

Approaches to Protecting the Global Environment

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We seek to operate in harmony with the environment in an effort to pass a sound and rich environment on to future generations.

Focusing on Reducing Greenhouse Gas Emissions through the Value Chain

Giving the highest priority to conserving the global environment, the JT Group is striving to prevent global warming and optimize the use of natural resources, while seeking to operate in harmony with environment in all countries and regions in which it operates.

Expanding the scope of environmental management to cover all consolidated subsidiaries worldwide, the JT Group Environment Action Plan (2009–2012) is designed to further reduce the environmental impact of the JT Group's business, setting greenhouse gas emissions, water consumption, waste generation, and waste recycling as major environmental indexes. Although some business places were shut down owing to the Great East Japan Earthquake on March 11, 2011, the JT Group is making steady progress toward the goals, for example, adopted measures to deal with the shortage of electricity, such as changing the temperature setting of air conditioners, reducing lighting and introducing energy-efficient LED lighting—which contributed to reducing both greenhouse gas emissions and electricity consumption.

On the other hand, social requirements for companies are growing and diversifying as the global environmental problem becomes increasingly critical. In October 2011, the World Resources Institute (WRI) and the World Business Council for Sustainable Development (WBCSD) jointly announced the Corporate Value Chain (Scope 3) Account-

ing and Reporting Standard of the Greenhouse Gas Protocol. While the JT Group has been keeping track of greenhouse gas emissions based on life-cycle assessments (LCA), the scope of monitoring was expanded in FY 2011 to cover the entire value chain based on Scope 3.

It is essential that the JT Group reviews its environmental impact, thereby keeping pace with changes in society and the business environment and examining its responsibilities from a long-term perspective. The JT Group, therefore, will continue to make a concerted effort to create a low-carbon, recycling-based society in an effort to operate in harmony with the environment—a philosophy expressed in the JT Group Environment Charter.



Hideki Miyazaki
Executive Deputy President
Assistant to CEO in CSR

JT Group Environmental Management

JT Group Environment Charter

The JT Group gives the highest priority to conserving the global environment.

JT established the "JT Global Environment Charter" in May 1995 and has been striving to conserve the global environment. As JT's business began to diversify and go

global, the JT Global Environment Charter was upgraded to the "JT Group Environment Charter" in March 2004, which was revised again in May 2010, with biodiversity issues incorporated. The JT Group will seek to operate in harmony with the environment in all countries and regions in which it operates.

JT Group Environment Charter

Basic Principle

The mission of the JT Group is to create, develop and nurture its unique brands to win consumer trust, while understanding and respecting the environment, and the diversity of societies and individuals.

We, will leave a healthy and productive environment to future generations, and have an active involvement in environmental and biodiversity issues.

Based on the following policy, we continue to act as a good neighbor with local communities in all countries and regions where we operate, and strive to bring about harmony between our corporate activities and the environment.

JT Group Environmental Policy

1. Management System

We will continually improve our environmental management system to enhance our environmental performance.

2. Compliance

We will comply with every environmental law in all countries and regions where we operate.

3. Products and Services

We will continually strive to reduce environmental impact in the process of product development and services, while also taking into account the aspect of the biodiversity.

4. Process and Supply Chain

We will strive to reduce the environmental impact and optimize the use of natural resources at all stages of our activities, while also taking into account the aspect of the biodiversity, from procurement of raw materials and manufacturing, through to sales and distribution. We will also encourage suppliers to understand our Charter.

5. Environmental Education

We will develop a culture of environmental awareness through education and training; and encouraging employees to take personal responsibility for their actions for creating a better environment.

6. Environmental Communication

We will make an appropriate disclosure of our environmental performance and keep good relationships with our stakeholders through active communication.

Revised in May 2010

Developments in the JT Group Environmental Action Plan (2009–2012)

Based on the JT Group Environmental Action Plan (2009–2012), the JT Group sets targets for major environmental indexes concerning greenhouse gas emissions, water consumption, waste generation, and waste recycling, with

Environmental Impact Reduction Targets (2009–2012)

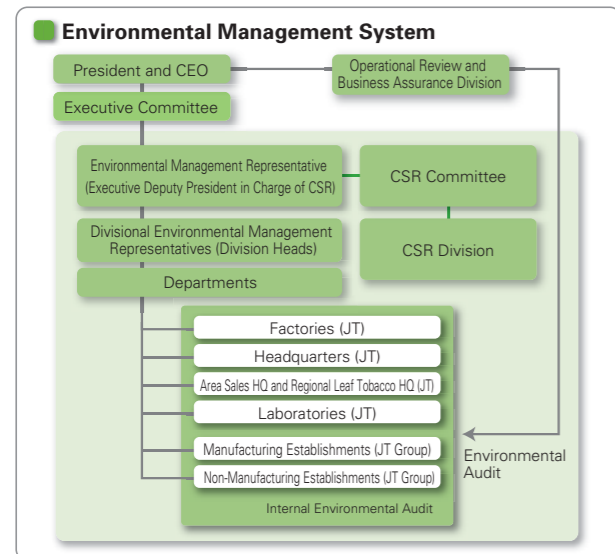
Objective	Scope	Medium-Term Target (2009–2012)	Results (FY 2011)
Greenhouse gas emissions	JT Group	Reduce by 10% below FY 2007 levels in FY 2012	Reduced by 10.9% below FY 2007 levels
		Reduce emissions from tobacco product factories per million cigarettes by 11% below FY 2007 levels in FY 2012	Reduced by 7.2% below FY 2007 levels
	JT	Reduce by 50% below FY 1995 levels in FY 2012	Reduced by 54.6% below FY 1995 levels
		Reduce emissions from tobacco product factories per million cigarettes by 12% below FY 1995 levels in FY 2012	Reduced by 12.9% below FY 1995 levels
Water consumption	JT Group	Reduce by 12% below FY 2007 levels in FY 2012	Reduced by 27.2% below FY 2007 levels
	JT	Reduce by 70% below FY 1995 levels in FY 2012	Reduced by 74.5% below FY 1995 levels
Waste generation	JT Group	Reduce by 15% below FY 2007 levels in FY 2012	Reduced by 18.8% below FY 2007 levels
	JT	Reduce by 35% below FY 1995 levels in FY 2012	Reduced by 24.6% below FY 1995 levels
Recycling	JT Group	Continue with zero emission* activities at factories	Zero emission was achieved at 23 factories

