SANYO DENKI

Environmental Management Report 2012

SANYO DENKI CO., LTD.

Corporate philosophy

We SANYO DENKI make the dreams of people come true for the happiness of people in cooperation with people.

To carry out the corporate philosophy, we do the following

For Environment...	For society and the natural environment we will help preserve the global environment and contribute to the prosperity of mankind through our corporate activities.
For Customers...	For customers and users we will create new values through technology, products and services.
For Suppliers...	For suppliers and vendors we will strive for integrated technical development and harmonious mutual prosperity through parts purchase, production contracting and joint development.
For Investors...	For investors and financial institutions we will increase our investment worth and credit through sound management policy and good access to information.
For Competitors...	For competitors and the industry we will strive to build industrial and technical development through technical alliances and competition.
For Employees...	For all of our employees we will help individuals to achieve self-fulfillment through their work and the company.

Contents

Scope of the report

Organizations covered by the report: The Head Office, the Technology Center and factories in Japan (Kangawa Works, Shioda Works and Fujiyama Works)
Period covered by the report: Fiscal 2011(from April 1, 2011 through March 31, 2012; more recent information is included in the Environmental Topics section)

Our declared corporate philosophy is, "For the benefit of society and the natural environment, we are dedicated to help preserve the global environment and to contribute to the prosperity of mankind through our corporate activities." To apply this declaration throughout our company, we have established an environmental management system with an Environmental Committee serving as overseer of all activities.

For example, we establish and promote annual objectives for conservation projects including environmental design promotion, energy usage reduction, copy paper usage reduction, and waste reduction. Our energy conservation efforts were especially effective in power saving last year owing to the caps on electricity consumption resulting from the Great Japan Earthquake and subsequent nuclear accident.

From the perspective of factory production, we have been compelled to recognize the significance of the energy supply as essential to manufacturing. The global perception of energy and its value has been changing, and an energy feed-in tariff system has been established in Japan this year. We believe this will lead to a significant shift toward renewable energy resources. This system should enable solar power generation to be established as a sound business enterprise and rapidly accelerate its expansion.

Power management related concerns have also been increasing, such as in production leveling, micro grids, regenerative electric power, peak shaving and power storage. Applying our expertise in power conversion technology, we have developed power conditioners for photovoltaic generation, regenerative electric power systems, peak shaving systems for factories, and a grid management system. We expect some of these systems to contribute beneficially in the future era.

In developing new products, we apply a policy of practical application of new energy and energy saving technology. Among these products, the Power Systems Division develops energy-related systems such as those mentioned above to contribute directly to energy management. Our Cooling Systems and Servo Systems Divisions are developing products with high efficiency, low power consumption, and high performance and precision.

We develop our products according to environmental design objectives, and denote such products that satisfy certain environmental assessment standards as "eco-products." We promote our customers' use of eco-products as a contribution to their conservation efforts to reduce their environmental impact on the planet.

Finally, in October 2011, environmental cleanup of the soil and ground water at the former Midorigaoka Works was completed with the understanding and cooperation of the surrounding inhabitants, for which we are sincerely grateful. Our Company is determined to promote and practice such environmental preservation activities. To ensure transparency of management, we believe disclosure of environmental information is essential.

Our environmental preservation activities are aimed at decreasing the environmental burden over product life cycles and total energy consumption by recycling. We ask for your understanding and cooperation with our environmental management efforts as described in this Environmental Management Report.

Director and Major Operating Officer
Nobumasa Kodama

Environmental Policy

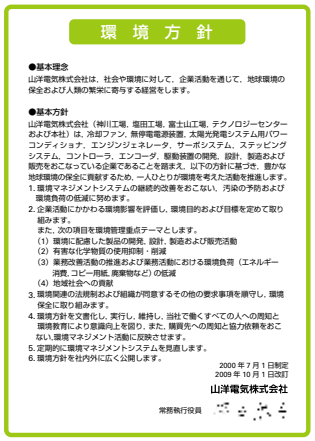
Basic Philosophy

SANYO DENKI helps preserve the global environment and enhance the mankind's prosperity through its corporate activities for the society and the environment.

Basic Policy

SANYO DENKI CO., Ltd., comprising Kangawa Works, Shioda Works, Fujiyama Works, Technology Center and Head Office, develops, designs, manufactures and sells cooling fan, UPS, power conditioner for photovoltaic generation system, engine generator, servo system, stepping system, controller, encoder, and driving device. Under the principles listed below, each member of SANYO DENKI will take part in eco-friendly activities to help preserve the abundant global environment.

1. We will continuously improve the environmental management system and work hard to prevent pollution and reduce the environmental impact of our activities.
2. We will assess the environmental impact of our corporate activities and focus on our environmental objectives and targets.
We will also deal with the following as high-priority themes for environmental management.
(1) Develop, design, manufacture, and sell environment-friendly products
(2) Reduce or eliminate the use of hazardous chemicals
(3) Reduce the environmental impact (energy consumption, number of copies, waste, etc.) of business activities
(4) Contribute to the local community
3. We observe environmental laws, restrictions and other rules agreed upon by organizations and work hard for environmental preservation.
4. We document, carry out and maintain our environmental principles, make them known to all our employees, and ask that our employees both cooperate in the pursuit of these principles and reflect them in our environmental management.
5. We will review the environmental management system periodically.
6. We will openly publicize the environmental principles to parties in and outside the company.


環 境 方 針

●基本理念
山洋電気株式会社は、社会や環境に対して、企業活動を通じて、地球環境の保全および人類の繁栄に寄与する経営をします。

●基本方針
山洋電気株式会社（神川工場、塩田工場、富士山工場、テクノロジーセンターおよび本社）は、冷却ファン、無停電電源装置、太陽光発電システム用パワーコンディショナ、エンジンジェネレータ、サーボシステム、ステッピングシステム、コントローラ、エンコーダ、駆動装置の開発、設計、製造および販売をおこなっている企業であることを踏まえ、以下の方針に基づき、豊かな地球環境の保全に貢献するため、一人ひとりが環境を考えた活動を推進します。
1. 環境マネジメントシステムの継続的改善をおこない、汚染の予防および環境負荷の低減に努めます。
2. 企業活動にかかわる環境影響を評価し、環境目的および目標を定めて取り組みます。
また、次の項目を環境管理重点テーマとします。
（1）環境に配慮した製品の開発、設計、製造および販売活動
（2）有害な化学物質の使用抑制・削減
（3）業務改善活動の推進および業務活動における環境負荷（エネルギー消費、コピー用紙、廃棄物など）の低減
（4）地域社会への貢献
3. 環境関連の法規制および組織が同意するその他の要求事項を順守し、環境保全に取り組みます。
4. 環境方針を文書化し、実行し、維持し、当社で働くすべての人への周知と環境教育により意識向上を図り、また、購買先への周知と協力依頼をおこない、環境マネジメント活動に反映させます。
5. 定期的に環境マネジメントシステムを見直します。
6. 環境方針を社内外に広く公開します。

2000 年 7 月 1 日制定
2009 年 10 月 1 日改訂

山洋電気株式会社

常務執行役員

Environmental policy brochure

System

It has been 12 years since the Environmental Committee was established in April 2000. The committee has been working to maintain a level of energy saving and waste reduction in factories since fiscal 2004. In addition to reducing environmental burdens, the committee is also striving to reduce the volume of hazardous chemical substances and develop eco-products to achieve its major environmental management goals.

