



Pioneer Group  
Environmental Report  
**2011**

# Message

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<ul style="list-style-type: none"> <li>• This report has been created for general readers to promote Pioneer's environmental conservation activities in the global community. We aim to fulfill our role as a responsible corporation based on opinions and criticism from the public.</li> <li>• During the production of the environmental report, we referred to the GRI* Guidelines and the Environmental Reporting Guidelines 2007 from the Ministry of the Environment. With the guidelines as our guiding principle, we will continue to strive for ever greater accuracy.</li> <li>• The GRI Guidelines require disclosure of corporate information from three aspects, economic, environmental and social. This report covers the environmental aspect.</li> </ul>	
<small>* GRI (Global Reporting Initiative) is an international organization established to improve the quality of corporate communications so as to realize sustainable development. (<a href="http://www.globalreporting.org/">http://www.globalreporting.org/</a>)</small>	
<b>Environmental Range of Data</b>	
<ul style="list-style-type: none"> <li>• The period covered by the data is FY2011 (April 2010 - March 2011), but whenever possible, the latest events have been included even if outside this period.</li> <li>• Expansion of the range of the data and scrutiny of the figures has caused some changes from the figures released last year.</li> <li>• There may be some discrepancies between subtotals and totals due to rounding off.</li> <li>• The scope of this data is as follows. (Site name is as of March in 2011. )             <ul style="list-style-type: none"> <li>Japan                     <ul style="list-style-type: none"> <li>• PIONEER CORPORATION                             <ul style="list-style-type: none"> <li>• HEADQUARTERS</li> <li>• KAWAGOE PLANT</li> <li>• KANTO MATERIAL CENTER</li> </ul> </li> <li>• TOHOKU PIONEER CORPORATION                             <ul style="list-style-type: none"> <li>• HEADQUARTERS</li> <li>• YONEZAWA PLANT</li> <li>• TENDO MINAMI PLANT</li> </ul> </li> <li>• MOGAMI DENKI CORPORATION</li> <li>• TSE CORPORATION</li> <li>• PIOTECH, INC.</li> <li>• PIONEER MICRO TECHNOLOGY CORPORATION</li> <li>• PIONEER COMMUNICATIONS CORPORATION</li> <li>• TOWADA PIONEER CORPORATION</li> <li>• PIONEER SERVICE NETWORK CORPORATION World Parts Center/Repair Technical Center</li> <li>• PIONEER FINETECH CORPORATION</li> <li>• PIONEER FA CORPORATION</li> <li>• PIONEER SYSTEM TECHNOLOGY, INC.</li> </ul> </li> <li>NORTH AMERICA                     <ul style="list-style-type: none"> <li>• PIONEER NORTH AMERICA, INC. USA [PNA]</li> <li>• PIONEER AUTOMOTIVE TECHNOLOGIES, INC. USA [PAT]</li> <li>• PIONEER ELECTRONICS OF CANADA INC. CANADA [POC]</li> </ul> </li> <li>LATEN AMERICA                     <ul style="list-style-type: none"> <li>• PIONEER SPEAKERS, S.A.D.E C.V. MEXICO [PSSA]</li> <li>• PIONEER DO BRAZIL LTDA. BRASIL [PBL]</li> </ul> </li> <li>EUROPE                     <ul style="list-style-type: none"> <li>• PIONEER EUROPE NV. BELGIUM [PEE]</li> <li>• PIONEER FRANCE SAS FRANCE [PFS]</li> <li>• PIONEER SCANDINAVIA AB. SWEDEN [PES]</li> <li>• PIONEER BENELUX BV NETHERLANDS [PEB]</li> <li>• PIONEER DENMARK A/S. DENMARK [PDS]</li> <li>• PIONEER ELECTRONICS DEUTSCHLAND GMBH. GERMANY [PED]</li> <li>• PIONEER GB LTD. UK [PGB]</li> <li>• PIONEER NORGE A/S NORWAY [PEN]</li> <li>• PIONEER ITALIA S.P.A. ITALY [PEI]</li> </ul> </li> <li>ASIA                     <ul style="list-style-type: none"> <li>• PIONEER ELECTRONICS ASIACENTRE PTE. LTD. SINGAPORE [PAC]</li> <li>• PIONEER TECHNOLOGY [MALAYSIA] SDN.BHD. MALAYSIA [MPT]</li> <li>• PIONEER MANUFACTURING (THAILAND) CO., LTD. THAILAND [PTM]</li> <li>• TOHOKU PIONEER (THAILAND) CO., LTD. THAILAND [PTP]</li> <li>• TOHOKU PIONEER (VIETNAM) CO., LTD. VIETNAM [TPV]</li> </ul> </li> <li>CHINA                     <ul style="list-style-type: none"> <li>• PIONEER CHINA HOLDING CO., LTD. [PCH]</li> <li>• PIONEER TECHNOLOGY (SHANGHAI) CO., LTD. [PSG]</li> <li>• PIONEER TECHNOLOGY (DONG GUAN) CO., LTD. [PTD]</li> <li>• DONGGUAN MONETECH ELECTRONIC CO., LTD. [MND]</li> <li>• PIONEER ELECTRONICS (SHANGHAI EXPORT ZONE) CO., LTD. [PGE]</li> <li>• PIONEER (HK) LTD. [PHK]</li> <li>• SHANGHAI PIONEER SPEAKERS, CO., LTD. [SPS]</li> <li>• MOGAMI (DONG GUAN) ELECTRONIC CO., LTD. [MDE]</li> </ul> </li> <li>OCEANIA                     <ul style="list-style-type: none"> <li>• PIONEER ELECTRONICS AUSTRALIA PTY. LTD. [PTY]</li> </ul> </li> </ul> </li> </ul>	

## Aiming to "Move the Heart and Touch the Soul," Pioneer Strives to Have a Zero Impact on the Environment



Energy concerns have increased around the world in the wake of the Great East Japan Earthquake, which triggered an incident at the Fukushima Daiichi Nuclear Power Plant. As a result, momentum has gathered, with more and more consumers preferring to buy products that conserve energy and save on electricity usage. At Pioneer, we will continue to help solve environmental issues one by one in an effort to exert zero impact on the environment. Not only will we work to secure a dominant position as the preferred choice of customers by actively developing products that are defined by their outstanding environmental friendliness, but we will also endeavor to reduce the environmental load of our activities across the entire product lifecycle, from planning and design to manufacture, delivery, use and disposal.

In order to achieve zero environmental impact, Pioneer has identified three key environmental goals: (1) fight global warming; (2) recycle and reuse resources; and (3) reduce the use of substances that impact the environment. With these goals in mind, we will adopt a unique approach toward efforts to protect the environment.

In the fight against global warming, Pioneer participates in the Voluntary Action Plan of the Environment of the Japan Business Federation (Nippon Keidanren). We have accordingly set the goal of reducing CO<sub>2</sub> emissions per unit of actual production by 36% during the five-year period from FY2008 to FY2012, one percentage point higher than the 35% target for the electrical and electronics industry, compared to the base year of FY1990. The Company is currently on course to achieve this goal. In addition, Pioneer is actively engaged in the development of environmentally friendly products. As one example of the Company's success in the car electronics field (and the high esteem in which its products are held), the CYBER NAVI, equipped with an eco-route search function that has been designed to provide genuine eco-driving support, received special awards from the Judging Committee and Board of Review at Green IT AWARD 2010 and 12th Green Purchasing Award. More recently, with the debut of the 2011 CYBER NAVI AVIC-VH09CS series, featuring augmented reality (AR) scouter mode helps alleviate traffic jams, Pioneer has achieved further reduction in fuel consumption.

In home electronics products, we were able to considerably reduce energy consumption by incorporating a high-efficiency "Direct Energy HD Amplifier" in the SC-LX83 audiovisual multi-channel amplifier and developing Eco Mode for the slim-body VSX-S300 receiver. We also focused on lowering energy consumption when products are in standby mode.

Fundamental to the cyclical approach adopted by the Company is the reduction, reuse and recycling of resources. In this context, we proactively promote the 3Rs principle, including the application of recycled materials. The Pure Malt series, which we have sold since 1998, are recognized around the world as a product that exemplifies our recycling efforts. Pure Malt speakers were developed in collaboration with brewing and distilling company Suntory Holdings Limited, which was seeking a way to recycle casks (made from virgin white oak) that were being used for fuels and other purposes after fulfilling their mission of aging whisky. In the "Resource Recycling Technology & System Awards" presented by the Clean Japan Center and supported by the Ministry of Economy, Trade and Industry (METI), the Pure Malt speaker series won the "Clean Japan Center Chairman's Award" in 2005 and the "METI Industrial Technology & Environment Bureau Director General's Award" in 2009. In FY2009, as commendation for its meritorious action in the "Reduce, Reuse, Recycle Promotions" program, the same series received the "Chairman's Award of the Reduce, Reuse, Recycle Promotions Council."

As a part of our comprehensive efforts to reduce the substances that impact on the environment of our business activities, we have established a Group-wide management structure that aims to promote green procurement in collaboration with suppliers, deliver products that customers can use with a strong sense of safety and reliability, and reduce as well as eliminate substances included in components and materials that impose a burden on the environment. This latter initiative, in particular, indicates the Group's focus on ensuring that there are no chemical substances in products that can pollute the environment after their disposal. Moreover, we are working steadily to incorporate and comply with all relevant regulations including REACH, the European Union's new "Registration, Evaluation, Authorization and Restriction of Chemicals" legislation.

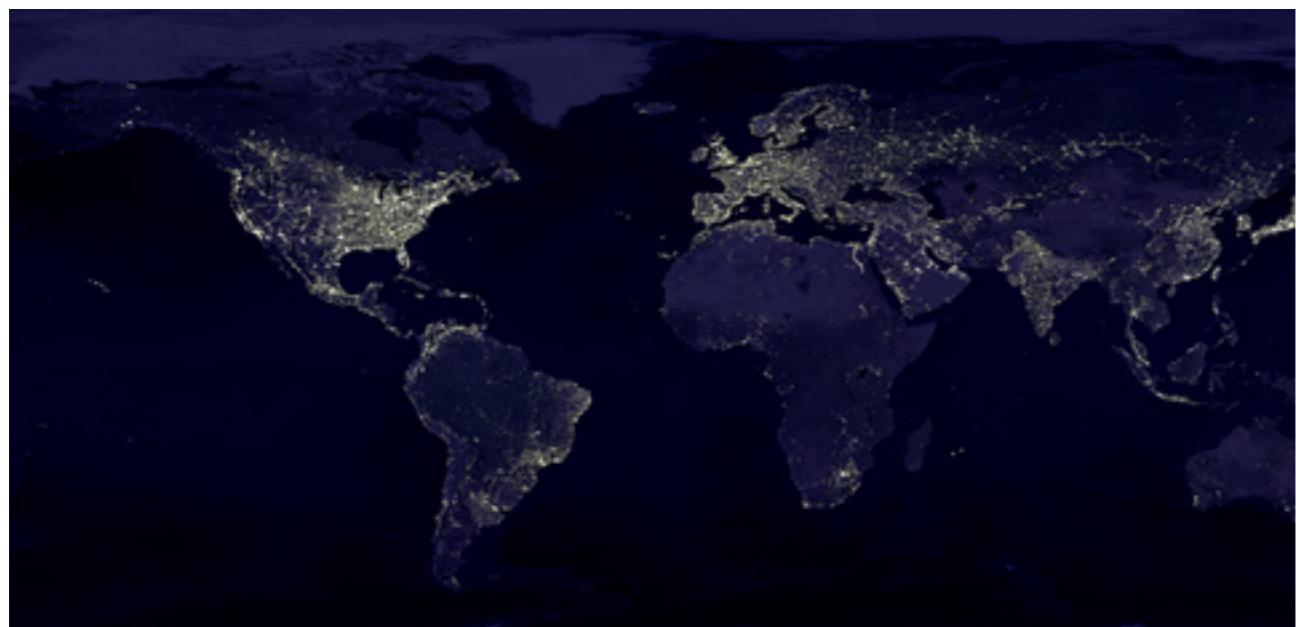
Moreover, Pioneer is committed to reducing the emission of substances that impose a burden on the environment during the manufacturing process. About the volatile organic compounds (VOCs) based on the industry's voluntary action guidelines, the Company identified the goal of reducing emissions by 30% in the fiscal year ended March 31, 2011 compared with levels recorded in the fiscal year ended March 31, 2001. Against this goal, we successfully reduced emissions by 87% in the target fiscal year. Working diligently to have a zero impact on the environment, Pioneer also abolished the use of specified chlorofluorocarbons (CFCs), recognized as substances that deplete the ozone, in 1992, and brought forward to 1996 the elimination of hydrochlorofluorocarbons (HCFCs), which have been earmarked for prohibition by international regulation in 2020.

Our corporate philosophy is to "Move the Heart and Touch the Soul." By proactively striving to integrate corporate and environmental preservation activities, we believe that we can help to recover the irreplaceable natural beauty of the Earth, and in turn, truly "Move the Heart and Touch the Soul" of people everywhere. We welcome your comments and opinions regarding our activities.

**Susumu Kotani**  
President  
August 1, 2011

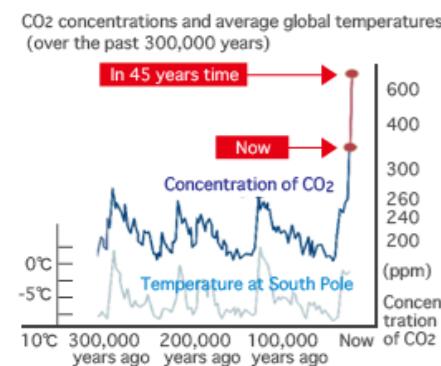
# Global Environmental Issues

This is a representation of the Earth at night as it might appear when viewed from space. The bright areas are areas where lights have been switched on. They are an indication of just how much energy we are consuming even at night. Since the Industrial Revolution of the 18th and 19th centuries, technical progress has succeeded in bringing ever more comfort and convenience into our lives. Yet most of us gave no thought to the behind-the-scenes destruction that we were unwittingly wreaking on the global environment. As a result, we now find ourselves facing an array of daunting challenges, from global warming and depletion of natural resources to pollution by environmentally hazardous substances. To enable future generations to enjoy the benefits of the Earth, we must tackle these environmental issues head-on.



Source: NASA This photo was created from several images of the Earth at night taken by weather satellite.

## Global Warming



Source: IPCC Third Assessment Report

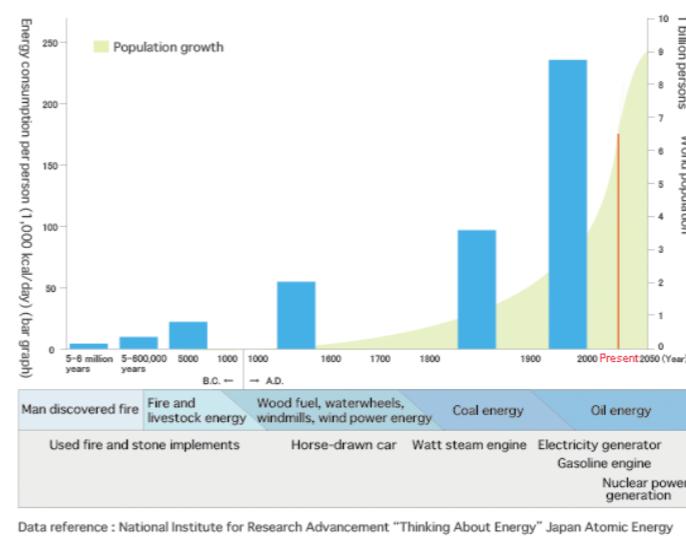
The average global land temperature is rising at a rate of approximately 0.74°C per century. It is generally agreed that global warming is caused by the increasing concentration of CO<sub>2</sub>. The resulting imbalance has wide-ranging impacts, damaging the ecosystem, bringing extreme weather conditions and causing the loss of low-lying land through rising sea levels.

Now: The average temperature is higher than that recorded at any time in the past 300,000 years.  
In 45 years time: Failure to take immediate action now to bring about change is predicted to result in the level of CO<sub>2</sub> shown in the figure.

IPCC: Jointly established in 1988 by the World Meteorological Organization (WMO) and the United Nations Environment Programme (UNEP)

## Depletion of Natural Resources

### Relationship between humans and energy



Source: Energy in Japan 2010, Agency for Natural Resources and Energy, METI  
Original Source: BP Statistical Review 2009 (Oil, Natural Gas, Coal:2008) OECD/NEA-IAEA URANIUM 2007 (Uranium:2007)

Development following the Industrial Revolution which started at the end of the 18th century was propelled by fossil fuel energy and led to a population explosion in the 20th century. This population explosion, in turn, is the source of the issues now confronting mankind, from environmental destruction such as global warming and depletion of natural resources to problems of energy and food security.

Oil is not available in inexhaustible supply, as it was once said to be. Nor are other natural resources limitless. We must leave as much as possible of these greatly depleted resources to future generations. To achieve this goal, development of technologies for safe nuclear power generation, production of fuel cells, etc. is essential.

## Pollution by Environmentally Hazardous Substances



Japanese rice-fish threatened by water pollution

Air pollution, ozone depletion, water pollution, soil contamination, erosion of biodiversity and health damage are just some of the problems caused by the effects of environmentally hazardous substances used by man, such as cadmium and chlorofluorocarbons. In the natural world, animals, water and air form a complex and mutually supportive ecological network. There is a need for appropriate worldwide management of chemical substances that do not degrade easily.

## Biodiversity

Species are disappearing at an unprecedented speed. Erosion of biodiversity is not simply a matter of a decline in the number of species; it means the breakdown of the mutually complementary relationship of living organisms, in other words, the collapse of the earth's ecosystem. This is a critical issue for human beings who are at the top of the ecosystem. The cause of this breakdown is linked to various environmental issues such as global warming, acid rain, deforestation and pollution of the oceans.

