

Technical Center / Environmental Report 2005

Business Summary: Vehicle Planning, Styling Design, Design, Prototype Engineering, Experiments

Location: 560-2 Okatsukoku, Atsugi-shi, Kanagawa, Pref., Japan

Start of Operations: November 1981

ISO 14001 Certification: March 1999

Message from Technical Center's Environmental Supervisor

NISSAN Technical Center of Kanagawa Prefecture, located in Tanzawa Oyama with its bountiful nature, is Nissan Motor's global hub, responsible for developing new products and technology. We aim to promote business activities in symbiosis with the environment as we continue to proactively conserve and improve it.



Environmental Supervisor and
Executive Vice President
Mitsuhiro Yamashita



Technical Center

To realize Nissan's corporate vision, "Enriching People's Lives", the Technical Center is engaged in product planning, styling design, design, prototype engineering, and experiments as part of the development of new products and technology.



The Technical Center aims to meet practical design and manufacturing concerns while improving vehicle quality through virtual design verification, using large-screen displays and full-scale clay models.



Through a variety of tests, we confirm that each vehicle has met vehicle quality targets, and are developing increasingly efficient technologies tailored to the needs of the market.



We thoroughly examine domestic and overseas vehicle accident data in pursuit of our goal to halve the number of fatalities and serious injuries resulting from car accidents.

The Environmental Policy in Nissan Technical Center

"Symbiosis of People, Vehicles, and Nature"

As the global R&D operation in Nissan Motor Co., Ltd., we utilize top-level environmental technologies and make the most of the initiative of individuals, address continuous environmental improvement activities and contribute to the realization of the sustainable society to protect our global environment.

1. Our efforts toward clean production

To realize a clean automobile society, we will assess environmental impact in all stages of a vehicle life cycle and continuously develop environmental technology. We will especially focus our efforts on making improvements in important environmental fields, including enhanced fuel efficiency (reduction in CO₂ emissions), which will contribute to curbing global warming.

2. The promotion of business activities symbiosis with the environment

All business activities will be rationalized and made suitable, in order to minimize the pressure towards the environment, and to contribute to the symbiosis.

3. Individual voluntarily activation to improve the environment

Through environment education and enlightenment, we hope to deepen the individual awareness of improving the environment so it will relate to voluntary actions.

4. Maintain Transparency to the Society

We will promote two-way communication with our stakeholders so that our corporate activity should remain transparent to the society.

In order to execute all of the above-mentioned, we will surely conform ourselves to laws, ordinances and other regulations. We will also set our specific targets and continue systematic efforts in preventing environmental issues.

1. Our efforts toward clean production

In order to reduce the environmental impact of vehicles, it is important that efforts are directed towards every stage of a vehicle's life-cycle. To this end, Nissan is moving forward with the development of technology and environmentally friendly vehicles at the early stages of product development for cleaner exhaust emissions, improved fuel economy (and reduced CO₂ emissions), reduced vehicle noise, management and reduced use of chemical substances with environmental impact, and recycling design.

Main Products Sold in 2004

2005 **RJC** Car of the Year Award

FUGA



TIIDA



LAFESTA



NOTE



2. The promotion of business activities in symbiosis with the environment

Through the promotion of simulations and other methods, we are moving forward with optimization and streamlining of development operations, which in turn contributes to a reduction in resource and energy consumption. Moreover, in order to implement environmental preventive measures, we identify facilities, operations, and processes that have an environmental impact, and perform periodic reviews to make facility and management improvements.