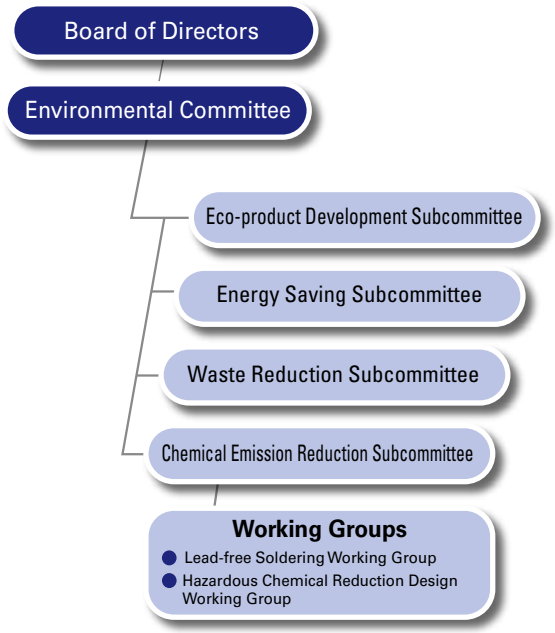
Major Responsibilities of the Environmental Committee

1. Formulation of policies on environmental conservation activities, and reporting and instructions on the same
2. Formulation and enforcement of company rules and procedures (including company-wide environmental manuals) concerning environmental conservation activities
3. Promotion of environmental conservation activities at the head office, factories and branch offices through those in charge of environmental management
4. External contacts concerning company-wide environmental conservation activities
5. Surveys on social situations relating to environmental conservation activities

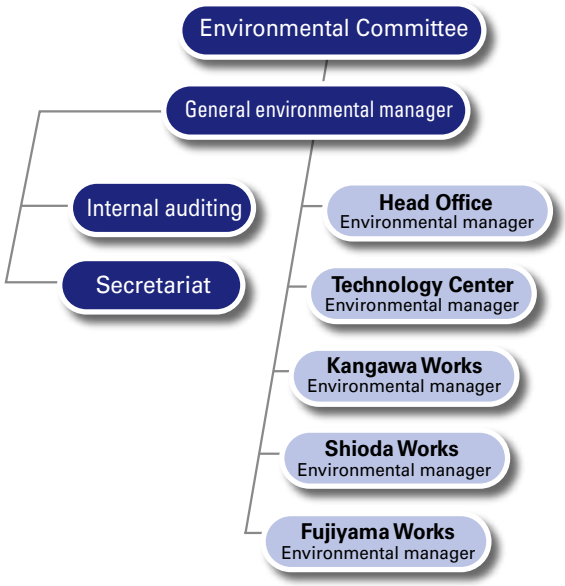
Environmental Committee

Scheme of Environmental Management System

Position of the Environmental Committee and Its Organization



Organization Chart for Environmental Management System



- **Eco-product Development Subcommittee**
  The subcommittee promotes the development of competitive products designed to protect the environment in accordance with eco-design standards.
- **Energy Saving Subcommittee**
  The subcommittee promotes energy saving through its daily activities for the environmental management system. It also formulates long-term energy saving strategies and proposes cost-effective investments.
- **Waste Reduction Subcommittee**
  The subcommittee works to reduce waste and disposal costs and achieve zero emissions.
- **Chemical Emission Reduction Subcommittee**
  The subcommittee strives to reduce emissions of hazardous chemical substances and minimize environmental pollution via self-management. It also works to promote the use of lead-free soldering and lead-free electric wires, reduce hazardous chemical substances, and develop measures for PRTR (pollutant release and transfer register).

We developed 20 new certified eco-products in this fiscal year
and were also able to raise the sales ratio for eco-products to 40.7%.
We achieved a 98.3% level of zero emissions for the company as a whole.

Activity	Goal for fiscal 2011	Track record in fiscal 2011
Promotion of eco-designing	Creation of eco-products	Twenty new products certified as eco-products
Sales activities	Sales ratio of eco-products: 50% or higher	Sales ratio of eco-products: 40.7%
Reduction of hazardous chemical substances	Use of lead-free soldering Development of products with reduced amounts of RoHS-6 hazardous substances Reduction of substances defined in the PRTR Law	Lead-free solder usage in each division is now nearly 100%, and we will continue promoting this effort in the future. Almost all models of cooling fans, stepping motors and servo motors now comply with the RoHS-6 hazardous substance directive. Other models are being brought into compliance upon request.
Reduction in power consumption	Kangawa Works (4%) Shioda Works 12% Fujiyama Works 11% Technology Center (5%) Head Office 9%	14% 31% 15% (1%) 18%
Reduction in fuel consumption	A-type heavy oil：261kl 21% *Total of the Shioda and Fujiyama Works LPG：38,000㎥N 54% *Total of the the Technology Center Town gas：690,000㎥N 3% *Total of the the Kangawa Works	21% A-type heavy oil：259kl 45% LPG：45,300㎥N 3% Town gas：688,400㎥N
Reduction in the use of copying paper	Kangawa Works (46%) Shioda Works (28%) Fujiyama Works 22% Technology Center 24% Head Office 39%	(33%) 5% 28% 31% 46%
Reduction of waste	Kangawa Works (15%) Shioda Works (4%) Fujiyama Works 52% Technology Center 12% Head Office 49%	(14%) 16% 54% 35% 43%
Contribution to local communities	Cleaning of areas around the Head Office, the Technology Center and the factories conducted more than once every month	Goal achieved
Promotion of zero emission	Raising the company-wide waste recycling rate 99.6% or higher.	Company-wide rate: 98.3%

Notes: 1. The reduction rate is calculated using fiscal 2000 as the base year, except for electric power and town gass, for which fiscal 2006 and 2010 were used as the respective base years.
2. Figures in parentheses indicate increases.

Specific Energy-Saving Measures

We recognize the crucial importance of energy-saving activities aimed at reducing CO2 emissions as a means to prevent global warming, and we strive to promote such energy-saving activities and improve energy consumption efficiency.
In 2011, we reduced our electric power consumption from the previous year by summertime energy-saving measures due to the power shortage caused by the nuclear accident, and CO2 output was consequently reduced. The unit cost of production was also reduced.

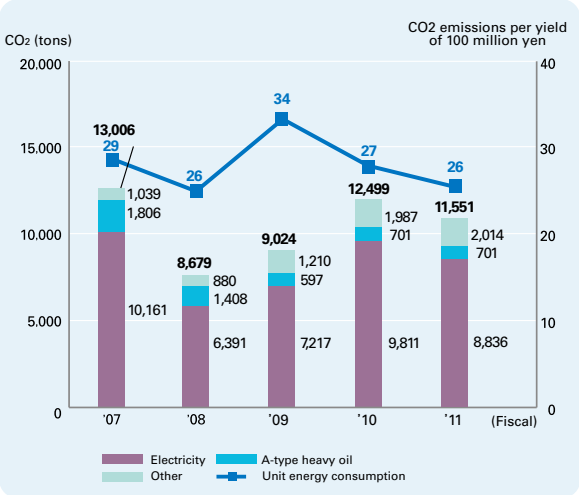
Results of introduction

- We selected and introduced a hybrid system product to replace the hydraulic pumps on the cooling fan blade assembly line at our Fujiyama Works. Electricity consumption was reduced by cutting power while the pumps were idle.
- We developed and introduced in-house electrical equipment using our own servo motors instead of the former hydraulic method. Electricity consumption was subsequently reduced.
- We analyzed equipment operating states using the energy management system newly introduced in the Kangawa Works to reduce unnecessary power consumption of systems and equipment.

