

# Environmental and Social Report Digest

Year Ended March 31, 2002



# 2001



# Message From Management

Protecting and sustaining the environment around us is very important to our customers and to us. We approach this responsibility as a corporate citizen with the conviction that sound environmental policy is at the core of sound business practice.

This January, we announced the "Nissan Green Program 2005", a mid-term environmental action plan outlining the company's efforts in environmental protection, encompassing product and technology development, recycling strategy and many other initiatives.

Nissan's policy is well reflected in our acceleration of Ultra Low Emission Vehicle plan announced last October, which expands the use of U-LEV technology in up to 80% of Nissan passenger cars in Japan by the end of FY2002.

At Nissan, adopting new technologies to bring realistic and pragmatic benefits and solutions to the urgent needs of protecting the environment is of top priority. The all new "March", announced this February and well accepted in the market, is certified as U-LEV and has already met FY2010 fuel economy standard ahead of schedule. Our U-LEV strategy yields immediate and affordable solutions. In addition, this car has a recyclable ratio of 95%. This performance has been achieved very quickly thanks to the motivation of all Nissan people involved.

Progress of joint development program with Renault for fuel cell vehicle is progressing smoothly. In addition to the road tests with Xterra-FCV in California, Nissan will participate in domestic testing program for FCVs in Japan under the auspices of the Japanese government this year.

We also have concentrated efforts on the reduction of waste and emissions which is related to all our business activities.

In manufacturing, we have completed eliminating direct landfill waste disposal at all plants and facilities in March, 2002. At the same time, in sales and services, we have completed certifying all Nissan dealers in Japan with a "Nissan Green Shop" certification, based on ISO14001. Through these efforts, we have established an environmental manage-

ment system revolving around the lifecycle of a vehicle, from manufacturing to point of sales to recycling.

Sound environmental policies are, and will continue to be an ever-increasing part of our core business of designing, building and selling exciting and attractive vehicles worldwide.

Nissan will remain to be at the forefront in deploying affordable and environmental friendly technologies to the market, while developing innovative and creative solutions for the future.

Nissan is committed to contributing to and enriching people's lives.



**Carlos Ghosn**  
President & Chief Executive Officer  
Nissan Motor Co., Ltd.

**Nobuo Okubo**  
Executive Vice President and  
Environmental Officer  
Nissan Motor Co., Ltd.

## Nissan's Environmental Philosophy and Policies

Under Nissan's Vision & Mission, we have set the following environmental philosophy and environmental policy toward realizing its "Customer-Focused and Environmental Friendly" guideline. Nissan's mission in society is to foster the attainment of sustainable development and the formation of the recycling-based society and economy by pursuing business based on these philosophies.

### Nissan's Environmental Philosophy

#### Symbiosis of people, vehicles and nature

It is our view that the basis of environmental protection lies in the human capacity to show kindness and concern. Along with striving to understand the environment better, all of us at Nissan bring a shared concern for people, society, nature and the Earth to bear on our activities. This commitment and concern are embodied in every Nissan product and throughout all of the company's operations as the driving forces of Nissan's ongoing contributions to the advancement and enrichment of society.

### Environmental Policy

Nissan is taking the initiative to promote wide-ranging activities aimed at improving the environment both globally and locally in line with the guidelines noted here. These efforts are being pursued in all areas of the company's operations, including product development, manufacturing, sales and service, in order to make Nissan's Environmental Philosophy a reality.

- Achieving a cleaner automotive society**  
Nissan aims to reduce the environmental impact at every stage of the vehicle life cycle, namely product development, manufacturing, use and disposal, in order to create a cleaner living environment. Besides working to improve vehicles themselves, Nissan also contributes to the improvement of social systems involving vehicle use.
- Conserving natural resources and energy**  
Because the earth's natural resources and energy supplies are finite, Nissan is advancing efforts to minimize their consumption at every stage of the vehicle life cycle.
- Expanding and continuously improving Nissan's environmental management system**  
Nissan is implementing an in-house environmental management system that conforms to the environmental management system standard formulated by the International Organization for Standardization (ISO).
  - Preventing environmental issues in the first place and observing laws and regulations
  - Cultivating a corporate culture dedicated to environmental protection
  - Undertaking cooperative activities with subsidiaries and affiliates
  - Strengthening communications and cooperation with customers
- Issuing reports on environmental activities**  
Nissan regularly issues announcements and publications explaining the company's efforts to address environmental concerns.

