

# Important Steps to Address the Prevention of Global Warming

We are promoting the prevention of global warming, emphasizing energy conservation measures at production sites and the utilization of natural energies.

## Reducing greenhouse gases

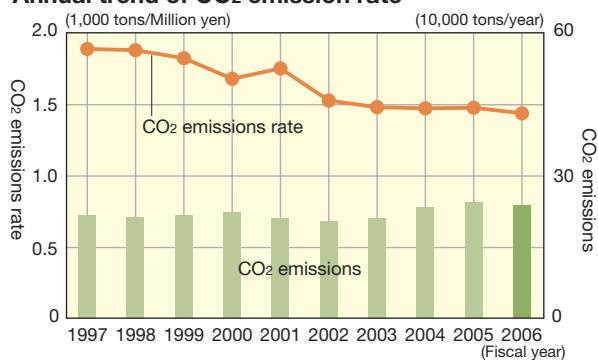
### Ensuring energy conservation measures at production sites

In Japan, most of the CO<sub>2</sub> that causes global warming is generated by production activities. Accordingly, energy conservation at production sites is the most effective measure in reducing CO<sub>2</sub> emissions.

NTN is promoting efficient production at every operating site (domestic and overseas) and is pushing energy conservation measures such as fuel changeovers for heat treatment furnaces, integrated operation of compressors and air conditioning equipment and use of inverter lighting equipment. Also, to enhance energy conservation awareness among employees, we are promoting even small energy conservation activities such as switching off unnecessary lighting during rest breaks. Furthermore, we are aggressively pushing the use of natural energies like wind and solar.

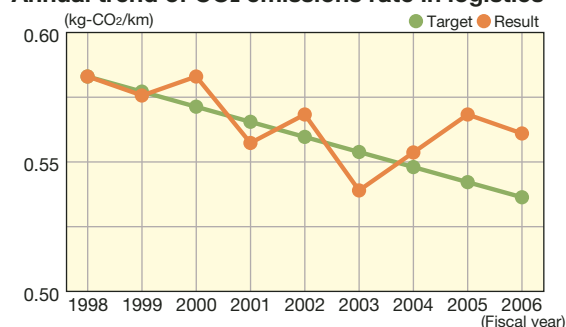
In domestic operating sites, we established a target of “25% reduction of CO<sub>2</sub> emissions in 2010 from

### Annual trend of CO<sub>2</sub> emission rate



\* Excludes entities organized after fiscal 2003.

### Annual trend of CO<sub>2</sub> emissions rate in logistics



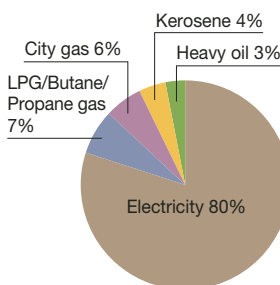
fiscal 1997,” nearly double the industry’s target of a 13% reduction\*. The Japan Bearing Industrial Association (JBIA), to which we belong, established that target as part of the voluntary activity plan of the Japan Economic Federation.

In fiscal 2006, a target of a 20% reduction compared to fiscal 1997 at our domestic operating sites was set and achieved (20.1% reduction). In fiscal 2007, in addition to the conventional target of CO<sub>2</sub> emissions rate (22% reduction), we will work for a new target: total CO<sub>2</sub> emissions less than 260,000 tons.

On the other hand, in fiscal 2006, overseas operating sites set a target of a 2% reduction compared to the previous fiscal year at each site, and eight of 13 sites achieved the target. In fiscal 2007, a target of 1% reduction compared to fiscal 2006 was set for all overseas operating sites in seven countries.

\* Japan Bearing Industrial Association defines 1997 as the baseline year since some companies of JBIA had difficulties in obtaining CO<sub>2</sub> emission amounts in 1990 (the baseline year of the Kyoto Protocol).

### NTN’s CO<sub>2</sub> emissions by energy source



### Annual energy consumption

Electricity	562 GWh
Oil	
Heavy oil	3,450 kL
Kerosene	3,870 kL
Gas	
LPG/Butane/Propane gas	6,660 tons
City gas	7,330,000 m <sup>3</sup>

## Efforts to conserve energy

### Aggressive use of energy conservation diagnostics

We are aggressively working toward a drastic reduction of CO<sub>2</sub> at our whole company. NTN will also receive an energy conservation diagnosis under a grant from NEDO (an independent administrative agency – “New energy/National organization of Advanced Industrial Science and Technology”).

NTN receives information and advice from energy experts for drastic energy conservation, and refurbishment of our plants’ equipment is performed as needed.

**Refurbishment for energy conservation at Iwata Works**

In autumn of 2006, equipment to utilize waste heat for power generation was introduced at Iwata Works (Iwata-city, Shizuoka-pref.), NTN's main plant that accounts for approx. 30% of our total energy usage. Warm wastewater is transferred to the adjacent CVJ plant through the pipe line, then used for heating in winter via a heat exchanger. By this, a reduction of approximately 1,600 tons of CO<sub>2</sub> was accomplished in one winter and fuel expense for kerosene boilers was reduced.



Wastewater pipeline and heat exchanger

**Aggressive use of wind and solar power generation**

We are working aggressively to use natural energy. We have installed wind and solar power generators when installing equipment.

As a result of these investments, NTN's rating output of natural energy totaled 210kW (Solar: 190kW; Wind 20kW), and the power generation is 243MWh/year. The reduction in CO<sub>2</sub> is 168 tons/year. This is almost the same reduction as would be obtained by 47ha (the area of 36 Tokyo Domes) of forest. NTN's total of 190kW of solar power generation is ranked 38th among approximately 1,000 domestic companies\*.