The 10th Conference of the Parties to the Convention on Biological Diversity (COP 10) was held in October 2010 in Nagoya. Nagoya Protocol and Aichi Targets were adopted. Pioneer continues to work toward a balance between conservation of biodiversity and sustainable use from the Basic Law on Biodiversity's perspective in Japan. Pioneer views reduction of greenhouse gases as the greatest challenge in its common biodiversity strategy and is striving to protect biodiversity through reduction of CO<sub>2</sub> emissions generated at its facilities and during use of its products. In addition, as measures focused on conservation and sustainable use, Pioneer employees and their families promote forest conservation and protection of biodiversity at Pioneer Forest, cooperated with Saitama Agriculture and Forestry Corporation.

# Environmental Vision and Environmental Policies

Pioneer has adopted environmental conservation activities as a corporate mission and an important business challenge. Improvement of business efficiency, increased productivity and creation of corporate values are vital for business activities, and environmental conservation activities should share the same degree of importance.

## Environmental Vision

### True Integration of Corporate Activities and Environmental Preservation Activities



The Pioneer Group has adopted environmental preservation activities as a corporate mission and an important business challenge. The Group makes every effort to reduce the environmental impact in every process of the product lifecycle, from research and development to planning, design, manufacturing, sales, servicing and disposal. Reducing environmental impact, i.e. improving environmental quality, is just as important as product quality such as QCD measures in manufacturing. Pioneer has established the concept of environmental quality in its business processes as a contribution to the creation of a sustainable society and actively promotes the true integration of corporate activities and environmental preservation activities. Restoring the precious and irreplaceable Earth will move the hearts of many people.

## Pioneer Group Charter for Corporate Operations

"Move the Heart and Touch the Soul" is the philosophy of the Pioneer Group. According to this philosophy, we, all the executives and employees of Pioneer, aim to continue our pioneering creation of new markets and conducting our business with integrity. We will operate our corporate activities based on a high standard of ethics, and aim to keep winning the confidence of our customers by contributing to society as responsible corporate citizens.

- We will provide products and services that are useful, reliable and safe.
- We will operate our corporate activities fairly.
- We will continue efforts to conserve materials and energy, and reduce impact on the Earth's environment.
- We will strive for fair disclosure of information about our corporate activities.
- We will undertake effective risk management to deal with unforeseen incidents as quickly and sincerely as possible.
- We will properly manage and protect our assets and rights.
- We will endeavor to contribute to society from a global perspective.
- We will aim to pursue our corporate activities, always with respect for humanity.

## Environmental Policies

### Philosophy of Environmental Preservation

The Pioneer Group will make efforts to always contribute to maintaining and realizing the rich and safe global environment through our corporate activities, based on the general understanding that it is one of our corporate missions to maintain, improve, and hand over the global environment to the next generation.

### Basic Policies of Environmental Preservation

#### 1.Compliance with Laws and Regulations

The Pioneer Group will comply with all applicable laws and regulations, and agreed requirement items in connection with environmental protection, and when necessary, establish voluntary control standards to reduce the negative impact of its activities on the environment.

#### 2.Preservation of Environment

Ozone depleting substances and hazardous substances of environmental concern should be banned from use, switched with a substitute substance, and its discharge restrained. Business activities should consider effects on the ecosystem to reduce such environmental impact, and prevent contamination at the same time. Furthermore, efforts to reduce greenhouse gas emissions and saving of natural resources should be taken into account.

#### 3.Eco Design Product Development

From the designing stage of products, reduction of hazardous chemicals containment, as well as in parts, materials procurement stage, and until the disposal of the product on a total life cycle basis, attention to environmental evaluation and promotions in saving resources, energy, and recycling points for the "product assessment" should be made. Efforts to develop new eco-friendly technologies shall also be implemented.

#### 4.Objectives Management

The Pioneer Group will set goals with subjects and targets to reduce environmental impact by compliance to regulations and preservation of the environment in its products development, making best effort to achieve these targets.

#### 5.System Promoting Environmental Protection

An All-Pioneer system that contributes to the promotion of environmental protection will be established under the leadership of the officer in charge of the Environmental Management Group of Pioneer Group Headquarters. For such purpose, each division will establish corresponding organizations and optimize the environmental management system.

#### 6.Educational Training

The Pioneer Group will promote to cultivate environmental protection and its policies to all its employees and business partners, including specialized education when necessary.

#### 7.Continuous Improvement

The Pioneer Group will continuously maintain and improve its environmental management system and protection activities performance, by understanding its activities and conducting appropriate measures in accordance with the environmental audits and management reviews.

#### 8.Disclosure and Communications

The Pioneer Group will continuously disclose environmental information actively, in every field of its products and corporate activities, to improve environmental activities communicating with the stakeholders.

## Pioneer Environmental Mark



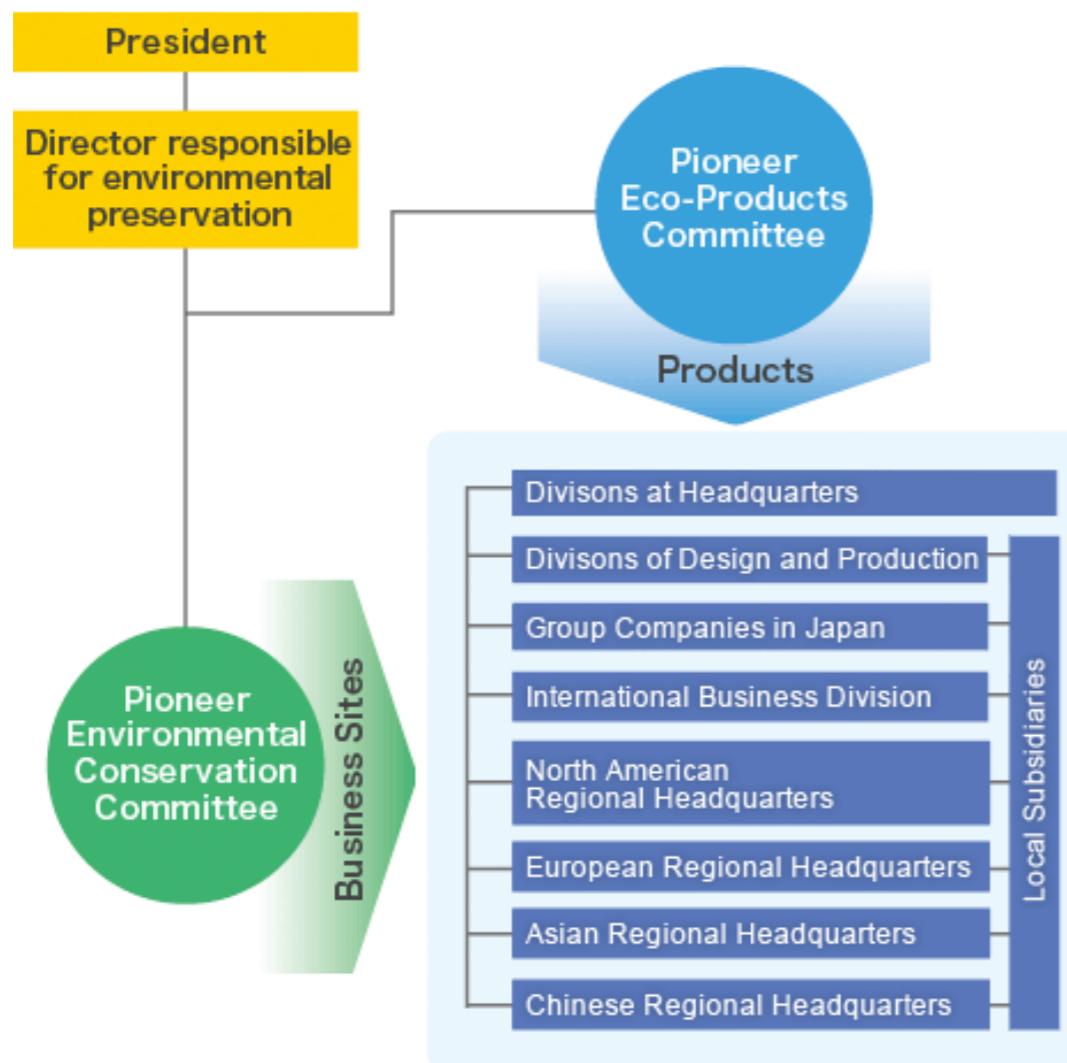
The Pioneer Environmental Mark, a motif of the Earth and two leaves, represents the Earth, the environment and living in harmony. Displayed in Pioneer catalogs, environmental education posters and related materials, the Company's environmental symbol is used throughout the world as both an education tool to raise environmental awareness within the Group and a promotion tool to advance Pioneer's green credentials externally.

# Environmental Management Activities

With the aim of strengthening its environmental governance, Pioneer has created a structure that will enable integration of the environmental management systems promoted at each of its facilities and subsidiaries in Japan, thereby encouraging organization-wide activities toward common goals. In future, integration will be extended to cover all subsidiaries worldwide, thereby further enhancing the results of the environmental activities of the entire Pioneer Group.

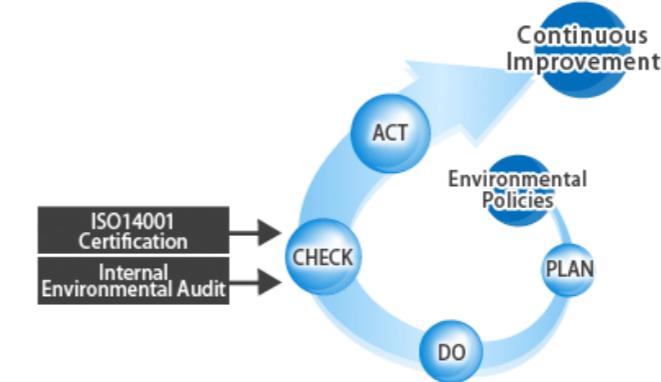
## Organization of Pioneer environmental preservation activities

In 1991, Pioneer launched the Pioneer Environmental Conservation Committee to serve as a group-wide organization to discuss and take action on environmental issues related to business activities at Pioneer facilities. In 2006, the Company inaugurated the Pioneer Eco-Products Committee, which cross-divisionally controls those environmental preservation activities related to products. This current two-committee structure serves as horizontal and vertical axes in promoting overall activities of Pioneer's environmental preservation system to cover both facilities and products.



## Environmental Management System

Pioneer is building an environmental management system based on ISO 14001 international standards. This system is used effectively in Pioneer Group companies worldwide to implement environmental preservation activities.



## Creating opportunities through environmental audits

We conduct internal audits regularly at each facility to check the effectiveness of the environmental management system and promote continuous improvement. The Pioneer Group in Japan has some 100 active internal environmental auditors. In addition, our environmental management system is objectively assessed by regular external audit conducted by an ISO 14001 registration body. Problem areas or the need for improvement which are highlighted by the internal and external audits are dealt with appropriately and any measures taken are spread laterally throughout the group to ensure uniform improvement. In addition, self-assessment is conducted at all our facilities throughout Japan and this self-inspection creates opportunities for us to notice areas that need improvement and implement measures on our own initiative.

## Main results of external auditing

In September 2009, Pioneer Corporation and its domestic group companies acquired ISO 14001 certification, an international standard for environmental management systems, for all their domestic facilities. In addition, 6 items to be monitored were highlighted. Efforts are being made to share information between all facilities in order to ramp up environmental activities in response.

## Integrated Environmental Management System

With the growing importance of environmental preservation activities, particularly measures to combat global warming, it is essential to promote strong, efficient environmental management in order to achieve good results. At such a time, enhancement of the environmental governance of the Pioneer Group is a major issue. The ISO 14001 environmental management systems at Pioneer Corporation's four sites (Head Office, Kawagoe, Kawasaki and Corporate Research & Development Laboratories) were integrated in August 2007. Integration enables the business sites to rigorously carry out Plan, Do, Check and Act (PDCA) activities, and ensures that all these sites work together toward more ambitious targets. In addition, integration has been extended to group companies in Japan in 2009. This is an opportunity to unify the Pioneer Group's environmental policy for an integrated environmental management system. Looking forward, integration will be extended to group companies worldwide, thereby further enhancing the results of the entire Group's environmental conservation activities.

\*PDCA stands for Plan, Do, Check and Act.

## ISO14001 Certification Status (As of March 2011)

### [JAPAN]

- PIONEER CORPORATION (HEADQUARTERS)
  - PIONEER CORPORATION KAWAGOE PLANT
- TOHOKU PIONEER CORPORATION HEAD OFFICE, TENDO PLANT
  - TOHOKU PIONEER CORPORATION TENDO SOUTH PLANT
  - TOHOKU PIONEER CORPORATION YONEZAWA PLANT
- MOGAMI DENKI CORPORATION
- TSE CORPORATION
- PIONEER MICRO TECHNOLOGY CORPORATION
- PIONEER COMMUNICATIONS CORPORATION
- TOWADA PIONEER CORPORATION
- PIONEER INVESTMENT CORPORATION
- INCREMENT P CORPORATION
- PIONEER SERVICE NETWORK CORPORATION
- PIONEER MARKETING CORPORATION
- PIONEER SOLUTIONS CORPORATION
- PIONEER SYSTEM TECHNOLOGY, INC.
- PIONEER MEDIA CREATES CORPORATION
- TECHNO ACCESS CORPORATION
- FUKUIN CORPORATION
- PIONEER WELFARE SERVICES CO., LTD.
- PIONEER FA CORPORATION
- PIONEER FINETECH CORPORATION
- TECHNICAL AUDIO DEVICES LABORATORIES, INC.
- PIONEER HANBAI CORPORATION
- PIONEER DIGITAL DESIGN AND MANUFACTURING CORPORATION
- TECHEXPERTS
- PIONEER WORKERS UNION
- PIONEER PENSION FUND
- PIONEER HEALTH INSURANCE SOCIETY

### [LATIN AMERICA]

- PIONEER DO BRASIL LTDA. [PBL]
- PIONEER SPEAKERS,S.A.DE C.V. [PSSA]

### [EUROPE]

- PIONEER EUROPE NV [PEE]
- PIONEER GB LTD. [PGB]
- PIONEER ELECTRONICS DEUTSCHLAND GMBH [PED]
- PIONEER FRANCE SAS [PFS]
- PIONEER ITALIA S.P.A. [PEI]
- PIONEER BENELUX BV [PEB]
- PIONEER DENMARK A/S [PDS]
- PIONEER NORGE A/S [PEN]
- PIONEER SCANDINAVIA AB [PES]
- PIONEER ELECTRONICS IBERICA SA [ESP]

### [ASIA]

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- MOGAMI(DONGGUAN)ELECTRONICS CO.,LTD. [MDE]
- PIONEER(HK)LTD. [PHK]

### [OCEANIA]

- PIONEER ELECTRONICS AUSTRALIA PTY.LTD. [PTY]

## Results in FY2011

Results: investment ¥90 million, expenses ¥1,201 million, economic benefit ¥176 million. In addition, there were no environment-related investment/loans\*.

\*Environment-related investment/loans: Investment and loans under the Environmental Consideration Law that take into consideration the environment

### Environmental costs

Category	Description	Details	FY2010/3		FY2011/3	
			Investment	Expenses	Investment	Expenses
Plants	1. Anti-pollution costs	Wastewater treatment and management, water quality analysis, smoke treatment, etc.	10	201	36	81
	2. Global environmental preservation costs	Energy saving-related costs (depreciation of solar power generation, demand control, inverter control, power measuring systems introduction, etc.)	47	152	0	129
	3. Resource recycling costs	Waste disposal and recycling costs	0	152	0	122
Upstream and downstream costs		Cost of reducing environmental impacts generated upstream or downstream in production and servicing activities	0	76	0	31
Management activities		Cost of acquiring and maintaining ISO 14001 certification, education and training costs, PR costs	8	509	0	264
R&D	Environmental preservation costs in R&D activities	Cost of developing technologies including environmental factors (high-performance organic EL displays, ultrahigh-density storage, etc.)	244	802	54	440
Social activities	Environmental preservation costs in social activities	Voluntary environmental preservation activities (Zero Refuse Campaign, etc.) and donations to environmental groups	0	17	0	12
Environmental remediation	Envionmental remediation cost	Cost to restore, cover degradation suits or insurance fees.	0	0	0	123
Total			309	1,909	90	1,201

## Environmental Accounting

Pioneer has kept environmental accounts since the internal Environmental Accounting Committee was formed in October 1999. The scope of environmental accounting application is all offices and subsidiaries that are certificated by ISO14001 management system. Pioneer discloses its environmental accounting results as an important tool in the promotion of corporate environmental preservation activities.

### Pioneer's environmental accounting defined

Pioneer has established its own Group-wide Environmental Accounting Guidelines based on the "Environmental Accounting Guidelines (2005 Edition)" published by Japan's Ministry of the Environment. These guidelines stipulate that environmental investment depreciates in fixed amounts over a five-year period and the economic benefit extends to five years. Our environmental investment calculations, however, reflect figures from 1999 onwards, the year that Pioneer began keeping environmental accounts. It is possible to make comparisons in green purchasing as to when consideration has been made for the environmental or not; furthermore, only items which show a striking difference are calculated. One hundred percent of wage costs are accounted for in the division that deals with the environment full-time, and other notable environmental activities are accounted for based on a pro rata or time-multiplied wage rate. Economic benefits such as sale profits from recycling and cost savings (savings on electricity and waste disposal expenses, external consultation fees, environmental impact measurement fees, etc.) are accounted for, but so-called "surmised benefits" (from risk avoidance) are not calculated.

### Economic benefits

Economic savings			
Category	Details	FY2010/3	FY2011/3
1. Savings due to environmental preservation(energy saving, pollution prevention, etc.)	Power reduction by purchase of energy saving equipment, upgrading, etc.	194	85
2. Savings due to resources recycling(resource saving, recycling, waste disposal, etc.)	Reduction of waste disposal costs	53	46
	Profits from sales of valuable resources	23	31
3. Upstream and downstream savings(in procurement, production, distribution, green purchasing)	Reduction in component unit price, reduction in distribution costs, green purchasing effect	14	14
Total		284	176

## Environmental Risk Management

### Strict voluntary management standards

In the unlikely event of an accident at a facility that resulted in environmental contamination of the surrounding area, it would take a lot of time and money to restore the contaminated environment and could cause serious problems and loss to the neighboring residents and many other concerned people. In order to avoid such risk, Pioneer has established and operates voluntary management standards that are stricter than mandated by law.

