

# Realizing a Sustainable Society For the Global Environment

## Promoting environmental management

### ← P5 CSR Policy ⑤

#### ● Environmental Conservation Action Plan

The Hitachi Chemical Group established Hitachi Chemical's Action Guidelines for Environmental Conservation in 1993 to guide environmental conservation activities related to the business activities of the Group as a whole. Each fiscal year, we formulate a concrete Environmental Conservation Action Plan based on the Hitachi Group's roadmap, Environmental Vision 2015.

In the Environmental Conservation Action Plan for 2007 (see p. 36), we categorized our activities into

#### Hitachi Chemical's Action Guidelines for Environmental Conservation

##### Purpose

In order to realize an environmentally harmonious and sustainable society through products and services, Hitachi Chemical is committed to meeting its social responsibilities by promoting a globally applicable *Monozukuri* (designing, manufacturing and repairing products) for reducing the environmental impact of products throughout their entire life cycles, thereby ensuring environmental conservation.

Please see our website for details.

**URL** <http://www.hitachi-chem.co.jp/english/csr/environment/guidelines.html>

eco-mind (awareness) and global environmental management, next-generation products and services, high-standard eco-factories and offices, and environmental collaboration with stakeholders. We set action targets and target values for each category. As a chemicals manufacturer, we will further strive to reinforce Group-wide environmental management, reduce environmental impact, improve control over chemical substances, and expand green products based on this action plan.

#### ● System for promoting environmental conservation activities

Environmental conservation activities for the entire Group, including the Environmental Conservation Action Plan, are determined by the Across-the-Board CSR Conference (see p. 8) chaired by the President and CEO and attended by the heads of operating divisions, works and Group companies. The Committee for Environmental CSR-compliant *Monozukuri* (see p. 16) and other committees have been set up to respond to regulations on chemical substances and promote cross-sectional information sharing encompassing the works, sales offices and Group companies.

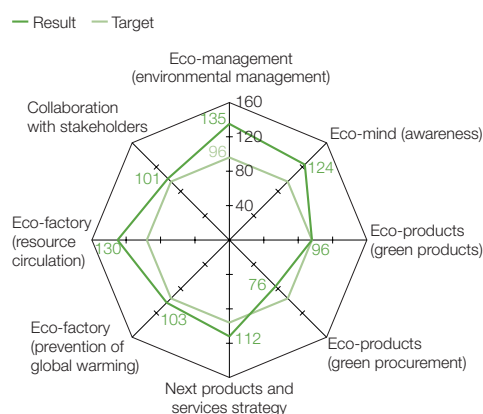
#### ● Development of an environmental management system

The Hitachi Chemical Group has been developing an environmental management system based on ISO 14001, and major Group companies in Japan and

#### GREEN 21 evaluation criteria

| Category                                   | Principal performance indicators  |
|--|---|
| Eco-management (environmental management)  | Action plan, environmental accounting                                       |
| Eco-mind (awareness)                       | Employee education  |
| Eco-products (green products)              | Eco-design management system, green products                                |
| Eco-products (green procurement)           | Green procurement, green purchasing   |
| Next products and services strategy        | Business and product strategy, sustainable business, external advertising   |
| Eco-factory (prevention of global warming) | On-site energy conservation, environmental consideration in distribution    |
| Eco-factory (resource circulation)         | On-site energy conservation, environmental consideration in distribution    |
| Collaboration with stakeholders            | Information disclosure, communication activities, global citizen activities |

#### Evaluation radar chart (consolidated) (FY2006)



abroad obtained certification by 2002 (68 sites have been certified as of March 2007).

In a consistent effort to improve our environmental activities, these sites conduct self-assessment through an internal audit and undergo an audit by an external ISO 14001 certification body. To ensure an objective and fair audit, internal auditors selected from outside the targeted section, and from other sites, conduct the audit based on a check sheet.

#### ● GREEN 21 evaluation system for environmental activities

2006 Result: 876 GP (Target: 768 GP)  
2007 Target: 896 GP

In 1998, the Hitachi Chemical Group adopted the Hitachi Group's GREEN 21 self-evaluation system, which assesses environmental conservation activities in accordance with a set of specific standards.

Under GREEN 21, our activities and level of accomplishment for each year are evaluated in terms of Green Points (GP), which provide us with an overall measurement of accomplishments. This objective analysis of strengths and weaknesses is useful in promoting environmental activities.

In 2006, we earned 876 GP. While we exceeded our target in eco-management (environmental management), eco-mind (awareness) and eco-factories (resource circulation, 96 GP), we fell significantly short of our target in eco-products (green procurement). In response to

these results, we will further urge business partners to adopt materials with less environmental impact in 2007. We will also address weaknesses at each site by analyzing their GP.

#### ● Environmental accounting system

The Hitachi Chemical Group introduced an environmental accounting system in 1999 to continuously enhance our environmental investments and conservation activities and to deepen stakeholder understanding of our corporate stance by disclosing information on the allocation of management resources to environmental activities and the value generated by environmental technologies and eco-friendly products.

