

# Preventing Global Warming

## Use of energy

**The target of fiscal 2005 for the consumption of energy per unit of production was achieved.**

The Nitto Denko Group aims at reducing the consumption of energy per unit of production (crude oil equivalent of energy consumption per production of one million yen) to prevent global warming caused by massive greenhouse gas emission due to energy consumption.

Nitto Denko on a non-consolidated basis marked 445 liters/1 million yen in fiscal 2004 thanks to the effect produced by the introduction of ESCO\* project. The target for fiscal 2005 (460 liters/1 million yen) was successfully achieved ahead of the schedule, largely exceeding the target of Japan Chemical Industry Association which Nitto Denko holds membership in.

Each plant is shifting the energy that it consumes from heavy oil to city or natural gas to reduce CO<sub>2</sub> emissions. The Onomichi Plant will introduce a photovoltaic power generation system in fiscal 2005. We expect it covers approximately 5% of the energy consumption in the Onomichi Plant.

\*ESCO Project: It stands for Energy Service Company and means a business to improve energy efficiency. Each company offers a comprehensive services including its technology, equipments, human resources, and the funds required for energy saving and receives a part of the benefit obtained through the energy savings from the customer in compensation for the service.

## CO<sub>2</sub> emissions from treatment of solvents

**Efforts toward effective energy using with solvent treatment equipment is being conducted.**

The Kyoto Protocol came into effect on February 16, 2005. It defines 5% reduction in the annual average of greenhouse gas emitted from all developed countries from 2008 to 2012 compared to the level of 1990.

The Nitto Denko Group uses a large volume of organic solvents in its manufacturing processes. CO<sub>2</sub> emissions, which are from the operations of solvent recovery equipment and deodorizing furnaces and from the incineration of solvents in such furnaces, account for approximately 25% of the total emission.

The group is reducing fuel consumption by installing a boiler in the furnace, recovering heat from the incineration of organic solvents, generating vapor being utilized as energy for production. Thus, it endeavors to reduce CO<sub>2</sub> emissions in total.

In the Toyohashi Plant, 50% of CO<sub>2</sub> emissions results from solvent treatment. To reduce such CO<sub>2</sub> emissions, the plant has been replacing a direct-fired deodorizing furnace with a regenerative deodorizing furnace and introducing solvent recovery equipment since August 2004 in stages according to the predetermined plan. We expect 7% reduction in CO<sub>2</sub> emissions (approximately 15,000 metric tons/year), improvement in consumption of energy per unit of production, and reduction of energy costs.

## Fuel Conversion

December 2002	Shiga Plant	-----	Converted from LPG to city gas
April 2004	Kameyama Plant	----	Abolished the use of heavy oil and converted to city gas
October 2004	Kanto Plant	-----	Converted from heavy oil and LPG to city gas
January 2005	Onomichi Plant	-----	Partly introduced natural gas

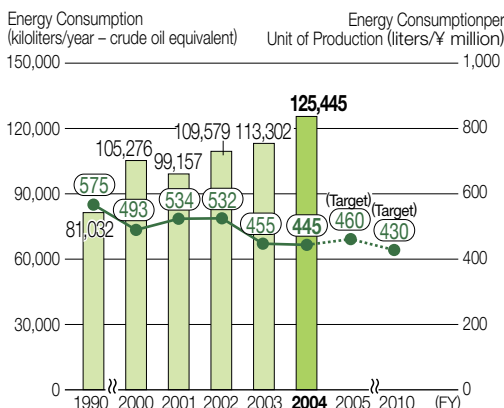
## Greenhouse gases other than CO<sub>2</sub>

**Use of SF<sub>6</sub> was totally abolished in fiscal 2004.**

The Kameyama Plant had used SF<sub>6</sub>, one of the greenhouse gasses, in the performance test of electrical insulation materials but succeeded in total elimination of the gas in fiscal 2004. The Nitto Denko Group does not use other chlorofluorocarbon greenhouse gasses (HFCs and PFCs).

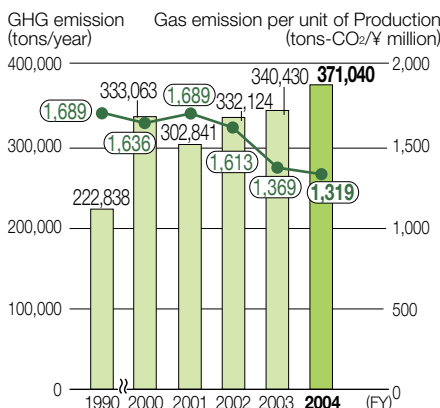
## Energy Consumption and Energy Consumption per Unit of Production

(Nitto Denko on a non-consolidated basis)



## Greenhouse Gas Emission and Gas Emission per Unit of Production

(Nitto Denko on a non-consolidated basis)



## CO<sub>2</sub> Emissions by Factor

(Nitto Denko on a non-consolidated basis)

