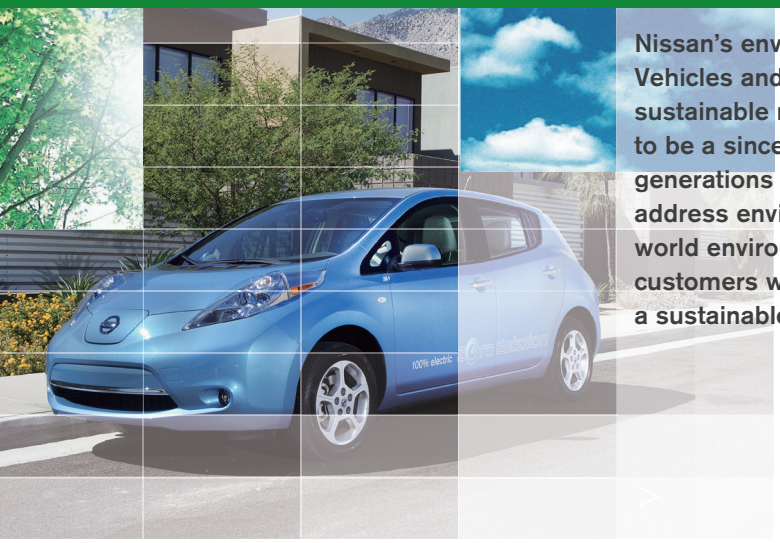
Environment



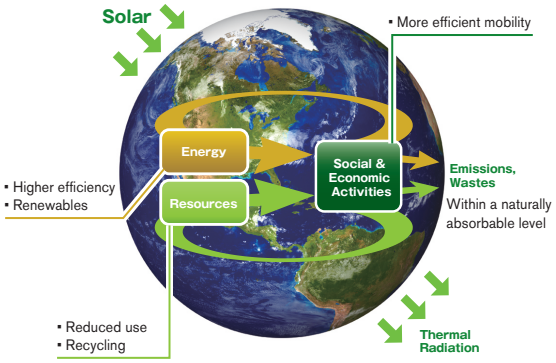
Nissan's environmental philosophy, "a Symbiosis of People, Vehicles and Nature," expresses our ideal picture of a sustainable mobility society. As part of this ideal, Nissan aims to be a sincere eco-innovator. For the sake of the planet and of generations to come, we work proactively and in good faith to address environmental challenges and to help reduce the real-world environmental impact of our products. We provide our customers with innovative products to help the development of a sustainable mobility society.

Pillars of Activity

The increasing global population and the rapid growth of the world economy have effects on the global environment, from environmental degradation and climate change to issues of supply and demand of energy, resources, water and food. Ensuring the balance of economic growth and the natural environment is a big challenge facing humankind as we continue to pursue personal and collective prosperity.

As a global automaker, Nissan takes active steps to identify the direct and indirect impacts of its business on the environment to help minimize them. Our 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 by promoting effective use and recycling of energy and resources.

Ultimate Goal and Key Issues

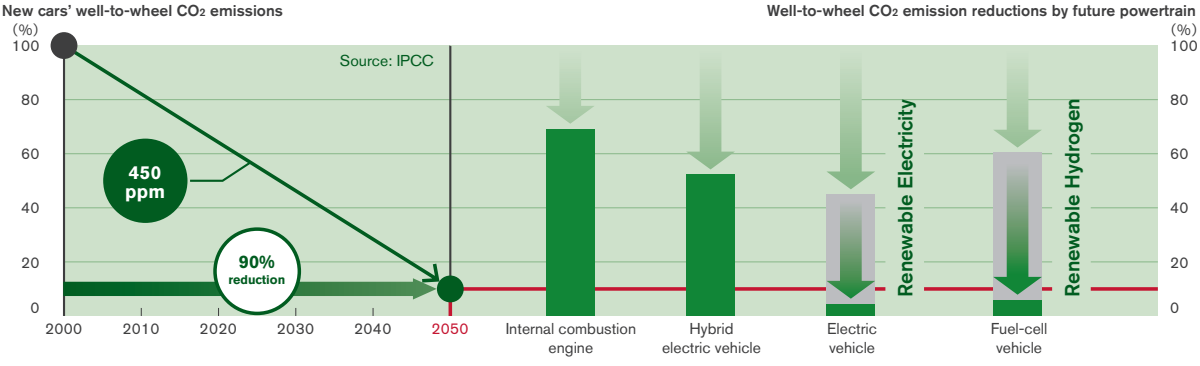


Nissan's Approach to the Environment

According to a United Nations forecast, by 2050 the global population will have grown from the present 7 billion to an estimated 9 billion, with 70% of the population living in cities. The demand for natural resources and energy will increase significantly. The automobile industry must work not only to help reduce CO_2 emissions, but also to reinvent its business structures to reduce reliance on fossil fuels.

According to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change (IPCC), atmospheric CO_2 will need to be stabilized at 450 parts per million or lower in order to keep average temperatures from rising more than 2 degrees Celsius on a global basis. Based on this assumption, we have calculated that "well-to-wheel" CO_2 emissions for new vehicles will need to be reduced by 90% in 2050 compared with levels in 2000. To help achieve this 90% cut, the efficiency of our internal combustion engines will need to improve in the short term. Over the long term, we need to increase the adoption of electric vehicles and fuel-cell electric vehicles and to make use of renewable energy to power these technologies while each country and region moves toward more renewable energy sources. We are advancing technological development on the basis of this future scenario.

Our CO_2 Reduction Scenario



Nissan Green Program 2016

We announced our new environmental action plan for the six years through fiscal 2016, the Nissan Green Program (NGP2016), on October 24, 2011. NGP2016 focuses on reducing the environmental impact of corporate activities and pursuing harmony between resource consumption and ecology. We aim to contribute to recycling and to promote and widen the application of green technologies that were developed in NGP2010, our previous environmental action plan. NGP2016 has four specific key actions: penetration of zero-emission vehicles; wider application of fuel-efficient vehicles; corporate carbon footprint minimization; and new natural resource usage minimization. The program includes activities in development, manufacturing, sales, service and all other departments companywide. NGP2016 is one of the critical strategies supporting Nissan Power 88, our mid-term plan that was unveiled in June 2011.

Nissan Green Program 2016 Progress

Main areas	Action plans	FY2011 progress	See page
Penetration of Zero-Emission Vehicles	1.5 million cumulative EV sales with Alliance partner Renault	Global Nissan LEAF sales: 23,000	p. 26
	Introduce four EVs including Nissan LEAF	Development underway	p. 26
	Prepare to introduce fuel-cell electric vehicle (FCEV) into market	Development underway	p. 27
	Take global leadership in supplying batteries for electric-drive	Preparations underway to produce batteries in U.S. and U.K.	p. 27
	Help create zero-emission society utilizing EVs and their derivative technologies with partners - Develop EV charge/discharge system and information network - Demonstrate smart house/community/grid, starting from Yokohama	Promoted activities such as establishing a new recharging service company for EVs & PHEVs, unveiling the "LEAF to Home" system	p. 28
	Provide "energy storage" solution with used EV batteries through 4R business	Promoted activities such as an electricity storage system for residences	p. 29
Wider Application of Fuel-Efficient Vehicles	Improve CAFE* by 35% from FY2005 (Japan, U.S., Europe, China) * Corporate average fuel economy; meet or exceed regulatory requirements	Improved CAFE by 15% from FY2005	p. 30
	Introduce top fuel-efficiency models in various classes	These models had the top fuel efficiency in their class: -Versa sedan 33 mpg (Combi mode) in U.S. -Tiida 6.2 liters/100km (Euro mode) in China	p. 30
	Introduce FF-HEV in C class and above; expand FR-HEV offerings	Development underway	p. 30
	Introduce plug-in hybrid (P-HEV)	Development underway	p. 31
	Introduce next-generation CVT globally; expand CVT sales to 20 million cumulative units (from 1992)	Global CVT vehicle sales of 2.08 million; cumulative total since 1992 of 11.08 million	p. 31
	Develop lightweight technologies with structure optimization, new materials and new manufacturing processes	Developed the world's first Ultra High Tensile Strength Steel rated at 1.2 gigapascals (GPa)	p. 31
	Contribute to CO_2 reduction by ITS technologies	Worked with the Beijing Municipal Commission of Transport on dynamic route guidance using IT devices	p. 31
	Collaborate with Beijing city government to improve traffic congestion, promote eco-driving		
Corporate Carbon Footprint Minimization	Reduce CO_2 emissions of corporate activities by 20% (t-CO_2/vehicle, vs. FY2005)	Reduced 8.9% from FY2005	p. 32
	Reduce by 27% in all manufacturing sites (t-CO_2/vehicle, vs. FY2005)	Reduced 20.5% from FY2005	p. 32
	Promote activities to reduce CO_2 emissions in inbound/outbound logistics	Promoted activities to reduce CO_2	p. 33
	Reduce by 1%/year in offices (Japan, North America, Europe, China, t-CO_2/unit)	Reduced 2.6% from FY2005	p. 33
	Reduce by 1%/year in dealers (Japan, t-CO_2/unit)	Reduced 11.9% from FY2005	p. 33
New Natural Resource Usage Minimization	Increase recycled material usage ratio per vehicle by 25% in Japan, U.S. and Europe	Activities promoted	p. 34
	Expand closed-loop recycling scheme with business partners - Collect and recycle scrap, waste from vehicle production - Collect and recycle end-of-life vehicles (ELVs)	Started activity to collect steel and aluminum sheet scraps generated during production and recycle them back into steel and aluminum sheets for use	p. 34
	Improve ELV recovery rate - Achieve top level ELV recovery rate (Japan) - Promote proper treatment and resource recovery globally	Achieved recovery rate of 98.8% in Japan; efforts underway globally	p. 35
	Reduce scarce resource usage	Development underway	p. 35
	Reduce critical metal, rare earth usage		
	Comply with emission regulations in each region with minimum precious metal usage		
	Reduce waste	Reduced by 8.4% in Japan plants and 12.3% in global plants	p. 35
	Reduce waste by 2%/year (Japan) and 1%/year (global) in manufacturing plants		
	Reduce waste in logistics by expanding best-practice activities		
	Promote water-usage management and reduction in all plants	Set water use targets and began activities to reduce usage in Australia, India, China and Mexico	p. 35
Environmental Management Enhancement	Enhance and promote environmental management throughout supply chain (consolidated companies, sales companies, suppliers)	Revised the Nissan Green Purchasing Guidelines to enhance controls on environmental impact of substances	p. 36
	Promote reduction, substitution and management of environment-impacting substances	Enhanced management on environmental impact of substances to meet REACH targets	p. 36
	Reduce environmental impact of products with life cycle assessments (LCAs)	Evaluations underway using product LCAs	p. 37