# Nissan Green Program 2005 (Mid-term Environmental Action Plan)



## NISSAN GREEN PROGRAM 2005

To realize a clean automotive society, Nissan will engage in environmental measures in various fields and use various techniques. Our research and development efforts are aimed at reaching our objectives in 2005.

The Nissan Green Program: an ongoing program for the future.  
The program mark symbolizes Nissan's hopes for more green on the Earth.

### Recycling



Nissan Green Parts

- Appropriate treatment of ELVs
- Promotion of used parts

We will improve the recyclability of new models to 95% or more by 2005.  
We will proceed the development of appropriate treatment technologies for ELVs.  
We will improve the range of reuse and rebuilt parts (Nissan Green Parts).

### Product Development

- Improvement fuel economy
- Reducing exhaust emissions
- Designing recyclable vehicle structure
- Reduction of vehicle exterior noise
- Lower emitting of air conditioner refrigerants

Enhance U-LEV models starting from Bluebird Sylphy  
Complete the development of FCV around 2005.  
Improve fuel economy with the introduction of models equipped with CVT.



### Sales and service

- Promote environmental management at dealers

Promote environmental protection activities of dealers (Nissan Green Shop Certification System)  
Promote the recycling of used bumpers  
Promote the collection and destruction of Freon Gas



### Manufacturing

- Promotion of energy saving
- Promotion of waste reduction and recycling
- Improvement Management of chemical substances
- Reduction of CO<sub>2</sub> in logistics

Reduce CO<sub>2</sub> emission by 10% from 1999 levels by 2005.  
Eliminate wastes for reclamation.

## Progress in FY 2001

Area	Major achievements in FY 2001
Product Development	Enhance U-LEV models Bluebird Sylphy, Serena, March, Primera, Skyline Participated in California Fuel Cell Partnership Introduced 95 percent recyclable vehicle: March
Manufacturing	CO <sub>2</sub> emission reduced by 14.5% from 1999 levels Direct reclamation eliminated at all plants and offices Waste incineration weight reduced by 18% from 1999 levels Installation of VOC20g/m <sup>2</sup> model line has been completed Complete preparation to submit notice on substances subject to PRTR for fiscal year 2001
Sales and service	Complete "Nissan Green Shop" certification for all dealers (236 firms)

Area	Major achievement in FY 2001
Recycling	Put on the market of a waste oil and liquid collection equipment "one stage drainer" National network for Nissan Green Parts has been completed and Nissan Parts Gumma Sales office has joined the network
Environmental operations	Application of ISO14001 and continuous improvement at all production centers Creating new risk evaluation standards and implementation of the evaluation Review and revise facilities improvement, maintenance management and strengthening of management Sponsor Nissan Environmental Meeting. Issue environmental report 2000 Two CNG commuter buses purchased

# Product Development

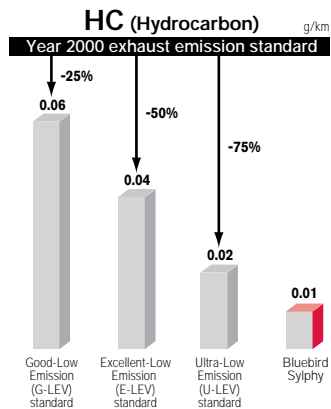
## Cleaner Exhaust Emission

Nissan is proactively researching and introducing cleaner exhaust emission vehicles by improving engine combustion, advanced engine control technologies, and after treatment devices such as the catalytic converter system. We will continue to introduce "Ultra-Low Emission Vehicles (U-LEV)" to more than 80% of all passenger cars sold in Japan by the end of March 2003.