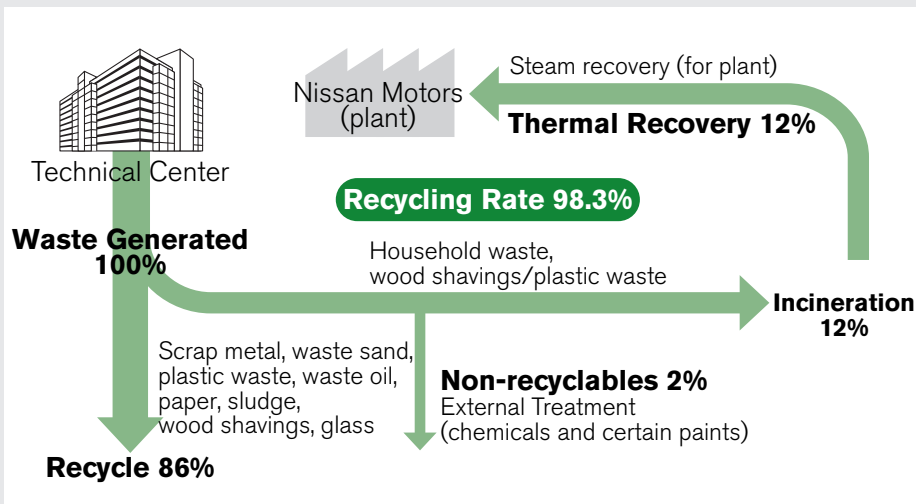
We are developing safer and more driver-friendly vehicles by studying driving behaviour and vehicle manoeuvring through simulated versions of various road and traffic conditions experienced while driving in urban areas, highways and other crowded driving conditions. By replacing real cars with simulated driving, we shorten the time required for the 'proving ground' and test course assessments, which in turn contribute to the reduction of resource and energy consumption.



To be prepared for the possibility of an on-site oil spill that could potentially leak into the road surrounding the plant, in 2003 we installed a tank that separates oil and water, and an emergency cut-off valve in one of the plant's rainwater ponds that flows into a nearby river. As a further measure, in 2004, we installed such emergency cut-off valves in all water retention facilities at the plant. We are currently expanding our use of such safety mechanisms by equipping other plant facilities, and we have taken precautionary steps in connection with wastewater leakage from water treatment plants and oil leakage from commuter and shuttle buses.



As part of our monthly environmental activities, the environmental supervisor and vice supervisor monitor the environmental and other facilities at the Technical Center and confirm that the facilities are properly maintained and improved. In 2005, to raise the level of environmental awareness among environmental managers from each department (representatives in charge of environmental matters), we carried out an environmental facilities tour.



Reduction in Paper Use (FY2004 actual results)
 Conserved the equivalent of about 185 trees.



Energy Conservation Activities (FY 2004 actual results)
 Conserved the equivalent of 22 days' worth of energy for 90,000 households in Atsugi City.

Zero Emission Activities

By separating our waste into 25 different categories and expanding our network of recyclers, we achieved a recycling rate of 98.3%.

3. Individual voluntarily activation to improve the environment



In-house Environmental Seminar on the Kyoto Protocol

To promote individual voluntarily environmental activation, we offer various environmental education activities to in-house and temporary staff as well as partner companies working with the Technical Center. In 2004, we also held an environmental seminar on the Kyoto Protocol, where we discussed our common concern for, as well as the importance of, global warming. In addition, in June, during our 'Environmental Month', we held an event to further raise environmental awareness amongst our employees. There were many staff participants and, to support their education, we held an environmental quiz called "Let's try! - You're the Environmental Expert" in which participants were asked about the Technical Center's environmental activities.

**4. Maintain transparency to the society
 ~Communication with the local community~**



Introduction of Environmental Activities at "Share the Experience!"

We introduced the importance of taking action for the environment, which included using a panel exhibition that explains the Technical Center's environmental activities. Staff also gave personal experiences to local members of the community regarding energy-saving examples related to stereo and video decks. Activities also included an environmental quiz for children.

Events with Local Associations and Governments

We hold regular explanatory meetings and Open Houses for the local associations and governments of Atsugi and Isehara cities to familiarize them with the Technical Center's business operations and environmental efforts.

