To prevent global warming we are moving to deploy energy-saving and clean energy technologies while expanding the use of IT systems.

Promote Energy-Saving Technologies and More Efficient Use of Energy in the Corporation's Operations

Web search | 13

More than 90% of the NTT group's CO_2 emissions are produced by the use of electricity. A series of initiatives have been carried out called the Total Power Revolution (TPR) campaign in an effort to reduce these emissions. As a result of these TPR initiatives, in 2003 we successfully reduced power usage by 200 million kWh. Yet at the same time, we have also deployed telecom equipment to support expanded broadband services such as ADSL*1 and FTTH *2 and deployed new base stations to support 3rd-generation mobile phone networks, and this has significantly increased our power consumption. Consequently, CO_2 emissions increased to 2.92 million tons in 2003, a 40 thousand tons increase over 2002.

Looking at trends over the past five years, we have pushed CO_2 emissions down by some 450 thousand tons in line with our target goals, but increasing emissions linked to the spread of IT services and rapid spread of cell phones has more than offset the reductions. Considering the enormous changes that have affected the state of the information and communications sectors since 1999 when this target was set, we are now in the process of reassessing our target CO_2 emission targets.
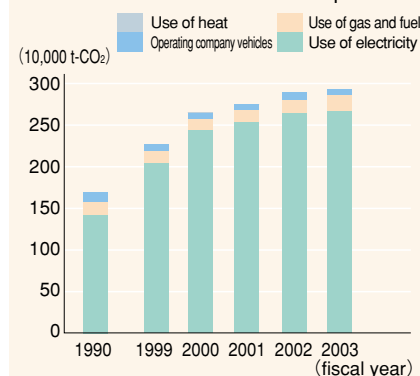
Total Power Revolution (TPR) campaign initiatives

○Promote better energy management in 4,000 NTT buildings nationwide
○Deploy and upgrade energy-efficient power equipment and air conditioners
○Deploy telecom equipment and build networks that consume less power (convert servers, routers, and other broadband-related equipment to dc power supplies that consume less power)
○Improve power self-sufficiency through development of solar, wind, and other clean power generation technologies
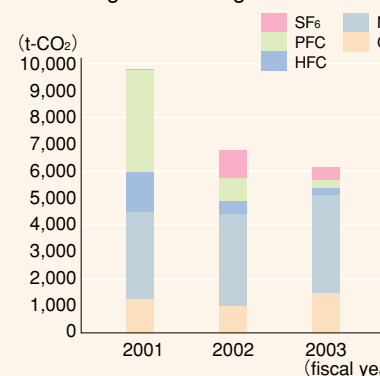
*1 ADSL (Asymmetrical Digital Subscriber Line): A technology for sending high-speed data over existing metallic telephone lines.
*2 FTTH (Fiber-to-the-home): A service for delivering data all the way to the home over optical fiber.
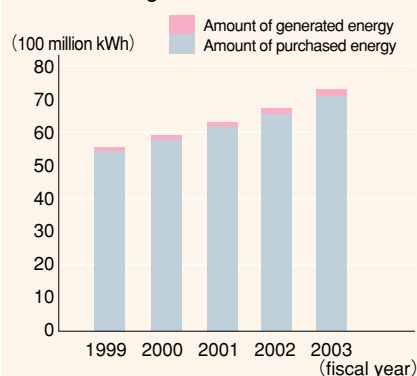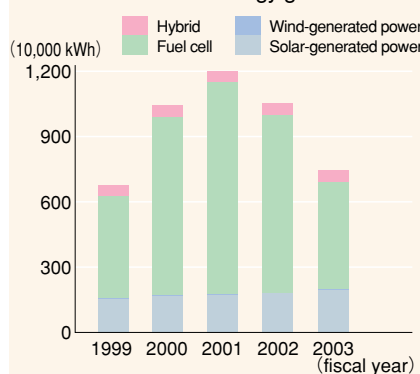
●CO_2 emissions from business operations
(10,000 t-CO_2)
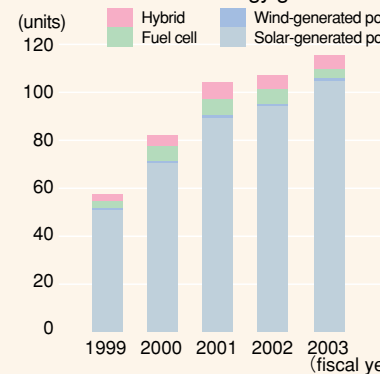Use of heat / Operating company vehicles / Use of gas and fuel / Use of electricity
(years: 1990 1999 2000 2001 2002 2003, fiscal year)