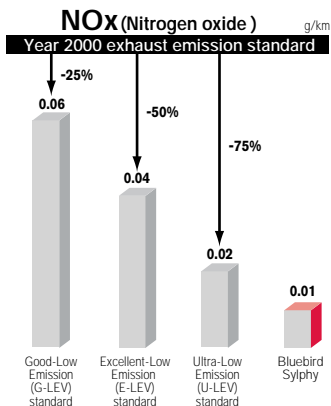
### Low exhaust emission technology for gasoline engine

Super Ultra Low Emission Vehicle (SULEV) certified Sentra CA (Clean Air), sold in the United States since February 2000, is the world's first gasoline Vehicle to receive Zero Emission Vehicle credit from the California Air Resources Board (CARB) as it met all other requirements including zero evaporative emission from the fuel system, and the on-board diagnosis level 2(OBD-II). In Japan, we have further improved the technology used in the "Sentra CA" and introduced the Bluebird Sylphy, with more than a 50% emission reduction from the Japanese "Ultra-Low Emission Vehicle (U-LEV)" standard by the Ministry of National Land and Transport. In fiscal year 2001, the equivalent U-LEV technology was expanded to the new March, Serena, Skyline and Primera.

### Exhaust Emissions of Bluebird Sylphy



Ultra-Low Emission Vehicle (Bluebird Sylphy 1.8L 2WD)



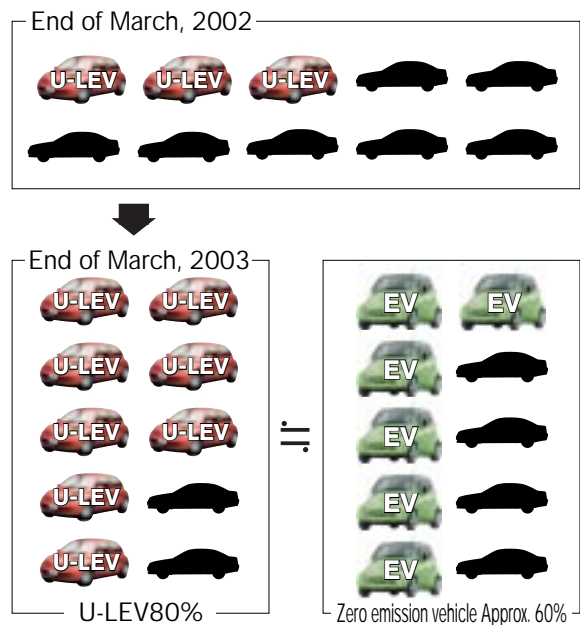
QG18DE



SENTRA CA

### Increasing Ultra-Low emission vehicles (U-LEV)

U-LEV is an environmentally friendly vehicle with exhaust emissions as clean as about one fourth of the level of NOx and HC of cars certified for the Japanese year 2000 exhaust emission standards. Introducing 80% of U-LEV passenger cars annually in Japan has the equivalent effect, in terms of reducing NOx and HC, to disseminating 400,000 zero emission vehicles, such as fuel cell vehicles and electric vehicles, annually.



### U-LEVs sold in fiscal year 2001

March



Skyline



Serena



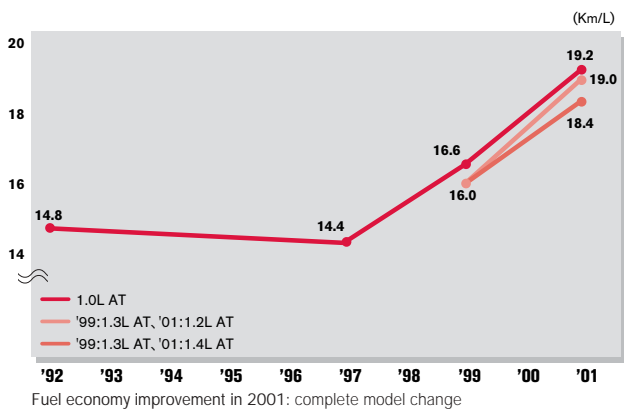
Primera



## Improving Fuel Economy

In order to promote the improvement of fuel economy (curb on CO<sub>2</sub> emissions), Nissan has been advancing its comprehensive research and development and commercialization. Nissan aims to achieve its voluntary standards for fuel economy which reflect the Japanese government's standards for diesel-powered vehicles in 2005 and for gasoline-powered vehicle in 2010, as well as standards set by other countries. In Japan, all of our gasoline-powered vehicles in every weight class surpassed the year 2000 fuel economy improvement goals of Japanese government.

