

Eco-Factories—2

Preventing Global Warming and Reducing Water Consumption

Targets for 2005

- CO₂ emissions
Non-consolidated: no more than 77% of 1990 levels
Consolidated: no more than 86% of 1990 levels
- CO₂ emissions per unit of production
No more than 81% of 1990 levels

Results for 2005

- Non-consolidated: 78%
Consolidated: 92%
- Non-consolidated: 68%
Consolidated: 84%

Targets for 2006

- 93% or less
- 80% or less

CO₂ emissions in 1990 on a consolidated basis were estimated from the proportion of CO₂ emissions in 1990 and 2000 on a non-consolidated basis.

Reducing CO₂ emissions through energy conservation

The Hitachi Chemical Group considers global warming as a grave issue and endeavors to reduce CO₂ emissions through energy conservation in line with the coming into effect of the Kyoto Protocol. We have accordingly set targets for reducing CO₂ emissions related to energy sources and CO₂ emissions per unit of production* by 2010.

In 2005 we introduced high-efficiency equipment, promoted site consolidation and expanded the proportion of prod-

ucts with lower CO₂ emissions per unit of production. As a result, CO₂ emissions related to energy sources totaled 175,346 tons on a non-consolidated basis and 447,233 tons on a consolidated basis, or 78% and 92% (estimated) of the levels in 1990. While we have already attained the 2010 target of 93%, we fell short of attaining our targets for 2005 due to increased production volume. CO₂ emissions per unit of production were 68% on a non-consolidated basis, attaining in advance both the 2005 target of 81% and the

2010 target of 75%.

In the future, we will strive to reduce emissions in terms of the absolute volume and aim to achieve our reduction plan by seeking conversions in the production method and products.

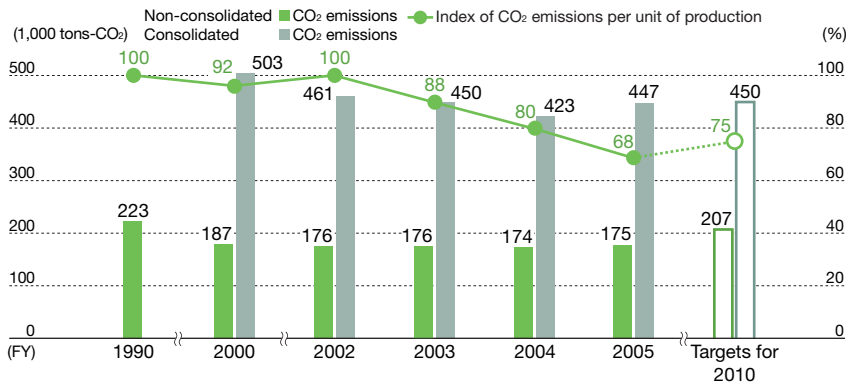
* CO₂ emissions per unit of production:
CO₂ emissions / net sales (against 1990 levels)

Reducing other greenhouse gases

The Hitachi Chemical Group established a production method that does not use hydrofluorocarbons (HFC) and has not used this substance since 2003.

Since we continue to use sulfur hexafluoride (SF₆) for testing purposes, we had set our goal of reducing emissions to 10% or less of the level in 2002 by 2010. In 2005, SF₆ emissions totaled 0.05 tons, or 10% of the level in 2002, thereby accomplishing this goal.

Amount of CO₂ emissions and index of CO₂ emissions per unit of production



Providing energy-saving housing equipment: Ecocute—natural refrigerant (CO₂) heat pump water heater

Hitachi Housetec Co., Ltd., manufactures Ecocute, a natural refrigerant (CO₂) heat pump* water heater. Ecocute is an eco-friendly product that conveys heat absorbed from the atmosphere to the refrigerant, and then applies compression to raise the temperature of the refrigerant high enough to boil water.

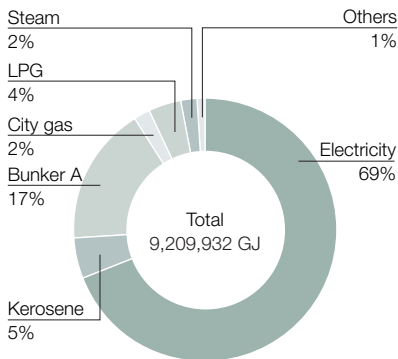
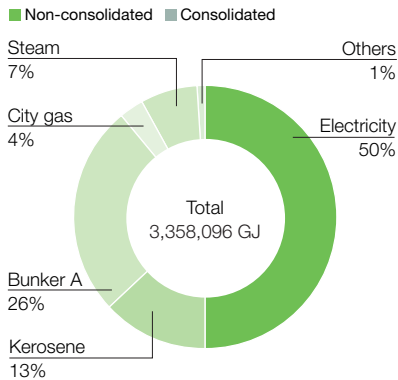
The unit consumes only a third of the electricity used by conventional electric heaters and curbs the generation of greenhouse gases since it does not require combustion, unlike

