

Promotion of Energy Savings

NGP2005 Objectives

- Reduction of total CO₂ emissions by more than 10% from FY1999 (42% from FY1990) levels by FY2005

Major Results by FY2005

- Reduced total CO₂ emissions by 14% from FY1999 (FY2005 emissions were reduced 44% versus FY1990) through improvements to equipment and operating processes as well as other measures



Cogeneration system in Tochigi Plant

Nissan is approaching the reduction of CO₂ emissions in our production processes on two fronts, improving equipment and improving operating procedures. Through these efforts, our domestic production processes produced 14% less CO₂ emissions in Fiscal 2005 than in Fiscal 1999 even as we significantly increased the number of vehicles produced.

Across-the-board Energy Savings

When one plant confirms that a certain measure is effective in reducing CO₂ emissions, that measure is then applied to other plants, thereby multiplying the positive impact and producing significant cumulative results.

One initiative was to progressively introduce to all plants a control system that coordinates pneumatic compressor use to ensure flexible responses to production volume, production-line modifications, and other changing conditions. Nissan is also working to conserve energy at all levels of its operations, including optimizing the supply of steam, highly energy-efficient lighting, and inverters to reduce the load on equipment motors.

In Fiscal 2001, Nissan gathered a team of energy specialists into the Nissan Energy Service Company (NESCO) to focus on promoting efficient energy usage at Nissan's five automobile plants in Japan. NESCO is taking an increasingly active role in energy saving activities.

The facility planning department provides guidance for enhancing operating equipment efficiency and develops plans to introduce new equipment to improve energy efficiency. We are diligent about saving energy in any way possible, and our efforts extend to ensuring that all equipment is shut down during non-operating times, and we continue to constantly seek and develop new energy-saving measures.

Introduction of Cogeneration Systems

Nissan is actively installing cogeneration systems that capture and utilize the heat produced when generating electricity and raise overall energy efficiency and help to further reduce CO₂ emissions. Usage of these systems is steadily growing each year, and cogeneration systems are currently in operation at the Oppama, Yokohama, Tochigi and Kyushu plants.

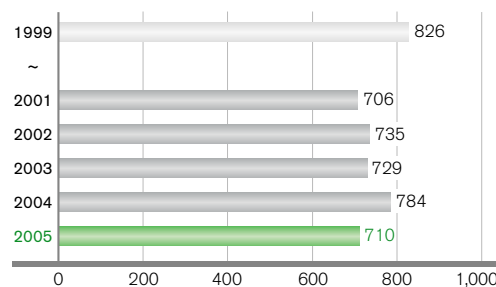
Use of Renewable Energy

Nissan is also emphasizing the use of renewable energy as an additional way to decrease the impact of our operations on the environment. We are participating as a partner in a project to construct a wind-powered generator in the city of Yokohama, Kanagawa Prefecture. The new facility is scheduled to commence operation by the end of Fiscal 2006, and we plan to utilize the power generated at our Yokohama Plant.

In addition, Nissan Motor Manufacturing (U.K.) Ltd. introduced six wind-powered electric generators in Fiscal 2005.

CO₂ Emissions (1,000t-CO₂, Japan)

Production



Reduction of Waste and Promotion of Recycling

NGP2005 Objectives

- All plants eliminated direct landfill disposal of waste by FY2001
- Reduction of amount of waste incinerated by more than 50% from FY1999 levels by FY2005 (All plants initiated a zero emission program during FY2001)

Major Results by FY2005

- Zero waste directly to landfill achieved in FY2001 and remains in force
- Waste incineration volumes reduced by 90% from 1999 levels (from 27,900t in FY1999 to 2,723t in FY2005)

Nissan implements various measures to reduce the waste from its automobile production processes and promote recycling. Promotion of “zero waste emissions” activities based on the “3Rs (reduce, reuse, and recycle)” concept has resulted in the achievement and maintenance of “zero direct landfill waste” and a substantial reduction in the volume of waste incineration.

Application of the 3R Activities

Reduce - Curbing waste generation

Nissan invests significant capital and is engaged in a wide range of activities to reduce the volume of waste generated during the production process. Special committees are dedicated to researching technical measures to reduce waste production, utilize returnable palettes for parts delivery operations, reduce the volume of cutting oil used through recovery and reuse or by a spray application technique, and utilizing a drying process for wastewater treatment sludge.

Reuse - Reusing waste

We aim to steadily expand the range of reusable parts and materials. Efforts to raise our reuse rates include the collection and multiple reuse of protective covers for parts that in the past had been disposed of after use.

Recycle - Recycling waste

Nissan promotes effective recycling via thorough and detailed segregation of about 100 types of waste in cooperation with recycling operators. Our recycling operations continue to expand and now

include recovering and reselling for reuse various types of plastic from wrapping materials, which previously would have been incinerated. In addition, we also recycle mill end-waste from production processes.