Promotion Structure

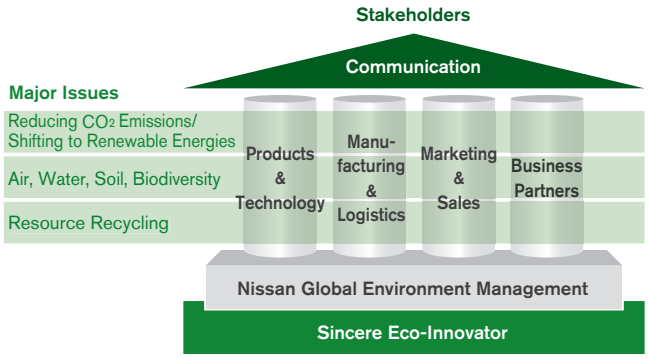
In order to implement NGP2016 fully, Nissan works within the framework of its global environmental management system to ensure maximum results. The system organically links divisions engaged in product and technical development, production, logistics, marketing and sales. Cross-functional collaboration allows us to set targets and promote implementation in all areas of our company.

We have created specific organizational roles and responsibilities to clarify areas of activity and responsibility. Our Global Environment Management Committee (G-EMC), headed by Nissan's chief operating officer, determines overall policies and the proposals to be put before the Executive Committee. The Environmental Planning Group, attached to the Corporate Planning Department, determines which proposals will be forwarded to the G-EMC and assigns specific actions to each division.

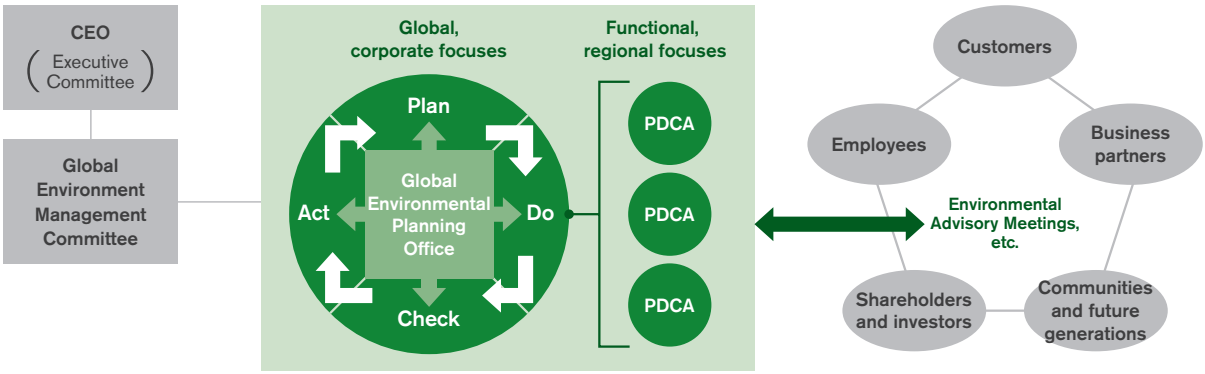
The Group is also responsible for the efficient management and operation of environmental programs based on the PDCA cycle: plan, do, check and act.

We enhance our activities by soliciting the ideas of leading environmental experts and organizations at our Environmental Advisory Meetings. We also learn about the trends of socially responsible investment funds and assessments from rating organizations. We use this information to help understand the opinions of our stakeholders and to better assess our goals and activities.

Our Framework for Global Environment Management



Nissan's Global Environment Management Organization



Fiscal 2011 Review and Future Tasks

In fiscal 2011 we announced NGP2016 and made a promising start toward reaching the goals for each of the four key actions. (See p. 24.) Our main achievements include unveiling the "LEAF to Home" system, which contributes to efficient energy use, and beginning demonstration tests of a system for recharging electric vehicles using solar power and lithium-ion batteries. We also helped to cut CO_2 emissions by installing smart meters for full control of electricity use at our plants and offices and we introduced an energy-efficient coastal car carrier. We will further bolster the environmental performance of our products and our corporate activities in order to achieve the goals of NGP2016 completely.

Nissan's CO_2 Emission Levels*1

Production

2,642 kton

CO_2 emissions from consolidated plants in Japan, U.S. and Europe: 1,698 kton*3

Logistics

1,660 kton

Use of Nissan vehicles

102,000 kton*2

Calculated according to Nissan's internal standards (projected lifetime emissions from new cars sold in FY11)

Offices, etc.

Energy use 417 kton

Employee commutes 449 kton

CO_2 emissions from consolidated employee commutes in Japan, U.S. and Europe: 214 kton*3

*1 Nissan calculations
*2 Tank-to-wheel calculation
*3 Nissan receives third-party certification from PricewaterhouseCoopers Aarata Sustainability Certification Co., Ltd. For more information, please see http://www.nissan-global.com/EN/DOCUMENT/PDF/SR/2012/report01.pdf

Penetration of Zero-Emission Vehicles

1.5 Million Cumulative Alliance EV Sales by 2016

Electric vehicles (EVs) are a product showing that what is good for the public and the planet is also good business. Nissan's commitment to sustainable mobility begins by addressing concerns over climate change and supports sustainable profits for Nissan by satisfying customers' demands for more environmentally friendly vehicles. Greater movement toward renewable energy such as solar, wind and hydropower in the future is expected to further enhance this segment, as EVs will be able to use energy from a variety of sources.

Nissan LEAF sold more than 23,000 units in fiscal 2011, making it the best-selling EV in the world. We are planning the launch of seven more all-electric vehicles together with our Alliance partner Renault. Our aim is to achieve cumulative sales of 1.5 million units of Alliance EVs by 2016 globally. The Renault-Nissan Alliance will continue to lead the auto industry with the highest level of global EV sales.

Introducing Four EVs Including Nissan LEAF

We launched Nissan LEAF, our 100% electric vehicle, in Japan and the United States in December 2010 and in Europe in March 2011. As a zero-emission vehicle producing no CO_2 or other tailpipe emissions during operation, Nissan LEAF has achieved outstanding environmental performance.

Nissan LEAF is fitted with a high-capacity lithium-ion battery that allows a maximum driving range of up to 200 km on one full charge (as measured in JC08 Japan test mode). The Nissan-developed electric motor, inverter and dedicated EV platform provide powerful, smooth acceleration and excellent stability and control at all speeds. Quiet during operation, Nissan LEAF offers a unique driving experience, with advanced information technology systems that give a full range of convenient functions. The batteries that power EVs can also play a key role as energy-storage devices supporting large-scale reliance on renewable energy sources. As such, they have the potential to contribute to lowering carbon emissions throughout society as a whole, not just in the automotive sector.