* Recycling rate with over 99.5%

JT Group's System to Promote Environmental Management

The executive deputy president, assistant to CEO in CSR, supervises the JT Group's environmental management as an environmental management representative, while the head of each division, as a divisional environmental management representative, controls environmental management of the division and group companies concerned, which together comprise the JT Group's environmental management.

The CSR Committee monitors developments in the "JT Group Environmental Action Plan" and environmental management, while examining specific measures in an effort to develop the group-wide environmental management.



efforts underway to achieve goals for reducing its environmental impact.

As part of a program to save electricity, for example, electricity consumption in each area was centrally monitored in the summer of 2011, while other programs are in place to reduce water consumption, segregate waste materials, and advance waste recycling.

Management Systems Based On ISO 14001 Standards

The JT Group has an environmental management system based on the international environmental standard ISO 14001. While manufacturing establishments are encouraged to obtain ISO 14001 certification, non-manufacturing establishments (area sales headquarters, laboratories, and distribution centers) have their own ISO 14001-conforming environmental management systems, and small-scale establishments, their simplified versions. These systems with different levels are designed to manage environmental impacts according to the nature and scale of operations.

Status of the JT Group's Environmental Management

ISO 14001 Certification	
JT	14 establishments (factories)
Group Companies	Japan Tobacco International (27 group companies), Eastern Japan Plant Service, Central Japan Plant Service, Western Japan Plant Service, Kyushu Plant Service, JT Engineering, Japan Filter Technology (3 factories), Fuji Flavor, JT Logistics (2 distribution centers) Torii Pharmaceutical (1 plant), Japan Beverage Group (12 companies), TableMark (1 factory), Katokichi Suisan (2 factories), Hokkaido Katokichi (2 factories), Uwonuma Rice, Ipingshang Foods Corporation, Sunburg, Nihon Shokuzai Kako, KS Frozen Foods (1 factory), Thai Foods International, Toranomon Energy Service
Complying with ISO 14001	
JT	38 establishments (the headquarters, area sales headquarters, laboratories)
Group Companies	TS Network, JT Logistics, JT Beverage
Simplified Environmental Management System	
JT A-Star	

Development of Human Resources for Environmental Management Systems

The JT Group is developing human resources to drive environmental management, with in-house programs in place to educate newly appointed environmental managers on ISO 14001, environmental laws and regulations as well as those on environmental system management and to train internal auditors, all designed to provide them with hands-on knowledge of environmental management. For example, about 100 employees from across Japan participated in a program to learn the specifics of the Waste Management and Public Cleansing Act, which was revised in FY 2011.

Trainings Offered in FY 2011

Title	Description	Number of trainees
Training for newly appointed environmental managers	Training and education for environmental managers	104
Training for environmental auditors	Training and education for internal auditors (theory)	28
On-site training for environmental auditing	Training and education for internal auditors (practice)	11
Training for environmental information systems	Learning of environmental information management systems	32
Training for environmental laws and regulations	Learning of waste material management	99



Training for environmental laws and regulations

Measures in Procurement

The JT Group set the "Green Purchasing Guidelines" to encourage the purchase of goods that have less environmental impact, with each group company purchasing goods from the online catalogue on the intranet. These guidelines applied to a total of 1,024 items (office supplies, office furniture, office automation equipment, vehicles, etc.) in FY 2011, while JT's green purchasing rate stood at 60.7% in value terms.

At the same time, the JT Group is driving an environment-conscious procurement of raw materials in partnership with suppliers. The domestic tobacco business, for example, procures raw materials according to the "Green Procurement Standards," which involves helping suppliers establish their environmental management systems. As a result, 84.5% of them started practicing environmental management in FY 2011.

Environmental Auditing

Environmental Auditing by the Operational Review and Business Assurance Division

While establishments certified by ISO 14001 and those operating ISO 14001-conforming environmental management systems conduct internal audits based on ISO 14001, the Operational Review and Business Assurance Division conducts additional environmental audits at selected establishments of JT Group companies, taking into account changes in the business environment and the number of years since the last audits. They are designed to continuously improve the JT Group's environmental management, with the division independent from those engaged in environmental activities objectively reviewing and evaluating the group's environmental conservation programs.

