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Protecting the Environment

Nissan's Business Activities and the Environment

Nissan's vision of an ideal society is "a Symbiosis of People, Vehicles and Nature." Since adopting this environmental philosophy in 1992, we have worked hard to make it a reality, constantly assessing the impact of our vehicles and corporate activities on the global environment while making every effort to address such issues. We will continue to make proactive efforts, working with society to create a brighter future for our planet and generations to come.

Achieving a Sustainable Mobility Society

In 2009 the United States, under the new administration of President Barack Obama, and other nations began boosting environment-related spending. These moves were meant to help counter the severe worldwide recession and global warming, and they had particular impact on the automobile industry, with governments introducing stronger fuel-efficiency requirements, stricter regulations of emissions of CO₂ and other greenhouse gases and policies including subsidies and tax incentives to promote a transition to more fuel-efficient vehicles. This greatly increased the consumer demand for environmentally conscious cars.

In the area of CO₂ emissions reductions, the Japanese administration of the Democratic Party of Japan proposed the medium-term target of reducing emissions by 25% from 1990 levels by 2020, and the major industrialized economies took a leadership position at the G8 Summit in L'Aquila, Italy, in moving toward low-carbon societies with agreement on a target of an 80% reduction by 2050 in industrialized countries overall. In the future, the debate on the ideal frameworks for action is expected to take place in line with the Copenhagen Accord the document signed at the 15th Conference of the Parties (COP15) to the United Nations Framework Convention on Climate Change that noted the scientific consensus on the need to limit the rise in global temperature to within 2 degrees Celsius.

Meanwhile, the harsh economic situation continues, and balancing growth with environmental measures will be a major, ongoing challenge for businesses. To get through the recession, companies will need to have a vision for the future, maintain and strengthen their competitiveness through innovative environmental technologies, and create new value, while at the same time providing against risk. At Nissan, we will continue making sincere and proactive efforts toward further innovations based on our medium-term environmental action plan, Nissan Green Program 2010, to realize a sustainable mobility society in which people and vehicles coexist with nature.

Nissan's Approach to Environmental Issues

Motor vehicles are built using a quantity of resources and are primarily powered by fossil fuels such as gasoline and diesel. As a global automaker, Nissan takes active steps to identify the direct and indirect impacts of its business on the environment and subsequently minimize them. Furthermore, our ultimate goal is to reduce the environmental impact caused by our operations and Nissan vehicles throughout their lifecycle to a level that can be absorbed naturally by the Earth, leaving as small a footprint on the planet as possible.

Nissan aims to be a "sincere eco-innovator." We show that we are *sincere* by taking a proactive stance toward addressing environmental challenges and reducing the real-world environmental impact. We believe that being an *eco-innovator* means providing our customers with optimal value in the form of innovative products, technologies and services as contributions to a sustainable mobility society.

We also believe that we can contribute to sustainable development through our environmental initiatives. We are actively working to contribute to the protection of the global environment through sustainable mobility to achieve "a Symbiosis of People, Vehicles and Nature."

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Please see our website for detailed information on our environmental activities.

<http://www.nissan-global.com/EN/ENVIRONMENT/>

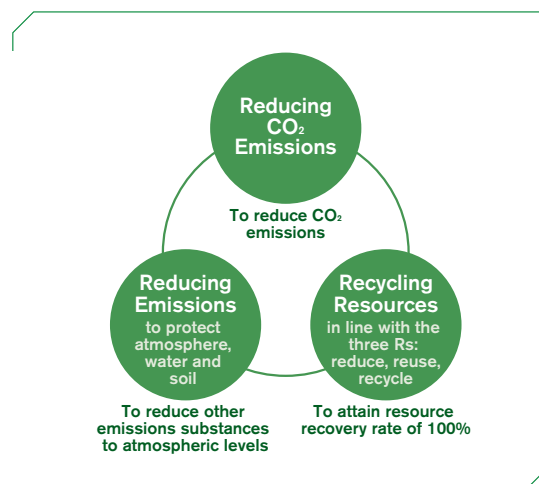


NISSAN
GREEN PROGRAM

Nissan's Three Key Issues

After considering the impact of various environmental issues, including climate change, the burden placed on the ecosystem and humans by environment-impacting substances, and mineral and water resources, Nissan defined three key issues to be tackled: reducing CO₂ emissions, reducing other emissions (to protect the air, water and soil) and recycling resources. We are working to achieve specific goals in each of these areas in order to minimize the impact of Nissan's motor vehicles and business activities on the environment.

We feel that these issues can be resolved in a sustainable way only by offering customers the right products at the right time and right cost. Reduction of CO₂ emissions, which Nissan considers one of its top priorities, is being advanced companywide under a "QCT-C" framework that adds the component of CO₂ to the traditional management indices of quality, cost and time.



Moving Toward Long-Term Goals

The ultimate long-term strategy for automakers to help protect the environment and create new demand is to develop zero-emission vehicles, which have essentially no environmental impact while being driven.

Nissan has committed to becoming a zero-emission leader, and we are working energetically in pursuit of this goal. In fiscal 2009, we announced the Nissan LEAF, our first mass-production entry into the EV space. The Renault-Nissan Alliance also formed cooperative ties with national and local governments around the world, working to expand partnerships toward the eventual realization of a zero-emission society.

We are also implementing our medium-term environmental action plan, Nissan Green Program 2010, which we launched in December 2006 as a means to help the company as a whole achieve key environmental targets and establish needed frameworks by 2010. We made a number of achievements in this pursuit in fiscal 2009, including our joint development of a next-generation continuously variable transmission (CVT) with an affiliate, JATCO Ltd., and our prompt moves to expand our range of environmentally conscious cars by outfitting them with engine and CVT modulation, alternator regenerative systems and reduced drag.

Expert Comment

Mie Asaoka

President
Kiko Network

Nissan is working to be a leader in zero-emission mobility, and its efforts to develop and promote electric vehicles (EVs) should be an effective way to reduce CO₂ emissions. Growing numbers of consumers are looking at the total cost of vehicle ownership, including fuel prices, and choosing EVs based on their economic sensibility.

We have seen rapid shifts in smart grids and renewable energy in the last few years, and we may see a new type of automobile society sooner than we think. This is a society where EVs are a part of power infrastructure built with smart grids and relying increasingly on renewable energy sources, and where they play a role in promoting the development of compact urban environments.

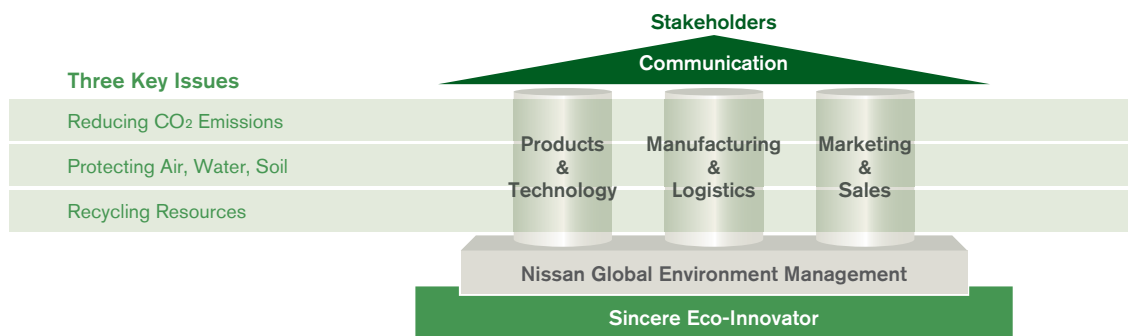
In tackling the challenge of climate change, we need to address issues in a broad range of areas, including energy and water resources. We have gone beyond the stage where companies could consider actions to address these on an individual basis. Today they must work in partnership with governments and other industries. I fully expect that Nissan will show strong leadership in bringing together these actors as it works toward the achievement of a low-carbon society.

Protecting the Environment

Environmental Management

Nissan has identified three major environmental issues on which to focus its energies: reducing CO₂ emissions; protecting the air, water and soil; and recycling resources. To make progress in these areas, we believe a management system is needed that achieves maximum results by organically linking divisions engaged in product and technical development, production, logistics, marketing and sales. We are building a global environmental management framework and establishing targets and action plans in all areas of activity to promote consistent approaches.