With the addition of a light commercial Nissan vehicle and a luxury Infiniti model, we will have a total of four EVs on the global market by 2014.

We displayed the Infiniti LE Concept at the New York International Auto Show in 2012.

Global Accolades for Nissan LEAF

Nissan LEAF has garnered a string of awards for its high environmental performance and comprehensive approach to bringing about a sustainable, zero-emission society. Nissan LEAF was named 2011 World Car of the Year at the New York International Auto Show. In Japan, it was the winner of the 2012 RJC Car of the Year award, presented by the Automotive Researchers' & Journalists' Conference of Japan (RJC), and the Car of the Year Japan Executive Committee voted it Car of the Year Japan 2011–2012. Nissan LEAF also won the 2011–2012 Japan Automotive Hall of Fame (JAHFA) Car of the Year and 2011–2012 JAHFA Car Design of the Year awards, both presented by the selection committee of JAHFA. Our all-electric car was also awarded the Minister of Land, Infrastructure, Transport and Tourism's Prize in the 2011 Eco Products Awards.

CAR OF THE YEAR JAPAN 2011 2012

日本カー・オブ・ザ・イヤー受賞

主催：日本カー・オブ・ザ・イヤー実行委員会

2012 RJC

カーオブザイヤー受賞

e-NV200 Unveiled at Auto Show

Nissan unveiled the e-NV200, a 100% electric commercial vehicle based on the NV200 multi-use vehicle (marketed in Japan as the NV200 Vanette), at the 2012 North American International Auto Show held in Detroit, Michigan. The e-NV200 offers business users and families a flexible, roomy interior space with no CO_2 emissions during operation, thus ushering in the multipurpose EV of the future.

The e-NV200 achieves a driving range on a par with that of Nissan LEAF.

Commercial Viability of Fuel-Cell Electric Vehicles

Fuel-cell electric vehicles (FCEVs) are another type of zero-emission vehicle producing no CO_2 or other emissions. Powered by electricity generated from hydrogen and oxygen, they emit only water during driving. Our FCEVs make use of the lithium-ion batteries and high-power electric systems refined in our EV development, as well as the control systems from our hybrid vehicles and the high-pressure gas storage technologies from our compressed natural gas vehicles (CNGVs). In January 2011, Nissan announced efforts with 12 other companies to launch FCEVs and to develop the hydrogen supply infrastructure in Japan. Development is now progressing toward achieving these goals within this decade.

In October 2011, we released our Next Generation Fuel Cell Stack for FCEVs. This model features improvements to the membrane electrode assembly making up the fuel cells and to the separator flow channel, giving a power density 2.5 times greater than the 2005 model and, at 2.5 kW per liter, the best in the world among auto manufacturers according to our calculations. The use of platinum and the variation of parts have both been reduced to a quarter of the levels of the 2005 model, and the size has been substantially reduced to less than half that of existing models. With these improvements, we have reduced the cost of the new fuel cell stack to one sixth that of the 2005 model.

Under the agreement of strategic cooperation between the Renault-Nissan Alliance and Daimler AG, we will work to develop FCEVs.

The Next Generation Fuel Cell Stack released in 2011

Pursuing a Zero-Emission Society

The widespread use of zero-emission vehicles, which produce no CO_2 emissions during operation, is an effective way of helping to bring about a sustainable society. The auto industry must go beyond producing and selling zero-emission vehicles to help put the necessary infrastructure in place and assure that the vehicles are economical to use—goals that no company can accomplish on its own. The Renault-Nissan Alliance has made the launch and popularization of EVs a key strategy, and has committed to zero-emission leadership. In addition to boosting the development and production of EVs, we have forged more than 100 zero-emission partnerships with national and local governments, electric power companies and other partners in a range of industries to promote zero-emission mobility and to carry out discussions on the construction of the required infrastructure.

In China, for example, Nissan started a pilot program in the cities of Wuhan and Guangzhou in 2011. Various activities were aimed at contributing to the establishment of energy-efficient and environmentally friendly cities, with an eye on the eventual full-fledged rollout of EVs in the Chinese market.

We also began global proving tests of an e-NV200 prototype. For the first phase, the Japan Post Service Co. carried out a test of one vehicle in the city of Yokohama, Kanagawa Prefecture, in July 2011 to evaluate its capabilities under normal usage conditions. Similar proving tests will be carried out elsewhere in Japan and in Europe.

We are also taking part in a comprehensive range of initiatives focusing on zero-emission mobility, including the production of lithium-ion batteries, secondary use and recycling of batteries, in-house manufacture and sale of quick-charging equipment, construction of vehicle-charging infrastructure and standardization of charging methods with other manufacturers.

The spread of zero-emission vehicles will pave the way for the development of a sustainable mobility society.

Global Lithium-ion Battery Production

In Japan, lithium-ion batteries for Nissan LEAF are produced at the Automotive Energy Supply Corporation (AESC) plant in Zama, Kanagawa Prefecture, a joint venture launched by Nissan and NEC Corporation. Battery modules, each containing four battery cells, are assembled and then shipped to the Nissan Oppama facility, where 48 of them are assembled into the electric car's battery pack, which is then fitted into Nissan LEAF.

Preparations are underway to produce Nissan LEAF and the EV batteries outside Japan. In the United States, production at the Nissan plant in Smyrna, Tennessee, is scheduled to start in the second half of 2012. At full production speed, the plant will produce up to 150,000 EVs and 200,000 lithium-ion battery packs per year, creating up to 1,300 new jobs in the state.

In Europe, the Sunderland Plant in the United Kingdom will start production of lithium-ion batteries in 2012 and EVs in the first half of 2013. When operating at full capacity, production is expected to be 50,000 EVs and 60,000 lithium-ion battery packs a year. These new operations are expected to create 200 new jobs within Nissan and 600 positions in our U.K. supply chain.

"LEAF to Home" Smart Power Supply System

In August 2011, Nissan unveiled a new system that enables electricity to be supplied from the lithium-ion batteries installed in Nissan LEAF to households. Nissan LEAF can supply the electricity in its battery to a house when the car's quick-charging port is connected to the house's electricity distribution panel. This system provides completely new value made possible by the zero-emission vehicle's battery. In addition, the connector complies with the CHAdeMO Association's protocol for quick chargers, known for its versatility, safety and reliability.

With the "LEAF to Home" smart power supply system, Nissan LEAF can be used as an electricity storage device for houses in times of power outages and/or shortages. The lithium-ion batteries can store up to a maximum of 24kWh of electricity, sufficient to power an average Japanese household for about two days. Nissan believes this system will be able to supply households with a stable amount of electricity throughout the day. The system can also help to reduce the burden on the power grid by charging Nissan LEAF with electricity generated at night (often at lower cost to the consumer), or through sustainable methods such as solar power, and using it during high demand periods.

The "LEAF to Home" system in action, using the EV Power Station released by Nichikon in June 2012

Powering Yokohama Marine Tower

From November 1 to 6, 2011, Nissan took part in the "Yokohama Marine Tower–LEAF Illumination 2001" event. Drawing on our "LEAF to Home" concept, we lit up Yokohama Marine Tower with power stored in a single Nissan LEAF. The vehicle was charged with solar power from the panels installed at our Global Headquarters in Yokohama (see p. 33). By providing the considerable amount of electricity needed for this event with clean energy sources, we were able to put on a beautiful illumination show while sharing our message of eco-friendliness with event visitors.

Nissan LEAF's Disaster Response Role

In partnership with the government of the city of Sendai, Miyagi Prefecture, Nissan is carrying out trials to supply public facilities with electricity from the battery of Nissan LEAF. Sendai suffered tremendous damage during the Great East Japan Earthquake in March 2011, and EVs played an important role in the aftermath. People were able to use the electricity supply, which was restored relatively quickly, while gasoline supplies were delayed for a long time. This prompted Sendai to begin testing a system for supplying public facilities with electricity. The municipal government is promoting energy diversification and ensuring emerging energy sources as part of its efforts toward building communities in which people feel secure, and it is looking at installing the system at disaster shelters and disaster prevention centers.

New Values for EVs

At the 2011 Tokyo Motor Show, the new values of EVs that Nissan proposes—such as the Smart House of the Future, which can draw power from Nissan LEAF batteries, and the EV-based Smart Lifestyle—were on display.

- **NSH-2012 Smart House of the Future**

The NSH-2012 is an implementation of the "LEAF to Home" electric supply system, which uses power stored in Nissan LEAF batteries. The Smart House combines solar panels, fuel cells and Nissan LEAF batteries to maintain a steady power supply to the home independent of weather conditions. Even if there were a power outage in a disaster, solar power and Nissan LEAF batteries could continue to supply the Smart House of the Future with electricity. Similarly, smart communities could be viewed as a broader application of the "LEAF to Home" concept.