Environmental Auditing of Environmental Management Systems

The Operational Review and Business Assurance Division conducted audits in FY 2011 to determine if the JT Group's environmental management system was implemented on the basis of specified policies and procedures. As a result, four non-compliances were identified, including the JT Group's regulations on waste management, some of which were considered unfeasible. Efforts are underway to solve all the problems identified.

Environmental Auditing to Examine Compliance with Environmental Laws and Regulations

In FY 2011, the Operational Review and Business Assurance Division teamed up with group companies' auditing departments to examine compliance with environmental laws and regulations at the five establishments listed below.

As a result, nine non-compliances were identified, including failure to complete outsourced waste disposal service agreements in accordance with relevant laws and regulations and to report on changes in septic tank supervisors in accordance with the Purification Tank Act. All the problems identified have been solved. In addition, group-wide efforts are underway to solve non-compliances in which the group's other establishments are involved by sharing information among all parties concerned.

Establishments Audited in FY 2011

JT Tokai Factory, Fuji Flavor, TableMark Yamamoto Factory, Katokichi Foodlec, Koyo Foods

Relevant Laws and Regulations

Act on the Improvement of Pollution Prevention Systems in Designated Factories, Factory Location Act, Act on the Rational Use of Energy, Waste Management and Public Cleansing Act, Air Pollution Control Act, Offensive Odor Control Act, Noise Regulation Act, Vibration Regulation Act, Water Pollution Control Act, Purification Tank Act, Sewerage Act, Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof, Fire Service Act, High Pressure Gas Safety Act

Environmental Impact of the JT Group's Business and Approaches to Reduce It (Domestic)

Operations such as raw material procurement, manufacturing, transportation, sales, and consumption all have an impact on the environment. The JT Group, therefore, has a system in place to monitor and reduce the environmental impact.

【Calculation of Environmental Load】

- **Energy**
Conversion factor, based on the Law Regarding the Rationalization of Energy Use
- **Greenhouse gases**
Conversion factor, based on the Law Concerning the Promotion of the Measures to Cope with Global Warming
- **NOx (nitrogen oxides)**
Based on the Environmental Activity Evaluation Program
- **SOx (sulfur oxides)**
Emissions are calculated, with their amount converted into SOx, based on the sulfur content and density of the fuel used as well as on the efficiency of desulphurization equipment.



Energy-Saving Measures

A project was launched in FY 2011 at JT's factories to visualize energy consumption by working group and equipment, while the data obtained are used for monitoring and analysis purposes to further reduce energy consumption. Specific measures include introduction of heat-pump hot-water systems and high-efficiency turbo freezers. In addition, programs are underway at offices to optimize the operations of air conditioners, air supply and exhaust fans, and toilet water heaters. Improvements of facilities are also underway, and expected to further reduce energy consumption.



"Visualization" through integrated monitoring

Simplification and Reduction of Packaging Materials

The JT Group is reducing the weight of caps and PET bottles for beverages. A 280-ml PET bottle for the green tea "Tsujiiri", for example, has a special configuration, resulting in about 17% reduction in the use of plastics. Likewise, "Mild Seven Style Plus series", which hit the market in January 2012, uses about 20% less paper and about 28% less plastics compared to conventional packaging.



The top sides of packages

Optimization of Transportation

The JT Group, which is advancing modal shift and increasing the loading rate of trucks to reduce greenhouse gas emissions, was certified by the Ministry of Land, Infrastructure and Transport as an "Eco Rail Mark Company" for its aggressive approaches to switching to environmentally friendly rail freight transportation. The modal shift rate stood at 58.1% in FY 2011, and the loading rate of 10-ton trucks from factories to distribution centers, at 99.7% (on a pallet basis).



* The percentage of railroad and marine transportation of tobacco materials with a hauling distance of over 500 km

Creation of Recycling Systems

Japan Beverage, a beverage vending machine operator, recycles used beverage containers and disposes of them properly. Recycle Plaza JB, which started operations in 2003, is an intermediate disposal facility equipped with an advanced recycling system. Taking care of the entire container recycling process, it is expanding its recycling system. In addition, the JB Recycle Network, which consists of over 180 recycling and distribution companies nationwide, is in place to further drive recycling of resources.



Segregation process of used beverage containers at a recycling facility

Approaches to Preventing Global Warming (Domestic)

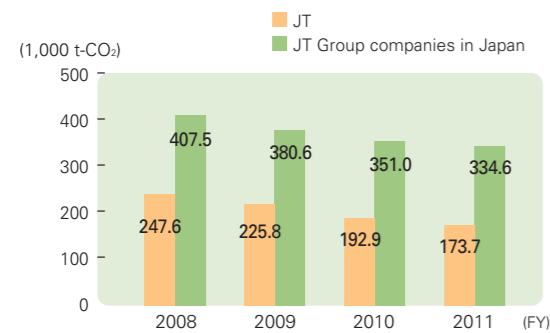
Approaches to Reducing Greenhouse Gas Emissions

The JT Group is striving to reduce greenhouse gas emissions, which cause global warming.