FY 2004 Objectives and Results (Business Activities)

Objective	Target	Result	Comment
Communication with Local Communities and Authorities	No serious claims	+	Held information exchange sessions with local communities.
Environmental preventive measures	No environmental accidents* ¹	+	Ensured by improving facilities and lateral spread throughout the company of safeguards against minor incidents that may otherwise lead to serious environmental accidents.
Compliance with environmental laws	No legal violations	+	Ensured by the establishment of corporate targets and enforced through daily inspections and environmental patrols.
Improving Waste Recycling	Over 98% recycling rate	+	Actual result: 98.3% Achieved by verifying that our waste was separated and by expanding our network of recyclers.
Reducing Waste Generation	Over 2% reduction rate* ²	+	Actual result: 4% Achieved by identifying recyclable items among waste and recycling them.
Promoting Energy Conservation	Over 1% reduction in CO ₂ emissions* ²	+	Actual result: 2% Energy Conservation Committee identified and implemented new areas for energy conservation.
Reducing Paper Use	Reduction in paper use: 44% per person per month* ³	+	Actual result: 49% Achieved by using projectors, doubled-sided copying and shrinking documents to be copied.
Fostering a Better Understanding and Awareness of Environmental Protection	100% participation in environmental management system training	+	Actual result: 100% Improved environmental education and engaged in events during Environment Month.

*¹ Environmental Accident: A spill above legal requirements leaving company grounds *² Reduction Rate: Compared with FY 2003 *³ Reduction: Compared with FY 2001

Environmental Data

Air Quality (Air Pollution Control Law and ordinances)

Unit: NOx:ppm, Soot and dust: g/m³N

Substance	Facility	Legal Unit	Measured Value
NOx	Kerosene boilers (installed before April 1, 1997)	150	114
	Kerosene boilers (installed after April 1, 1997)	80	78
	Gas boilers	150	100
	Smelters	180	90
Soot and dust	Kerosene boilers	0.3	0.004
	Gas boilers	0.1	0.002
	Smelters	0.2	0.001

*Measured values are the maximum measured values in FY 2004.

Wastewater Quality (Sewage Water Law and other ordinances)

Unit:mg/l (except pH)

Item	Legal Limit	Measured Value		
		Maximum	Minimum	Average
pH	Above 5 – less than 9	7.8	6.7	7.3
BOD	<600	410	1	71.9
SS	<600	180	1	18
n-hexane	Liquid petroleum	5	1	<1
	Fat and oil taken from plants and animals	30	26	1
Zinc	3	0.8	<0.01	0.2
Nickel	1	0.2	<0.1	<0.1
Iodine	<220	<1	<1	<1
Smeltable metal	10	0.5	<0.1	<0.1
Soluble manganese	1	0.1	<0.1	<0.1

PRTR Substances

Unit: kg/year

Substance number	Chemical substance	Amount handled	Air	Water	Waste	Landfilled by Nissan	Recycled	Chemically changed	Product
40	Ethyl benzene	21,982	1	0	5	0	0	21,976	0
43	Ethylene glycol	1,057	9	0	1,046	0	0	2	0
63	Xylene	129,655	601	0	462	0	0	128,592	0
85	Chlorodifluoromethane	1,214	0	0	1,214	0	0	0	0
227	Toulene	178,744	187	0	1,659	0	0	176,898	0
299	Benzene	7,370	4	0	1	0	0	7,365	0
Total		340,022	802	0	4,387	0	0	334,833	0

*PRTR : Pollution Release and Transfer Register. This system calculates the extent to which the production, use, and storage of chemical substances result in the release and transfer of those substances into the environment. The PRTR Law was originally enacted in July 1999 in Japan. *According to PRTR law, raw materials that contain 0.1% or more of carcinogen (designated type 1 chemical substances) and those that contain 1% or more of other substances are measured. *As the figures are rounded to the first place, the sum of air, water, chemicals, waste, or buried by Nissan, recycled, chemically changed, and made into products may not necessarily be the same as the sum of the amount handled or total.

Nissan Motor Co., Ltd.

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