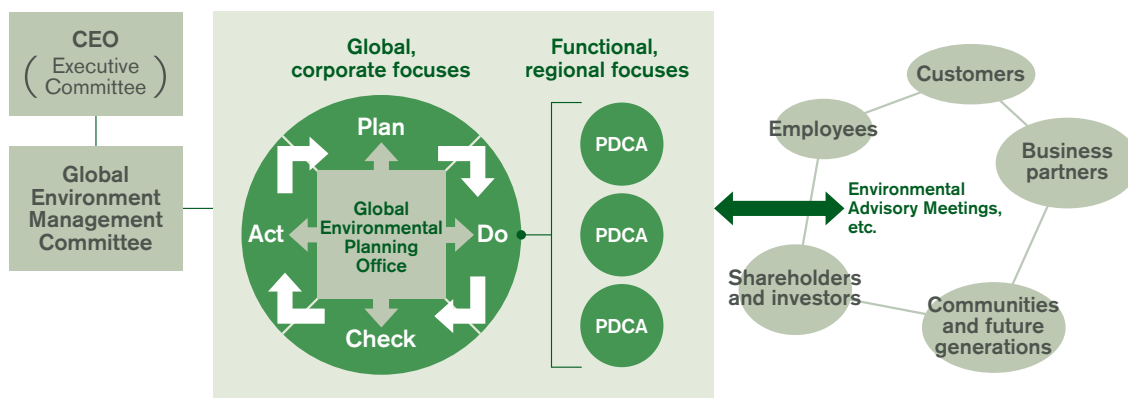
Our Framework for Global Environment Management



Environmental Management Framework

Nissan has created the organizational system shown below to clarify areas of activity, with the aim of promoting environmental management worldwide. Our Global Environment Management Committee (G-EMC), headed by Nissan's chief operating officer, decides overall policies and the proposals to be put before the Executive Committee. The Global Environmental Planning Office, established in 2007, determines which proposals will be forwarded to the G-EMC and assigns specific actions to each division. It is also responsible for the efficient management and operation of progress based on PDCA—the cycle of planning, doing, checking and acting. In addition to operating these internal organizations, we gather the ideas of leading figures and institutes at our Environmental Advisory Meetings, using them to grasp the opinions of our stakeholders and to scrutinize our goals and activities. We seek to further enhance our activities by learning about the trends of socially responsible investment (SRI) funds and assessments from rating organizations.

Nissan's Global Environment Management Organization



A Full Range of Environmental Management Systems

To promote efforts in this field, we are introducing environmental management systems in all companies in the global Nissan Group, including production sites, sales companies and affiliates. We are working to apply ISO 14001 standards at our main global production plants and R&D centers; today 18 of 20 production sites, including those of both Nissan and its consolidated manufacturing affiliates, have obtained ISO 14001 certification. Our policy is to extend environmental management systems with these same criteria to regions in which we are newly expanding.

In addition to undergoing audits by third-party organizations, each year Nissan carries out its own internal audits of its environmental systems and environmental performance. These are to check whether our environmental management systems are functioning properly and to confirm that our various organizations are implementing measures on an ongoing basis in line with our environmental policy.

In Japan, we have introduced the Nissan Green Shop certification system, an original Nissan approach to environmental management based on ISO 14001 certification. As of the end of March 2010, some 2,900 dealership outlets of 178 sales companies, including parts and forklift dealers, have been certified under the system. This ongoing approach is maintained through internal audits conducted by the sales companies themselves every six months, in addition to regular annual reviews and certification renewal audits carried out every three years by Nissan headquarters.

Shared Approach with Suppliers

The Nissan and Renault purchasing divisions have laid out their approach to dealing with suppliers in a booklet titled *The Renault-Nissan Purchasing Way*. In 2010, we created the *Renault-Nissan CSR Guidelines for Suppliers*. Our efforts in the field of supply-chain management are based on these documents. (See page 63 and page 65.)

In April 2008 we issued the Nissan Green Purchasing Guidelines as standards for the environmental efforts of our automobile parts and materials suppliers, and we are now expanding these guidelines globally. We will continue to work together with our suppliers worldwide to realize our environmental philosophy of "a Symbiosis of People, Vehicles and Nature."

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The Renault-Nissan Purchasing Way, Renault-Nissan CSR Guidelines for Suppliers, and Nissan Green Purchasing Guidelines are available for download from our website.

http://www.nissan-global.com/EN/COMPANY/CSR/STAKEHOLDER/BUSINESS_PARTNERS/

Communication with Stakeholders

Nissan creates a range of opportunities to communicate with stakeholders. We take what we learn through this communication and reflect it in our operations to increase the value of the company and build relationships of trust. An example of this is the Environmental Advisory Meetings we hold each year for discussions with leading experts in the environmental field. The things we learn in these discussions are used to evaluate the direction of our environmental strategy, letting us change course where needed to achieve our environmental goals. The discussions also play an important role in management by providing external feedback on Nissan's corporate activities. We work to improve communication with our stakeholders through various other means as well, including publishing the annual Sustainability Report and other booklets or pamphlets describing our environmental efforts, disclosing information via our website, and holding exhibitions, test drives, environmental panel exhibits in our factory guest halls, environmental facility tours and traveling environmental lectures with academia-industry cooperation.

Nissan Waku-Waku Eco School

To teach children about environmental issues in a way that is easy to understand and will lead them to action, Nissan conducts education activities outside the company. Since 2008, we have organized the Waku-Waku Eco School, an original program run in cooperation with the nonprofit organization Weather Caster Network (WCN). This program consists of three parts: talks by a weather forecaster from WCN, assembly of kits of fuel-cell car models, and trial rides in an X-TRAIL fuel-cell vehicle. In fiscal 2009 we added a class that focuses on recycling and held these classes at 31 elementary schools, with the participation of some 2,900 children. We will continue these efforts to provide opportunities for children to experience future energy resources and technology and raise environmental awareness through learning about automobiles.

Environmental Education for Employees

Nissan conducts environmental education for all its employees in Japan to promote and deepen individual awareness with regard to the environment. Basic education is a part of the orientation of new employees when they join the company. Classes and seminars are also held to raise the awareness of managers and midlevel employees, using Nissan's original environmental education curriculum.

In January 2008 we began the environmental e-Learning program in Japan. This is an environmental education tool for employees developed in conjunction with Natural Step, an international NGO. The program offers enjoyable learning about the Earth's environmental mechanisms and the ecological issues that we should be aware of as an automobile manufacturer. Environmental e-Learning is already available at affiliated companies and subsidiaries in Japan, and in the future we will develop a more systematic program to spread these unique education activities worldwide.

Protecting the Environment

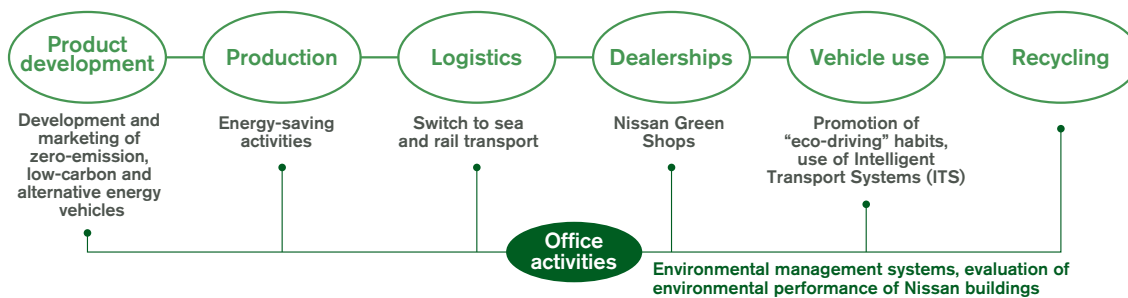
Reducing CO₂

Carbon dioxide (CO₂) is thought to be a leading cause of global warming, and reducing CO₂ emissions is an urgent task that we all need to address. At Nissan, emissions reduction is among our highest priorities. As a global automobile manufacturer, we are working to reduce CO₂ emissions at every stage of our vehicles' lives: from production to transport and operation.

The Tasks for Nissan to Tackle

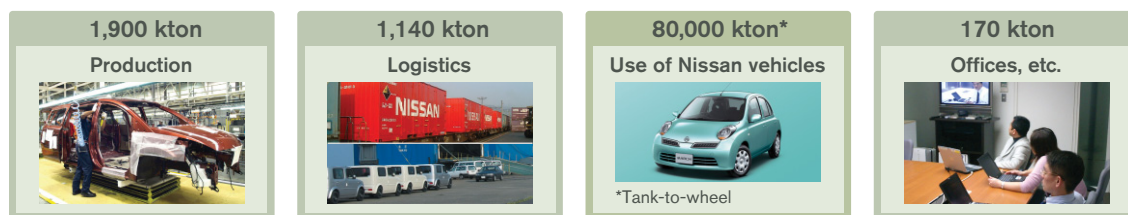
The first commitment phase of the Kyoto Protocol started in 2008, and international debate toward drawing up the next framework from 2013 is moving forward. These movements are accompanied by increasingly strict regulations on CO₂ emissions by the governments of many nations. European Union countries have already strengthened their emissions regulations with the announcement of regulations for all new vehicles sold in the region from 2012. The United States has announced stepwise increases in automobile fuel efficiency standards until 2016. In Japan, fuel efficiency standards for fiscal 2015 have been announced. More demanding than the fiscal 2010 standards in effect now, these are being applied to large trucks as well. In China, which became the world's top automobile market in 2009, further strengthening of the regulations is being examined. As governments take these steps, increased environmental awareness is taking widespread root among consumers.