The NSH-2012

▪ **Next-generation mobility with PIVO 3**

PIVO 3 is a smart urban EV of the near future. With a compact body under 3 meters long and in-wheel motors with wide steering angle, this vehicle is highly maneuverable, allowing a U-turn on a road only 4 meters wide. Automated Valet Parking (AVP) could one day enable PIVO 3 to automatically drive, locate a parking space and return to its driver at the AVP exit when called by smart phone. PIVO 3's use of Intelligent Transport Systems (ITS) forge new ties among people, vehicles and society, realizing driving ease and new mobility for urban society.

PIVO 3

The Nissan New Mobility Concept

In September 2011, Nissan received authorization from Japan's Ministry of Land, Infrastructure, Transport and Tourism (MLIT) to carry out trials on public roads of the Nissan New Mobility Concept, a 100% electric vehicle that was developed in response to rising numbers of senior citizens and single-member households, along with increasing use of automobiles for short-distance trips by up to two people. A completely new concept car, it is the first such vehicle on public roads in Japan.

The Nissan New Mobility Concept

Nissan participated in fiscal 2011 MLIT trials aimed at community-building using environmentally friendly vehicles. The trials were held in Nissan's home city of Yokohama and the prefectures of Aomori and Fukuoka, which are working to promote the development of vehicles suitable for senior citizens. Through trials of ideal local traffic systems and numerous surveys, we will continue working to improve vehicle usability. Nissan carries out activities like these to produce fresh ideas toward the realization of new EV uses and smooth traffic flows for society.

Infrastructure to Help the Spread of EVs

Nissan commenced sales of its proprietary quick-charging unit at Nissan parts dealers throughout Japan in November 2011. The new quick-charging unit retains the high performance of Nissan's current unit in approximately half the volume, allowing installation in smaller spaces.

In November 2011, Nissan and Sumitomo Corp. of America agreed to collaborate on sales and marketing activities in the U.S. market for the new quick-charging unit. The two companies have agreed to work together to popularize the new quick-charging unit to help bring about a zero-emission society.

Japan Charge Network Launched

In February 2012, Nissan, Sumitomo Corp., NEC Corp. and Showa Shell Sekiyu K.K. jointly established a new recharging service company for EVs and plug-in hybrid electric vehicles (PHEVs). The new company is called Japan Charge Network Co., Ltd.

The new company began trial service in April 2012 and now includes an infrastructure network in Kanagawa Prefecture and part of Tokyo. The next stage will be to steadily build up a nationwide recharging infrastructure that puts the convenience of users at the fore while taking into account a range of lifestyle scenarios. Auto dealers, gas stations, convenience stores, fast food restaurants and large-scale commercial complexes are seen as possible business partners where rechargers could be installed.

Joint Venture to Promote Second-life Use for Batteries

The high-performance lithium-ion batteries used in Nissan's EVs retain up to 80% of their initial capacity after five years of use under average conditions. This means these batteries still have useful roles to play even when they are no longer used in vehicles. Examining "4R" business models—ways to reuse, resell, refabricate and recycle lithium-ion batteries—allows their effective use for energy storage solutions in a range of applications, thus creating a much more efficient energy cycle of battery use.

The energy storage system holds the equivalent of four Nissan LEAF batteries.

In September 2010, Nissan and Sumitomo Corp. launched 4R Energy Corporation, a joint venture to develop secondary-use business opportunities for used EV batteries. 4R Energy Corp. is working on the

development and testing of a stationary storage battery. In July 2011, 4R Energy started testing of the storage battery in an EV charging system. In this system, electricity generated by solar cells installed at Nissan's Global Headquarters is stored in lithium-ion batteries with the capacity of four Nissan LEAFs. Seven charging stations (with a total of three quick-charge stations and 14 normal charge sockets) located on the grounds of our headquarters can fully charge the equivalent of approximately 1,800 Nissan LEAFs annually.

In February 2012 we announced an electricity storage system for residences using 12 KWh lithium-ion batteries from Nissan LEAF. In March 2012, Nissan and the Kanagawa Prefectural Government began joint trials of a storage system that reuses batteries from Nissan LEAFs that have been in service as taxis for a year, recharging them using solar power generation combined with an EV charger. The trials are examining the usability of the batteries as part of a stationary storage system and potential framework for secondary use of EV batteries through disassembly and assessment, followed by reprocessing for non-auto use.

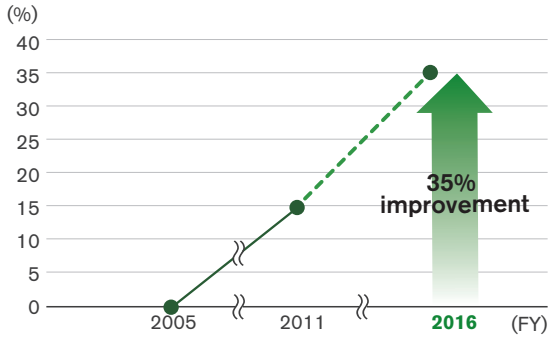
In February 2012, Nissan North America, Inc. and ABB, the world's leading power and technology group, along with 4R Energy Corp. and Sumitomo Corp. of America, announced a partnership in the United States to evaluate the reuse of lithium-ion battery packs that power Nissan LEAF. The technology is currently being tested for commercial and industrial energy storage systems and backup power sources, and business applications are being evaluated.

Wider Application of Fuel-Efficient Vehicles

Improved Corporate Average Fuel Efficiency

Demand for motor vehicles is expected to continue to rise along with mature market recovery and emerging market expansion. Efforts to create sustainable mobility will require the greatest possible improvements to the fuel efficiency of gasoline-powered engines. Nissan has placed three core technologies at the heart of its efforts in this area: the lithium-ion battery, the one-motor/two-clutch parallel hybrid system and the new-generation continuously variable transmission (CVT). We will be including these core technologies in a greater range of our new vehicles. Our target for fiscal 2016 is a 35% improvement in corporate average fuel efficiency from the fiscal 2005 level (as measured by corporate average fuel efficiency standards in the Japanese, North American, European and Chinese markets). Our result in fiscal 2011 was a 15% improvement from the fiscal 2005 level.

Corporate Average Fuel Efficiency



Top-level Efficiency in Various Classes

During fiscal 2011 we introduced fuel-efficient vehicles with our new CVT, one of our three core technologies. In the small vehicle class in China we launched the Tiida, which travels 100 kilometers on 6.2 liters of gasoline (as measured in the European fuel-economy mode also used in China). In the same class in the United States, we marketed the Versa sedan, which achieved 33 mpg in the U.S. Environmental Protection Agency rating for combined fuel economy. Both models had the top fuel efficiency in their class (as of the Tiida's launch in May 2011 and the Versa's launch in August 2011).

Nissan's Hybrid Offerings

Hybrid vehicles, which run on a combination of a gasoline-powered engine and an electric motor, may allow improvement of fuel efficiency and considerable reductions in CO_2 emissions. Nissan has developed a unique hybrid system using a high-output lithium-ion battery together with a single motor for both drive and regeneration, as well as an Intelligent Dual Clutch Control system in which two clutches are linked in parallel, one to the motor and one directly to the engine and transmission. Our system is one of the simplest, lightest-weight hybrid systems available for use in passenger vehicles, providing acceleration and handling on par with a vehicle powered by a V8 engine*1 while maintaining the fuel efficiency of a compact.*2 The Intelligent Dual Clutch Control system won the Contribution Prize at the fiscal 2011 Ichimura Prizes in Industry, presented by the New Technology Development Foundation—making Nissan this year's only automobile industry recipient of this prize, which recognizes developments that have helped to advance technology in a certain industry. Our system also won the Technological Development Award from the Society of Automotive Engineers of Japan.

The 2012 Infiniti M Hybrid

The Fuga Hybrid luxury sedan that went on sale in Japan in autumn 2010 used the Intelligent Dual Clutch Control system to achieve mileage of 19.0 km/l (as measured in Japan's 10–15 mode) while delivering a direct, powerful driving experience.

The 2012 Infiniti M Hybrid includes our new Infiniti Direct Response Hybrid system to complement its 3.5-liter V6 engine. This combination power plant, which also includes a high-power lithium-ion battery and 50 kW (67 hp) motor, was named one of Ward's 10 Best Engines for the year, the only hybrid power train to make the list.

Nissan is also working on a hybrid system specially designed for use in front-wheel-drive vehicles. Just like our rear-wheel-drive system, this combines a one-motor/two-clutch parallel hybrid system with our new-generation XTRONIC CVT, producing drive power with a 2.5-liter supercharged gasoline engine and a lithium-ion battery. This compact, versatile system delivers a high-power engine and enables fuel-efficient travel in every situation, from city to highway driving. We will release new hybrid vehicles with this system onboard globally from 2013, beginning with the North American market.