gas or petroleum-fueled water heaters. Its global warming potential has been reduced to 1/1,700 of conventional heat pumps that use a chlorofluorocarbon substitute, and it has no ozone depletion potential. Smaller, lighter components in an optimized layout reduce the number of piping materials as well as the weight of components. Sorting packaging materials is also easier.

* Heat pump: equipment that transfers heat absorbed from low-temperature objects to a high-temperature object



Breakdown of total energy consumed (FY 2005)



Reducing water consumption

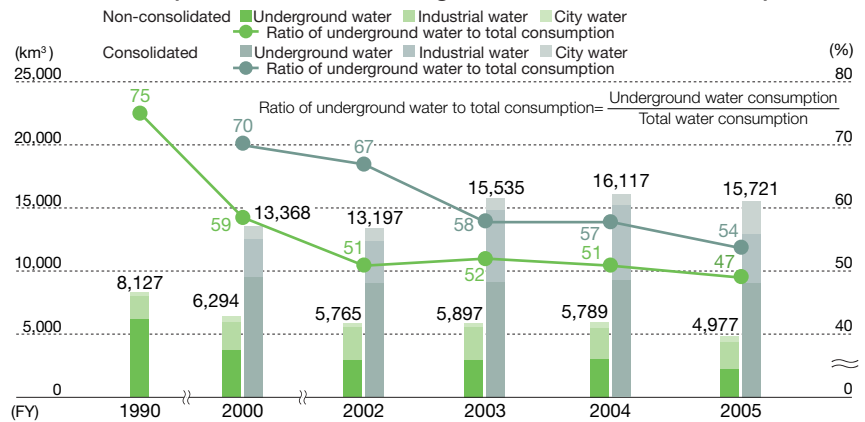
The Hitachi Chemical Group endeavors to effectively use limited water resources through such measures as integrating production facilities, moving underground water pipes above ground to prevent leakage, pursuing water saving measures, recycling and reusing wastewater.

In 2005, water consumption totaled 4,977 km³ on a non-consolidated basis and 15,721 km³ on a consolidated ba-

sis, or 79% and 118%, respectively, against 2000 levels. Wastewater recycled and reused as coolant water totaled 5,641 km³ on a non-consolidated basis and 6,400 km³ on a consolidated basis.

In 2006, we will continue to reduce water consumption in response to the needs of environmental conservation and business expansion while keeping in mind the importance of advancing the effective use of resources.

Water consumption and ratio of underground water to total consumption



Voices

Growing "green curtains" to save energy and reduce the use of air conditioning



Production Technology Division, Namie Hitachi Chemical Co., Ltd.

Namie Hitachi Chemical Co., Ltd., acquired ISO 14001 certification in 1997, and has been promoting energy-saving activities for its facilities and equipment, including inverter conversion, controlled operations, and shorter operating hours. In the course of pursuing additional means for conserving

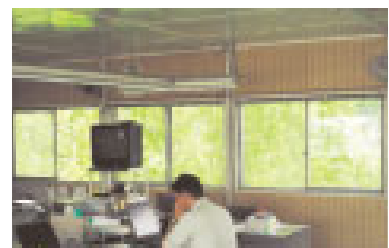
energy, we learned about efforts to lower room temperatures by growing squash and sponge cucumber around buildings.

Consequently in 2005 we began to grow plants such as gourds and sponge cucumbers as a "green curtain" covering exterior walls that reduces consumption of electricity. As a result, we brought down the frequency of air conditioner use during the summer and cut electricity consumption at the office for July and August by about 20% compared with the previous year.

Energy conservation using green curtains costs little and is maintenance-free, and the greenery seen from the windows also had the effect of relaxing employees, while the cultivation and harvesting of gourds helped promote communication among employees.

We intend to continue this activity as part of our goal of becoming a com-

pany that contributes to reducing environmental impact in areas where employees can perform their work with enthusiasm.



"Green curtain" on the southern side of the Production Technology Office

The Hitachi Chemical Group began group-wide efforts to grow green curtains starting in 2006. Information on this activity can be found on our website.

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