Nissan's Efforts to Reduce CO₂ Emissions



We are living in a carbon-conscious society, and today there is an increasing need for a sense of urgency. Society needs to first slow the increase in CO₂ emissions, and then move to reducing them. This demands innovative technologies and business models. At Nissan, we are accelerating our efforts for a low-carbon society.

Nissan's CO₂ Emissions Levels



Calculated according to Nissan's internal standards (projected lifetime emissions from new cars sold in FY09)

Nissan's Approach

Technical innovation is essential for reliable progress in reducing CO₂ emissions. We are unlikely, however, to reduce them to sustainable levels with technology alone; this will require cooperative efforts by all of society. Even in the area of technology, we cannot pursue only CO₂ reductions. We will not achieve real sustainability unless consideration is given to basic performance and cost, allowing the technology to be put into widespread use. Based on this awareness, Nissan considers the environment from the perspective of the entire lifecycle of its vehicles, and is working to reduce CO₂ emissions in all its corporate activities. We have made zero-emission vehicles the core of our strategy in our product range in particular, and we want to turn these environmental challenges into an opportunity to contribute to a sustainable society.

QCT-C for Emissions Management

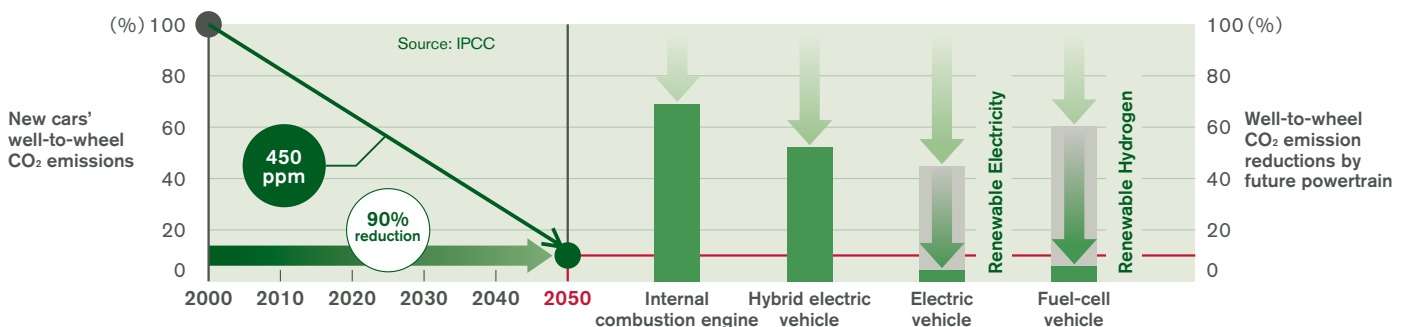
We have introduced the Nissan Global CO₂ Management Way, QCT-C, to ensure results from our CO₂ reduction activities. This is a new set of management indices with CO₂ (C) added to the traditional QCT indices of quality, cost and time, and it shows the efforts we are making across the entire company to reduce CO₂. With QCT-C, we have placed CO₂ reductions alongside quality, cost and time in importance, and we are promoting corporate activities with a balance in these four areas. We have set CO₂ reduction targets in all areas of our business with the aim of creating new value for customers and society.

A Long-Term Roadmap

We have established long-term CO₂ reduction targets and are carrying out systematic research and development based on those targets. Opinions vary with regard to the levels at which average global temperature and CO₂ concentration need to be kept. Based on the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), it is necessary to stabilize atmospheric CO₂ at 450 parts per million or lower in order to keep average temperatures from rising more than 2 degrees Celsius. To achieve this, "well-to-wheel" CO₂ emissions for new vehicles need to be reduced by 90% in 2050 compared with levels in 2000. This includes emissions that automobile makers (including Nissan) do not control, such as those generated from the extraction and refining of crude oil and its delivery to customers as fuel, as well as fuel consumption during operation.

If the 90% emissions reduction target is to be met, there will have to be greater use of electric-powered vehicles, such as electric and fuel-cell vehicles, over the longer term. It will also be necessary for these vehicles to be powered by renewable energy sources. We have set the target of making Nissan the leader in zero-emission vehicles. In addition to boosting our development of these vehicles, we are working on infrastructure development in cooperation with many government and local bodies to facilitate their spread.

Our CO₂ Reduction Scenario



Providing Technology Through the “Four Rights”

To steadily reduce CO₂ emissions, we aim to provide effective technologies at prices customers can afford and to spread these technologies widely with a focus on their total contribution. Our basic approach to introducing technology is the “four rights”—providing the right technology, at the right time, in the right market and at the right value to the customer.

Based on these four rights, we are working to raise the efficiency of internal combustion engines to the highest possible level, while moving ahead with the development and launch of electric and fuel-cell vehicles as the zero-emission vehicles of the future. We believe it is a social obligation of a global automaker to provide technology that has true value while meeting the diverse needs of customers and society.

Integrated Approach to Emissions Reduction

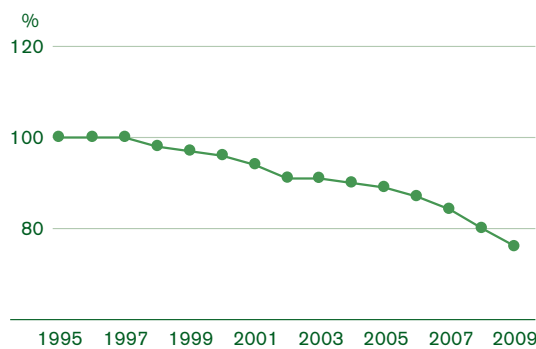
We approach CO₂ reductions during vehicle operation from the three perspectives of vehicles, drivers and the driving environment. CO₂ emissions during vehicle operation change depending on vehicle performance and type of fuel, as well as on driving technique and road conditions. We therefore seek not only to improve our vehicles, but also to conduct educational activities and introduce technologies that support eco-driving habits by our customers, and to improve the traffic environment in coordination with local and national governments and other industries.

EFFORTS IN OUR PRODUCTS AND TECHNOLOGIES

Further Emission Reductions from New Cars

Nissan has taken various approaches in its efforts to cut CO₂ emissions from new vehicles. In addition to fuel consumption measured in accordance with the standards of different countries, we have also set our own in-house standards for real-world fuel economy. These standards take into account city, highway and congested traffic conditions, and function as an index for improving fuel efficiency. We also calculate the companywide averages for fuel consumption in Japan and North America, and for CO₂ emissions in Europe, according to the number and type of vehicles shipped each year. This helps us set targets to meet regulatory standards in each region and to reduce overall CO₂ emissions. The graph shows the average annual CO₂ emissions of new Nissan cars sold in the Japanese, U.S. and European markets based on actual shipments.

Sales-Weighted Average CO₂ Emissions of New Passenger Cars (Japan, EU, USA)



Our Zero-Emission Approach

The ultimate long-term strategy for automakers to help protect the environment and create new demand is to develop zero-emission vehicles, which have essentially no environmental impact while being driven. Renault and Nissan place the introduction and widespread marketing of electric-powered vehicles producing zero emissions at the center of their Alliance strategy, and Nissan has committed to becoming the leader in zero-emission vehicles.

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Please see our website for detailed information on our zero-emission strategy.

<http://www.nissan-zeroemission.com/EN/>

Unveiling New Electric Vehicles

Electric vehicles (EVs) that run on a battery-powered motor are one type of zero-emission vehicle, emitting no CO₂ during operation. At Nissan, we sold our first electric car in 1947 and we have been actively developing and marketing electric cars since the 1960s. Using this wealth of experience, we unveiled the Nissan LEAF, an all-electric zero-emission vehicle with an on-board lithium-ion battery, on August 2, 2009. Sales will commence in December 2010 in Japan, the United States and some European countries. In 2012 we will commence large-scale global sales of the vehicle. We also unveiled the Land Glider, an urban EV concept car, at the 41st Tokyo Motor Show in October 2009.



