions (by region)

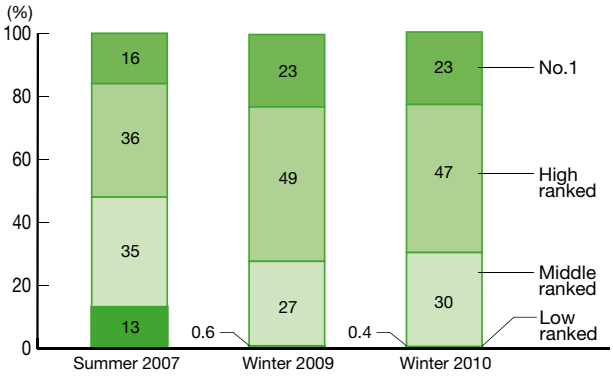


In Japan, we continue to work toward increasing the percentage of No.1 energy-saving products while reducing the percentage of low energy-saving products, in accordance with the Energy Conservation Performance Catalog.[*1] In fiscal 2011, 23% of our products were classified as No.1 and almost none[*2] were low ranked except one model of a compact fluorescent lamp.

*1 Published twice a year (summer and winter) by the Agency for Natural Resources and Energy and Ministry of Economy, Trade, and Industry of Japan.

*2 SANYO brand products not included.

■Breakdown of energy-saving models (Energy Conservation Performance Catalog)



Examples of No.1 energy-saving products

Plasma TV

Panasonic developed Neo PDP with greatly increased luminance efficiency through improvements in the cell design, discharge gas, and fluorescent body of the panels. As a result, we reduced the annual power consumption of our plasma TV by 65% compared to our fiscal 2008 model.

Annual Power Consumption[*1]
FY2008 Model: 1,495 kWh (TH-42PZ700A)
FY2011 Model: 511 kWh (TH-P42V20A)

*1 Based on the Australian Star Rating standard.

TH-P42V20A (Australia)

Air Conditioner

With our highly efficient air circuits, compressors, heat exchangers, and inverter controls, we improved the energy efficiency ratio of our air conditioner by 8% compared to our fiscal 2006 model, achieving 12.12 Btu/Wh.[*2] Our technology obtained the highest level of efficiency rank (Level 5) by the Electricity Generating Authority of Thailand. In addition, further energy-saving can be achieved with the installation of ECONAVI, which uses two motion sensors to accurately detect the location and movement of a person and pinpoint efficient operation.

*2 Btu: British thermal unit.

Energy Efficiency Ratio
FY2006 Model: 11.22 Btu/Wh (CS-C12DKT)
FY2011 Model: 12.12 Btu/Wh (CS-S13MKT)

CS-S13MKT (Thailand)

Contribution in Reducing CO_2 Emissions through Products

● LED Light

LED light bulbs consume about 1/5 of the power of incandescent light bulbs, and are expected to quickly find their way into homes thanks to their long lives. However, existing LED bulbs are limited because of their narrow light dispersion. With its double-reflector system (2-layer reflector) and larger globe (light-emitting surface), our fiscal 2011 model LDA7D-G has boasted the widest*3 light distribution angle in the industry of approximately 300 degrees, which is nearly equivalent to the angle of incandescent light bulbs.

*3 Based in comparison to a normal bulb-type LED (E26 cap). As of January 26, 2011 (surveyed by Panasonic).

Luminous Efficacy
FY2006 Model: 13.5 lm/W
(incandescent light bulb LW100V36W)
FY2011 Model: 67.4 lm/W (LDA7D-G)

LDA7D-G (Japan)

Comprehensive Energy Solutions

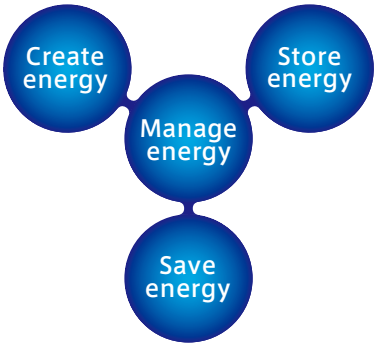
Virtually zero CO_2 emissions throughout the entire home

With economic growth and an increase in the number of households, CO_2 emissions from the household sector will rise even further. Panasonic provides a range of products for homes, from stand-alone home appliances to houses themselves. Thus, getting our products and services together, we can develop Comprehensive Solutions for the Entire Home to help our customers reduce their CO_2 emissions at home in a unique way that no other company can do.

We drive the reduction of CO_2 emissions throughout the entire home through four concepts:“create energy,” “store energy,” “save energy” and “manage energy.” Saving energy by increasing energy efficiency of home appliances and insulation efficiency of house itself, we can reduce power consumption in the enitre home. For energy yet necessary even after saving, we create energy by promoting low-emissions photovoltaic power generation and fuel cells and store energy by drawing on household lithium-ion accumulator batteries. Finally, connecting all the devices and managing energy can help achieve “virtually zero CO_2 emissions throughout the entire home.”

To achieve virtually zero CO_2 emissions throughout the entire home, having a system for energy management is important. One way to improve the efficient use of power and connect our equipment and devices is through our home energy management system (HEMS). This system contributes to CO_2 emissions reduction by controlling the equipment smartly in the house. Smart Energy Gateway (SEG) plays a key role in HEMS. In addition to energy saving equipment and energy storing equipment, SEG connects the smart meter (an electricity meter that incorporates a telecommunication function), gas meter, water meter, and domestic appliances, and enables monitoring of their energy flow and consumption on displays such as TVs. Furthermore, SEG judges the efficient use of electricity and heat, and recommends optimal use according to the daily patterns of each household. SEG enables the realization of environmental lifestyles by controlling the electricity and heat of equipment through connection to the network.

■Energy management

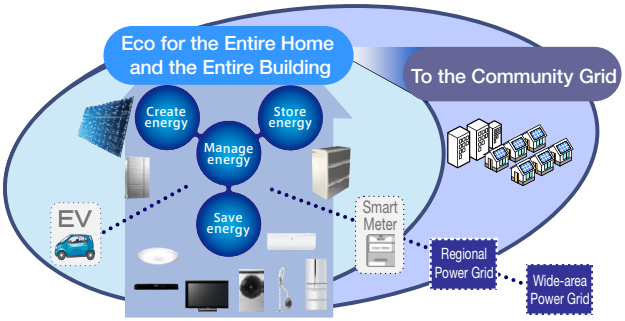


Expanding Energy Systems Business

To further broaden the scope of our concept of virtually zero CO_2 emissions throughout the entire home and enhance our industry position in photovoltaic power generation and fuel cell business to expand our Energy Systems business, we are going to promote Comprehensive Solutions for the Entire Town worldwide. In Japan, utilizing our comprehensive energy solutions, we are running a project in our former factory site in Fujisawa City to create Fujisawa Sustainable Smart Town. Outside Japan, we have participated in the Sino-Singapore Tianjin Eco-city Project planned by the Chinese and Singaporean governments with Hitachi, Ltd.

Aiming to expand our Energy Systems business, we achieved 550.8 billion yen in sales in fiscal 2011, and will continue to make progress toward our fiscal 2019 target of 3 trillion yen in sales.

■Comprehensive energy solutions



Contribution in Reducing CO_2 Emissions through Production Activities

Energy Saving and Global Warming Prevention at Factories

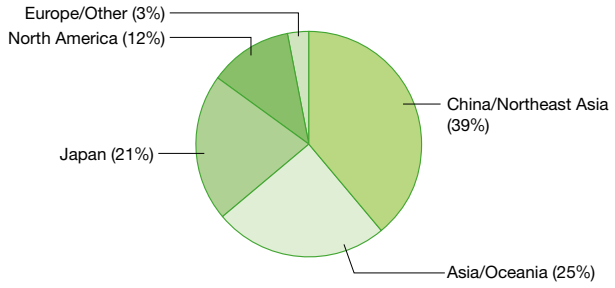
Maximizing the size of contribution in reducing CO_2 emissions

In our last round of CO_2 targets, we achieved 0.84 million tons in CO_2 emissions reductions in our production activities by fiscal 2010, far exceeding our target of 0.3 million tons from fiscal 2007. By pursuing continuous improvement of our energy management capabilities and lowering our CO_2 emissions per basic unit, we aimed to maximize our contribution in reducing CO_2 emissions in production activities in fiscal 2011.

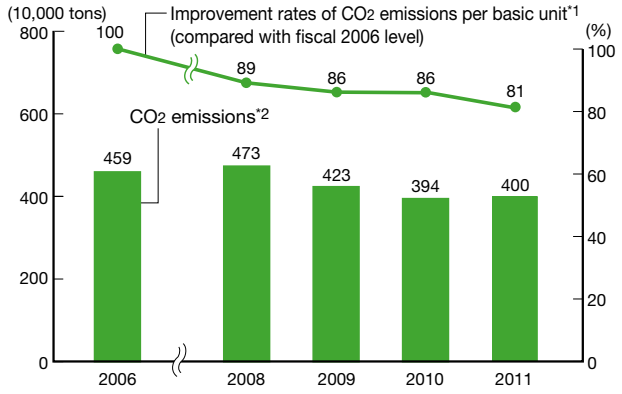
As a result, we increased the size of contribution in reducing CO_2 emissions through production activities in fiscal 2011 to 2.11 million tons.

We will continue to make progress toward achieving our targets of the size of contribution in reducing CO_2 emissions through production activities, which are 2 million tons in fiscal 2012 and 1.7 million tons in fiscal 2013.

■Size of contribution in reducing CO_2 emissions (by region)



■Global CO_2 emissions and the improvement rates of CO_2 emissions per basic unit



*1 Calculated with the weighted average of the improvement rate for CO_2 emissions per basic unit of nominal production for each factory. The amount of CO_2 emitted from each factory was used for weighting cases that had no improvements.

*2 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 CO_2 emission factor for electricity purchased in Japan (kg CO_2/kWh) is fixed at 0.410. If the factors set for each fiscal year are used instead (0.425 for fiscal 2006, 0.453 for fiscal 2008, 0.373 for fiscal 2009, and 0.351 for fiscal 2010 and 2011), total CO_2 emissions will be 4.63 million tons for fiscal 2006, 4.90 million tons for fiscal 2008, 4.08 million tons for fiscal 2009, 3.70 million tons for fiscal 2010, and 3.75 million tons for fiscal 2011. 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 CO_2 ITAKONA[*3] initiative

To ensure the reduction of CO_2 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 CO_2 METAGEJI[*4] initiative.

From fiscal 2011, we promoted our CO_2 ITAKONA initiative to further identify energy waste and develop ideas for reduction through the best use of METAGEJI. Through our CO_2 ITAKONA initiative, we will be able to use the data and results visualized through METAGEJI to troubleshoot and classify our consumed energy according to its factor and implement measurable reduction activities more efficiently.

In addition, we have set up regular seminars to expand our ITAKONA initiative. Also, we document the procedures of our CO_2 ITAKONA initiative and use this information to develop factories within our Group.

*3 ITAKONA 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 CO_2 emissions reduction efforts and call these our CO_2 ITAKONA initiatives.

*4 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.

● Promotion of Top Runner Factories for saving and creating energy

To further promote energy conservation and reduce CO_2 emissions across our company, since fiscal 2011 we have selected Top Runner Factories in each of our domain companies to provide a model for other factories in the domain to follow. Top Runner Factories make investments in energy conservation and create three-year implementation plans that are used to raise the environmental performance of all companies within the domain. This plan provides guidance in six areas: (1) Introducing top-level production process innovations, (2) Maintaining and managing highly efficient manufacturing equipment, (3) Pursuing the top-level rate of CO_2 emissions reduction per basic unit, (4) Implementing system for energy consumption visualization, (5) Promoting factory-wide CO_2 emissions reduction efforts in production processes, (6) Introducing our solar energy system. Selected Top Runner Factories are required to have outstanding and specialized features in energy conservation. Through this initiative, Top Runner Factories achieve the highest level of energy saving in the domain company, as well as develop No. 1 energy-saving technologies for their specialized area. Such cases of advanced factories are rolled out across relating factories worldwide by Top Runner Factories.

In fiscal 2011, our Top Runner Factory in our Home Appliance Company provided a production process innovation and reduced the amount of CO_2 emissions by 57% by using a firing method to change the thermal insulation molding process and taking advantage of hot air to shorten the process.

Contribution in Reducing CO_2 Emissions through Production Activities

● Identifying necessary measures through energy conservation diagnoses

We have been promoting energy conservation diagnoses undertaken by internal experts since fiscal 2008. At our business domain companies, managers and skilled engineers who have expertise in manufacturing processes collaborate together to resolve problems to reduce CO_2 emissions. Further, we have an expert team to provide technical support to our factories and conduct diagnosis activities to search for themes that can be applied group-wide.

In fiscal 2011, a total of 340 energy conservation proposals (to reduce CO_2 emissions by 34,000 tons) were made and implemented at 13 factories, focusing on "conserving energy without great expense."

As an example of measures to conserve energy without great expense, factories can prevent the leakages of compressed air.[*5] At factories, compressors are operated to send air across the facilities, for which large amounts of energy are used. Panasonic conducts surveys on leakages of air and implements measures to operate the compressors more efficiently and reduce their electricity usage.

*5 Compressed air used to operate factory machines.

Energy conservation diagnosis

● Sharing CO_2 reduction examples and training experts

In September 2008, we created a keyword search system on the intranet with a database of CO_2 reduction examples called the BA Chart.[*6] A total of 1,100 examples are registered in the database (as of March 2011) and we are now promoting its use across the company.

In China, we annually select excellent energy conservation cases from the activities conducted at our factories in the country and award the factories after onsite examinations. For this fiscal year, 107 applications were filed for the competition, implying that the energy conservation levels are also being increasingly raised outside Japan.

For the promotion of energy conservation initiatives, it is critical to train engineers versed in energy-saving technologies. Accordingly, Panasonic has held 27 training seminars on CO_2 reduction since fiscal 2008, developing a total of 618 experts. In fiscal 2011, we also began holding a competition on practical onsite energy conservation diagnosis abilities, in order to promote the development of human resources who have both theoretical and practical knowledge for onsite energy-saving activities.

*6 BA Chart: Chart that provides a comparison between before and after the implementation of CO_2 reduction measures.

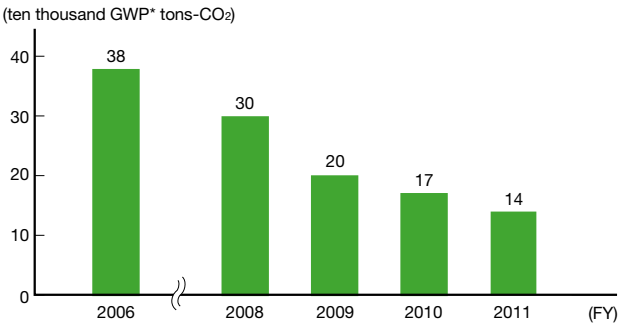
Training seminar on energy saving

Reducing the emissions of GHGs other than CO_2 from energy use

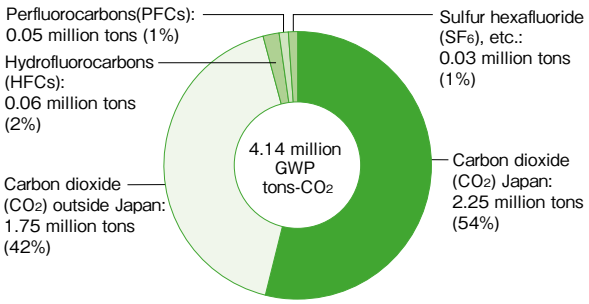
In addition to CO_2, Panasonic emits PFCs, SF_6, and other GHGs, which are mainly used as etching and cleaning gases at its semiconductor factories. In order to reduce the emissions of these gases, our semiconductor factories have been implementing measures including substituting such gases with those having lower environmental impact and installing GHG removal devices to recover the generated gases and render them harmless.

While the World Semiconductor Council aims to reduce GHG emissions by at least 10% from the 1995 level by 2010, Panasonic's semiconductor department has achieved a 56% reduction from the 1995 level in fiscal 2011.

■Emissions of GHGs other than CO_2 (CO_2-equivalent)



■Breakdown of total GHG emissions (CO_2-equivalent)



* Global Warming Potential: a measure to describe the GHG impact in CO2 equivalency.

Promoting factory energy conservation CDM*

Panasonic has been implementing an energy conservation project at its factories in Malaysia since fiscal 2005, which was approved as a CDM project by the United Nations in March 2007, becoming the first CDM project to be implemented by a Japanese company for energy conservation. We are now further promoting this project.

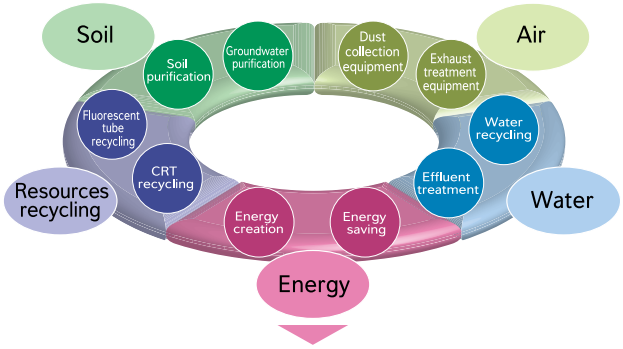
*Clean Development Mechanism: a method authorized by the Kyoto Protocol, whereby industrialized countries undertake initiatives to reduce GHG emissions through rendering financial and technical assistance to developing countries.

Environmental Solution Business

Factory Energy Conservation Support Service

We provide our technologies, knowledge, and experience related to the environment as a packaged service offering to enterprises outside our company looking to improve the environmental performance of their factories. Our Total Environmental Package Solutions for Entire Factories offers environmental solutions in energy conservation, effluent treatment and water recycling, exhaust treatment, resource recycling, soil and groundwater purification, and energy creation such as solar power. These solutions were all instrumental in our own efforts to achieve an 840,000 ton CO_2 emissions reduction in the previous three-year period. In addition, in April 2010, we started the Factory Energy Conservation Support Service to provide further guidance in energy consumption visualization, energy conservation diagnoses, practical measures for energy saving, and overall implementation support for factories through technology, equipment, human resources, and finance.

■ **Image of our Total Environmental Package Solutions for Entire Factories**



Factory Energy Conservation Support Service

Phase1	Phase2	Phase3	Phase4
Proposals of energy conservation measures	Making energy use visible	Support energy conservation efforts	Energy conservation solutions for entire factories

In March 2011, we opened an "eco visualization" showroom in the Kasugai factory of Panasonic Ecology Systems Co., Ltd., where visitors can actually experience the service. Specifically, in the showroom, measurement data of the production and power equipment operated in the factory can be monitored. State-of-the-art technologies, system equipment, and the energy-saving measures actually implemented by the Panasonic Group's factories are also introduced in the showroom.


The "eco visualization" showroom

Energy Saving in Offices

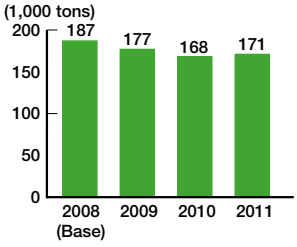
CO_2 emissions reduction at non-manufacturing sites

Since fiscal 2009, we have been focusing on reducing CO_2 emissions at our non-manufacturing facilities. Specifically, we implemented diagnoses and visualization of waste by energy "tuning" at 76 of our self-owned office buildings in Japan. As a result, we reduced CO_2 emissions at these non-manufacturing sites in Japan by about 9% in fiscal 2011 compared to the fiscal 2008 baseline level, an average reduction of over 2% per year. From fiscal 2011, we started to check the progress of 119 sites including those owned by other companies on a monthly basis. We also introduced our Green Office Assessment to improve our environmental management practices at non-manufacturing sites. This assessment is composed of a 50-point scale section with 40 items and another 50-point scale section focusing strictly on CO_2 emissions reduction, and is used as an annual evaluation process. In fiscal 2011, we achieved a "Level 3.1" average (total score: 62/100) across the entire Panasonic Group. We continue to aim toward achieving a performance average of "Level 4" or higher (total score: 80 or more/100) at our non-manufacturing sites in fiscal 2013.