*1 A maximum torque of 620 N·m is achieved with the combination of the HM34 electric motor (maximum torque 270 N·m [27.5 kgf·m]) and the VQ35HR engine (maximum torque 350 N·m [35.7 kgf·m]/5,000 rpm).
*2 Fuel efficiency is 19.0 km/l (in Japan's 10–15 mode).

Progress in Plug-in Hybrids

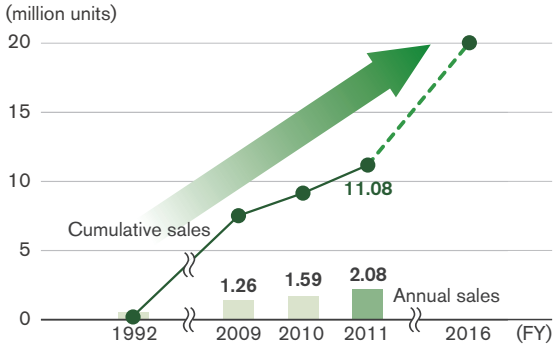
Plug-in hybrid electric vehicles (HEVs) can draw power from ordinary household electrical outlets to replenish their batteries and run on motors similar to those of EVs. Nissan is currently working on plug-in HEVs with the aim of bringing them to market by 2015.

Global Rollout for Our New CVT

The continuously variable transmission (CVT) enables smooth acceleration without noticeable gear changes. It also allows selection of the optimum engine speed to match the vehicle's rate of travel, thus achieving powerful driving with lower fuel consumption. In October 2011 Nissan unveiled its new-generation XTRONIC CVT for use in cars with 2.0- to 3.5-liter engines. This addition expanded the lineup of Nissan cars with CVT technology from the 1.2- to 3.5-liter classes.

The new XTRONIC CVT features a world-leading ratio coverage of 7.0 (specific to 2.0- to 2.5-liter engine vehicles, as of October 2011) and has reduced friction by approximately 40% from previous versions. These factors have improved fuel efficiency by up to 10% (in-house measurement using U.S. Environmental Protection Agency combined mode) compared to similar vehicles with older CVTs. We are introducing this new CVT globally in 2012, beginning with the North American market, and we aim to achieve cumulative sales of CVT vehicles above the 20 million mark since our launch of the technology in 1992. In fiscal 2011 a total of 2.08 million Nissan cars with CVT technology were sold globally, for a cumulative total of 11.08 million.

Number of CVT-Equipped Units Sold



Toward Lighter Vehicles

Nissan places emphasis on developing materials and optimizing body structure to reduce vehicle weight, one way to improve fuel efficiency. One of these research efforts is in the area of ultra-high tensile strength steel.

In October 2011 we announced the world's first ultra-high tensile strength steel rated at 1.2 gigapascals (GPa), which is highly formable and can be used for cold pressing structural body parts. Developed together with Nippon Steel Corporation and Kobe Steel, Ltd., this material can be made much thinner and still used with the same performance as traditional high-tensile sheet metal. We can use 15 kg less of the material per vehicle body, achieving corresponding improvements to fuel economy and driving performance. This metal is also suitable for mass parts production through cold pressing, which requires no sheet heating machinery on the line, thus keeping production costs lower. New vehicles to be announced in 2013 will use this new material in the center pillar reinforcements, side roof rails, front roof rails and other elements. Nissan cars all around the world will include this new metal.

Reducing Traffic Congestion with ITS

An automobile's fuel efficiency depends not just on the car's own capabilities but on the environment in which it drives and the way it is driven as well. Nissan is actively working to create societal infrastructure that will help to improve the traffic environment. Intelligent Transport Systems (ITS) are a particularly important part of our efforts, and we are collaborating with others in a variety of industries to craft solutions to tough problems like road congestion that automakers cannot tackle on their own.

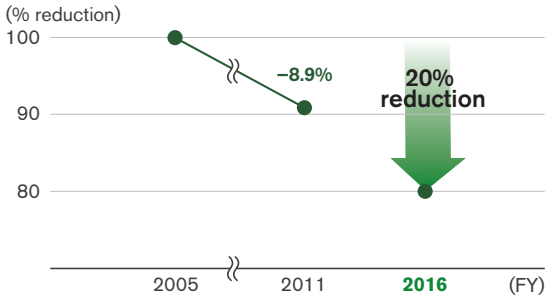
In the Wangjing district of Beijing, China, we worked with the Municipal Commission of Transport beginning in January 2012 on a large-scale experiment to confirm whether dynamic route guidance using IT devices can help to disperse traffic congestion. In this experiment, a world first, we distributed navigation devices to 12,000 Wangjing residents. Over the course of eight months, these devices are providing users with dynamic route guidance, or real-time traffic information helping them to choose the best travel routes, and eco-driving support helping them to operate vehicles in more environmentally friendly ways.

Corporate Carbon Footprint Minimization

A 20% Emission Reduction in Corporate Activities

We are said to be in a carbon-constricted world, in which reducing carbon dioxide emissions is a task to be tackled by all companies. By fiscal 2016, Nissan aims to reduce the CO_2 emissions associated with its corporate activities by 20% globally from the fiscal 2005 level, as measured in tons of CO_2 (t-CO_2) per vehicle, and to become the company with the lowest CO_2 emissions in the automobile industry. To achieve this goal, we widened the scope of measurable objectives in fiscal 2011 to include logistics, offices and dealerships in addition to production sites, and strengthened controls. At present we are expanding our use of renewable energy worldwide. Our result in fiscal 2011 was an 8.9% reduction from the fiscal 2005 level.

Global Reduction of CO_2 Emissions per Vehicle



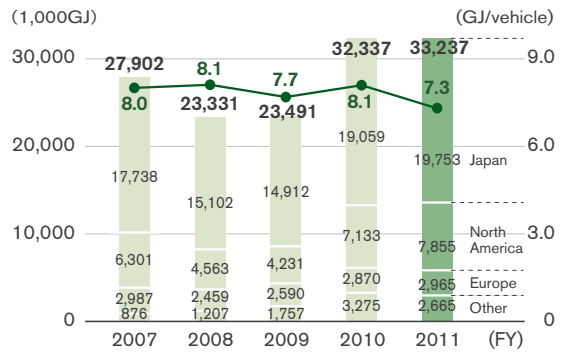
Energy Saving in Global Production

Most of the CO_2 emissions in the manufacturing process come from the consumption of energy generated with fossil fuels. We are engaging in a variety of energy-saving activities in manufacturing our vehicles.

We are promoting the use of renewable energy sources appropriate to the location of each of our global plant sites. Since 2005, we have installed 10 power-generating wind turbines on the grounds of Nissan Motor Manufacturing (UK) Ltd., which together provide about 5% of the electricity used at the entire site. In Japan, Nissan 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.

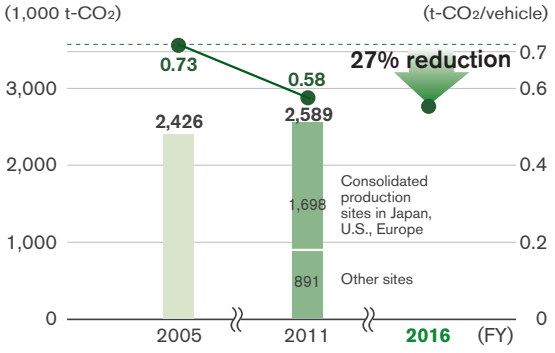
In production technology, we are introducing highly efficient equipment, improving manufacturing techniques and adopting energy-saving lighting. Our offices use finely controlled lighting and air conditioning for low-energy-use, low-loss operations. We are promoting CO_2 emission reduction activities and introducing our cutting-edge energy conservation technology from Japan in Nissan plants worldwide. Meanwhile, our plants in all countries learn and share best practices with each other. With these activities, we set a target of reducing CO_2 emissions by 27% below the fiscal 2005 level by fiscal 2016, as measured by the index of "CO_2 emissions per global vehicle" (total emissions generated from global Nissan vehicle manufacturing sites divided by the total Nissan vehicle production volume). In fiscal 2011 our CO_2 emissions per global vehicle were approximately 0.58 tons, a reduction of 20.5% from the fiscal 2005 level.

Global Energy Consumption



Note: The figures for FY2011 are for 136 companies of the Nissan Group worldwide, including consolidated companies.

