Sustainability Report 2005
The SANYO Group wants to be a corporation that is loved and trusted by the people of the world by developing unique technologies and offering excellent products and sincere services. The Group seeks to become an indispensable element “like the Sun,” for the people of the world.

Management Philosophy

We are committed to becoming an indispensable element in the lives of people all over the world.

The SANYO Group wants to be a corporation that is loved and trusted by the people of the world by developing unique technologies and offering excellent products and sincere services. The Group seeks to become an indispensable element “like the Sun,” for the people of the world.
The SANYO Group has been publishing an annual Environmental Report since 1998. Our Sustainability Report 2004 contained more comprehensive coverage of our social responsibility. This Sustainability Report 2005 comprises the chapter of our environmental conservation activities, “Working with the Earth” and the chapter of our responsibilities for our stakeholders, “Working with People”, and is designed so that our activities are plainly understood. A questionnaire sheet is attached at the end of this report, so we appreciate it if you could submit honest feedback this report.

Report Period:
April 1, 2004 to March 31, 2005 (This report includes some past data, the latest information and forecasts.)

Coverage:
The SANYO Group (SANYO Electric Co., Ltd and its consolidated subsidiaries both within and outside Japan). For environmental reporting, this includes those covered in principle by the Group Environmental Management System (GEMS), which includes the major SANYO Group companies in Japan. For particular kinds of data totals, specific company names are noted.

Scope:
Environmental Performance, Social Performance, and Economic Performance

Sustainability Report 2005 has been edited in accordance with the following guidelines:
GRI Sustainability Reporting Guideline 2002

Next Scheduled Report:
July 2006

Note Concerning Forward-Looking Statements, Projections, and Plans
This report not only describes past and present facts related to “SANYO Electric Co., Ltd and its related companies” the (SANYO Group), but also includes forward-looking statements, projections, and plans. Such forward-looking statements, projections, and plans are based on data that was available at the time at which the report was prepared, and therefore include a degree of uncertainty. Accordingly, future results of operating activities and other new developments may differ from the statements, projections, and plans included in this report. We ask our readers’ understanding of the fact that the SANYO Group cannot be responsible for such eventualities.
We are a corporate group that supports consumer lifestyles and industry primarily by manufacturing and marketing electrical and electronic products, components and equipment.
Commercial Business

Industrial Equipment

We develop, manufacture and market commercial refrigerators and freezers, showcases, package-type air conditioners, gas-engine heat pump air conditioners, absorption chiller and heat exchangers, computers for medical use, and other commercial, industrial and medical equipment that support various industrial businesses.

Component Business

Batteries, Electronic Devices

We also develop, manufacture and market various LSI devices, LCD panels, transistors, LEDs, optical pickups and other electronic components, lithium-ion batteries, nickel-cadmium batteries, nickel-metal hydride batteries, solar cells, rechargeable batteries for hybrid automobiles, and also compressors for refrigerators, freezers and air-conditioners, etc.

Other Businesses

Leasing, Credit, Logistics, Security, Housing, etc.

We are also active in evolving and in providing solutions for a wide range of consumer and industrial businesses including those involved in credit, maintenance, information systems, logistics and housing—building and marketing individual dwellings and condominiums.

Corporate Data (As of March 31, 2005)

Name of Company: SANYO Electric Co., Ltd.

Founded / Incorporated:
February 1947 / April 1950

Capital: ¥172,242 million

Consolidated Net Sales: ¥2,484.6 billion

Non-consolidated Net Sales: ¥1,458.9 billion

Lines of Business:
Consumer Business, Commercial Business, Component Business, and Other Businesses

Number of Employees:
15,687 (consolidated: 96,023)

Number of Consolidated Companies:
143 (62 domestic and 81 overseas)
We Seek to “Think GAIA” and Become a Company that Delights the World

We are committed to becoming an indispensable element in the lives of people all over the world.

In the 20th century, we all sought after convenience, efficiency and economy, and we were able to secure a pleasant lifestyle and material abundance. However, our pursuit of convenience and the superabundance of things not only failed to make us happy but also, as we came to realize, left behind a burdensome inheritance for the Earth.

Solving the various problems we face will save the life in which we all share, or rather it will gladden and quicken that life, something we are beginning to realize is of incomparably greater value than the convenience or abundance of things.

The implementation of a sustainable society has value for the whole world, and enterprises that do not take this into account will not survive. Sustainable development—that is, making our lives more convenient and pleasant in an evolutionary process that makes the world and its life vigorously healthy—is something we see as absolutely essential. We call this evolutionary path, by which we evolve in harmony with the environment of Earth, “symbiotic evolution.” The question for the new products and businesses we will make is “How can SANYO best serve the Earth?” This means always keeping our minds and hearts focused on Gaia, the living organism of Earth. We have expressed this attitude as “Think GAIA” and for us this means always asking ourselves “How would this affect the Earth?” As we continually keep in mind the Earth and its organism, listening to what we learn from it, our vision and our determination is to form an enterprise with sensitive hearing and heart.

One strand of our corporate DNA is the desire to help mothers in the home and to ease their workload. This has been built into the many products and services we have developed since our foundation. We want the SANYO Group to be a company that delights the world at the same time as it pleases all the people who live in it. That means not only reducing the environmental impact of our corporate activities but also providing products and services that contribute to the solution of environmental problems and the living of healthy and enjoyable lives. This is expressed in our corporate philosophy “We are committed to becoming an indispensable element in the lives of people all over the world.”
Providing Environmental Solutions and Continually Improving Our Effect on the Environment

In our corporate activities (providing AV products, information and communication equipment, electrical appliances, industrial and commercial equipment, electronic devices, batteries etc., and services) we of the SANYO Group have been working to prevent pollution and reduce the environmental impact at every stage from research and development, through design, procurement of materials, manufacturing, logistics and sales, to recovery and recycling, etc. This has been our approach ever since 1970, and in 1998 we established the Group’s environmental action plan. From 2000, we have been operating the Group Environmental Management System (GEMS) as the basis for corporate activities in three directions—Process, Products and Mind—aiming at continuous, ongoing improvements in our effect on the environment.

In practical terms, quantitative targets were set for reducing the volume of emissions of gases responsible for global warming, reducing the volume of wastes, reducing the discharge of chemicals that threaten the environment and abandoning their use in products, expanding the number of products that give special consideration to the environment, and for the development of environmental technologies. Three-year targets were set, and individual targets for the intervening years. These targets were largely met in 2004. Targets will be reviewed and set annually.

In order both to conserve the Earth’s environment and to enhance human lifestyles, we seek not only to reduce the environmental impact of our activities but also to make more active contributions. Practical solutions are called for. We will be developing products and expanding our business, selecting and concentrating our activities, as an example of our main business domains, energy and ecology (E&E).

Consider energy, the motive power behind all activities. In this sector, the Group possesses outstanding products and technologies to generate, save and store energy, including a photovoltaic power generation system with the world’s highest conversion efficiency, small rechargeable batteries which hold the world No.1 market share and batteries for hybrid automobiles. These represent significant contributions to the prevention of global warming.

Water, the source of life, is another vital theme. We are contributing to the conservation of water in the environment by our Aqua Clean System using electrolytic technology, by phosphorus and nitrogen removal equipment, and by a device for treating silicon wastewater.

Our group is also in an advantageous position in HVAC (heating, ventilating and air-conditioning) businesses such as high-efficiency industrial freezers, refrigerators, air-conditioners, and CO₂ compressors, featuring our unique technology using safe and harmless non-fluorocarbon refrigerants and other similar equipment applications.

Our attitude To Corporate Social Responsibility (CSR)

In working to achieve a sustainable society, corporate management must now show how it carries out its social responsibilities. The corporation must discharge its responsibilities towards the environment along with other social responsibilities (including governance, compliance, ethics, and human rights) while also maintaining economic performance.

We believe that as we implement our management philosophy “...committed to becoming an indispensable element in the lives of people all over the world” and discharge our social responsibilities, this will lead to corporate sustainability and continuing progress along the path of symbiotic evolution. We set up a CSR unit in 2004, to link, advance and strengthen our activities in environmental conservation, social contributions and compliance, etc.

In addition to these activities, in 2004 we created on our sustainability report a page detailing our social activities as part of efforts to inform our stakeholders. Significant information of this kind has also been added this year.

In seeking to realize our new vision, “Think GAIA,” and to become a sustainable enterprise, we have initiated the SANYO Evolution Project from July 2005. The SANYO group is taking up the challenge to “become an indispensable element” to people, society and the environment.

In this, we ask for your further understanding and support of the SANYO Group.

August 2005

Chairman and CEO

President and COO
The CSR Concepts of the SANYO Group

Our Group Management Philosophy Aims to Ensure the Sustainability of the Group itself by Sustaining the Peoples of the Earth and the Environment.

In July 2005, we expressed the management vision behind our own corporate sustainability as “Think GAIA”.

In terms of the practical implementation of our management philosophy, the main thrust will be to become a company that delights the Earth and life. In other words, SANYO will transform into a company that always focuses mind and heart on GAIA, the living organism of Earth, sensitive and responsive to her needs.

The New Management Vision of the SANYO Group

Think GAIA

Company that delights the Earth

Company that delights all the People of the Earth

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—Corporate Declaration—

The SANYO EVOLUTION

Today, we embark on an evolutionary journey marked by extraordinary change and profound commitment.

Today is the day that we begin to “Think GAIA”, which means becoming a company that creates solutions for a sustainable Earth.

Today, we break away from outdated beliefs, conventions and customs, and utilize our unique corporate strengths and vision towards preserving the Earth for future generations.

Today will be marked in history as one of momentous significance for SANYO. For, it is a day of rebirth, a day on which we vow to grow, expand and commit ourselves to a symbiotic evolution.

July 1, 2005

Executive Director, Chairman & CEO
Tomoyo Nonaka

Executive Director, President & COO
Toshimasa Iue

Working with the Earth

The Global Environment
Promoting business activities that are consistent with the global environment

Customers
Providing products and services that are safe and valuable

Business Partners
Creating the relationship to share the profit through business

Shareholders and Investors
Improving corporate value and disclosing information timely

Employees
Share corporate vision and allocate rewards based on performance

Local communities
Promoting contribution to the local community as a good corporate citizen
Principles of Conduct

Established in 1985 and revised in 2001, our Principles of Conduct stipulate the guidelines that all directors, officers and employees of the SANYO Group must observe while performing their business activities. Every director, officer and employee observes the rules defined in this Code, thinking and acting globally and conducting their business activities in a sound law-abiding manner.