In FY2011, there were zero violations of the law at our domestic business locations. There was one incident where a business location received a complaint related to the environment, and the complaint concerned the sorting of waste by an industrial waste processor.

At business site that have been closed, we conducted an inspection for soil contamination. The results showed some contamination by hazardous substances. We reported these findings and the site is designated as designated area. We plan to remove the contaminants when the site is changed the characteristics.

### Implementation of emergency response training

For facilities likely to cause major environmental impact in the event of an accident (such as crude oil tanks), we carry out emergency response training to handle every conceivable emergency. We have also devised a system for taking steps to quickly minimize the impact and promptly notifying the local authorities in which the concerned facility is located.

In FY2011, there were no environmental emergencies at our plants in Japan.

### Comprehensive PCB Management

Polychlorobiphenyl (PCB) was widely used in electric transformers and capacitors in the past. Recognized as a persistent, harmful chemical substance, the manufacture and import of PCB is currently prohibited under the Stockholm Convention on Persistent Organic Pollutants. The disposal of all devices containing PCB by no later than 2016 has been mandated. On this basis, Pioneer is systematically promoting disposal. As of the fiscal year ended March 31, 2011, the Company had disposed of four units, with 31 units still in storage.

### Risk management by PRTR

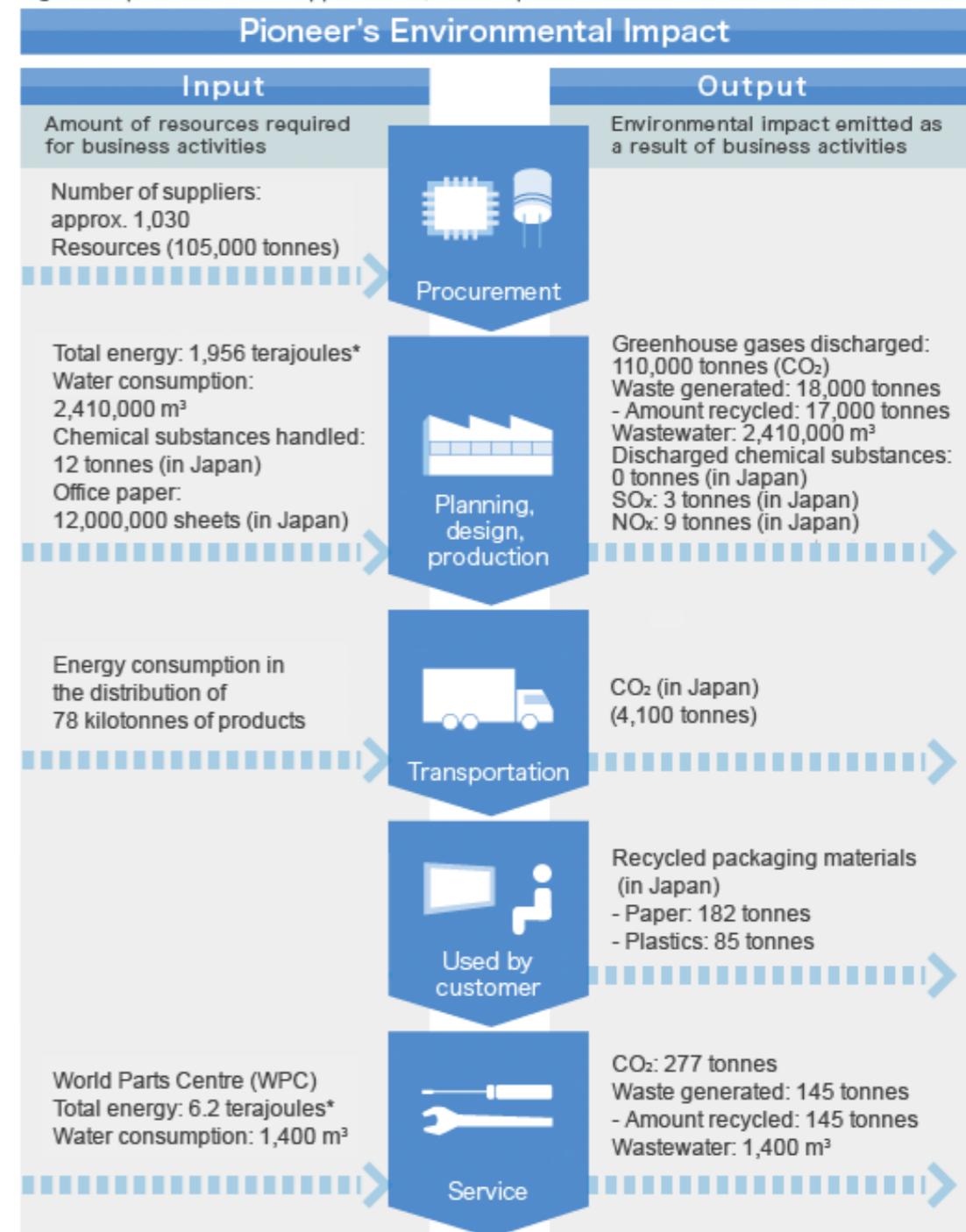
Data submission under the PRTR Law in Japan began in FY2002. In accordance with the Law, the Pioneer Group collects and manages environmental data for each facility and reports to the prefectural authorities. Utilizing this data, we are committed to raising the level of environmental risk management and reducing environmental impact.

Pioneer products go through various planning, design and manufacturing processes before they are delivered to the customer, used and then disposed of or recycled at the end of their useful life. Various impacts on the environment are unavoidably generated in each process. Pioneer continues to devote every effort to reducing such environmental impacts.

## Material Balance

Figures in parentheses are approximate, based upon estimates

\* Tera is defined as  $10^{12}$



## Trends in Past 3 Years

### Input

		Unit	FY2009/3	FY2010/3	FY2011/3
Procurement	Material suppliers	Companies	1,100	950	1,030
	Resources	10,000 tonnes	10	7	10.5
Planning, design, production	Total energy	TJ	4,133	2,052	1,956
	Water consumption	10,000 m³	414	214	241
	Chemical substances handled	tonnes	42	16	12
	Office paper	10,000 sheets	2,490	1,500	1,200
Transportation	Goods transported	10,000 tonnes	7.7	4.8	7.7
Service (WPC)	Total energy	TJ	4.7	4.4	6.2
	Water consumption	m³	1,100	1,000	1,400

### Output

		Unit	FY2009/3	FY2010/3	FY2011/3
Planning, design, production	Greenhouse gases discharged	10,000 tonnes	21	11	11
	Waste generated	10,000 tonnes	2.6	1.9	1.8
	Amount recycled	10,000 tonnes	2.3	1.8	1.7
	Wastewater	10,000 m³	414	214	241
	Waste chemical substances	tonnes	0	1.6	0
	SOx	tonnes	4	4	3
	NOx	tonnes	25	61	9
Transportation	CO <sub>2</sub> (in Japan)	tonnes	3,700	4,300	4,100
Used by customer	Recycled packaging materials (in Japan): paper	tonnes	103	251	182
	Recycled packaging materials (in Japan): plastics	tonnes	169	95	85
Service (WPC)	CO <sub>2</sub>	tonnes	214	201	277
	Waste generated	tonnes	95	202	145
	Amount recycled	tonnes	95	202	145
	Wastewater	m³	1,100	1,000	1,400

The Pioneer Group is working to prevent global warming, to recycle resources and to reduce environmentally hazardous substances. In FY2011 we succeeded in achieving SIX out of our SEVEN targets. Based on this result, we will set targets for our activities in FY2012 and FY2014.

## Main Targets and Results in FY2011

Category	Issue	Targetz	Results	Self assessment
Targets	Global warming prevention	CO <sub>2</sub> equivalent greenhouse gas emissions Japan: 36% reduction from FY1991 level	Achieved 59% reduction, on track to achieve reduction targets for the 2008 to 2012 period	○
	Resource recycling	Reducing valuable resources/waste materials Japan: 1% reduction from FY2010 level on a per unit of actual production*¹ basis.	Achieved 36% reduction	○
Controls	Global warming prevention	Control of CO <sub>2</sub> emissions from the transport of products, Japan: 1% reduction over previous year per unit of sales*²	Actual emissions per unit of sales reduced 36%	○
	Resource recycling	Recycling rate for valuable resources/waste material • Japan: Maintain 99.5% rate or higher • Overseas: Maintain 99% rate or higher	Achieved 100% at all operating bases	○
	Chemical substance control	• Control of VOC emissions 30% reduction from FY2001 level • Control of PRTR substances 60% reduction from FY2001 level	• Achieved 87% reduction • Achieved 100% reduction	○
	Atmospheric pollution prevention	SOx and NOx emissions reduction 20% reduction from FY 2005 level	Achieved 95% reduction	○
	Green purchasing	Green purchasing promotion Maintain guidelines (95%)	Slightly underachieved 93% reduction	△

(Note) Self-evaluation standards (broad estimates): ○ Significantly exceeded the target: 110% or more / ○ Achieved the target: 100% to less than 110% / △ Fell slightly short of the target: 95% to less than 100% / × Failed to meet the target: less than 95%

\*¹ Emissions per unit of actual production: CO<sub>2</sub> emissions + Real output (calculated by dividing the production output for each fiscal year by the Bank of Japan Domestic Corporate Goods Price Index for electronic products, with fiscal 1990 as the base year). The Goods Price Index for fiscal 2010 was 0.3995.

\*² Emissions per unit of sales: CO<sub>2</sub> emissions + Sales (calculated by dividing the sales for each fiscal year by the Bank of Japan Domestic Corporate Goods Price Index for electronic products, with fiscal 2006 as the base year). The Goods Price Index for fiscal 2010 was 0.843.

## Future Environmental Targets

Category	Issue	Target for FY2012	Target for FY2014
Targets	Global warming prevention	CO <sub>2</sub> equivalent greenhouse gas emissions Japan: 36% reduction from FY1991 level	CO <sub>2</sub> equivalent greenhouse gas emissions In Japan: 12% reduction of gross emissions w/w: 10% reduction per unit of sales at FY2021 from FY2011
	Resource recycling	Reducing valuable resources/waste materials Japan: 1% reduction from FY2011 level	Reducing valuable resources/waste materials w/w: 3% reduction per unit of sales at FY2021 from FY2011
Controls	Resource recycling	Recycling rate for valuable* resources/waste material • Japan: Maintain 99.5% rate or higher • Overseas: Maintain 99% rate or higher	Recycling rate for valuable* resources/waste material • Japan: Maintain 99.5% rate or higher • Overseas: Maintain 99% rate or higher
	Green purchasing	Green purchasing promotion Maintain guidelines (95%)	Green purchasing promotion Maintain guidelines (95%)

\*zero emission at operating bases

on a per u

Pioneer considers the delivery of environmentally friendly products to customers around the world to be one of its most important missions. The Company focuses on “Energy saving,” “Recycling of Resources(3Rs),” and “Reducing Environmentally Hazardous Substances” as primary environmental challenges, aiming to reduce environmental impact by pursuing environmentally friendly designs. Environmental impact and product assessment using the life cycle assessment (LCA) method enable the company to continuously enhance the environmental friendliness of its products. In addition, Pioneer stimulates development of environmentally friendly products by evaluating compliance with strict company standards relating to environmental friendliness.

## What are Environmentally Friendly Products?

At Pioneer, environmentally friendly products are those that satisfy internal standards based on a three-point evaluation of how environmental impact is reduced in all stages of a product's life cycle, including material production, product manufacturing, distribution, usage and recycling.

### 3 points for environmental

#### Energy saving

- Reducing electric power consumption
- Reducing fuel consumption
- Reducing weight and size
- Promoting energy efficiency during product transportation

#### Recycling of Resources (3Rs)

- Reducing the amount of raw materials and the number of component items used
- Promoting greater efficiency in packaging
- Promoting easily decomposable structure
- Promoting longer life

#### Reducing Environmentally Hazardous Substances

- Promoting green procurement
- Abolishing the use of specified hazardous chemical substances
- Distributing information on chemical substances

## Product Development Efforts

While confirming life cycle assessment (LCA) results, Pioneer develops environmentally friendly products by setting numerical targets and designating areas to improve in its product environmental action plans. In evaluating and improving environmental performance, Pioneer conducts product assessments and evaluations of the environmental friendliness of all its products based on its own internal standards.

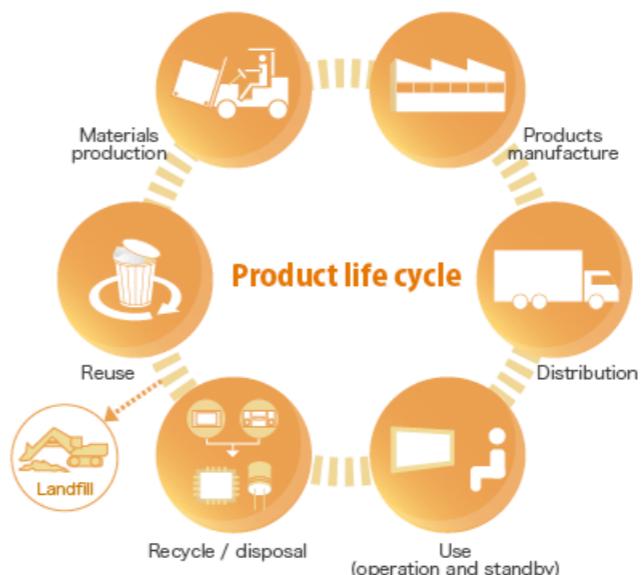
## Evaluation system for environment-friendly products

Since FY2008, Pioneer has utilized its own evaluation system for measuring environmental friendliness, and discloses the results of product evaluations on its website.



Super Advanced Eco-Model	Products that exhibit industry leading environmental performance Examples of certified products: • CYBER NAVI AVIC-VH09CS, AVIC-ZH09CS, AVIC-VH09, AVIC-ZH09, AVIC-ZH09-MEV • AV Multi-Channel Amplifier VSX-S300, VSX-S500 • Pure Malt Speakers S-A4SPT-PM, S-A4SPT-VP, S-PM300
Advanced Eco-Model	Products that substantially exceed the environmental performance of conventional products Products that have undergone product assessment and that comply with critical requirements of Pioneer's environmental standards Examples of certified products: • Raku-Navi Lite AVIC-MRZ99 • DVD Player DV-2020 • Discussion Table WWT-DT101
Eco-Model	Products that exhibit basic environmental performance Products that have undergone product assessment and that comply with essential requirements of Pioneer's environmental standards

## Environmental Impact Assessment by Life Cycle Assessment (LCA)



Industrial products consume resources and energy and continue to emit CO<sub>2</sub> and other wastes throughout their life cycle, from the mining of the raw materials and the machining and manufacture of materials and parts, to product assembly, transportation, use and disposal. LCA is the process whereby products are comprehensively analyzed and assessed for their effect on the environment throughout their life cycle, in order to effectively reduce their environmental impact. By analyzing data gleaned from LCA, Pioneer is able to quantitatively determine which stage of a product's life cycle has the greatest impact on the environment. We conduct LCA evaluations of the major models in each of our product lineups.

Beginning with the problem of global warming and compounded by electricity and gasoline shortages caused by the Great East Japan Earthquake, Japanese consumers are increasingly demanding that products conserve energy better. Seeking to answer these demands, Pioneer has always sought to improve energy conservation, and offers products in various fields that are able to operate in eco modes that provide excellent energy-saving performance. Our development efforts focus on ways to save energy in all situations that our products may be used. By leveraging Pioneer's innovative environmental technologies, we aim to create products that feature both excellent performance and functionality and are also environmentally conscious.

### Reducing CO<sub>2</sub> emissions by improving fuel economy with car navigation systems

Car navigation systems have advanced as tools for drivers to reach their destinations in as short a time as possible without getting lost. By adding new features such as searching for routes that prioritize fuel economy and other support for eco driving, new value can be derived from car navigation systems as an indispensable tool for a low-carbon automotive society.

#### 2011 CYBER NAVI Series Helps Alleviate Traffic Jams



Super Advanced Eco-Model certified products

**AVIC-VH09CS**

Introduced in 2011, the CYBER NAVI series of car navigation systems (AVIC-VH09CS / ZH09CS / VH09\*1 / ZH09\*1 / ZH09-MEV\*1 models) not only supports eco driving, but also helps to alleviate traffic jams. When driving on the highway at 70 kilometers per hour, maintaining a driving distance of at least 40 meters from the car in front was theoretically found to significantly alleviate traffic jams. Based on this discovery, the CYBER NAVI series, in augmented reality scouter mode, can measure the distance between cars and recommend a better distance\*2 via its on-screen car distance indicator. Traffic jams are alleviated if drivers maintain this recommended distance between vehicles; and driving at a steady speed with infrequent acceleration and deceleration helps improve fuel efficiency according to Eco Drive 10 Recommendations\*3.

\*1: Requires the ND-CS1 cruise scouter unit, sold separately.  
\*2: Supervised by Professor Nishinari of the University of Tokyo  
\*3: Compiled by the Eco Drive Proliferation Network

#### 2010 CYBER NAVI series of car navigation systems won two authoritative environmental awards

The CYBER NAVI (AVIC-VH9990/ZH9990/H9990), released in FY2010, which offers enhanced features and functions including high-grade Smart Loop Congestion Information, proprietary technology for estimating fuel consumption, and an eco-status eco-drive support function, has attracted significant acclaim for improving fuel consumption efficiency, receiving the following two awards.



- Received the Judging Committee Special Award in the "Green IT AWARD 2010."
- Received the Special Award from the Board of Review in the "12th Green Purchasing Award" in 2010.

#### Supervisor's comment



Kyoichiro Fujii  
Car Electronics Engineering Division,  
Software R & D Department



Development staff

Ecological friendliness is now a global pursuit and improved fuel efficiency is highly in demand for vehicles. The carrozzeria CYBER NAVI car navigation system, winner of the prestigious Environmental Prize, features the industry's first eco-route search function, which provides drivers an estimate of fuel consumption before they even hit the road. Proprietary technology developed by Pioneer for estimating fuel consumption enabled the creation of the eco-route search, absolute fuel consumption display, and eco-status features. They were perfected through the dedicated teamwork and exhaustive efforts of employees facing unprecedented industry challenges, and involved verifying data through repeated real-world test runs to ensure their application achieves high customer satisfaction.