Global CO_2 Emissions from Manufacturing Activities



Notes: The figures for FY2011 are for 41 companies of the Nissan Group worldwide, including consolidated companies. Figures for Japan, U.S. and Europe have received third-party certification from PricewaterhouseCoopers Aarata Sustainability Certification Co., Ltd. For more information, please see http://www.nissan-global.com/EN/DOCUMENT/PDF/SR/2012/report01.pdf

International Energy Star Program Honors (North America)

The International Energy Star program to promote energy savings was started by the U.S. Environmental Protection Agency in 1992, and is currently being implemented in seven countries and regions. There are now 17,000 companies and organizations participating in the program, carrying out various energy-saving activities. Nissan has been involved in the program since 2006. In fiscal 2011 Nissan North America (NNA) was named Partner of the Year for Energy Management, an honor received for the second year running. Nissan's manufacturing plants in Smyrna and Decherd, Tennessee, and Canton, Mississippi, are Energy Star award winners for their specific energy efficient operations. NNA has increased energy efficiency by more than 30% at its three U.S. plants with thorough controls that reduce energy use and loss in operations.

More Efficient Logistics and Modal Shifts

Nissan began sending chartered trucks for pick-up and delivery of parts in 2000, a method that was uncommon among automobile manufacturers in Japan at the time. This approach has also been adopted widely at our overseas manufacturing sites, increasing the global efficiency of our operations. We have also worked together with suppliers to optimize the frequency of deliveries and transport routes and to improve packaging specifications.

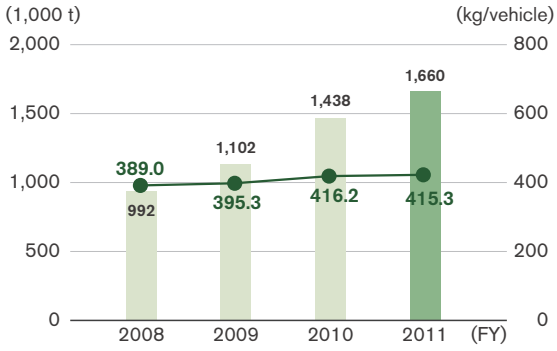
In Europe, we are conducting joint shipment of parts and completed vehicles with our Alliance partner Renault. In joint shipments by ferry across the English Channel, we have also linked up with other automakers to improve transport efficiency further.

Much effort is dedicated to devising efficient modes of packaging for the huge number of parts of different shapes and materials that go into each automobile. Through simultaneous-engineering logistics activity, we are working from the design stage to create parts and develop new vehicles with consideration for transportation efficiency, as well as to reduce the parts shipments per vehicle. We also monitor the competency levels of packaging design engineers and are cultivating their abilities through global adoption of an original Nissan program.

We have reviewed our transport methods and are undertaking a modal shift from truck to maritime and rail transport. Some 70% of our completed vehicles in Japan are transported by sea. Parts shipments from the Kanto area around Tokyo 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 Nissan sites outside Japan, transport methods are selected to best match the local geographical conditions. 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.

Global CO_2 Emissions from Logistics



Our Energy-Efficient Car Carrier

Nissan unveiled its new energy-efficient car carrier, the *Nichioh Maru*, in January 2012. Built by Shin Kurushima Dockyard Co., Ltd., the *Nichioh Maru* will be used in the transport of completed vehicles and parts. This is the first coastal ship in Japan to be powered by an electronically controlled diesel engine, to be equipped with solar power panels and to use LED lighting in the ship's hold and living quarters. Its hull is painted with the latest low-friction coating, among other energy-efficient features.

The *Nichioh Maru* can carry up to 1,380 vehicles, and runs twice weekly on a route connecting Japan's Kanto, Kinki and Kyushu regions. Compared with existing car carriers of the same type, the vessel saves as much as 1,400 tons of fuel annually and achieves CO_2 emission reductions of about 4,200 tons.

Efforts at Our Dealerships and Offices

Nissan manages CO_2 emissions at its offices globally and at company-owned dealerships. At our Global Headquarters we started testing of a charging system for electric vehicles (EVs) that combines a solar power generation system with the high-capacity lithium-ion batteries used in Nissan LEAF in July 2011. Power generated by solar cells at our Global Headquarters is stored in storage batteries with the capacity of four Nissan LEAFs and used to charge EVs. The total electricity that can be generated and stored is the equivalent to fully charging approximately 1,800 Nissan LEAFs annually. CO_2

The solar panels installed at our Global Headquarters

emissions are also being managed at our North American, European and Chinese sites, and we aim for reductions of 1% each year from fiscal 2010 at each site in Japan, North America, Europe and China.

Many of our dealers are making efforts to save energy, including the use of highly efficient air-conditioning, insulation films, ceiling fans and LED lighting. In Japan we are undertaking activities to reduce CO_2 emissions by 1% each year.

Peak Energy Use Reduced 30% in Summer 2011 in Japan

Nissan made companywide efforts to save energy in response to power shortages experienced by Japan in the summer of 2011 as a result of nuclear power plant closures following the earthquake and tsunami disaster. In addition to switching our workers' days off, a measure adopted by the entire auto industry, we managed power use in plants and offices by installing smart meters, changed to off-peak working hours (moving early shifts forward and pushing late shifts back) and night shifts in production departments, moved working times forward in nonproduction departments, and used small, private electric generators for cogeneration. As a result we achieved peak energy use reductions of about 30%, greatly exceeding our initial target of 15% reduction in maximum energy use during peak hours. We also held a campaign to encourage employees to reduce energy use at home as well. (See p. 72.)

New Natural Resource Usage Minimization

Increasing Usage of Recycled Material to 25%

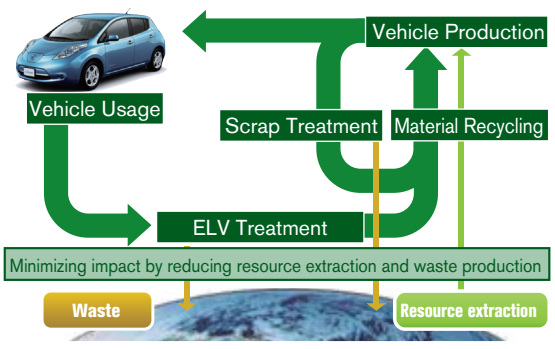
Demand for mineral resources is growing rapidly as emerging countries develop economically. Some predictions forecast that all currently known mineral resources will have been extracted by 2050 if present trends continue. Some mining sites currently in operation and new exploration sites are located in areas where local ecosystems need to be preserved, and there is concern about the environmental effects of topsoil excavation, deforestation and wastewater.

Nissan is taking measures to address these issues. We are increasing use of renewable resources and recycled materials in addition to the traditional approach of using resources more efficiently to reduce reliance on them. Our efforts with respect to recycled materials are based on the thinking that once a natural resource is extracted it should continue to be used, while maintaining quality, to minimize environmental impact. We have set a target of increasing the usage rate for recycled materials per vehicle to 25% by fiscal 2016.

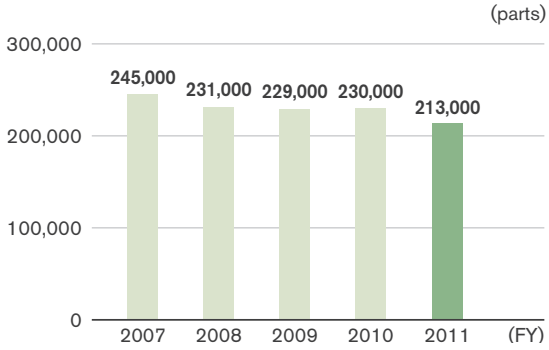
Our Closed-Loop Recycling System

Closed-loop recycling is a method of recycling waste and scrap generated during production and collection of end-of-life Nissan products and using it as material in the same type of products while maintaining its quality standards. With this method, the same material can be used repeatedly, thus greatly reducing CO_2 emissions and the environmental impact over the product lifecycle. Together with our business partners, we are putting tremendous effort into collecting and reusing steel and aluminum sheet scraps from the manufacturing process, and aluminum wheels from used vehicles and reusing these resources. In Japan we are recycling plastic from finished bumper scraps at our plants and from scrap bumpers collected from dealerships. Collected scraps or bumpers will be turned into recycled plastics in a finished bumper reprocessing line set up in our Oppama Plant. Recycled plastics have already been given new life as bumpers used in Nissan LEAF and many other new vehicles.

Closed-Loop Recycling



Number of Recovered Bumpers



Raising the Recovery Rate

To optimize processing and improve the recovery rate for end-of-life vehicles (ELVs), Nissan carries out experimental studies to develop more efficient ways of dismantling its cars. To date, such research has focused on establishing methods of processing waste oil, waste liquids, lead and other substances that impact the environment. We are presently researching ways to increase the recovery rate further in order to reclaim and reuse valuable materials from ELVs. Feedback from the studies has led to improvements in dismantling techniques and has aided our product design division in choosing suitable materials and designing vehicles that are easier to dismantle. As of fiscal 2011, our own calculations showed that we had achieved a recovery rate of 98.8% in Japan.