<table>
<thead>
<tr>
<th>Principles of Conduct</th>
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<td>Quality Work to be Proud of the World Over</td>
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1. **Integrity**—We work with integrity.
   - (1) Pride and courage
   - (2) Respect for rules and fair competition
   - (3) World view

2. **Customer Oriented**
   - (1) Work that meets expectations
   - (2) High-quality work
   - (3) Work that meets our customers’ trust

3. **Creativity**—We single-handedly open up new eras.
   - (1) Creating markets
   - (2) Aiming for the top
   - (3) Innovation

4. **Mutual Trust**
   - (1) A fresh and open working environment
   - (2) An encouraging workplace
   - (3) Performing our duties

5. **Social Commitment**
   - (1) Pride and courage
   - (2) Respect for rules and fair competition
   - (3) World view

Our Efforts in CSR

To achieve a sustainable society is not just a matter of economics. Corporate management must consider the environment and uphold social justice. Corporate social responsibility (CSR) is vital in both of these aspects—environmental and social.

Underpinning our group management philosophy is our determination to be of value to the full range of our various stakeholders; shareholders and investors, customers, business partners, employees, local communities, and to the environment.

Implementing this management philosophy and our new “Think GAIA” vision will fulfill our social responsibilities. We must listen to the voices of our stakeholders, and be aware of the needs of the environment, as we advance CSR.

Creating the Organization to Do the Job

In April 2004, SANYO established a specialized unit to advance the range of CSR-related activities.

In 2004, CSR-RM Meeting was formed with members largely drawn from each Head Office unit for CSR and risk management. This encouraged the pooling of information on CSR and concentrated on identifying issues in the disclosure of SANYO’s own information. These activities led, in 2005, to enhanced efforts to improve the disclosure of such information.
SANYO Management

Group Management Has Been Prepared and Strengthened So That the Entire Group Can Discharge Its Social Responsibilities.

Corporate Governance

In the interests of all stakeholders, SANYO seeks to increase its corporate worth. In order to do so, it is essential not only to achieve management targets but also to maintain a sound management system and, by making appropriate disclosures at the right time, to ensure management transparency, while setting up adequate internal controls.

Aware of this need, SANYO introduced the so-called internal “company” system of corporate governance in April 1999, appointing outside directors and introducing an officer system. In April 2003, SANYO adopted a business group organization that controlled the management of internal companies, and reformed the organization along functional lines into business units for products and businesses across the organization of the SANYO Group. This and other means of strengthening management reflect our determination to build a sound management structure that gives precedence to transparency and rapid decision-making in our efforts to configure the system of corporate governance.

From April 2005, the organization was further modified to enhance its functionality by redrawing the previous business groups into eight business groups. Our efforts to strengthen corporate governance will continue with this new management system as we seek sustainable development.

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**The SANYO Group Management System (as of June 29, 2005)**

- **General Meeting of Shareholders**
  - Appointments/terminations
  - Suggestions

- **Board of Corporate Auditors**
  - Corporate Auditors
  - Outside Auditors

- **Board of Directors**
  - Directors
  - Outside Directors

- **Executive Division**
- **CEO, COO, CFO Officers**

- **Board of Corporate Auditors**
- **Internal Auditing Committee**
- **Special Committees**
  - Nomination Committee
  - Compensation Committee
  - Internal Auditing Committee
  - Internal Auditing

- **Head Office**

- **Business Groups**
  - (8 in all)
  - Internal Company
  - Related Companies

- **(Head Office) Corporate Audit Office**

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**Strengthening Supervisory and Monitoring Functions**

In order to separate supervisory and monitoring functions from business executive functions, and to increase the transparency of management, SANYO has appointed half of its directors (five out of ten as of June 2005) without concurrent executive responsibilities so that they can concentrate on supervision, while the remaining five will hold concurrent executive responsibilities. The five without concurrent executive responsibilities include two outside directors, and will oversee the other directors, and executive officers appointed by the board of directors, in the performance of their duties.

In order to strengthen audit functions, two additional auditors have been appointed from fiscal 2005. Currently, the board of corporate auditors consists of six auditors; three of them are outside auditors. It oversees the performance of directors, and its members attend meetings of the board of directors and all other important meetings, and it audits performance and assets.
Completing and Strengthening Internal Controls
In order to complete and strengthen the system of internal controls for working procedures, financial reporting and compliance, we have established internal auditing departments in the head office, internal companies, and major subsidiaries. All such departments share a common awareness of the issues and themes to be addressed in internal audits, and they are working to ensure sound and efficient working procedures by issuing any necessary instructions for improvement to the departments they audit. Further, the internal auditing departments exchange their audit reports and other information with corporate auditors, seeking to maintain and improve the consistency and the quality of audits by performing effective and efficient evaluations.

Special Committees Advising and Proposing to the Board of Directors
At SANYO, under the management system whereby corporate auditors exercise supervision and monitoring, sound management is further encouraged by the establishment of three special committees of the board of directors. These are the Nomination Committee, the Compensation Committee and the Internal Auditing Committee. These committees are formed of directors, officers and corporate auditors, with participation by external experts, who combine to make proposals to the board of directors in line with their special functions.

Compliance
The SANYO Group, in order to fulfill its responsibilities to society in line with our management philosophy (See P1), as defined compliance with a wider scope that includes not only laws and our internal rules but also corporate ethics and social norm, and is carrying out compliance management throughout the SANYO Group.

The Compliance Promotion System
To increase the effectiveness of our commitment to compliance throughout the group, compliance promotion system has been established under the overall responsibility of CEO, with compliance leaders designated by each company’s president to assume actual promotion of compliance within the group. In April 2001 a specialized department was established to ensure thorough compliance (now CSR Unit), and since then through the PDCA cycle* (plan, do, check and action) continuous enforcement to our compliance has been executed within our compliance promotion system.

* One of the management cycles which aims to improve the current status on a continual basis by implementing the processes of Plan, Do, Check, and Action in sequence and in a cyclical manner.

Internal Auditing Committee
The Internal Auditing Committee has been established under the board of directors to carry the responsibility for compliance management throughout the group. It monitors the awareness of compliance issues possessed by officers and those responsible for managing related companies, and assumes a role in reporting and proposing to the board of directors concerning important issues. The chairman of this committee is a director without concurrent executive function, with external and regular auditors attending as advisors.

The SANYO Group Compliance Promotion System
(As of June 29, 2005)

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Compliance

The SANYO Group Compliance Guidelines
The group’s compliance guidelines were enacted in January 2002. They express the principles of compliance for directors and employees who are acting in accordance with the group’s Principles of Conduct (see P9), identifying issues that require particular attention from a compliance point of view. The guidelines have been printed as a booklet and issued to directors and employees.

Compliance Leaders Ensure Shared Awareness
Compliance leader have been appointed within the head office and each internal company in order to ensure that the different divisions within the SANYO Group all pursue practical measures. The Compliance Leader plays a central role within each company in heightening employee awareness of compliance issues and preventing problems, by carrying out in-house training along with the nature of company business and proposing and implementing other measures to be taken.

Compliance Efforts
(1) Compliance Hotline
In January 2002, Compliance Hotlines were installed as consultation channels and reception desks for compliance related issues in order to detect problems as early as possible. The reception desks of the Hotlines are installed both in the head office and the internal companies. Any employee of the SANYO Group can use any of the reception desks. The operation of the desks, including the duty to preserve the confidentiality of the consultations and protect the users, is clearly stated in the corporate rules and made known to employees of the SANYO Group.

(2) Compliance Training Session for the Management
Since fiscal 2001, the Internal Auditing Committee has sponsored annual compliance training sessions for the management (directors, officers and corporate auditors), inviting external experts.

In fiscal 2004, the fifth such training was held, with the theme “CSR Management and Compliance.” It was attended by about a hundred participants, including Compliance Leaders and the presidents of related companies. The training included lectures on how to ensure that CSR management and compliance could be well known to everyone in the SANYO Group, and effective measures to be taken.

(3) Employee Training Sessions
In order to heighten employee awareness of compliance issues and encourage appropriate actions, the opportunities are taken to give trainings to new employees and newly appointed managers of the company before they take up their appointments. From fiscal 2004, mid-carrier employees also receive training when they take up employment.

(4) Compliance Awareness Questionnaire
Questionnaires are used to check the actual situation with regard to employee awareness of compliance issues to perform our ongoing improvement activities.

(5) The Situation Overseas
As part of the commitment to ensuring full compliance management in group companies overseas, the first North American Compliance Promotion Meeting was held in January 2005 at San Diego, California.

This meeting was attended by top management of all group companies headquartered in the United States and, from Japan, the chairman and members of the Internal Auditing Committee. The meeting presented the results of a compliance questionnaire survey of top management in the local companies, detailed current approaches to compliance issues, and legal issues requiring specially careful handling in the North American context, encouraging exchanges of information on these and other topics. This not only heightened top management awareness but also sought to achieve a throughgoing in-house consensus on the responsibilities of management for compliance.

Similar meetings are planned outside North America.
Personal Information Protection
In order to appropriately handle the personal information obtained from our customers, we observe the following practices.

(1) We appoint executive officers whose specific responsibility is to exercise overall control of personal information. Through locating individuals and secretariats responsible for personal information both in head office and in each business groups, we are completing a whole-company system to protect such personal information.

(2) After completing our policy and internal rules on protecting personal information, we have publicized them over the corporate intranet to the SANYO Group, and while working to ensure that all officers and employees observe the law and our internal rules, we inform them of the importance of protecting personal information.

(3) We have prepared cards showing our personal information protection policy, the influence of leaks of personal information, and the points requiring special attention in everyday work. These cards have been issued to employees in the SANYO Group to ensure the necessary awareness of how to handle personal information.

(4) We give training to administrators for personal information in every division on how such information should be handled. In fiscal 2004, this approach was extended throughout the SANYO Group, and scope of system for protecting personal information was expanded in group companies, with education and training being given to enhance awareness in each company in turn.

In fiscal 2005, based on the system for securing personal information protection, the entire group inaugurated a PDCA cycle, with ongoing education and training to enhance awareness.

The SANYO Group Guidelines for Personal Information Protection

Believing that protection of personal information in business activities is a duty of every corporation, the SANYO Group seeks to protect personal information according to the principles described below.