In 2006, we invested ¥5.6 billion on a non-consolidated basis and ¥10.9 billion on a consolidated basis in R&D for eco-friendly products and the management and maintenance of equipment for reducing environmental impact. We also invested ¥1.0 billion on a non-consolidated basis and ¥2.1 billion on a consolidated basis in fuel conversion to natural gas to reduce CO<sub>2</sub> emissions and to introduce regenerative deodorizing equipment for effluent gas treatment to reduce emissions of volatile organic compounds (VOCs).

We define the impact in monetary terms as economic effects, whereas amount is defined as volume effects; economic effects totaled ¥4.3 billion on a non-consolidated basis and ¥4.6 billion on a consolidated basis.

#### Results of environmental accounting

| Category   | Non-consolidated |      | Consolidated |       | Category   | Non-consolidated |      | Consolidated |      |
|--|------------------|------|--------------|-------|--|------------------|------|--------------|------|
|  | 2005             | 2006 | 2005         | 2006  |  | 2005             | 2006 | 2005         | 2006 |
| <b>1. Total costs (millions of yen)</b>              | 57.2             | 56.1 | 115.5        | 108.7 | <b>1. Total economic effects (millions of yen)</b>                           | 36.0             | 43.0 | 41.3         | 45.7 |
| (1) Direct costs for production                      | 32.3             | 32.0 | 53.6         | 55.6  | (1) Net income effect  | 2.2              | 4.0  | 4.5          | 5.8  |
| (2) Upstream/downstream costs                        | 0.3              | 0.3  | 0.6          | 1.3   | (2) Effect of reducing expenses  | 2.3              | 2.5  | 3.7          | 3.1  |
| (3) Management activity costs                        | 3.5              | 3.7  | 9.2          | 8.5   | (3) Effect of reducing materials   | 31.5             | 36.5 | 33.1         | 36.7 |
| (4) Research and development costs                   | 20.5             | 19.5 | 50           | 42.5  | <b>2. Volume effects</b>   |                  |      |              |      |
| (5) Social activity costs                            | 0.5              | 0.5  | 0.5          | 0.6   | (1) Reduction of wastes landfilled (tons/year)                               | 0.5              | 0    | 381          | 41.8 |
| (6) Environmental damage costs                       | 0.1              | 0.1  | 1.6          | 0.2   | (2) Reduction of chemical substances emitted into the atmosphere (tons/year) | 80               | 369  | 383          | 791  |
| <b>2. Environmental investment (millions of yen)</b> | 4.3              | 10.0 | 22.4         | 21.2  |  |                  |      |              |      |

Data is compiled from 32 domestic sites.

## Realizing a Sustainable Society For the Global Environment

### Green products

#### ← P5 CSR Policy 25

##### ● Raising the ratio of green product sales

2006 Result: 83% (Target: 80%)  
2007 Target: 83%

Since 1999, the Hitachi Chemical Group has been conducting Green Product Assessment and certifying products that meet the specified standards to reduce the environmental impact of products at each stage of their life cycle.

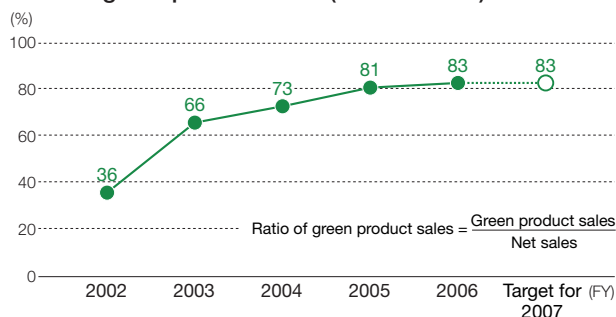
Led by the Product Safety Committee, we assess our products at each stage of the design, testing and mass production process, based on the eight criteria designated for individual product types. As of March 2007, green products totaled 98 on a non-consolidated basis and 269 on a consolidated basis, while their ratios to sales were 85% and 83%, respectively.

Examples of our green products are introduced on page 17.

##### ● Eco-efficiency indicators and eco-factors

Since 2005, the Hitachi Chemical Group has adopted eco-efficiency indicators to measure the value that a

### Ratio of green product sales (consolidated)



product creates by reducing environmental impact and resource consumption and, furthermore, encourages developers and designers to take the environment into consideration.

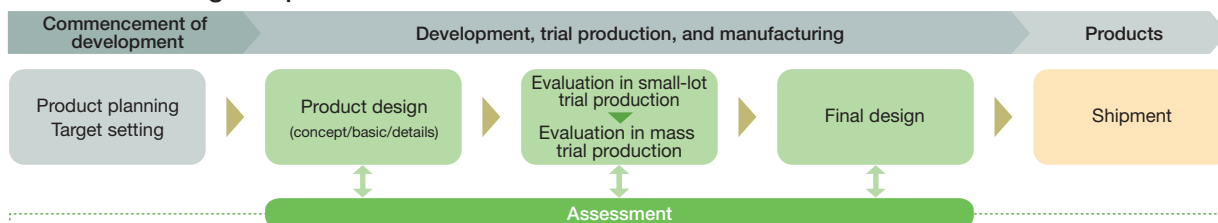
By calculating the ratio of greenhouse gas emissions to functionality for the product's entire life cycle (global warming prevention efficiency) as well as the ratio of resources newly consumed or disposed of, we objectively consider and assess environmental impact as well as product value and impact throughout its life cycle. Such factors as product value and effects, for example longer product life, are included in calculating eco-efficiency. In addition, we calculate factors that indicate enhanced eco-efficiency against a base year in an ongoing improvement effort.