Many arguably find eco-driving troublesome, having to avoid quick starts, stops and limiting idling, amongst other requirements. In response, Pioneer has included a variety of features that make it fun, such as implementing eco-driving evaluation guidance and a detailed eco-status display, which convey the degree of eco-driving to drivers through playful graphics and voice messages. The cutting-edge technology, advanced functionality, and advanced performance that the carrozzeria CYBER NAVI car navigation system is renowned for has been made more accessible and user-friendly. We hope you will try CYBER NAVI and see for yourself just how fun and effective eco-driving can be.

\* For car navigation systems sold in Japan as of May 2010 (study conducted by Pioneer)

#### Smart Loop — Leading the way even in disaster-stricken areas



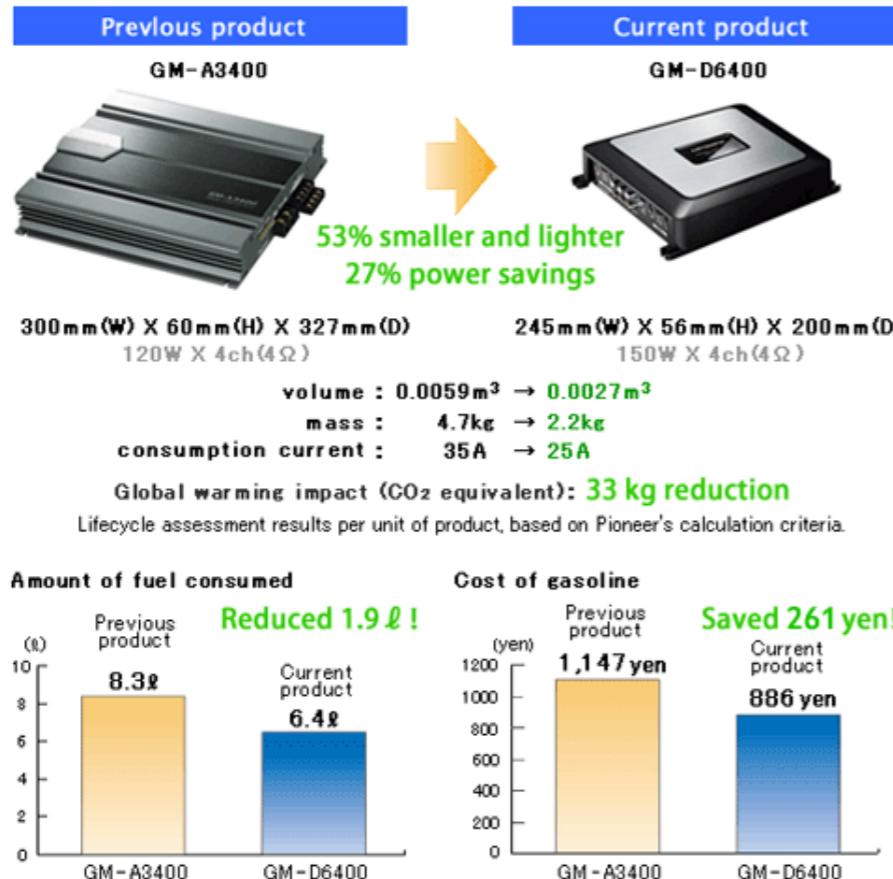
Smart Loop is an information network system that enables users to provide and share knowledge, acquire various kinds of traffic information such as information on traffic jams, and then apply it to route searches. The system acquires Smart Loop Congestion Information via a mobile phone or communication module and applies it to car navigation, enabling it to respond rapidly to ever-changing traffic conditions. Congestion information that cannot be acquired by VICS is supplemented to ensure extremely accurate route searches. Avoiding traffic jams, not getting lost and reaching the destination as quickly as possible thus contribute to cutting wasteful fuel consumption and fighting global warming.

The benefits of these Smart Loop Congestion Information features were particularly evident in the immediate aftermath of the Great East Japan Earthquake, when transportation infrastructure across the devastated areas was virtually shut down. Information regarding roads that were open to traffic starting on April 1, 2011 was displayed on NAVI screens. This service, which facilitated smooth travel, was extremely helpful in guiding recovery and relief vehicles.

## Corresponding environment of Car Electronics products

**Reduction in size and weight, and increased power savings through digital amplification technology that delivers more power**

The GM-D6400 digital power amp contributes to a reduction in CO<sub>2</sub> and efficient fuel consumption.



Annual reduction/amount saved per car with product installed, based on Pioneer's calculation criteria.

## Car navigation with increased transport efficiency thanks to reduced size and weight

Reducing packaging size increases the number of units that can be loaded onto trucks and containers during shipment. A larger number of units raises transport efficiency and cuts fuel consumption during shipping.

### Package comparison



The size of the cardboard box for the product's accessories (red circle in the above photo) was reduced by revising the included antenna and shortening the cable. This enabled a reduction in total package size.



### Supervisor's comment



With eco-cars currently in demand worldwide, car audio must also be environmentally friendly, which is why we developed this product. We succeeded in reducing the size and weight of the heat sink for cooling the product, and decreased power use by switching to digital technology. The product offers high output and high efficiency; I'm completely satisfied with its performance, power and sound quality.

Kazuyuki Kudo  
After Market Car Electronics  
Business Division, After Market  
Designing Division

## Corresponding environment of Home Electronics products

The value of highly tasteful home-use audio and visual products is defined by such features as their audio and picture display quality. At the same time, Pioneer is working to incorporate environmentally conscious design and to promote functions that enhance energy conservation and efficiency.

### Enjoying the simple pleasures of movies and music while helping to protect the environment



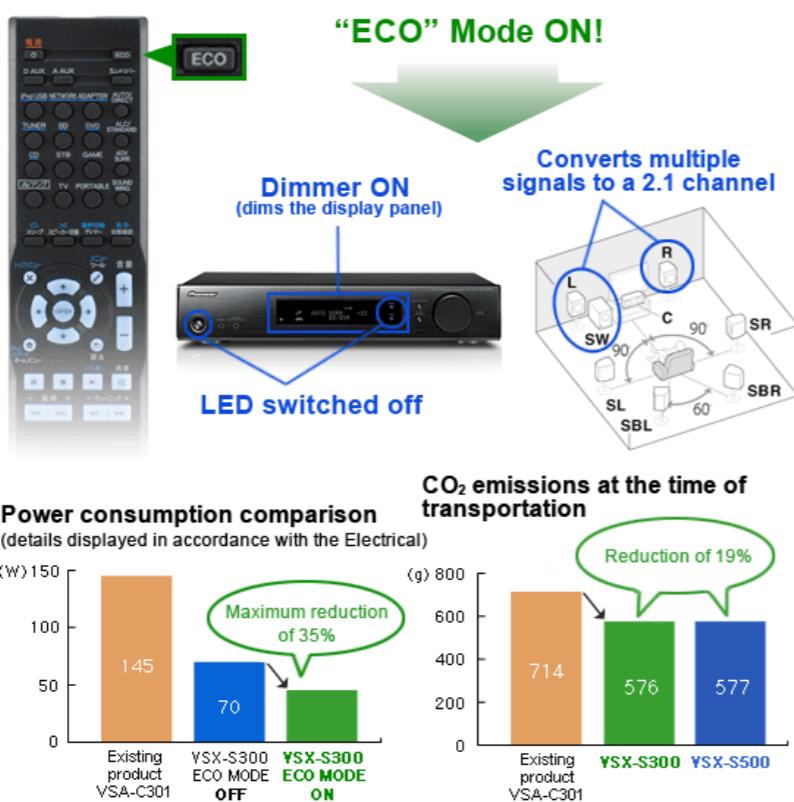
Super Advanced Eco-Model certified products  
AV Multi-Channel Amplifier VSX-S300

#### Main environment-friendly factors

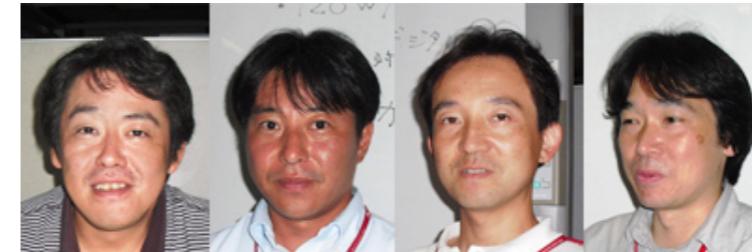
- Equipped with an easy-to-operate Eco Mode: This special power-saving feature reduces up to a maximum of 35% of power usage compared with normal operating use (see diagram below)
- 70W low power consumption: Realizes high sound quality and high power 120W output power per channel utilizing highly efficient Class D amplifiers and a newly developed power source while achieving 70W low power consumption; reduces power consumption by approximately 52%\*
- Helps to conserve energy during product transportation: Slim and compact size utilizing highly efficient Class D amplifiers and other equipment; successfully reduces product mass and packaging capacity; as a result, helps to enhance transport loading efficiency, thereby reducing the volume of CO<sub>2</sub> emission during product transportation by approximately 19%\*

\* Comparison with Pioneer's AV multi-channel amplifier VSA-C301 (released in 2003)

Step into eco-performance with just a push of the dedicated ECO remote control button Eliminates complex operations, allowing any and all users to enjoy the simple pleasures of eco performance



#### Supervisor's comment



From the left photograph  
Katsuhiko Kakuzen  
(Sales) Marketing Department,  
Hiroaki Taguchi  
(Planning) Home AV Business Division,  
Izaho Nomura  
(Electric design) Home AV Business Division,  
Shinichi Akiyama  
(Software design) Home AV Business Division

Storing a large AV multi-channel amplifier in a low board-type rack sacrifices interior design considerations. A low board-type rack also impedes dissipation of the heat generated by a large amplifier. With this in mind, and in an effort to address customers' needs, we recognized the importance of providing AV multi-channel amplifiers that generated minimal heat while offering superior and stylish interior design. Without in any way compromising on such features as high power and quality sound, we took steps to bring to the market products that were also distinguished by their eco-features, allowing customers to enjoy their movies and music without making sacrifices.

We take great pride in the VSX-S300—we are confident that it combines outstanding design with excellent performance and environmental concerns at a reasonable price. We urge customers to look into this product's many attributes and enjoy owning a full-fledged home theater while helping to protect the environment.

### The DV-2020 DVD player offers outstanding energy conservation performance

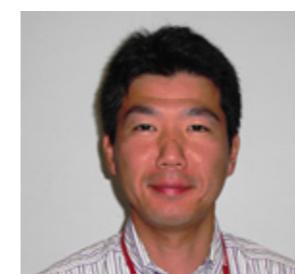


DVD Player DV-2020

#### Main environmentally friendly factors

- An automatic switch-off function: Equipped with an automatic switch-off function after a period of 30 or minutes during which the product is not in use
- Low power consumption: 6W power consumption; realizes 0.5W power consumption during idle periods
- Compact packaging: Reduction in packaging capacity by 8% compared with existing models; contributes to reductions in CO<sub>2</sub> emissions through improved product transportation efficiency
- Complies with the RoHS Directive: Complies with restrictions on the use of certain hazardous substances in electrical and electronic equipment issued by the EU

#### Supervisor's comment



Yoshio Orihara  
Home AV Business Division,  
Product Planning Department

I was in charge of planning for the superior price-performance DV-2020 model, which delivers enhanced standard features including a 1.4x quick scan mode that increases convenience when searching for scenes and reviewing disc sections—all in a compact, high-quality DVD player. Building on the knowledge gained through our efforts to gain Energy Star\* certification, a new and increasingly stringent environmental conservation standard, we took steps to channel this know-how into the development of the DV-2020. We were determined to create a product that would deliver increased ease of use while ensuring a complete range of standard functions, high performance and environmental advantages.

\* Audio/Video Version 2.0,Tier2

### Pioneer Participates in the Energy Star Program



The United States Environmental Protection Agency introduced the Energy Star program as an energy saving standard. Pioneer Electronics(USA), Inc. (PUSA) participates in Energy Star for audio-visual products and attaches Energy Star labels to certified products.

### DVD Player DV-420V-K registration approved under the "Audio/Video Version 2.0, Tier 2" Energy Star Program for the North American market

#### Supervisor's comment



Eiji Nakajima  
Home AV Business Division,  
Designing Department

Although Energy Star is a voluntary program in the U.S.A. and not a mandatory regulation, it is an authoritative standard in energy preservation in which achieving this standard may significantly contribute to prevent global warming. We worked in challenging to obtain certification from the more drastic and environmentally stringent standards of the new Ver. 2.0, Tier 2 program, as opposed to its previous Ver. 1.0. Through clear understanding of the new standard (specifications) requirements, thorough verification related to software changes, strict reviews on electric circuitry, succeeding new standards in power saving during playback mode/sleep mode, and in auto power down function; we were able to obtain certification for passing Energy Star's Ver. 2.0, Tier 2 standard.

With this certification for the North American models, this energy saving technology was exploited in models to Japan and other countries. In parallel with our pursuit for high quality picture/sound and high functionality, we make it our mission to constantly make efforts in developing and designing such environmentally friendly products.

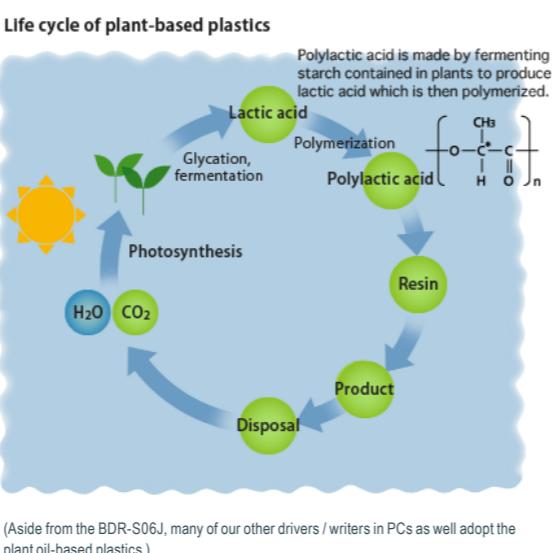
### A Plant-based Resin Used in the Front Panels of Computer Writers



Windows 7™対応  
BD/DVD/CD writer BDR-S06J-BK

Plant-based plastics with a Poly Lactic Acid base are used for the entire front panel of the BD/DVD/CD writer "BDR-S06J(-W, -BK, -KR)."

- Reduced oil consumption to prevent depletion of oil resources.
- In carbon neutral status\*, CO<sub>2</sub> is not added into the atmosphere (reducing our product CO<sub>2</sub> emission amount by 20% compared to conventional oil-based plastics), thereby contributing to the fight against global warming.



\*Carbon neutral status refers to the carbon circulation theory. For example, although plants emit CO<sub>2</sub> like oil when they are burned, they absorb CO<sub>2</sub> through photosynthesis in their growth process, as plants are organic. Therefore, essentially burning plant material does not increase CO<sub>2</sub> levels in the atmosphere.

### Green IT

#### Paperless No-Travel Remote Conference System

Pioneer's remote conference system "CYBER CONFERENCE SYSTEM PRIME", which was developed with the concepts of "transmit at once", "visible all", and "extremely understandable", brings the remote conference rooms together with the industry-leading quality's real-time data sharing, which responds to the various communication scenes. Smoother communications, just like talking face to face with people in far-away places, can contribute to prevent the global warming with less business travels and reduced fuel consumption in transportation. Plus, saving the data written in the screen directly contributes to the paper-less conference, such as sharing the documents.

#### Special Features and Environmental Consciousness of Remote Conference System

Energy saving (CO <sub>2</sub> reduction)	<ul style="list-style-type: none"> <li>*Conference with remote plants or business places contributes to less business travels and less transports using airplanes or trains.</li> <li>*It realized to transmit a real thing, such as a sample, as if they are watching right there without transporting it to remote places.</li> <li>*Watching same screen each other and writing directly in the screen made it possible to transmit ideas at once.</li> </ul>
Resource saving (Paperless)	<ul style="list-style-type: none"> <li>*Sharing real-time high quality images with remote places and saving data in PC contribute to paper-less conference.</li> </ul>



#### Contributing to a Paperless Society —Introducing a Device That Does Paper Better Than Paper Does

#### Supervisor's comment



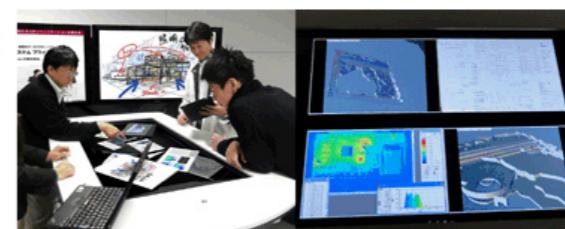
Toru Maruyama(left) / Natsuhiko Nonaka(right)  
Pioneer Solutions Corp.,  
Communication System Department

Pioneer's Table Discussion enables both analog and digital content to be displayed on a table-like large-scale display for roundtable discussions as and when required. It connects to such wide-ranging tools as personal computers, scanners, digital cameras and iPads. During meetings that employ conventional projectors, presentations are limited to a single piece of material for each screen display with a single-line flow of information from the presenter. As a result, personal computer data and paper-based materials must be copied and distributed to all meeting participants in order to promote an adequate understanding of presentation content. Pioneer's Discussion Table enables the collation and display of multiple data sources on a single table-like screen. Data can be moved and aligned freely both by the presenter and meeting participants in an easy-to-view format, facilitating the common sharing of information as well as timely and lively

interactive discussion. The Discussion Table helps to promote a paperless society and to conserve scarce and precious paper resources while also reducing printer power consumption and use of ink and toner. Even further, it reduces the time required for meetings and discussions, thus contributing to the inherent and true purpose of roundtable discussions—increased efficiency and efficacy. Moreover, materials collated using Discussion Table can be transferred to participants' iPads, enhancing portability. At the same time, by linking and using Discussion Table with Pioneer's remote conference system, "CYBER CONFERENCE SYSTEM PRIME," key individuals unable to attend the meeting can fully participate in discussions.