1. Appropriate handling of personal information
In order to protect personal information, the SANYO Group has not only established a management system, it also collects, utilizes and provides information that is suitable in extent by appropriate methods according to corporate rules and other standards.

2. Measures to ensure accuracy and safety
By executing measures to ensure accuracy and safety about personal information, the SANYO Group intends to avoid illegal access to personal information, and prevents its loss, destruction, alteration or leakage.

3. Observance of laws, regulations and codes
In handling personal information, the SANYO Group strictly observes the laws, regulations and other rules related to personal information protection.

4. Continued personal information protection efforts
The SANYO Group continuously updates, upgrades and improves its efforts for personal information protection.

Risk Management
Coping With and Managing Risks
Based on the regulations for risk management established for the SANYO Group, we identify and assess the risks that must be faced so that responsible departments could control and reduce them appropriately.

With respect to proposed business plans and the introduction of new products to the market, the responsible departments must investigate the attendant risks and the appropriate means to minimize them, evaluating the results form a comprehensive viewpoint before reaching a decision or seeking approval.

Then, the regulations for risk management are the primary means of dealing with conceivable emergencies and securing a rapid resumption of normal operations so as to maintain the functions of the organization and the trust of society. At the same time, we are seeking to improve the system for risk management by deciding the measures to be taken for the main emergencies envisaged, so that the system could function practically.

Further, the SANYO Group suffered damage to a subsidiary manufacturing semiconductor devices struck by the Niigata-Chuetsu Earthquake in October 2004, but we formed the emergency headquarters at the head office and the site, in accordance with this rule. It enabled us to take possible quick measures for gathering information and supporting the employees affected.

Damage to Niigata SANYO Electronics Caused by the Niigata-Chuetsu Earthquake
On 23 October 2004, an earthquake of magnitude 6.8 struck the Niigata-Chuetsu region. Niigata SANYO Electronics Co., Ltd. was near the epicenter in Ojya City and suffered damage to its equipment and inventories that amount to 42.3 billion yen including their restoration cost (fortunately there was very little human injury). We put the highest priority on employee safety, and as soon as we had checked the state of gas leaks and damage to underground waste-water tanks, we informed the authorities concerned (local government, the public health centers, and the city hall) and took the necessary countermeasures. We also reassured local residents that there was no threat to their safety due to these material damage, and thereafter we repeated confirmations of the influence on the environment around the company, and reported the results to the authorities.

A report on the safety and health of employees concerned is given on Page 72.
The SANYO Group has long sought to reduce the environmental impact at every stage of its corporate activities, and has implemented environmental conservation by developing solar cells, rechargeable batteries, and CO₂ compressors, etc., the first products and technologies of this kind in the world and/or in Japan. As we move into the future, we are committed to developing new technologies and products under the theme Energy & Ecology that will make the best use of the riches of Nature in a symbiotic relationship with the environment. By providing such products and technologies we intend to become a company that delights the world.
Energy & Ecology (E&E) is a major business domain for our group, and at the same time a distinctive theme of our environmental conservation activities. Around the E&E core, we will continue to develop products and technologies that meet the requirements of energy saving and environmental conservation—products like solar cells, rechargeable batteries for hybrid automobiles, and air conditioners—and seek for sustainability in markets, society and the Earth.

**Products** .............................................P34-42
Reducing the environmental impact of products.

**Process** ..............................................P43-52
Reducing the environmental impact of our corporate activities.

**Mind** ..................................................P53-56
Facilitating communications.

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**Special Feature 1** ..........P15
We steadily supply high-efficiency solar cells that reduce the volume of CO2 emissions and save energy.
**Supplying our unique solar cells.**

**Special Feature 2** ..........P19
We develop and supply automobile battery system that reduces global warming.
**Developing of battery systems for HEVs.**

**Special Feature 3** ..........P21
We achieve products with low environmental impact by using natural CO2 as a refrigerant.
**Developing compressors using natural refrigerant introduced a unique two-stage compression technology.**
We steadily supply high-efficiency solar cells that reduce the volume of CO₂ emissions and save energy.

As a clean form of energy that neither discharges CO₂, implicated in global warming, nor depends upon non-replenishable fossil fuels, much is expected of solar power generation. In order to address humankind’s common problem of global warming, SANYO has devoted major efforts on developing a key device for photovoltaic power generation systems, the solar cell. * These efforts endeavor to improve generating performance by raising the efficiency of energy conversion while also reducing the environmental impact of the materials and processes used in solar cells’ manufacture.

* These devices absorb sunlight and convert it directly into electricity, they do not store electrical energy.

The promising future for widespread use of photovoltaic power generation systems.

Solar power generation uses the photovoltaic effect of silicon semiconductors (this is the phenomenon in which light strikes the silicon or certain other substances, electrons are ejected, and electricity is generated). The technology directly converts the energy of sunlight into electricity. Its history began in 1954, with the invention of the single crystalline silicon solar cell. In 1958, it was used as the source of electrical power in the US artificial satellite Vanguard. Worldwide interest turned to solar power generation in 1973, on the occasion of the first oil shock, as a next-generation source of energy independent of fossil fuels. In 1974, almost simultaneous initiatives were taken in Japan, the United States and Europe to form national projects, and development work continued to address the technical problems of combining multiple solar cells into solar-cell modules that could be used to supply power in dwellings or other buildings within practical solar power generation systems. In Japan, in 1994, The Ministry of International Trade and Industry (now the Ministry of Economy, Trade and Industry) initiated a system of subsidizing the monitoring of domestic photovoltaic power generation systems, and at a time when people’s interest in saving energy was growing, this stimulated a significant increase in the number of installations. Currently, in preparation for even more widespread installation, the need is growing for photovoltaic power generation systems with higher efficiencies that can contribute to lower environmental impact.
Supplying Our Unique Solar Cells

HIT solar cells: product of a quarter-century of technology development combined with original concepts

In 1980, SANYO was the first company in the world to successfully industrialize the production of amorphous silicon solar cells. At the time, the mainstream of solar cells used single crystalline silicon. In comparison, non-crystalline (amorphous) silicon was characterized by slightly lower conversion efficiencies but its outstanding absorption of light enabled it to generate electricity in low-intensity ambient lighting, and it could be manufactured fairly simply by a low-temperature process, this has generated a very large demand for use in small-size equipment such as pocket calculators, etc.

Based on this technology, from 1990 SANYO has started to develop a new type of solar cell that would be more efficient but impose a lower environmental impact. The aim was to achieve the development of a new structure that would combine high conversion efficiency of single crystalline silicon and the low energy requirements of amorphous silicon production with high manufacturing productivity. After much trial and error, a solar cell was developed in 1997 in which a thin-layer of intrinsic amorphous silicon production with high manufacturing productivity. After much trial and error, a solar cell was developed in 1997 in which a thin-layer of intrinsic amorphous silicon was deposited on a single crystalline silicon base to form a heterojunction structure. This is the HIT (heterojunction with intrinsic thin-layer) solar cell used in large numbers in SANYO’s photovoltaic power generation systems.

In a typical production method for conventional single crystalline silicon solar cells, the photovoltaic function can only be secured by processes running at high temperatures above 900°C, and the production process itself is complex. In addition, there is also the problem that in the boundary regions between semiconductors, two different kinds of impurity are diffused alternately, making it difficult to form a good interface. At that time, heterojunction structures in which thin films of amorphous silicon were formed on a single crystalline silicon base had already been developed, but they had proven unable to exceed the performance of single crystalline silicon solar cells, and a breakthrough was necessary. Here, SANYO was able to use its thin-film forming technology acquired in the production of amorphous silicon solar cells to form a thin-film of amorphous silicon free of impurities at temperatures below 200°C, and to develop a novel structure in which this film was injected between the single crystalline silicon and the amorphous silicon. This innovative concept enabled SANYO to achieve significantly improved solar cell electrical performance while at the same time reducing the energy used in production.

The World’s Number One in Power Per Unit Area

HIT 200W modules have the world’s highest conversion efficiency at 17%*1 (other methods produce an average of about 14%). They also have outstanding temperature characteristics, and are characterized by output powers that drop less at high summer temperatures, a problem with conventional solar cells. This outstanding conversion efficiency and the advantage in power-per-unit-area in the summer, gives HIT solar cells a 16 to 27% advantage in efficiency*2 over typical solar cells with the same area. Given these performances HIT solar cells have achieved the number one*3 position in output power per unit area in the world.

*1 This is the parameter that shows what proportion of the solar energy striking a solar cell is converted into electrical energy.
*2 Under otherwise similar conditions, the comparison is made between the electric power generated by each company’s standard module per unit area (PTC rating). (This value has been registered with the California Energy Commission.) PTC in this case are defined as 1,000W/m² plane-of-array irradiance at an ambient temperature of 20°C, and a wind speed of 1m/s.
*3 SANYO survey, for mass-produced products, as of October 1, 2004.

◆ Photovoltaic Power Generating System (a residential example)

A Solar-cell Module
Each panel contains a number of solar cells. They are attached to the roof, etc, where sunlight is turned directly into electricity.

A solar cell

Junction Box
This relay box collects together all the DC*1 electricity generated by the solar-cell modules. The DC electricity is connected to the power conditioner.

Power Conditioner
This device converts the DC electricity to the AC*2 used in home.

*1 DC: direct current
*2 AC: alternating current

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The Manufacture of HIT Solar Cells Has Little Environmental Impact

A high conversion efficiency means that the size of the solar cells needed to generate a given amount of electricity can be smaller than those used in other types, which means that less material resources are used.

The methods and materials used to manufacture HIT solar cells, and the amount of inputs, make them a product that has little impact on the environment. The temperature of the processes by which the base plate and thin films of silicon are formed has been kept under 200°C, and this reduces the amount of fuel and electricity consumed in their manufacture. The silicon film is only 200µm thick (previously, the single crystalline silicon used was 350µm thick), and this again reduces the amount of raw materials used. Furthermore, the silicon material used by SANYO is easily extracted from sand and stone, resources that are extremely plentiful in nature, very different from the compound semiconductors used in other solar cells.

Currently, in order to reduce the volume of CO₂ emissions resulting from manufacturing solar cells, SANYO is reducing the number of layers of silicon and the thickness of the films, and is working to increase the throughput of the film-forming process (further reducing energy consumption). Also, to prevent soil and water pollution when products come to the end of their useful lives, over half of our currently shipping products are lead free, and from July 2005, plans call for all products shipping within Japan to be lead free.