Promotion of Zero Direct Landfill Waste and Recycling

Nissan has consistently maintained the standard of “zero direct landfill waste” (less than 1.0% of the level of Fiscal 1990) since first achieving the target in Fiscal 2001. The goal of reducing the volume of waste incineration to 50% or less of the Fiscal 1999 level was first achieved in Fiscal 2003, well ahead of schedule. Ongoing efforts further reduced the FY2005 volume of waste incineration to just 10% (2,723 tons) of the Fiscal 1999 level.

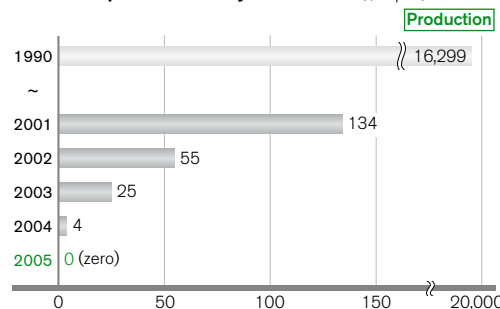
Nissan achieved a recycling rate* of 99.5% in Fiscal 2005 in Japan, while the Yokohama, Kyushu, and Iwaki Plants posted perfect 100% recycling rates. We plan to implement these recycling efforts on a global scale.

* Recycling rate: the percentage of the total amount of waste and valuable resources generated that is recycled, included via thermal recovery.

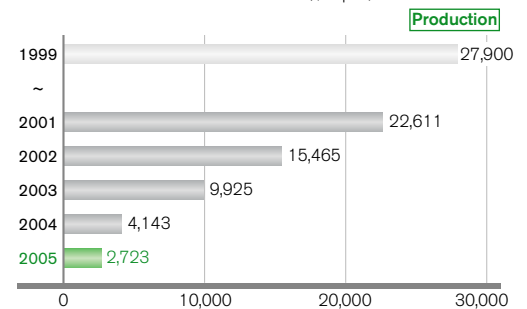


On-site incinerators in Tochigi Plant

Waste Disposed Directly to Landfill (t, Japan)



Volume of Incinerated Waste (t, Japan)



Improved Management of Chemical Substances

NGP2005 Objectives

- Installation in FY2002 of a model paint line that reduces volatile organic compounds (VOCs) emissions to 20g/m² and promotion of efforts to reduce substances subject to the Pollution Release and Transfer Register (PRTR) system

Major Results by FY2005

- Completed installation of model paint line at No.2 Kyushu Plant in FY2002, reducing VOC emissions to an industry-leading level below 20g/m²
- Reduced VOC emission volume per unit of painted area in FY2005 by 65% from the FY1994 level

Nissan strictly supervises the use of chemical substances that have the potential of becoming environmental pollution. We enforce preventive measures and seek to minimize risk by placing priority on reducing the amount of these substances used and strictly controlling or eliminating the amount that is discharged from the manufacturing processes.

Reducing Volatile Organic Compounds (VOCs)

Nissan places top priority on reducing the presence of VOCs, a category that makes up 90% of all chemicals emitted during automobile production. We continue to work hard to achieve compliance before regulations are introduced in each respective country of operation, to raising our collection and recycle rates of cleansing thinner and other VOCs, and to reducing the volumes discharged outside the plants in addition to cutting down the overall amount of VOCs used.

One step we are taking to reduce the volume of VOCs volume is the modification of our painting process lines by installing new equipment allowing the use of water-based paint. The painting line at No.2 Kyushu Plant was converted to water-based paint in Fiscal 2002. At less than 20g/m², the plant's water-based painting line maintains the lowest VOC discharge level in the industry. The Tochigi Plant converted to water-based paint in Fiscal 2004, and No.1 Kyushu Plant converted in Fiscal 2005.

Raising the recycling rate and lowering the volume of cleansing thinner used enabled Nissan to achieve a 65% reduction in VOC emission volume per unit of painted area from Fiscal 1994 to Fiscal 2005.

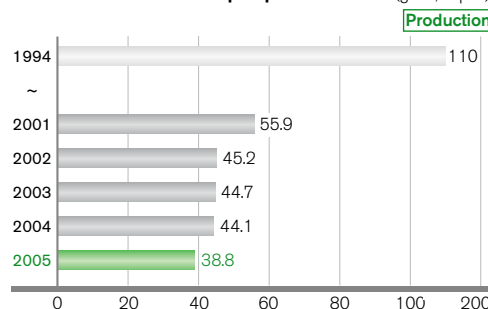
Management of Chemical Substances

When new oils and fats, chemicals, paints, and other materials are adopted for use within the company, the corresponding Material Safety Data Sheet (MSDS) is acquired from the material's manufacturer, and the information that this provides is used to evaluate all environmental, safety, and health factors. Harmful substances are prohibited from use and are replaced with materials that have less impact on the environment.