Reducing Scarce Resource Usage

Hybrids and electric vehicles (EVs) emit less CO_2 over the lifecycle of the product than gasoline-powered vehicles, but scarce resources called rare earths are a necessary component of their motors. Mining of rare earth elements impacts the environment, and uneven distribution of these resources gives rise to concern about soaring prices. Reducing their usage is important. We have started development to reduce the usage of rare earth elements in collaboration with our suppliers.

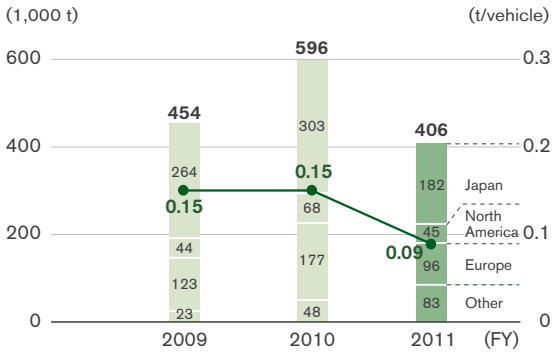
Thorough Measures for Waste Materials

Nissan actively promotes measures based on the three Rs—reduce, reuse and recycle—in its production processes whenever possible, striving to minimize the waste generated and maximize recycling efficiency by means of thorough sorting of waste. Our efforts have paid off. As of the end of fiscal 2010, we have achieved a 100% recovery rate at all of our production sites in Japan: five manufacturing plants, two operations centers and five affiliates. We are also working to bring this rate to an automotive-industry-leading level in each region of the globe.

Nissan has been making great efforts to reduce the number of wooden pallets and cardboard boxes used in import and export parts shipping, replacing them with units made from materials like steel and plastic, which can be returned for reuse. We have been using collapsible plastic and steel containers for shipping parts to and from our operational sites around the world for more than 10 years. In fiscal 2011, the adoption rate for these containers exceeded 98%. We have also been working with our Alliance partner Renault to expand the use of our globally standardized, returnable containers. Through our simultaneous design activities in the logistics stage, we consider ways to improve parts packaging methods from the development stage, thus contributing to a reduction in the packaging materials we use.

Through these efforts, we plan to reduce the amount of waste from our production factories by 2% annually in Japan and by 1% annually worldwide.

Total Waste Produced



Note: The figures for FY2011 are for 136 companies of the Nissan Group worldwide, including consolidated companies.

Sales of Nissan Green Parts

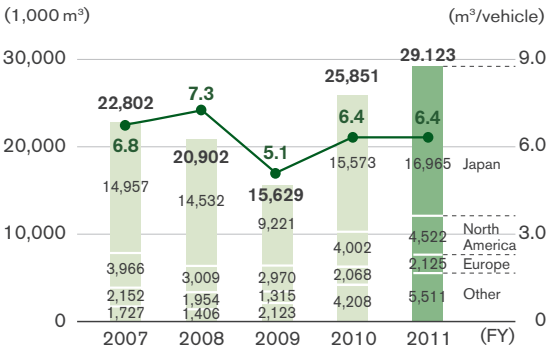
Parts with the potential for recycling include those reclaimed from ELVs as well as those replaced during repairs. In Japan, Nissan collects and thoroughly checks the quality of these secondhand parts, and those that receive a passing grade are sold through our sales outlets as Nissan Green Parts. We 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 2011 reached ¥1.61 billion.

Water-Use Management

The issue of water resources is becoming ever more serious as water use increases due to the growing world population and economic development. Plants producing Nissan vehicles and parts are located all over the world, and they all use water as part of the production process. We are making efforts to manage and reduce water usage at all of our production plants.

We carry out water-use assessments on an ongoing basis at all plants. Based on a Nissan-developed index of water risks, plants are categorized into three levels.

Water Resource Use



Note: The figures for FY2011 are for 136 companies of the Nissan Group worldwide, including consolidated companies.

Level A is defined as plants that either already have a water-related issue or are expected to face one in the near future; Level B as plants with potential water problems; and Level C as plants at low water risk. We are working to put in place activities matched to the conditions at each plant. In fiscal 2011, we set water use targets for Level A plants in Australia, India, China and Mexico and began activities to reduce water use.

Environmental Management Enhancement

Improvements to Our Management System

Nissan is progressing with the introduction of environmental management systems to all its operation sites worldwide.

In January 2011 we obtained integrated ISO 14001 certification for our Global Headquarters and all of our main facilities in Japan for research and development, production and distribution, as well as for our product development processes. To confirm that this management is functioning properly, we undergo audits by third-party organizations, and we carry out our own internal audits of our environmental systems and environmental performance annually to strengthen the company's measures based on the PDCA cycle: plan, do, check and act. We have also obtained ISO 14001 certification at our main production plants outside Japan. Our policy is to extend environmental management systems with these same criteria to regions in which we are newly expanding.

We have introduced an original approach to environmental management based on ISO 14001 certification, which we call the Nissan Green Shop certification system, to our sales companies in Japan. This system is managed 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. As of the end of March 2012, 2,800 dealership outlets of 173 sales companies, including parts and forklift dealers, have been certified under the system.

Our consolidated manufacturing affiliates have obtained ISO 14001 certification.

Shared Approach with Suppliers

The purchasing divisions of Nissan and Renault carry out supply-chain management in a manner consistent with *The Renault-Nissan Purchasing Way*, a booklet outlining policies for dealing with suppliers, and the *Renault-Nissan CSR Guidelines for Suppliers* published in 2010. In 2008 we adopted the Nissan Green Purchasing Guidelines, a set of standards for the environmental efforts of our automobile parts and material suppliers. In 2011 we revised it to enhance the controls on the environmental impact of substances. Through these purchasing guidelines we seek to share our environmental principles and action plans with our suppliers and to promote the reduction of environmental impact throughout the entire supply chain.

Environmental Education for Employees

Nissan conducts environmental education for all of its employees in Japan to promote and deepen individual awareness of environmental issues. Basic education is a part of the orientation of new employees when they join the company. Classes and seminars following Nissan's original environmental education curriculum are held to raise the awareness of managers and midlevel employees. We are also developing localized educational tools for employees at our operation sites around the world.

We announced Nissan Green Program 2016 (NGP2016) in fiscal 2011 and held presentation meetings and open round-table discussions at our offices to familiarize employees with the program's environmental targets and key activities. These meetings were established as occasions to increase awareness in all of our employees about the link between NGP2016 and their own work. We plan to expand these meetings to affiliated companies in the future.

A "town hall" style meeting on NGP2016 held at the Nissan Technical Center in February 2012

Nissan's Tough Voluntary Standards

Stricter controls on the environmental impact of substances are being implemented in countries around the world. Examples include the European 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 volatile organic compounds (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 or perform better than the environmental regulatory requirements 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 (excluding OEM vehicles) launched from July 2007 onward. To meet European Union requirements, we are working to fulfill our registration and notification duties under the REACH Regulation, and are filing notification of the classification, labelling and packaging of substances and mixtures in line with the CLP Regulation. To reduce VOCs in vehicle cabins, we have adopted the voluntary targets of the Japan Automobile Manufacturers Association as Nissan's global standards and are reconsidering the parts and adhesives used in seats, door trim, floor carpets and other vehicle parts.

We are moving to strengthen our management of substances that impact the environment, with systematic reduction or replacement of those substances.

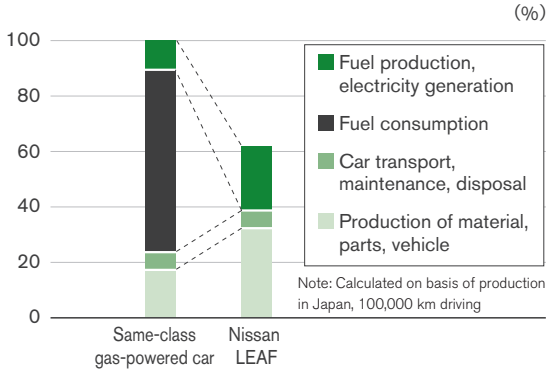
Lifecycle Assessment to Reduce Environmental Impact

Nissan uses the lifecycle assessment (LCA) method to evaluate and comprehensively assess environmental impact in all stages of the vehicle lifecycle, from resource extraction to production, transport, customer use and vehicle disposal. We also carry out LCAs for new technologies as they are introduced.