The Hitachi Chemical Group assessed seven products in 2006, and plans to calculate the eco-efficiency of 18 more products in 2007. We will also calculate the factors for these products to reinforce our eco-friendly manufacturing.

Calculation results for eco-efficiency and eco-factors are published on our website.

URL <http://www.hitachi-chem.co.jp/english/csr/environment/factor.html>

### Assessment for green products



We assess our products based on checklists that consist of eight criteria. The product is defined as a "green product" if the rating of each of the eight criteria is at least two on a scale of five points (max) and either the average rating is at least three or any one criteria is rated at the highest level.

#### Checklist of materials and parts

| Criteria for evaluation    | Description  |
|----------------------------|--|
| Product functionality      | Higher functionality per unit of resource                          |
| Resource saving            | Reduction of resource consumption                                  |
| Resource recycling         | Recycling of resources and a recycle-based society system          |
| Chemical safety            | Reduction of risks to human health and use of hazardous substances |
| Green chemistry            | Reduction of environmental impact of chemical substances           |
| Environmental conservation | Reduction of total environmental impact                            |
| Energy saving              | Energy saving in the manufacturing process and in use              |
| Information disclosure     | Provision of information about disposal and waste treatment        |

#### Checklist of finished products

| Criteria for evaluation    | Description   |
|----------------------------|---|
| Reducing weight            | Resource saving, downsizing, weight reduction and standardization |
| Longer useful life         | Durability, reliability, and ease of repair/maintenance           |
| Reuse and recycling        | Use of recycled materials   |
| Ease of disassembly        | Ease of disassembly and separation                                |
| Ease of processing         | Ease of crushing and decomposition                                |
| Environmental conservation | Reduction of total environmental impact                           |
| Energy saving              | Energy saving in the manufacturing process and in use             |
| Information disclosure     | Provision of information about disposal and waste treatment       |