Nissan LEAF



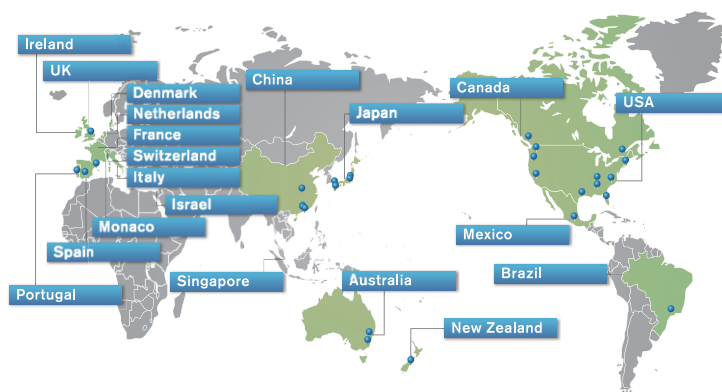
Land Glider

High-Power Lithium-Ion Battery

From a very early stage, Nissan has been committed to the development of motors, batteries and inverters, which are the core technologies of electric-powered vehicles. In 2007, Nissan founded the joint-venture company Automotive Energy Supply Corporation (AESC) with NEC Corp. and NEC Tokin Corp., which manufacture and supply compact lithium-ion batteries. Tests of a high-power lithium-ion battery destined for automobiles began in July 2009. The laminated lithium-ion battery produced by AESC has roughly twice the energy density of conventional cylindrical batteries. The new battery will be used in Nissan's electric and hybrid vehicles released in the United States and Japan in fiscal 2010, and AESC is looking at marketing the batteries to other companies as well.

Partnerships with Different Countries

Increasing the use of zero-emission vehicles is something no single company can do on its own. The wide adoption of these vehicles requires that they be economical to use and that the societal infrastructure be in place to support their use. As of June 2010, the Renault-Nissan Alliance has entered into some 60 partnerships promoting zero-emission vehicles. Overseas we are working with Australia, Brazil, Canada, China, France, Ireland, Israel, Italy, Mexico, the Principality of Monaco, New Zealand, Portugal, Singapore, Spain, Switzerland and the United Kingdom to promote the introduction of zero-emission vehicles. In Japan we have formed partnerships and business tie-ups with Kanagawa Prefecture and Yokohama City, as well as Miyazaki Prefecture, Kitakyushu City, Saitama City and the All Japan Ryokan Association, an industry group for *ryokan*, or Japanese-style inns. In the United States, we are in talks with state governments in Tennessee, Oregon, California, Arizona, Washington, North Carolina, Texas, Florida and Massachusetts regarding similar partnerships for promoting zero-emission mobility and creating the required infrastructure.



Joint Development of Quick Charging System

In August 2009, Nissan and Showa Shell Sekiyu K.K. announced the start of studies on joint development of a quick charging system for electric vehicles combining Nissan's advanced lithium-ion batteries for automotive use with Showa Shell's next-generation CIS (copper, indium and selenium) solar panels. The aim is to contribute to the spread of EVs as fully zero-emission vehicles that emit no CO₂ or other potentially harmful gases during either operation or charging. The jointly created system is to be capable of providing electricity even during power outages, such as in the case of a natural disaster. Moreover, by reducing the load on the grid, the system will permit quick-charging facilities even where there is low electric power capacity.

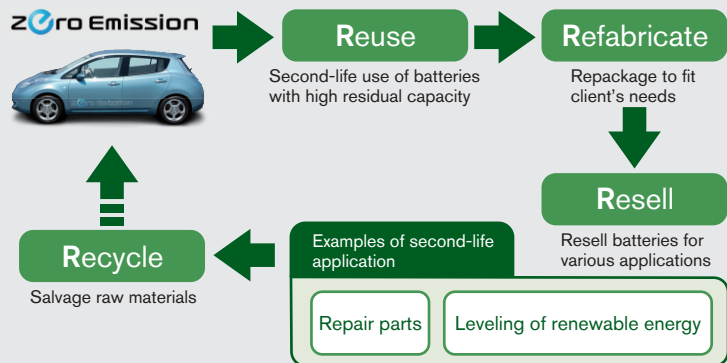
Future application of the technology for the quick-charging system is expected in homes and large-scale solar power plants (mega solar plants).

Second Life for Batteries

In October 2009, Nissan and Sumitomo Corporation announced plans to examine a joint business venture to give a second life to batteries used in EVs. The high-performance lithium-ion batteries used in Nissan's EVs will still retain 70%–80% of their initial capacity at the end of vehicle life. Based on the "4R" business model, the two companies will seek to reuse, resell, refabricate and recycle these batteries, providing an energy storage solution for the global market.

Both companies will examine the feasibility of the business in order to establish a framework for a new joint-venture company, which is expected to be operational by the second half of 2010 in Japan and the United States. In Europe, the Renault-Nissan Alliance partners are carrying out a joint examination of this business model.

Second Life for Batteries: 4R Business



Improving FCV Performance

Fuel-cell vehicles (FCVs) run on electricity generated from hydrogen and oxygen, and are another type of zero-emission vehicle emitting no CO₂ or other exhaust gases. The only substance emitted during driving is water. At Nissan, we began limited leases of FCVs in Japan in 2003, and in December 2008, we delivered an X-TRAIL FCV to the city of Nikko in Tochigi Prefecture, famous for Toshogu Shrine and other UNESCO World Heritage Sites. The X-TRAIL FCV has an original fuel-cell stack developed by Nissan with maximum output of 90 kilowatts, giving maximum speed and acceleration performance equivalent to those of a gasoline engine.

In 2008, we developed a new fuel-cell stack with improved performance and began vehicle tests. This stack features a new thin, metallic internal separator allowing the size to be reduced to about three-fourths that of a conventional unit. At the same time, improvements to the membrane used for producing electricity from the hydrogen and oxygen have increased output from 90 to 130 kilowatts. This means that a high-capacity stack of the same volume as a conventional fuel cell can generate about twice the output, making it suitable even for larger vehicles. We have also reviewed the electrode catalyst layer structure, reducing the amount of precious metal used and improving durability in order to realize considerably lower costs and longer lifespans.

New Inverter Developed

Nissan regards the inverter as one of the key technologies in electric-powered vehicle development, along with the motor and the battery, and is working hard on inverter development. These devices control the electricity for electric-powered vehicles, and their size has often set limitations on vehicle layout. We have developed the world's first inverter for a vehicle that uses silicon carbide (SiC) for the diodes, which are key components of the inverter. We have begun driving tests using an X-TRAIL FCV equipped with the new inverter. In the future this will allow improved energy efficiency and the achievement of lighter, more compact components compared to previous versions. Nissan is aiming for further reductions in size by using SiC for the transistors, another key component of the inverter.

Improved Efficiency for the Internal Combustion Engine

Looking at the potential for further cuts in CO₂ emissions of cars with different sources of power, we believe gasoline engine cars should be able to achieve a further 30% reduction in emissions compared to 2000 levels in the future. Improving gasoline-powered vehicle efficiency is therefore central to Nissan's emissions reduction initiatives in the short to medium term.

Expanding the Fuel-efficient Nissan Eco Series

Japan's new preferential tax scheme for environmentally friendly vehicles came into effect in April 2009. In fiscal 2009, we released 13 fuel-efficient models in what we call the Nissan Eco Series, making an expanded range of cars eligible for this scheme available to our customers. The Cube, Note, Tiida, Tiida Latio and Wingroad have engine and CVT modulation, an alternator regenerative system and reduced drag to improve fuel consumption. The Tiida, Tiida Latio and Cube also incorporate an eco-drive support system, which combines the Eco-mode Function (which assists the driver in accelerating smoothly) and a speed-control function linked to the onboard navigation system. These systems provide appropriate adjustments to the engine and the CVT based on how hard the driver is pressing on the accelerator. They also help to optimize engine and CVT control with input from the navigation system on road-related information like the distance to upcoming curves or toll gates, thereby enabling more effective eco-driving practices. This eco-drive support system won the ANRE Director-General's award in the fiscal 2009 Energy Conservation Prizes.

Nissan Develops Next-Generation CVT

At Nissan, we are aiming to reduce total CO₂ emissions through the proliferation of what we believe to be genuinely effective technology, and we regard the continuously variable transmission (CVT) as an important technology for improving fuel efficiency. CVTs are fitted to many different types of Nissan vehicles, ranging in size from the very small to the very large. Global sales topped one million vehicles in fiscal 2007, and cleared 1.25 million in fiscal 2009.

In July 2009, Nissan announced it had jointly developed a next-generation CVT with its affiliated company JATCO Ltd. The new CVT uses an original construction combining conventional CVT belt operation with an auxiliary gearbox, giving a significantly increased gear ratio range and at the same time allowing more compact size, lighter weight and greater efficiency. Nissan will be using the next-generation CVT in vehicles worldwide.