### Fuel Economy of the March (Japan 10-5 mode)



### Expanding the adoption of direct injection (Nissan Di) gasoline engines

Nissan's unique Next combustion\*<sup>1</sup> improves fuel economy. The newly developed Nissan Di VK45DD engine adopted to the Cima achieves excellent low emission performance and a low fuel consumption of 10.0km/L while maintaining a high level of driving performance and quietness.

\*<sup>1</sup> Next Combustion: "Nissan Exquisitely Tuned" combustion that utilizes both "Stratified charge Combustion" for fuel economy and "Homogeneous charge Combustion" for high output.

## Development of clean energy vehicles

From the point of preventing global warming and cleaner exhaust emission, we are developing major four technologies such as electric, hybrid, natural gas and fuel cell.



Xterra FCV  
(High pressure hydrogen method)





AD van CNGV (compressed natural gas vehicle)



Hypermini (electric vehicle)



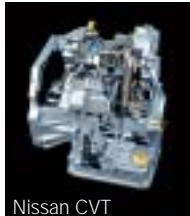

### Vehicles adopting Direct Fuel Injection Gasoline Engines

Engine	Vehicles
 VQ30DD, VQ25DD	 Stagea (Photo), Skyline, Cedric, Gloria, Cefiro
 QR25DD	 Primera (Photo), Primera Wagon

Also adopted on Cima, Bluebird Sylphy, Bluebird, and Sunny.

### Expanding the adoption of Continuously Variable Transmission (CVT)

The belt type continuously variable transmission (Nissan CVT/ Nissan CVT-M6) uses a set of pulleys and a steel belt to continuously changes the transmission ratio. The EXTROID CVT, the first of its kind in the world, implements double cavity design with disks and power rollers to transfer driving force and to change transmission ratio. These two transmissions has improved the efficiency of the drive-train system and thus the fuel economy.

 Nissan CVT	[Vehicles adopting the Nissan CVT] Primera, Primera Wagon, Bluebird, Avenir, Sunny, Liberty, Tino, R'nessa, Wingroad, Serena, Cube, Bluebird Sylphy	 EXTROID CVT	[Vehicles adopting the EXTROID CVT] Cedric, Gloria, Skyline
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### Fuel Cell Vehicle (FCV)

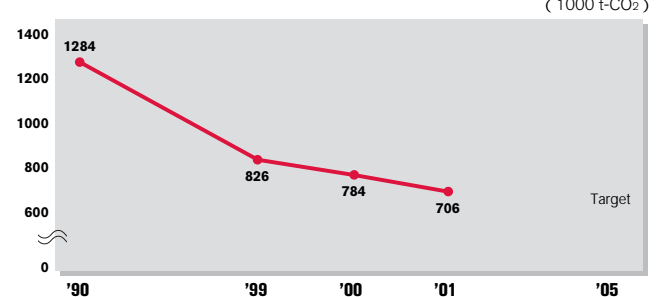
This is an automobile with a clean and efficient power source that directly generates electrical energy through the reaction of hydrogen and oxygen, leaving only pure water as a by-product. We are engaged in the development of FCV with excellent environmental performance and energy conservation while maintaining ease of handling. Also, we have participated in the California Fuel Cell Partnership (CaFCP) to perform test drives on public roads with the high pressure hydrogen fuel cell powered "Xterra FCV" from April 2001.

# Manufacturing

## Promoting energy saving

We improved our productivity by consolidating the plants and processes, and enhanced energy conservation by introducing high efficiency cogeneration systems. Total CO<sub>2</sub> emission in 2001 fell 14.5% from 1999 levels (or down 45% from 1990 levels).