The Effectiveness of Photovoltaic Power Generation in Reducing CO₂ Emissions

It is generally estimated that a photovoltaic power generation system with a capacity of 1kW will, in comparison with other forms of generation, reduce CO₂ emissions by 90kg per year. Also, since solar cells have a normal operating life of over ten years, and the energy required to manufacture transport and dispose of a photovoltaic power generation system can be recovered within two years, this means that for the remaining eight years, more energy can be generated without imposing any further impact on the environment.

In 2004, photovoltaic power generation systems with a total capacity of approximately 1.2GW were manufactured worldwide. This is equivalent to the generating capacity of two typical thermal power stations. Of this, SANYO’s manufacturing capacity is 153MWs in 2005 and is planned to reach 1GW in 2010.

Through the supply of outstanding solar cells and encouraging the spread of photovoltaic power generation systems, we will not only contribute to the prevention of global warming, but also generate an unmistakable economic effect as each home is able to sell excess electrical energy generated. This will lead to increased human consciousness of the environment... With the confidence that comes from the results we have already achieved, we are committed to further research in the future.

* Reducing CO₂ emissions by 90kg a year: 1kWh is the equivalent of 90g of CO₂, multiplied by the annual generation of approximately 1,000kWh.

Our responsibility and our approach


Eiji Maruyama, Solar Cell Research Department, Advanced Energy Research Laboratory, R&D Division.

As research engineers, our attitude is that in making devices like solar cells, which have an enormous positive effect in reducing environmental impacts, we should aim for products that achieve the greatest result for the least possible expenditure of energy and materials. In our commitment to our daily work we feel that without this attitude we would have no right to be working on solar cells. There are many problems to overcome, but it is a worthwhile challenge, and there is no greater satisfaction for an engineer than to achieve the targeted result/aim/goal.
Clean Energy For The World

The SANYO Group Devotes Our Efforts On Production and Supply Of Solar Cell Modules In Three Centers Around The World.

The SANYO Group, faithful to the new management vision “Think Gaia,” has established production and distribution centers for solar cell modules in Japan, Europe (Hungary) and Central America (Mexico), to advance the further spread of these modules on a global basis.

In 2004, worldwide production of solar cells amounted to 1,195MW*, a 57% increase over the year before, and it seems certain that demand in Japan, Europe and the US, indeed globally, will continue to grow. Our group, in order to respond to this demand, built the Nishiki-no-Hama factory for HIT solar cell production at Kaizuka, Osaka, which went into operation in January 2004. We are actively expanding production with plans calling for a system with 153MW total capacity for HIT solar cells.

Currently, production of HIT solar cells in Japan is at two locations: Nishiki-no-Hama (with 103MW annual capacity) and the Shimane SANYO Industrial Co., Ltd. (at Unnan in Shimane Prefecture, with 50MW capacity). Japanese production of HIT solar cell modules takes place at three locations; the Tokomabe Factory (annual production capacity 30MW at Kasai, Hyogo Prefecture), the Nishiki-no-Hama Factory (capacity 33MW) and the Tokyo Plant (capacity 40MW at Oizumi, Gunma Prefecture). Since 2003, HIT solar cell modules for the North American market have been produced at the Monterey Factory in Mexico (annual capacity 10MW). In July 2005, our Hungarian Factory (with a capacity of 50MW) was opened at Dogro in the Republic of Hungary.

In the future, these production and distribution centers for solar cell modules will power our drive to spread clean energy globally, achieve energy saving and control global warming.

We develop and supply automobile battery system that reduces global warming.

In preventing global warming, reducing the amount of CO₂ emissions in automobile exhaust gases is a major issue. Cars driven by electric motors are therefore attracting attention as a means of reducing fuel consumption.

In recent years, hybrid electric vehicles (HEVs), which use a combination of conventional engines and electric motors, are gradually coming into use.

Future hopes are pinned on electric vehicles (EVs) — automobiles driven only by electric motors — and the advent of cars powered by fuel cells using hydrogen as their fuel. SANYO is one of the very few manufacturers in the world to develop and produce battery systems for HEVs, and we have taken up the challenge of R&D for outstanding car battery systems.

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**Characteristics of Various “Ecological” Cars**

<table>
<thead>
<tr>
<th>Performance</th>
<th>Natural gas Vehicle</th>
<th>Methanol Vehicle</th>
<th>Electric Vehicle 12V</th>
<th>Hybrid Electric Vehicle 12V</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Compact, short and medium distances</td>
<td>Light trucks, etc., long distances</td>
<td>Compacts – Buses, short distances</td>
<td>Compacts – Buses, long distances</td>
</tr>
<tr>
<td>Energy saving</td>
<td>Approx. 10%</td>
<td>7%</td>
<td>Approx. 40%</td>
<td>Approx. 40%</td>
</tr>
<tr>
<td>2010 Target</td>
<td>About 1.0 million</td>
<td>About 220,000</td>
<td>About 410,000</td>
<td>About 1.8 million</td>
</tr>
<tr>
<td>Main issues</td>
<td>Price</td>
<td>Price</td>
<td>Price</td>
<td>Price</td>
</tr>
</tbody>
</table>

*Source: Material of New and Renewable Energy Subcommittee, Advisory Committee for Natural Resources and Energy, METI 2011*

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**Infrastructure and Batteries: Support for the Eco-Car**

An HEV uses its conventional engine and its electric motor according to driving conditions, and achieves very high fuel efficiencies. For example, the Ford “Escape” with a 2.3-liter engine has a fuel economy of 9.4km/L (in town), but when the same 2.3L engine is used in parallel with the SANYO HEV battery system, the “Escape Hybrid” achieves a far superior fuel economy of 15.3km/L. Because less fuel is used for driving, the amount of exhaust gas emissions is reduced, and this reduces the amount of CO₂ emissions.

EVs, which do not use gasoline, and fuel cell vehicles that use hydrogen, do not emit any CO₂ at all. To encourage the spread of these cars, generally called “eco-cars,” the necessary infrastructure of recharging stands and hydrogen-gas stations is gradually being established. As a result, the battery systems that power these “eco-cars” will become even more important in the future.
Developing Battery Systems for HEVs

Development started in 1997, the year the Kyoto protocols were adopted.

In 1997, the year when Kyoto protocols setting targets for percentage reductions in greenhouse gases like CO2 were adopted (ratified in 2005) and also the year when Toyota Motor Corporation became the first to market an HEV, Prius, SANYO started to develop nickel-metal hydride batteries for HEVs. Behind this decision lay a long history of technological excellence and a track record that began with the development of a nickel-cadmium battery in 1964, continued with nickel-metal hydride batteries, lithium-ion batteries, and lithium-polymer batteries, whose successive development and marketing made us the leading supplier of consumer secondary cells (rechargeable batteries).

Today, SANYO has taken up a new challenge: developing battery systems for HEVs that will match expanding demand.

The development theme was to exploit the ability of nickel-metal hydride batteries to supply a lot of power over long periods of time, while securing the high output power needed for good starting and acceleration performance, and achieving a long working life. Success followed, and in 1999 at the 33rd Tokyo Motor Show, we displayed our HEV battery system. Later, we entered agreements with the Ford Motor Corporation and Honda Motor Co., Ltd., and in 2004 we mass-produced HEV battery systems for Ford’s Escape Hybrid and for Honda’s Accord Hybrid. The Escape Hybrid was not only Ford’s first hybrid car but also the world’s first hybrid SUV, achieving outstanding fuel economy.

The HEV Battery System: Born of SANYO’s All-round Strengths

The battery systems supplied to Ford use 250 1.2V D-type nickel-metal hydride batteries connected in series to form a high-voltage battery pack, and are packaged with a cooling fan to keep the batteries cool and an electronic control unit to monitor battery condition. Various divisions of SANYO contributed the sophisticated technologies that made this package possible.

For example, because battery performance is greatly influenced by changes in temperature, in order to ensure that all 250 batteries were cooled evenly, we used air-conditioning technology and computer-aided engineering support for the design in order to develop the optimum cooling structure. In order to achieve the high outputs required for starting and acceleration without compromising useful service life, the software for the electronic control unit controlling the batteries was developed by a team drawn from various software departments.

In this way, various technologies were combined to give a great battery performance required for HEVs while at the same time provide a useful working life comparable with that of a conventional car engine (10 years and 150,000 miles). We also developed technologies to prevent electrical discharge and the leakage of electrolyte in the unlikely event of an accident, not only increasing collision safety performance under impact essential in automobile applications but also achieving weather resistance that will withstand a very wide range of climatic conditions. The Escape Hybrid in particular, which must satisfy the harsh driving conditions required of SUVs, has a battery system that operates consistently over a very wide range of temperatures from +50°C down to -40°C.

Creating HEV Battery Systems with Higher Performance and Lower Cost

The SANYO HEV battery system in the Ford “Escape Hybrid” SUV was developed by a team drawn from various software departments. In order to contribute to the realization of cars that have lower impact on the environment, SANYO will continue to take up the challenges involved.

Our responsibility and our approach

Aiming to Create Battery Systems with Even Wider Applications

Fumio Yasutomi, Controller Development Group, Engineering Department, HEV Business Unit, Mobile Energy Company.

At the moment, we develop battery systems for a particular model car. However, in the future, our dream is to create general-purpose battery systems that, like tires and car navigation systems, can be used in any model of any manufacturer’s cars. If we succeed, then we will have played our part in the spread of HEVs that are environmentally friendly.
We achieve products with low environmental impact by using natural CO₂ as a refrigerant.

In order to prevent global warming, the use of fluorocarbons is being abandoned on a global scale. In the leading industrialized nations, designated CFCs*1 have not been manufactured since 1995, and although the HCFCs*2 that replaced them have a smaller effect on the ozone layer, it has been decided that they, too, should be phased out by 2010.

One of the main applications for these fluorocarbons is as the refrigerants that form the essential medium for heat transfer in air-conditioners and refrigerators, etc. Industry needs new refrigerants to replace fluorocarbons, and research has been proceeding into natural refrigerants that have little impact on the environment. This led SANYO to develop a CO₂ compressor that would use naturally occurring CO₂.

We have already combined this compressor with a heat pump to create a water heater using natural refrigerant, and in future we intend to extend the applications to refrigeration equipment.