■ **Green Office Assessment**

40 items to check energy saving	
Indexes	• Implementation of systems • Air conditioning/ventilation • Lighting • Water supply/hot water supply/toilets • Operation of OA machines • Careful measures to promote energy saving • Energy efficiency improvement in equipment • Energy efficiency improvement in OA machines
Actual CO_2 emissions	
Indexes	• Target achievement rate for the fiscal year • Average annual target achievement rate

■ **CO_2 emissions from non-manufacturing sites (self-owned office buildings in Japan)**



Note: Scope of the data: Non-manufacturing sites with 100 or more employees. CO_2 emission factor for electricity purchased: 0.410 kg CO_2/kWh.

Panasonic has been promoting Green IT initiatives to reduce CO_2 emissions through the use of IT technologies. To be specific, the initiatives are classified into Green of IT (making IT devices more energy-saving and improving its operations), Green by IT (making the entire society more energy-saving by the use of IT), and Green Data Center (making the data center more energy-saving).

■ **Activity details and results**

Activity	Details	CO_2 emissions reduction in fiscal 2011
Green of IT	Stricter management of PC power sources Reducing the standby power used by IT devices	791 tons
Green by IT	Promoting working at home, Internet-based meetings, and HD image communication system	3,956 tons
Green Data Center	Consolidating/integrating servers	952 tons

Note: SANYO Electric not included.

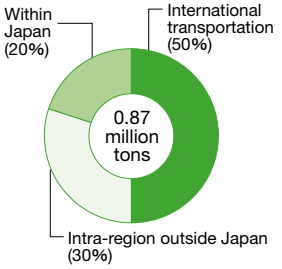
Green Logistics

Reducing CO_2 emissions in logistics

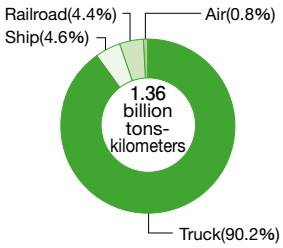
Panasonic has set the target of reducing its CO_2 emissions by 46% by fiscal 2019 (from fiscal 2006 level) and a midterm goal of reducing its CO_2 emissions per basic unit*1 by at least 1% year-on-year for both international and domestic transportation through activities in five major initiatives. In fiscal 2011, our global CO_2 emissions from logistics activities came to 0.87 million tons, of which international transportation accounted for 50% and domestic transportation accounted for 20%. Year-on-year reduction rate of CO_2 emissions per basic unit from international and domestic transportation was 2% (compared to the fiscal 2010 level) due to modal shift activities. In fiscal 2012, we plan to expand our ECO-VC*2 Activity to align negative environmental impacts with cost rationalization, as well as share more results globally.

*1 CO_2 emissions per transportation weight.
*2 VC: Value Creation.

■ CO_2 emissions from logistics

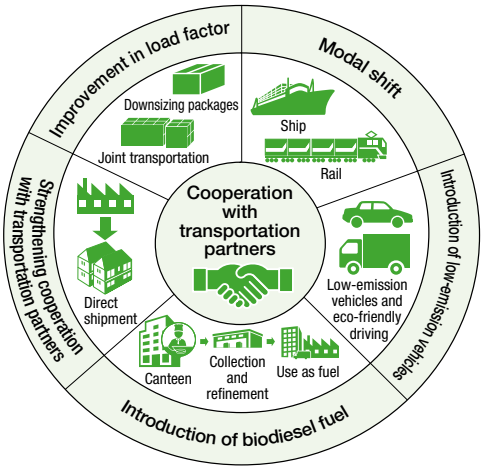


■ Transportation amount by transportation method (Japan)



Note: SANYO Electric not included in intra-region outside Japan and international transportation.

■ Major initiatives taken for Green Logistics



Modal shift

Panasonic has been fostering transportation by rail, because CO_2 emissions from rail transportation represent one-seventh* that from transportation by truck. The amount of Panasonic's domestic railroad freight transportation in fiscal 2011 totaled 21,221 five-ton containers and CO_2 emissions were reduced by 13,756 tons. The reduction amount increased by 56% year on year, as a result of fostering joint transportation with companies in other industries using four proprietary containers and also increasing the frequency of regular round-trip transportation to make better use of large containers in cooperation with transporting partners. In fiscal 2010, the railroad transportation amount reached 25,845 thousand ton-kilometers and Panasonic was approved to use the Eco Rail Mark in July 2010. We are also promoting transportation by rail outside Japan. In the past, our products manufactured in Asia and China were transported by ship to Europe and then delivered to countries in Central Asia through inland routes by truck. However, following the improvement of various conditions, including those related to customs clearance, we started using the trans-Chinese railway to achieve the shortest distance transportation of our products from production centers to the market, thereby also meeting the challenge concerning the long lead times. Regarding the shipment of LCD TVs manufactured in Malaysia, we reduced CO_2 emissions per container by 85% and the lead time by half.

*Comparison of CO_2 emission factors per ton-kilometer.

Introduction of large natural gas-powered trucks (Japan)

In cooperation with our transportation partners, we have introduced large CNG*1-powered trucks for transportation between cities and logistics centers to reduce our environmental impact, and also reduced transportation loss through joint transportation with companies engaged in other industries. In fiscal 2011, in recognition of the development and introduction of large CNG-powered vehicles, we were commended by the Director-General for Commerce and Distribution Policy of the Japanese Ministry of Economy, Trade and Industry as an excellent company in terms of green transportation. In March 2011 we introduced four additional large CNG-powered vehicles, which are used for the transportation of our products from factories to logistics centers, and from the centers to electronics retail stores. These CNG-powered vehicles are the largest of their kind in Japan and not available on the market. They are next-generation low-emission vehicles that meet the requirements of the "post new long-term exhaust gas regulations"—standards that are said to be the strictest in the world and which no other vehicle has yet met.*2

*1 CNG: Compressed natural gas.
*2 As of March 2011.

Large-CNG vehicle owned by Panasonic

Green Logistics Seminar in Asia

We have developed our Green Logistics Manual as a tool to promote green logistics activities outside Japan, as well as to promote energy conservation visualization activities and proactive logistics activities including enlightenment. In November 2010, we held our first overseas Green Logistics Seminar in Singapore and we plan to hold more logistics seminars at our sites outside Japan moving forward to promote green logistics globally.

Green Logistics Seminar in Asia (held on November 24, 2010)

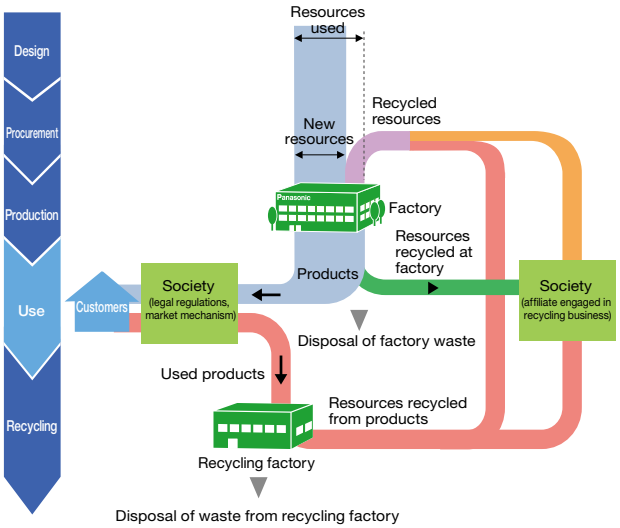
Resources Recycling

Recycling-oriented Manufacturing

With swift economic growth advancing worldwide, bringing heightened attention to concerns over resources, the sourcing of new resources and materials will not only impact our global environment, but minerals resource depletion and materials pricing run-up will also become big issues that impact company management.

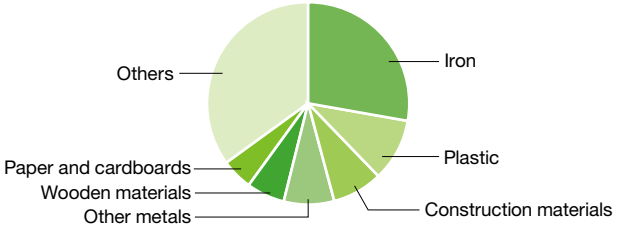
To address these concerns, Panasonic selected resources recycling as an underlying theme along with CO_2 emissions reduction, promoting our "recycling-oriented manufacturing" concept. Under this concept, we minimize the amount of total resources used and maximize the amount of recycled materials, as well as aim toward Zero Waste Emissions by reducing our final disposal of waste from production activities. We continuously look to make our products lighter and smaller to reduce our total resources used, and we employ new technologies that maximize the collection of recycled resources and expand the use of recycled resources. We also look to eliminate the waste generated at our factories by promoting the use of recycled resources, and we aim to reduce the waste we send to landfills to as close to zero. We will contribute to creating a more sustainable society, as well as achieve business growth by globalizing total materials recycling. Our total recycling system addresses the resources we work with during development, production, and logistics, as well as the resources we receive from used product collection.

■Goal of recycling-oriented manufacturing



We use many kinds of resources due to our wide range of products and businesses, from semiconductor parts to houses. In recycling-oriented manufacturing, it is important to promote the reduction of total resources used, and at the same time to develop a recycling process according to the specific characteristics of each resource for expansion of our usage of recycled resources.

■Breakdown of total resources used (by category)



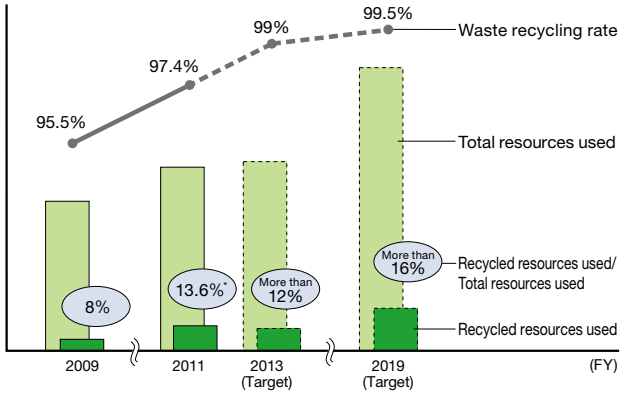
We review the volume of each type of resource used across our Panasonic Group and continuously clarify recycled resource utilization issues. For example, in the case of plastic, by identifying the characteristics of each product that require this resource, securing a stable supply, and researching how to recycle it and develop new recycling technologies for it, we used approx. 6,000 tons of recycled plastic for our products in fiscal 2011. As for wood, we position those that are certified as Category 1 (see page 26) in the Panasonic Group Green Procurement Guidelines for Wood as recycled resources and promote the utilization. In fiscal 2011, we used a total of about 165,000 tons of recycled wood.

In addition, for other resources as well, we are enhancing the foundation for our recycling-oriented manufacturing by clarifying the issues and challenges relating to the utilization of recycled resources, accumulating the know-how for making the best of the resources, and preparing guidelines.

Our recycling-oriented manufacturing focuses not only on recovering and renewing materials and resources, but also promoting the use of recycled materials in our products to go one step further.

As the goal for recycling resources, we have set the percentage of recycled resources used in total resources used to more than 12% in our midterm management plan GT12, based on the vision that it is important to take comprehensive actions without limiting resource types. In fiscal 2011, a significant extension of initiatives for wood lead to a great boost in the usage of recycled resources corporate wide, and resulted in achieving 13.6%. Fiscal 2011 also achieved a 97.4% recycling rate of waste at factories.

■Medium to long-term targets and actual results for FY 2011



* The "recycled resources used/total resources used" index was set in fiscal 2011, and improvements will be made in fiscal 2012 onwards to obtain more accurate data for "recycled resources used" and "total resourced used." As a result, the figures for fiscal 2011 may also change in the future.

Resources Recycling through Products

Reduction in Resources Used

Reducing product mass

To reduce the use of resources for production, we continuously look to reduce the weight of our products. In addition to our efforts for downsizing our products by using thinner and lighter materials and parts and less components, we will strengthen our approach to product design for easy recycling from the recycling resources point of view.

Blu-ray disc recorder

The mass of the product has been reduced by about 31% from that of the previous model (DMR-BR570) by downsizing and integrating key devices such as the thin slot-in Blu-ray disc drive, and by simplifying the structure through the reduction of the number of parts used. The model has thereby achieved the world's smallest size*1 among digital tuner-equipped Blu-ray disc recorders. Also because of its layout-free compact design (installable either horizontally or vertically), the space required for installation has also been reduced.

*1 65 mm (W) x 194 mm (H) x 210 mm (D). Main body only, not including the projecting parts. As of November 2010 (surveyed by Panasonic).

DMR-BF200 (Japan)

Blu-ray disc drive

For optical pickups (laser light source and light-receiving section required for data recording and regeneration) uniquely developed for Blu-ray disc drives (read/write optical disc drives for Blu-ray discs), the main parts are integrated to make the disc drive thinner. Moreover the number of parts used has also been reduced. As a result, we have achieved the industry's thinnest*2 read/write Blu-ray disc drive (9.5 mm).

*2 As of February 2011 (surveyed by Panasonic).

UJ242 (Japan, North America, Europe, China)

Making Full Use of Recycled Resources

Utilizing recycled resources

We promote the use of recycled resources by making the best use of them in the creation of new products, and we promote recycling resources, such as plastic. In fiscal 2011, we created a guideline for understanding how to utilize recycled resources by material and started a system that promotes the use of recycled resources.

We will build a foundation to make better use of recycled resources by improving our quality assurance system and accelerate the development of necessary technologies.

Car speaker

We have developed the industry's first* car speaker that has a frame made from recycled polypropylene by combining our technology to extract high-purity polypropylene from a mix of various plastic and metal materials, technology to mix the recycled polypropylene, and the methodology to manage the quality. We began mass production of these car speakers in February 2011.

*As of February 2011 (surveyed by Panasonic).

Car speaker frame

Tilted drum washer/dryer and refrigerator

In terms of weight, washers and refrigerators comprise about 36% and 40% plastics, respectively. The plastics used in these products are generally recycled by being melted, filtered for the removal of foreign matters, and processed into pellets. Panasonic, however, has established a technology that has no heating or melting steps to recycle plastics without pelletizing, thereby preventing the degradation of the materials by heat and also reducing CO_2 emissions. We then use the plastics thus recycled as product materials.

The use of recycled plastic in washers and refrigerators has been increasing year by year. In fiscal 2011, we fostered the use of recycled plastics in more components for these products and were able to increase the use of recycled plastic substantially over the previous year's level.

■Use of recycled plastic in products

Refrigerator

Coil cover

Tilted-drum washer/dryer

Exhaust outlet channel

Resources Recycling through Production Activities

Development of Recycling Technologies

Approach to develop recycling technologies

It is important to recover more resources as much as possible to expand usage of recycled resources. To increase recovery of recycled resources, Panasonic's relevant divisions collaborate with each other aiming to develop further efficient recycling technology.

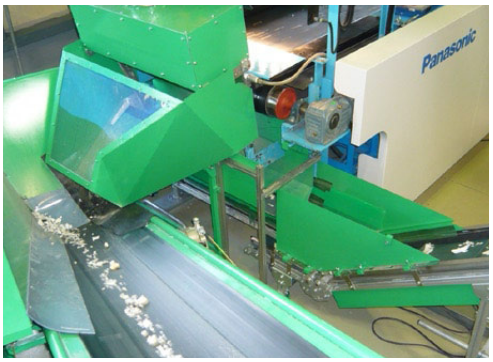
● High-precision resin sorting system

Home appliances contain 20-30 percent plastic materials. Previously, plastic components that can be disassembled by hand were sorted, recovered, and utilized for our products as resources, the rest was shredded with metals, and residues were mainly treated as fuels after the metals were removed.

In order to increase the amount of recycled resources, Panasonic developed a high-precision resin sorting system that can sort and recover plastic materials from the residues.

The system uses near-infrared rays to instantly identify specific plastic materials contained in the residues carried on a conveyor and the plastic materials thus identified are shot down for recovery with compressed air. This system enables the sorting and recovery of plastic materials by type at purity of over 99%, and also enables the removal of plastic materials that contain bromine, which is regulated under the REACH Regulation.

Moreover, the system can be operated without using water, and is compact, allowing easy installation.



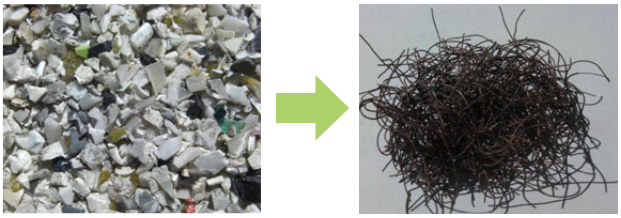
Resin sorting system (sorting part)

● Organic decomposition treatment system through catalytic reactions

Residues from the recycling process of used home appliances contain small amount of metals such as copper and iron and organic matter that consists of plastics and rubber, etc.

This system, "Organic decomposition treatment system through catalytic reactions," developed and introduced by Panasonic, enables recovery of metals from the residues without incineration.

Specifically, the residues are mixed with a catalyst (titanium oxide) and the organic matter contained in the residues is broken down into harmless gases through catalytic reactions. The residues will then contain only metals, which can be recovered as resources. Using this system, it becomes unnecessary to use fuel for the incineration of residues, leading to a decrease in CO_2 emissions.



Before treatment: Residues that remained to the end without being sorted

After treatment: Metals left after the organic matter was gasified

● Recycling heat-insulating urethanes used in refrigerators into solid fuel

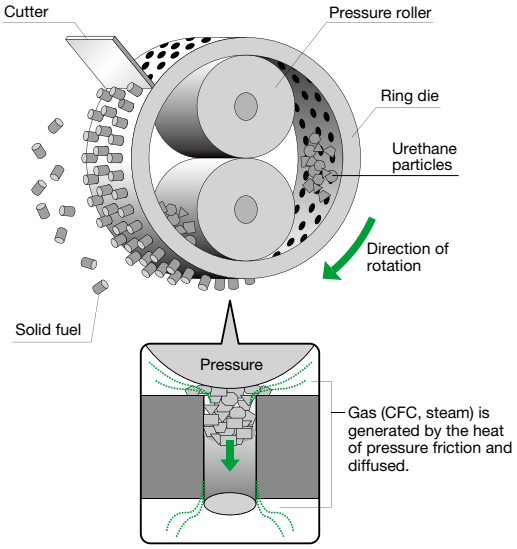
Heat-insulating urethanes used in refrigerators were difficult to recycle into fuels because the urethanes are processed into sponge using gas such as CFC and would generate chlorine gas that would damage the furnace when incinerated. From these reasons urethanes were difficult to use as is.

To solve this problem, Panasonic Corporation, Mitsubishi Materials Corporation, and Chubu Eco Technology Co., Ltd. jointly developed a technology, "pellet mill thermal compression," to extract fluorocarbon material from the urethane sponge by compressing and solidifying it into small cylinder-shaped pellets.

Specifically, based on this technology, crushed urethane is processed into cylinder-shaped pellets by pressing into a cylindrical mold with several thousand holes (ring die). CFC contained in the urethane vaporizes and separates with the friction heat generated when the crushed urethane is squeezed through the holes. The gasified CFC is recovered using special equipment.