## Total CO<sub>2</sub> Emission



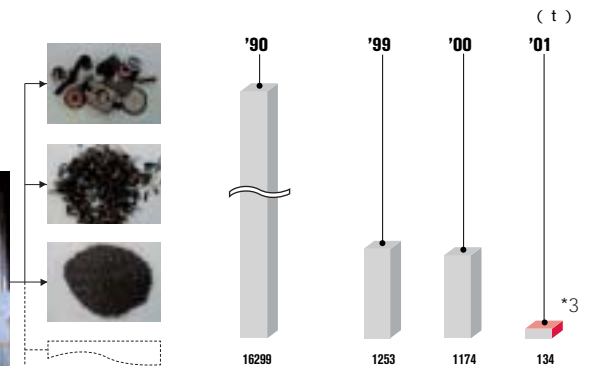
## Achieved zero emission

As a result of the company's best efforts to achieve zero emission in wastes, we have achieved the target of zero waste for reclamation. \*1. Nissan's plants and offices have made extensive efforts to sort and recycle wastes. As a result, the total recycling rate has risen substantially to 97.6%.

\*1 To reduce weight of waste that goes directly from plants and business offices to landfills to less than 1.5% compared with the fiscal year 1990 levels.

## Disposed weight by reclamation\*2

\*2 Shows the weight of waste that goes directly to landfills from plants and business offices.  
\*3 Annual equivalent as of March 2002



## Examples of waste reduction and recycling



[Oppama Plant]  
Scrap parts are disassembled by hand and metal pieces are recycled.

[Zama Office]  
Floor trash sorter divides trash into large trash, steel trash, non-ferrous metal trash, sand, and combustible trash. As a result, 90% of the trash is now recycled.



# Sales and service

## "Nissan Green Shop" Certification System

From April 2000, we have implemented our own environmental management certification system that conforms to ISO 14001 to reinforce the environmental protection activities of dealers. Certification of all dealers (236 companies including parts dealers, forklift dealers, and other related facilities) was completed in March 2002. We verify the continuation of environmental preservation activities in order to establish environmental management and to maintain and enhance activities by having the dealers themselves inspect themselves, and through our company's surveillance in the first and second year after certification and to renew the certification in the third year.



## Example of the results of the certification system



# Recycling

## Efforts in the development stage of new models

### Achieved recyclability of 95%\*1

All new models launched in or after 1999 have achieved a recyclability of 90% or higher. By developing structures and materials that are easy to recycle, our new March launched in 2001 boasts a recyclability more than 95%.

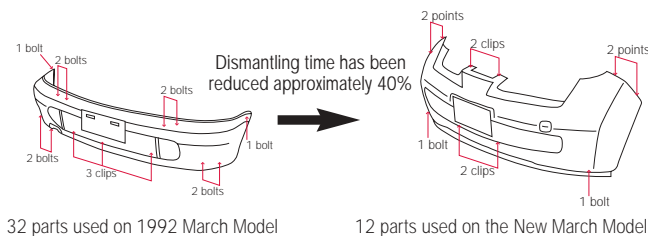
\*1 Based on Nissan's in-house calculation standards

### Principal recyclable parts on the new March



### Development of easy to recycle Structures

Nissan has made parts easier to remove from automobiles by reducing the number of parts and reducing the number of points where parts are installed on automobiles.



## Efforts in the ELV Treatment Stage

### Sale of Reuse Parts \*1 and Rebuilt Parts\*2

Reusable parts are sold under the name, "Nissan Green Parts." In October 2000, we completed the national sales network for these parts.



\*1 Reuse parts: Used parts that are reused after washing and performing a quality check.

\*2 Rebuilt parts: Recycled parts that are disassembled, washed, inspected, and fitted with new expendable parts.

### Reuse Parts example



### Rebuilt Parts example



### Development of equipment that appropriately treatment waste oils and liquids

Using our knowledge as an automaker, we developed and now sell a equipment that securely and economically collects waste oils and liquids in a single process.