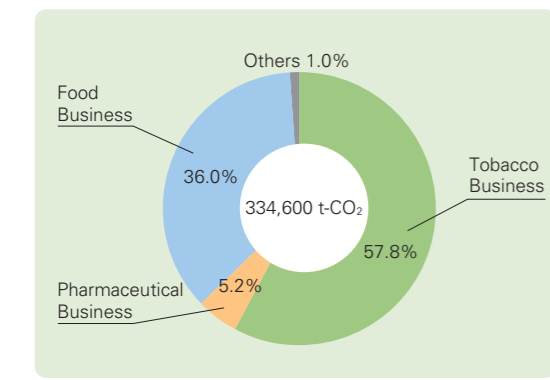
In fact, JT reduced its CO₂ emissions by 19,200 tons from FY 2010 levels (or by 54.6% from FY 1995 levels) in FY 2011. Likewise, the JT Group companies in Japan reduced its CO₂ emissions by 16,500 tons or 4.7% from FY 2010 levels in FY2011.

Factory equipment such as boilers, compressors, and air conditioners are being replaced with energy-efficient ones to continuously reduce greenhouse gas emissions. In FY 2011, moreover, factory environmental managers jointly launched the "CO₂ Reduction Project," while stepping up efforts to share information between them, examine proactive measures, and evaluate their effectiveness. Similar programs are underway at laboratories and offices.

Trends in Greenhouse Gas Emissions*



Greenhouse Gas Emissions by Business (FY 2011)*



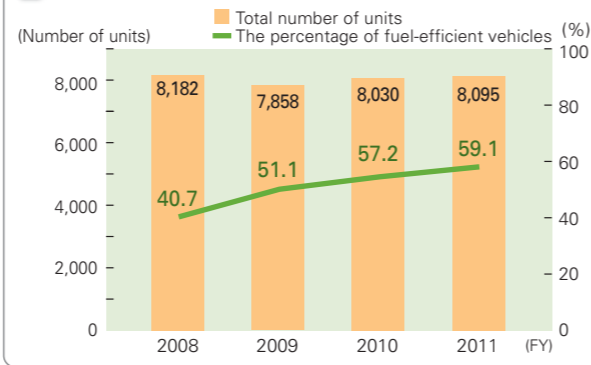
* Scope: 36 domestic JT Group companies

Introduction of Fuel-Efficient Vehicles

The JT Group's fleet of sales vehicles and delivery trucks is switching to their low-emission, fuel-efficient counterparts in an effort to reduce greenhouse gas emissions from its operations such as sales and distribution. They account for 59.1% of the entire fleet of vehicles (or 4,785 units out of 8,095) as of the end of March 2012.

In addition, to raise awareness of eco-driving among employees, efforts including training programs, putting stickers on vehicles, and putting up signboards at parking lots are underway.

Percentage of Fuel-Efficient Vehicles



Use of Renewable Energy

The JT Group is utilizing renewable energy to reduce greenhouse gas emissions.

For example, solar panels with a total output of about 35,000 kWh per year are installed on the rooftops of both the JT Tokai Factory and the Nagoya branch of TS Network, a tobacco product distributor—which translates into a reduction of about 11 tons of CO₂ emissions per year, compared to purchasing electricity from power companies. This amount is equivalent to that absorbed annually by the forest with an area of about four football pitches, while the electricity generated is used primarily to power lighting.

The Nagoya branch of TS Network is also working on rooftop gardening to mitigate the heat island effect.



Solar panels at the Tokai Factory



Solar panels and rooftop gardening at TS Network

Approaches to Saving Electricity

Various approaches were adopted in FY 2011 to deal with a power shortage following the Great East Japan Earthquake.

The JT Group, therefore, set up a team within the JT headquarters to reduce the maximum electricity demand during summer (between July and September) by 15% year on year. Not only establishments operating in the areas served by Tokyo Electric Power and Tohoku Electric Power, but also those operating across Japan, made a concerted effort to save electricity. At the same time, electricity consumption was closely monitored, with power saving at each establishment updated and posted on the intranet to raise employees' awareness of saving electricity.

As a result, business establishments in the areas served by the Tokyo Electric Power with a contract demand of over 500 kW reduced the maximum electricity demand by 28–32% year on year, and those in the areas served by Tohoku Electric Power, by 20–25%, both being well above a minimum of 15% required by the Electricity Business Act. Likewise, establishments in the areas served by Kansai Electric Power reduced the maximum electricity demand by 12–17% year on year, surpassing its voluntary 10% goal.

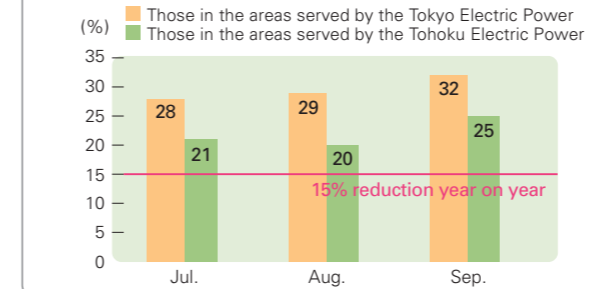
Other establishments with a contract demand of below 500 kW, to which the Electricity Business Act does not apply, also implemented electricity-saving measures; those in the areas served by Tokyo Electric Power, Tohoku Electric Power, and Kansai Electric Power achieved a 20–24%, 14–19%, and 12–24% reduction, respectively, all overachieving their voluntary goals.

In addition to these power-saving efforts, all the establishments participated in the "Household Power Saving Declaration," a power-saving educational program launched by the Ministry of Economy, Trade and Industry.