Automatic Clean Diesel Vehicle

Nissan is also working hard on the development of clean diesel vehicles, which are expected to bring CO₂ emissions below the levels of conventional diesel vehicles. Diesel vehicles have always had an advantage in terms of energy and CO₂ reductions due to their low fuel consumption, but it has been very difficult to make their exhaust cleaner. Through our Alliance with Renault, we developed the new M9R clean diesel engine. This was fitted to the X-TRAIL 20GT, which was launched in Japan in September 2008. The X-TRAIL 20GT has outstanding environmental performance, and is the first vehicle to comply with Japan's 2009 Emission Regulations. It won the ANRE (Agency for Natural Resources and Energy) Director-General's award in the 19th annual Energy Conservation Prizes, presented by the Ministry of Economy, Trade and Industry, and the Minister's Prize in the fifth annual Eco-Products Awards presented by the Ministry of Land, Infrastructure, Transport and Tourism. The X-TRAIL 20GT achieves both clean exhaust and low fuel consumption, and a model with automatic transmission will be available in Japan in 2010.

Original Hybrid System

Hybrid cars combining an engine and an electric motor can achieve substantial CO₂ emission reductions. Nissan has developed a parallel hybrid system in which a motor used for both propulsion and regeneration is connected directly to the engine and the transmission using two clutches. The system also incorporates a high-power lithium-ion battery. It gives even greater driving pleasure than a gasoline car while achieving the fuel consumption of a compact car. This system is mounted in the Fuga hybrid car, which will go on sale in Japan in the fall of 2010.

Biofuel Vehicles Marketed

Biofuels are produced mainly from plant matter, such as sugar cane, corn and construction waste material. These fuels are a renewable energy source. Since they are produced from plants that have absorbed CO₂ during their lives, they do not add significantly to overall CO₂ levels and have been a focus of considerable attention as a renewable energy source. In North America, Nissan has already brought to market the Titan FFV and Armada FFV, which can run on 85% bioethanol fuel (E85). In March 2009, we began marketing our flex-fuel Livina, the first Nissan vehicle that can run on any bioethanol blend (E100), in Brazil.

E1 Grand Prix Held Jointly with Yokohama City

Nissan and Yokohama City launched the E1 Grand Prix on September 28, 2009, as part of their five-year collaborative project, Yokohama Mobility "Project Zero." The E1 Grand Prix, which aims to encourage more drivers to adopt "eco-driving" practices, is a fuel consumption competition open to Yokohama residents. Competitors can register their car details online via the E1 Grand Prix site and report their fuel consumption using a computer or mobile phone. This enables them to see eco-driving rankings by car model and area, as well as graphs and other displays showing improvements made in fuel consumption. There is also an eco-driving diagnosis system that gives points for different driving situations, such as starting, cruising, decelerating and stopping.

Eco-Driving Training Sessions in China

Nissan has been working proactively to increase the number of drivers using eco-driving practices both in Japan and overseas. We held eco-driving training sessions for customers in China during fiscal 2009 in Beijing, Shanghai and Guangzhou. Our classes were well received, and many of the participants saw the benefits of improved fuel consumption as a result of the eco-driving advice and hands-on practice. (Please refer to page 50.)

Support for U.K. Eco-Driving

Nissan carried out a trial project using Intelligent Transport Systems (ITS) to give support for eco-driving to motorists in the United Kingdom for eight months starting June 27, 2009. Some 100 Nissan car owners took part in the trial. Information relayed to drivers onboard included fuel consumption trends to check their eco-driving and rankings to compare their average fuel consumption with that of other drivers from the previous month. Out of the vehicles, the participants received evaluations of their daily eco-driving performance and analyses including a breakdown of fuel consumption trends by distance and road type.

Nissan held briefing sessions about the trial with the U.K. government, and will be checking to see if this sort of information provision can help increase individual awareness of CO₂ reductions in normal daily driving scenarios in the United Kingdom. The results of the trial will be used in the development of a next-generation navigation system for the European market.

EFFORTS IN OUR BUSINESS ACTIVITIES

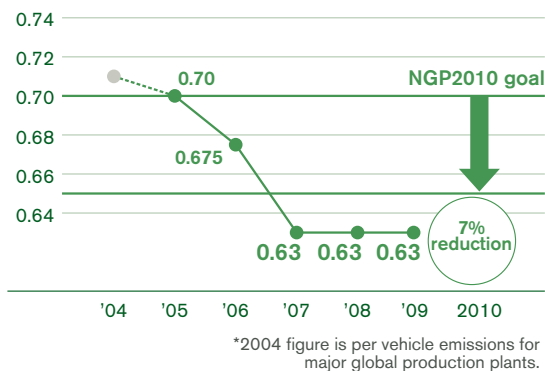
Global Energy Saving

Most of the CO₂ emissions in the manufacturing process are from the consumption of energy generated with fossil fuels. We are confronting these issues directly and engaging in a variety of energy-saving activities in manufacturing our vehicles. In the area of production technology, this includes the introduction of highly efficient facilities, improved production methods and the use of energy-efficient lighting. In our business offices, fine control of lighting and air-conditioning equipment enables us to operate with lower levels of energy use and loss. We then share these activities and best practices with our global production sites to promote lower CO₂ emissions.

We have also started to utilize renewable energy sources appropriate to the location of each plant site. Since 2005, we have installed 10 power-generating wind turbines on the grounds of Nissan Motor Manufacturing (UK) Ltd., which together provide about 7% of the electricity used at the entire site. In Japan, Nissan Motor Company is co-sponsoring the city of Yokohama's Y-Green Partner program for wind power generation. We are also adopting solar energy; Nissan Motor Iberica, S.A. in Spain has set up solar energy panels and Nissan Mexicana, S.A. de C.V. in Mexico has installed facilities to produce hot water by solar power. Nissan's target is to reduce CO₂ emissions by 7% below the fiscal 2005 level by fiscal 2010 as measured by "CO₂ emissions per global vehicle" (total emissions generated from global Nissan vehicle manufacturing sites divided by the total Nissan vehicle production volume). To achieve this, we are promoting CO₂ emission reduction activities and introducing Japan's cutting-edge energy conservation technology at our plants worldwide, while our plants in all countries also learn and share best practices with each other. CO₂ emissions per vehicle in our global manufacturing sites for fiscal 2009 were approximately 0.63 tons, a 10% reduction from the fiscal 2005 level.

Global CO₂ Emissions per Vehicle

(t-CO₂/vehicle produced)



Two Approaches for Logistics

For Nissan, which has markets and production sites around the world, transport efficiency is an important way to reduce our environmental impact. Logistics can be made more efficient through two major approaches. One is to raise the loading ratio, by increasing the amount that is carried at one time and decreasing the number of shipments; the other is to shift the transport mode from trucks to ships or trains, which emit less CO₂. At Nissan, we are working to reduce CO₂ emissions through an integrated approach.

In 2009, CO₂ emissions from our activities related to logistics amounted to about 87,000 tons in Japan. Overall, there was a decrease of some 1,000 tons of CO₂ from the previous year. We are now moving to monitor and control CO₂ emissions from transport in North America, Europe and other regions as we do in Japan.

More Efficient Delivery

Nissan has been sending its own trucks to take delivery of needed parts from suppliers since 2000, making it the first Japanese automaker to do so. This has enabled us to “visualize” waste during transport that had been hidden in the past. We have worked with suppliers to optimize the frequency of deliveries and transport routes and to improve packaging specifications, or the “mode of packaging.” The result is better loading ratios and reduced truck runs. We have already introduced this approach in China and Thailand, and as of May 2010 we are using it in our newly completed plant in India as well.

In Europe, we are conducting joint shipment of parts and completed vehicles in cooperation with our Alliance partner Renault. In joint shipments by ferry across the English Channel, we have also linked up with other automakers to further improve transport efficiency.

A huge number of parts of many different materials and shapes go into an automobile. We therefore put much effort into devising efficient modes of packaging. We have developed an original program to cultivate packaging design engineers, and we are now training them at production sites in Japan and other countries. As of the end of March 2010, 26 people from eight countries had completed this training. These specialists are contributing to further improving transport efficiency at the global level.

Modal Shifts

To increase transportation efficiency and reduce CO₂ emissions, we have reviewed our transport methods and are undertaking a modal shift from truck to maritime and rail transport. Some 60% of our completed vehicles in Japan are transported by sea. Parts shipments from the Kanto area to our Kyushu Plant are nearly all by rail and ship. The Japanese Ministry of Land, Infrastructure, Transport and Tourism has recognized Nissan as an outstanding enterprise for this modal shift to sea transport.