This technology has enabled us to recycle heat-insulating urethane into high-calorie fuel that can be used safely for a wide range of purposes. Moreover, the transportation efficiency has also increased by four times as a result of pelletizing the urethane, which in turn contributes to CO_2 emissions reduction.

■System to thermally compress urethane into pellets



Resources Recycling through Production Activities

Used Product Recycling

Promoting product recycling globally

Aiming at the effective use of natural resources and prevention of environmental pollution, a growing number of recycling laws have been enacted in various countries throughout the world. Examples include the Home Appliances Recycling Law and the Law for the Promotion of Effective Utilization of Resources in Japan, the WEEE Directive in the EU, and recycling laws in many states in the USA. In China as well, a similar law has been taking effect since January 2011. In addition to complying with recycling laws in each country, Panasonic attempts to go further: We endeavor to play an active role in creating the most efficient recycling system in each country in view of its local recycling infrastructure.

■Results of fiscal 2011

Japan: Recycled approx. 142,000 tons of the four kinds of home appliances
Europe: Collected approx. 61,000 tons of used electronic products
USA: Collected approx. 6,200 tons of used electronic products

Note: SANYO Electric not included

● Japan

In response to the Home Appliances Recycling Law of 2001, which covers four specified kinds of home appliances, Panasonic developed a geographically dispersed recycling network through the effective use of existing recycling facilities nationwide. A recycling management company operates all the recycling-related services, including supervising 379 designated collection sites and 36 recycling facilities, on behalf of the “Group A” manufacturers (24 companies including Panasonic). Panasonic Eco Technology Center Co., Ltd., which is one of recycling facilities, conducts unique research to improve its recycling processes for more efficient treatment of the four specified home appliances[*1] and for the recovery and supply of more resources. In fiscal 2011, Panasonic recycled approx. 142,000 tons of the four specified home appliances.

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

Used air conditioners disassembled at the facilities of Panasonic Eco Technology Center

● Europe

Prior to the enforcement of the WEEE Directive in Europe in August 2005, we established a recycling management company, ENE EcologyNet Europe GmbH, in Germany in April 2005. In cooperation with established recycling companies, we have built up a high-quality recycling system based in Germany. In 2010, we collected approx. 61,000 tons[*2] of used products covered by the WEEE Directive.

*2 Calculated by multiplying weight of collected products through each collection system by Panasonic’s share on a product weight basis in the market that is relevant with the collection system.

● USA

Following the start-up of the state recycling law in Minnesota in July 2007, Panasonic established Electronic Manufacturers Recycling Management Company, LLC (MRM), jointly with Toshiba Corp. and Sharp Corp. in September of the same year, and began recycling TVs, PCs, etc. Subsequently we also launched recycling operations in other states with similar laws enacted, and in November 2008 initiated voluntary recycling programs across the country through MRM. Panasonic collected approx. 6,200 tons[*3] of used electronic products in 2010.

*3 Total amount collected based on both state mandates and through voluntary efforts, etc.

Recycling activity by employees from Panasonic Corporation of North America

● China

The Regulation for the Management of Recycling and Disposal of Waste Electrical and Electronic Products (China WEEE) was enforced in January 2011, and prior to the enforcement, many used home appliances were collected across the country in line with the Chinese government’s policy to promote the replacement of home appliances launched in June 2009.

Panasonic signed an agreement to establish a joint company for recycling business in Hangzhou, named Panasonic DADI DOWA Summit Recycling Hangzhou Co., Ltd. with Hangzhou DADI Environmental Protection Engineering Co., Ltd., DOWA Holdings Co., Ltd., and Sumitomo Corporation in May 2011. The new company will engage in collection, disassembly, and selling recycled materials of used appliances according to the WEEE regulation aiming for an advanced model for home appliances recycling in China, thereby contributing to environmental conservation and the effective use of resources in the country.

Rendering of Panasonic DADI DOWA Summit Recycling Hangzhou Co., Ltd.

● Asia & Oceania

Also in the Asia & Oceania Region, an increasing number of countries are moving toward legislation governing recycling.

In Australia, Panasonic is participating in an examination to build a recycling scheme for TVs, PCs, etc. together with the government and industry; while in Vietnam, we are discussing optimal legislation for recycling with the government and industry. In India, legislation is being reviewed for its enforcement in January 2012. Prior to the enforcement, we began implementing measures for the recycling of Panasonic TVs in March 2010. We are also engaged in activities to educate the public about recycling, and encourage customers to participate in recycling through activities such as giving them “Green Certificates” when the products they brought in have been recycled.

Zero Waste Emissions from Factories

Achieving Zero Waste Emissions by minimizing final disposal

Waste generated at our factories is classified 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) final disposal (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 recycle rate of our waste materials. Accordingly, we strive globally toward achieving our Zero Waste Emissions[*1] goal by reducing the amount of final disposal to nearly zero by fiscal 2013.

Specifically, we aim to achieve a factory waste recycling rate of 98.5% in fiscal 2012 and 99% and more in fiscal 2013. In fiscal 2011, our waste recycling rate was 97.4%, a 1.1 point improvement from the previous year.[*2]

*1 Panasonic's definition: Recycling rate of 99% or higher.
Recycling rate = Amount of resources recycled/(amount of resources recycled + amount of final disposal)

*2 SANYO Electric not included in fiscal 2010 results.

● Measures to reduce the generation of waste

As a means to reduce the generation of waste, we are fostering resource-saving product design. In our production activities, we have reduced the amount of waste plastic by improving the molds used in the production process. Moreover we have started a "visualized analysis" of waste. In fiscal 2011, we undertook such analyses at nine sites to identify specific factors contributing to waste generation, with the aim of further reducing waste. In our logistics operations as well, we are reviewing the use of packaging materials to reduce waste and promote the reuse of such materials.

● Measures to reduce final disposal amounts

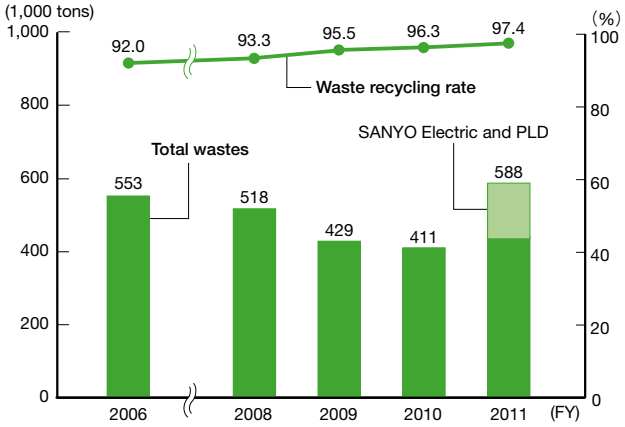
To promote the recycling of waste, we enhanced activities in areas outside Japan, such as China and other Asian countries as well as Europe, in fiscal 2011. By sharing information within and between these areas, we are committed to improving the average level of recycling activities across all regions. For example, by utilizing BA Charts prepared by each region,[*3] we promote the sharing of excellent examples and know-how among our factories across regions. We also hold regular regional meetings for participants to share the Group's policies on factory waste and information about recyclers. In addition, we conduct surveys on the management of waste at our bases outside Japan so that business domain companies in Japan and local factories in other countries can share more information about recycling-related problems. Moreover by holding meetings regularly at our priority bases, we check how waste is being sorted at the bases and propose solutions suitable for each particular recycling infrastructure.


Information-sharing meeting in Europe

In order to press forward with these activities, it is essential to develop human resources with expertise in waste management. Accordingly, Panasonic has been regularly providing training on waste management in each region. In fiscal 2011, we provided six training sessions in Asia and Europe, attended by a total of 167 employees.

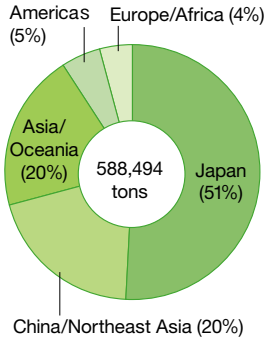
*3 BA Chart: Chart that provides a comparison between before and after the implementation of waste reduction and recycling measures.

■Amount and recycling rate of total wastes including revenue-generating waste

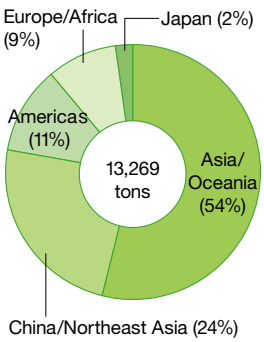


Note: SANYO Electric and PLD not included in fiscal 2006 and 2008 through 2010.

■Breakdown of total wastes including revenue-generating waste (by region)



■Breakdown of final disposal (by region)



■Breakdown of total wastes including revenue-generating waste (by category)

(unit: tons)

Items	Total wastes	Recycled	Final disposal
Metal scrap	183,512	180,607	298
Paper scrap	75,781	73,000	589
Plastics	61,102	53,265	1,951
Acids	77,579	66,470	83
Sludge	48,196	36,211	1,899
Wood	26,765	26,522	199
Glass/ceramics	24,398	23,691	656
Oil	21,694	18,738	285
Alkalis	42,691	18,395	21
Other	26,776	17,100	7,288
Total	588,494	514,000	13,269

Initiatives for Water Resource Conservation

Approach to water conservation

It is said that available fresh water is only about 0.01% of the Earth's total water resources. To save this resource, we provide products that help conserve and recycle water. We also use recycled water over and over in our production activities.

Water 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. From fiscal 2012 we will enhance one of the criteria, water resource conservation, in our Green Product Accreditation Criteria, and speed up the development of industry-leading products that contribute to water saving and recycling.

● Drum washer

The 3D sensor detects the movement of the drum and the inverter optimizes the rotation speed. In addition, the load sensor and foam sensor detect the load of laundry for optimal washing. With these functions, the washer has achieved the top-level water saving performance*1 in the European market, in addition to being highly energy-efficient.

*1 Uses 6.25 liters of water to wash one kilogram of laundry. As of June 2010 (surveyed by Panasonic).

NA-168VG3 (Europe)

● Dish washer/dryer

This dish washer/dryer is equipped with our unique Powerful Disinfecting Mist technology to ensure high washing power and with a Nozzle Switching System Jet Cleaning for efficient circulation of water. Moreover three sensors detect the dirt level and volume of the tableware to be washed for optimal automatic operation, thereby saving up to 80% of the water when compared with washing by hand, in addition to saving energy.

Water use per single washing*2

Washing by hand: Approx. 95 liters per washing
Model released in FY 2011:
Approx. 11 liters per washing (NP-TR3 with standard course)

*2 53 dishes and 24 smaller items (based on the voluntary criteria of the Japan Electrical Manufacturers' Association).

NP-TR3 (Japan)

● W (Double) water-saving shower

This can save water not only when showering but also when cleaning the bathroom. The shower reduces the flow volume without weakening the pressure, and saves about 15% of water used when taking a shower, compared with the use of a conventional shower.*3 You can also save about 36% of water when used in cleaning the bathroom. This is because the shower can both double its power and double the spray area, making it more effective in rinsing off cleanser foam.

*3 Conventional shower (dynamic water pressure: 0.2 MPa; flow volume: 10 liters per minute) as defined by the Japan Valve Manufacturers' Association.

Quantity of water f ow per minute*4

Showering: 8.5 liters per minute
Cleaning the bathroom: 6.4 liters per minute

*4 When dynamic water pressure is 0.2MPa.

W (Double) water-saving shower (Japan)

Water conservation through production activities

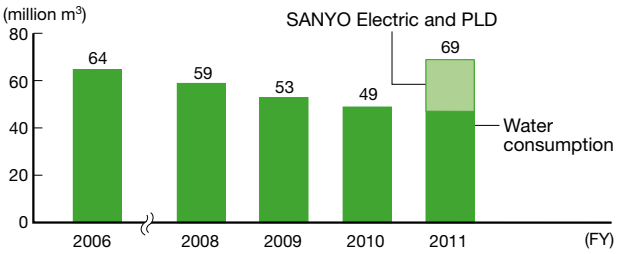
By collecting, treating, and reusing waste water from our manufacturing processes and air conditioning systems, we reduce the amount of water use and wastewater effluent. This reduces the impact of the intake and effluent of water in production activities on water resources. With many regions around the world threatened by water shortages, we carefully select which regions to focus on to address our use of water in our manufacturing activities.

Panasonic Electronic Devices (Tianjin) Co., Ltd. installed a highly efficient wastewater reuse system within its wastewater treatment process, and has since been promoting the reuse of industrial water and domestic water in its factory as industrial water and for watering plants. As a result, the company reduced the use of water by 48,500 tons year on year in fiscal 2011, which is equivalent to the amount of water from 123 25-meter pools.

Wastewater reusing system

Panasonic will continue to reduce its water use despite increasing production volumes, foster increased water recycling, and reduce water usage at more of its factories in Asia and across the world. Especially in priority regions, we will enhance the necessary measures and will also designate some of our facilities as model factories for water saving across the Group.

■Amount of water consumption



Note: SANYO Electric and PLD not included in fiscal 2006 and 2008 through 2010.

■Breakdown of water consumption (by region)

(10,000 m³)

Region	Municipal water/ industrial water	Rivers/lakes	Groundwater	Consumed	Discharged
Japan	2,673	14	2,533	5,220	4,136
Americas	54	0	8	62	42
Europe/Africa	17	0	26	43	42
Asia/Oceania	572	6	75	652	419
China/Northeast Asia	838	0	42	880	639
Total	4,153	20	2,684	6,857	5,277

Reducing the Impact of Chemical Substances

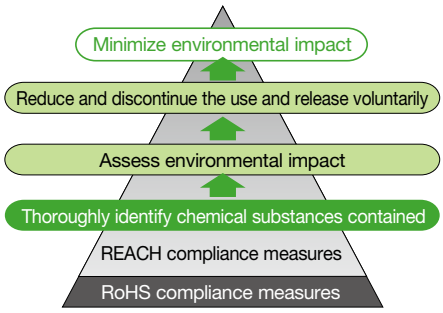
Initiatives Aiming to Minimize the Environmental Impact of Chemical Substances

Initiatives to minimize environmental impact

As represented by the enforcement of the REACH regulation* 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, Panasonic has been manufacturing products in line with its basic policy of minimizing the use of chemical substances that might adversely affect human health and the environment throughout their life cycles. As specific initiatives, we aim to minimize 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.

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

■Process to minimize environmental impact



Chemical Substances Management Rank Guidelines

Panasonic published the Chemical Substances Management Rank Guidelines in 1999, which lists chemical substances that should be discontinued, reduced, and properly managed. Both Panasonic Group companies and suppliers are asked to comply with the guidelines.

In fiscal 2010, we expanded the scope of hazard assessment to include various hazards to human health and the environment. We have since been endeavoring to identify chemical substances used in the components and materials of our products and strictly manage the use of prohibited substances to ensure that these substances will not be used or contained in our products except in some special cases. Specifically, for managed substances contained in our products, we will conduct environmental impact assessments based on their usage and use amount, and for substances used at our factories. We will further reduce the release of chemicals with the consideration to their impact on human health and the environment.

■Chemical Substances Management Rank Guidelines (for products and factories)

For products			For factories	
Rank		Definition	Rank	Definition
Prohibit	Level 1	・Substances whose use in products is prohibited by laws and regulations ・Substances whose use in products will be prohibited by laws and regulations within one year ・Substances whose use in products is prohibited within Panasonic	Prohibit	Use of the following substances should be immediately discontinued: ・Carcinogens for humans ・Ozone depleting substances (excluding HCFCs) ・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
	Level 2	・Substances whose use in products will be prohibited by international treaties or laws on and after a specified date ・Substances whose use in products is voluntarily restricted by Panasonic		
Manage		・Substances whose actual use status must be further researched and whose impact on health and safety as well as appropriate treatment must be considered ・Substances whose use or non-use and the amount of use must be further researched	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

Chemical Substances Management Rank Guidelines ▶http://panasonic.net/eco/topics/suppliers/

■Panasonic's initiatives to reduce chemical substances with environmental impact

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*
- October 2005: Discontinued use of six RoHS substances globally*
- March 2009: Discontinued use of PVC in internal wiring of new products to be sold in Japan*
- March 2011: Will discontinue use of PVC in internal wiring of new products globally*

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

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
- 2005 (Japan): Reduced use by 75% Reduced release and transfer amount by 62%
- 2010 (Global): Reduced release and transfer amount of key-reduction target substances by 46.3% compared to fiscal 2006 level

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

Management of Chemical Substances in Products

Identifying chemical substances in products

Participating in cross-industry initiatives

To contribute to the achievement of the global goals set at the WSSD, it is important for us to disclose and communicate information about 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. Panasonic is a member of the Joint Article Management Promotion consortium (JAMP) together with about 370 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.

JAMP ▶http://www.jamp-info.com

Partnering with suppliers to identify chemical substances in products

We have been utilizing our chemical substance management system called “GP-Web” since fiscal 2005. Through GP-Web, parts manufacturers have been providing information about the use of chemical substances in their products supplied to Panasonic. In July 2009, we revised the system referring to proposals made at the JAMP and started information communication based on common standards across the supply chain, including upstream manufacturers and our customers.

In addition, an e-learning site is open in Japanese, English, and Chinese for the purpose of efficiently requesting upstream suppliers, including both those who directly deal with us and those who do not, to provide us with necessary information. We now have about 10,000 registered users of this system. Users will learn Panasonic’s ideas on chemical management and how we communicate the information about the use of chemical substances in our products through JAMP’s system.
To deepen our suppliers’ understanding, we offered eight explanatory meetings in five cities in China in which 1,973 individuals from 1,148 Chinese supplier companies attended in December 2010. In March 2011, we offered another session in China to provide training on practical operation using PCs. This training session was attended by 341 individuals from 238 Chinese supplier companies.

Explanatory meeting for Chinese suppliers to deepen their understanding on the handling of chemical substance information

Assessing the environmental impact of chemical substances

Panasonic began measuring chemical substances released into the environment from home appliances to assess their environmental impact, in cooperation with the Itsubo Laboratory, Tokyo City University. In fiscal 2011, based on the results of environmental impact assessments made on phosphorus flame retardants used in printed boards, we selected a flame retardant to reduce releases from discarded products, and developed basic technologies for the preparation of printed circuit boards with due consideration for their impact on biodiversity. Also, as part of measures to prepare information for the safe use of products in which substances of very high concern (SVHCs) are contained above specified levels, which is required under the EU REACH regulation, we have created a safety assessment document regarding the ceramic fibers used in some models of microwave ovens for professional use. We have concluded that the amount of the ceramic fibers released from the models is limited, and will therefore have minimal impact on human health.

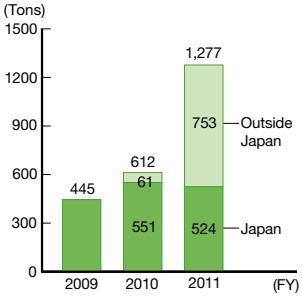
Management of Chemical Substances in Products
▶http://panasonic.net/eco/products/chemical_substance/reach.html

Reducing the use of PVC resin

With regard to polyvinyl chloride (PVC) resin, there are concerns about the generation of hazardous substances through the inappropriate disposal of waste resin. Panasonic has been striving to reduce the use of PVC resin in the internal wiring of its products newly released in Japan from April 2009, and on a global basis from April 2011, in consideration of the difficulty of sorting PVC resin from end-of-life products.