Power-saving status is updated and posted on the intranet

Year-on-year Comparison of Power Saving in the Summer of 2011 (Establishments with Contract Demand of over 500 kW)



Energy-Saving Measures at Manufacturing Establishments

Part of manufacturing at factories in the areas served by the Tokyo Electric Power and Tohoku Electric Power was temporarily relocated to Kyushu to reduce the maximum electricity demand in summer. Other power-saving measures include shutdown of some manufacturing equipment and air conditioning systems, postponement of maintenance at facilities, optimization of operation hours, switch to operations on holidays, and use of internally generated electricity and storage batteries, all designed to make effective use of electricity and reduce electricity consumption during peak hours.



Self-power generator at the frozen-food manufacturer Sunburg

Energy-Saving Measures at Offices

A variety of energy-saving measures were adopted, such as switch to LED lighting, adjustment of the air temperature control, optimization of elevator operations and ceiling lighting, and introduction of a task-ambient lighting system.

In addition, a COOL BIZ program was implemented from May to October to reduce energy consumption of air conditioners.



Task-ambient lighting system

* Task-ambient lighting refers to designs in which a modest general lighting system is supplemented with local task luminaries.

Energy-Saving Measures for Vending Machines

The JT Group is striving to reduce power consumption of cigarette and beverage vending machines. Specific measures include introduction of LED lighting, optimization of lighting hours, and switch to beverage vending machines equipped with heat pump and peak cut systems. With the cooperation of shop owners, moreover, lighting was turned off for another few hours, as were vending machine refrigerators in the summer of 2011.



▶ **Energy-Saving Campaign Sticker**
"Operating with Energy-Saving Mode" sticker

▶ **Heat Pump System**
Efficient use of heat for the cold and hot compartments to reduce power consumption

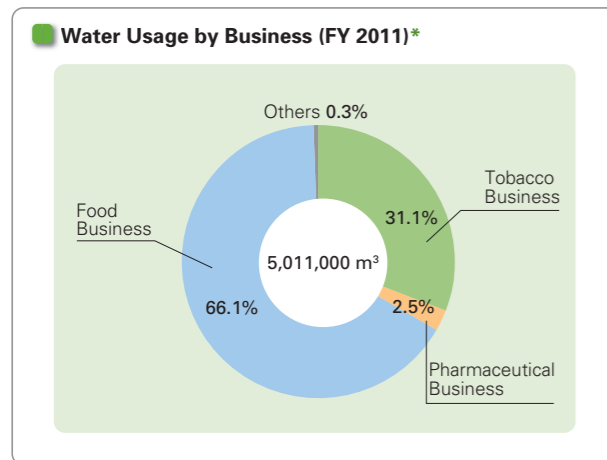
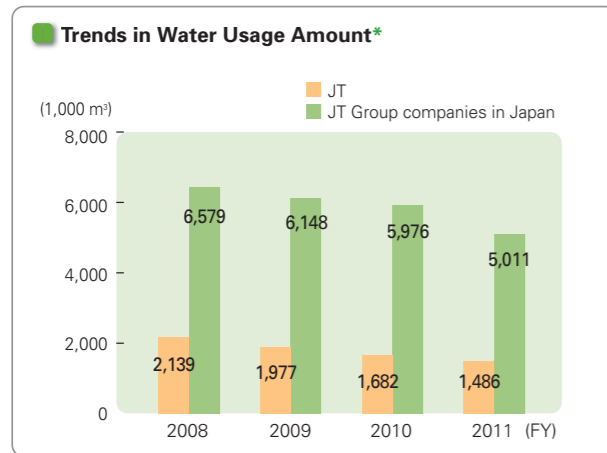
▶ **Peak Cut System**
The peak-cut function, where the compressor is shut down during peak load hours in summer, to save power

Approaches to Creating a Recycling-Based Society (Domestic)

Approaches to Reducing Water Usage

The JT Group is taking measures to save and reuse water, with efforts underway to optimize the use of water at factories. Specifically, flow meters installed at each production line visualize water usage and enable detailed analysis of the amount of water used and required, the results of which are examined to optimize the amount of flow and reduce the use of water. Other proactive measures include review of water usage and improvement of equipment and facilities. Laboratories and offices are also working on water-saving programs, such as introduction of water-saving automatic faucets, saving of toilet flushing water, and use of recycled water.

In fact, JT's water usage decreased by 195,900 m³ year on year (or 74.5% from FY 1995 levels), and the JT Group's water usage (domestic), by 965,700 m³ or 16.2% year on year, both in FY 2011.



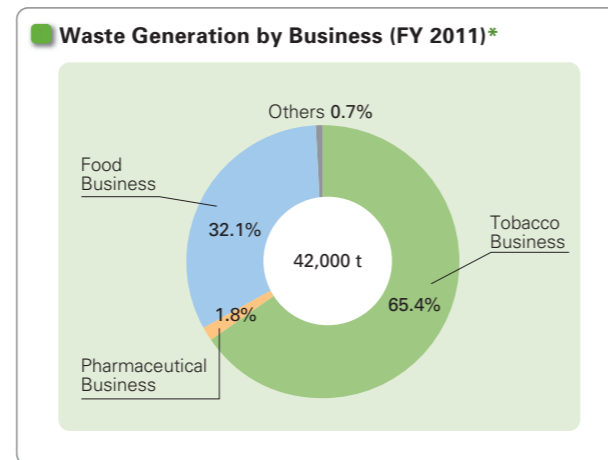
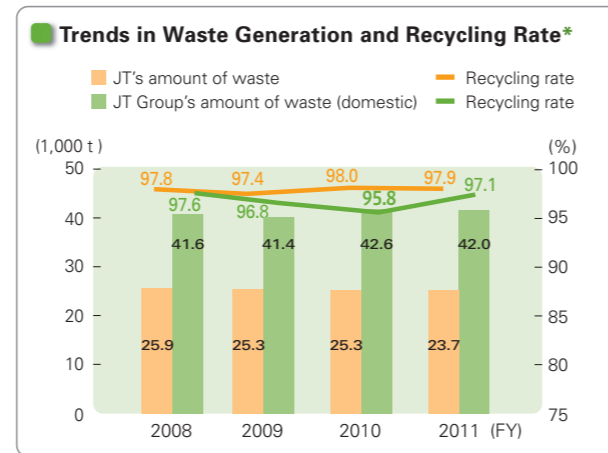
* Scope: 36 domestic JT Group companies