*1 These are chlorofluorocarbons subject to international regulation under the Montreal protocols adopted in 1987 to prevent destruction of the ozone layer (CFC-11, CFC-12, CFC-113, CFC-114, and CFC-115, etc).

*2 These are hydrochlorofluorocarbons subject to international regulation under the Montreal protocols adopted in 1987 to prevent destruction of the ozone layer (HCFC-22, HCFC-123, and HCFC-141b, etc).

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Types of Refrigerant and their Characteristics

<table>
<thead>
<tr>
<th>Refrigerant</th>
<th>ODP*1</th>
<th>GWP*2</th>
<th>Flammability</th>
<th>Toxicity</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designated fluorocarbons</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>CFC12</td>
<td>1</td>
<td>10600</td>
<td>None</td>
<td>Low</td>
</tr>
<tr>
<td>HCFC22</td>
<td>0.05</td>
<td>1700</td>
<td>None</td>
<td>Low</td>
</tr>
<tr>
<td>New</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFC410A</td>
<td>0</td>
<td>1975</td>
<td>None</td>
<td>Low</td>
</tr>
<tr>
<td>Next generation</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HFC32</td>
<td>0</td>
<td>550</td>
<td>Slight</td>
<td>Low</td>
</tr>
<tr>
<td>Natural</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Ammonia</td>
<td>0</td>
<td>0</td>
<td>Slight</td>
<td>High</td>
</tr>
<tr>
<td>Propane</td>
<td>0</td>
<td>3</td>
<td>High</td>
<td>Low</td>
</tr>
<tr>
<td>CO₂</td>
<td>0</td>
<td>1</td>
<td>None</td>
<td>Low</td>
</tr>
</tbody>
</table>

*1 Ozone depletion potential (ratio to that caused by the equivalent amount of CFC11).
*2 Global warming potential (from 3rd IPCC Assessment Report)
CO₂: A safe natural refrigerant that neither depletes the ozone layer nor contributes to global warming

Among natural refrigerants attracting attention as a replacement for fluorocarbons are CO₂, ammonia, and air. Of these, SANYO selected CO₂ in 1998 and began development of a CO₂ compressor.

Among substances that possess refrigerant properties, CO₂ has particularly outstanding properties from the point of view of imposing lower impacts on the environment. Not only is it free from the ozone depletion caused by CFCs but it also has a small GWP only 1/120th to 1/3,800th that of HCFCs. What is more, it is free of the flammability and toxicity of ammonia and other alternatives, and can be safely used as a refrigerant.

Not only that, but the CO₂ used is generated within the factory as a byproduct, so absolutely no additional CO₂ is generated for refrigerant use, and there is no fear of accelerating global warming.

Achievement of high-efficiency and high-reliability by unique two-stage compression technology

While CO₂ thus has many of the characteristics required of refrigerants, it does have one major disadvantage: it is difficult to compress. In order to liquefy CO₂, pressures three or four times those needed for fluorocarbons are required. This means that the compressors must achieve and control high pressures. Higher pressures generally mean larger and more costly pressure vessels, and the applications of CO₂ compressors have usually been limited to large-scale installations on ships, etc. in order for them to find applications in individual dwellings or apartment blocks, the problems of high-pressure operation must be solved and the compressor reduced to a comparable size with those used in home air-conditioners.

SANYO, by adopting the highly reliable twin rotary structure developed for our air-conditioner compressors, was able to develop unique technology for two-stage compression of CO₂. In 1999, SANYO developed the world’s first compact sealed CO₂ compressor, the two-stage compression of which readily achieves the high pressures needed, while at the same time providing high efficiency, low vibration, low noise, and high reliability. In addition to these outstanding characteristics, the loads imposed on the compressor during compression are low enough to achieve longer operating life.

High expectations for the CO₂ compressors within the context of abandoning fluorocarbons

With the gathering momentum of the worldwide trend to abandon HCFCs and replace them with CO₂ as a natural refrigerant, SANYO is using CO₂ compressors in many heat-pump type water heaters under the “Eco-Cute” brand name. They are also used in automatic dispensing machines. For example, automatic dispensing machines of this type were installed at the Athens Olympic Games in 2004.

In the future, SANYO is looking to expand the range of applications to heating, driers for bathrooms, and other equipment, and eventually to freezers and refrigerators. We are committed to reducing their size and cost because this will both contribute to their widespread adoption and reduce the resources used in their production.

* Eco-Cute is the name under which an electric power utility company and water-heater manufacturer sells heat-pump water heaters using natural refrigerants. SANYO uses its CO₂ compressors in its own products, and supplies them for the heat-pump type water heaters produced by other companies.

Our responsibility and our approach

Making people’s lives more comfortable as we reduce the environmental impact

Hiroshi Mukaiyama, NR Project, R&D Headquarters

With compressors that use fluorocarbon refrigerants, attention must be paid to recover and not release the refrigerant when disassembling or processing them during repair work and disposal. This is unnecessary with CO₂ compressors. And since the CO₂ used is a factory byproduct, this also reduces environmental impact. What is more, because little electricity is consumed, running costs are low and they also run quietly. We are working to ensure that as many people as possible can experience for themselves the practical advantages of Eco-Cute products.
**Environmental Policy and Action Plan**

The SANYO Group, as a manufacturer, approaches environmental issues from three directions, namely, Process, Products, and Mind, as a corporate citizen, and we are proceeding with our environmental conservation efforts according to the SANYO Group Environmental Policy and Guiding Principles for Ecological Activities.

**SANYO Electric Group Environmental Policies**

SANYO Electric Group’s corporate vision is “Think GAA” and based on this we aim to become “a company that delights the Earth.” With “Sustainability” as our keyword, we will pursue “Symbiotic Evolution” to simultaneously realize global environmental conservation and a comfortable and prosperous society.

For this purpose we will focus on the approaches described below in all stages (research/development design, material procurement, manufacturing, distribution/sales, usage, and finally, disposal/recycling) related to SANYO Electric Group’s business activities (offering of products and services in fields such as audio-visual & information communications equipment, home appliances, industrial/commercial equipment, electronic devices, and batteries).

1. We will establish and maintain an environmental management system. With the objective of pollution prevention, we will examine environmental issues from the global level down to those specific to corporate management. To address them we will work to continually improve our environmental management system. Further, we will periodically audit our system to confirm its effectiveness.

2. In addition to adhering to environment-related laws/regulations and all other requirements that SANYO Electric Group acknowledges, we will establish our own standards when necessary and work to reduce environmental risk.

3. In the field of product design, to contribute to the formation of a sustainable society, we will focus on reduction of energy consumption, effective utilization of recycled materials, improvement in durability and recyclability, and reduced use of chemical substances harmful to the environment. In this way we will strive to develop and promote diffusion of “environmentally conscious products” with minimal environmental impact.

4. In our business activities, in addition to reducing energy consumption and material input through improving process efficiency and effectively using renewable energy and recycled materials, we will strive to reduce emission of chemical substances harmful to the environment, prevent global warming, conserve exhaustible resources, reduce waste, and prevent pollution.

5. In order to strengthen our efforts described above, SANYO Electric Group will put together the “Environmental Action Plan” to outline the objectives and targets. This plan will be periodically reassessed as we work to improve the quality of our environmental management.

- **SANYO Genesis III Program: Pioneer the expansion of a sustainable and clean energy society,** and **SANYO Harmonious Society Program: Create a compassionate and prosperous society**

6. We will engage in environmental education and enlightenment activities to improve the environmental consciousness of all members of SANYO Electric Group, including employees, and those who perform work commissioned by SANYO Electric Group.

7. To facilitate good communication with every stakeholder, including customers, business partners, shareholders, and local communities, and to create an environment in which we work together for a better future, we will seize every opportunity to actively share information and engage in proactive dialogue with them. Further, we will positively incorporate their opinions to improve the quality of our environmental management.

8. As a means of achieving the above, SANYO Electric Group will maintain applicable certifications related to environmental management systems, such as ISO14001, and also obtain new certifications covering new areas.

**Guiding Principles for Ecological Activities**

Let’s conduct business and lives in an environmentally-sound manner.

1. **1. Treasure…** Nature · Objects

2. **2. Save…** Resources · Energy

3. **3. Use…** Recycled resources · Recycled products · Clean energy

4. **4. Reduce…** Garbage · Wastewater · Exhaust gas

5. **5. Participate in…** International cooperation · Local community · Environmental preservation

**Environmental Action Plan**

The SANYO Group established the “Environment Voluntary Plan” in 1993 to promote environmental conservation activities.

In February 1998, in response to The 3rd Session of the Conference of the Parties to the United Nations Framework Convention on Climate Change (COP III), held in the previous year, we established the Group Environmental Action Plan, the “Action E21.” This plan aims to continuously reduce the environmental impact from three aspects of “Process,” “Products” and “Mind” based on the environmental management system.

This stance is based on our recognition of the importance to reduce the environmental impact from “Process,” which is the business activities to produce and sell products and from “Products” including services that are used by our customers, as well as the importance to transform people’s “Mind” to promote environmental conservation activities.

- **Process**
  - Realization of business activities that pose less impact on the environment through energy saving, resource conservation and waste reduction

- **Products**
  - Development of environment-conserving products to contribute to improve the environment and environmentally-harmful products that reduce the environmental impact.

- **Mind**
  - Creation of a system for a recycling-oriented society, environmental communication, improved awareness, and social contribution
Environmental Action Plan Targets and Achievements

1. Activities that aim for realization of “Zero Emission, Complete Recycling, and Detoxified Product Lifecycle” as part of the “SANYO Product Circulation Program.”