●Other greenhouse gas emissions
(t-CO_2)
SF_6 / PFC / HFC / N_2O / CH_4
(years: 2001 2002 2003, fiscal year)

●Power usage
(100 million kWh)
Amount of generated energy / Amount of purchased energy
(years: 1999 2000 2001 2002 2003, fiscal year)

●Amount of clean energy generated
(10,000 kWh)
Hybrid / Fuel cell / Wind-generated power / Solar-generated power
(years: 1999 2000 2001 2002 2003, fiscal year)

●Number of clean energy generators
(units)
Hybrid / Fuel cell / Wind-generated power / Solar-generated power
(years: 1999 2000 2001 2002 2003, fiscal year)

Prevent Global Warming Through Use of Clean Energy

Web search | 14-1

As a strategy to reduce CO_2 emissions, NTT began an aggressive effort to deploy solar-powered generators, a clean energy source that does not give off greenhouse gas emissions, back in 1996. During 2003, ten new systems with a generating capacity of 120.7 kW were deployed and put into service in NTT DoCoMo's new buildings and NTT WEST outdoor telecom installations. In combination with the preexisting base of 106 systems, this brings the annual power output from solar-powered generators to 7.417 million kWh, for a reduction of 963 tons of CO_2 emissions.

Solar power generation system

Reduced CO_2 Emissions Through Introduction of Low-Pollution Vehicles

Web search | 14-2

The NTT Group is moving the reduce CO_2 emissions from the company's vehicles by employing more hybrid, natural gas, and other low-pollution vehicles. The number of low-pollution vehicles in the company's fleet increased by 61 vehicles over 2002, for a total of 566 low-pollution vehicles in NTT group's fleet. We will be making an aggressive effort to convert an increasing percentage of the company's fleet to low-pollution vehicles in the years ahead.

Appearance of a natural gas-powered vehicle

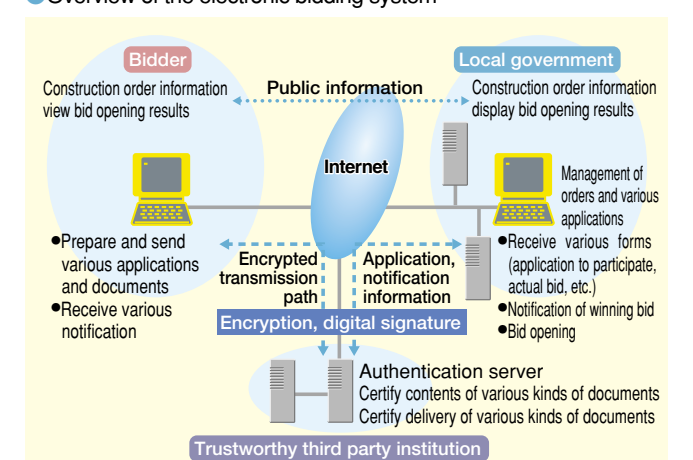## Promote Spread of Electronic Bidding to Prevent Global Warming

Web search | 14-3

In support of the government's e-Japan strategic initiative, the NTT Service Integration Laboratories developed an electronic bidding system that enables local government to conduct bidding and tendering operations online using the Internet and personal computers, and is aggressively promoting the system to local governments nationwide.

Yokosuka in Kanagawa Prefecture was the first municipality to adopt the system in September 2001. The system proved an immediate success and was rapidly adopted by other cities including Shimonoseki and Tsukuba, on the prefectural level by Saitama Prefecture, and many other local governments. As of the end of 2003, the e-bidding system has been adopted by 30 local governments.

By digitizing the process of submitting bids and tenders, all the paper forms and the energy that would ordinarily be expended in traveling to the bidding site are saved, so assuming that the e-bidding system was adopted by all prefectural governments, it is estimated that 2,302 tons of CO_2 emissions could be reduced annually.*

●Overview of the electronic bidding system

Bidder
Construction order information view bid opening results

Public information

Local government
Construction order information display bid opening results

Internet

Management of orders and various applications

●Prepare and send various applications and documents
●Receive various notification

Encrypted transmission path

Application, notification information

●Receive various forms (application to participate, actual bid, etc.)
●Notification of winning bid
●Bid opening

Encryption, digital signature

Authentication server
Certify contents of various kinds of documents
Certify delivery of various kinds of documents

Trustworthy third party institution

* Based on realistic assumptions that 20 companies participate in each tender bid offering, and 18,000 contracts are put up for bid every year.