At our overseas sites, transport methods are selected to best match the local geographical conditions. In China, barge and rail transport have been used from an early stage for parts shipments to inland plants. We are also shifting from truck to rail and ship for completed vehicle transport, depending on the destination. In Mexico, we are increasing the proportion of completed vehicles that are transported domestically by rail.

EFFORTS AT OUR DEALERSHIPS AND OFFICES

Comprehensive Emissions Management

We are currently working to upgrade the Nissan Green Shop program implemented throughout Japan to introduce comprehensive CO₂ management measures at our dealers. (See page 21.) In fiscal 2008, based on Nissan Green Program 2010, we began managing CO₂ emissions from the business activities of Nissan dealers. Among our offices, the Nissan Advanced Technical Development Center in Atsugi, Kanagawa Prefecture, received the top “S” ranking in the Comprehensive Assessment System for Building Environmental Efficiency, or CASBEE, from Japan’s Ministry of Land, Infrastructure, Transport and Tourism. In October 2008, the same ranking was given to Nissan’s global headquarters in Yokohama City, which was completed in 2009. The “S” ranking certifies office buildings that conform to the highest level of environmental performance in Japan. CASBEE forms part of the Japanese government’s efforts to fulfill its obligations under the Kyoto Protocol by promoting energy-saving structures, and Nissan is helping Japan to meet its national environmental targets.

We have also begun managing CO₂ emissions from corporate activities at European business sites and the new Nissan North America headquarters in Tennessee, which was built with consideration for its environmental impact ahead of the global headquarters in Japan. We plan to strengthen our management of CO₂ emissions in many more countries and regions in the future.

Environmentally Friendly Headquarters

Nissan's global headquarters in Japan, which went into operation in August 2009, is an environmentally friendly facility that makes the best possible use of renewable energy, enabling significant CO₂ reductions and energy savings. The building makes active use of sunlight through its "curtain wall"—movable louvers that allow the entire building exterior to be made of glass—and five condensing lenses in the central channel of the building. Combined with a natural light control system, these ensure optimal lighting and reduce energy use. The distinctive louvers, which draw on the image of traditional Japanese bamboo blinds, control the amount of direct sunlight during summer and actively allow light in during other seasons, thus cutting the energy needed for climate control.

Dampers (on-off valves for the air conditioning) in the outside wall have sensors to detect wind speed and humidity, and they bring in outside air to reduce the energy needed for air conditioning. The energy needed for ventilation systems is reduced through the use of ascending air currents in the central channel of the building that provide natural ventilation.

The efficient use of renewable energy throughout the structure means that the new headquarters building is expected to emit approximately 3,800 tons of CO₂ per year less than our former headquarters (total for main building and annex of former headquarters: 14,000 tons/year).

WEB

Please see our website for more information on our global headquarters.

<http://www.nissan-global.com/EN/COMPANY/HQ/>

Protecting the Environment

Protecting the Air, Water and Soil

Our lives depend on a balance within the ecosystem composed of air, water, soil and other living beings. At Nissan, we are working to reduce the environmental effects of our vehicles throughout their lifecycles so that we may hand down a healthy global environment to future generations. We are making this approach a new part of our values as we continue to develop and champion environmentally friendly technologies.

Promptly Adapting to National Regulations

The impact of automotive products on the environment comes primarily in the usage stage in the form of emissions. Countries around the world are implementing stricter regulations covering these exhaust emissions. In particular, governments are expected to bring the regulations on diesel vehicles, which offer an effective means of reducing CO₂ emissions, into line with those now covering gasoline vehicles. In addition, China and other emerging countries are now moving toward closing the time lag in implementation of exhaust regulations as stringent as those seen in Europe and North America. Efforts are being strengthened in each country to limit the use of environment-impacting substances in vehicle materials and help minimize the release of formaldehyde, toluene and other volatile organic compounds (VOCs) in vehicle cabins.

Responding to the demands of society to reduce our environmental impact as much as possible, we are progressively implementing and carrying out measures to address these issues as we expand our business globally. We have been quick to develop vehicles that meet the various environmental protection regulations in effect in the countries where we do business.

EFFORTS IN OUR PRODUCTS AND TECHNOLOGIES

Toward Cleaner Exhaust Emissions

Nissan proactively sets strict regulations and targets for the design and production of its vehicles with the aim of making them more environmentally friendly. Building on our research and development, in which we have set ourselves the ultimate goal of emissions as clean as the atmosphere, we are working to be a world leader in reducing exhaust emissions with the early introduction of vehicles that meet emissions regulations in each country.

Our Sentra CA, released in the United States in January 2000, was the first gasoline-powered car in the world to receive Partial Zero Emissions Vehicle (PZEV) certification in compliance with the emissions requirements of the California Air Resources Board (CARB). PZEV vehicles must meet the zero evaporative emission regulations as well as have an on-board diagnostic (OBD) system that warns of problems with the catalytic converter or other emission-control systems. Our Bluebird Sylphy, released in Japan in August 2000, became the first vehicle to gain certification from the Ministry of Transport (now the Ministry of Land, Infrastructure, Transport and Tourism) as an Ultra-Low Emission Vehicle (U-LEV) producing 50% less nitrogen oxide (NO_x) and non-methane hydrocarbon (NMHC) than the 2005 emission standards level. In 2003, this model became Japan's first to receive SU-LEV certification as a Super Ultra-Low Emission Vehicle, with emissions at 75% less than that level. As of the end of February 2010, over 90% of all Nissan gas-powered vehicles sold in Japan are SU-LEVs.

Rolling Out Clean Diesel Vehicles

Nissan aims to stay ahead of the regulatory curve in the field of cleaner exhaust emissions with the development of new clean diesel vehicles equipped with such technologies as diesel particulate filters (DPFs) that trap and remove the substances that make up dark fumes, NO_x-absorbent catalysts and oxidation catalysts. In September 2008, we launched a manual-transmission X-TRAIL 20GT as the world's first clean diesel vehicle to meet Japan's 2009 Emission Regulations, which are among the strictest in the world. In 2010, we plan to introduce an automatic model in Japan.

World's First Ultralow Precious Metal Catalyst

Nissan is the first automaker in the world to put into practical use an "ultralow precious metal catalyst" for gasoline vehicles that uses only half the precious metals of conventional catalysts. The new 2008 model Nissan Cube incorporates this technology. Exhaust-cleaning automotive catalysts use such metals as platinum to facilitate chemical reactions that convert the nitrogen oxide (NOx), carbon monoxide (CO) and hydrocarbon (HC) in exhaust gases into less harmful byproducts. Controlling the use of large quantities of limited and costly precious metals, however, was a major technological obstacle. The Cube reduces the use of precious metals in the underfloor converter from 1.3 grams to 0.65 grams, achieving the same level as SU-LEV models. Plans call for the catalyst to hereafter be gradually incorporated in new compact models released in Japan. At present we are expanding our use of this catalyst.

Nissan's Tough Voluntary Standards

Stricter controls on the environmental impact of substances are being sought in countries around the world. Examples include the European End-of-Life Vehicles (ELV) Directive and the European Commission's Registration, Evaluation, Authorization and Restriction of Chemicals (REACH) Regulation, which went into force in June 2007. To help minimize the potential release of formaldehyde, toluene and other VOCs in vehicle cabins, the Japan Automobile Manufacturers Association has launched a voluntary program that calls for all new models launched in Japan from April 2007 to meet standards set by the Japanese Ministry of Health, Labor and Welfare for concentration levels of 13 compounds in vehicle interiors.

Nissan has steadily advanced efforts to meet these requirements. In an effort to reduce the potential release of environment-impacting substances, we have established voluntary standards to meet the environmental regulations enacted in countries where we do business. We are working on a global basis to prohibit or limit the use of four heavy metals (mercury, lead, cadmium and hexavalent chromium) and polybrominated diphenyl ether (PBDE) flame retardants in all new models launched from July 2007 onward. We are also reconsidering the parts and adhesives used in the seats, door trim, floor carpets and other parts of our vehicle cabins with the aim of reducing in-cabin VOCs.

Impact Reduction Throughout the Vehicle Lifecycle

Nissan believes that the timely delivery of vehicles equipped with effective environmental technologies at an affordable price is connected to reducing environmental impact. As such, we work to reduce environmental impact throughout the entire vehicle lifecycle, from development and manufacturing to usage and disposal. In the design and development stage, we utilize top-level catalytic technologies to develop cleaner vehicles.