Discussion Table  
VWS-DT101



# Recycling of Resources (3Rs)

Eco-Products

In countries all over the world, social structures hitherto centered on mass production, mass consumption and mass disposal are coming under scrutiny and there is a progressive shift toward recycling-oriented societies. At the core of recycling is the 3Rs (Reduce, Reuse, Recycle) concept. Pioneer promote 3Rs aggressive by using recycle material etc.

## Recycling of used whiskey barrels

Pure Malt speakers were developed in collaboration with brewing and distilling company Suntory Holdings Limited, which was seeking a way to recycle casks (made from virgin white oak) that were being used for fuels and other purposes after fulfilling their mission of aging whisky. Oak trees grow for 100 years before serving as whisky casks for another 50 to 70 years. After that, the wood is recycled into speaker cabinets that produce warm, rich sounds for many more years. As well as speakers, Pioneer also uses retired casks for making audio racks and other products, expanding the Pure Malt series lineup and promoting recycling of natural materials.

This series launched sales in 1998, later to win numerous and prestigious environmental awards in becoming the leading product in Pioneer's recycling efforts.

In the "Resource Recycling Technology & System Awards" presented by the Clean Japan Center and supported by the METI (Ministry of Economy, Trade and Industry), the Pure Malt speaker series won the "Clean Japan Center Chairman's Award" in 2005, and the "METI Industrial Technology & Environment Bureau Director General's Award" in 2009. In the same year of 2009 as commendation of meritorious action in the "Reduce, Reuse, Recycle Promotions" program, the same series received the "Chairman's Award of the Reduce, Reuse, Recycle Promotions Council."

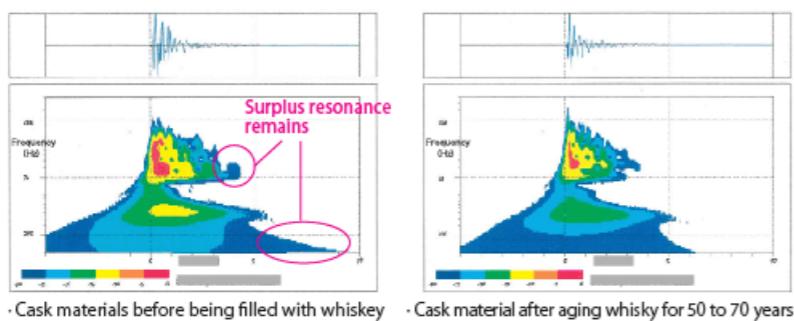


## Main environment-friendly factors



- Using old casks for cabinets and ducts contributes to the recycling and reduced use of natural resources
- Low VOCs (volatile organic compounds) content
- Replacement of styrene foam packaging material with recyclable pulp molded material
- Use of lead-free solder
- A portion of revenue from product sales is donated to the Green Fund of the National Land Afforestation Promotion Organization as a contribution to government-led promotion of afforestation

## Data on sounds produced when beating cask material



Experiment results indicate that casks used to age whisky have less resonance (eigentone) and produce a softer and more natural sound quality. These recycled casks can be said to serve a dual purpose: being environmentally friendly and having a positive effect on sound quality.

## Recycling of batteries

Compact rechargeable batteries are used in such Pioneer products as cordless telephones and Air navi (GPS Navigation products). These rechargeable batteries employ various precious metals including nickel (Ni) and cobalt (Co). The recovery and reuse of these previous metals helps to conserve limited resources. Guided by Japan's Law for Promotion of Effective Utilization of Resources, Pioneer is a member company of the Japan Portable Rechargeable Battery Recycling Center (JBRC) and a proactive participant in the recycling of products and materials. Accordingly, the company is actively involved in the collection and recycling of used compact rechargeable batteries.

## Complying with Japan's Act on the Promotion of Sorted Garbage Collection and Recycling of Containers and Packaging (Containers/Packaging Recycling Act)

Japan's Act on the Promotion of Sorted Garbage Collection and Recycling of Containers and Packaging (Containers/Packaging Recycling Act) was promulgated in April 2000 in an effort to promote the reduction and recycling of household container and packaging waste. As a corporation covered by the Act, Pioneer estimates the amount of projected paper and plastic container and packaging waste used in Japan, concludes a recycling consignment contract each year with the Japan Containers and Packaging Recycling Association, and assumes the burden of recycling costs. The Company is also promoting wherever possible resource conservation with respect to its packaging with the aim of minimizing the amount of container and packaging waste.

# Reducing Environmentally Hazardous Substances

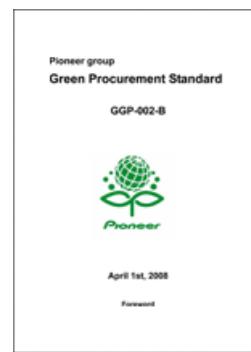
Eco-Products

Pioneer is building a Group-wide environmental hazardous substances (EHS)\*<sup>1</sup> management structure and systems and is implementing green procurement in an effort to eliminate any and all presence of EHS in its products and materials. Through these means, the Company is endeavoring to deliver to its customers products that can be used in total safety, as well as to ensure there are no chemical substances present in its products that can pollute the environment after product disposal. In addition, Pioneer is working steadily to conform to the REACH regulation\*<sup>2</sup>, a new set of European rules and regulations applicable to chemicals and chemical substances.

\*1. EHS stands for Environmental Hazardous Substances.

\*2. REACH (Registration, Evaluation, Authorization and Restriction of Chemicals) is an EU regulation requiring registration of all chemical substances in order to manage risks to the environment and human health from the perspective of harmful effect, production volume, uses, persistence, etc.

## Promoting Green Procurement



Pioneer provides its suppliers with guidelines relating to the control and management of EHS through its Green Procurement Standards. At the same time, the Company implements a Green Score system that serves as one component in its comprehensive criteria for judging whether or not Pioneer deals with particular suppliers. Through these and other means, the Company is soliciting the support and collaboration of suppliers with respect to green procurement. The Green Procurement Standards focus mainly on the control and management of EHS. Since their issue in July 2000, these standards have been openly disclosed to all suppliers. Pioneer's Green Procurement Standards are also revised from time to time. It sets out clearly the key points of EHS management for suppliers to enable them to satisfy environmental compliance and procure safe and environmentally friendly components and materials.

## Evaluating the EHS Management Systems of Suppliers

Pioneer evaluates suppliers from three perspectives: environmental management system, EHS management and 3Rs (Reduce, Reuse, Recycle), and awards each supplier a Green Score based on the evaluation results. This Green Score serves as the criteria for judging whether or not Pioneer deals with a particular supplier.

### Pioneer's environmental evaluation of suppliers (Green Score)

- A rank: Compliant
- B rank: Semi-compliant
- D rank: Improvement needed

In addition to the Green Score, we minimize the risk of EHS through spot measurement of procured components and EHS management audits at production sites.

## Using a Fluorescent X-ray Analyzer to check EHS in Products



Using a fluorescent X-ray analyzer to rigorously check for hazardous substances

Pioneer endeavors to keep hazardous substances out of its products through green procurement. One of the methods we employ is analysis of EHS content by fluorescent X-ray analyzer at various bases throughout the group. Our credibility is enhanced by such in-house analysis of products using the analyzer in addition to information provided by suppliers on EHS in products.

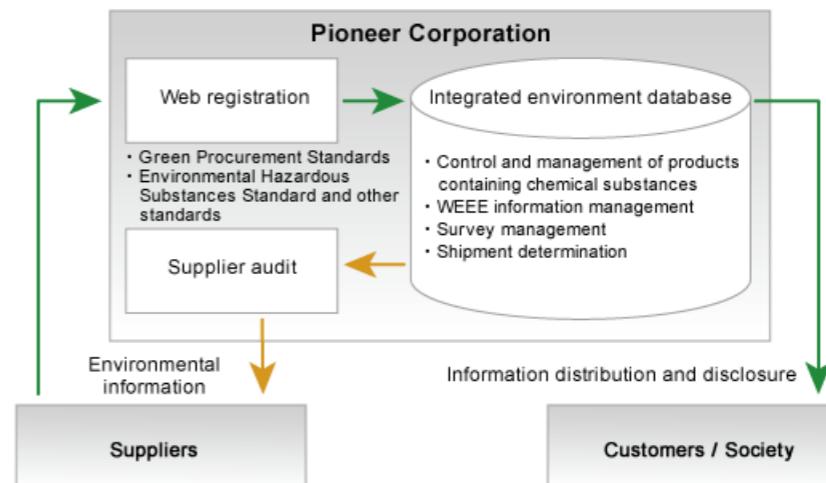
## Complying with New Rules and Regulations

### Managing chemical substance information as a part of efforts to comply with REACH regulation

Pioneer is bolstering its chemical substance information control and management systems in order to address the requirements outlined under such existing rules and regulations as the RoHS Directive\* as well as new chemical rules and regulations stipulated under the REACH regulation. In complying with the REACH regulation, there is an undeniable need to put in place a framework that is capable of smoothly disclosing and conveying information regarding products containing chemicals throughout the supply chain. Pioneer accordingly took the initiative to prepare in advance by holding a REACH briefing session for all of its suppliers in January 2009. The Company then commenced in earnest investigations into products containing chemicals in fiscal 2010. By incorporating the industry's standard format into its investigations, Pioneer is ensuring efficient investigations across the entire supply chain. In addition, the Company activated an integrated environment database in order to promote chemical substance control and management and is building a system to facilitate the flow of information and the efficient exchange of information regarding products containing substances from suppliers through to the Company's customers.

\* A law promulgated in Europe prohibiting the use of specific hazardous substances in electrical and electronic equipment. The six prohibited substances are lead, mercury, cadmium, hexavalent chromium, PBB and PBDE.

## A system for conveying information regarding chemical substances Suppliers Environmental information



# Environmental Data of Products

Eco-Products

## Major Model LCA Results

Pioneer quantifies environmental impact utilizing life cycle assessment (LCA) across the entire product lifecycle. Every effort is then made to reflect assessment results in product development.

### Car Electronics Products

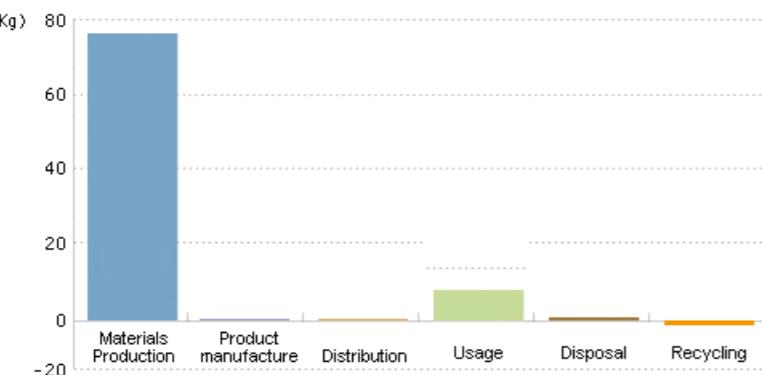
#### Raku-Navi Lite AVIC-MRZ99

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	85



AVIC-MRZ99

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



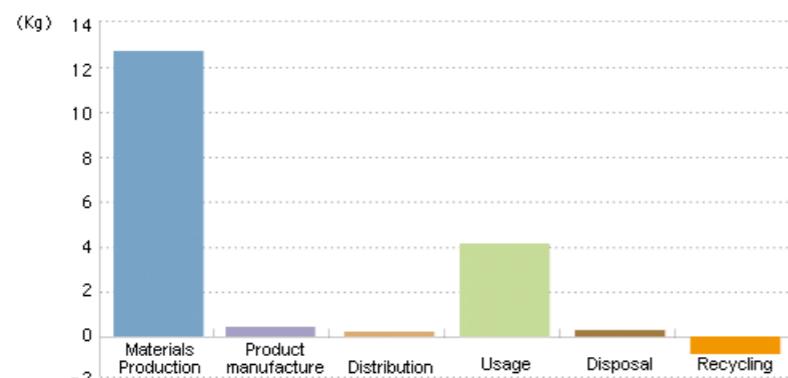
#### 1D Main unit DEH-P760

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	17



DEH-P760

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



### Home Electronics products

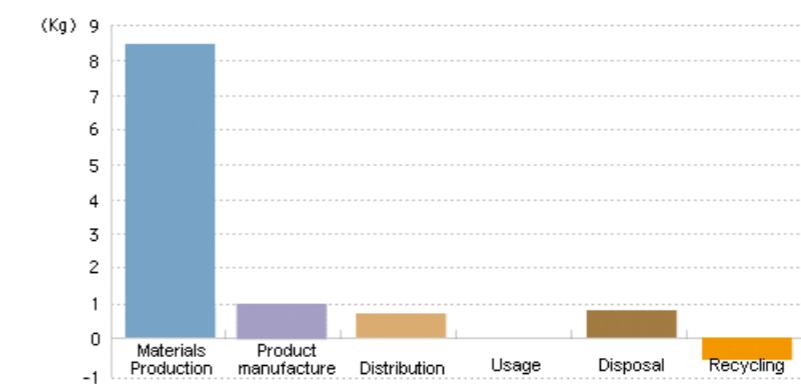
#### Pure Malt Speaker S-A4SPT-PM

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	10



S-A4SPT-PM

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



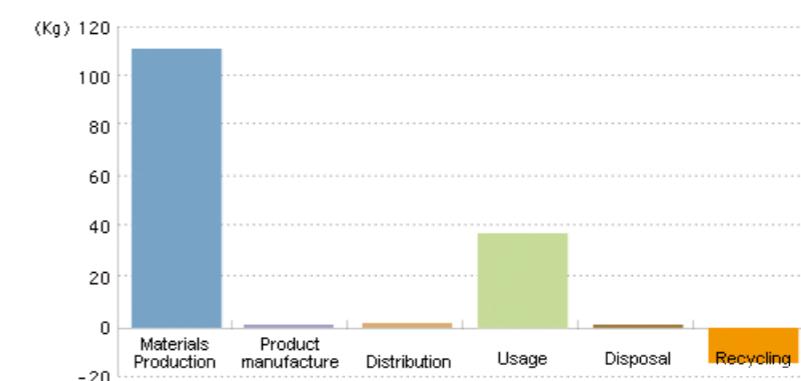
#### AV Multi-Channel Amplifier SC-LX73

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	141



SC-LX73

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



(Note) LCA calculation conditions for the two models mentioned above.

Fuel consumption: Weighted average for actual fuel consumption of top ten best selling cars in 2008, according to the Japan Automobile Dealers Association was used.

Driving condition: 800 km per month

Car stereo is assumed to be operating while driving and duration of usage is one year.

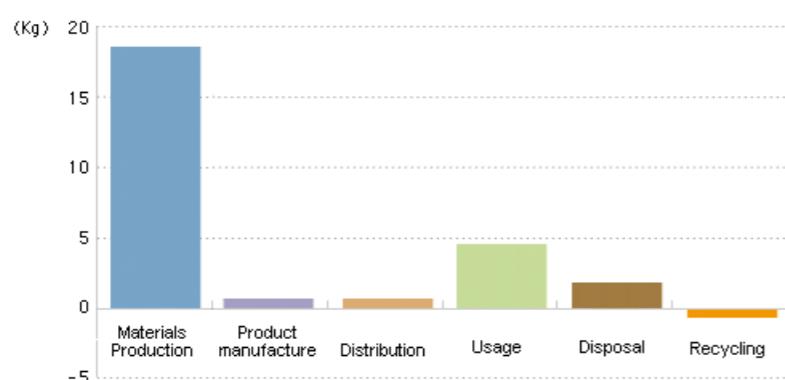
## CDJ Player CDJ-350

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	26



CDJ-350

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



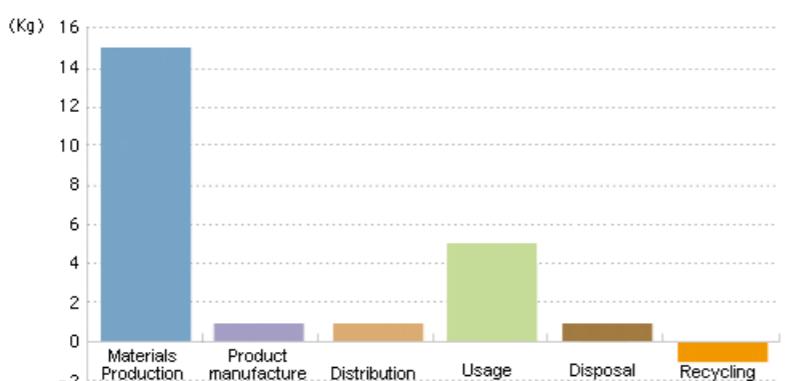
## DJ Mixer DJM-350

Consumption & Emissions During the Life Cycle	Total for All Stages (kg)
Global warming impact (CO <sub>2</sub> equivalent)	22



DJM-350

Global Warming Impact at Each Stage (CO<sub>2</sub> equivalent)



## Super Advanced Eco-Model certified products

Details of products certified using Pioneer's proprietary system that evaluates the degree of environmental friendliness.

### Car Electronics Products

**carrozzeria "CYBER NAVI"**  
**AVIC-VH09CS, AVIC-ZH09CS, AVIC-VH09, AVIC-ZH09, AVIC-ZH09-MEV**

#### Main environmentally friendly factors

Supporting environmentally friendly driving while alleviating traffic congestion through a variety of advanced functions, and contributing to an energy efficient automotive society while reducing CO<sub>2</sub> emissions.

- AR scouter mode: Displays the recommended distance between cars and helps alleviate traffic congestion
- Eco route search: Provides directions for the route that offers the least fuel consumption
- Eco status: Confirms the degree of environmental friendliness while promoting driving enjoyment
- Smart Loop Congestion Information: Contains road information up to approximately 700,000 km (excluding laneways etc.); provides enhanced functions that help avoid traffic congestion



AVIC-VH09 CS      AVIC-ZH09 CS      AVIC-ZH09-MEV

**carrozzeria "CYBER NAVI"**  
**AVIC-VH9990, AVIC-ZH9990, AVIC-H9990**

#### Main environmentally friendly factors

Supporting environmentally friendly driving while alleviating traffic congestion through a variety of advanced functions, and contributing to an energy efficient automotive society while reducing CO<sub>2</sub> emissions.