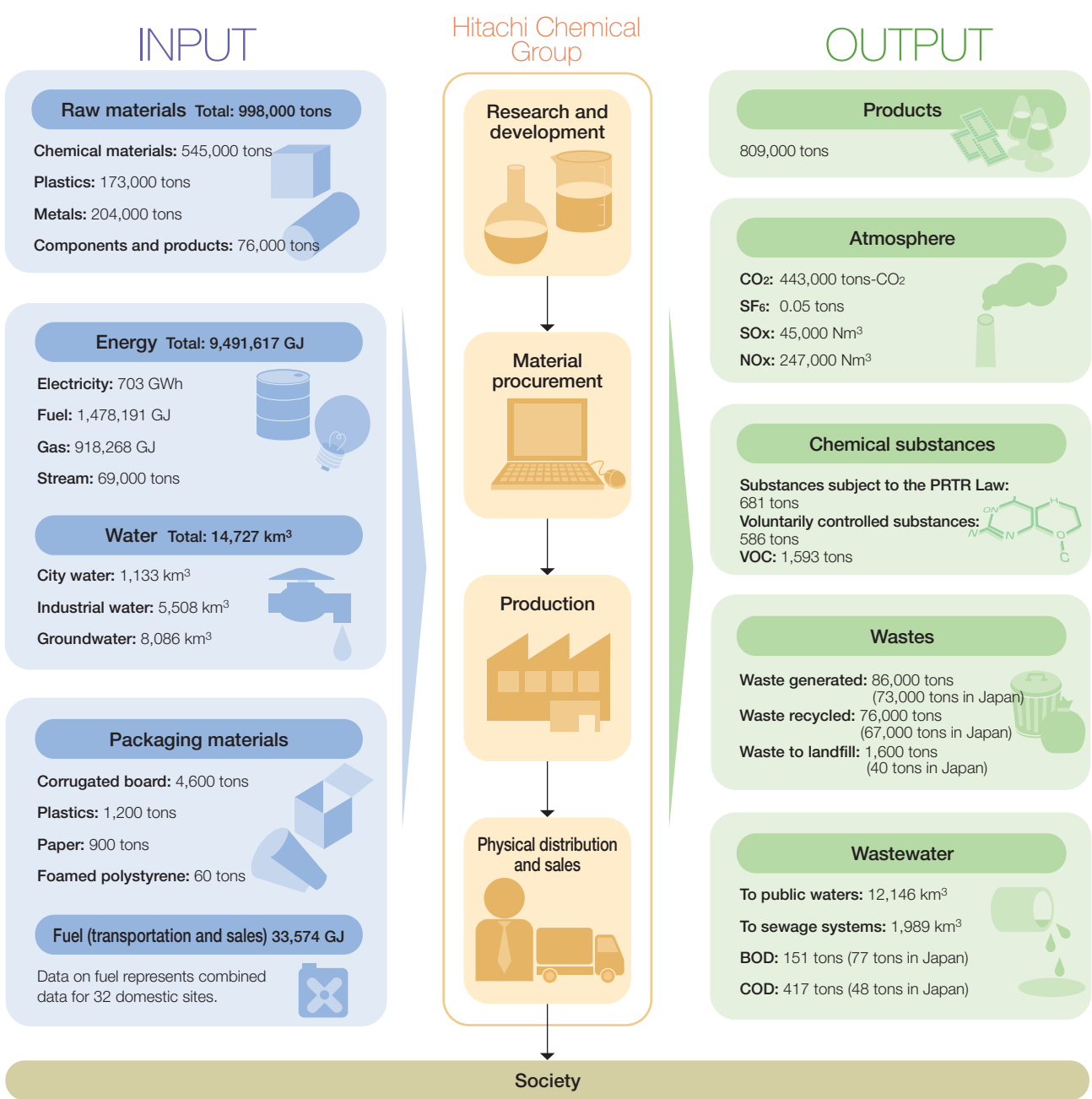
## Overview of environmental impact

### ← P5 CSR Policy 5

The Hitachi Chemical Group promotes *Monozukuri* in the provision of products and services to reduce environmental impact throughout the product life cycle to create an environmentally harmonious, sustainable

society. To that end, we verify environmental impact during the production process as well as at each stage of R&D, raw material procurement, distribution and product usage, in an effort to reduce environmental impact at every stage.

The flow chart below provides an overview of the input from resources and output to the global environment in 2006.



## Realizing a Sustainable Society For the Global Environment

### Preventing pollution from chemical substances

#### P5 CSR Policy 5

##### Reducing emissions of chemical substances

2006 Result: **20% of 2000 levels** (Target: 30% or less)

2007 Target: 20% or less of 2000 levels  
VOC: 25% or less

In 2006, in addition to installing new exhaust processing equipment and improving our manufacturing process, we switched from raw materials controlled under the PRTR Law to those not identified in the law. Consequently, chemical substances released into the atmosphere amounted to 831 tons on a non-consolidated basis and 1,255 tons on a consolidated basis, representing 15% and 20% of 2000 levels, respectively.

The Hitachi Chemical Group is also working to reduce our use of substances controlled by the PRTR Law or subject to voluntary control, such as n-butane and isobutane, as well as VOCs that are not targeted for control, by applying alternatives. In 2006, we reduced VOC emissions to 20% of 2000 levels on a non-consolidated basis and 23% on a consolidated basis. We will continue to comply with VOC emission level standards and systematically reduce these emissions by introducing exhaust processing equipment.

##### Preventing air, water and groundwater pollution

The Hitachi Chemical Group is striving to reduce emissions of sulfur oxide (SOx), nitrogen oxide (NOx), soot and dust by converting from heavy oil fuels to natural gas, optimizing operating conditions for boilers and installing dust collectors.

We are preventing water pollution by systematically reinforcing the capacity of our waste water processing equipment and introducing automated surveillance equipment. In addition, we are thoroughly committed to complying with voluntary control standards that are stricter than legal standards and with pollution prevention agreements signed with local governments.

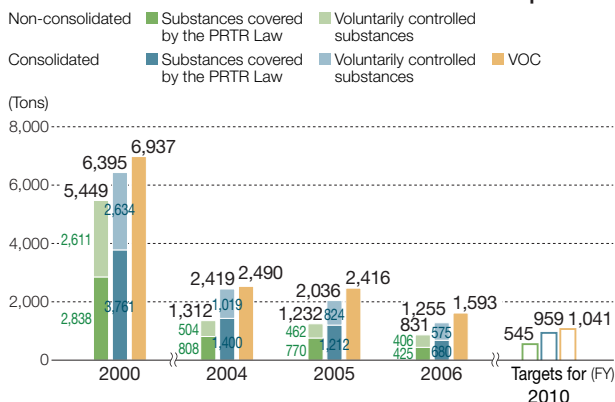
##### Control of hazardous chemical substances

The Hitachi Chemical Group stores transformers and other equipment containing polychlorinated biphenyls (PCBs) under the appropriate control and plans to complete treatment of all PCBs under storage at external disposal sites and treatment facilities by July 2016.

##### Response to local resident complaints

In 2006, the Hitachi Chemical Group received complaints from local residents concerning noise, and promptly responded by investigating the causes and taking the appropriate countermeasures. We are also dealing with odor by systematically introducing deodorizing equipment and exhaust processing equipment to safeguard the comfort of local residents.

#### Release of chemical substances into the atmosphere



#### VOC emissions reduced by approximately 96% by introducing exhaust processing equipment

Noda Works of Hitachi Kasei Polymer Co., Ltd. introduced thermal rotating exhaust processing equipment (see p. 32, upper-left image) for disposing of toluene, ethyl acetate, methyl ethyl ketone and other chemicals that are emitted from the drying furnace of the adhesive tape coater, and reduced VOC emissions to 95.7% of 2000 levels.

The equipment cleans exhaust by collecting all organic solvents generated by the drying furnace in the exhaust duct and burning them in thermal rotation combustion equipment. A soundproof chamber controls noise from the deodorizing fan and combustion blower.



Noda Works of Hitachi Kasei Polymer Co., Ltd. introduced thermal rotating exhaust processing equipment and reduced VOC emissions by 95.7% compared with 2000 levels.