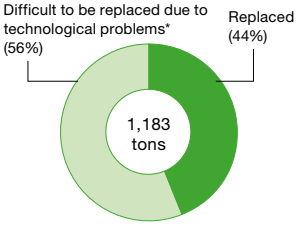
In fiscal 2011, we reduced the use of PVC resin in the internal wiring of products newly released in Japan by 524 tons. Moreover, for TVs and other AVC products released in Europe, we replaced PVC resin with a substitute to an amount of 753 tons one year earlier than planned. For new products to be shipped in and after April 2011, we have decided to use a substitute for PVC resin mainly for AVC products. For home appliances, however, such replacement might cause quality problems and we need to make further technological examinations.

Replacement of PVC resin used in the internal wirings of products



Note: SANYO Electric not included.

Replacement of PVC resin used in the internal wiring of products newly released in Japan



*Problems regarding bending property, mechanical strength, and other quality criteria for products.
Note: SANYO Electric not included.

Reducing the Impact of Chemical Substances

Management of Chemical Substances at Factories

Reduction Initiatives for Key Reduction-Target Substances

In fiscal 2007, from among the substances covered by the Rank Guidelines, we selected 368 substances that have a substantial impact on the environment (substances that have a large amount of release/transfer and that cause air pollution and/or global warming) as key reduction-target substances. We then promoted the reduction of these substances to achieve our global target of reducing their release/transfer by 10% from the fiscal 2006 levels by fiscal 2011. As a result, in fiscal 2010 we were able to achieve a 43.2% reduction and attain the target for fiscal 2011 earlier than planned. Moreover, in fiscal 2011, we achieved a 46.3% reduction. Because fiscal 2011 was the base year for the next reduction measures to be taken, we also made efforts to ensure collection of accurate data concerning the substances covered by the guidelines.

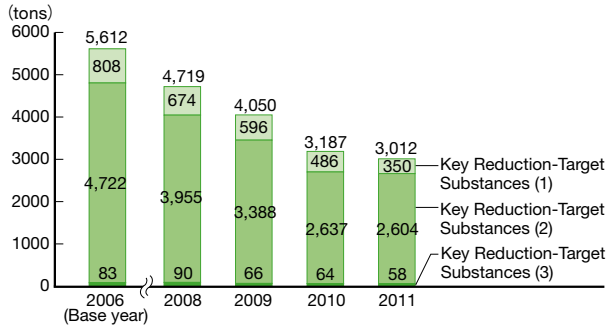
■ Definition of key reduction-target substances (368 substances)

(1) Ten groups of substances recording the highest levels of release/transfer in the Pollutant Release and Transfer Register survey (Japan, fiscal 2003)
Ten groups of substances recording the highest levels of release/transfer in the chemical substance survey (fiscal 2005) by Panasonic

(2) Twenty groups of VOCs recording the highest levels of release in a survey by the electrical and electronics industry

(3) Five groups of substances specified by the Japanese Law Concerning the Promotion of the Measures to Cope with Global Warming

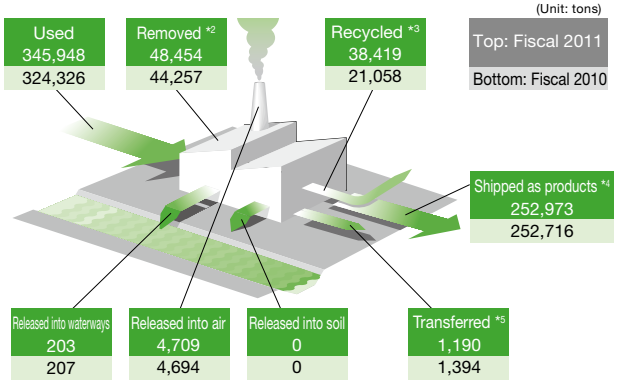
■ Release/transfer of key reduction-target substances



Note: SANYO Electric and PLD not included in fiscal 2006 and 2008 through 2010. Only PLD inciuded in fiscal 2011.

■ Material balance of substances in the Management Rank*1

(Unit: tons)



Note: SANYO Electric and PLD not included in fiscal 2006 and 2008 through 2010. Only PLD included in fiscal 2011.

Measures to reduce risks based on impact on human health and the environment

In response to international trends towards the stricter management of chemical substances, we will enhance measures to minimize the release of particularly hazardous substances into the environment in fiscal 2012 onwards. Based on the Chemical Substances Management Rank Guidelines for factories, we had assessed hazardousness mainly focusing on carcinogenicity, but in fiscal 2010 the guidelines were revised (to Ver. 4) and we expanded the assessment scope to include various hazards to human health and the environment. Moreover, we classified chemical substances based on their hazardousness and created a unique indicator "impact on human health and the environment"* by specifying a "hazardousness factor" for each substance.

We will implement measures to prioritize reducing the release of particularly hazardous substances using the new indicator. Based on the data collected in fiscal 2011, we aim to reduce their release by 2.5% by fiscal 2012, 5% by fiscal 2013, and eventually 15% by fiscal 2019.

*Impact on human health and the environment = Hazardousness factor x Release/transfer amount

■ Approach to the management of substances based on the Chemical Substances Management Rank Guidelines Ver. 4 (for factories)

Governing laws and regulations (Japan):
- Regulations on the management of chemical substances (PRTR Act, etc.)
- Regulations on environmental conservation (environmental criteria under the Basic Environment Act, etc.)
- Regulations on occupational health and safety (Industrial Safety and Health Act)
- International treaties (Stockholm Convention on Persistent Organic Pollutants, etc.)

Hazards to be included in the assessment target
- Hazards to human health:
  Carcinogenicity, mutagenicity, reproductive toxicity, and acute toxicity
- Hazards to the environment:
  Substances that might cause ecological toxicity, ozone layer depletion, global warming, or generate photochemical oxidants

■ Classification of hazards

Classification	Hazards to human health	Hazards to the environment	Hazardousness factor
A	Carcinogenicity	Ozone layer depletion	x 10,000
B	Serious 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

*1 Based on the Panasonic Chemical Substances Management Rank Guidelines (Version 3.1).
*2 The amount of substances converted into other substances through neutralization, decomposition, or other chemical treatment within the factory.
*3 The amount of substances recycled with revenue, as well as those recycled free of charge or with any payment.
*4 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.
*5 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.)

Initiatives to Conserve Biodiversity

Approach to biodiversity

Our society benefits from a multitude of nature's blessings grounded upon biodiversity, known as ecosystem services. Sadly, however, over the last 50 years this biodiversity has been lost at an unprecedented pace, and corporations are required to take initiatives on biodiversity conservation and sustainable resource usage.

We adequately understand the impacts on biodiversity, and collaborate with our stakeholders, from local partners and environmental NGOs to other professionals and issues experts, to achieve our goal of contributing to biodiversity conservation.

Promoting our Biodiversity Project

To promote biodiversity initiatives in our business activities, we established the Biodiversity Project to implement concrete measures in three important areas that affect biodiversity: land use, products, and procurement.

● Initiatives in land use

We aim to contribute to the conservation of biodiversity in the areas where our business sites are located. As a first step to achieve our land use goals, we developed tools to quantitatively evaluate our potential impact per site.

■ Tool to assess each site's potential to contribute to biodiversity

Assessment of the environment using aerial photography (80 points)
(1) Size and layout of green area (2) Quality of green area in biodiversity (3) Layout and quality of water environment
+
Assessment based on data and reference materials (20 points)
(1) Green area on the site (2) Upper level plan made by the local government (3) Existence of rare creatures (4) Existence of symbolic species of the region
=
Scoring up to 100 points

As a result of assessing Panasonic's 121 sites in Japan using this tool, we selected the Moriguchi and Kadoma areas in Osaka, where 12 sites including the head office are located, as model areas. We will enhance the ecological network that connects the Yodo first-class river running in the north of the areas and Tsurumi Ryokuchi Park located to the south of the areas. Specifically we will contribute to creating urban areas that are blessed with nature and provide habitats for living creatures. Because we need to collaborate with a range of stakeholders to achieve this, we established a council to examine measures for biodiversity in cooperation with the local government, universities, and companies in October 2010.

● Initiatives in products

We receive third-party assessments from BirdLife Asia, an independent, global NGO that provides useful product information to help customers distinguish products that contribute positively to biodiversity conservation. Some examples of these products are our bamboo-fiber speakers, which are made from sustainable and recyclable bamboo and provide high-quality sound; our Mushi-veil light, which provides low insect-attracting features so as not to disrupt the ecosystem of insects; and our Tafna-ray lighting system, which prevents powdery mildew of strawberry from forming and reduces the amount of chemical pesticide use.

● Initiatives in procurement

Panasonic created the Panasonic Group Green Procurement Guidelines for Wood to conserve biodiversity and sustainable resource usage after thorough consultations with the World Wide Fund for Nature (WWF) Japan. The Guidelines divides various wood and wooden materials that may be procured into three categories: Priority procurement (Category 1), Acceptable procurement (Category 2), and Avoiding procurement (Category 3). In fiscal 2011, we used approximately 390,000 m^3 of wood and wooden materials. Of this, 71% (a 21-point year-on-year increase) was from Category 1, 28% from Category 2 (a 19-point year-on-year decrease), and 1% (a 2-point year-on-year decrease) from Category 3. We continue to aim toward reducing our Category 3 procurement to nearly zero by fiscal 2013.

■Details of Green Procurement Guidelines for Wood

Partnership with the World Wide Fund for Nature (WWF)

Since 2007, we have been promoting the Yellow Sea Ecoregion Support Project, a seven-year partnership with WWF Japan. The project aims to implement measures required for the sustainable use and conservation of the Yellow Sea Ecoregion, a body of sea water enclosed by China and the Korean peninsula and noted for its high biodiversity value.

Introducing initiatives in the Yellow Sea Ecoregion Support Project at COP 10

Panasonic
Project Supporter
WWF

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Approach to Green Lifestyles to Enrich People's lives

Panasonic is committed to realizing green lifestyles to enrich people's lives worldwide. Among changes to be made on a global scale in the future, the rapid increase in CO_2 emissions is a major issue in particular. According to reports made by the International Energy Agency (IEA), it would greatly contribute to CO_2 emissions reduction for people to make more efficient use of energy in their lives. Based on the recognition that people have various lifestyles, challenges, and values, Panasonic will realize better living with a sense of security, comfort and joy in a sustainable way by making lifestyle proposals from the viewpoint of customers.

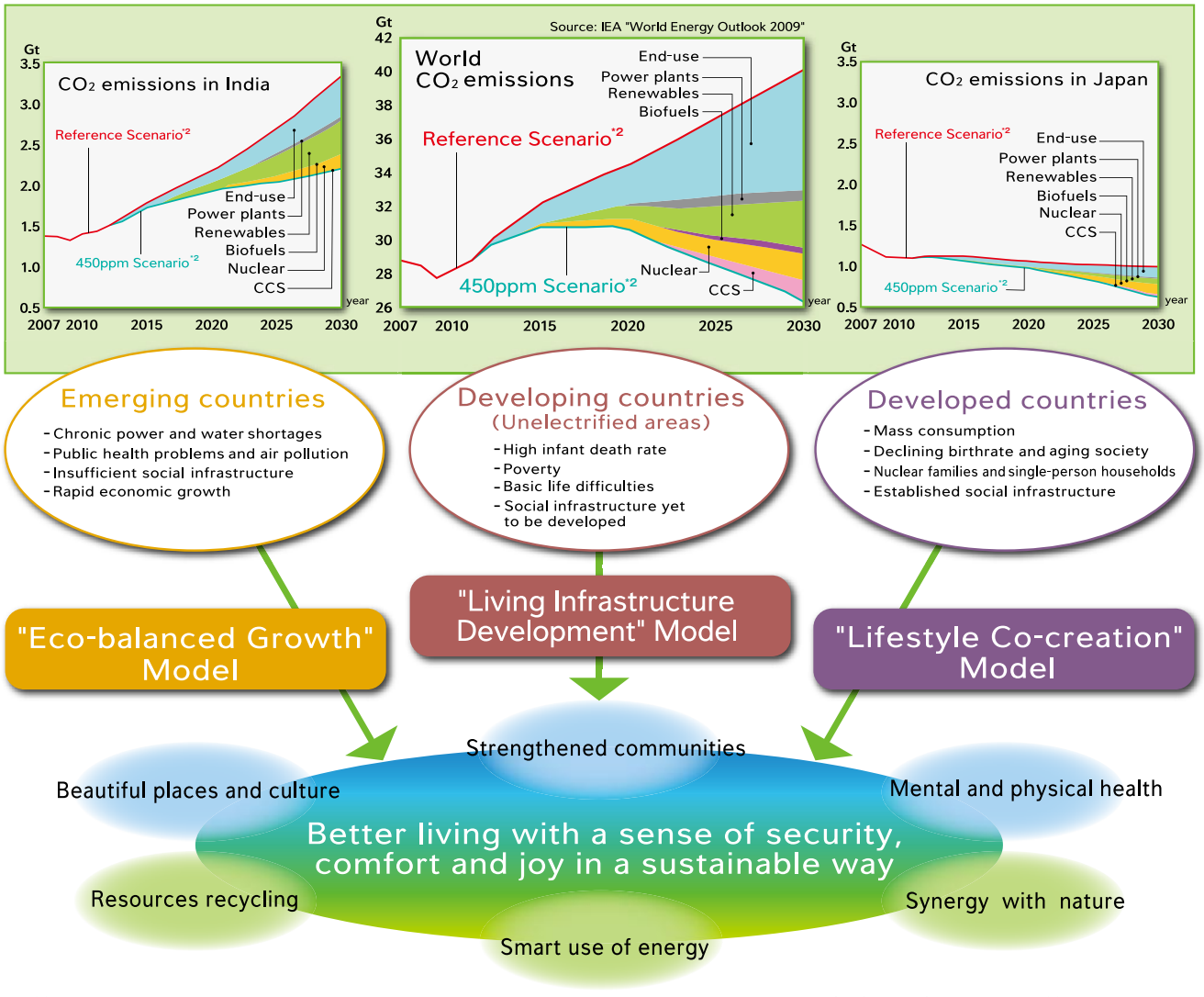
In the following pages, we will classify the countries in the world into three categories and propose green lifestyles suitable for each category (which were announced at the Panasonic 'eco idea' Forum held in October 2010). The first category is "emerging countries," such as India where per-capita CO_2 emissions are as low as about 1.4 tons[*1] at present, rapid increase in emissions is anticipated. For countries belonging to this category, we propose an "Eco-balanced Growth" Model.

The second category is "developing countries," particularly "unelectrified areas." For these countries, we propose a "Living Infrastructure Development" Model in a manner that is friendly to both the environment and society, mainly by using renewable energy sources.

The third category is "developed countries," where CO_2 emissions will slightly decrease on a long-term basis. Nonetheless, in developed countries such as Japan, where per-capita CO_2 emissions are as high as about 10 tons,[*1] drastic measures must be taken to substantially curtail CO_2 emissions toward the internationally agreed goal of reducing emissions by 80% by 2050. For these countries, we propose a "Lifestyle Co-creation" Model through cooperation with consumers and local communities.

*1 According to data provided by the World Bank (2006).

■**Three approaches based on the estimation of global CO_2 emissions**



*2 If CO_2 concentration is reduced to 450 ppm, the rise in temperature can be restricted to two degrees, in contrast to the business as usual (BAU) scenario (prediction of global CO2 emissions on the assumption that no special measures will be taken to reduce emissions).

Emerging Countries

Present status of emerging countries (middle class in India)

Tap water is available for only two to three hours a day. People usually sparingly use water stored in a tank. Because electricity is also in short supply and charges are very expensive, people make minimal use of electricity. They have some durables and usually use home electric appliances over a long time by having them repaired when necessary.

Water

Each household has a tank to store water.

Water used for washing is reused for other purposes.

Food and cooking

Most people cook at home, often using a lot of oil.

Supper starts rather late in the evening and people generally eat between meals.

Living environment

People can live safely in densely populated residential areas.

People buy perishables every day instead of making bulk purchases.

Electricity

Curtains are drawn even during the daytime to block strong sunlight. The room needs lighting.

A rechargeable battery for household use is installed as a precaution against frequent blackouts.

Health

The urban sky is cloudy due to exhaust gas and dust.

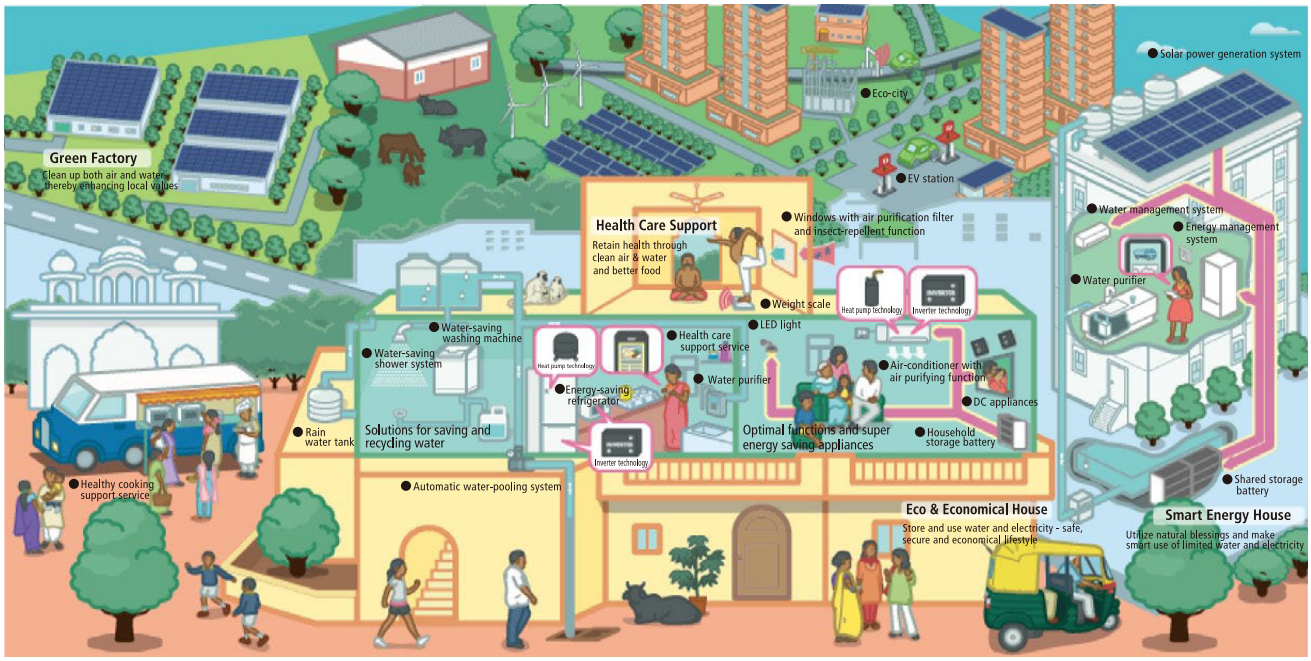
A university hospital crowded with patients who have to wait for long hours to be checked by a doctor

Transportation

Major means of transportation is road transportation. In cities there are heavy traffic jams and compressed natural gas-powered vehicles are used for public transportation to help protect the environment.

Lifestyle proposals for emerging countries (India) for 2018: “Eco-balanced Growth” Model

In the midst of rapid economic growth, India faces power shortages, difficulty in accessing clean water, air pollution, public health problems, etc. On the other hand, Indians conserve electricity, water, and resources, and emphasize time spent with their families. We propose a healthy and smart lifestyle and a society where economic growth goes with ecology based on a traditional culture.