- Eco route search: Provides directions for the route that offers the least fuel consumption
- Eco status: Confirms the degree of environmental friendliness while promoting driving enjoyment
- Smart Loop Congestion Information: Contains road information up to approximately 700,000 km (excluding laneways etc.); provides enhanced functions that help avoid traffic congestion



AVIC-VH9990      AVIC-ZH9990      AVIC-H9990



- Received the Judging Committee Special Award in the "Green IT AWARD 2010."
- Received the Special Award from the Board of Review in the "12th Green Purchasing Award" in 2010.

## Home Electronics Products

### AV Multi-Channel Amplifier VSX-S300, VSX-S500

#### Main environmentally friendly factors

AV amplifier for full theater use that offers comprehensive energy savings through eco-mode functions and digital technology.

- Eco-mode: Function that reduces electric power consumption by a maximum of approximately 35%
- 70W(VSX-S300), 74W(VSX-S500) low power consumption
- Energy conservation during product transportation: Deliver increasingly slim and compact products to enhance the efficiency of product transportation loads



VSX-S300



VSX-S500

### "Pure Malt Speaker" series

#### Main environmentally friendly factors

Promoting the practice of the 3Rs through such initiatives as the recycling of used whiskey barrels to make speaker cabinets



S-A4SPT-PM



S-A4SPT-VP



S-PM300



The Pure Malt Speaker series won the METI Industrial Technology & Environment Bureau Director General's Award at the 2009 Resource Recycling Technology & System Award Ceremony sponsored by the Clean Japan Center.

## Advanced Eco-Model certified products

The latest certified products are indicated in red lettering. (Last Update: Aug, 2011)

### Car electronics products

Category(For product information)	Model Name	Model No.	Starting date of the sales	Principal items of eco friendly design
Car Navigation System	Raku Navi	AVIC-HRZ990	Oct. '10	The backup electric current of the product is 3mA or less.
		AVIC-HRZ880		Product, system, or service which contributes to reduce environmental burden indirectly by using the product. (Smart Loop compatibility improves efficiency to avoid traffic jams, and reduces fuel consumption.)
	AVIC-HRV110G	Nov. '10		The backup electric current of the product is 3mA or less.
	AVIC-HRV110			Load efficiency of transportation has been improved. The backup electric current of the product is 3mA or less
Raku Navi Lite	Raku Navi Lite	AVIC-MRZ99	Oct. '10	The backup electric current of the product is 3mA or less.
		AVIC-MRZ77		Load efficiency of transportation has been improved. The backup electric current of the product is 3mA or less
		AVIC-MRZ66		The backup electric current of the product is 3mA or less.
	AVIC-MRZ85	May. '10		Load efficiency of transportation has been improved. The backup electric current of the product is 3mA or less
Car AV System,Car Stereo	1D Main Unit	DEH-P650	Jan. '10	Load efficiency of transportation has been improved.
		DEH-560	Jan. '11	Load efficiency of transportation has been improved.
		DEH-550	Jan. '10	Load efficiency of transportation has been improved.
		DEH-460	Jan. '11	Load efficiency of transportation has been improved.
		DVH-P560	Feb. '11	The backup electric current of the product is 3mA or less.
	2D Main Unit	DVH-P550	Feb. '10	Load efficiency of transportation has been improved.
		DEH-360	Jan. '11	Load efficiency of transportation has been improved.
		DEH-350	Jan. '10	Load efficiency of transportation has been improved.
		FH-P530	May. '08	The backup electric current of the product is 3mA or less.
		TS-W3010	Jun. '06	Load efficiency of transportation has been improved.
Speaker	Unit Subwoofer	TS-W2510		
		TS-W2010		
		13cm Separate 2way Speaker	TS-Z132PRS	
	Custom Fit Speaker	TS-V171A	Sep. '08	Load efficiency of transportation has been improved.
		TS-C1710A	Oct. '08	
Pre Amplifier	Universal Digital Pre Amplifier	RS-P99x	Jun. '10	The backup electric current of the product is 3mA or less.
	Bridgeable 4ch Power amplifier	RS-A99x	GM-D6400	Load efficiency of transportation has been improved.
		Monophonic Power amplifier	GM-D6100	
	Bridgeable 4ch Power amplifier	PRS-A900	Dec. '07	The backup electric current of the product is 3mA or less.
Power Amplifier	Digital TV Tuner	GEX-P90DTV	May. '08	Load efficiency of transportation has been improved.
		GEX-P70DTV		
TV Tuner	Audio Master Unit	AXM-P01	May. '07	The backup electric current of the product is 3mA or less.

# Environmental Data of Products

Eco-Products

## Home electronics products

Category(For product information)	Model Name	Model No.	Starting date of the sales	Principal items of eco friendly design	
iPod Speaker System	DVD SPEAKER SYSTEM FOR iPod	XW-NAV1	Jun. '10	The product with the auto standby function.	
		X-NAS50			
	DIGITAL SPEAKER SYSTEM FOR iPod	XW-NAC1			
		XW-NAS5			
Audio Components	AV Multi-Channel Amplifier	SC-LX83	Oct. '10	The standby power of the product is 0.1W or less.	
		SC-LX73			
		VSA-LX55	Jul. '11	• The standby power of the product is 0.1W or less. • The product with the auto standby function.	
		VSA-LX53	Jul. '10	The standby power of the product is 0.1W or less.	
	Powered Subwoofer	S-LX70W	Oct. '07	The product with the auto standby function.	
		S-W1EX	Dec. '05		
	Pure Malt Audio Rack	B-PM1000	Oct. '06	Recycled materials and recycled parts are used in major parts of the products. (except recycled plastic)	
	Speaker Stand	CP-PM300	Nov. '06		
Blu-ray Disc Player	Blu-ray Disc / DVD Player	BDP-LX91	Dec. '08	The product with the auto standby function.	
		BDP-LX54	Nov. '10		
		BDP-LX53	May. '10		
		BDP-430	Nov. '10		
		BDP-330	May. '10		
DVD Recorder	HDD / DVD Recorder	DVR-WD70	May. '08	The product with the auto standby function.	
DVD Player	DVD Player	DV-2020	May. '11		
		DV-610AV	Jul. '08		
		TDV-420V	May. '10		
		DV-225V	Apr. '10		
		DV-220V	May. '10		
		DV-120	Apr. '10		
		Cordless Headphone	SE-DRS3000C	Jun. '08	Load efficiency of transportation has been improved.
AV Accessories	Inner-ear Headphone	SE-CL33	Jun. '10		
		SE-CE11	Mar. '10		
		SE-CL07-K	Jun. '10		
		DVR-S17J	Dec. '09	Plant-based plastic and plant-based coating material are used in products, accessories, and packaging materials.	
DVD / CD Writer for PC	Internal DVD / CD Writer	DVR-S16J	Sep. '08		
		DVR-A16J			
		External DVD / CD Writer	DVR-X162J	Dec. '08	
BD Writer for PC	BD-ROM DVD / CD Writer	BDR-S06J	Oct. '10	• Plant-based plastic and plant-based coating material are used in products, accessories, and packaging materials. • Load efficiency of transportation has been improved.	
		BDR-S05J	Oct. '09	Plant-based plastic and plant-based coating material are used in products, accessories, and packaging materials.	
DJ Equipment	DVJ Player	DVJ-1000	Sep. '06	Load efficiency of transportation has been improved.	
		DVJ-X1	Apr. '04	The standby power of the product is 0.1W or less.	
	Video Switcher	VSW-1	Dec. '04		
	SOUND & VISION Mixer	SVM-1000	Jan. '08		

Category(For product information)	Model Name	Model No.	Starting date of the sales	Principal items of eco friendly design	
CDJ Player	CDJ Player	CDJ-2000	Nov. '09	The product with the auto standby function.	
		CDJ-900	Dec. '09		
		CDJ-850	Aug. '10		
		CDJ-800MK2	Mar. '06	The standby power of the product is 0.1W or less.	
		CDJ-400-K	Nov. '09		
		CDJ-400	Dec. '07		
		CDJ-350	Jun. '10	The product with the auto standby function.	
		JCDJ-200	Apr. '05	The standby power of the product is 0.1W or less.	
		CDJ-100S	Sep. '98		
		MEP-7000	Apr. '08		
DJ Equipment		CMX-3000	Dec. '01	The product with the auto standby function.	
DJ Mixer	DJM-T1	Jul. '11			
	DJM-5000	Oct. '09			
	DJM-3000	Apr. '02	The standby power of the product is 0.1W or less.		
	DJM-2000	Jun. '10	The product with the auto standby function		
	DJM-1000	Mar. '05	The standby power of the product is 0.1W or less.		
	DJM-909	Dec. '03			
	DJM-900nexus	Mar. '11	• The rate of recyclability has been improved. • The product with the auto standby function.		
	DJM-800	Feb. '06	The standby power of the product is 0.1W or less.		
	DJM-700	Oct. '07			
	DJ Effecter			DJM-400-K	Nov. '09
			DJM-400	Mar. '06	The product with the auto standby function. • Load efficiency of transportation has been improved.
			DJM-350	Jun. '10	
Active Reference Speaker	EFX-1000	May. '05	The standby power of the product is 0.1W or less.		
	EFX-500	Sep. '98			
	EFX-500-R	Mar. '05			
AV Accessories	Active Reference Speaker	S-DJ08	Jan. '11	The product with the auto standby function.	
		S-DJ05	Mar. '11		

## Industrial use products

Category(For product information)	Model Name	Model No.	Starting date of the sales	Principal items of eco friendly design
Cyber Conference Solution	Cyber conference system	CCS PRIME	Sep. '08	Product, system, or service which contributes to reduce environmental burden indirectly by using the product.
	Discussion Table	WWS-DT101	Aug. '11	
Business Products Professional Video Player	Professional HD Video System Player	HD-V9000	Jan. '10	The product with the auto standby function.
	System installation Professional Bu-ray Disc Player	BDP-V6000	Aug. '09	

## Products Compliant as Specified Procurement Items with the Act on Promoting Green Purchasing

Pioneer's CAR NAVI and ETC devices comply with the stipulations for specified procurement items under the Act on Promoting Green Purchasing and are compatible with intelligent transportation system (ITS) automotive devices. In this manner, the Company is contributing to an environmentally conscious automotive lifestyle.

Pioneer is committed to reducing the environmental impact of all its plants in Japan and overseas. We are working towards CO<sub>2</sub> reduction, zero emission of waste and promotion of recycling in our manufacturing processes and management activities under the slogan "No negative input, no negative output, no negative use."

## Basic Efforts

### No negative input, no negative output and no negative use at plants



Prevention of global warming is a corporate mission

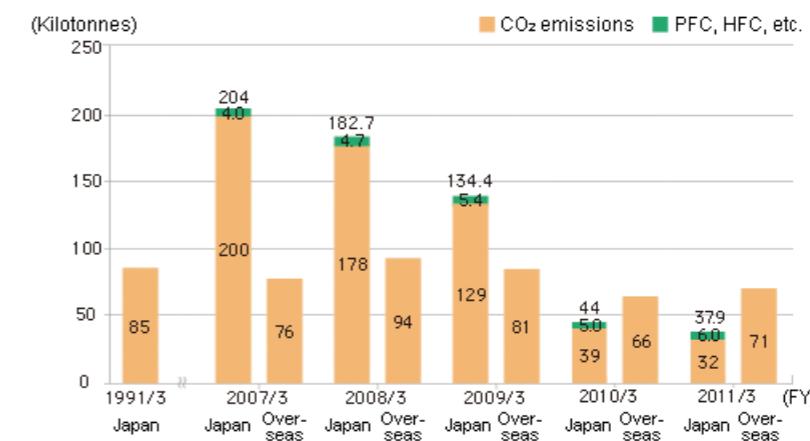
The Kyoto Protocol commitment period started in April 2008. Japan has set a target of reducing CO<sub>2</sub> emissions by 6% from 1990 levels. To achieve this target, the whole country from government to businesses and homes must take concrete steps to reduce CO<sub>2</sub> emissions. The electric and electronic industries have formulated their own voluntary environmental action plans and are working to achieve their program goals. Pioneer participates in the voluntary environmental action plan of Nippon Keidanren (Japan Business Federation) and has set a voluntary target of 36% in an effort to achieve the 35% reduction in CO<sub>2</sub> emissions per unit of actual production\* from 1990 levels during the commitment period of the Kyoto Protocol from 2008 to 2012 which is the target of the electric and electronic industries. In addition, the company is also working to reducing total emissions.

\* Actual production is calculated by dividing the fiscal year production by the Bank of Japan domestic corporate goods price index for electrical equipment based on FY1990 (0.399 for FY2011).

## Reducing CO<sub>2</sub> Emissions

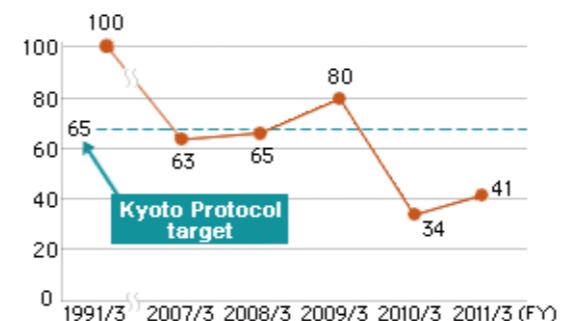
Pioneer is striving to reduce its CO<sub>2</sub> emissions by tackling reduction of energy consumption at its production plants head-on. Until FY2006, CO<sub>2</sub> emissions increased over 1990, the base year for measuring emission reductions, but they have since fallen as a result of our energy conservation efforts and reduced production.

### Greenhouse Gas emissions



In Japan GHG emissions are calculated using emission coefficients of each electric power company, reflecting the Kyoto Mechanism credit. Overseas, emission coefficients of "Greenhouse Gas Protocol Initiative (2006)" are used.

### Emissions per Unit of Actual Production



As a member of the electrical and electronics industry, Pioneer is working towards a 35% reduction in CO<sub>2</sub> emissions per unit of actual production from 1990 levels during the commitment period of the Kyoto Protocol from 2008 to 2012. In addition, Pioneer has set a voluntary reduction target of 36%. In FY2011 the index of domestic GHG emissions became 41% of FY1991 emissions.

## Promoting the use of photovoltaic power



Photovoltaic system at  
Pioneer's Kawagoe Plant

Pioneer is actively promoting the introduction and use of photovoltaic power as a part of its overall greenhouse gas reduction efforts. In this context, the Company is currently conducting field tests for new photovoltaic technologies in conjunction with the New Energy and Industrial Technology Development Organization (NEDO). In its initial phase, this joint research project involved the installation of a 150kW photovoltaic power system at Pioneer Micro Technology Corporation (MTC) in Yamanashi Prefecture in March 2007. This system is being used to power, powering part of MTC's manufacturing line. More recently, a 30kW photovoltaic power system was installed at the Company's Kawagoe Plant in Saitama Prefecture in February 2009. This system is being used to power the business site. Utilizing a dedicated line, the status and details of solar power generated at the Kawagoe Plant are relayed hourly to NEDO. At the same time, electricity output is displayed on a real time basis through a monitor located in the Plant lobby. Through these means, Pioneer has established a framework that allows interested parties to visually confirm the Company's efforts to contribute to the environment. Looking ahead, the Pioneer Group will proactively promote efforts to reduce greenhouse gas emissions by leveraging the benefits of such clean energy alternatives as photovoltaic power generation and further enhancing electricity consumption efficiency.

## Energy Saving Ideas



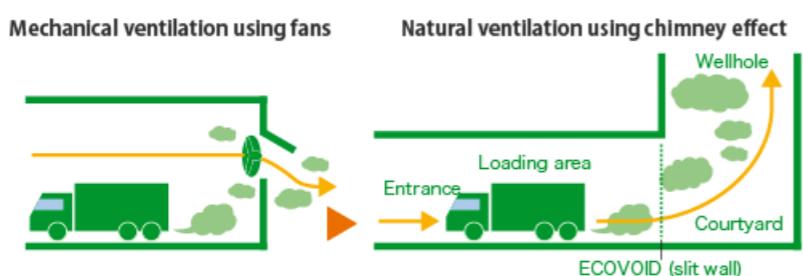
Headquarters

Pioneer's Headquarters, completed in April 2007, is a design and development base for home electronic products and many of its engineers are working on energy saving and environmental impact reduction of products. Various measures were incorporated into the construction of the plant in order to reduce energy consumption in its daily business activities. The plant embodies the Pioneer approach of reducing the environmental impact of its products and the energy consumed in its daily production activities.

The Kawasaki facility became the Company's headquarters starting in November 2009.

## Natural ventilation using the chimney effect of the loading area

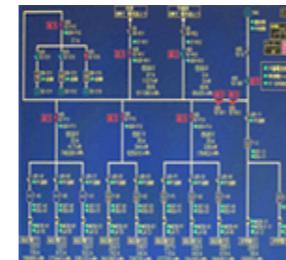
Normally, loading areas require fans to ventilate the exhaust fumes from trucks in the area, but at the Kawasaki Plant we have switched to natural ventilation using the chimney effect created by connecting the vehicle entrance/exit with the wellhole. This has eliminated the need for mechanical ventilation using fans, thereby reducing power consumption.



## Reducing air-conditioning energy

The Headquarters has adopted an ice thermal storage system for the air conditioners in the office area. The system produces ice at night when energy demand is low and uses the ice for air conditioning during the daytime, thus reducing power consumption. In addition, the executive offices use total heat exchangers to reuse the heat discharged from warm rooms during wintertime heating, further reducing air conditioning energy.

## Adopting a building energy management system



BEMS monitor

The plant's equipment management office collects data on power consumption and utilization using the building energy management system (BEMS). This data is then utilized to support power consumption management, including daily monitoring of optimized operations, checking departments with conspicuously high power consumption and analyzing reductions in consumption.

## LEDs used to illuminate Pioneer logo



Logo illumination by LEDs

LEDs are now being used to illuminate the Pioneer logo on the north and south sides of the building. This has reduced energy consumption to one-third of the amount compared with fluorescent lighting.