The Shimodate Works laid pipelines for natural gas and converted from heavy oil fuels to natural gas for through flow boilers.

## Preventing global warming

### ← P5 CSR Policy ⑤

#### ● Reducing CO<sub>2</sub> emissions

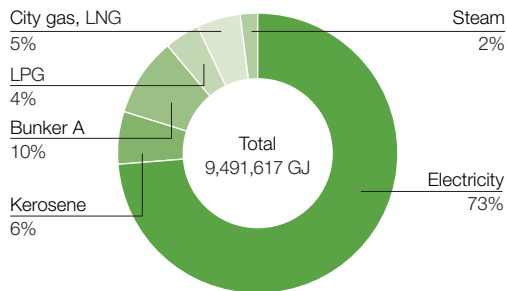
2006 Result: **Emissions: 91% of 1990 levels**  
(Target: 93%)  
**CO<sub>2</sub> emissions per unit of production: 80% of 1990 levels** (Target: 80%)

2007 Target: Emissions: 93% or less of 1990 levels  
CO<sub>2</sub> emissions per unit of production: 79% or less of 1990 levels

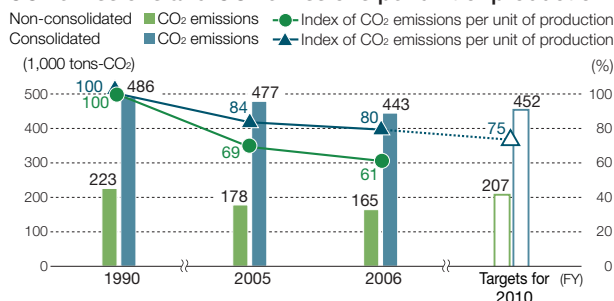
CO<sub>2</sub> emissions per unit of production are calculated on a consolidated basis.

In light of targets set by the Kyoto Protocol, the Hitachi Chemical Group is working to reduce CO<sub>2</sub> emissions to 93% of 1990 levels and CO<sub>2</sub> emissions per unit of production to 79% of 1990 levels.

#### Breakdown of total energy consumed (FY2006)



#### CO<sub>2</sub> emissions and CO<sub>2</sub> emissions per unit of production



Potential CO<sub>2</sub> emissions for oils, gases and fuel have been calculated based on standards outlined by Article 3 of the Law Concerning the Promotion of Measures to Cope with Global Warming. Electricity figures for 2005 and 2006 are based on potential emissions from electric power suppliers as listed by the Ministry of Economy, Trade and Industry, and Environment Agency Notice No. 3 (2007), and electricity for 1990 was calculated by applying the average value for all electricity sources (0.421 tons-CO<sub>2</sub>/MWh) under Keidanren Voluntary Action Standards.

CO<sub>2</sub> emissions in 1990 on a consolidated basis were estimated from the proportion of CO<sub>2</sub> emissions in 1990 and 2000 on a non-consolidated basis.

unit of production to 75% through energy conservation measures at factories and other efforts. Specifically, we are promoting fuel conversion to natural gas, which has a smaller CO<sub>2</sub> emission potential per energy unit, raising production efficiency and expanding the use of energy-saving products.

In 2006, CO<sub>2</sub> emissions from energy sources amounted to 165,000 tons on a non-consolidated basis and 443,000 tons on a consolidated basis in Japan, or 74% and 91% of 1990 levels, respectively. CO<sub>2</sub> emissions per unit of production were 61% and 80% of 1990 levels, respectively, thereby achieving our targets for both emissions and emissions per unit of production for 2006. Hereafter, we will further strive to reduce emissions, while improving per unit emissions. With the cooperation of our customers, we will conserve energy at each manufacturing site and across the entire product life cycle.

#### ● Reducing other greenhouse gases

The Hitachi Chemical Group has set goals for reducing emissions of greenhouse gases other than CO<sub>2</sub> to 10% or less of 2002 levels by 2010. Designated chemical substances have not been used in the production process since 2003. In testing facilities we utilize high-efficiency collection equipment for sulfur hexafluoride (SF<sub>6</sub>) that resulted in total emissions of 0.05 tons, within the target level.

#### Laying our own pipelines to convert to natural gas fuel

While converting from heavy oil fuels to natural gas can lead to 20% or more reduction in CO<sub>2</sub> emissions per energy unit, the conversion requires the construction of gas lines and other infrastructure. For this reason, Shimodate Works worked with gas companies to lay a natural gas pipeline from Moka, Tochigi Prefecture, to the factory, and completed the conversion by installing 12 through flow boilers (see page top, right image) and deodorizing equipment in 2006. Plans are underway at Shimodate Works to convert most of the combustion facilities by 2010, and other nearby works are also planning to take advantage of this infrastructure.

## Realizing a Sustainable Society For the Global Environment

### Reducing waste generation and wastes to landfills

#### P5 CSR Policy 5

##### Reducing waste generation and promoting recycling

2006 Result: **Waste generation: 78% of 2000 levels**  
(Target: 96% or less)

**Recycling rate: 88%** (Target: 86% or above)

2007 Target: Waste generation: 79% or less of 2000 levels  
Recycling rate: 88% or more

The Hitachi Chemical Group is actively working to limit the amount of waste generated and to recycle waste.