<table>
<thead>
<tr>
<th>Environmental objectives and targets</th>
<th>Target for FY2005</th>
<th>Target for FY2006</th>
<th>Target for FY2007</th>
</tr>
</thead>
<tbody>
<tr>
<td>Reduction of greenhouse gas emissions</td>
<td>Reduction in CO₂ emissions (sales unit volume) Reduction of 5% or more compared to FY1999</td>
<td>Reduction in CO₂ emissions (sales unit volume) Reduction of 10% or more compared to FY1999</td>
<td>Reduction in CO₂ emissions (sales unit volume) Reduction of 15% or more compared to FY1999</td>
</tr>
<tr>
<td>Reduction of industrial waste</td>
<td>Final disposal ratio GEMS average of 0.3% or less 1% or below at 85% or more sub-sites</td>
<td>Final disposal ratio GEMS average of 0.3% or less 1% or below at 90% or more sub-sites</td>
<td>Final disposal ratio GEMS average of 0.3% or less 1% or below at all sub-sites</td>
</tr>
<tr>
<td>Promotion of environmental-friendly quality products</td>
<td>Ratio of environmentally-friendly quality products 30% or more</td>
<td>Ratio of environmentally-friendly quality products 35% or more</td>
<td>Ratio of environmentally-friendly quality products 40% or more</td>
</tr>
<tr>
<td>Promotion of environmental technology</td>
<td>Development of 36 or more items in total since FY2000</td>
<td>Development of 39 or more items in total since FY2000</td>
<td>Development of 42 or more items in total since FY2000</td>
</tr>
<tr>
<td>Research &amp; development that harmonizes the environment and the economy</td>
<td>Transfer of environmental technology to manufacturing divisions: 3 businesses or more in total since FY2000</td>
<td>3 transfers (3 transfers or more in total since FY2000)</td>
<td></td>
</tr>
<tr>
<td>Reduced use of HFC as a refrigerant or heat insulator</td>
<td>10% or less</td>
<td>12.4%</td>
<td>❌</td>
</tr>
<tr>
<td>Reduced use of lead solder in products</td>
<td>50% or less</td>
<td>36.0%</td>
<td>❌</td>
</tr>
<tr>
<td>Reduction of CO₂ emissions (sales unit volume)</td>
<td>Reduction of 20% or more compared to FY1999</td>
<td>18.8%</td>
<td>❌</td>
</tr>
<tr>
<td>Waste reduction</td>
<td>Final disposal ratio - 0.5% or less</td>
<td>0.2%</td>
<td>❌</td>
</tr>
<tr>
<td>Reduction of chemical substance emissions subject to PRTR</td>
<td>Reduction of 79% or more compared to FY1999</td>
<td>86.2%</td>
<td>❌</td>
</tr>
</tbody>
</table>

2. As part of programs, “SANYO Blue Planet,” “SANYO Genesis III,” and “SANYO Harmonious Society,” expansion of products and development of technologies to contribute to the “Challenge of the Global Environmental Issues,” “Development of a Society with Sustainable Clean Energy,” and “Creation of a Compassionate and Prosperous Society and Mind.”

Expansion of environmentally-friendly quality products
- Ratio of environmentally-friendly quality products - 35% or more (according to FY2005 evaluation)
- Ratio of products that satisfy the environmental quality standard - 80% or more
- Ratio of products that satisfy the environmental quality standard - 90% or more

Promotion of environmental technology
- Development of 36 or more items in total since FY2000
- Development of 39 or more items in total since FY2000
- Development of 42 or more items in total since FY2000

Research & development that harmonizes the environment and the economy
- Transfer of environmental technology to manufacturing divisions: 3 businesses or more in total since FY2000
- 3 transfers (3 transfers or more in total since FY2000)

Reduced use of HFC as a refrigerant or heat insulator
- 10% or less
- 12.4%

Reduced use of lead solder in products
- 50% or less
- 36.0%

Reduction of CO₂ emissions (sales unit volume)
- Reduction of 20% or more compared to FY1999
- 18.8%

Waste reduction
- Final disposal ratio - 0.5% or less
- 0.2%

Reduction of chemical substance emissions subject to PRTR
- Reduction of 79% or more compared to FY1999
- 86.2%

*1 In the plans for FY2005 to FY2007, the value of the basic year and the target value have been revised due to the changes in the scope of GEMS and in the sales plan.

*2 The target value was reset since FY2005 along with the tightening of the registration criteria.

Achievements for Environmental Action Plan in FY2004

Environmental objectives and targets | Target in FY2004 | FY2004 achievements (actual results) | Self evaluation

| Expansion of environmentally-friendly products | Ratio of E21 products - 25% or more | 41.7% | ★
| Promotion of environmentally-friendly design | 100% or more of the Standard for environmentally-friendly products achievement standard | 100.1% | ★
| Expansion and promotion of green procurement | Domestically produced products, survey progress ratio - 30% or more | 57.6% | ★
| Research & development that harmonizes the environment and the economy | Transfer of environmental technology to manufacturing divisions: 3 businesses or more in total since FY2000 | 3 transfers (3 transfers or more in total since FY2000) | ★
| Reduced use of HFC as a refrigerant or heat insulator | 10% or less | 12.4% | ❌
| Reduced use of lead solder in products | 50% or less | 36.0% | ❌
| Reduction of CO₂ emissions (sales unit volume) | Reduction of 20% or more compared to FY1999 | 18.8% | ❌
| Waste reduction | Final disposal ratio - 0.5% or less | 0.2% | ❌
| Reduction of chemical substance emissions subject to PRTR | Reduction of 79% or more compared to FY1999 | 86.2% | ❌

Self evaluation standard: ★★★★★ Excellent ★★★★ Good ★★★ Poor
Excellency: Target achieved at least one year ahead of schedule. Good: Target achieved as scheduled. Poor: Target not achieved as scheduled.
The SANYO Group introduced the environmental management system (EMS) in the 1990s. In 2001, the group environmental management system (GEMS) was established, and we are making our efforts as a Group to continuously improve environmental activities.

History of Environmental Management System Establishment

Establishment of EMS at Manufacturing Facilities (from the mid-1990’s)

In 1994, the SANYO Group implemented environmental auditing to examine the implementation and management of environmental actions at each manufacturing facilities. No specific problems were found in achieving the target or in compliance with environmental regulations. However, in order to continuously implement and improve the environmental activities for the global and local environment, a need was recognized to establish the EMS and to operate the system continuously to verify the appropriateness of the evaluation of environmental impact and the target. Hence in 1995, the SANYO Group formulated the First EMS Establishment Guidelines for manufacturing facilities, including subsidiaries in Japan and overseas. The major manufacturing sites worldwide endeavored to establish EMS according to this Guideline, and by March 1998, all these sites obtained the ISO14001 certification.

In April 1998, we developed the Second EMS Establishment Guidelines that involve an expanded scope for establishing EMS, covering not only SANYO manufacturing facilities, but also the head office, and research, service and logistics sections. Since then, we have been promoting environmental management activities according to these guidelines.

In establishing EMS, our manufacturing facilities were grouped by geographical area as one site, such as those in Daito (Osaka), Gifu, and Shiga, or Sumoto factory and Tokushima factory to obtain ISO14001 certification. With regards to subsidiaries and affiliated companies, the certification was obtained for each company.

Operating EMS by geographical areas in this manner made it possible to reduce the environmental impact in accordance with the local regulations and bylaws. However, as environmental objectives and targets had to be set separately by each site, their position in relation to the overall group target values in the Environmental Action Plan tended to be obscure, and the environmental investment as the Group became dispersed. Another issue was that the environmental impact by product was difficult to grasp. As more businesses within a site were spun off into separate companies, which made it more difficult to make unified decision at the site.

Unification and Restructuring towards GEMS Structure (2000s -)

Hence, the Group opted for a consistent environmental management that could be promoted efficiently within the SANYO Group. In November 2000, 24 major sites (domestic internal companies, divisions, facilities, related companies) that had already acquired the ISO14001 certification were unified into one site and the previous sites were redefined as sub-sites.

At the same time, we defined “Action E21,” our group environmental action plan, in accordance with the group environmental policy set by the top management of the SANYO Group (President of SANYO Electric Co., Ltd). The system was completed, where each sub-site operates towards each objective and target, based on the group environmental action plan, and the SANYO Group endeavors to reduce any impact on the environment within a single organization. In March 2001, the integrated certification for the group was obtained for the 24 sites which had been integrally operated as one site. This is how the Group Environmental Management System (GEMS) was developed where regional activities are managed as overall group activities to reduce any impact on the environment, including measures for global warming prevention, waste reduction, reduction in chemical substance emissions, etc.

Furthermore, the “GEMS” was restructured by corporate management organization rather than by region in April 2002, and new targets were set for environmental activities. This is because of the importance recognized in having the environmental management centered on products as the development of environmentally-friendly products such as energy-saving equipments will become more important.

In April 2003, the structure of sub-sites was revised to form a similar framework as new management organization, “business unit system”. This structure is current as of today.

The EMS by management organization sometimes includes cases where a multiple number of facilities make up one sub-site, or cases where a large scale facility includes more than one sub-site. The SANYO Group has a regional council in place by geographical area to ensure achievement in these cases, and efforts are made to take consistent actions under instruction of the person responsible of the regional council to address issues which are specific to the area. For example, facilities or factories in the area take charge of compliance with local regulations.

Development of the environmental management system

1994 Environmental audit was implemented.

1995 The First EMS Establishment Guideline was formulated.

1998 The Second EMS Establishment Guideline was formulated.

2000 “Action E21,” the environmental action plan, was formulated.

2001 “GEMS,” the Group EMS, was established.

2002 The EMS structure was reorganized by corporate management organization rather than by region.

2003 Sub-sites were reorganized to follow the same framework as corporate management organizations.
Organizational Structure for Promoting the Group Environmental Management System (GEMS)

The SANYO Group unified the 24 domestic sites in November 2000, which had already acquired ISO14001 certification separately, in order to promote environmental management as a Group in an integrated manner, and based on this unified foundation, the Group Environmental Management System (GEMS) was established.

This united organization acquired the group ISO14001 certification in March 2001, and we are striving to ensure Group environmental policy, prompt decision making, and promote the Group environmental action plan. In April 2003, sub-sites were reorganized along with the introduction of the business unit system.

**Organizational Structure for Promoting GEMS (as of March 31, 2005)**

**Top Management Level**
- President of SANYO Electric Co., Ltd.*1
- Person Responsible for Group Environmental Supervising
- Person Responsible for Group Environmental Auditing
- Group Environmental Auditing Committee
- Group Environmental Auditing Secretariat

**Meetings and Committees**
- Corporate Quality, CS & Environment Council (Business Group unit)*4
  - Chairperson: Person Responsible for Group Environmental Supervising
- Environmental Protection Committee
- Environmental Products Committee

**Sub-sites**
- Technology & R&D Headquarters
- Consumer MM Group
- Life Solutions Company
- Amenity Solutions Company
- Consumer Domestic Sales H.Q
- Commercial Technology and Manufacturing Group
- Semiconductor Company
- Mobile Energy Company
- Clean Energy Company
- Electronic Device Company
- Business Development Headquarters
- SANYO Sales & Marketing Corporation
- SANYO Electric Logistics Co., Ltd.
- NTT DATA SANYO System Corporation
- Staff

*1 The person has the highest responsibility and authority in GEMS.
  1. To formulate SANYO Group environmental policy.
  2. To authorize Action E21 environmental action plan.