## Brightening dining areas with natural light from large windows



The Employee Cafeteria

## Other energy saving measures

- Measures against the summer sun and west sun
- Transformer operation by appropriate load factor
- Adoption of high-efficiency transformers
- Adoption of automatic power factor regulators
- Adoption of high-efficiency fluorescent lighting
- Adoption of water-saving sanitary appliances
- Maintaining appropriate illuminance with light sensors and controllers
- Turning off lights in empty rooms using motion sensors

## Energy Saving by Heat Discharge



Reflow furnace area

At Towada Pioneer in Aomori Prefecture, we succeeded in saving energy by focusing on the heat discharged from the reflow furnace on the circuit board assembly line. More precisely, we increased the heat exhaust speed by changing the setting on the duct fan inverter that discharges the heat from the reflow furnace to outside. In this way, we were able to create a comfortable environment of about 25°C around the reflow furnace. In addition, there was no longer any need to operate the special blower which previously was keep running for 24 hours to lower the room temperature. In four months, CO<sub>2</sub> emissions were reduced by approximately 19 tonnes.

## Introduction of NaS Batteries



NaS batteries introduced by Pioneer Micro Technology

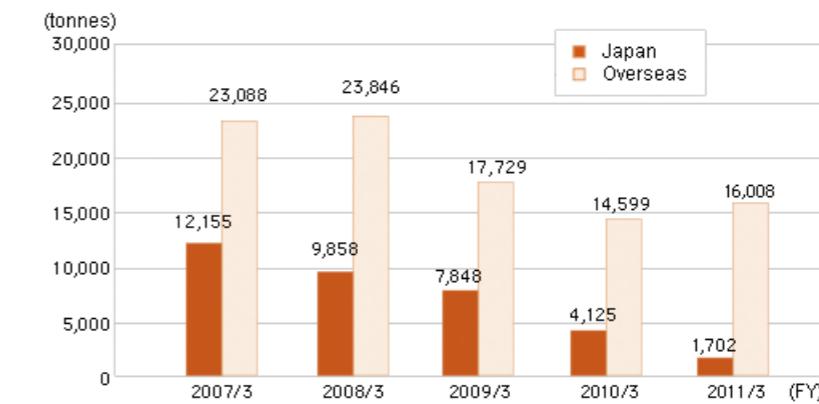
In May 2009, Pioneer Micro Technology Corporation in Yamanashi Prefecture commenced usage of NaS batteries, which can store large quantities of electric power with a rated output of 2,000 kWh. This is possible thanks to the battery's ability to store electricity during nighttime hours when energy use is low, and then discharge it in response to daytime usage peaks.

The Pioneer Group is promoting environmental activities at its plants worldwide with the aim of achieving Zero emission of waste\*. In FY2006, we achieved this goal at our group companies in Japan. FY2010, We achieved it at target companies of our overseas group too. We will continue and further improve for the activity.

\*Zero emission of waste (Pioneer's definition)

Recycling of exceeds 99.5% of waste generated at our plants so as to eliminate landfill disposal in Japan. Besides in foreign countries, the recycling rate exceeds 99%.

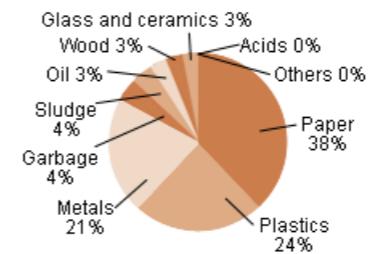
### Amount of waste and valuable resources generated



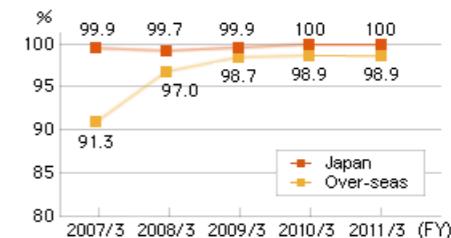
### Amount of waste and valuable resources generated

The amount generated at Pioneer plants in Japan in FY2011 decreased by 59% from the previous year, and increased at overseas plants by 10%. The amount of waste reduced in Japan was the result of plant consolidation. The increase in waste generated overseas was attributable to an increase in production volume.

### Composition of waste and valuable resources (in Japan)



### Recycling rates



### Improvement of recycling rate

We maintained a recycling rate of over 99% in Japan in FY2011. We also maintained a high recycling rate of 98.9% at our overseas plants. The recycling rate is calculated based on the method of waste management established by the law and regulations in each country.

\* This graph includes data from plants that are not subject to zero emissions targets.

# Recycling of Resources (3Rs)

Eco-Plants

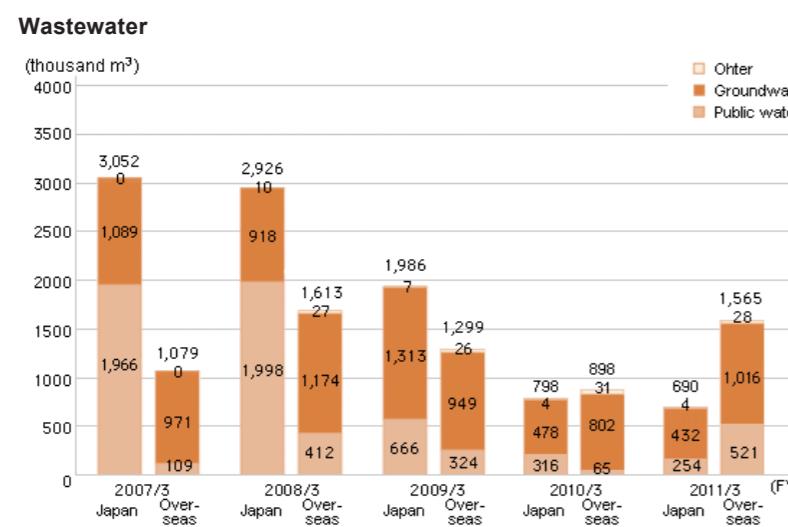
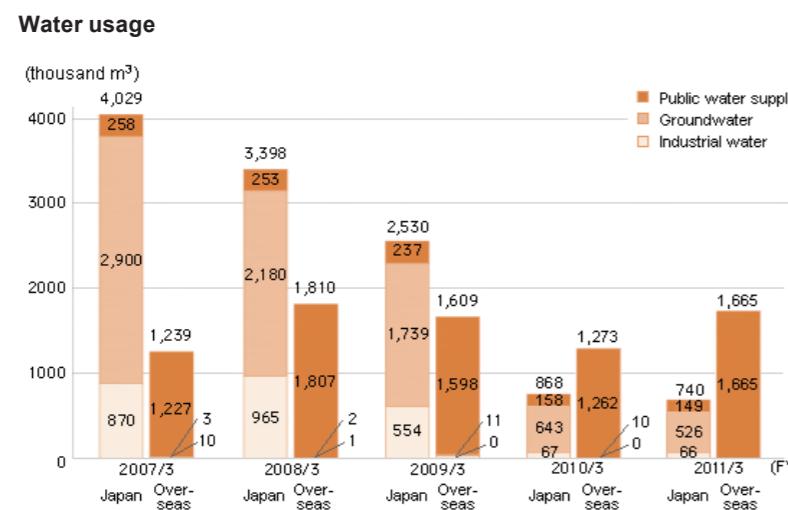
## Recycling Centers

Product waste is generated at our development and production plants. To improve the recycling rate, Pioneer has established recycling centers at these plants to disassemble and sort waste.



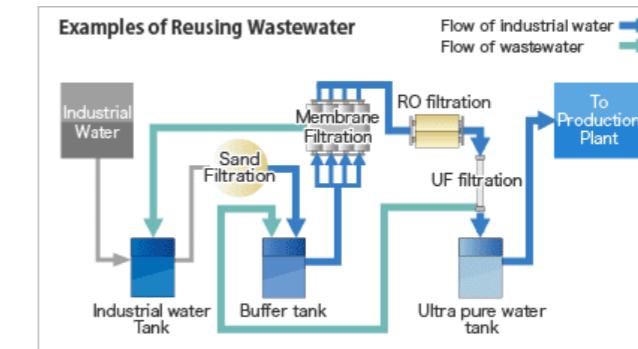
## Trends in Water Usage and Wastewater Volume

In FY2011 water usage and wastewater in Japan slightly decreased and increased in overseas.



## Wastewater Reuse

Production of semiconductors and organic EL displays requires pure water. Pure water is created by passing raw industrial water through various filters. Wastewater is generated when the water passes through the filters, but it is recovered and reused as industrial water. In FY2011, we reused 43,000 m³ in this way.



## Green Purchasing (in Japan)

The basic concept underlying green purchasing is not to buy unnecessary items, only buy required items, and ensure all items bought are environmentally friendly. The Pioneer Group promotes green purchasing based on a list of items with a 100% green purchasing target. In FY2011, Pioneer achieved its 100% green purchasing target for eleven out of thirteen items. Green purchasing was not achieved for the other two items, as they did not include green-compliant products in terms of functionality and performance.

### Items targeted for 100% green purchasing

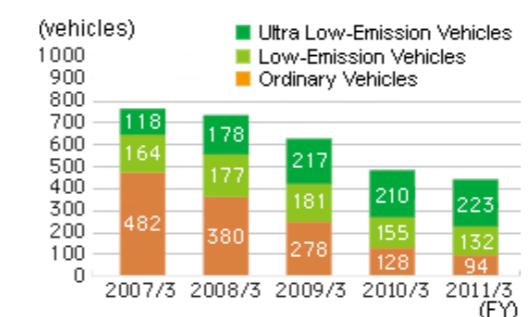


(○: 100% green purchasing was achieved)

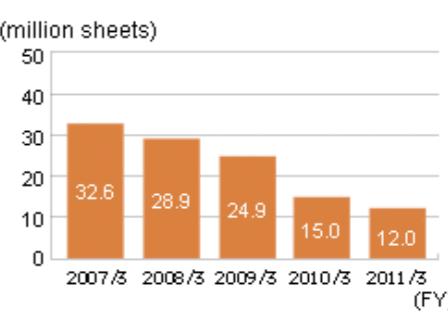
Approximately three-quarters of the Company's car fleet has been replaced with Low-Emission Vehicles\*, with Ultra Low-Emission Vehicles\* comprising 64% of them. Initiatives to reduce office paper usage compared to the previous fiscal year were promoted, resulting in an approximate 20% reduction in FY2011.

\*Low-Emission Vehicle (LEV) Environmental Performance Certification: System of indicating how much hazardous substances have been reduced from exhaust gas emissions from the reference value.  
Ultra Low-Emission Vehicles (4-star ranking): Reduced by 75% or more  
Low-Emission Vehicles (3-star ranking): Reduced by 50% or more

### Number of Low-Emission company vehicles



### Office paper purchases (Converted in A4)



# Reducing Environmentally Hazardous Substances

Eco-Plants

Pioneer is committed to reducing emissions by conducting environmental impact assessments and reducing the discharge of chemicals used in the production process into the air or water, changing to alternative substances where technologically practicable or improving the process. We are currently engaged in deciding the procedures for appropriate management of chemical substances required in the production process.

## Management by PRTR System

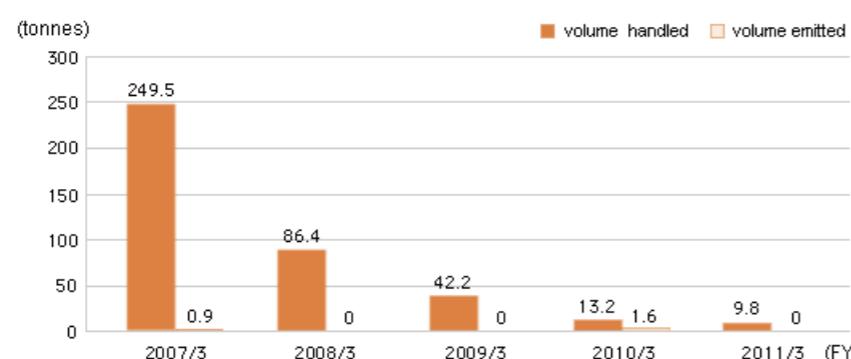
Under the PRTR Law\*, Pioneer is required to notify the government of emissions/transfers of chemical substances, starting with our business activities in FY2002. Regarding to the PRTR law object substances, in FY2011 the total volume of handled was 9.8 tonnes and volume emitted into atmosphere, water and soil were zero in Japan. We will continue to reduce our environmental impact by improving the management level of chemical substances.

\* PRTR Law:Law Concerning Reporting, etc. of Release of Specific Chemical Substances to the Environment and Promotion of the Improvement of Their Management PRTR : Pollutant Release and Transfer Register

### Handling, transfer and emissions of PRTR chemical substances

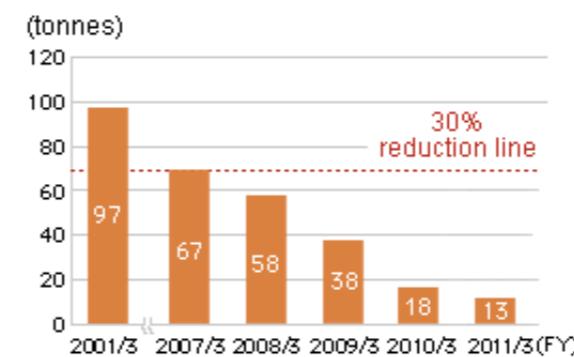
Substance	Volume handled	Volume emitted into atmosphere	Volume transferred			Volume consumed	Volume removed or disposed of	Volume recycled
			Volume transferred as waste	Volume transferred to sewers	Total			
Hydrogen fluoride and its water-soluble salts	4.5	0.0	0.0	0.0	0.0	0.0	4.5	0.0
N,Ndimethyl formamide	2.8	0.0	2.8	0.0	2.8	0.0	0.0	0.0
2-amino ethanol	2.5	0.0	2.5	0.0	2.5	0.0	0.0	0.0
Total	9.8	0.0	5.3	0.0	5.3	0.0	4.5	0.0

### Volumes of PRTR chemical substances handled and emitted (in Japan)



## Reduction of VOC Emissions

### VOC emissions (in Japan)



Pioneer has also been working to reduce emissions of volatile organic compounds (VOCs) used in the production process. We aim to reduce emissions by 30% by FY2011 from the FY2000 (2001/3) level in accordance with the industry's voluntary action plan. In FY2011, we succeeded in reducing emissions by 87% from the base year.

## Total Elimination of Ozone-depleting Substances

As early as 1992, Pioneer had totally eliminated specified chlorofluorocarbons with high ozone depletion potential whose use was banned by international regulations in 1995 from the production processes of all group companies. In addition, by 1996 we had totally eliminated chlorofluorocarbon alternatives\*, whose use will be banned by international regulations by 2020, from the production processes of all group companies by switching to cleaning with alcohol or not cleaning at all.

\* Chlorofluorocarbon alternatives: Hydrochlorofluorocarbons (HCFCs) and hydrofluorocarbons (HFCs)

## Strict Water Quality Control

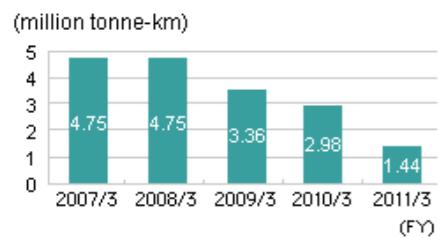
Pioneer has set voluntary water quality standards that are stricter than those set by Japanese law, and implements strict water quality control throughout the group. At plants that use harmful substances, Pioneer has installed wastewater treatment facilities and it supervises and manages processes in order to stay in strict compliance with water drainage regulations for wastewater and public water resources.

Pioneer is working toward energy conservation in distribution. We are making various efforts throughout the entire distribution system, from transportation of production materials to sales-related transportation.

### Logistical Initiatives

#### Modal shift

##### Amount handled by modal shift

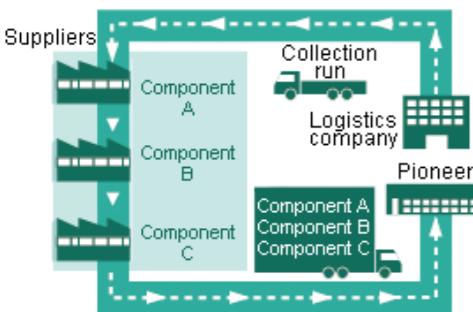


Modal shift refers to shifting transportation methods from trucks to railways or marine transport. Pioneer has been promoting such a shift for many years. In FY2011, the volume of freight handled by railways and marine transport amounted to 1.44 million tonne-kilometers\*, a decline of about 50% from the previous fiscal year. This decrease was attributable to new distribution bases established to receive products from overseas, in order to increase transportation efficiency within Japan. Thus, the modal shift in Japan is being replaced by means of marine transportation from overseas.

\*Tonne-kilometer (tonne-km) is the unit used to indicate volume of freight transport.  
For example, if 1 tonne of freight is transported 1 kilometer, this is expressed as 1 tonne-kilometer.

#### Transport reform using milk runs

##### Milk run concept



To ensure the efficient transportation of materials from multiple component suppliers, Pioneer employs the "milk run" system of one truck visiting several suppliers to pick up the required components. In FY2011, 20 component suppliers were incorporated in the milk runs, resulting in a reduction of 79,300 km in the cumulative traveling distance for 2-tonne and 4-tonne trucks. This corresponds to a fuel saving of 13.7 kiloliters and a reduction in CO<sub>2</sub> of 36.0 tonnes.

Pioneer is committed to reducing the environmental impact of its sales, distribution and service activities by promoting recycling based on the 3Rs(Reduce, Reuse, Recycle) concept.

### Reuse of Sales Promotion Items

As part of our environmental preservation activities, Pioneer makes every effort to reuse items used in sales promotions. For example, the display stands used in sales campaigns can be used over again by changing the decorations.

#### Example of continuously using sales promotion display stands



### Collecting Repair and Replacement Parts for Recycling

Pioneer undertakes 3Rs (Reduce, Reuse, Recycle) of service parts as part of our environmental preservation activities. We collect repair and replacement parts such as large printed circuit boards and mechanical units that customers find it difficult to dispose of and dispose of them appropriately. With the cooperation of customers, we collect recyclable components and reuse them as service parts under our environmental preservation policy.