As our procurement network for parts and materials expands globally, we have decided to standardize our environmental initiatives, producing the Nissan Green Purchasing Guidelines. In 2009, we began spreading the use of these guidelines to other operations in Asia. By sharing Nissan's corporate philosophy and environmental action plan with suppliers, we are working to build a management structure for reducing environmental impact all the way up the supply chain.

EFFORTS IN OUR BUSINESS ACTIVITIES

Reducing the Environmental Impact of Production

Nissan has taken a thorough approach to establishing a management system and usage standards to control environment-impacting substances in the manufacturing process, and is actively engaged in activities to reduce both usage and emissions of such substances. Keeping in step with the globalization of markets and parts procurement channels, we have instituted voluntary standards worldwide that are more stringent than the regulations in the countries where our main plants exist as we work together with our suppliers to reduce the use of environment-impacting substances.

For example, Japan revised its Air Pollution Control Law in fiscal 2006, outlining new requirements for VOCs to be met by fiscal 2010. Nissan complied with these requirements ahead of schedule by switching to water-based paints that include minimal amounts of VOCs, as well as by reducing the amount of paint and thinner used and collecting leftover materials, thereby improving production efficiency.

Protecting the Environment

Toward Sustainable Recycling of Resources

Nissan manufactures and markets its vehicles all around the world, utilizing resources in a variety of forms. In line with our basic stance of treating resources as limited, and believing that they should be used as efficiently as possible, we are working to make effective use of resources at every stage of our vehicles' lifecycles. In this way, we hope to continue contributing to the enrichment of people's lives with sustainable mobility.

Promoting Recycling in Every Region

The average passenger vehicle, which weighs from 1 to 2 tons, is constructed of finite materials, including iron, aluminum, copper and synthetic resin. It also consumes fossil fuels once it is on the road. Nissan is keenly aware of the importance to its business of making effective use of all resources, no matter how common or rare they may be. We also conduct studies with leading researchers to obtain information on the environmental impacts of resource extraction that we should be aware of as an automobile manufacturer.

Nations around the world are taking steps to boost efficient resource usage. Japan and the countries of the European Union were among the first to regulate automobile recycling; the End-of-Life Vehicles (ELV) Directive came into effect in Europe in 2000, followed by an Automobile Recycling Law in Japan that came into force in 2005, promoting the creation of better recycling systems. Korea also brought into force a law mandating ELV recycling in 2008. Moreover, preparations are being made in China and other developing economies to cope with the expected dramatic increases in ELVs accompanying rapidly rising car sales there. Nissan is taking its own independent measures and making every effort to promote resource recycling globally, using the methods best suited to each area in which we do business.

Reduce, Reuse, Recycle

The Global Nissan Recycling Way is a guideline that we constantly keep in mind as we consider ways to recycle and implement them. Our basic approach in identifying and resolving issues is to employ the "three Rs"—reduce, reuse and recycle. Essentially, we aim to reduce the use of substances that will end up as waste, reuse what we can and recycle materials whenever possible. This is done throughout a car's lifecycle, which we have separated into four stages: development, production, sales and service and end-of-life.

Responding quickly to Japan's Automobile Recycling Law, which set a 95% recovery rate as the target to achieve by 2015, Nissan moved its own target up by five years, incorporating it into the Nissan Green Program 2010 (NGP2010). We hit this target in fiscal 2006, four years ahead of NGP2010 and nine years ahead of the legal requirement. We are now aiming to reach this 95% target on a global basis.

At the development stage, Nissan vehicles are designed to reduce their use of environment impacting substances and make them easier to recycle, with consideration even to the point of reducing automobile shredder residue, or ASR, created during recycling. To reduce reliance on nonrenewable resources, we also give consideration to the use of recycled plastics and other materials, as well as renewable biomaterials. Material reclaimed from bumpers exchanged in repairs is recycled for use in new vehicles. We are also examining the possibility of recycling material from ELVs for use in new vehicles, exploring methods to overcome the technical challenge of maintaining their quality. The Nissan LEAF, an all-electric, zero-emission vehicle scheduled for

The Global Nissan Recycling Way



launch in December 2010, will see expanded use of recycled material, including some from plastic parts recovered from ELVs. Nissan is planning to use recycled material from non-ELV sources as well, including home appliances and plastic bottles, and will continue to make effective use of limited resources.

Recycled Materials to Be Used in the Nissan LEAF



- Plastics recycled from ELV parts
- Plastics recycled from end-of-life home appliances
- Plastics recycled from unpainted bumpers
- Plastics recycled from painted bumpers
- Other recycled plastics
- Recycled PET fabric
- Other recycled fabric
- Vibration dampers with wood powder
- PLA and recycled PET fabric

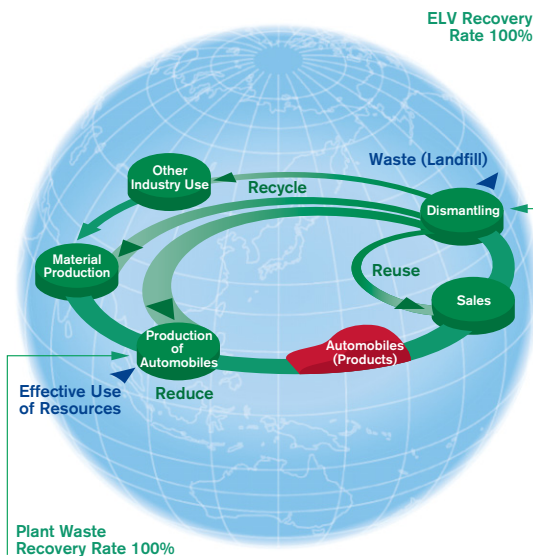
Note: The above is subject to change once production and sales are officially launched.

Nissan is working to reduce as much as possible the waste generated during the production phase, while also promoting reuse and recycling. Reused parts provide new value in the sales and service phase. Moreover, we research ways to make dismantling and recycling easier at the end of a vehicle's life. We then share the knowledge and techniques gained in this stage with people involved in the earlier phases of the lifecycle to improve the total process. Nissan places particular emphasis on recycling used cars into new vehicles to the greatest extent possible, rather than into other products, without sacrificing material quality.

Through such measures Nissan seeks to achieve an ultimate goal in the area of resource recycling of a 100% recovery rate* for all byproducts of its production and other business activities. We hope to expand our resource recycling approach through connections with different groups in society, as well as through partnerships with industries outside our own.

* The waste energy recovered and material recycled or reused, expressed as a percentage of total waste weight.

Resource Recycling Flows: Our Ultimate Goals



Auto Parts from Derelict Bamboo Groves

In an effort to reduce resource consumption in automobile manufacturing, Nissan came up with the idea of using bamboo harvested from derelict groves and culled in the process of thinning cultivated groves—a resource that has been difficult to dispose of in Japan—as material for car parts. We are currently working with local governments, universities and parts suppliers to develop techniques for effectively converting bamboo into useful material. This initiative will help us improve our carbon neutrality when the material is incinerated in the vehicle's end-of-life phase by emitting the same amount of CO₂ that the plants absorbed while they grew. It will also let us contribute to resolving the problem of dealing with derelict groves and fostering regional development.

EFFORTS IN THE DEVELOPMENT STAGE

Design Centered on Vehicle Lifecycle

Making efficient use of all natural resources to produce environmentally friendly vehicles is essential to the sustainability of our mobility society. Nissan designs and develops new vehicles from the point of view of the three Rs, taking into consideration the automobile's entire lifecycle, from the design stage until the end of its useful life. We seek to avoid the use of substances that impact the environment and ensure that our products are easy to dismantle and recycle. Since 2005, Nissan has achieved a recoverability rate of 95% or greater for all new models in Japan, and we are focusing development efforts on pushing this rate still higher.

Working together with our Alliance partner Renault, we have created a recycling simulation system called OPERA for use in the early design stages to calculate recoverability rates and recovery costs for new models. This has led to enhanced recycling efficiency from an economic standpoint as well.

Achieving a 95% Recoverability Rate with the Skyline



EFFORTS IN THE PRODUCTION AND LOGISTICS STAGES

Thorough Measures for Waste Materials

Nissan actively promotes measures based on the three Rs in its production processes whenever possible, striving to minimize the waste generated and maximize recycling efficiency by means of thorough sorting of waste. In line with the objectives of our medium-term environmental action plan, NGP2010, we are working to achieve a 100% recycling rate for our operations in Japan and bring this rate to automotive-industry-leading level in each region. Our efforts have paid off; as of the end of 2009, we have achieved this 100% rate at five manufacturing plants, one operations center and five of our affiliates in Japan.