Reduce Waste Generation and Promote Recycling

The JT Group is practicing 3R (Reduce, Reuse, and Recycle) at home and abroad.

JT's waste generation decreased by 1,550 tons year on year (or 24.6% from FY 1995 levels) in FY 2011. The JT Group's waste generation (domestic) was reduced by 670 tons (or 1.6%) year on year, while about 6,730 tons of waste materials were generated owing to the Great East Japan Earthquake.

Tobacco factories continue to reuse packing materials, with 230 tons of packing materials for raw material reused in FY 2011. As for recycling, each establishment stepped up efforts to segregate waste materials and review services of waste disposal companies to increase the waste recycling rate. As a result, 23 factories have achieved zero emission with a recycling rate of over 99.5%. The amount of waste materials, meanwhile, includes those sold or transferred as resources.



* Scope: 36 domestic JT Group companies

Approaches to Conserving Biodiversity

The JT Group gives due consideration to biodiversity while preserving its forests in accordance with the principle on biodiversity conservation laid down in the "JT Group Environment Charter." For example, a year-long ecological field survey that started in July 2010 at JT Forest Shigetomi (JT's forest in Aira City, Kagoshima Prefecture) was completed, the results of which were reported to Kagoshima Prefecture, Aira City, local universities, and stakeholders such as the owners of neighboring land. On the basis of opinions and suggestions provided by these stakeholders, the JT Group will continue to work on forest conservation in cooperation with local communities.

Related pages p13-14
 Feature 2: From Forest Conservation and Development to Co-habitation with Forests

Other Approaches

Proper Management of Chemical Substances

The JT Group manages the chemical substances it uses in accordance with the "Chemical Substance Management Guidelines," which are in accordance with 18 relevant laws and regulations, to prevent pollution around each establishment and ensure the safety of employees. Chemical substances used at laboratories and factories are also managed properly, with the amount of purchase, emissions, and transfer closely monitored.

The PRTR Law, meanwhile, applied to 25 establishments as of the end of March 2012.

Proper Management of PCB Wastes

PCB wastes (transformers, capacitors, fluorescent lamp ballasts, etc.) are properly stored and managed in accordance with the relevant laws and regulations. A total of 86 PCB containing units were detoxified in FY 2011.

Soil Pollution Countermeasures

JT had completed checking records of the soil of its property in FY 2007. Soil surveys were conducted as needed, while any chemical substances, whose concentrations exceed the levels established in the Soil Contamination Countermeasures Law, were properly treated to purify the soil in coordination with the authorities.

Environmental Communication

JB Environment Network Won the "Reduce, Reuse, and Recycle Contributor Award"

The JB Environment Network, which was established by the vending machine operator Japan Beverage and consists of beverage manufacturers, won the "2011 Reduce, Reuse, and Recycle Contributor Award" from the Minister of Agriculture, Forestry and Fisheries for its contribution to beverage container recycling and 3R educational programs. This annual award, which is sponsored by the 3R Suishin Kyogikai (3R Promotion Council), recognizes individuals and groups for their continuing achievements in 3R to boost the creation of a recycling-based society.

In addition to recycling used beverage containers, meanwhile, Recycle Plaza JB offers facility tours for visitors and gives lectures at elementary and junior high schools, providing them with opportunities to learn about environmental conservation.

In September 2011, Recycle Plaza JB was recognized by the governor of Saitama Prefecture for its recycling technology and environmental performance and was designated as a "Sainokuni Factory," a partner for creating a prosperous Sainokuni.



Recycle Plaza JB



At Reduce, Reuse, and Recycle Contributor Award Ceremony

Communicating with Local Communities

The JT Group participates in a variety of environmental events and symposiums to provide local communities with information on its environmental conservation activities through exhibitions, etc.

In FY 2011, educational programs on forest conservation were held across the country in connection with the UN International Year of Forests. At the exhibition "Corporate and Eco-action 2011," sponsored by the Minato Ward, Tokyo, the JT Group introduced JT Forest initiative, which started in 2005 on the basis of the needs of local communities, and exchanged opinions with visitors and lecturers.



Introducing "JT Forest" at the exhibition "Corporate and Eco-action 2011"

Approaches to Protecting the Global Environment (Overseas)

Activities in the International Tobacco Business

Japan Tobacco International (JTI) controls the production, marketing and sales of JT Group cigarette brands in more than 120 countries around the world and has more than 25 manufacturing operations in 22 different countries. JTI is a truly international and multicultural business, employing more than 24,000 people around the world.