In 2006, we continued to convert to resource-conserving products and to develop resource-conserving production methods. As a result, waste generation totaled 38,200 tons on a non-consolidated basis and 85,800 tons on a consolidated basis, representing 74% and 78% of 2000 levels, respectively, thereby achieving the targets for 2006. Our recycling rate reached 99% on a non-consolidated basis and 88% on a consolidated basis.

The Waste Committee deliberates and exchanges information associated with the action plans of major business sites and Group companies to promote waste reduction and recycling. We have also embarked on a new activity for our major products: studying issues for converting to resource-recycling products using our own

analytical tools and setting research themes and promoting improvements in production technology.

##### Reducing wastes to landfills

The Hitachi Chemical Group has been promoting new production methods and recycling to reduce wastes to landfills. As a result of these activities, we achieved zero emissions\*<sup>1</sup> at all 32 domestic sites in 2006. Generation of landfill wastes amounted to 1.4 tons on a non-consolidated basis and 1,627 tons on a consolidated basis (38 tons for domestic sites, on a consolidated basis), while the ratio of wastes to landfills\*<sup>2</sup> was 0.0036% on a non-consolidated basis and 1.9% (0.130% in Japan) on a consolidated basis.

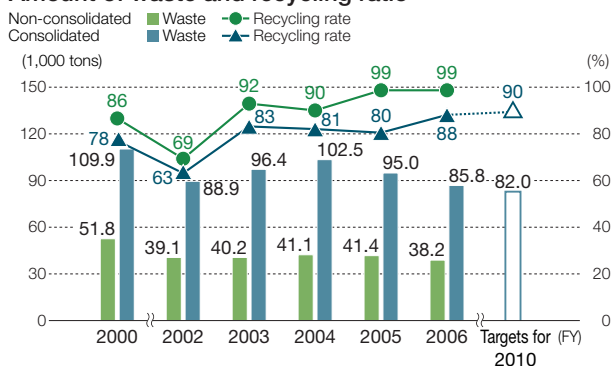
\*<sup>1</sup> The Hitachi Chemical Group defines "zero emissions" as reducing the ratio of wastes to landfills to no more than 1% and less than 5 tons in volume.

\*<sup>2</sup> Ratio of wastes to landfills: amount of wastes to landfills / wastes generated.

##### Promoting recycling in overseas Group companies

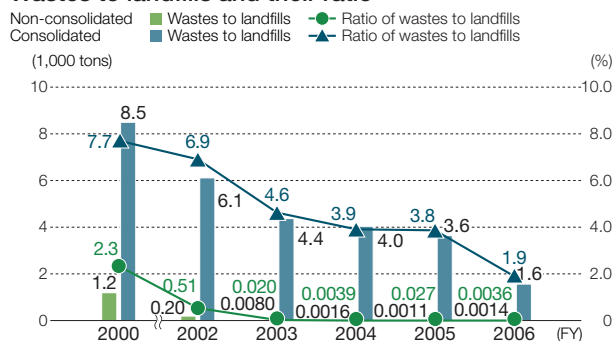
Since overseas Group companies have been behind their counterparts in Japan in recycling efforts, we held meetings in 2006 to exchange information on the actual situation of waste disposal in Group companies in Southeast Asia and China. While the infrastructure for recycling tends to be particularly malstructured overseas, we will promote recycling by designating disposal as a top priority and by encouraging Group companies in the region to share information with one another.

#### Amount of waste and recycling ratio



The Hitachi Chemical Group compiles data on all materials that become useless at our business sites and are consequently disposed of as waste, sold as valuable resources, transferred for a price or at no cost, or effectively reused within the Group (excluding reuse during the production process).

#### Wastes to landfills and their ratio



## Reducing environmental impact in physical distribution

### ← P5 CSR Policy ⑤

#### ● Promoting a modal shift and improving transportation efficiency

To reduce CO<sub>2</sub> emissions, the Hitachi Chemical Group collaborates with transport companies that carry our products and raw materials to promote a modal shift and to boost the efficiency of transportation. We also ask our suppliers to consider delivery methods with lower CO<sub>2</sub> emissions. In 2007, we plan to analyze transportation volume and energy consumption to reduce CO<sub>2</sub> emissions per unit of production by 1% compared to 2006 levels.

Following revisions to the Law Concerning the Rational Use of Energy in April 2006, Hitachi Chemical and two other members of the Hitachi Chemical Group are expected to be designated as “specified shippers” (as of June 2007).

#### ● Ensuring safe transportation of products and raw materials

The Hitachi Chemical Group issues “yellow cards” (emergency contact cards) that clearly specify measures to be taken in the event of emergencies during the transportation of products, and uses “container yellow

card” labels that display emergency measures to ensure safety during the transportation and use of products containing hazardous and toxic chemical substances.

We also request that suppliers delivering raw materials carry yellow cards.

#### ● Reducing the number of company cars and introducing low-pollution vehicles

In 2006, the number of vehicles (including forklifts) owned by manufacturing sites totaled 278 on a non-consolidated basis (258 in 2005) and 822 on a consolidated basis (769 in 2005), of which low-pollution vehicles accounted for 18% and 39%, respectively. We will reduce the overall number of company-owned cars and promote conversion to low-pollution vehicles such as hybrid vehicles.