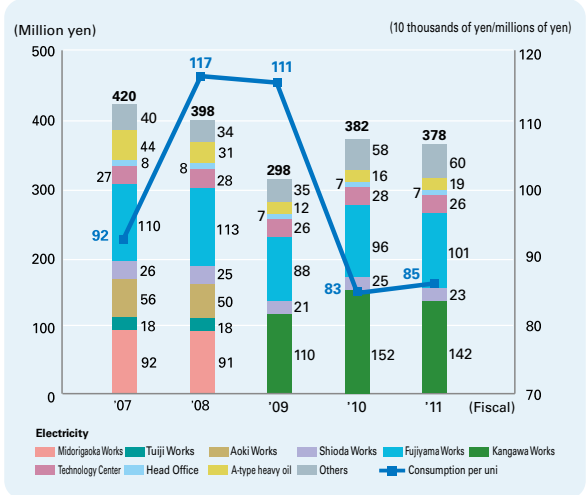
Fujiyama Works
Hydraulic pump for cooling fan blade assembly line

Kangawa Works
Factory equipment installation

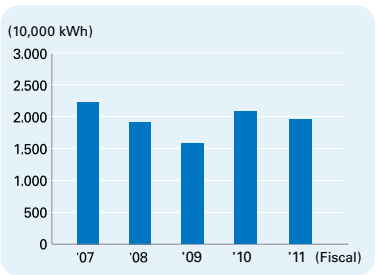
Energy consumption measured in terms of the amount of CO_2



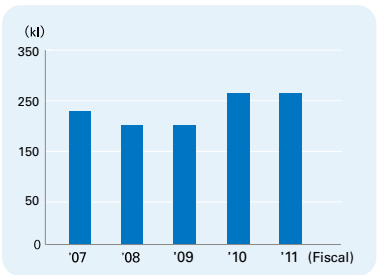
Consumption value per production value



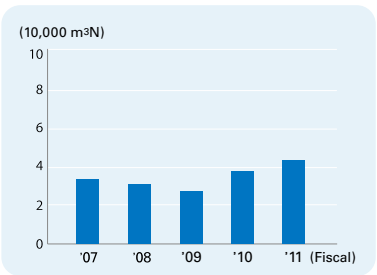
Power consumption



A-type heavy oil



LPG



Sanyo Denki has been employing an environmental accounting system since fiscal 2003 with the aim of implementing efficient and effective measures for environmental conservation. We measure the costs required for environmental conservation in our business activities and the effects produced by these activities using quantitative indicators (measured in terms of monetary units or physical quantities) and analyze these costs and effects in order to improve the efficiency and activity levels of environment management.

"Environmental Accounting Guidelines" published by the Ministry of the Environment, Format for publication C
Data range (company-wide)

Period covered: April 1, 2011 to March 31, 2012

Track records for fiscal 2011

(1) Cost of environmental preservation

In 2011, our cost of environmental preservation totaled 911 million yen, consisting of 56 million yen in investments and 855 million yen in expenditures. Our investments were in research and development efforts to design and develop environmentally compatible products. Our expenditures consisted of 62.9% for research and development, and 24.2% for management activities, an unusually high proportion.

(2) Effects of environmental preservation

Electricity-saving measures in the summertime due to the power shortage caused by the nuclear accident positively affected resources used for our business activities, except for the amounts of LPG and fuel oil consumed. Specifically, energy consumed was the equivalent of 890 t-CO2, while 2.15 MWh of electricity was consumed, which was lower than the previous year.

(3) Economic effects

Energy saving measures in the summer resulted in an economic benefit of 4 million yen due to cost savings through energy conservation. On the other hand, revenue from the sale of securities was 99 million yen, a decrease from the previous year.

Environmental Conservation Costs

(In thousands of yen)

Category		Details of major activities	Investment	Cost
(1) Costs within the area of business	1. Pollution prevention costs	Air pollution prevention (measurement of smoke and soot) Water pollution prevention (inspection of wastewater treatment tanks, extraction of sludge, sewage disposal, etc.)	0	23,709
	2. Global environment conservation costs	Periodical electricity checks	0	24,559
	3. Resource recycling costs	Reduction of waste, recycling, and proper waste disposal	0	42,586
	Total of items 1 through 3		0	90,854
(2) Upstream and downstream costs		Green procurement of office supplies and commissions for refurbishing and reconditioning product	0	16,435
(3) Administration costs		Development and operation of the EMS and environmental training for employees	0	206,883
(4) R&D costs		Development of eco-products (such as testing equipment and making molds)	55,872	537,803
(5) Social activity costs		Annual membership fee for the Japan environmental management association for industry, and other fees	0	3,098
Total			55,872	855,073

Expenses include depreciation of facilities and personnel costs.

Effects of Environmental Conservation

Classification	Indicators for the effects of environmental conservation		
	Indicators for environmental burdens	Indicators	Indicator value (Note1)
Effects on resources input for business activities	Input of energy	Decrease in energy consumption	Energy consumption measured in terms of the amount of CO2 : 890 tons of CO2
			Electricity consumption : 2,150,000kWh
			A-type heavy oil consumption: 24kL
			LPG consumption: △ 26t
			Kerosene consumption : 0.5kL
			Light oil consumption : △ 21kL
			Town gas consumption : 24,000Nm3
			Gasoline consumption : 3.3kL
		Increase in the percentage of renewable energy in total energy consumption	Photovoltaic power generation : 0.026% (company-wide)
	Input of water	Decrease in water consumption	Water consumption : △ 80m3
	Input of other resources	Decrease in the input of other resources	Copying paper consumption : 25.7 million sheets
Effects on environmental burdens due to emissions and waste produced by business activities	Discharge of waste and other materials	Decrease in the total discharge of waste and other materials	Total discharge of waste : 189t
		Increase in the percentage of recyclable materials in the total discharge of waste	Recyclable materials and useful materials: △1.27%
		Decrease in the discharge of hazardous waste	Discharge of hazardous waste : 1.2t

△ : Triangles indicate that there was no difference compared to last year.

(Note1) If the measure of the amount will be stated as the difference between the amount of the reference period compared with the year.

Economic effects of environmental conserving measures (substantive effects)

(In thousands of yen)

Classification		Amount
Profits	Sales of useful materials	98,992
Reduction of costs	Reduction of costs by energy saving	3,750
	Reduction of waste disposal costs by recycling	2,468
	Reduction of expenses for copying paper	816

△ : Triangles indicate that there was no difference compared to last year.

Eco-products

Efforts for designing eco-products

As for product design, we are carrying out R&D to incorporate the latest energy-saving technologies into our new products. At the same time, we carry out product assessments to evaluate the environmental impact of products at each stage, such as component and material procurement, manufacture, distribution, use, recycling, and disposal. Newly developed products are compared with commercially available and existing products and are certified as "eco-products" (eco-design products) if they satisfy the specified evaluation standards. In fiscal 2011, eco-products were made up of a total of 151 types .

Eco-products are presented in catalogues and other materials with "LEAF symbols."