Reductions in Containers and Packaging Materials

To help preserve forest resources, Nissan has been moving forward with efforts to replace the wooden pallets and cardboard boxes used in parts shipping with units made from such materials as steel and plastic, which can be returned for reuse. We have been working with our Alliance partner Renault since 2001 to standardize and share our returnable pallets, and with the inclusion of China and other Asian markets in this initiative, global standardization is now nearly complete. We are also working with our suppliers to develop and adopt new packaging materials for shock absorbers that are more reusable and recyclable than the paper and plastic now used.

100% Recycling Rate Achieved at Mexican Assembly Plant

At Nissan Mexicana's Aguascalientes assembly plant a recycling rate of 100% was achieved in vehicle manufacturing processes in fiscal 2009. A target of 100% recycling rate by fiscal 2010 was set based on NGP2010, but this target was achieved one year ahead of schedule.

This plant had maintained a recycling rate of 99% in its production processes since 2006, but the remaining 1% was a major challenge. In addition to activities to separate waste, employees reviewed everything from food packaging to cup material from vending machines, reinforcing 3R activities in every aspect within the company. This was the first time for a production site outside Japan to achieve complete recycling of waste materials—not only plastic, metals and other materials discarded in production processes but also paper and organic waste from offices.

EFFORTS IN THE MARKET AND AT DEALERSHIPS

Nissan Green Shop Certification System

Nissan has implemented its own Nissan Green Shop environment management certification system in line with ISO 14001 standards at its dealerships in Japan, which totaled some 2,900 outlets belonging to 178 sales companies as of March 2010. Dealers certified as Nissan Green Shops designate officers responsible for environmental issues. These officers maintain dealer compliance with environmental regulations, ensure that ELVs and various forms of waste are disposed of properly, manage all environment-related equipment and carry out communication activities aimed at customers. We regularly conduct internal audits with the aim of improving the quality of operations. In 2008, we added new measures based on Nissan Green Program 2010 to reduce CO₂ emissions related to sales activities.

Sales of Nissan Green Parts

Parts with the potential for recycling include those reclaimed from ELVs as well as those replaced during repairs. In Japan, Nissan collects and thoroughly checks the quality of these secondhand parts, and those that receive a passing grade are sold through our sales outlets as Nissan Green Parts. We sell these parts in two categories: reusable parts, which are cleaned and tested for quality before sale, and rebuilt parts, which are disassembled and have components replaced as needed. Sales of these parts in fiscal 2009 reached ¥1.76 billion.

Reuse of Aluminum Wheels

Nissan is engaged in a unique recycling program to collect aluminum wheel rims from ELVs and recycle them as materials for new vehicles. While waste aluminum materials are usually recycled into engine parts, we work together with recyclers throughout Japan to collect rims from Nissan ELVs and put the recycled high-grade aluminum back to use in suspensions and other important vehicle parts. Striving to reduce the use of virgin natural resources, we presently collect and recycle around 140 tons of end-of-life aluminum wheel rims each month.

Dismantling Methods that Raise the Recovery Rate

To optimize processing and improve the recovery rate for ELVs, Nissan carries out experimental studies to develop more efficient ways of dismantling its cars. While such research has until now focused on establishing methods of processing waste oil, waste liquids, lead and other substances that impact the environment, we are presently moving ahead with research aimed at further increasing the recovery rate in order to reclaim and reuse valuable raw materials from ELVs. Feedback from the studies has led to improvements in dismantling techniques and has also proved useful to our product design division in choosing suitable materials and designing vehicles that are easier to dismantle.

Increasing Overall Industry Recycling Efficiency

Japan's Automobile Recycling Law, which was enacted in 2002 and went into force in January 2005, requires automakers to take back and recycle automobile shredder residue (ASR) and airbags, as well as to take back and dispose of chlorofluorocarbons and hydrofluorocarbons (CFCs and HFCs) from their ELVs. As part of its efforts to comply with the law and increase the efficiency of its resource recovery, Nissan joined with 13 automobile manufacturers and other firms to form the ASR Recycling Promotion Team (ART). As a leading member of this team, Nissan is working together with society to improve recycling efficiency throughout the industry.

Nissan's recovery rate in Japan for ASR from April 2009 through March 2010 was 81.7%, more than satisfying the 50% level mandated by the law for fiscal 2010 and even clearing the 70% requirement set for fiscal 2015. We have also achieved an airbag recovery rate of 94.4%, exceeding the legally required 85%, and have recovered and safely destroyed 176,963.4 kilograms of CFCs and HFCs.

Recovery of Shredder Residue

Even before the 2002 enactment of Japan's Automobile Recycling Law, Nissan was taking action to recover automobile shredder residue, or ASR. Nissan developed technology to control the temperature of ASR during the heat recovery process, which had been difficult due to the material's high heat index. After modifying the furnace at our Oppama Plant, in fall 2003 we became the first automaker in the world to recover energy from ASR in its own furnace. Since the Automobile Recycling Law went into force in 2005, we have processed about 5,500 tons of ASR annually. With the energy generated in the incineration, we create steam used in the vehicle painting process at the factory.

Recycling Performance Overview

(Apr. 2009-Mar. 2010; Japan)

ASR	Volume Received	134,517.2 t
	Volume Recovered	109,852.4 t
	Recovery Rate	81.7 %
Airbags	Volume Received	70,814.3 kg
	Volume Recovered	66,837.5 kg
	Recovery Rate	94.4 %
CFCs/ HFCs	Volume Received	176,963.4 kg
Total Deposits Received		¥6,586,287,894
Total Cost for Recovery, etc.		¥6,295,394,414

Protecting the Environment

Our Ecosystem and Biodiversity Approach

The United Nations Millennium Ecosystem Assessment report issued in 2005 concluded that the ecosystem services evaluated had degraded over the past 50 years. Humans have changed the Earth's ecosystems more rapidly and extensively than in any comparable period of time in history. Humankind depends greatly on a number of ecosystem services, including provision of food and fresh water, climate regulation and protection from natural disasters. Industry must recognize not just its impact on ecosystems, but also its dependence on these services. Companies today face the pressing need to balance between environmental preservation and economic progress as they pursue their business activities. In October 2010, Japan will host COP10, the tenth meeting of the Conference of the Parties to the Convention on Biological Diversity, and companies are expected to step up their efforts in this field. Nissan recognizes the impact of its products and corporate activities on ecosystems, and is moving forward with preservation actions on a global scale, in line with its own unique approach for sustainability.

Mobility and the Ecosystem

Nissan has carried out extensive studies on the relationship between mobility and ecosystem services through workshops with specialists in the field. We have cooperated with the United Nations University Institute of Advanced Studies, which played a central role in the U.N. Millennium Ecosystem Assessment, on the impact of mobility on the ecosystem and the benefits to humans of ecosystem services. In 2010, we will publish the results of this research, provisionally titled "Nissan's Mobility and Ecosystem Assessment."

Sustainable Use of Water Resources

Ensuring environmental sustainability is one of the seven Millennium Development Goals outlined in the U.N. Millennium Development Declaration, which was adopted at the Millennium Summit in September 2000. One of the Environmental Sustainability targets in the Development Goals is to "halve, by 2015, the proportion of the population without sustainable access to safe drinking water and basic sanitation." At Nissan we use water resources in our production processes and elsewhere, and are deeply aware of the importance of this issue. We are working to preserve water resources by reducing our water use and to continue reusing water to minimize discharge. For example, at our Oppama Plant in Kanagawa Prefecture, we carry out intensive purification of water used in production so it can be reused. At our global headquarters in Yokohama, we have installed recycling systems for treatment and reuse of graywater and rainwater in toilets and other facilities. In these ways we are reducing the amount of water resources we consume.

Working Locally to Preserve Biodiversity

The Nissan Technical Center and Nissan Advanced Technical Development Center in Atsugi, Kanagawa Prefecture, are located in the natural splendor of the Tanzawa-Oyama region. We are working to preserve the greenery that remains on the grounds of these centers, as well as to maintain the natural connections between these grounds and the natural environment that exists in surrounding areas.

At the Nissan Technical Center, for instance, we work to preserve the natural stands of forest growing on the grounds and to maintain the area's biodiversity by planting trees in areas affected by construction of the facilities. Various birds, wild deer and even troops of monkeys can be spotted on the grounds. The site is also home to a rare natural growth of a perennial orchid called *ebine* in Japanese, which is on the "Red List" of threatened species published by Japan's Ministry of the Environment. In recent years overharvesting of these flowers has pushed them to the brink of extinction in the wild. We are carrying out minimally invasive management of these flowers to preserve them in an undisturbed, natural state. The green areas near our facilities are used by local residents for both recreation and environmental education activities. Here we have set up a network of walking trails connecting a number of nearby parks; these trails have proved popular with adults and children alike.



A walking trail near our facilities