*2 The person has the responsibility and authority for control of GEMS.
  1. To control the SANYO Group’s environmental activities according to the environmental management measures decided by the Corporate Quality, CS & Environment Council.
  2. To authorize SANYO Group annual environmental action plans.

*3 The person has the responsibility and authority for establishing, implementing and maintaining GEMS.

*4 Person Responsible for Group Environment Supervising acts as the chairperson to determine the direction of the environmental management of Business groups. Since April 2005 after the organizational changes, the “Corporate Quality, CS & Environment Council” changed its name to the “Corporate Environmental Council.” The name of the unit which promotes GEMS changed from “Corporate Quality, CS & Environmental Unit” to “Environmental Promotion Center.”

Please see our Web site for the “Map of SANYO facilities in Japan and GEMS sub-sites in FY2004,” the “List of GEMS sub-sites in FY2004” and the “Performance by site and by facilities.”

FY2004 GEMS
http://www.sanyo.co.jp/Environment/sanyo_e/
Examples of GEMS Practice

Status of ISO14001 Certification

As of the end of March 2005, the number of ISO14001 acquired within the Group is 78. (Please see the end of this book for the list of acquired certifications.)

Please note that the form of certification varies. For example, 41 related companies and main facilities of SANYO Electric Co., Ltd. together are registered as one site. Likewise, more than one company is registered as one site for certification in some cases. In other cases, one facility of a company is registered as one site on its own, so the number of registered certifications does not match the number of companies.

Identification of Significant Environmental Aspects and Development of Objectives and Targets

Once a year, potential and actual environmental aspects are identified in business activities, products and services at every level, from divisions and sub-sites to the entire GEMS. Among the selected impacts, significant environmental aspects, such as energy consumption and waste generation, are identified.

Significant Environmental Aspects for GEMS

In order to continuously improve our environmental performance for the significant environmental aspects we have identified, the President of SANYO Electric Co., Ltd. develops medium-term (three-year) targets for the SANYO Group and the specific environmental action plan to achieve these targets. Based on this plan, Person Responsible for Group Environmental Supervising formulates and manages the targets and the plan for the current fiscal year.

Once the objectives, targets and the plan are determined, Person Responsible for Group Environmental Management provides each sub-site with specifically tailored targets so that all sub-sites proceed as one entity with activities to achieve the objectives and targets of the SANYO Group.

Those significant environmental aspects not included in the Group Environmental Action Plan are dealt with in objectives and targets of the sub-sites. Environmental aspects for which environmental performance have been improved to a high level may be reclassified as items to be maintained at that level, rather than as targets.

The GEMS Secretariat monitors and measures the status of progress of the Group Environmental Action Plan once a month, and reports the status of progress to Person Responsible for Group Environmental Management. This officer summarizes the status of progress every three months, and reports this to Person Responsible for Group Environmental Supervising.

About Environmental Policy

At the top management level of GEMS, the President of SANYO Electric Co., Ltd. sets the SANYO Group Environmental Policy, and instructs all the employees of the SANYO Group to promote environmental protection activities.

Accordingly, the management of each sub-site formulates its own Sub-site Environmental Policy while considering the business activities, products and services specific to that sub-site, and clarifies the important issues for its environmental protection activities.

To ensure that the environmental policies of sub-sites are consistent with the Group Environmental Policy, Person Responsible for Group Environmental Policy, Person Responsible for Group Environmental Management verifies the policies of sub-sites using a checklist.

Significant Environmental Aspects for the GEMS

- Use of energy (electricity, natural gas, etc.)
- Use of lubricants, etc. in processes
- Use of chemical substances (sodium hydroxide, etc.) in processes
- Hazardous chemical substances (lead, lead compounds, etc.) in products
- Generation of industrial wastes (metal scrap, waste plastic, etc.)
- Generation of specially controlled industrial wastes (waste oil, waste acid, etc.)
- Emission of PRTR substances into the atmosphere
- Research and development on themes important to the environment
Status of Observance of Environmental Laws and Regulations

The SANYO Group companies and sub-sites, in order to grasp the laws and regulations relevant to their business activities, products and services, have developed frameworks to ensure that information on all new environmental laws and regulations, as well as amendments to existing ones, are obtained and communicated without omission within the organization, and efforts are made to comply with them by monitoring and measuring observance situation on a regular basis. In addition, the SANYO Group endeavors to observe other requirements to which the Group consented, such as agreement amongst industry groups.

With regards to environmental standards which are specific to regions, the Group not only complies with various bylaws, but also sets its voluntary standards higher than those of bylaws to ensure prevention of violation.

Since GEMS was established, there were no particular problems concerning compliance with environmental laws and regulations between FY2001 and FY2003.

In FY2004, the voluntary standard was exceeded at some sub-sites concerning water or noise pollution, but the situation was rectified promptly by taking appropriate measures. There has been no serious breach of laws and regulations, with no guidance, recommendation, orders and reprimand issued by the regulatory authority. Hence neither fines nor penalties were charged on the SANYO Group.

The Mechanism for Continuous Improvement

In case of nonconformity with environmental regulations or voluntary standards, we have a mechanism to investigate the causes and impacts of the nonconformity, to implement appropriate corrective and preventive actions and to verify their effects, in order to prevent the occurrence of nonconformity and to ensure continuous improvement in operating and managing GEMS.

When achievements of environmental performance exceed the group environmental action plan or objectives and targets provided in sub-sites action plans, then the management reviews the plan and upwardly revises the target for the following fiscal year in order to continue with our environmental activities with high aims.

Education and Training

General education sessions are provided on a regular basis at each sub-site for all employees including subcontractors within the scope of GEMS including subcontractors (approx. 30,000 people) in order to raise awareness of environmental conservation.

In general education sessions, explanation of the group environmental policy and environmental target of each division are provided for 30 minutes to 1 hour based on the materials common throughout the SANYO Group, to ensure that every person is well informed and to raise their awareness.

Person Responsible for Group Environmental Management provides education to Person Responsible for Environmental Management at each site and the EMS Secretariat concerning the operational policy and the direction of GEMS in order to maintain the unitary level of awareness among the sub-sites.

In addition, it is planned to provide environmental e-learning program for those who play the role as lecturers in the company, such as the GEMS secretariat, Person Responsible for Environmental Management, EMS Secretariat, environmental managers and environmental promoters, to unify knowledge and awareness at a high level. Based on the result, preparation will be made to implement environmental education across the company by improving the educational system to make it easier to participate.

In the Sales division, every person therein is informed, through education and training, that the most important environmental measures for manufacturers are to expand the sales of environmentally-friendly products, such as energy saving air conditioners, fluorocarbon-free energy saving refrigerators, EcoCute (heat exchange hot water system), and photovoltaic power generation systems.

In the Service division, the combined use of “on-site training” at service stations or spots by skilled engineers, and “e-lecturers” where participants can learn repair method remotely via e-learning are encouraged in order to continuously improve the service technology level. This will lead to a higher rate of completing the on-site repair on the first visit, reducing the burden and wasted effort, hence contributing to the environmental measures.

In the Management division, each person is made aware that each environmental action, such as collection, management, and reporting of the environmental information, green purchase, energy saving, reduced usage of paper and waste recycling as well as compliance with the environmental regulations will accumulate and lead to conservation of the environment and help form a recycling-oriented society.

As for the employees involved in operations which may have significant impacts on the environment, such as boilers, incineration systems, chemicals, and for those involved in operations handling the environmental laws and regulations, special education and training are provided to prevent accidents from occurring.
Examples of GEMS implementations

Internal Environmental Audits

Every sub-site within GEMS performs internal environmental audits on a regular basis in accordance with the requirements of ISO14001 and our own standards. Any nonconformity is rectified, and the audit result is reflected in the review of the environmental policy, objectives, targets and the management system by the management level.

The Group holds the “Group Environmental Audit” every year, where the group environmental auditors selected from sub-sites, audits other sub-sites than they belong to and Person Responsible for Group Environmental Management in accordance with the requirements stipulated in ISO14001 and the Group Environmental Manual. In these audits, they check the progress of continuous environmental management, the observance of environmental laws and regulations, and the effectiveness of internal environmental audits. The Group environmental audit enables each sub-site to share distinguished activities and achievements within the Group, which contributes to improve the operation of GEMS.

There was no significant nonconformity identified in the Group Environmental Audit in FY2004. However, 15 cases of “minor nonconformity” and 43 cases for “observation” were pointed out. In the internal audit of each sub-site, 8 cases of significant nonconformity, 162 cases of minor nonconformity, and 361 cases for observation (total of 531 cases) were identified, but corrective measures have been promptly implemented by each sub-site.

Measuring of Environmental Management Levels

The SANYO Group has been measuring environmental management levels in order to verify GEMS activities and achievements. In FY2004, we have introduced a more objective external assessment system by using environmental management assessment service of Nikkei Research Inc., to replace our own assessment system.

In the latest assessment, it was characteristic that the non-manufacturing sites, which operate the environmental management system at the same level as the manufacturing facilities, received relatively higher assessment results. For example, a sub-site which has administrative staff received the assessment result equivalent to the first or the second in the category of communication services and non-manufacturing in the 8th environmental management survey by the Nihon Keizai Shimbun, Inc. Our analysis of this result is that the GEMS is contributing to the promotion of environmental management.

Environmental Risk Management

A range of measures and countermeasures are planned and implemented in order to deal with possible environmental risk in the future at each sub-site including facilities and factories. The importance of these measures (the magnitude of their environmental impacts) is assessed, and important items are included in the objectives and targets in the annual plan and measures for these targets are implemented steadily.

The major environmental risk areas identified for the entire GEMS are described below.

♦ Countermeasures for Major Identified Environmental Risks

For the items that have achieved the targets, higher targets are set. For the items where no future effectiveness is expected by pursuing numerical targets, targets are set from a new angle, while maintaining the current situation. In FY2005, waste materials and the basic unit for CO2 emission will be looked at.