Furthermore, we register the materials and substances we use in a tabulation system and diligently record the corresponding usage quantities and the volumes discharged to the environment. Chemical products requiring registration are the 435 substances designated by the Pollutant Release and Transfer Register (PRTR) Law as well as various other chemicals.

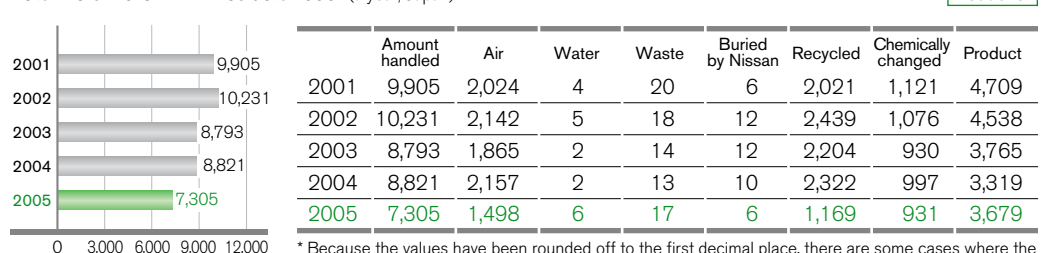
This tabulation system for chemical substances accesses information from the purchase control system for procurement of materials. By managing all necessary information in an integrated manner, reliable statistics on usage and discharge volumes can be tabulated and effective measures implemented.

VOCs Release volume per painted area (g/m², Japan)



A line switched to water-based paint, producing less VOCs at Kyushu Plant

Total volume of PRTR substances (t/year, Japan)



* Because the values have been rounded off to the first decimal place, there are some cases where the aggregated amount for each item does not agree with the sum total.

Environmental Protection in Logistics Operations

NGP2005 Objectives

- Reduction of total CO₂ emissions by more than 10% from FY1999 levels by FY2005

Major Results by FY2005

- FY2005 CO₂ emission levels reduced by 14% from FY1999 levels

Measures to improve the efficiency of our logistics operations are another aspect of our efforts to reduce CO₂ emissions. With the cooperation of parts makers and logistics firms, we are working to raise the loading ratio while implementing a modal shift to transport systems with lower CO₂ emission output. In Fiscal 2005, these efforts enabled us to reduce CO₂ emission levels by 14% from Fiscal 1999 levels.

Improving Loading Ratios

Revising the methods of transport

In Fiscal 2000, Nissan became the first Japanese automaker to implement a "roundup" system with the automaker dispatching its own trucks to collect required parts. The "roundup" system consolidates parts deliveries from several different suppliers into a larger single load, enabling higher loading ratios than the traditional system where each supplier dispatches trucks individually. The result has been a significant improvement in loading ratios with the number of deliveries per day to our plants in Japan by 10-ton trucks being cut from 2,500 to 2,200 deliveries.

Improving containers and packing

Nissan has also created a more efficient loading system utilizing 55 types of specially designed containers that are also collapsible to minimize the load space they occupy during empty return trips. These efforts have helped raise the loading ratio by approximately 10%.

In addition, we use Computer Aided Design (CAD) to simulate packaging design types. This enables planning for maximum loading ratios during the design stage and eliminates the need for prototype parts in our logistic planning. In April 2005, we established the Logistics Engineering Group to refine this work and to facilitate a more systematic approach to streamlining Nissan's logistics.

Modal Shift

Nissan is progressively shifting its transportation mode for finished vehicles and parts from truck to vessel for longer distance within Japan. Currently, 51% of these shipments are made by sea.

In addition, in Fiscal 2004, all parts makers making truck shipments to the Nissan Kyushu plant from the Kanto region of Greater Tokyo completed the switch to train-based shipment forwarding. The revised system has reduced CO₂ emissions by about 70% compared to transporting the same volume by truck. In Fiscal 2005, we also focused on establishing an all-rail transport system for after-sales parts and successfully reassigned a portion of the deliveries from the Tohoku and Kinki regions to the Sagamihara Parts Center to rail transport.

In 2005 and 2006, we introduced "Nissan Car Pack" containers for rail transport to help deal with the higher delivery volume that usually occurs when vehicle orders increase in February and March. The innovative design uses a double-stack container which carries two vehicles, one above and one below. Nissan Car Pack enabled us to ship about 1,000 export models from the Tochigi Plant to the Yokohama Honmoku Pier both years during these high-volume periods.

Another key move to reduce CO₂ emissions was achieved by redirecting a portion of the shipments of U.S.-bound export models produced at the Tochigi Plant from the Oppama port to the Honmoku port which is a shorter distance for truck delivery.



Modal shift to rail