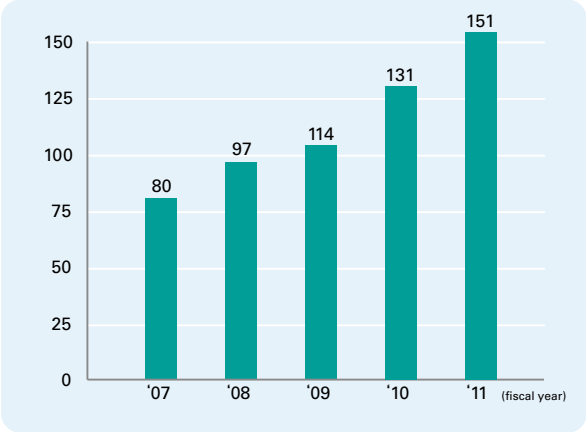
ECO PRODUCTS

Life Cycle Assessment (LCA)

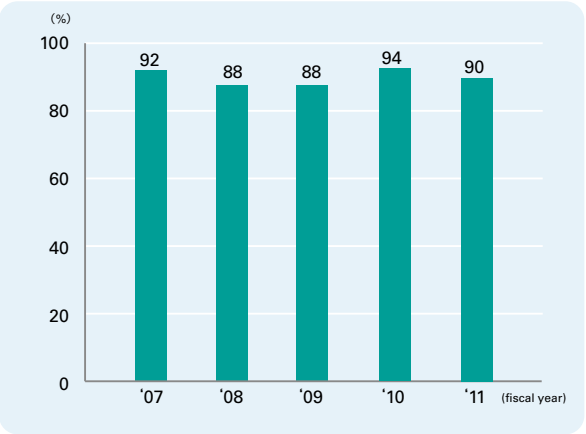
LCA is one of the techniques used to provide a general quantitative measure of levels of environmental impact, including global warming, and evaluate the impact of products through their life cycles. We evaluate the environmental compatibility of a product using this method. Our rate of implementing LCA in our eco-products has been about 90% since fiscal 2007.

Number of Products Certified as Eco-products

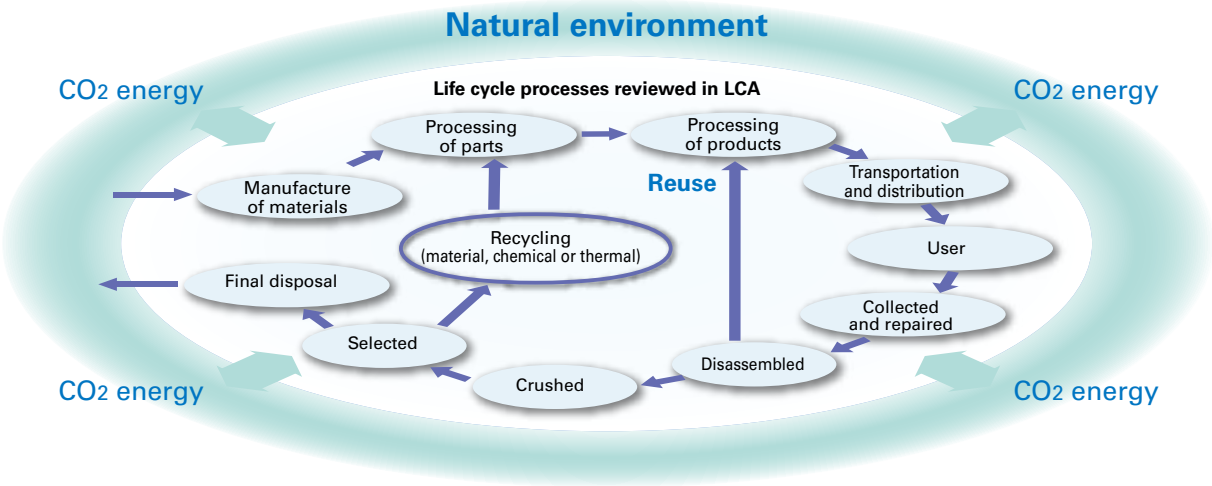
(Total Number of Products in All Divisions)



LCA implementation rate



Life Cycle Processes Reviewed in LCA



Effects on the natural environment (global warming) are assessed at each stage of the life cycle, based on the energy consumption and the amount of CO_2 emission.

Representative Eco-products of Fiscal 2011

Results of LCA

Twenty new eco-products were developed in 2011. We will present the results of the LCA of three representative products. The results are based on a comparison of the amounts of CO_2 emitted during the time of use between newly developed models and their immediate predecessors. Since these products are used for a long time, the reduction of CO_2 emitted during the time of use will be effective in preventing global warming. The following results show the CO_2 emission volumes for one year (result of LCA divided by the service life of a product).

52×52×15mm Low Power Consumption Fan "San Ace 25" GA type

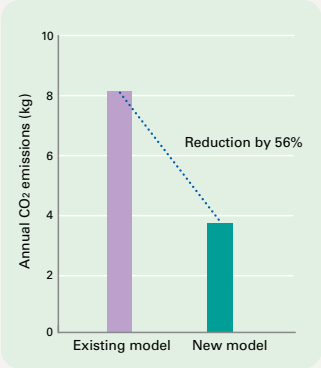
Features

- Power consumption is reduced by approx. 62 % compared with our conventional fan
- Sound pressure level is reduced by 4 dB(A)
- The product is RoHS compliant

Models compared for LCA

New model : 9GA0512P7A001
Existing model : 109P0512A701

Comparison of CO_2 emission



10kW PV Inverter「SANUPS P73H」

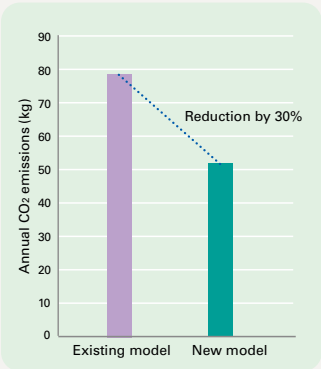
Features

- Industry's top conversion efficiency of 94.5%
- Superior in waterproof / dustproof performance.
- Three-phase 3-wire system 202V AC
- JET certification

Models compared for LCA

New model : P73H103
Existing model : P73D103

Comparison of CO_2 emission



180mm角 AC Servo motor「SANMOTION R」

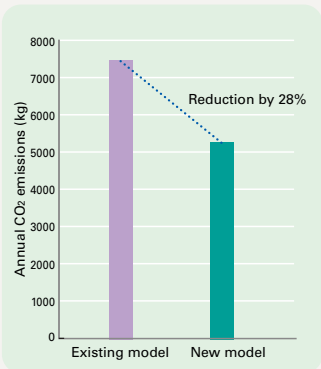
Features

- Shortening length is reduced by approx. 24% compared with our conventional motor
- Power consumption is reduced by approx. 28% compared with our conventional motor
- The product is RoHS compliant

Models compared for LCA

New model : R2AA18350L
Existing model : Q2AA18350H

Comparison of CO_2 emission



Promoting Green Supply

●Establishment and Implementation of the Chemical Substance Management Guidelines

We established in August 2005 our Chemical Substance Management Guidelines for the management of hazardous substances concerning parts and indirect materials used for our company's products and manage chemical substances in accordance with it. Our Chemical Substance Management Guidelines provide management rules concerning substances specified in laws and regulations, such as substances whose use is restricted or prohibited by the RoHS Directive, SVHC (high-concern material) in REACH, substances banned by legislation, and substances designated by the Japan Green Procurement Survey Standardization Initiative (JGPSSI). We keep these guidelines updated by making necessary revisions to them in response to changes i n relevant laws, (Revision was made twice in 2011.) regulations, and other rules. They include definitions of terms, RoHS threshold values, survey questionnaires for our suppliers on chemical substances that affect the environment, and a guarantee form to assure that no RoHS-restricted substances are contained in the materials we use. At present, we request that our suppliers agree to abide by our Chemical Substance Management Guidelines and submit a survey questionnaire and a guarantee form to assure that their supplies contain no RoHS-restricted substances.