Based on the concept of Eco & Economical House, we propose for safe and economical lifestyles. In an Eco & Economical House, inverters, heat pumps, and other energy-saving appliances developed by utilizing our environmental technologies as well as equipment to save and recycle water will be utilized. In wealthier households, solar power generation facilities and energy/water management systems will also be proactively used.

Developing Countries (Unelectrified areas)

Present status of developing contries (unelectrified area in Zambia)

Only about 30% of people can use safe water, which is transported from wells, often taking many long hours. The electrification rate is only 3% and more than 60% of the people live on less than 2.5 dollars per day. There are only 12 doctors per 100,000 people and the medical care system is quite vulnerable.

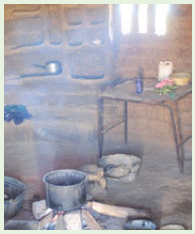
Water

Well water is sterilized by using a chemical agent.

Fetching water is a daily task for women and children.

Food and cooking

Cooking outdoors



The kitchen is full of smoke, which can cause asthma.

Education

Simply equipped classroom of a community school, which is dark without any lighting.

Electricity

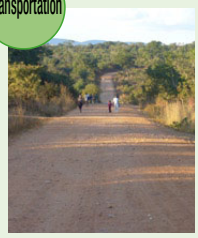
Kerosene lamps are used for lighting, which could cause fires.

The TV diffusion rate is low and members of several households watch TV together.

Health

There is usually only one clinic within an area extending over 10 km^2 where people can receive simple medical care, including health checks for malaria.

Transportation



Many people walk for four to five hours to buy daily goods and batteries.

Only a few people have bicycles, which are very expensive in the country.

Lifestyle proposals for developing countries (unelectrified area in Zambia) for 2018: “Living Infrastructure Development” Model

Unelectrified regions are facing serious problems including difficulties in accessing safe water, chronic malnutrition and diseases, and lack of means for transportation and information access. Life opportunities such as medical care, education, employment and leisure time are provided by utilizing renewable energy, which will thus lay the found ation of their independence. We propose such a lifestyle that expands chances of life without destroying the rich diversity of nature.

For areas that are not electrified, people will have many more opportunities in their lives if they can use electricity. As a means to build the foundation for independence, we propose the use of mobile “life innovation containers,” where solar panels and other necessary equipment are installed to provide power for home electric appliances. We will introduce these containers to village hospitals, stores, and other community centers on an experimental basis.

Developed Countries

Present status of developed countries (Japan)

People can enjoy convenient lives based on well-established living infrastructures, including a sufficient supply of water, electricity, gas, and information. The country, however, is facing problems related to the aging of society and the decreasing birthrate, as well as the depopulation in rural areas. The country is moving toward the creation of a low-carbon society based on environmental technologies accumulated over the years.

Water

Tap water is always available.

The safety of tap water is ensured.

Food and cooking

More ready-prepared meals are consumed with the increasing number of people working away from their families and of working women.

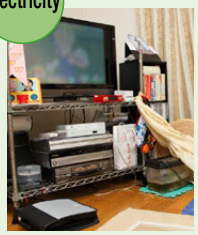
The food sufficiency rate is at the world's lowest levels; yet 30% of food is discarded without being eaten.

Living environment

Many stores are open 24 hours a day, making people's lives more convenient.

Close communication among people still remains in local communities but is decreasing in cities.

Electricity



Power use per household has increased by about 1.6 times over 30 years.

People often enjoy watching TV and playing games individually in their own rooms.

Health

Advanced medical technologies and disease prevention systems enable the country's high longevity.

Cases of lifestyle-related diseases and obesity are increasing.

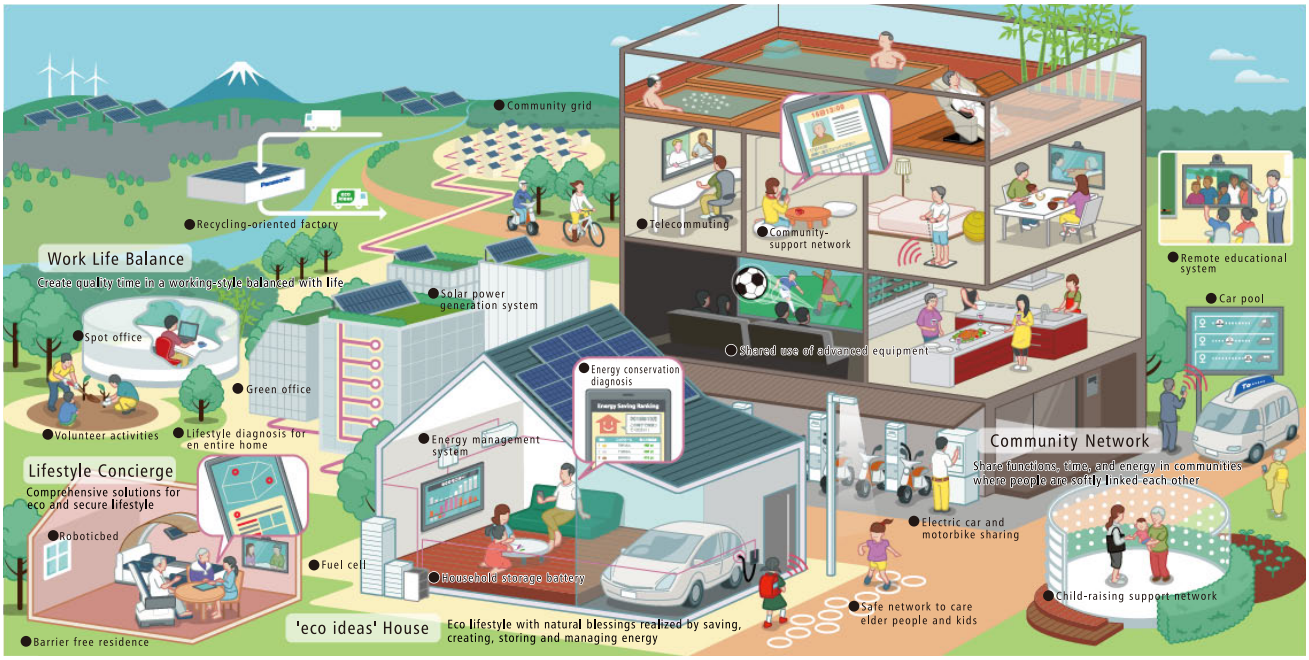
Transportation

Safe and convenient transportation systems are established.

Measures need to be implemented for the weak, such as the elderly.

Lifestyle proposals for developed countries (Japan) for 2018: "Lifestyle Co-creation" Model

Japan has realized the economic growth by enhancing energy efficiency. Taking over virtue of Japan such as smartness and kindness, everyone enjoys his or her life in a bond of family and a network of communities, which is supported by cutting-edge environmental technologies. We want to create such a lifestyle jointly with stakeholders.



Based on the concept of energy management, namely, "energy creation," "energy storage," and "energy conservation." Aging parents will be supported by their children through IT-based services called "lifestyle concierge" (daily life assistant). Also, through "community networks," people will cooperate with their neighbors, for example by sharing renewable energy.

Panasonic ECO RELAY for Sustainable Earth

Vision for Panasonic ECO RELAY

Panasonic has been promoting the Love the Earth Citizens' Campaign since 1998. In 2008, we introduced the Panasonic Eco Relay, where employees around the world plan local environmental activities and implement those events with their employees as well as adults and children in their region. Over the last three years, there have been more than 1,800 events held. With the concept to globally connecting people, regions, action, and the next generation, the campaign has been renamed the Panasonic ECO RELAY for Sustainable Earth, and its goal is to contribute to a sustainable society and the preservation of the global environment as responsible global citizens.

Logo mark for the activities

Promoting environmental education and tree planting on a global scale

We independently developed modular teaching materials that can be flexibly used by employees to give environmental education to local children. In 2010 we began creating these materials in multiple languages, including Japanese, English, and Chinese. Since 2007 we have also been continuing a campaign to plant one tree for each targeted product sold as an activity to increase green plants in cooperation with customers. We are conducting this tree planting activity through the Eco-Schools and LEAF program of the Foundation for Environmental Education (FEE), an international NGO.

Environmental education in India

Tree planting in Zambia

■Results of environmental education and tree planting

Environmental education	About 213,000 children were taught in 25 countries and regions worldwide.
Tree planting	About 749,000 trees were planted in 53 countries and regions worldwide.

Earth Lunch Hour activity

In October 2010, we introduced the Earth Lunch Hour, which focuses on ecology in our immediate environment by looking at how we spend our lunch time, what we eat, how we prepare food, and how we clean up afterward. We invite the participation of employees, their families, lunchroom staff, and local residents to expand our contributions to preserving the environment.

▶http://panasonic.co.jp/eco/earthlunchhour/

Initiatives for human resource development

Encouraging all employees to become environmental innovators

Panasonic has been providing employees with "general programs" on environmental knowledge and Panasonic's environmental policies and activities, and also with "specialized programs" for more advanced educational skills, in order to develop human resources who will serve as facilitators of Panasonic's environmental sustainability management.

In fiscal 2011, we expanded the target of the general programs to include all Panasonic Group companies in addition to those in Japan, and about 125,000 employees* received training on Panasonic's environmental measures, as well as on the resource and energy issues that cause environmental problems, population problems, and various other topics, through the intranet and other means. For our specialized programs, we held seminars on environmental laws and regulations, management of chemical substances and waste, and also on "energy conservation diagnosis skills technologies." In fiscal 2011, we held 16 seminars for employees in Japan, China, Singapore, and other Asian countries, and a total of 598 employees participated, including those belonging to divisions other than environment-related divisions.

For the annual global competition in which the Panasonic Group Manufacturing Skills Competition, we added "eco mind skills" (overall environmental knowledge and expertise) and "energy conservation diagnosis skills" (ability to make improvement proposals for energy conservation at offices and factories) to the competition sections in fiscal 2011. By awarding those with excellent environmental expertise, we aim to foster the development of human resources for a corporate-wide enhancement of environmental knowledge. In addition to these group-wide measures, individual business domain companies and sales departments within the Group also provide unique and practical training according to their specific business areas.

In the future, we will further expand and enhance environmental education in the human resource development programs for both new and newly promoted employees, while also providing special training that incorporates local themes and social trends targeting all Group employees across the globe. Through these measures, we aim to turn each and every employee into an environmental innovator.

Employees participating in the competition on energy conservation diagnosis skills

* SANYO Electric not included.

Collaboration with Suppliers

Accelerating the Reduction of Environmental Impacts through Cooperation across the Supply Chain

Collaboration with suppliers and transportation partners

Panasonic cannot make a sufficient contribution to the environment by itself. To increase our contributions, we are fostering cooperation with our suppliers and transportation partners, who have close relations with our business operations, beyond corporate boundaries. We are thereby reducing our environmental impacts across the supply chain in a range of aspects, such as CO_2 emissions reduction, resource recycling, management of chemical substances, and biodiversity conservation.

Measures for green procurement

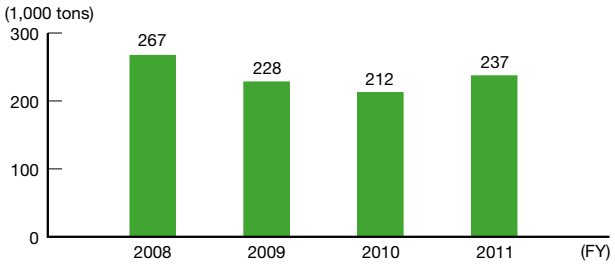
Aiming for manufacturing environmentally-conscious products in partnership with our suppliers, we released our first Green Procurement Standards (Version 5 issued in February 2010) in March 1999, and promote Green Procurement. We request all our suppliers to establish, maintain, and improve their environmental management systems and the environmental performance of the materials by acquiring ISO 14001 certification, as well as to respect our environmental policies and principles, based on our Green Procurement Standards.

For the management of chemical substances, we ask suppliers to submit documents that certify the non-use of specific chemical substances based on the Panasonic Group Chemical Substances Management Rank Guidelines and to enter data on the use of chemical substances into Panasonic's GP-Web chemical substance management system. We also conduct audits in cooperation with suppliers.

As for the reduction of CO_2 emissions, we asked suppliers belonging to Panasonic Kyoeikai*1 to identify and reduce their CO_2 emissions. In response, about 100 suppliers began conducting the necessary activities in fiscal 2009, and although overall emissions increased in fiscal 2011 year on year due to the extremely hot summer and the special boom caused by the Eco Point System implemented in Japan, the CO_2 emissions of suppliers had decreased by about 11% compared with the emissions prior to the launch of the project. In the future we will identify total CO_2 emissions from the entire supply chain. As the first step, we will cooperate with suppliers and materials manufacturers who have large volumes of emissions and identify the amount of CO_2 they have emitted in order to supply products to Panasonic.

*1 Panasonic Kyoeikai is composed of excellent small and medium-size enterprises supporting the Panasonic Group's production activities.

■CO_2 emissions by suppliers belonging to Panasonic Kyoeikai*2



*2 The factors related to fuels are based on the Guidelines for Calculation of GHG Emissions (version 2.2) published by the Japanese Ministry of the Environment. The CO_2 emission factor for electricity purchased in Japan (kg CO_2/kWh) is fixed at 0.410.

ECO-VC Activity

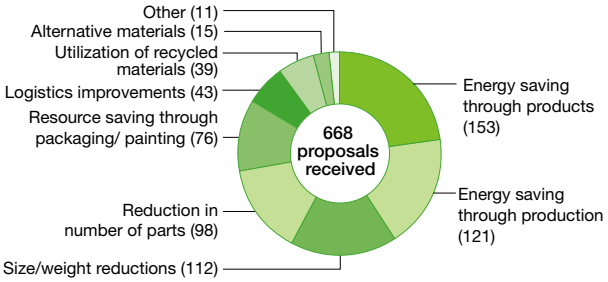
Since fiscal 2010 Panasonic has been implementing ECO-VC* Activity with its suppliers. This program seeks out ways in our parts procurement activities to save energy and resources or use recycled materials, which at the same time aims to rationalize costs. In fiscal 2011, we expanded the focus on recycling-oriented manufacturing in addition to the original objective of reducing CO_2 emissions, and we received 668 proposals from suppliers around the world on ways to reduce energy consumption in products and factories, as well as proposals about how to make products smaller and lighter, and to use fewer parts. We wanted to share the best of these proposals with all our suppliers, and so we established the Panasonic Excellent Partners Meeting, which is attended by all our suppliers worldwide.

In the future, we will implement this ECO-VC Activity throughout the supply chain—from procurement to distribution—to reach many more suppliers and reduce CO_2, lower costs, and promote recycling-oriented manufacturing (minimizing resources used, recycling, and switching to non-petroleum materials).

* VC: Value Creation.


Sharing excellent proposals

■Breakdown of ECO-VC Activity proposed by suppliers (by theme)



■Environmental results of proposed themes for ECO-VC Activity

Items	FY 2010	FY 2011
Number of proposals	512	668
CO_2 reductions derived from proposals	29,000 tons	163,000 tons
Use of recycled resources derived from proposals	N/A	11,612 tons
Reduction in resources used derived from proposals	N/A	12,311 tons

Global Eco Projects

Environmental Sustainability Management across the World

Promotion of 'eco ideas' Strategy

In October 2007, Panasonic announced its 'eco ideas' Strategy that focused on acceleration of global warming countermeasures and on global promotion of environmental sustainability management. In order to disseminate this Strategy, which marked a milestone in our environmental initiatives, as a group-wide policy and put it into concrete actions in each region, we commenced our Global Eco Projects.

During the three-year promotional period of the 'eco ideas' Strategy to fiscal 2010, each of the regions of China, Europe, and Asia Pacific formulated targets in the three categories of 'eco ideas' for Products, 'eco ideas' for Manufacturing, and 'eco ideas' for Everybody, Everywhere, and publicly announced them as the regional 'eco ideas' Declaration. The feature of each region's declarations can be summarized as follows: China focused on contributing to society through obtaining official certificates for both products and factories; Europe reinforced their partnerships with environmental NGOs; and the Asia Pacific focused on raising awareness for the environment among stakeholders and reinforcing environmental marketing. Through active promotion to attain the respective targets in each region, the three year period generated remarkable results.

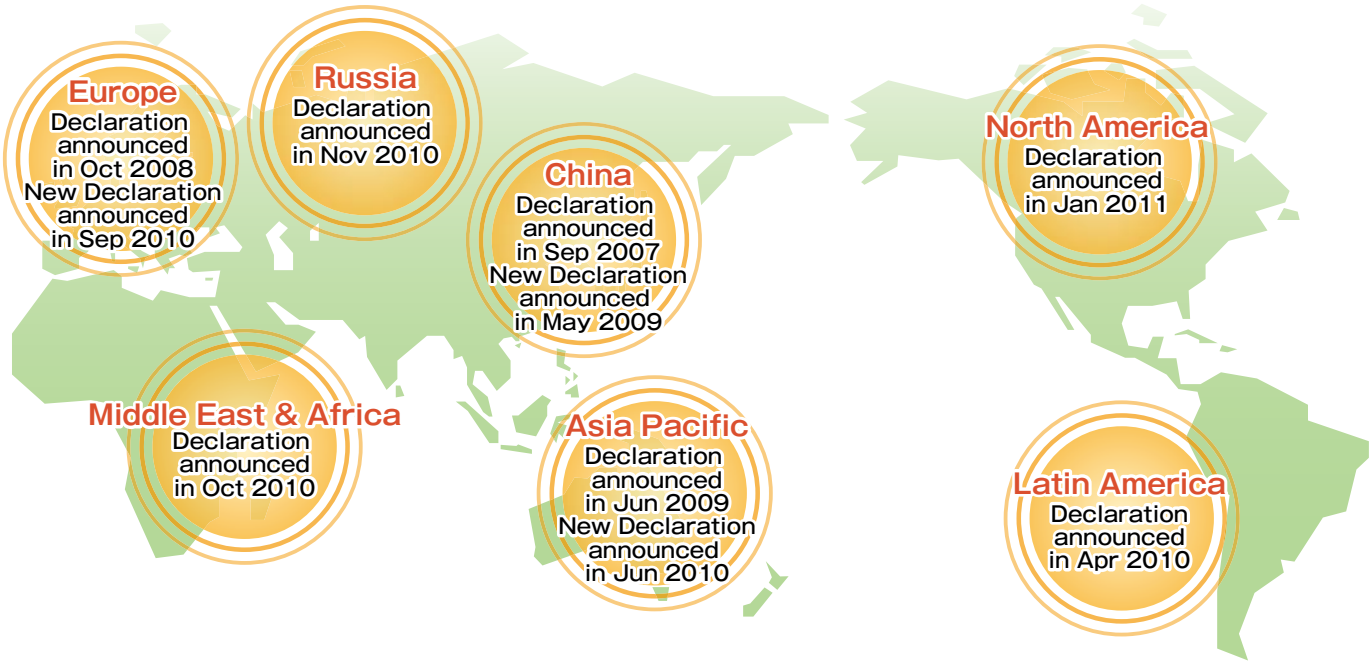
Activities from FY2011

The midterm management plan GT12, starting in fiscal 2011, evolved our initiative into a higher stage, where activities focus on two areas—'eco ideas' for Lifestyles and 'eco ideas' for Business-styles—based on a vision looking to the 100th anniversary of our founding. As conducted through fiscal 2010, each region continues to work on the wide-spread of eco products, reduction in the environmental impact from business activities, and collaboration with local communities in environmental education, awareness raising, and nature conservation activities. Further, each of the regions has set up an index with regard to the expansion of eco product sales to realize the integration of our environmental contribution and business growth.