### Factory Refurbished Products

From the perspective of every effort to reduce waste and minimize our environmental impact, Pioneer uses a specific refurbishing line to restore products returned to us after being put on the market to revive them as refurbished products and sells them online under the category "Factory Refurbished."(Japan domestic only)

# Communicating our Message

## Eco-Communication

At Pioneer we believe it is our duty to continue to play a leading role in the creation of new markets, promote preservation and improvement of the global environment as a responsible corporate citizen and maintain a high level of ethics as a member of local as well as international society. Together with various stakeholders, we can realize the Pioneer Group philosophy of "Move the Heart and Touch the Soul" by our adherence to this belief.

### Environmental exhibition

This illustration shows the role Pioneer should play in the preservation of the global environment through our relations with a variety of stakeholders.



For non-environmental social information.

### Environmental exhibition



"carrozzeria" car navigation system



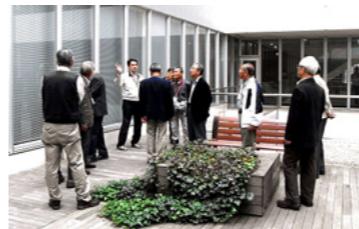
"Music EV" electric vehicle

Pioneer participated in the Eco Products 2010 Exhibition. The Company's participation was based on the overarching theme "Ecology to NEXT STAGE — Pioneer's Next-Generation Ecology." The Exhibition itself was held over three days from December 9, 2010 (Thursday) to December 12, 2010 (Saturday) at the Tokyo Big Sight.

At the exhibition, the Company showcased its next-generation in-car display device, the Network Visions Head-Up Display. Supporting an increasingly safe and comfortable driving experience, the Company's offerings featured on-board car navigation and other systems that boast lightweight and energy efficient speaker equipped seats, route search functions that reduce energy consumption, as well as a battery-charged search function. In addition to an electric "music vehicle" that allows drivers and passengers to enjoy the wonder of audio and movie entertainment while driving, Pioneer displayed its capabilities for displaying wide-ranging smart phone information on car windscreens.

The exhibition was an opportunity for Pioneer to provide to a large number of customers the true-to-life experience and excitement of a bright and enjoyable tomorrow that is already almost here.

### Environmental Seminar Held for Local Citizens



Visitors tour the environmental facilities at the headquarters



Visitors brought their favorite music to listen to on the Pure Malt speakers

sound demonstration with Pure Malt speakers (S-A4SPT-VP) made from retired whisky casks as a leading example of an environmentally conscious product.

The visitors thoroughly enjoyed listening to the wonderful sound of the Pure Malt speakers, moving their feet to the rhythm with looks of fascination on their faces.

In April 2011, Pioneer held an environmental seminar for 31 people, outlining its environmental initiatives on "The Local Environment and Greenery" for the Kawasaki Citizen Academy, a non-profit organization.

The company explained its environmental activities and social contributions, including initiatives to conserve energy and reduce waste at its business offices, gave a tour of the headquarters, introduced its environmentally friendly products, and offered a

### Nature Festival

Pioneer's headquarters, participated in a local nature festival held in September 2010. Many members from the local government, companies and NPOs participated, making for a very lively event enjoyed by large crowds. Pioneer exhibited its Pure Malt speakers, and set up a plasma TV. A documentary titled "Shintsurumi Soshajo (marshaling yard)" was screened.



Screening of archive film



Scene from event

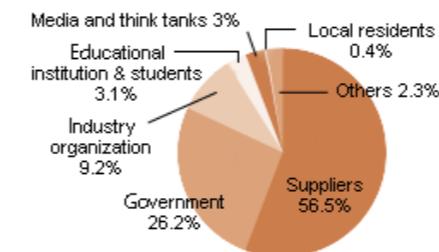
### Yamada Junior High School Receives Pioneer Environmental Contribution Award



The award ceremony

In November 2010, representatives of the Kawagoe Plant visited Yamada Junior High School, and presented students there with the Pioneer Environmental Contribution Award. The award ceremony took place during the morning assembly of all students, during which the award and a plaque were presented to the school. This award was expressed gratitude to all of the students' efforts to collect and recycle bottle caps. Since the school began collecting bottle caps in 2009, more than 300,000 caps have been collected and sent to the Kawagoe Plant for recycling.

### External Inquiries



In FY2011, Pioneer received 260 inquiries about its environmental conservation activities. (in Japan)

As a responsible corporate citizen, Pioneer undertakes various environment-related social activities aimed at realizing a sustainable society.

## PET Bottle Cap Collection for Vaccines



Some of the PET bottle cap



Loading caps collected (200kg per bags)

Pioneer collects caps as well as, and separately from PET bottles. As the caps are made from high-purity polypropylene, they can be sold as recycled resources. After collection, the caps are recycled by a recycling company, but the profits on sales are used to purchase vaccines under a JCV sponsorship program\*. On March 2011 we have donated the amount enough vaccine for approximately 1,235 children.

\* JCV sponsorship program: Program aimed at enlisting the cooperation of companies in fund-raising activities to provide vaccines against infectious diseases for children all over the world whose lives might thereby be saved, as well as related facilities and equipment, and at actively promoting support activities.

## Pioneer GomiZero 1st Quarter

The Pioneer Group launched a local cleanup effort at its domestic plants, calling it "Pioneer GomiZero 1st Quarter". This three-month effort ran from April to June this year as part of the company's Cleanup Campaign. Launched to coincide with Earth Day (April 22), Zero Garbage Day (May 30), Environment Month (June), World Environment Day (June 5), it was intended to help local environmental protection and improve employee awareness on environmental issues through local cleanup efforts. Over 399 people helped collect some 1.4 tonnes of refuse.



Headquarters (Around the station)



Kawagoe Plant



Pioneer Communications Corporation



Tohoku Pioneer Corporation Headquarters



Towada Pioneer Corporation



Pioneer Micro Technology Corporation



Pioneer Finetech Corporation



Pioneer FA Corporation



Pioneer Service Network Corporation Shizuoka

## Example of Environmental Activities at an Overseas Base

Pioneer Electronics Asiacentre Pte. Ltd. (PAC), a local affiliate in Singapore, engages in various environmental activities, some of which are highlighted below.

### Clean-Up Activities

During the "Clean-Up the World Weekend" held from September 17 to 19 in 2010, employees cleaned up local areas as a part of their contributions to local communities.

### No Car Day

On September 22, 2010, employees participated in "No Car Day" to support reductions in CO<sub>2</sub> emissions in an effort to fight global warming. Employees left their cars at home and used public transportation to go to work.

### Earth Hour

Employees participated in the "Earth Hour" initiative to help fight global warming and reduce CO<sub>2</sub> emissions. From 8:30 to 9:30pm on March 26, 2011, people around the world turn off their electricity at the same time to help preserve the environment.

## Forest Conservation Activities

The Pioneer Group conducts continual forest conservation activities.

### Pioneer Forest



Tree pruning



To explore the forest

Since 2005, Pioneer has held the Pioneer Forest Event near Lake Kamakita in Saitama Prefecture. The 12th event was held in October 2011, with about 60 employees and their families participating. The adults spent most of their time working up a sweat while pruning trees during beautiful autumn weather, and the children participated in the forest exploration program run by Asoken, an organization that educates through outdoor activities. During the afternoon, the children tried their hand at making original mobile phone straps using branches, leaves and nuts that came

### Corporate Forestry



Forest thinning

Tohoku Pioneer is participating in the Corporate Forestry Project, sponsored by Yamagata Prefecture. The project brings together four companies from Tendo city in an agreement with the Yamagata Prefecture Forestry Incorporated Foundation to support the diverse functionality of the Tendo city Nukuzu-area mountain forest. Located next to Tendo city's Jagaramogara, it has been declared a national treasure. The employees of Tohoku Pioneer joined in to help plant trees, clear brush, prune branches, and cut down trees.

### Light-Down Campaign



Pioneer Finetech (Pioneer logo) Pioneer FA (parking lot lights)



Since 2003, the Ministry of the Environment has conducted its CO<sub>2</sub> Reduction / Light-Down Campaign to encourage facilities and homes to turn off lights in an effort to combat global warming. Pioneer turned off all lighting at its facilities nationwide, including signs and advertising lights, on June 21 (the day of the Summer Solstice) and July 7 (Tanabata Light-Down campaign) in 2010. Lights were turned off on both occasions from 8:00 PM to 10:00 PM, saving some 200 kWh of electricity.

The Pioneer Group educates all its executives and employees in environmental conservation. Pioneer's educational activities are not restricted to within the company, but extend to families too, and enable the company, unions, employees and their families to act together. The company also presents awards for outstanding contributions to conservation activities.

## Internal Education

To strengthen the environmental governance of the Pioneer Group, Pioneer has integrated the ISO14001-certified environmental management systems at its facilities in Japan, with the facilities sharing the same environmental training content. In addition, information concerning the independent environmental efforts of each plant are added to e-learning materials.

## Pioneer Environmental Contribution Award



Award winners

The Pioneer Group presents the Pioneer Environmental Contribution Award to the company's plants, groups and individuals that have contributed to environmental conservation activities. Patents judged to have made a particular contribution to environmental conservation are recognized by receiving the Environmental Patent Award. In FY2011, there were 41 applications for the Pioneer Environmental Contribution Award, and ten groups and individuals were given the award. The highest award were given in "Energy-saving promotion at the home by ecological-drive practice." Environmental Patent Award was regrettably not awarded this year.

## COCO-chan Campaign

The COCO-chan Campaign aims to reduce electric power consumption in the homes of employees in order to cut CO<sub>2</sub> emissions, the main cause of global warming, by calling for companies to cooperate in the efforts of the Japanese Electrical Electronic & Information Union to reduce CO<sub>2</sub> emissions. The campaign is held over the four months from June to September every year.

About 700 people participated in FY2011, but unfortunately due to the hot weather, around three-fourths of the families increased their per-person energy usage compared with the previous year. About 5% of the families were able to cut their electricity usage by 15% or more.

## Number of Holders of Main Environment-related Qualifications

FY ended March 2011

	Qualification	No. of qualified persons
National qualification	Pollution-related	Environmental Pollution Control Operator (Air, Water, Noise, Vibration)
	Energy	Registered Energy Manager
		Qualified Person for Energy Management
	Waste	Boiler Operator
		Administrative Officer for Special Management of Industrial Waste
	Hazardous Materials Officer	42
	Handling of hazardous materials	207
		Specified High Pressure Gas Handling Supervisor
		High Pressure Gas Handling Supervisor
		Work Supervisor (Organic Solvents, Lead, Specified Chemical Substances)
Other	Toxic Substances Handling Officer	388
	Industrial Safety and Health Manager, Waste Disposal Facility Technology Manager etc.	6
Environmental management	Internal Environmental Auditor (in Japan)	56
	Internal Environmental Auditor (Overseas)	96
		233

## Topics

### Highest Award Given for Eco Drive Contest



Group photo

Towada Pioneer Corporation (Aomori Prefecture) was given the top award at the 2010 Eco Drive Contest sponsored by the Ministry of the Environment and the Environmental Restoration and Conservation Agency. The Eco Drive Contest aims to spread awareness throughout Japan of environmentally conscious driving habits (Eco Drive), such as not accelerating quickly while driving. An award is given each year to businesses that made excellent progress on Eco Drive initiatives. Towada Pioneer Corporation has promoted Eco Drive initiatives as a part of its environmental protection efforts since FY2008. In FY2010, we aimed to expand the Eco Drive initiative from company vehicles to cars privately owned by employees and vehicles operated at partner companies. The award recognized the company's creation of annual targets, setting up of bulletin boards, and distribution of pamphlets to everyone in an all-out effort to promote Eco Drive.

### Tree planting with Prize Money from Pioneer Environmental Contribution Award



Tree planting

Pioneer FA Corporation (PFA) planted commemorative trees with the prize money received with the FY2010 Pioneer Environmental Contribution Award. PFA, which received the Pioneer Environmental Contribution Award in recognition of the excellence of its greenery projects in Saitama Prefecture, used the prize money for the environment by planting trees around its office in accordance with its slogan to "plant new seeds and protect greenery."

## Awards

### 2010

	Awarding Body	Description	Recipient
December	Ministry of the Environment Environmental Restoration and Conservation Agency	Excellent Award in The Ecological-drive contest in 2010	Towada Pioneer Corporation
November	Green Purchasing Network	The CYBER NAVI won the 12th Green Purchasing Award	Pioneer
October	Green IT Promotion Council	The CYBER NAVI won the Judging Committee Special Award in the Green IT AWARD 2010	Pioneer

### 2009

	Awarding Body	Description	Recipient
November	Green Purchasing Network	The Demand Bus System using a Pioneer car navigation system wins the 11th Green Purchasing Award	Jointly awarded to Pioneer and Iizuna-machi, Kamiminochi-gun, Nagano Prefecture
October	3R Promotion Council	The Pure Malt Speakers wins the 3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer
	Ministry of Economy, Trade and Industry, and Clean Japan Center	The Pure Malt Speaker series wins the METI Industrial Science and Technology Policy and Environment Bureau Director General's Award at the Resource Recycling Technology System Awards	Pioneer
May	Saitama Prefecture	Sainokuni Green Plan Award	Pioneer FA

## Awards

2008

	Awarding Body	Description	Recipient
November	Eco-Products Awards Steering Committee	CYBER NAVI AVIC-VH9000 won the Chairperson's Award (Excellent prize), Eco-Products Awards Steering Committee	Pioneer
June	MOI (Thai Ministry of Industry)	Prime Minister Industry Award 2008 (Thailand)	Pioneer Manufacturing (Thailand) Co., Ltd. [PTM]
March	Aomori Prefectural Government	Grand Prix in the Aomori Environmental Activity Partnership Awards	Towada Pioneer Corporation
January	The Energy Conservation Center, Japan	2007 Excellent Energy Conservation Manager in the Agency for Natural Resources and Energy Director-General's Awards	Hideo Maeda, General Affairs Department, Pioneer Plasma Display Corporation

2007

	Awarded by	Description	Awarded to
November	Yamanashi Center for Climate Change Actions	Award for Excellence in the Eco-Energy Category of the 2007 Stop Global Warming-Activity Contest	Pioneer Micro Technology Corporation
	Miyagi Prefectural Government	Grand Prix in the Implementation Category of the 2nd Miyagi Green Purchasing Awards	Pioneer System Technologies Corporation

2006

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Service Network Corporation World Parts Center
March	Corporate Liaison Council	Excellent Corporation Award 2005 awarded by the Corporate Liaison Council on the Environment of Yamanashi Prefecture	Pioneer Display Products Corporation Yamanashi Plant
February	Chubu Bureau of Economy, Trade and Industry	Chubu Bureau of Economy, Trade and Industry General Director's Award in the 2005 Awards for Excellence in Plant Energy Management	Pioneer Display Products Corporation Headquarters & Shizuoka Plant
February	Kanto Area Electricity Use Rationalization Committee	Grand Prix in 2005 Chairman's Awards	Pioneer Headquarters
February	Green Purchasing Network	Economy, Trade and Industry Minister's Award in the 8th Green Purchasing Awards	Pioneer

2005

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Micro Technology Corporation and Pioneer Communications Corporation
October	Ministry of Economy, Trade and Industry, and Clean Japan Center	Pure Malt Speaker Project won the Clean Japan Center Chairman's Award in the Resource Recycling Technology System Awards	Pioneer Tokorozawa Plant
February	The Energy Conservation Center, Japan	Plasma TV PDP-435SX won the Energy Conservation Center Chairman's Award in the 15th Energy Conservation Grand Prize	Pioneer

2004

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Precision Machinery Corporation and Towada Pioneer Corporation
February	Japan Electric Association	Economy, Trade and Industry Minister's Award for Excellence in Plant Energy Management	Pioneer Plasma Display Corporation (former NEC Plasma Displays)
February	The Energy Conservation Center, Japan	Kyushu Bureau of Economy, Trade and Industry General Director's Award	Pioneer Plasma Display Corporation (former NEC Plasma Displays)

2003

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Headquarters, Tokorozawa Plant, Kawagoe Plant, Omori Plant, Pioneer Display Products Corporation Headquarters & Shizuoka Plant and Yamanashi Plant
April	Japan Federation of Printing Industries	AVIC-DR2500 "DVD Raku-Navi" won the Special Award in the Japan Packaging Competition	Pioneer Kawagoe Plant
March	Ministry of Economy, Trade and Industry, and Clean Japan Center	The "DVD Mini Rakura" project won the Encouragement Award in the Resource Recycling Technology System Awards	Pioneer Tokorozawa Plant

2002

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Headquarters, Omori Plant, Tokorozawa Plant, Kawagoe Plant, Corporate Research and Development Laboratories, Pioneer Video Corporation Kokubo Plant and Tatomi Plant, Shizuoka Pioneer Corporation, Tohoku Pioneer Corporation Tendo Headquarters
February	Kanto Bureau of Economy, Trade and Industry	Kanto Bureau of Economy, Trade and Industry General Director's Award in the 2001 Awards for Excellence in Plant Energy Management	Pioneer Tokorozawa Plant

2001

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Headquarters, Tokorozawa Plant, Kawagoe Plant, Omori Plant, Corporate Research and Development Laboratories, Tohoku Pioneer Corporation Tendo Headquarters, Pioneer Plasma Display Corporation (former NEC Plasma Displays), Shizuoka Pioneer Corporation, Pioneer Video Corporation Tatomi Plant
June	Sainokuni Saitama Environmental Promotion Council	Saitama Environmental Award	Pioneer Tokorozawa Plant

2000

	Awarded by	Description	Awarded to
October	3R Promotion Council	3R Promotion Council Chairman's Award in the 3R Promotion Contributors Awards	Pioneer Tokorozawa Plant, Kawagoe Plant, Pioneer Plasma Display Corporation (former NEC Plasma Displays), Shizuoka Pioneer Corporation, Pioneer Video Corporation Tatomi Plant



Address for opinions and inquiries about this report:

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