One stage drainer

# Environmental Communication

### Activities for Enlightening Customers On the Environment

Our company publishes environmental pamphlets, public relations materials, videos and "The Environmental Note" and "The Nissan Recycle Book" to explain our environmental preservation projects to customers. Also, as a precursor to the introduction of "Comprehensive Study Hours"



Special Class on Electric Vehicles  
(At a primary school in Mitaka, Tokyo)

at all primary schools in Japan from fiscal year 2002, we have repeated last fiscal year's experiment of organizing "Special Classes on Electric Vehicle (Hypermini)" jointly with primary schools.

### Exhibitions and Test Drives

We make positive efforts to participate in large and small exhibitions relating to the environment and test drives to try to promote the proliferation of low pollution cars and clean energy cars. In fiscal year 2001 our company participated in a total of 66 such exhibitions and test drives.



Prime Minister Koizumi at a Fuel Cell Vehicle Test Drive

# Involvement with society

## Partnership with NPOs

We want to participate in making society an energetic forum that accepts diversity. By forming partnerships with NPOs that have taken the initiative in tackling various social problems, we are investing in society through social participation activities.

### Nissan Children's Storybook and Picture Book Grand Prix

This contest for amateur authors and illustrators of storybooks and picture books for children has been held annually since 1984 with the aim of providing children with storybooks and picture books that inspire their dreams and imagination. Works that finish in the upper levels in this contest are recognized as high quality works. Today, the contest is seen as a gateway to success for new authors and illustrators.



Poster inviting entries

### Nissan-NPO Learning Scholarship Program

Through this program that began in 1998, we invite applications from students who wish to work for NPOs, select the successful candidates, and give them scholarships according to their work accomplishments. We receive applications from over 100 students every year. Of these, approximately 20 are awarded scholarships to work in NPOs of various fields including social welfare, environment, international exchange, culture, and arts.



A student receives a certificate of completion from Nissan president Carlos Ghosn

## Communication With Customers

### Customer Voice Center

We formed a Customer Voice Center, which is composed of a customer desk, a section that uses customers' feedback comments within the company, a section that promotes improvements, and a section that promotes customers' satisfaction with dealers around the country.



Customer Voice Center

### Customer desk

Toll-free: 0120-315-232

Mondays through Fridays (excluding holidays) 9:00-12:00, 13:00-17:00

### Nissan Information Center

Toll-free: 0120-838-232

Mondays through Fridays (excluding holidays) 9:00-12:00, 13:00-16:00

### Post Office:

<http://www.nissan.co.jp/POSTOFFICE/>

## Vision

Nissan: Enriching people's lives

## Mission

Nissan provide unique and innovative automobiles products and services that deliver superior measurable values to all stakeholders\* in alliance with Renault.

\*Our stakeholders include customers, shareholders, employees, dealers, suppliers, as well as the communities where we work and operate.

## Guiding Principles

### SUCCESS

Seeking Profitable Growth

Unique and Innovative : " Bold and Thoughtful "

Customer-Focused and Environmental Friendly

Cross-Functional and Global

Earnings and Profit Driven

Speed

Stretch

## Corporate Profile (As of end of March, 2002)

### NISSAN MOTOR CO., LTD.

Established : December 26, 1933

Headquarters : 2 Takaracho, Kanagawa-ku, Yokohama-shi, Kanagawa-ken 220-8623

Head Office : 6-17-1 Ginza, Chuo-ku, Tokyo 104-8023

Tel: 03-3543-5523

Paid-in capital : 604,556 million yen

Number of employees : Consolidated 125,099 persons (Unconsolidated 30,365 persons)

Consolidated Subsidiaries : 297 companies

Business outline : Development, manufacturing, purchase, sales, leasing and service of automobiles, industrial vehicles and other transportation equipment, parts and other related materials.

## Published by

Nissan Motor Company Co., Ltd. Environmental Management Committee

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This report is a digest version of the Environmental and Social Report (total of 64 pages) that we publish. The full report can be viewed on our website.  
<http://www.nissan-global.com>