In fiscal 2011, the Latin America, Middle East & Africa, Russia, and North America regions announced their 'eco ideas' Declarations for the first time, and the Europe and Asia Pacific regions announced new Declarations following their original ones between fiscal 2008 to 2010. These declarations demonstrate that our Global Eco Projects have been fully adopted in all of our regions.

Panasonic will further develop the Global Eco Projects across the entire Panasonic Group's activities towards 2018 by expanding it beyond the departments and employees directly involved in the businesses related to environment, to the administrative and sales departments. Through this, we will realize the integration of environmental contribution and business growth on a global scale, and achieve the 100th anniversary vision.

■'eco ideas' Declarations across in the world



Asia Pacific

Asia Pacific 'eco ideas' Declaration 2010

In June 2010, Panasonic Asia Pacific announced the Asia Pacific 'eco ideas' Declaration 2010, which sets new midterm targets for fiscal 2013.

Among the targets in the previous Asia Pacific 'eco ideas' Declaration publicized in June 2009, those for Manufacturing and Global Citizenship Activity were successfully achieved within fiscal 2010, and we have been making a steady progress on a target of eco product sales expansion set for fiscal 2013.

In the new Declaration, pillars of activities are transformed into two new categories—'eco ideas' for Lifestyles and eco ideas' for Business-styles—in order to further widen our environmental contributions.

Declaration event

'eco ideas' Factory developed in Indonesia

On October 1, 2010, Panasonic Lighting Indonesia (PLI) announced that it became the fourth 'eco ideas' Factory* within the Asia Pacific region.

The launch ceremony welcomed some 340 attendants, including Indonesian government officials, the Japanese consulate, and journalists. At the same time, the factory also launched a new model of an energy-saving compact fluorescent light bulb for high-volume segments.

PLI is actively involved in environmental activities, including glass recycling and CO_2 emissions reduction within its production of energy-saving lamps. In addition, PLI widens its focus of environmental activities to cover environmental education and awareness promotion for students in the local community.

Announcement of 'eco ideas' Factory in Indonesia

* An 'eco ideas' Factory is a model factory which lives in harmony with local communities and stakeholders, as well as embodies Panasonic's environmental strategy with two 'eco ideas' initiatives.

Collaborating with Singapore's National Environment Agency on environmental education

Under its partnership with Singapore's National Environment Agency (NEA), Panasonic Asia Pacific has been hosting the Panasonic-NEA Environment Champions (Schools) Industry Module since January 2010.

This is an experiential learning program for primary and secondary school pupils to learn about the industrial environmental practices at Panasonic 'eco ideas' Factory. So far a total of 338 pupils have attended.

The program also runs the Environment Champions Project Competition, in which participants develop and implement environmental outreach projects. The contest winning team was invited to Japan by Panasonic in December 2010 and the children visited our showroom and recycling facility to learn more about Panasonic's environmental approach and also enjoyed the exchange with elementary school pupils in Kusatsu City, Shiga Prefecture.


Trip to Japan by the winning team

Conducting a consumer-participating eco campaign

Panasonic has conducted the "Make a Change" campaign through a social networking service across seven countries in the Asia Pacific region in order to promote environmental awareness.

Our Web site dedicated to this Campaign provides videos to introduce Panasonic's environmental technologies, solicits readers' ideas to help resolve environmental problems, and holds votes for environmental advert designs and competitions.

Make a Change Website

Panasonic sponsors Singapore International Energy Week 2010

In October 2010, Singapore International Energy Week 2010 (SIEW) was held under the theme of "Fuelling the Smart Energy Economy," in which Panasonic participated as a platinum sponsor. SIEW was attended by government officials, academics, international institutions, and the media, as well as representatives from energy-resource and environmental companies. Panasonic introduced its comprehensive energy solutions in exhibitions and dialogue session.


Panel discussion

■Targets of Asia Pacific 'eco ideas' Declaration 2010 and results in fiscal 2011

Items	FY2013 target	FY2011 results
'eco ideas' for Lifestyles	(1) Achieve 80% of sales to be contributed by eco products (2) Roll out Panasonic Global Eco Learning Programme in Asia Pacific region (3) Utilize social media platforms to generate eco awareness and inculcate eco habits among consumers	(1) Increased to 66% (2) Conducted in India, Indonesia, and Thailand (3) Organized on-line eco campaign utilizing facebook
'eco ideas' for Business-styles	(1) Achieve 500,000 tons in a size of contribution in reducing CO_2 emissions from production activities (compared with the case without improvement after fiscal 2006) (2) Develop an 'eco ideas' factory in each of Indonesia, India, Vietnam, and the Philippines	(1) Achieved 520,000 tons (2) Developed in Indonesia

Europe

New ‘eco ideas’ Declaration in Europe

At the IFA 2010 electronics show held in Berlin, Germany, September 2010, Panasonic Europe announced its new ‘eco ideas’ Declaration in Europe, which sets its environmental targets for fiscal 2013.

Panasonic Europe aims to increase sales of products with eco labels that convey our products’ environmental performance in a clear manner, and also to increase contributions to reducing CO_2 emissions in the product use stage. The company also accelerates efforts in CO_2 emissions reduction and resource recycling in its business operations, as well as focusing on environmental education for children.

Announcement of the Declaration

Further reduction of environmental impact from production activities

Production sites in Europe are working hard to achieve the CO_2 emission reduction and recycling rate targets stipulated in the new ‘eco ideas’ Declaration.

Panasonic Automotive Systems Czech, where car audio systems are produced, reduced its waste arisings by approx. 4% in fiscal 2011 (compared with fiscal 2010) realizing a 98% waste recycling rate. This was achieved through the reuse of wooden pallets and cardboard boxes for packaging inside and outside of the company and exhaustive separation of recyclables by employees.


Reuse of cardboard packages

Panasonic Europe holds stakeholder dialogue

Panasonic Europe held a dialogue in February 2011 with external stakeholders under the theme of “carbon footprinting of goods within the consumer electronics sector.”

The attendants to the dialogue were experts from different fields, including environmental NGOs, a consumer testing magazine’s editor, an academic institute, and educational and governmental organizations. We earnestly discussed a calculation method for CO_2 emitted from production and usage stages, and an optimal information publication method.

Panasonic is actively engaging with its stakeholders to collaborate in contribution to build up a more sustainable society.


Discussion in the dialog

Participation in Care Innovation 2010

In November 2010, Panasonic participated in an international symposium and environmental exhibition called Care Innovation 2010, held in Vienna, Austria, as one of its gold sponsors.

Panasonic hosted an exhibit with the theme of “a lifestyle with virtually zero CO_2 emissions in an entire home,” as well as delivered presentations concerning the new midterm environmental targets with two key pillars of CO_2 reduction and resources recycling, chemical substance management, and the Energy Systems Business (solar cells, fuel cells, storage batteries and home energy management systems) . Participation in the Care Innovation enabled us to inform a wider audience about our environmental activities.

Panasonic’s presentation

■ **Targets of new European ‘eco ideas’ Declaration and fiscal 2011 results**

Items	FY2013 targets	FY2011 results
‘eco ideas’ for Lifestyles	(1) Increase the sales ratio of eco labeled products*1 in total sales to 30% (2) Achieve 3.5 million tons in a size of contribution in reducing CO_2 emissions through energy management products*2 (3) Provide environmental education to 100,000 children through Kids School-eco learning programme	(1) Increased to 14% (2) Achieved 580,000 tons (3) Provided to 15,000 children
‘eco ideas’ for Business-styles	(1) Achieve 7,000 tons in a size of contribution in reducing CO_2 emissions in European manufacturing sites (compared with the case without improvement after fiscal 2006) (2) Reduce 1,000 tons of CO_2 emissions at non-manufacturing sites*3 (compared with FY2010) (3) Achieve 99% waste recycling rate in European manufacturing sites	(1) Achieved 12,000 tons (2) Reduced 714 tons (3) Achieved 97%

*1 Products with European Type I Eco-labels or those qualified for Panasonic’s ‘eco ideas’ label due to their industry-leading environmental performance.
*2 Subject items are: solar panels, fuel cells, heat pumps, energy recovering ventilations, LED lightings, and compact fluorescent lightings.
*3 Sites with 100 or more employees.

China

Declaration to Become an Environmentally Contributing Company in China

In September 2007, Panasonic held the China Environmental Forum, where we publicized concrete action targets concerning products, factories, and employees' activities as the Declaration to Become an Environmentally Contributing Company in China.

Two years later in May 2009, Panasonic also held the China Environmental Forum 2009 and declared to be a model company in China through further intensified environmental contributions. We are now disseminating our environmental technologies and expertise widely across the Chinese society through a range of activities.

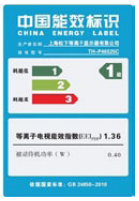
Progressive acquisition of environmental labels in China

As of March 1, 2011, the energy efficiency labeling for flat screen TVs became obligatory in China. This label displays the product's energy-saving performance in three grades. Panasonic acquired the top-grade energy efficiency label for all models of our plasma TVs released in fiscal 2011.

We are also actively obtaining voluntary environmental labels* and acquired a total of 459 labels for a variety of products, including air conditioners and washing machines, in fiscal 2011.

* China Environmental Labeling, Energy and Water Conservation Labeling, and China Ecolabeling.

Plasma TV P46S25C



First-grade energy efficiency label acquired

■ **Chinese environmental labels**

China Environmental Labeling Type I

China Environmental Labeling Type II

Energy Conservation Certification label

Water Conservation Certification label

China Ecolabeling

Green Factory Competition initiative

In order to boost a level of environmental activities throughout the production sites in China and Northeast Asia, Panasonic has been holding an intra-company award scheme, the China Green Factory (GF) Competition, since fiscal 2008. For the fiscal 2011 competition, we have invited model cases in four categories: energy saving, resources recycling, chemical substance reduction, and water conservation, and gave awarded for the best practices. The applicant cases were introduced to all Chinese factories as GF Competition model cases, to share and implement expertise concerning these model practices across all sites. A total of 107 cases applied for the competition, and all together they reduced 15,200 tons of CO_2 emissions, 400 tons of wastes, 40 tons of chemical substances, and 121,000 tons of water usage.

On-site verification

Development of environmental experts in Chinese corporations

Panasonic offers environmental expert training to Chinese corporations as a model environmentally contributing company in China. In fiscal 2011, in collaboration with various organizations we provided a total of nine training courses to 892 attendants from 710 Chinese corporations.

Training course held with the State-Owned Assets Supervision and Administration Commission of the State Council (fiscal 2011)

Tree planting and environmental education for children

In June 2009, we started the "One Million Trees over 10 Years" tree planting program and "One Million Children over 10 Years" environmental education activity. Utilizing a curriculum for younger children—exclusively developed by Panasonic China—along with global environmental education material for older children newly developed by Panasonic headquarter, the program was provided to about 63,000 children in fiscal 2011. The number of trees planted during fiscal 2011 reached approx. 52,000.

Environmental education

Tree planting

■ **Declaration details in China**

Items	FY2008 declaration	FY2010 declaration
Products	Panasonic will make all its products certified "Green Products"	Launching top-level energy saving products successively
Manufacturing	Panasonic will transform all its factories into "Clean Factories"	Offering know-how about environmentally-conscious manufacturing to society
Human resources	Employees at all of our Chinese Panasonic Group companies will participate in environmental activities	Spreading employees' eco activities into local society

North America

‘eco ideas’ Declaration in North America

Panasonic North America (PNA) announced the ‘eco ideas’ Declaration in North America at the 2011 International Consumer Electronics Show, held in Las Vegas, USA, in January 2011. In the area of ‘eco ideas’ for Lifestyles, PNA will work on expanding the sales of eco products, reducing CO_2 emissions in product usage, and providing the environmental education. In the area of ‘eco ideas’ for Business-styles, PNA will focus on the CO_2 emissions reduction in its headquarter premise, and product recycling by increasing the number of recycling collection sites to 1,600 sites across the USA.

Announcement of Declaration

Reception of Partner of the Year award from Energy Star for the second consecutive year

In March 2011, Panasonic Home & Environment Company was named as a 2011 Energy Star Partner of the Year by the United States Environmental Protection Agency following last year’s award.
This was in recognition of its contribution to greenhouse gas reduction through production and dissemination of ventilation fans with the industry’s No. 1 energy-saving performance, and efforts in raising wareness for the importance of products’ energy efficiency among consumers.

Ventilator fan FV-08VKM2 – industry’s top-class energy efficiency

■ Targets of ‘eco ideas’ Declaration in North America

Items	FY2013 targets
‘eco ideas’ for Lifestyles	(1) Double the sales of environmentally-conscious products* (2) Achieve 8,000,000 tons in a size of contribution in reducing CO_2 emissions through development and sale of energy efficient products (compared with the case without improvement after fiscal 2006) (3) Provide environmental educational outreach to at least 500,000 students
‘eco ideas’ for Business-styles	(1) Reduce CO_2 emissions from North American headquarters’ operations by 45% (compared with FY2006) (2) Expand Panasonic National Recycling Program to 1,600 sites (833 sites as of the end of FY2011)

* ENERGY STAR-qualified products, EPEAT Silver and Gold-registered products and Panasonic’s Superior GPs.

Latin America

‘eco ideas’ Declaration in Latin America

Panasonic Corporation of Latin America announced its ‘eco ideas’ Declaration in Latin America in April 2010.

One of the targets listed in the Declaration refers to a 10% reduction in CO_2 emissions from production activities within the region by fiscal 2013, and efforts have already begun.

As a part of these efforts, a team of intra-company experts conducted energy-saving diagnoses in Panasonic Brazil Manus Factory and Panasonic Mexico in October 2010. Based on the results, 27 energy saving measures to achieve 480 tons of CO_2 emissions reduction were suggested, and these measures are currently being implemented.

Energy saving diagnosis

Panasonic Mexico holds recycling-themed event

In April 2010, Panasonic Mexico held a recycling-themed event, which 100 employees and 300 external stakeholders attended. The children who participated in the event created a photo stand or pencil case using recycled materials collected by the employees.

Children making craft work

Participation in global-scale cleaning up event

The Beach Cleanup 2010 took place on September 26, 2010, as a part of the International Coastal Cleanup Day in which volunteers collect rubbish on the beach across 100 countries. Panasonic Corporation of Latin America sponsored the event and our employees participated in the cleaning activity. The Panasonic group collected approx. 1.4 tons of rubbish.

Panasonic’s cleaning up activity

■ Targets of ‘eco ideas’ Declaration in Latin America

Items	FY2013 targets
‘eco ideas’ for Lifestyles	(1) Double the regional sales of products with industry-leading environmental performance (compared with fiscal 2010)
‘eco ideas’ for Business-styles	(1) Reduce total CO_2 emissions from production activities by 10% (compared with fiscal 2006) (2) Develop an ‘eco ideas’ Factory in Latin America by fiscal 2012 (3) Contribute to local communities by taking initiatives in driving environmental activities together with communities

Russia

Russia 'eco ideas' Declaration

In November 2010, Panasonic Russia announced its midterm environmental targets as the 'eco ideas' Declaration in Russia, in Moscow. The press conference of the Declaration welcomed 65 attendants, including representatives from the Federal Agency of Youth Affairs of the Ministry of Sport, Tourism and Youth, journalists, and Panasonic managements.

Declaration event

Carrying out of Panaboard Eco Projects

Panasonic Russia has been hosting the Panaboard Eco Project, an eco learning program using Panaboards—Panasonic's interactive whiteboards—at 57 elementary and junior high schools in Russia. The program supports an eco contest for eco initiatives created by the children based on what they have learned. Panasonic Russia will offer support to bring the winning project to fruition.

Presentation by children at the Declaration event

■ Targets of 'eco ideas' Declaration in Russia

Items	FY2013 targets
'eco ideas' for Lifestyles	(1) Increase sales ratio of Superior GPs to 30% (2) Strengthen eco-themed promotional activities through showrooms
'eco ideas' for Business-styles	(1) Shift 50% of products originating from Asia/China to less environmental impact transportation modes/routes (2) Provide eco learning activities for the next generation in Russia (sponsoring youth project by the Federal Agency of Youth Affairs, and expanding Panaboard project) (3) Actively participate in eco activities of the Sochi 2014 Winter Olympic Games Organizing Committee (4) Designate an Environment Day twice a year for employees to participate in volunteer environmental activities

Middle East & Africa

'eco ideas' Declaration in Middle East & Africa

Panasonic Marketing Middle East (PMM) announced the 'eco ideas' Declaration in Middle East & Africa at the GITEX 2010, one of the biggest information, telecommunication, and AV equipment trade shows in the Middle East, which was held in October 2010.

The Declaration event was attended by approx. 150 people, including the chancellor of Abu Dhabi University, journalists, and Panasonic managements.

Declaration event

Panasonic sponsors WWF Lake Victoria Catchment Environmental Education Programme

Panasonic solely sponsors the Lake Victoria Catchment Environmental Education Programme, promoted by the World Wildlife Fund (WWF), and the program opening ceremony was held in March 2011.

The project is designed to empower catchment communities, schools and regional partners with the knowledge, motivation, and skills for the sustainable use and management of natural resources available along Lake Victoria in East Africa. An environmental model school is selected each from Tanzania, Uganda, and Kenya, which are located along the lake, and the students will work on promoting environmental activities.

Opening ceremony

■ Targets of 'eco ideas' Declaration in Middle East & Africa

Items	FY2013 targets
'eco ideas' for Lifestyles	(1) Double the regional sales of Panasonic Superior GPs (compared with FY2010) (2) Provide environmental education to 100,000 visitors to our showrooms
'eco ideas' for Business-styles	(1) Reduce CO_2 emissions from PMM premises by 15% (compared with FY2010) (2) Obtain LEEDS and ISO 14001 certification for PMM premises (3) Conduct Earth Lunch Hour once every month attended by all PMM employees (4) Continue to support the UAE Ministry of Education for their education program to encourage children to make videos concerning environmental protection. Also promote the eco picture diary activity for elementary schoolchildren (6–12 years old) (5) Provide scholarships for graduate students under the Environmental Science Bachelor Degree Program of Abu Dhabi University (6) Support WWF Lake Victoria Catchment Environmental Education Programme as a sole sponsor

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 CO_2 and wastes to the environment. This diagram maps the environmental impact from our business operation from a procurement stage to recycling activities.

INPUT		OUTPUT
	Suppliers	
Energy: 80 thousand TJ Renewable energy: 2.19 million kWh[*1]; Electricity: 6.76 billion kWh Gas: 180 million m^3; LPG: 30 thousand tons Heavy oil: 17 thousand kL; Kerosene: 6 thousand kL Recycled plastic: 6 thousand tons; Recycled wood: 165 thousand tons Water: 69 million m^3 Chemical substances: 345,948 tons[*3]	**Production**	CO_2: 4 million tons GHGs other than CO_2 from energy use: 0.14 million GWP tons-CO_2 NOx: 769 tons[*2]; SOx: 272 tons[*2] Total wastes including revenue-generating waste: 588 thousand tons; Final disposal: 13,269 tons Water discharged: 53 million m^3 COD: 552 tons[*2]; Nitrogen: 380 tons[*2]; Phosphorus: 41 tons[*2] Release and transfer of chemical substances: 6,102 tons[*3]
Energy: 8,947,139 GJ[*4] Biodiesel fuel: 40,728 L[*5]	**Logistics**	CO_2: 0.87 million tons[*6]
Electricity: 180 billion kWh	**Use**	CO_2: 91 million tons
Collected products: 180,853 tons[*3*5*7] CRT TVs: 94 thousand tons; Plasma/LCD TVs: 829 tons Air conditioners: 20 thousand tons; Refrigerators/freezers: 43 thousand tons Washing machines/clothes dryers: 23 thousand tons; PCs: 24 tons	**Recycling**	Recycled products: 142 thousand tons[*3*5*7] Metals: 66 thousand tons; Glass: 44 thousand tons; Other: 32 thousand tons Generated waste: 46 thousand tons[*3*5]

●Calculation model

<Area Covered> Global
<Scope>
Production: 346 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 CO_2 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 CO_2 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.
Input: An amount of purchased electricity from power utilities, and a volume of municipal water, industrial water and groundwater, etc.
Output: CO_2 emissions associated with the use of electricity, gas, LPG and petroleum, NOx, SOx, COD, nitrogen and phosphorus from the sites governed by legal regulations and ordinances, and water discharge to sewage and public water districts, etc.