JTI's EHS Summary

Since 2003, JTI has followed a plan to improve EHS performance. JTI has implemented strong EHS management systems, set challenging EHS targets annually and executed programs that provide performance improvement year-on-year.

In early 2010, JTI carried out a fundamental review of EHS expectations across the business, covering the Global Leaf business, Sales and Marketing operations, manufacturing operations and support functions such as Research and Development. The review confirmed that the approach taken to drive EHS performance and programs, particularly in manufacturing operations, was successful and should continue and strengthen. Significantly, the review also highlighted an expectation and need that EHS programs should be implemented more widely across the business.

As a result of this review, an EHS Plan was developed in the second half of 2010 and implementation started in 2011. The EHS function was strengthened, and EHS programs were launched in Sales and Marketing, Research and Development and Global Leaf operations.

JTI recognizes the benefit of a strong and disciplined approach to the management of EHS performance, as robust management systems deliver sustainable performance. All cigarette factories are certified to the international standards ISO 14001 and OHSAS 18001. This certification will now be extended to other parts of the company.

Environmental Performance

Using 2003 as a baseline year, JTI has made significant improvements in environmental performance per million cigarettes as a base unit. Between 2003 and 2011, the five environmental key performance indicators (CO₂, energy, waste and water intensity and recycling) improved. CO₂ by 31%, energy by 26%, waste by 43%, water by 49% and recycling by 9%. However, looking specifically at 2011, our energy and water intensity increased, recycling was stable, while CO₂ and waste improved.

One of the key reasons for the increase in energy con-

sumption is the installation of on-site combined heat and power (CHP) at several of our factories. Because of the way in which energy is accounted, energy consumption appears to have increased. However, CO₂ emissions have reduced largely due to CHP installation. The long-term aim of JTI is to return to year-on-year energy reduction. In order to achieve this, a program of optimizing the efficiency of factories is underway, supported by significant investments of USD 27 million over the next three years.

JTI recognizes the importance of a structured approach to energy management, and launched an energy management tool in 2011. This has been implemented in all factories.

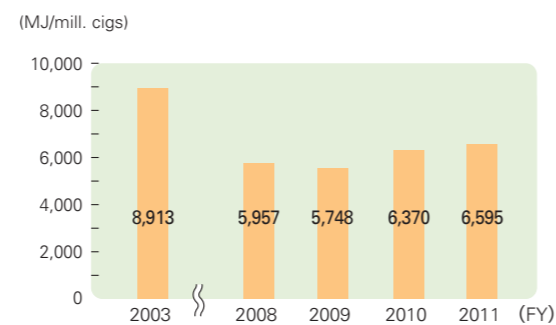
Carbon reduction is a key objective of the JT Group. JTI has embarked on a Carbon Management Program. The first step is a systematic quantification of carbon emissions across the entire value chain, from leaf tobacco to end consumer. This will enable long-term targets to be set and improvement opportunities to be recognized and acted upon.

Waste continues to fall, mainly driven by the waste reduction program launched in 2008 to collect and re-use large tobacco cases within the factories. After significant changes to JTI's business in recent years with major acquisitions, a survey was completed in 2011 to identify additional opportunities for waste reduction, which will now be investigated and implemented where beneficial and practical.

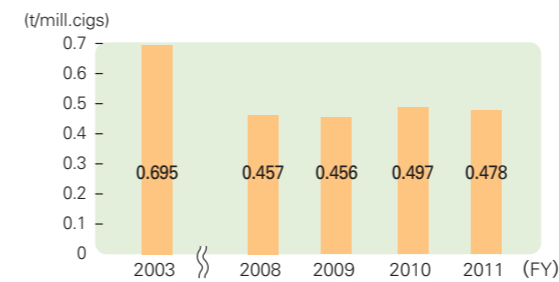


Installation of the CHP system Engineers at the Trier Factory, Germany

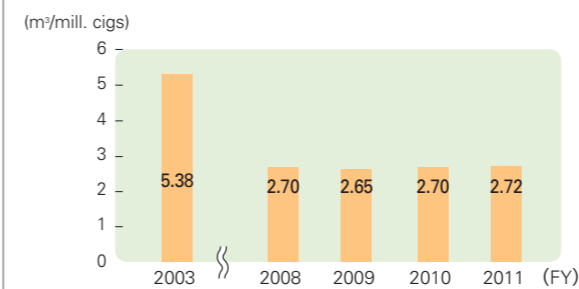
Energy Consumption / million cigarettes



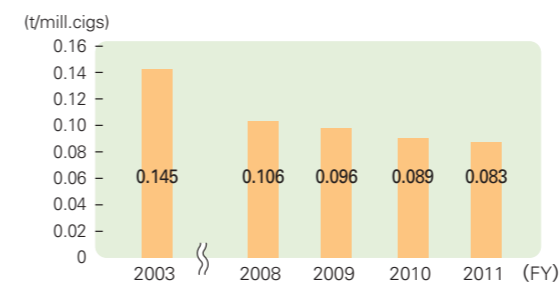
CO₂ Emissions / million cigarettes



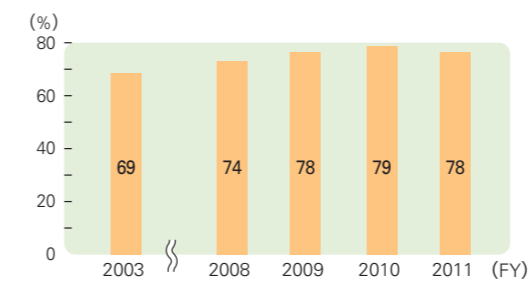
Water Consumption / million cigarettes



Production Waste Generation / million cigarettes



Production Waste Recycling Rate



Activities in the Food Business (Overseas)