●Green Purchasing

We are taking the initiative to purchase stationery and office supplies that are environment-friendly, such as products using recycled materials, substitute materials and waste materials, refillable products and products with replaceable parts, and products designed for recycling.

Reducing Hazardous Chemical Substances

The Hazardous Chemical Reduction Working Group, a subgroup of the Chemical Substance Emission Reduction Subcommittee, is working together with design sections of manufacturing divisions to achieve the goal of eliminating substances strictly prohibited by the RoHS Directive.

● Compliance of applicable products with the RoHS Directive

The installation of equipment required to meet the RoHS standards for cooling fans and stepping motors has been completed.

Measures requiring compliance with RoHS standards for applicable servo motors, servo amplifiers, and stepping motor drivers are being implemented and expanded.

● Preparations are currently under way to conduct a survey on hazardous substances designated by the JGPSSI and other organizations at the request of customer.

● Based on the Chemical Substance Management Guidelines, a survey is being conducted on hazardous chemicals contained in products.

● Our company guidelines concerning China RoHS are disseminated inside our company.

● Analysis of six RoHS substances contained in materials is being conducted using an X-ray fluorescent (XRF) analysis system.

● SVHC of REACH (substances of very high concern: 73) conducted a survey of content, to provide ongoing information to customers.

* RoHS Directive: The Directive on the Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment adopted by the European Parliament and the European Council RoHS six substances: lead, hexavalent chromium, cadmium, mercury, and specified brominated flame retardants (PBB and PBDE)
* China RoHS is a directive implemented by the Chinese government prohibiting the use of specified toxic chemical substances in electronic information products.
* REACH (Registration, Evaluation, Authorization and Restriction of Chemicals): The regulation in Europe to totally administer the registration, evaluation, authorization, and restriction of chemical substances.

Lead-Free Solder

The Fujiyama Works, which manufactures cooling fans, has been using lead-free solder for high-temperature soldering since March 2006, following the introduction of lead-free solder in all manufacturing processes in January 2004 (except for high-temperature soldering exempted from the RoHS standards).

With lead-free manufacturing equipment installed on the servo amplifier circuit board assembly lines at the Shiota Works and the power supply circuit board assembly lines at the Fujiyama Works, we have completed our lead-free manufacturing plans begun in 2004.

● Cooling fans and stepping motors: Installation of equipment for surface mount soldering completed

● Servo motors: Installation of equipment for surface mount soldering completed

● Servo amplifiers and stepping motor drivers: Changing to lead-free solder is being implemented and expanded to RoHS applicable products. A shift towards lead-free products is being promoted.

● Power supply devices: The change to lead-free solder is being implemented and expanded to RoHS applicable products.

An X-ray fluorescent analysis device at the Kangawa Works

Lead-free high-temperature soldering equipment at the Fujiyama Works

Energy Saving Measures Implemented in Manufacturing Processes at Factories

Works	Measures implemented	Effect
Kangawa Works	(1) Cut down unnecessary lighting in warehouses and on equipment (2) Lower air-pressure setting (3) Repair air leaks (4) Promote use of solar power	(1) Savings in commercial electricity (2) Savings in commercial electricity (3) Savings in commercial electricity (4) Savings in commercial electricity
Shioda Works	(1) Affixing calendar timers to machines (2) Redesigning of mounter programs (3) Miniaturize the equipment to be newly installed (4) Systematic operation of boilers according to weekly calendar timers	(1) Savings in electricity by preventing switches from being left on (2) Savings in electricity by reducing the production cycle time (3) Save energy through miniaturization of heater capacity (4) Control of use of A-type heavy oil
Fujiyama Works	(1) Stop use of unnecessary lighting (2) Adjustment of the operation time of air conditioners (3) Shift the operating hours of production equipment (4) Adjust the operating hours of loading equipment for test	(1) Savings in electricity by reducing lighting hours (2) Savings in electricity by reducing operation hours, Reduce the consumption of A heavy oil (3) Savings in commercial electricity (4) Saves electric power by reviewing the test run time

Compliance with the PRTR Law

Sanyo Denki keeps accurate records of the amounts of discharge and transportation of PRTR-controlled substances that are required to be reported and used in amounts of more than one ton in any one of the factories, and submits reports to relevant organizations.
This year, styrene at the Kangawa Works and antimony, toluene, and triphenyl phosphate at the Fujiyama Works came under reporting obligations. The Shioda Works has been exempt from reporting obligations regarding lead for the last five years due to our change to lead-free products for RoHS compliance.

PRTR (pollutant release and transfer register): A system for collecting, aggregating and publishing data on various hazardous chemical substances to see how much of these substances are released into the environment from what sources, or are transferred with waste from what facilities.

PRTR-controlled substances	PRTR-controlled substances (that are required to be reported and used in amounts of one ton or more)	
Antimony	Fujiyama Works	4.0t
Toluene	Fujiyama Works	1.1t
Triphenyl Phosphate	Fujiyama Works	2.6t
Styrene	Kangawa Works	8.8t

Signboard for idling stop


Vehicle that complies with the regulations on diesel car exhaust in seven municipal communities

Transportation

We are using vehicles that comply with the regulations on diesel car exhaust in seven municipal communities to transport supplies between factories. We are also promoting activities to stop idling in order to reduce environmental burdens.

Vehicle that complies with the regulations on diesel car exhaust

Reuse of Materials

We are returning wooden pallets used to transport purchased materials to carriers in order to promote their reuse.

[Other examples of reuse of materials]
Cardboard boxes: returned to suppliers
Shock absorbers: reused within the company
Inscription board mounts: recycled

Zero-emission Activities

Sanyo Denki is working as a member of the Zero-emission Promotion Committee and the Zero-emission Promotion Workshop (formed in April 2003) of the Nagano Techno Foundation* Asama Technopolis Region Center to promote environmental conservation activities in collaboration with companies in the surrounding areas.
The Zero-emission Promotion Workshop holds sessions for activity reports and makes inspection visits to member companies to see how waste is sorted by type and processed, and carefully examines how to improve waste disposal methods. The Workshop has eight subpanels to study the cooperative collecting and disposing of waste. Seven sub-panels were established in the Workshop last year to study the cooperative collecting and disposing of waste.

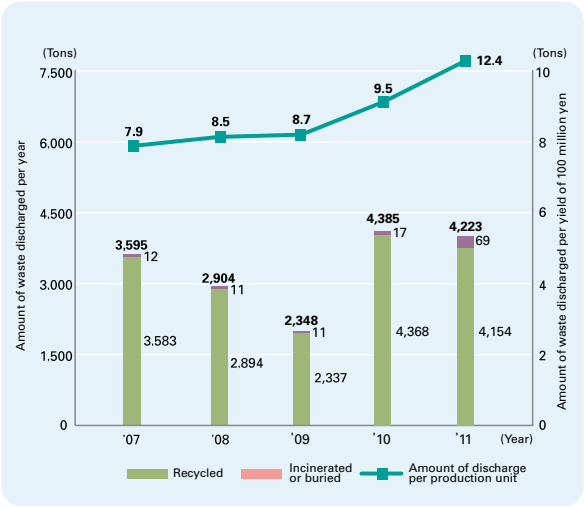
*The Nagano Techno Foundation was established to bring new life to the local economy and provide an autonomous basis for its development. To this end, the foundation is working to improve the level of local industries through technological innovation and develop new industries by exploiting local industry resources in five areas in Nagano Prefecture. The Asama Technopolis Region Center is one of its organizations.