*1 Figures from photovoltaic and biomass sources. Heat pumps not included.
*2 SANYO Electric and PLD not included.
*3 SANYO Electric not included.
*4 Intra-region outside Japan not included. SANYO Electric not included in international transportation.
*5 Figures for Japan.
*6 SANYO Electric not included in intra-region outside Japan and international transportation.
*7 Air conditioners, TVs, refrigerators/freezers, washing machines/clothes dryers, and PCs.
*8 LCD TVs, plasma TVs, CRT TVs, BD players, BD recorders, IH cooking heaters, irons, air conditioners, EcoCute, hot water pots, washer dryers, clothes dryers, full automatic washing machines, heated toilet seats with bidet, dish washer dryers, rice cookers, vacuum cleaners, rug heaters, microwave ovens with grill, refrigerators, LED lights, LED bulbs, LED tube lights, home-use f uorescent light and incandescent light bulbs, hair dryers, bathroom ventilators, cooker hoods, humidifiers, ventilation fans, air purifiers, dehumidifiers, door interphones, telephones, mobile phones, home facsimiles, and motor-assisted bicycles.
*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 CO_2 emission factors (kg- CO_2/kWh) used: 0.410 (Japan), 0.487 (Europe); 0.579 (North America); 0.740 (China); 0.927 (India); 0.527 (Asia/Oceania, Northeast Asia); 0.332 (Latin America); 0.327 (other regions).

Environmental Governance

Management and promotion system

Panasonic establishes its annual environmental policy based on overall Management Policy and Green Plan 2018. This policy is then thoroughly notified corporate-wide through the Environmental Working Committee, which is led by the director in charge of environmental affairs and consists of environmental compliance administrators from business domain companies and regional headquarters. The environmental performance data resulting from each activity is collected monthly (or annually) per business site in order to determine the progress being made, and additional measures are introduced as necessary. The annual performance data is disclosed after a third-party review, and comments made by stakeholders are utilized to improve the policy and its measures. As a means of performance data assessment, the size of contribution in reducing CO_2 emissions and resources recycling are used as the key management indicators, along with the amount of sales and operating profits. In particular, CO_2 emissions reduction is linked to the business performance evaluations of business domain companies.

In addition to the Environmental Working Committee, dedicated committees for corporate-wide key issues are set up with working groups composed of major domain companies and experts. Aiming to accelerate group management innovation, the Group Management Innovation Division, directed by the President and the Environment Innovation Subcommittee were also set up on April 1, 2010. Under the Subcommittee, the Corporate CO_2 Reduction Contribution Promotion Committee and the Corporate Resources Recycling Promotion Committee are established to propel related activities company-wide.

Environmental Accounting

For environmental sustainability management

■ Environmental accounting

(million yen)

Classification by the Ministry of the Environment of Japan	Investments*1	Expenses*1,2	Economic benefit
R&D	3,885	30,506	—
Global environmental conservation	5,009	2,911	4,981
Pollution prevention	2,032	6,847	—
Resource circulation	1,686	7,969	19,675
Upstream and downstream	561	5,702	4,128
Administration	99	8,379	—
Environmental remediation	30	2,072	—
Social activity	0	90	—
Total	13,301	64,474	28,784

*1 Where an entire amount of investment and expenses cannot be regarded as environmental conservation costs alone, the difference or appropriate portions (divided proportionally) are calculated. *2 Expenses include a cost of capital investment depreciation.

■ Environmental conservation benefits (in physical terms)

Categories	Emission reduction	Reference indicator: environmental impact	
		Fiscal 2010	Fiscal 2011
CO_2 emissions from the use of our products	−27 million tons*3	64 million tons*4	91 million tons
CO_2 emissions from production activities	−0.06 million tons	3.94 million tons	4.00 million tons
GHG emissions (other than CO_2)	30,000 tons	170, 000 tons	140, 000 tons
Release and transfer of key reduction-target chemical substances	200 tons*3	3,200 tons*5	3,000 tons*4
Final disposal of waste	1,100 tons*3	14,400 tons*5	13,300 tons
Water consumption	−20 million m^3 *3	49 million m^3 *5	69 million m^3
CO_2 emissions from transportation activities	−90,000 tons*3	780,000 tons*5	870,000 tons*6

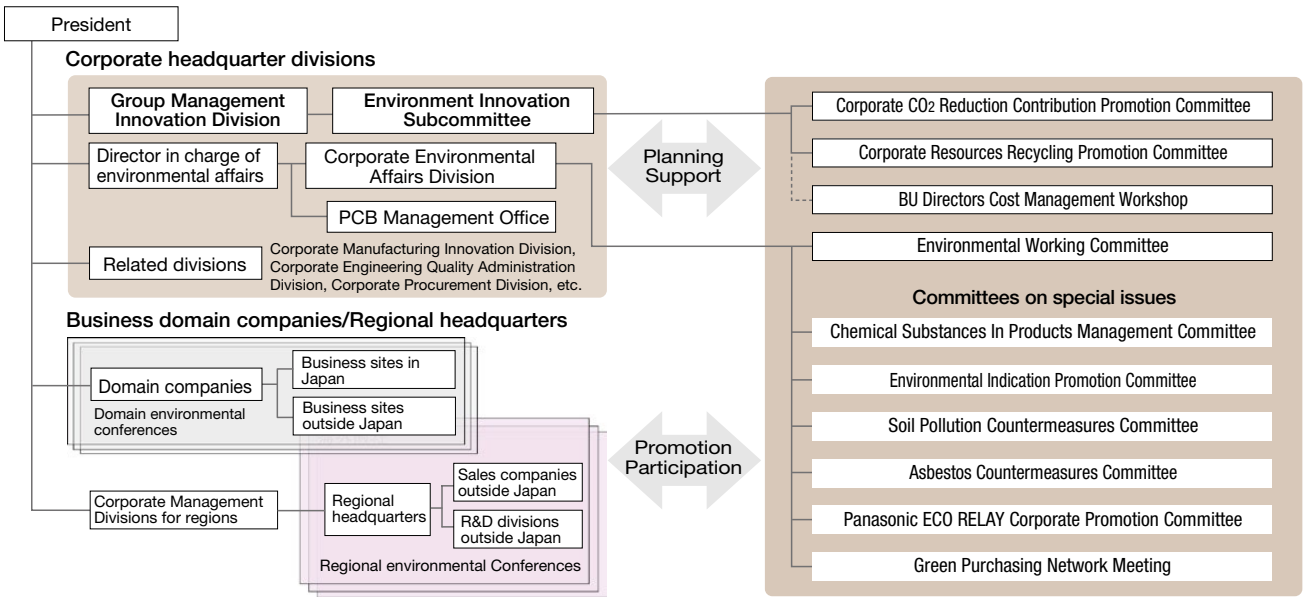
*3 Fiscal 2011 coverage subjects for compilation differ from fiscal 2010 coverage. *4 SANYO Electric not included. *5 SANYO Electric and PLD not included. *6 SANYO Electric and PLD not included in intra-region outside Japan and international transportation.

■ Economic effects for customers

Electricity cost reduction from product usage (global)	
Reduced amount of electricity*7	62 billion kWh
Reduced electricity costs*8	940 billion yen

*7 Calculated under the same conditions as when determining the size of contribution in reducing CO_2 emissions by energy-saving products. *8 Electricity costs were set for each region based on IEA Statistics.

■ Promotion system of environmental sustainability management in fiscal 2012



Environmental Management Systems

ISO 14001 certification

As the foundation of environmental sustainability management, Panasonic established Environmental Management Systems in all of our manufacturing sites across the world in 1998. We also continue to have the sites ISO14001 certified.*1

We will further reinforce this effort to build an Environmental Management System appropriate for a Green Innovation Company.

*1 A new manufacturing site usually obtains this certificate within the first three years of its operations.

■Obtainment of ISO 14001 certification (As of end of March 2011)

Region	Number certifications obtained*2		Total
	Manufacturing	Non-manufacturing	
Japan	47	26	73
Americas	20	2	22
Europe	14	2	16
Asia/Oceania	58	10	68
China/Northeast Asia	75	2	77
Total	214	42	256

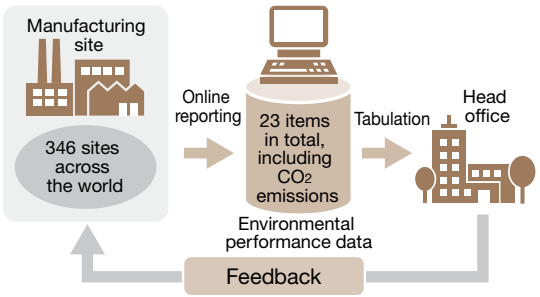
*2 Including multi-site certifications. Depending on the consolidation and closure of sites and promotion of multi-site certifications, the number of certifications obtained varies each year.

Environmental Performance System

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 developed and introduced an Environmental Performance System as a means of globally collecting and managing environmental data from all our manufacturing sites.

Since fiscal 2008, we have collected monthly major environmental performance data from all our manufacturing sites. Based on the data gathered through this system, the balance of the size of contribution to reducing CO_2 emissions is monthly determined, as well as assessing performance progress and any related issues to be addressed. This information is then used to ensure the thorough implementation of the necessary countermeasures. The Environmental Performance System plays a vital role in achieving our CO_2 reduction targets.

■Operation of the environmental performance system



Measures against Environmental Risks

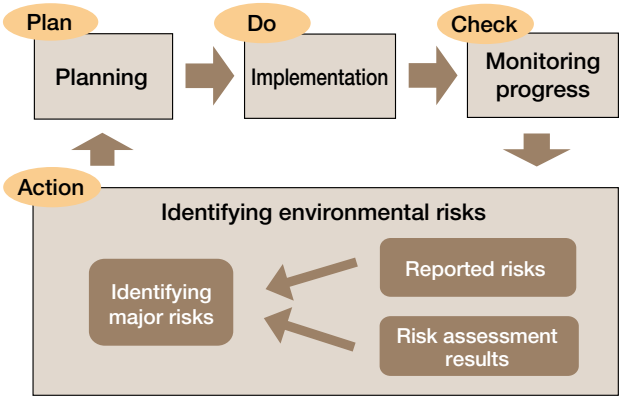
Company-wide systems to manage environmental risks

As a tool for continuously reducing environmental risks, Panasonic has established two environmental risk management systems: the Environmental Risk Management System per business domain company and the Environmental Risk Management Promotion Committee comprising relevant experts. The two together are responsible for (1) cyclic identification of environmental risks and company-wide management implementation, and (2) ensuring a quick response to reported environmental risks.

To identify environmental risks and implement the management system, the Committee determines the environmental risks that need to be managed based on the actual environmental risks reported from business domain companies and the risk assessment results conducted across the entire company. These risks are then classified according to their occurrence frequencies and the degree of impact on business. For risks classified as major and thus requires strict control, the PDCA approach is adopted in which countermeasures are established and implemented, and progress is checked and ensured.

If any environmental risk is reported, the reporting business domain company and the Environmental Risk Management Promotion Committee jointly work to carry out the emergency measures that are appropriate for the seriousness of the risk. They also work on standardizing risk management procedures in order to prevent any secondary risks arising from inconsistent countermeasures.

■Classification of environmental risks and countermeasure implementation



Compliance management at factories

Panasonic ensures legal compliance at its factories as a prerequisite for its operations, and regularly measures the level of environmental impact, including gas emissions, water discharge, noise, and odor levels at factories. For cases that could have resulted in a serious violation of the laws, we share relevant information across all our manufacturing sites to prevent the recurrence of similar problems.

In fiscal 2010, there were four cases of legal violation in Japan and one case outside Japan. In response, we made the necessary notifications to local governments and implemented countermeasures. We will continue to ensure legal compliance by implementing preventive measures.

■Cases of violation (exceedance of legal standard level,etc)

Region		Air	Water quality	Noise	Odor	Waste	Total
Global		0	2	1	0	2	5
	Japan	0	2	1	0	1	4

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. We are storing and making necessary notifications about such materials in compliance with the Act on Special Measures concerning Promotion of Proper Treatment of PCB Waste, which was enforced in Japan in July 2001. As for the PCB-containing capacitors buried at five of our factories, which we voluntarily made public in January 2003, we completed excavations, and we are now working on countermeasures in our former Tsukamoto factory site. We also began full-scale treatment of the contaminated soil by commissioning it to Geosteam Corp., which has PCB contaminated soil purification facilities in Kitakyushu. By the end of March 2011, approx. 16,130 tons of contaminated soil were transported to and treated at the facilities. We will continue to treat PCB waste and contaminated soil in a prompt manner.

■Numbers of PCB-containing items registered with JESCO[*1] and those already decontaminated (as of March 31, 2011)

Type of waste	Registered with JESCO	Already decontaminated
Transformers, capacitors, etc	2,281 devices[*2]	1,175 devices
PCB and PCB-containing oil	About 4,700 kg	—

*1 Japan Environmental Safety Corporation (company engaged in PCB waste treatment).
*2 Added 260 SANYO units. Two out of the registered units as of March 31, 2010 were found to be out of the scope.

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's 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. Furthermore, 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 Panasonic's 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 manufacturing and non-manufacturing sites in Japan under Panasonic's management supervision with regard to this issue in fiscal 2004, and also those outside Japan in fiscal 2006. Subsequently, Panasonic Electric Works and PanaHome joined our Group and in fiscal 2009 we again placed all our bases under management supervision. Since fiscal 2011, a new Panasonic management supervision policy has been established based on the previous policy, making it more organized and clarifying the details of its purpose. This has been enforced to improve risk management across all group companies, including SANYO Electric.

■Soil and groundwater risk management policy (fiscal 2011)

Conditions subject to management supervision	Procedure
Pollution dispersion prevention beyond Panasonic premises	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	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
(as of March 31, 2011)

		Number of sites targeted for investigation	Number of sites completing remedial measures	Number of sites currently taking remedial measures
Global		369	59	49
	Japan	197	55	43

Note: SANYO Electric and PLD not included.

Third-Party Opinion

Panasonic has been building a partnership with the Natural Step since 2001. The Natural Step has identified key requirements for a sustainable society in consensus with scientists, and many environmentally-industrialized countries and corporations refer to these conditions in determining their sustainable strategies.

In fiscal 2011, we requested the Natural Step to review our Green Plan 2018 and other initiatives. We take the opinions voiced by the Natural Step into account in order to make a steady progress in our environmental sustainability management.

Opinion on Green Plan 2018 and Other Initiatives

The Great East Japan Earthquake

On March 11, 2011, an earthquake of unprecedented magnitude, followed by a tsunami, struck Northeast Region, resulting in unimaginable damage to an extensive area. We very much appreciate that the Panasonic Group could provide support to the people in the affected areas—not only through the relief fund, but also through their own products and services.

The damage caused by the Great East Japan Earthquake was then exacerbated by the serious Fukushima nuclear power plant disaster.

In fact, the impact of the disaster not only spread to western countries that have been relying on nuclear power plants as Japan does, but even to developing countries that are considering building such power plants, generating an international movement for a shift towards renewable energy. However, it is not an easy task to switch all energy sources to renewable and strive toward sustainable development. The leadership and commitment by politicians and the industries are indispensble.

Contribution to disaster recovery

In its fiscal 2012 business plan, Panasonic announced that it would respond to the needs deriving from the power shortage and power cuts in east Japan including affected aeras through the promotion of energy-saving equipment, such as LED bulbs, and solutions that combine energy creation, energy storage, and energy management. As for the permanent recovery of the affected areas, Panasonic clearly described that it would contribute to the recovery through its Comprehensive Solutions for the Entire Home, Entire Building, and Entire Town, which offers energy and security management, and take the initiative towards realizing the vision of a Green Innovation Company.

Green Plan 2018

Panasonic's Green Plan 2018 can also be highly valued as it is an action plan that states the leadership and commitment to help provide solutions to these global difficulties to realize sustainable energy usage.

The Green Plan 2018 lists development of its Energy System Business as the target for fiscal 2019. We believe that this will be the business through which Panasonic can contribute to international society most. This is because Panasonic can offer the world's top class technologies in photovoltaic power generation and fuel cell cogeneration systems. In particular, the commercialization of fuel cells for home use is attracting society's attention as an epoch-making innovation. However, these products can only be beneficial to society when they become widely used. The challenge here is that the demand for these products is still small and therefore production costs are high.

Cooperation with stakeholders is the key

One of Panasonic's targets for fiscal 2009 is expanding environmental contribution through cooperation with stakeholders. The description states that it is necessary to start working with the supply chain and involve all the relevant parties, including customers, governments, local communities, NGOs, research institutes, experts from different fields, suppliers, distributors, and business partners, in order to generate a "wave of revolution" across the world. We totally agree with this view. Products can only become widespread in use through cooperating with a number of stakeholders and building concrete strategies and plans.

Gaining further international presence through the Global Eco Projects

Panasonic has implemented environmental management and measures internationally. It is notable that the initiatives of each regional management company and promoting the activities that suit to the local geographical and cultural characteristics are highly valued.

The long-term eco city projects are starting up in different countries to build a low-carbon society on a global scale.

For example, Stockholm in Sweden is running a low-carbon eco city project called the Stockholm Royal Seaport. In this project, Stockholm has set up targets to reduce CO_2 emissions per resident to 1.5 tons per year by 2020—from the current 6 tons, and further aims at becoming a city that uses no fossil fuels by 2030. In order to achieve such high targets, advanced energy management technology, including the smart grid, must be implemented. Participating in such a project as a technological partner is very appealing.

In fact, Panasonic has already established partnerships with one European smart grid project, with Tianjin eco-city project in China, and with the Fujisawa Sustainable Smart Town project—which utilizes Panasonic's former factory site—in Japan. This forward-stepping approach is highly valuable strategy.

From Northeast Region to the world

In the fiscal 2012 business policy, President Otsubo announced that Panasonic would help establish a new society with new lifestyles in earthquake-affected Northeast Region as a message of regeneration to the world. We suggest considering a long term project of between 10 to 20 years to build a town solely operated using renewable energy, cooperating with local governments and other stakeholders with high environmental targets in the Northeast region.

We hope that Panasonic will continue to inspire society by new ideas over a long period in order to realize a more comfortable, greener, and safer life than before the earthquake for the 150,000 people who lost their homes through the earthquake and for the many families who were forced to evacuate their homes due to the nuclear power plant disaster.