NTN plans to achieve CO<sub>2</sub> emissions of less than 297,000 tons in 2010 (emission rate 25% reduction compared to fiscal 1997). NTN will work to achieve this target using an appropriate balance of natural energy use and energy conservation measures at each plant.

\* This is according to published rankings on accumulated values by companies with a rating output of solar power, that were installed based on NEDO "Solar power generation field test project" (results from 1998 to 2005)



Solar light panels at NTN Fukuroi Corp.

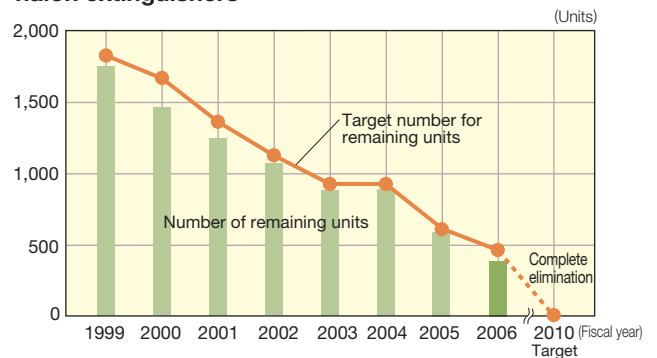
**Efforts to prevent air pollution**

**Eliminating halon extinguishers and coolants containing chlorine**

Halon extinguishers are widely used for fire suppression of electricity-related equipment, but decompose the ozone layer because they contain bromine chlorofluorocarbon. For this reason, the NTN group planned to entirely eliminate halon extinguishers in 1998 and is working to replace them with alternative extinguishers. In fiscal 2006, 170 units were replaced and remaining 364 units are scheduled to be entirely replaced by 2010.

Also, we set a voluntary target to completely eliminate coolants containing chlorine used in grinding and pressing processes in fiscal 2000. As a result of our efforts, the last equipment was replaced in 2006 with an alternative coolant.

**Annual trend of number of remaining units of halon extinguishers**



**Efforts to prevent ground pollution**

**Decontaminating ground pollution at Kuwana Works**

In November 2002, at Kuwana Works (Kuwana-city, Mie-prefecture), slight VOC (volatile organic compound) contamination was discovered in a well. This finding was not a violation of the Soil Contamination Countermeasures Law, but we are voluntarily working to decontaminate this site.

As a result of a detailed investigation of the whole area in Kuwana Works, ground pollution was found at three locations including the well mentioned. Decontamination work at two locations has been completed and the remaining one is almost within the environmental regulation specification. We will continuously monitor the VOC concentration and work for complete decontamination.

## Participating in environmental conservation activities

### Cleaning pavements

#### Head Office (Osaka-city, Osaka-prefecture)

In March 2006, the Environment Management Committee made a plan to “Clean the pavement on Yotsubashi-suji Street using corporate volunteers.” On the 1st day of June during “the month of environment,” the 1st cleaning activity was conducted for the pavement surrounding the Head Office.

On that day, participants from each department in the Head Office conducted the early morning cleaning, such as picking up cigarettes butts. Subsequently, the cleaning activity was conducted at the beginning of every month as an activity for all employees in the Head Office.



Cleaning activity in neighborhood of Head Office

### Employees promote “satoyama”-recovery greening activity in neighborhood participation

#### Iwata Works (Iwata-city, Shizuoka-prefecture)

All employees at Iwata Works are working on an “all-employee district greening project.”

In five years, 2,200 azalea trees were planted on “satoyama” (semi-natural areas located adjacent to populated areas that were traditionally cared for and utilized by local residents) in the neighborhood and benches made from the thinned woods were installed. Also, we are continuing to work with the local people for the beautification and cleaning of the mountains in the neighborhood (for example, by cutting the grass periodically). In 2007, it was named “Interaction Common” and a 1.4ha wide common intersecting with nature has come into being.

Also, the Shizuoka Greening Promotion Association presented a certificate of appreciation to Iwata Works as a large donor. Fiscal 2007 will be the 6th year for the employees’ participation in “Green Fund Raising” to make a donation for planting expenses and similar causes.



Grasscutting at a neighborhood mountain

### Teaming with local government for forest improvement project

#### Nagano Works (Kamiina-gun, Nagano-prefecture)

Nagano Works is supporting a program of “Forest sponsorship,” in which cities, towns, villages and companies work together for the recovery of a forest.

The Works supports the improvement of a forest (approx. 20ha), coordinating with Komagane-city. In May 2006, 60 employees participated in the grasscutting work.

We will continue to cooperate in the forest recovery and through the forestry experience become friendly to forests and open space and learn the value of the natural environment.



Grasscutting work

### Planting activity in the park

#### NTN Mikumo Corporation (Matsuzaka-city, Mie-prefecture)

In March 2006, as part of a local greening activity, employees of NTN Mikumo Corp. and their families planted about 60 trees at the Matsuzaka Chubudai Park. A letter of appreciation was presented to our company from Matsuzaka-city.

We will continue to donate trees every year.



Commemorative picture after planting

### Initial planting in the forest

#### NTN Kinan Corporation (Nishimuro-gun, Wakayama-prefecture)

NTN Kinan Corp. stated its plan to plant 2,000 broadleaf trees in a 1 ha forest named “Nagomi-no-mori (Harmonious forest)” over the next 10 years.

This is part of the “Corporate forest” project promoted by the local government and we are working together with the “green thumb team” organized by local children and local people.

In February 2007, a planting was organized and over 100 employees, their children and local persons planted trees.



Planting young trees