Thai Foods International Shares Natural Blessings with Local Communities

The JT Group Company Thai Foods International Co., Ltd., which produces yeast extracts and other natural seasonings, has a system in place to recycle natural blessings, such as biomass-fueled boilers; rice chaff originating from local rice mills are used as fuel to produce steam, which accounted for about 70% of energy consumed in the factory in 2011. The use of rice chaff resulted in a 46,000-ton reduction in CO₂ emissions, compared to using heavy oil, with the resulting ash reused as a fertilizer for cultivation of rice and other crops.



Thai Foods International Co., Ltd.

In 2011, moreover, new facilities came on stream to concentrate yeast broth, a byproduct of yeast extract production. While yeast broth, which is rich in essential organic and inorganic substances, has been supplied to nearby farmers as a fertilizer, its concentrate is more efficient in terms of transportation and usage, and is therefore being distributed in a wider area for more farmers. This recycling of yeast broth as an organic fertilizer contributes to reducing the use of chemical fertilizers and CO₂ emissions originating from their production.

Thai Foods International will continue to recycle and make use of natural blessings, while expanding operations in harmony with local communities



Yeast broth concentration facilities



Recycle yeast broth as an organic fertilizer

Environmental Accounting FY2011

Scope: All JT establishments

Period: FY2010 (April 1, 2010 to March 31, 2011), FY2011 (April 1, 2011 to March 31, 2012)

Environmental Conservation Cost

Unit: million yen

Category	Key Measures	Results in FY2010		Results in FY2011		
		Amount Invested	Amount of Expenditure	Amount Invested	Amount of Expenditure	
(1) Environmental preservation costs to reduce production/service-derived environmental impact in JT's business areas (business area costs)	—	656	2,017	405.4	1,822	
Breakdown	① Pollution prevention costs	Adoption of LEVs and fuel-efficient vehicles; facility depreciation costs; maintenance, operation and management of pollution control facilities, etc.	120	555	257	475
	② Global environmental preservation costs	Replacement of freezers; facility depreciation costs; maintenance, operation and management of energy-saving facilities, etc.	534	140	148	118
	③ Resource circulation costs	PCB waste management; facility depreciation costs; waste disposal and recycling, etc.	2	1,322	0.4	1,229
(2) Costs of reducing production/service-derived impact upstream or downstream during resource circulation (upstream/downstream costs)	Recycling of containers and packaging materials, etc.	—	102	—	79	
(3) Environmental preservation costs in management activities (management activity costs)	Environmental audits; environmental education; operation of organizations responsible for environmental management; monitoring and measurement of environmental load; improvement of green space, etc.	—	532	—	511	
(4) Environmental preservation costs involved in R&D (R&D costs)	Survey of the environmental impact of products, etc.	—	20	—	1	
(5) Environmental preservation costs involved in social activities (social activity costs)	Environmental cleaning measures; reforestation and forest conservation activities; contribution to environmental bodies; preparation of the CSR Report, etc.	—	3,912	—	3,383	
(6) Costs of dealing with environmental damage	Pollution impact levies; soil pollution survey and remedial measures, etc.	—	1,018	—	81	
(7) Other environmental costs	Asbestos survey and remedial measures, etc.	—	49	—	44	
Total		656	7,650	405.4	5,921	

Environmental Conservation Benefit

Actual Effects	Item	Results in FY2010	Results in FY2011	Year-On-Year Reduction	
Effect on resources invested in business activities	Amount of electricity purchased	1,000kWh	312,972	286,236	-26,736
	Fuel consumption (crude oil equivalent)	kℓ	26,320	22,762	-3,558
	Vehicle fuel consumption (crude oil equivalent)	kℓ	3,932	3,989	57
	Amount of water used	1,000m ³	1,682	1,486	-196
Effect on environmental impact and waste produced by business activities	SO _x emissions*	t	62	57	-5
	NO _x emissions*	t	99	91	-8
	Amount of CO ₂ emitted*	1,000t-CO ₂	193	174	-19
	Amount of waste water*	1,000m ³	1,072	951	-121
	Amount of waste, etc.	1,000t	25	24	-1

*Actual data at factories

Economic Benefit

Unit: million yen

Actual Effects	Results in FY2010	Results in FY2011
Income from recycling (sale of by-products)	36	86
Cost reduction by saving energy (year-on-year)	182	33

Guidelines for Environmental Accounting

Based on the "Environmental Accounting Guidelines 2005" of the Ministry of the Environment

- **Environmental Conservation Cost**
 - Expenditure and investment in environmental conservation programs are included.
 - For those partially made in environmental conservation programs (more than 50%), the total amount of investment and depreciation costs are included.
 - Expenditures for depreciation of facilities have been recorded under expenditure for the depreciation in the financial statement.
- **Environmental Conservation Benefit**
 - Benefit is measured as the year-on-year difference of the environmental impact.
- **Economic Benefit**
 - Benefits to company's profits as a result of carrying forward with environmental conservation activities.