> If a leader has enthusiastic determination to achieve something, it will definitely move other people. In response to such determination, each person will offer what they have—a person with wisdom will offer their wisdom, and a person with talent will offer their talent.
>
> Extract from *Shidosha no Joken, Jinshin no Myomi ni Omou* (Requirements of a Leader, Subtlety of the Human Heart), by Konosuke Matsushita

the NATURAL STEP

▶ http://www.tnsij.org

Sachiko Takami
Chief Executive of the Natural Step Japan

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

Independent Assurance Report

To the Board of Directors of Panasonic Corporation

Purpose and Scope

We were engaged by Panasonic Corporation (the "Company") to provide limited assurance on its 'eco ideas' Report 2011 posted in the Company's website (http://panasonic.net/eco/env_data/back_number/pdf/panasonic_eiR2011e.pdf) (the "Report") for the fiscal year ended March 31, 2011. The purpose of our assurance engagement was to express our conclusion, based on our assurance procedures, on whether:

1) the environmental indicators listed in the table below for the period from April 1, 2010 to March 31, 2011 described in "Green Plan 2018" included in the Report (the "Indicators") are prepared, in all material respects, in accordance with the Company's reporting criteria; and
2) all the material environmental information defined by the Japanese Association of Assurance Organizations for Sustainability Information ("J-SUS") is included in the Report.

The content of the Report is the responsibility of the Company's management. Our responsibility is to carry out limited assurance procedures and to express our conclusion.

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

Indicators	Page No.
Percentage of sales for No.1 eco-conscious products	7
The size of contribution in reducing CO_2 emissions through energy-creating products	10
The size of contribution in reducing CO_2 emissions through energy-saving products	11
The size of contribution in reducing CO_2 emissions through production activities	13
CO_2 emissions from non-manufacturing sites	15
Year-on-year reduction rate of CO_2 emissions per basic unit from international and domestic transportation	16

Indicators	Page No.
Recycled resources used／Total resources used	17
Waste recycling rate	21
Amount of water consumption	22
Release/transfer of key reduction-target substances	25
Result of environmental education and tree planting (environmental education)	31
Result of environmental education and tree planting (tree planting)	31

Criteria

The Company applies its own reporting criteria as described in the Company's website (http://panasonic.net/eco/env_data/back_number/pdf/review2011e.pdf). We used these criteria to evaluate the Indicators. For the completeness of material environmental information, we used the 'Criteria for Granting an Environmental Report Assurance and Registration Symbol' of J-SUS.

Procedures 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' issued by the International Auditing and Assurance Standards Board, and the 'Practical Guidelines of Sustainability Information Assurance' of J-SUS. The limited assurance engagement on the Report consisted of making inquiries, primarily of persons responsible for the preparation of information presented in the Report, and applying analytical and other procedures. The level of assurance provided is thus not as high as that provided by a reasonable assurance engagement. Our assurance procedures included:

- Interviews with the Company's responsible personnel to obtain an understanding of its policy for the preparation of the Report and reviews of the Company's reporting criteria.
- Inquiries about the design of the systems and methods used to collect and process the Indicators.
- 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 a recalculation of the Indicators.
- Visits to factories and administrative offices of the Company and its affiliates selected on the basis of a risk analysis.
- Assessment of whether or not all the material environmental information defined by J-SUS is included in the Report.
- 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:

1) the Indicators in the Report are not prepared, in all material respects, in accordance with the Company's reporting criteria as described in the Report; and
2) all the material environmental information defined by J-SUS is not included in the Report.

We have no conflicts of interest with the Company that are specified in the Code of Ethics of the Japanese Association of Assurance Organizations for Sustainability Information.

KPMG AZSA Sustainability Co., Ltd.

KPMG AZSA Sustainability Co., Ltd.
Osaka, Japan
July 22th, 2011

On-site review at Dalian SANYO Refrigeration Co., Ltd.

On-site review at China Hualu Panasonic AVC Networks Co., Ltd.

Outline of on-site review

- Period: From February to March in 2011
- Sites: Eight sites

J-SUS Assurance

This J-SUS imprint indicates that the environmental information contained in the 'eco ideas' Report satisfies the applicable provision of the code of the Japanese Association of Assurance Organizations for Sustainability Information.

▶http://j-sus.org/english.html

Environmental Communication

■Environmental communication results (handled by the head office of Panasonic Corporation)

Media/activities	Results	Media/activities	Results
Website (in Japanese)	Approx. 1,533,000 page views	Lecture meeting/article contribution	32
Website (in English)	Approx. 503,000 page views	Interview with reporters	15
Stakeholder dialogue	2	News release	18
TV*1/radio commercial	119	Response to surveys/ questionnaires	38
Newspaper advertisement	6	Inquiry/information request	136

*1 Only terrestrial.

■On-site environmental communication results (by region)

	Japan	Americas	Europe/ Africa	Asia Pacific	China/North-East Asia
Site tours (visitors)	35,772	1,506	2,726	1,786	816
Community con-tribution activities*2 (frequency)	630	18	12	95	114
Information disclosure*3	115	15	17	46	57

*2 Environmental events involving our participation and cooperation, including briefings to local residents on our environmental activities and other such meetings.
*3 Number of site reports posted on the Environmental Activities page in Panasonic's website.

■Participation in major exhibitions

Exhibitions	Venues	Period
China Beijing International High-tech Expo 2010	Beijing (China)	May-10
IFA 2010	Berlin (Germany)	Sep-10
Home Care & Rehabilitation Exhibition 2010	Tokyo	Sep-10
CEATEC JAPAN 2010	Tokyo	Oct-10
Panasonic 'eco ideas' Forum 2010	Tokyo	Oct-10
IGEM 2010	Kuala Lumpur (Malaysia)	Oct-10
GITEX 2010	Dubai (UAE)	Oct-10
International Broadcast Equipment Exhibition 2010	Tokyo	Oct-10
Eco-Products 2010	Tokyo	Dec-10
CES 2011	Las Vegas (USA)	Jan-11
The 7th Eco-Products International Fair	New Delhi (India)	Feb-11
SECURITY SHOW 2011	Tokyo	Mar-11

■History of environmental report issuance

Year	Number of copies			Number of pages	Issued
	Japanese	English	Chinese		
Environmental Report					
1997	17,000	8,000	—	24	Feb-98
1998	10,000	10,000	—	28	Mar-99
1999	18,000	5,000	—	40	Sep-99
2000	22,000	5,000	—	56	Sep-00
2001	20,000	5,000	—	66	Sep-01
2002	25,000	5,000	—	78	Jun-02
Environmental Sustainability Report					
2003	35,000	5,000	—	92	Jun-03
2004	25,000	8,000	4,000	76	Jun-04
Environmental Data Book					
2005	10,000	5,000	5,000	66	Aug-05
2006	10,000	5,000	5,000	68	Aug-06
2007	13,000	5,000	5,000	66	Jun-07
2008	13,000	5,000	3,000	72	Jun-08
'eco ideas' Report					
2009	10,000	5,000	3,000	50	Jun-09
2010	Posted on website only (PDF format)		1,000	42	Jun-10

■History of CSR report issuance

Year	Number of copies			Number of pages	Issued
	Japanese	English	Chinese		
The Panasonic Report for Sustainability					
2005	30,000	10,000	4,000	54	Jun-05
2006	30,000	10,000	5,000	62	Jun-06
2007	20,000	7,000	6,000	42	Jun-07
2008	14,000	8,000	5,000	30	Jun-08
2009	Posted on website only (PDF format)			138	Jun-09
2010				74	Jun-10

Panasonic 'eco ideas' Forum 2010

Panasonic 'eco ideas' Forum 2010 was held under the theme of "eR = 'eco ideas' Relations" at the Panasonic Center Tokyo in Ariake, Tokyo, from October 6 to 9, 2010. Panasonic presented a range of its environmental approaches as the Green Innovation Company through the Green Plan 2018 to enable various stakeholders to gain a better understanding. We also appreciated the diverse comments and opinions we received during the Forum.

▶http://panasonic.net/eco/forum2010/

■Special Displays

Green Lifestyles Zone


Green Plan 2018 Zone


Biodiversity Zone

■Sessions

[Panel Discussion] The Frontlines of Energy Solutions (October 7)

[Panel Discussion] Efforts to Preserve Biodiversity (October 8)


[Workshop] Proposal for Future Lifestyle by College Students (October 9)

Environmental Communication

■ Major awards in the environmental field

Category	Presenter and awards	Specific prize	Recipient company and details
Environmental sustainability management	Singapore Environment Council (sponsored by Singapore's National Environment Agency) Singapore Environmental Achievement Awards	SEAA Merit Award	Panasonic Refrigeration Devices Singapore Pte. Ltd.
Products & services	The Japan Machinery Federation Energy Saving Equipment Award	Chairman's Prize	Panasonic Ecology Systems Co., Ltd. Induced-draft fan in a designated silencer box (e.g. twin f ow fan)
	Metering Billing/CRM Europe 2010 European Utility Awards	Customer Excellence Award	Panasonic Corporation Home Energy Management System
	Industrial Designers Society of America International Design Excellence Awards	Gold Award	Panasonic Corporation LED bulbs (types of E26 cap and E17 cap)
	Japan Center for Area Development Research (supervised by the Ministry of Land, Infrastructure, Transport and Tourism) House of the Year in Electric 2010	Prize for Excellence and Prize for Excellent Corporations (Detached House Category)	PanaHome Corporation New EL-SOLANA
		Prize for Excellence (Apartment Category)	PanaHome Corporation ELMAISON
CO_2 reduction	Osaka Prefecture Osaka Stop-Global-Warming Awards	Excellence Prize	Panasonic Corporation Efforts to reduce CO_2 emissions from Panasonic sites in Osaka prefecture
	Ministry of Energy, Thailand Energy Award	Energy Conservation Promotion (Factories)	Panasonic Home Appliances (Thailand) Co., Ltd.Initiatives towards energy conservation in the factory
	The Nikkan Kogyo Shimbun, Ltd. 13th Protection of the Ozone Layer and Prevention of Global Warming Awards	Minister of Economy, Trade and Industry Prize	Sanyo Electric Co., Ltd. Development of f uorocarbon-free commercial freezer with CO_2-cooled DX-evaporators
Management of chemical substances	Ministry of the Environment Commendation for persons of merit in volatile organic compound (VOC) measures	Prize for Persons of Merit in VOC Measures	Home Appliances Company Vending Machine Business Unit, Panasonic Corporation
Logistics	Ministry of Economy, Trade and Industry Excellent Green Logistics Commendation Program	Director-General for Commerce and Distribution Policy Award	Panasonic Corporation and Panasonic Logistics Co., Ltd., (Received together with Tomy Co., Ltd., Tomy Logistics Co., Ltd., and Ecotruck Co., Ltd.)
Environmental communication	Ministry of the Environment / Global Environmental Forum 14th Environmental Communication Awards	Prize of Excellence for Environmental Reporting (Minister of the Environment Prize)	Panasonic Corporation Panasonic Group 'eco ideas' Report 2010 & Sustainability Report 2010
		Prize for Outstanding Performance in Environmental TV Advertising Category (Global Environmental Forum Chairperson's Prize)	Sanyo Electric Co., Ltd. Advertisement for eneloop, "Teach to Children"
	Toyo Keizai, Inc. & Green Reporting Forum 14th Green Reporting Award	Prize for Excellence	Panasonic Corporation Panasonic Group 'eco ideas' Report 2010
	Dentsu Inc. 63rd Dentsu Advertising Award	Prize for Excellence in Newspaper Advertising (Transportation Category)	Panasonic Corporation No-idling car battery "Powering off at every red signal is the way to eco"
		Prize for Excellence in Magazine Advertising (Serial Advertising Category)	Panasonic Corporation LED bulb EVERLEDS "Light that advances heat cutting" and others
		Prize for Excellence in Newspaper Advertising (Home Equipment Category)	Panasonic Corporation Palook Premier LS "We wrung out the wisdom of eco"
		Prize for Excellence in TV Advertising (Home Equipment Category)	Panasonic Corporation EVOLTA "Le Mans 24 hours"
	Fuji Sankei Business i. 49th Business Advertisement Awards	Grand Prize (Mixed Media Category)	Panasonic Corporation "I'm for ECONAVI" campaign
	The Nikkan Kogyo Shimbun, Ltd. 45th Japan Industry Advertisement Awards	Grand Prize	Panasonic Corporation Photovoltaic power generation / storage technology "The sun does not always shine"

Major honors in the environmental field

Selected in the Dow Jones Sustainability Indexes
Selected in the Global 100 Most Sustainable Corporations in the World
Selected in the FTSE4 Good Global Index Series
Selected in both the Carbon Disclosure Leadership Index and the Carbon Performance Leadership Index for Global 500
Ranked 1st among 475 manufacturers in the Nikkei Environment Management Survey, and 1st among 560 companies in the Environmental Brand Survey

History of Environmental Activities

As of March 31, 2011

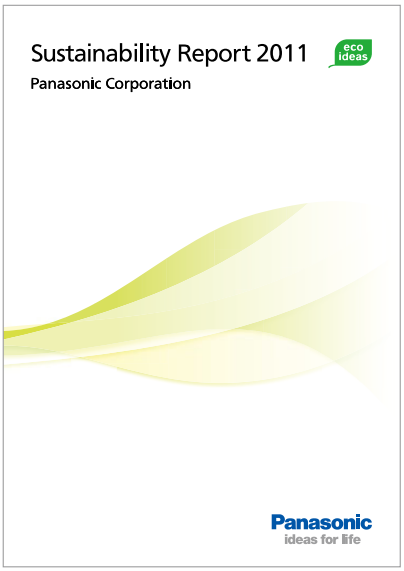
Era	Panasonic Group	World	Japan
			1967 •Basic Law for Environmental Pollution Control enacted
			1968 •Air Pollution Control Law enacted
	1970 •Pollution Survey Committee established		1970 •Water Pollution Control Law enacted •Waste Disposal and Public Cleansing Law enacted
			1971 •Environment Agency established
1970s	1972 •Environmental Management Office established	1972 •U.N. Conference on Human Environment held in Stockholm (Declaration of Human Environment adopted)	
		1973 •First oil shock occurred	
	1975 •Environmental Management Regulations enacted		
		1979 •Second oil shock occurred	1979 •Energy Conservation Law enacted
		1985 •Vienna Convention for the Protection of the Ozone Layer adopted	
1980s		1987 •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 •CFC-reduction Committee established		1988 •Ozone Layer Protection Law enacted
	1989 •Environmental Protection Promotion Office established		
	1991 •Matsushita Environmental Charter (Environmental Statement and Code of Conduct) enacted •Matsushita Product Assessment adopted and implemented		1991 •Keidanren Global Environment Charter enacted by Japan Federation of Economic Organizations •Law for Promotion of Effective Utilization of Resources enacted
	1992 •Environmental Policy Committee established	1992 •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 •Matsushita Environmental Voluntary Plan (Year 2000 targets) adopted •Matsushita Group's global environmental internal audits launched		1993 •The Basic Environment Law enacted
1990s	1995 •Acquired Environmental Management System Certification at AV Kadoma Site (first in the Matsushita Group)	1995 •First Conference of Parties to the U.N. Framework Convention on Climate Change (COP1) held in Berlin	1995 •Containers and Packaging Recycling Law enacted
		1996 •ISO 14001 International Standard on Environmental Management Systems launched	
	1997 •Corporate Environmental Affairs Division (CEAD) established •Environmental Conference established (held semi-annually)	1997 •COP3 held in Kyoto and adopted the Kyoto Protocol	1997 •Keidanren Appeal on the Environment announced by Japan Federation of Economic Organization
	1998 •Love the Earth Citizens' Campaign commenced •Recycling Business Promotion Office established •First environmental report (1997) published		1998 •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 •Green Procurement launched •Chemical Substances Management Rank Guidelines established •Acquired ISO14001 Certification in all manufacturing business units		1999 •PRTR (Pollutant Release and Transfer Register) Law enacted
	2000 •Lead-free Solder Project commenced •Held first environmental exhibition for general public in Osaka	2000 •Global Reporting Initiative (GRI) issued The Sustainability Reporting Guidelines	2000 •Basic Law for Establishing the Recycling-based Society enacted •Law for Promotion of Effective Utilization of Resources enacted
	2001 •Environmental Vision and Green Plan 2010 adopted •Held Environmental Forum in Tokyo and Freiburg,Germany •Matsushita Eco Technology Center launched	2001 •Reached final agreement on the actual rules of Kyoto Protocol in COP7 held in Marrakesh	2001 •Reorganized into the Ministry of the Environment •Law Concerning Special Measures against PCBs enacted
	2002 •Panasonic Center Tokyo opened	2002 •Johannesburg Summit (Rio+10) held	2002 •Kyoto Protocol ratified •Vehicle Recycling Law enacted •Law for Countermeasures against Soil Pollution enacted
	2003 •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	2003 •EU's WEEE Directive was enacted	
	2004 •Environmental Vision and Green Plan 2010 revised •PCB Management Office established •Superior GP Accreditation System launched		2004 •Prohibited manufacturing and use of products containing asbestos in principle
2000s	2005 •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 •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	2005 •Kyoto Protocol entered into force	2005 •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 •Environmental specialist position established •ET Manifest introduced into all Panasonic's manufacturing sites in Japan •Full-fledge introduction of biodiesel fuel in logistics	2006 •Restriction of Hazardous Substances (RoHS) Directive took effect in EU	2006 •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 •Energy conservation activities at our factories in Malaysia approved as CDM project by the U.N. •A new environmental mark 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	2007 •The Fourth Assessment Report of the Intergovernment Panel on Climate Change (IPCC) released •Registration, Evaluation, Authorisation and Restriction of Chemicals entered into force in EU •Framework for CO_2 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	2007 •'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 •Established the Corporate CO_2 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	2008 •G20 (conference of key countries' environmental and energy ministers) held •Hokkaido Toyako Summit held	2008 •Cool Earth Promotion Program announced by Prime Minister Fukuda •Mislabeling incident of waste paper pulp percentage •Long-term Energy Demand and Supply Outlook announced •Aso's cabinet inaugurated •Japan's Voluntary Emission Trading Scheme started
	2009 •Opened the 'eco ideas' House to demonstrate a lifestyle with virtually zero CO_2 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	2009 •China WEEE law promulgated •New framework for countermeasures against global warming on and after 2013 (post-Kyoto Protocol), the Cophenhagen 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	2009 •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 •Hatoyama's cabinet inaugurated
	2010 •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) •Started the entire factory energy-saving support service •Held 'eco ideas' Forum 2010 in Ariake, Tokyo •Established Green Plan 2018 •Launched Panasonic ECO RELAY for Sustainable Earth •Kasai Green Energy Park eco-friendly factory completed	2010 •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	2010 •Kan Cabinet inaugurated •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
2010s	2011 •Announced North America 'eco ideas' Declaration		2011 •Ministry of the Environment began discussions on instituting small home appliance recycling system •Home appliances eco point system ended •Great East Japan Earthquake

Reports on Panasonic's business activities

Reports related to Panasonic's business activities are composed of three reports: this 'eco ideas' Report, the Sustainability Report which details information on our CSR initiatives, and the Annual Report which contains financial data for shareholders and investors.

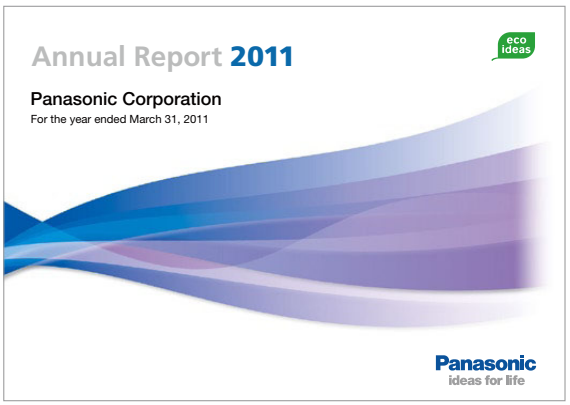
Sustainability Report [PDF]
This is available on our CSR website.

▶http://panasonic.net/csr/



Annual Report [PDF]
This is available on our IR website.

▶http://panasonic.net/ir/



Panasonic
ideas for life

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