#### ● Reducing packaging materials

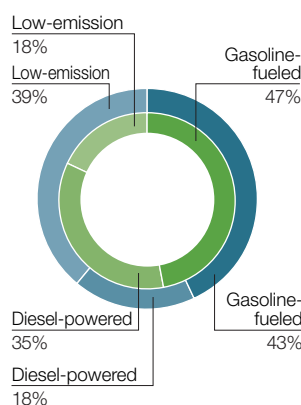
The Hitachi Chemical Group is targeting a 10% reduction in the consumption of packaging materials from 2000 levels by 2010 and is promoting simplified product packaging and broadening the use of returnable containers.

We also ask our suppliers to adopt similar activities when delivering materials in an effort to reduce packaging materials throughout the entire supply chain.

#### Ratio of low-pollution vehicles in company cars

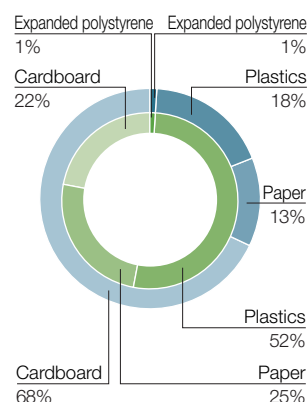
(as of March 31, 2007)

■ Non-consolidated ■ Consolidated



#### Ratio of packaging materials (FY2006)

■ Non-consolidated ■ Consolidated



#### Development of recycling technology for FRP

Fiber Reinforced Plastic (FRP) is a composite material made of resin and glass fiber that exhibits superior resistance to corrosion, outstanding weatherability and strength, and is broadly used in housing equipment, automobile parts, and both fishing and recreational boats. These same properties, however, make it difficult to recycle products made from this material.

Hitachi Chemical developed a technology for melting this resin under normal pressure to recycle the glass fiber and filler. By combining new fiber and resin, recycled glass fiber can now be reused as a structural material.

## Realizing a Sustainable Society For the Global Environment

### Caring for the environment in the office

#### ← P5 CSR Policy ⑤

##### ● Eco-management activity

The Hitachi Chemical Group utilizes the environmental management system at the Head Office and other business sites, and promotes environmental activities.

In the sales division, for example, we are expanding sales of eco-friendly products and actively undertaking such measures as relaying customer requests for environmental consideration to the development division.

As for the Head Office, various environmental measures have been taken by each administrative department based on one or more themes that the departments themselves set. One of the efforts by the R&D department was the establishment of a system for

evaluating environmental impact from the initial stage of new product development.

##### ● Green procurement of office equipment

The Hitachi Chemical Group undertakes green procurement of office equipment, which places priority on purchasing products with the Eco Mark or those that comply with the Green Procurement Law. In 2006, the ratio of green procurement\* was 53% on a non-consolidated basis and 56% on a consolidated basis.

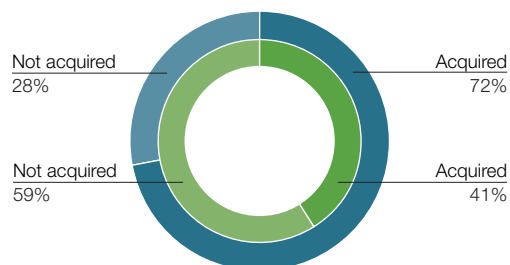
Furthermore, Hitachi Chemical utilizes the “e-sourcing” of electronic ordering and purchasing system to raise the efficiency of its green procurement by centralizing control over purchasing for the entire company.

\* Ratio of green procurement: amount of green procurement / total amount of procurement

#### Ratio of ISO 14001 certified sites

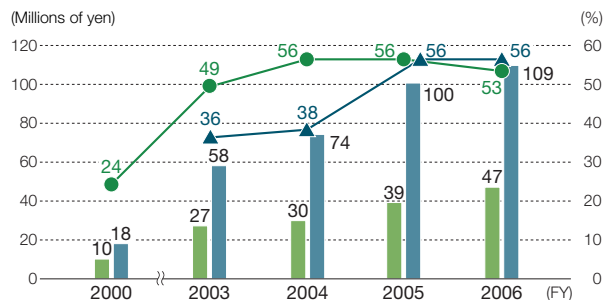
(as of March 31, 2007)

■ All business sites of the Group ■ Non-manufacturing sites



#### Amount and ratio of green procurement of office equipment

Non-consolidated ■ Amount ● Ratio  
Consolidated ■ Amount ▲ Ratio



#### Energy-saving activity using vines expands to the entire group

In 2006, the Hitachi Chemical Group implemented the Green Curtain Project, which had been proposed by employees, as part of our “Team Minus 6%” activities.

The project involves covering the windows and walls of buildings with vines to prevent room temperatures from rising and thus cutting down on the use of air conditioning. In 2005, Namie Hitachi Chemical Co., Ltd. used these plants on an experimental basis and succeeded in reducing

summer electricity consumption by 20% compared with the previous summer. The effort was expanded in 2006 to seven buildings throughout the Group.

We plan to continue this activity and apply it to more buildings in 2007.