[Nagano Techno Foundation]
URL: http://www.tech.or.jp
[Asama Technopolis Region Center]
URL: http://www.tech.or.jp/asama/

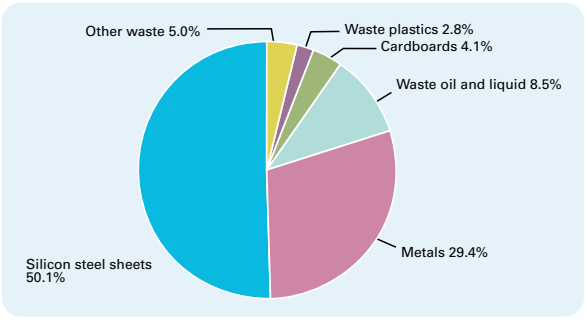
Recycling

We created a recycling to promote the in-house recycling of unneeded supplies such as OA equipment, desks, shelves and chairs.

Changes in the Amount of Waste Discharged



Percentage by Type of Waste



Waste		Amount discharged (tons)	Amount recycled (tons) / Recycling rate (%)	Recycling method
Sludge	Organic sludge	9.1	9.1/100	After oil and water are separated, dehydrated residues are turned into compost.
	Inorganic sludge	66.2	9.6 /14	After intermediate treatment, some of the sludge is recycled as road construction materials. Some is also gasified by furnaces, with residues recycled as cement materials.
Waste oil	Oil-based materials	5.5	5.4/98	After oil and water are separated, the material is recycled as fuel.
	Water-soluble materials (detergents, grinding liquid, etc.)	257.7	257.7 /100	Reuse and incinerated residues are used as cement materials.
	Volatile materials	7.1	7.1 /100	Distilled and used as recycled oil.
	Waste acid (batteries)	90.6	90.5 /99.9	Crushed, sorted and all recycled.
Waste plastics	OA equipment and circuit boards	38.7	38.7/100	Crushed, sorted and all recycled.
	Vinyls and films	56.6	56.6 /99.95	Turned into solid fuel (refuse derived fuel), reducing agents (using furnaces) and materials for power generation (thermal recycling)
	Molding scraps	8.1	8.1/100	
	Other solid scraps	12.6	11.6/92	
	Styrofoam	4.0	4.0/100	Turned into raw materials (material recycling); immersed in solvent to be turned into soil, and recycled as raw material
Metal scraps	Scraps generated in manufacturing processes	3355.6	3355.6 /100	Recycled as metal materials
	Metals (including empty cans)	0.3	0.3/100	
Paper scraps	Used paper	8.0	8.0/100	Turned into raw materials for recycled paper
	Newspapers, magazines, and other papers	56.8	56.8/100	
	Cardboards	173.5	173.5 /100	
Wood scraps	Packages and transportation pallets	59.0	59.0/100	Crushed and turned into combustion improver
Glass and ceramic scraps	Empty bottles, glass, and ceramics	2.2	2.2 /100	Crushed and turned into road construction materials
Other waste	Paper scraps and other waste	11.6	0/0	Incinerated
Total		4223.2	4153.8/98	

Social Contribution

●Exchange and Cooperation with Local Communities

Members of the Head Office, the Technology Center and the factories in Japan clean the areas around their offices and factories more than once a month. At the Kangawa Works and the Shioda Works, large-scale cleaning was carried out in cooperation with the neighborhood community association.

●Wrestling with diversification of living things

The preservation related to the diversification of living things is said to be an important problem as well as counter measures for global warming. Sanyo Denki performs energy-saving activities and makes efforts by using our resources including our technologies and products.

Outdoor cleaning activities

Education and Training

●Training Curriculum

Sanyo Denki's training system is composed of training programs by employee level, career training programs, and training programs by division. In fiscal 2011, we held the following company lectures and meetings:

● September 2011

Lecture on designs to reduce hazardous chemical substances (Regarding the recent trend of chemical substances and REACH regulations)

● March 2012

Briefing session on eco-products

Company lecture

Product presentation meeting

Internal Audits

We have employees conduct internal audits to check that the environmental management system created by the company is being properly implemented and effectively managed and maintained in accordance with regulatory requirements. To ensure the fairness and objectivity of internal audits, we created a certification system for internal auditors to avoid the auditing of divisions by their own members and conduct internal audits in accordance with the standards for internal audits. The results of internal audits are reported to the top management and divisions audited, with the aim of making improvements to the environmental management system.

Safety and Health

To prevent occupational accidents and to ensure the safety and mental and physical health of employees, we formed the Safety and Health Committees and opened its branches at the Head Office and the Ueda branch office (for the Technology Center and the factories). The Safety and Health Committee aims to provide a safe and healthy working environment, and to that end, it allocates officially certified administrators and experts in environmental management to ensure occupational safety and provide health care.

Activities of the Safety and Health Committee

◆ Inspection visits to workplaces

When a monthly committee meeting is held, committee members make an inspection visit to workplaces. The committee checks whether appropriate measures have been taken to solve the problems pointed out in the previous month, and whether or not any other problems can be detected.

◆ Prevention of occupational accidents

During inspection visits to workplaces, committee members check certain priority issues to prevent occupational accidents. All branch offices and factories are informed of occupational accidents that occur at workplaces so that they can implement appropriate measures to prevent any recurrence.

◆ Reports from administrators

The committee receives reports from safety and health administrators concerning environmental measurements, inspection schedules, announcements, training sessions and revisions to laws and regulations.

◆ Activities for maintaining and improving health

Medical examinations are conducted to achieve a 100% examination rate. Employees with health problems are provided with medical counseling and follow-up examinations. The committee also provides health consultant services to prevent lifestyle diseases in accordance with the annual schedules of branch offices and factories.

◆ Mental health care

We provide contacts for consultant services, training sessions on self-care for managers and other employees, and counseling by nurses.

◆ Installation of automatic external defibrillators (AED)

Automatic external defibrillators are installed at the Head Office and the Ueda branch office (for the Technology Center and the factories).

In addition, to be able to act quickly in unexpected situations, training sessions on general emergency life-saving methods are periodically provided.

◆ Training and drills

Emergency drills

Results of the soil inspection at the former works site

The results of our voluntary inspection of soil and groundwater on the Midorigaoka Works site have revealed that the levels of volatile organic compounds and heavy metals in the soil and groundwater are above the threshold values. The engineering work for environmental improvement started in February 2011 was completed in August.

AED

Training on general emergency life-saving methods

We created 20 eco-design products (eco-products) in fiscal 2011, a year during which 40.7% of our sales were accounted for by eco-products.
We will continue to promote the LCA-based development of products designed to reduce CO2 emitted during their use and to be eco-friendly.