Our calculations show that Nissan LEAF reduces CO_2 emissions by up to 40% over its lifecycle compared to gasoline-powered vehicles of the same class. This assessment was certified by a third-party LCA assessment organization, the Japan Environmental Management Association for Industry.

In the future we will continue to strive to lower the vehicles' environmental impact based on new technology and more efficient manufacturing processes. We are aiming for further reductions in CO_2 emissions over the lifecycle of our new vehicles.

CO_2 Emissions Over a Vehicle's Life Cycle



Protecting the Air, Water, Soil and Biodiversity

The United Nations Millennium Ecosystem Assessment report issued in 2005 concluded that the ecosystem services evaluated had degraded over the past 50 years. Many scientists believe that humans have changed the Earth's ecosystems more rapidly and extensively than in any comparable period of time in history. Humankind depends 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 environmental preservation and economic progress as they pursue their business activities.

Using the method of Corporate Ecosystem Services Review,* Nissan has evaluated value chains such as that from extraction of material resources to vehicle production and operation. Based on the results, we identified three priority areas for us as an automobile manufacturer: energy sourcing, mineral material sourcing and water usage. Since then we have been working to position the business risks and opportunities, reevaluating and further developing our traditional environmental initiatives.

* Developed by the World Resources Institute in cooperation with the World Business Council for Sustainable Development and Meridian Institute, based on the U.N. Millennium Ecosystem Assessment.

**"Ecosystem Services and the Automotive Sector" is available for download from our website:
http://www.nissan-global.com/EN/ENVIRONMENT/SOCIAL/BIODIVERSITY/**

Top Certification for Our Nature Preservation

In November 2011, the grounds of the Nissan Technical Center and Nissan Advanced Technology Center received Excellent Stage 3 certification in the Social and Environmental Green Evaluation System (SEGES), operated by the Organization for Landscape and Urban Green Infrastructure.

SEGES is a system to assess and certify particularly outstanding efforts that contribute to society and the environment through activities to protect and cultivate greenery in company-owned natural environments. The system is recognized in the Japanese government's Third Environmental Basic Plan, the National Biodiversity Strategy 2010, the Guidelines for Private Sector Engagement in Biodiversity and elsewhere. Of the approximately 150 hectares at the two Nissan sites above, about 60 hectares are covered in woods and green space, and we maintain a walking trail open to the public. Company events are also held there to allow employees to enjoy the natural surroundings. The site has also been designated as a preservation area for rare species, such as a perennial orchid called *ebine* in Japanese, and we work actively to maintain the environment.

Part of the public walking trail maintained on our land

Toward Cleaner Exhaust Emissions

Nissan proactively sets strict goals and targets for the design and production of its vehicles. Building on our research and development, in which we have set ourselves the ultimate goal of emissions as clean as the atmosphere, we have been working to reduce 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. PZEV vehicles must meet the zero-evaporative-emission regulations as well as have an on-board diagnostic system that warns of problems with the catalytic converter or other emission-control systems.

The 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 (NOx) and nonmethane 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.

Complying with Stringent Emission Regulations

While diesel vehicles have an advantage in terms of energy efficiency and level of CO_2 emissions, making their exhaust cleaner has been very difficult. At Nissan, we have developed technologies including a diesel particulate filter that traps and eliminates substances making up sooty exhaust, as well as NOx absorption and oxidation catalysts. These next-generation environmental technologies are used in the M9R clean diesel engine, developed through our Alliance with Renault, that comes in the X-TRAIL 20GT. This was the first vehicle to meet Japan's 2009 emissions regulations,* among the most stringent in the world. An X-TRAIL 20GT with a 6-speed automatic transmission (including manual mode) was introduced in 2010. In November 2011 we introduced an Atlas F24 1.5 ton diesel engine model, expanding Nissan's lineup of models that comply with the 2009 regulations.

* Japan's 2009 emission standards stipulate reductions of NOx by 47% and particulate matter by 64% from the levels required by the 2005 emission standards (applicable to vehicles weighing more than 1,265 kg). The 2009 Emission Regulations went into effect for new models in October 2009 and have been applied to existing models and imported cars since September 2010.

Our M9R clean diesel engine

Prevention of Air Pollution

At Nissan production plants, we thoroughly implement systems and control standards to manage air pollutants and undertake activities to reduce the amount of these substances used and emitted in our production operations. We aim for even higher levels of air pollution control than those mandated by the countries in which we operate.

In Japan, we have taken strict measures to reduce emissions of NOx and SOx pollutants from our factories, reducing the amount of these emissions to one-fourth of the levels emitted in the 1970s. Painting lines and other processes in vehicle production consume large amounts of heat. We have lowered NOx and SOx emissions by introducing low-NOx burners in the ovens and boilers that provide heat for our painting lines and by switching from heavy oil and kerosene to fuels with low SOx emissions for these ovens and boilers.

A current challenge is the reduction of VOCs, which readily evaporate and become gaseous in the atmosphere. These compounds account for approximately 90% of chemicals released in our vehicle production processes. We are working to increase the recovery of cleaning solvents and other chemicals and reduce the amounts of these substances emitted from our plants ahead of the implementation of new regulations in each country where we operate. We are also systematically switching to lines using water-based paints, which have fewer VOCs, and increasing the recycling rate for waste paint thinner in order to cut down on the total volume of these compounds that we use.

VOC emissions from the Kyushu Plant water-based paint line are now less than 20 grams per square meter of painted surface, and we are maintaining one of the best levels in the industry. Water-based paint lines have also been introduced in our Smyrna and Canton Plants in North America, our Barcelona Plant in Spain and other plants.

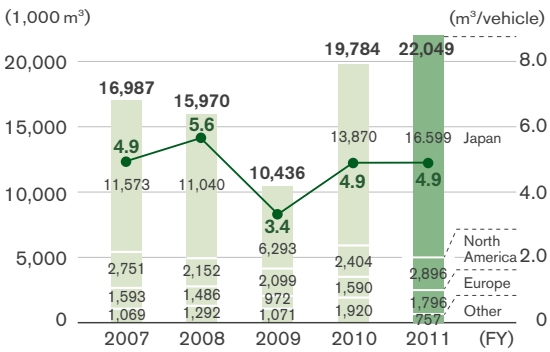
Purification of Drainage Water

We aggressively reuse water within our operations and try to reduce the total volume of water used. Wastewater undergoes high-level processing in our wastewater treatment facilities before being released into rivers or elsewhere.

In preparation for unexpected occurrences, such as the discharge of oil in rainwater, we have installed sensors to detect irregularities and a system to stop effluent from leaving our sites.

At the Oppama Plant, for example, we have installed a system to strengthen our water pollution prevention efforts. We have attached water quality sensors to the discharge ports of the wastewater treatment facility, and discharge of water outside the grounds is automatically suspended if water quality problems are detected.

Wastewater Release



Note: The figures for FY2011 are for 136 companies of the Nissan Group worldwide, including consolidated companies.

Messages from Our Stakeholders

Nissan's Leadership to a Low-Carbon Future

Daniel Sperling, Ph.D.
Director
Institute of Transportation Studies
University of California, Davis

Beginning in the 1990s, Nissan led the auto industry in testing the use of lithium-ion batteries. Early Nissan electric vehicles (EVs) like Altra EV and Hypermini provided key insights into lithium battery performance and consumer needs. In 2010, Nissan took the greatest leap in the area of EVs of any major automaker when it introduced Nissan LEAF. With Nissan LEAF, Nissan became the first major automaker to mass-produce EVs in the 21st century. The company has made massive investments in the manufacture of advanced batteries and EVs, leading the entire industry.

To develop the market, Nissan has been partnering with cities and regions around the world, providing critical initiatives to educate many groups and provide experience to interested buyers. Nissan's vision and leadership have enabled a worldwide vanguard of consumers and cities to explore the benefits of 100% battery EVs. The arrival of Nissan LEAF in California has also spurred the coordinated planning of infrastructure for plug-in vehicles. Nissan deserves credit for launching the modern EV industry. This leadership is pivotal in leading the auto industry and the transportation system to a low-carbon future.

Area Leaders' Messages

Reducing Resource and Energy Dependence

Hiromi Asahi
Deputy General Manager
Corporate Planning and Business Development Division
Corporate Planning Department, Environmental Planning Group

In fiscal 2011 we announced Nissan Green Program 2016 (NGP2016), our mid-term environmental action plan. This is the third such program in the series that began with NGP2005, launched in 2002. During these years society's interest in environmental issues has undergone change, and the Nissan Green Programs have evolved in response. With NGP2016, we have started working to reduce our dependence on the planet's energy and natural resources in addition to our activities to reduce our impact on the global environment. We have achieved all the objectives set in our previous Nissan Green Programs, and we are making concerted efforts throughout the company to do the same for the goals in NGP2016.