Details of the Green Curtain Project can be found on our website.

URL

<http://www.hitachi-chem.co.jp/english/csr/environment/greencurtain.html>



Green Curtain Project at Namie Hitachi Chemical Co., Ltd.

## Hitachi Chemical Group Environmental Conservation Action Plan for Fiscal 2007

| Category  |  | Long-term target   |  |   | FY2006  |  |  | Target for FY2007  | Relevant pages  |        |
|---|--|--|--|---|---|--|--|--|---|--------|
|   |  | Indicator  | Target value   | Target FY   | Target value  | Results  | Rating                                   |  |   |        |
| Eco-mind and global environmental management          | Promotion of environmental management                                      | Hitachi Chemical and its Group companies will promote Group-wide management of environmental conservation activities, including overseas companies. As a chemicals company, we will also continue activities for reducing the impact on the global environment, enhance the level of control over chemical substances and expand environment-friendly products to strengthen our environmental management and fulfill our social responsibility. |  |   |   |  |  |  | P27   |        |
|   | Enhancement of environmental management                                    | Compliance with the Hitachi Group Integrated Environmental Management System   | Obtain certification                                 | 2006  | Obtain certification  | Obtain certification                               | ○  | Continued  | P27   |        |
|   | Promotion of GREEN 21 activities   | Promotion of environmental activities through enhanced GP  | 1,280 GP   | 2010  | 768 GP  | 876 GP   | ○  | 896 GP   | P27   |        |
| Next generation products and services                 | Expansion of green products  | Ratio of green product sales   | 85% or more  | 2010  | 80% or more   | 83%  | ○  | 83% or more  | P29   |        |
|   | Enhancement of environmental efficiency                                    | Global warming factor  | Improve by at least 20% (one representative product) | 2010  | Apply to more products                                      | Verified 4 products Group-wide                     | ○  | · At least 10%<br>· Conduct test on one product per division | P29   |        |
|   |  | Resource factor  | Improve by at least 20% (one representative product) | 2010  | Apply to more products                                      | Verified 4 products Group-wide                     | ○  | · At least 10%<br>· Conduct test on one product per division | P29   |        |
|   | Risk control over chemical substances contained in products                | Appropriate response to regulatory trends  | Clarify responsibilities                             |   | 2008  | Reinforce information support                      | Support Committee, Working Group         | ○  | Planning  | P14-16 |
|   |  | Research on content and application of chemical substances contained in products   | All products   |   | 2008 (1st)  | Confirm status                                     | · Identify issues<br>· Consider action   | ○  | Start supply chain research   | P14-16 |
|   |  | Compliance with REACH regulations (registration of regulated substances)   | Primary registration completed                       |   | 2010  | Test compilation of chemical product safety report | Apply to single product, pinpoint issues | ○  | Determine targets for preliminary registration, prepare to register | P14-16 |
|   |  | Compliance with REACH regulations (reporting of substances of very high concern to articles contained)   | Report submitted                                     |   | 2010  | Confirm status                                     | · Identify issues<br>· Consider action   | ○  | Start plans for researching need for alternative technology         | P14-16 |
| High-standard eco-factories and offices               | Prevention of global warming   | CO <sub>2</sub> emissions (compared to FY1990)   | 93% or less  | 2010  | 93% or less   | 91%  | ○  | 88% or less  | P32   |        |
|   |  | CO <sub>2</sub> unit requirement index (domestic; compared to FY1990)  | 75% or less  | 2010  | 80% or less   | 80%  | ○  | 79% or less  | P32   |        |
|   |  | Reduction of CO <sub>2</sub> emissions during transportation (energy consumed per actual unit sales; compared to FY2006)   | 4% or more   | 2010  | Collect data and establish promotion system                 | Collect data and establish promotion system        | ○  | 1% or more   | P34   |        |
|   | Reduction of wastes  | Promotion of zero emission activities  | All domestic sites compliant                         |   | 2006  | All domestic sites compliant                       | All domestic sites compliant             | ○  | Continued   | P33    |
|   |  | Amount of waste (compared to FY2000)   | 75% or less  | 2010  | 96% or less   | 78%  | ◎  | 79% or less  | P33   |        |
|   |  | Recycling rate   | 90% or more  | 2010  | 86% or more   | 88%  | ○  | 88% or more  | P33   |        |
| Reduction of chemical substances during manufacturing | Amount of emissions into the atmosphere (domestic; compared to FY2000)     | 15% or less  | 2010   | Non-consolidated: 15% or less/<br>Consolidated: 30% or less | Non-consolidated: 15% or less/<br>Consolidated: 20% or less | ○  | 20% or less                              | P31  |   |        |
|   | Amount of VOC emissions into the atmosphere (domestic; compared to FY2000) | 15% or less  | 2010   | Registration of target facilities                           | Registered  | ○  | 25% or less                              | P31  |   |        |
| Environmental collaboration with stakeholders         | Promotion of environmental communication                                   | Communication initiatives for each stakeholder<br>· Communication via PR activities, websites, publication of sustainability reports and site reports, briefings with local residents  |  |   |   |  |  |  | -   |        |

Self-evaluation ◎ = Significantly above target; ○ = Above target; × = Below target