Item	Goals for Fiscal 2012	Goals to be achieved by fiscal 2013
Promotion of eco-products	Creation of eco-products	Creation of eco-products
Sales activities	Sales ratio of eco-products: 50% or higher	Sales ratio of eco-products: 55% or higher
Reduction of hazardous chemical substances	Promotion of the use of lead-free solder Implementation of measures to meet the RoHS-6 standards Reduction of PRTR-controlled substances	Promotion of the use of lead-free solder Implementation of measures to meet the RoHS-6 standards Reduction of PRTR-controlled substances
Reduction in power consumption	Reduction by 6% compared to 2006	Reduction by 7% compared to 2006
Reduction in fuel consumption	Maintaining the consumption of LPG at the current level (reduced by 58% compared to 2000)	Maintaining the consumption of LPG at the current level (reduced by 58% compared to 2000)
	Maintaining the consumption of A-type heavy oil at the current level (reduced by 29% compared to 2000)	Maintaining the consumption of A-type heavy oil at the current level (reduced by 29% compared to 2000)
	Gas consumption Reduction by 3% compared to 2010	Gas consumption Reduction by 5% compared to 2010
Reduction in copier paper consumption	Maintaining the consumption at the current level (reduced by 5% compared to 2000)	Maintaining the consumption at the current level (reduced by 5% compared to 2000)
Reduction of waste	Maintaining the consumption at the current level (reduced by 17% compared to 2000)	Maintaining the consumption at the current level (reduced by 17% compared to 2000)
Contribution to local communities	Cleaning of the area around factories once or more every month Participation in environment-related events	Cleaning of the area around factories once or more every month Participation in environment-related events
Promotion of zero-emission	Maintaining a company-wide waste recycling rate at 99.0% or higher	Maintaining a company-wide waste recycling rate at 99.0% or higher

The number of employees is as of June 2012.

Head Office

- Location : 1-15-1 Kita-otsuka, Toshima-ku, Tokyo
- Area : 1,761m²
- Number of employees : 214
- ISO certificate obtained : March 2002

Technology Center

- Location : Ueda Research Park, 812-3 Shimonogo, Ueda-shi, Nagano
- Area : 44,908m²
- Number of employees : 345
- ISO certificate obtained : November 1999

Kangawa Works

- Location : 5-4, Tonoshiro, Ueda-shi, Nagano
- Area : 67,140m²
- Number of employees : 740
- ISO certificate obtained : March 2010
- Products manufactured:
  AC/DC servo amplifiers, stepping motor linear servo motor, and encoders

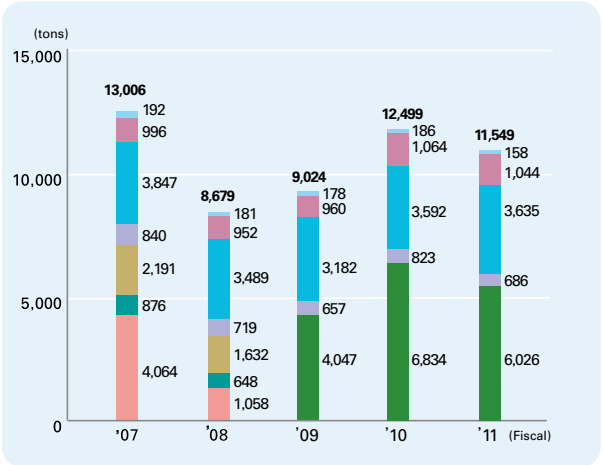
Shioda Works

- Location : 517 Goka, Ueda-shi, Nagano
- Area : 5,698m²
- Number of employees : 219
- ISO certificate obtained : March 2001
- Products manufactured: AC/DC servo amplifiers, stepping motor drivers, system controllers and printed circuit boards.

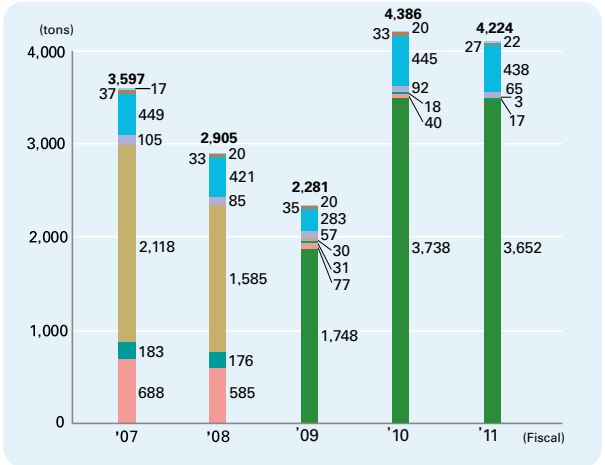
Fujiyama Works

- Location : 4016 Fujiyama, Ueda-shi, Nagano
- Area : 86,260m²
- Number of employees : 554
- ISO certificate obtained : December 1999
- Products manufactured: Cooling fans, UPS's (uninterruptible power supply devices), power source monitoring systems, power conditioners for photovoltaic power generation systems, and emergency self-power generation systems

Amounts of CO_2 emission by factory



Amounts of waste by factory



General Environmental Manager — Hideyuki Takahashi

Sanyo Denki established its environmental management system and obtained ISO14001 certification in 1999. Our general environmental manager works in the environmental management system under the direction of top management to promote environmental activities at our Head Office and factories. In addition to the energy conservation and waste reduction activities at each of our factories, we aim to reduce the global environmental burden by developing high-efficiency energy-saving products for our customers and providing power equipment to reduce consumption using maximum power peak cutting functions and regenerating electric power from braking forces. We also disclose environmental information to a wide spectrum of both internal and external stakeholders and place great importance on communication with local communities and relevant individuals. The Environmental Committee works with environmental managers at our factories to organize specialized subcommittees in order to discuss measures for ongoing environmental improvements and to take an active part in promoting environmental conservation activities to achieve our goals.

Head Office — Kazutomi Kaneko

The Head Office being in the power supply area of the Tokyo Electric Power Co., Ltd. aims at the demand value of the last year. In addition to providing support for improving the sales ratio of eco-products and for local environmental activities, the Head Office prioritizes measures to save energy and reduce waste and copier paper consumption.

- Improvement in the sales ratio of eco-products by supporting sales activities
- Proper temperature management for air conditioning
- Improvement in the sorting of waste and the recycling rate
- Volunteer activities for cleaning areas around the Head Office

We will continue to promote environmental activities at the Head Office and all our sales offices and branches.

Technology Center — Hideyuki Takahashi

The Technology Center, which is engaged in designing and developing products, is committed to promoting eco-designs and developing products that are free of hazardous chemicals. To promote the development of products designed for the environment, we certified 20 new products as "eco-products" in fiscal 2011. We have nearly completed the installation of equipment required to meet the RoHS standards for our target products, in order to achieve our goal of developing products that are free of hazardous chemicals. At the moment, assessments are under way to check for the presence of SVHCs (substances of very high concern) in compliance with the REACH regulations. We have also worked to reduce the consumption of electricity, LPG and copier paper as well as the amount of waste, and cleaned areas around the Ueda Research Park for the local community. Electric power consumption was reduced by 5.8% compared with the previous year. We intend to further reduce the burden on the environment by those using our products, through energy-saving based on environmentally considerate designs, and by reuse of electric power with greater efficiency and power regenerative functions in the future.

Kangawa Works — Kazuhiko Takizawa

The Kangawa Works is working to reduce lighting energy savings due to thinning, of waste, reduction of copy paper, the promotion of zero emission.
In the motor assembly, inspection, guidance system by expanding the production and inspection, check sheet of paper is eliminated, could reduce the copy paper.
Has implemented large-scale volunteer continued cleaning of the surrounding area.
Will continue working to reduce environmental load further using the data of BEMS central monitoring system can monitor bulk energy consumption.

Shioda Works — Masami Ando

The Shioda Works is promoting activities to save energy, reduce waste, and eliminate hazardous substances from the manufacturing processes.

- Reduction in power consumption (planned operation of air conditioners by using timers and checking room temperatures, and a reduction in the operation time of production lines by improving the operation rate)
- Reduction in the consumption of A-type heavy oil (planned operation of boilers using timers)
- Reduction in the consumption of copier paper (use of projectors, use of electronic means for checking progress, and reuse of the backs of printed paper)
- Thorough sorting of waste materials and promotion of the reuse of the delivery boxes for purchased parts
- Use of components and materials meeting the RoHS standards
- Volunteer activities for cleaning areas around the factory

Fujiyama Works — Satoshi Atou

The Fujiyama Works is reducing environmental burdens by improving fundamental work activities and is working on the promotion of activities to save energy, reduce waste, and achieve zero-emissions. As was the case last year, we have been requested by Chubu Electric Power Company to limit electric consumption to a contracted amount, and continue working on power reduction measures.

- Energy saving (a reduction in the consumption of electricity and A-type heavy oil for air conditioning).
- Reduction in the consumption of lead by using lead-free solder
- Reduction of waste (reduction of waste plastics and cardboards) and zero emission activities
- Use of components and materials meeting the RoHS standards
- Volunteer activities for cleaning areas around the factory

Kangawa Works	Item	Regulatory standard	Voluntary standard	Actual value
Air Quality Air pollution control laws and ordinances	Smoke and soot (g/m^3N)	Exempted		
	Nox(ppm)			
	Sox(m^3N/h)			
Water Quality Water pollution control laws, ordinance and agreements	PH(pH)	5.8 to 8.6	—	7.2
	BOD(mg/L)	20	19	14.0
	SS(mg/L)	30	28	10.0
Noise Laws, ordinances and agreements for noise regulation	(dB)	65	64	59

Shioda Works	Item	Regulatory standard	Voluntary standard	Actual value
Air Quality Air pollution control laws and ordinances	Smoke and soot (g/m^3N)	0.3	0.03	0.0022
	Nox(ppm)	180	130	57
	Sox(m^3N/h)	1.4	0.7	0.011
Water Quality Water pollution control laws, ordinance and agreements	PH(pH)	Exempted (No water disposal tank)		
	BOD(mg/L)			
	SS(mg/L)			
Noise Laws, ordinances and agreements for noise regulation	(dB)	65	64	58

Technology Center	Item	Regulatory standard	Voluntary standard	Actual value
Air Quality Air pollution control laws and ordinances	Smoke and soot (g/m^3N)	Exempted		
	Cold and hot water generator Nox(ppm)	150	130	52
	Emergency power generation equipment Nox(ppm)	600	550	81
	Sox(m^3N/h)	Exempted		
Water Quality Water pollution control laws, ordinance and agreements	PH(pH)	5.8 to 8.6	—	7.5
	BOD(mg/L)	20	19	16.0
	SS(mg/L)	60	54	11.0
Noise Laws, ordinances and agreements for noise regulation	(dB)	65	64	Exempted

Fujiyama Works	Item	Regulatory standard	Voluntary standard	Actual value
Air Quality Air pollution control laws and ordinances	Smoke and soot (g/m^3N)	0.3	0.03	0.0066
	Nox(ppm)	180	130	82
	Sox(m^3N/h)	5.0	2.5	0.033
Water Quality Water pollution control laws, ordinance and agreements	PH(pH)	5.8 to 8.6	—	7.5
	BOD(mg/L)	50	48	3.8
	SS(mg/L)	60	54	8.0
Noise Laws, ordinances and agreements for noise regulation	(dB)	65	64	Exempted

Business Profile

Sanyo Denki is working to develop new technologies and products, with the aim of creating "technologies to protect the global environment," "technologies to ensure human health and safety" and "technologies to exploit new energy sources and save energy."

■ Cooling Systems Division
Development, manufacture and sales of cooling fans and cooling systems

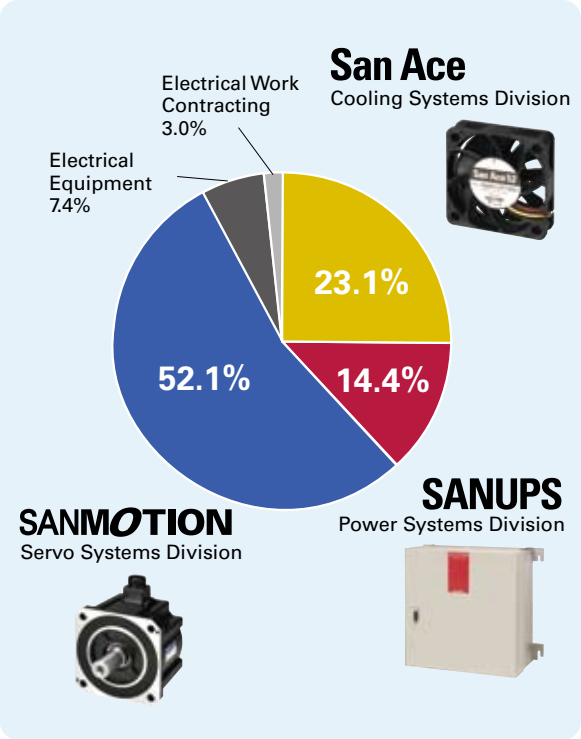
■ Power Systems Division
Development, manufacture and sales of uninterruptible power supplies, power conditioners for photovoltaic power generation systems, and engine generators

■ Servo Systems Division
Development, manufacture, and sales of servo systems, stepping systems, controllers, drivers, and encoders

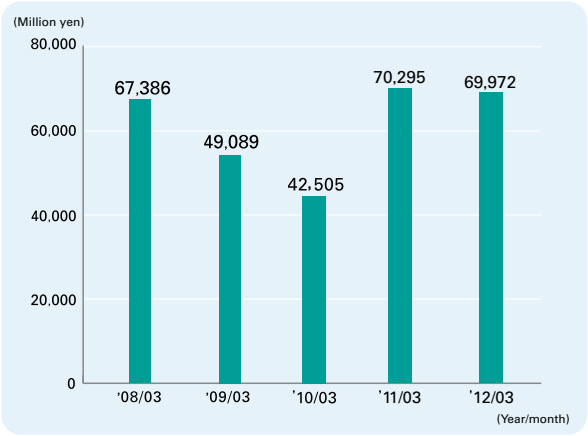
■ Electrical Equipment
Sales of domestic and foreign manufacturers of electrical and electronic

■ Electrical Work Contracting
The planning, design, construction and maintenance of industrial control systems

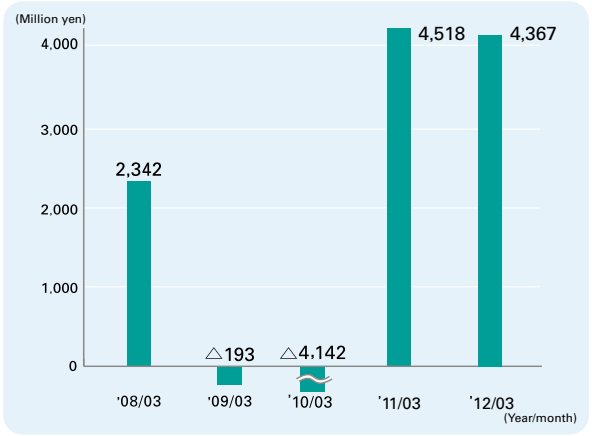
Sales Ratio (for the period from April 2011 through March 2012)



Changes in Sales (Consolidated)



Changes in Current Net Income (Consolidated)



Business Profile

Founded: December 31, 1936

Capital: 9.9 billion yen (as of March 31, 2012)

Sales (consolidated):

69.9 billion yen (for the period from April 2011 through March 2012)

Number of employees (consolidated):

2,870 (as of March 31, 2012)

■ For inquiries about the Environmental Management Report, please contact:

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