With regards to measure of the environmental management level, an external assessment service was introduced in FY2004 to ensure more objective assessment.

In addition, training (simulation) is carried out in December every year, in cooperation with sub-sites, to ensure sufficient management by the GEMS Secretariat. Participation by Person Responsible for Group Environmental Supervising is planned in the future.

As a result of these activities, 7 items out of 9 achieved the target in the environmental risk reduction measures which were specified in FY2004. The 2 items which did not reach the target were the reduction in designated fluorocarbons HCFC and reduction in CO2 emissions which is a countermeasure against global warming. The HCFC reduction target could not be reached in FY2004, but the use of HCFC has been totally phased out since April in FY2005. As for the CO2 emissions reduction, the target was reviewed for FY2005 and efforts are made to achieve them.

The emergency measures are reported in the item after the next, and the countermeasures against ground pollution are reported in the section, “Countermeasures against soil and groundwater issues (see page 52)” in detail.
Countermeasures for Major Identified Environmental Risks

Promotion of green procurement

Measures to prevent soil and ground water pollution

Target setting and promotion of CO2 emission reduction

Target setting and promotion of PRTR substance emissions reduction

Improvement in the methods to measure the environmental management level

Major Environmental Aspects Identified as Emergency Situations

- Storage of sodium hydroxide
- Storage of cadmium and its compounds
- Storage of waste alkalis
- Storage of waste oil
- Hazardous materials storerooms

Person Responsible for Group Environmental Management and the GEMS Secretariat, with the cooperation of each sub-site, assume an emergency situation at a sub-site, and conduct an annual emergency training which simulates the emergency procedures of the SANYO Group, in accordance with the manual, such as reporting to the top management and communicating instructions. There was an incident at a facility in December 2004 when the waste rinse water of water-based coatings ran into the rain water drainage accidentally. However, it was caught early and the soil water was quickly recovered by damming the stream. The incident was promptly reported to the administrative agency concerned, and efforts are being made to prevent a similar incident from occurring by reviewing the procedure manual.

Emergency training
**Summary of the Environmental Accounting**

The SANYO Group introduced the environmental accounting in FY1998. In the aggregated Group result in FY2004, the environmental conservation cost was ¥32,498 million in total, where investment was ¥5,832 million and expenses were ¥26,666 million. The environmental conservation effect was ¥69,130 million in total, where the direct effect was ¥6,617 million and indirect effect was ¥62,513 million.

**Calculation Method for Fiscal 2004**

   Investment amount: expenditures intended for environmental conservation.
   Expenses: costs of labor intended for environmental conservation, and depreciation expenses related to investments in environmental conservation.

2. Environmental conservation effects (calculated according to SANYO’s own criteria).
   Direct effects: the effects which have direct impact on the environment and which can be converted directly into a monetary sum.
   Indirect effects: effects that have indirect contribution to the environmental conservation activities, such as environmental education within the company and effects of environmental risk avoidance.

3. Environmental conservation indicators: calculation of environmental conservation achievements that are thought to have significant effect on the environment.


<table>
<thead>
<tr>
<th>Item</th>
<th>Main activities</th>
<th>FY2004</th>
<th>FY2003</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Investment</td>
<td>Expenses</td>
</tr>
<tr>
<td>1. Pollution prevention</td>
<td>Double thinning of the acid waste water tank</td>
<td>895</td>
<td>3,724</td>
</tr>
<tr>
<td>2. Global environmental conservation</td>
<td>Introduction of photovoltaic power generation system, and installation of inverters</td>
<td>910</td>
<td>1,314</td>
</tr>
<tr>
<td>3. Resource recycling</td>
<td>Expansion of steam boiler facility, waste disposal</td>
<td>587</td>
<td>3,144</td>
</tr>
<tr>
<td>4. Production/Service stage</td>
<td>Outsourcing recycling of containers and packaging</td>
<td>60</td>
<td>729</td>
</tr>
<tr>
<td>5. Environmental management</td>
<td>Maintenance and operation of environmental management systems</td>
<td>34</td>
<td>2,527</td>
</tr>
<tr>
<td>6. Environment-related R&amp;D</td>
<td>Research and development of solar cells</td>
<td>1,986</td>
<td>12,478</td>
</tr>
<tr>
<td>7. Social activities</td>
<td>Greening of the site, and works related to Solar Ark</td>
<td>1,276</td>
<td>2,186</td>
</tr>
<tr>
<td>8. Environmental damage</td>
<td>Soil Improvement</td>
<td>84</td>
<td>565</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>5,832</td>
<td>26,666</td>
</tr>
<tr>
<td>Total environmental conservation cost</td>
<td></td>
<td>32,498</td>
<td></td>
</tr>
</tbody>
</table>

**Note:** Due to rounding of the fractions, total numbers may not always be consistent.

**Environmental Conservation Cost**

With regard to the environmental conservation cost, investment decreased by 6% year-on-year to ¥5,832 million, while the expenses rose by 5% year-on-year to ¥26,666 million.

In the investment, the social activity cost increased by ¥1,238 million and the global environmental conservation cost decreased by ¥783 million. The social activity cost increased mainly due to the occurrence of capital investment related to Solar Ark.

**Breakdown of Environmental Conservation Costs**

<table>
<thead>
<tr>
<th>(Investments + expenses)</th>
<th>2.0%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pollution prevention</td>
<td>10.7%</td>
</tr>
<tr>
<td>Global environmental conservation</td>
<td>6.8%</td>
</tr>
<tr>
<td>Resource recycling</td>
<td>11.5%</td>
</tr>
<tr>
<td>Production/Service stage</td>
<td>2.4%</td>
</tr>
<tr>
<td>Environmental management</td>
<td>7.9%</td>
</tr>
<tr>
<td>Environment-related R&amp;D</td>
<td>44.5%</td>
</tr>
<tr>
<td>Social activities</td>
<td>4.5%</td>
</tr>
<tr>
<td>Environmental damage</td>
<td>61.6%</td>
</tr>
</tbody>
</table>

(Unit: ¥1 million)
Environmental Conservation Effects

The environmental conservation effects were ¥69,130 million in total, where direct effects decreased by 18% year-on-year to ¥6,617 million and the indirect effects also decreased by 12% year-on-year to ¥62,513 million.

The ratio of the environmental conservation effects to the environmental conservation cost (investment + expenses) was 213%, where the direct effects accounted for 20% and the indirect effects 192%. A large proportion of the direct effects was accounted for by the profit on selling of valuables concerning waste disposal and recycling.

In addition, the SANYO Group contributes to environmental conservation by providing customers with the E21 products (please see page 35).

The development expenses of E21 products are recorded as the research and development cost in the environmental conservation cost, and its effect will appear eventually as energy saving when customers use our products, or reduction of harmful chemical substances in the products. From the viewpoint that these efforts contribute to the society as a result, these are evaluated as indirect effects in the environmental accounting, and calculated quantitatively as an indicator to measure the contribution to the environment. The result of the effects in FY2004 was ¥4,216 million in effects on energy saving and resource saving, and ¥55,919 million in effects on reducing the chemical substances with the environmental impact.

Please see for the calculation method of the indirect effects.

http://www.sanyo.co.jp/Environment (Japanese only)

<table>
<thead>
<tr>
<th>Item</th>
<th>Content of main activities</th>
<th>Monetary effect FY2004</th>
<th>Monetary effect FY2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Energy conservation effect</td>
<td>Introduction of electricity saving equipment</td>
<td>1,042</td>
<td>1,774</td>
</tr>
<tr>
<td>2. Resource conservation effect</td>
<td>Installation of waste water recycling facilities</td>
<td>612</td>
<td>3,489</td>
</tr>
<tr>
<td>3. Reduction in waste disposal cost</td>
<td>Reduction of emission of industrial waste</td>
<td>300</td>
<td>268</td>
</tr>
<tr>
<td>4. Income from waste disposal</td>
<td>Sales of used paper</td>
<td>26</td>
<td>29</td>
</tr>
<tr>
<td>5. Environment-related business activities</td>
<td>ISO consultation income</td>
<td>559</td>
<td>625</td>
</tr>
<tr>
<td>6. Profit on selling valuables related to waste disposal and recycling</td>
<td>Profits on sale of scrap</td>
<td>4,078</td>
<td>1,882</td>
</tr>
<tr>
<td>Total of direct effects</td>
<td></td>
<td>6,617</td>
<td>8,058</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Item</th>
<th>Monetary effect FY2004</th>
<th>Monetary effect FY2003</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Environmental education effect</td>
<td>In-house training at training centers</td>
<td>35</td>
</tr>
<tr>
<td>2. EMS construction effect</td>
<td>In-house consultation for facilities to newly construct the EMS</td>
<td>8</td>
</tr>
<tr>
<td>3. Reduction in the payment of non-installment-type insurance premiums</td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>4. Improvement in operation rate through accident prevention</td>
<td>Installation of a back-up acid scrubber</td>
<td>1</td>
</tr>
<tr>
<td>5. Avoidance of remediation by preventing pollution</td>
<td>Transfer of the waste water treatment facility to above ground</td>
<td>955</td>
</tr>
<tr>
<td>6. Reduction in payment for compensation, etc.</td>
<td></td>
<td>0</td>
</tr>
<tr>
<td>7. Inserts on newspapers</td>
<td>SANYO’s Environmental efforts, environmentally-friendly products and introduction of Solar Ark</td>
<td>388</td>
</tr>
<tr>
<td>8. TV coverage</td>
<td>Introduction of Solar Ark</td>
<td>118</td>
</tr>
<tr>
<td>9. Access to environmental web site</td>
<td></td>
<td>652</td>
</tr>
<tr>
<td>10. Writing environment-related research papers, and award money</td>
<td></td>
<td>152</td>
</tr>
<tr>
<td>11. CO2 reduction effect</td>
<td>Reduction in electricity and heavy oil consumption</td>
<td>13</td>
</tr>
<tr>
<td>12. Energy and resource conservation effects of E21 products sold</td>
<td>Sale of E21 products</td>
<td>4,216</td>
</tr>
<tr>
<td>Total of indirect effects</td>
<td></td>
<td>62,513</td>
</tr>
<tr>
<td>Total effects</td>
<td></td>
<td>69,130</td>
</tr>
</tbody>
</table>

Note: Due to rounding of the fractions, total numbers may not always be consistent.

Environmental Conservation Indicators

In order to understand the environmental impacts of the SANYO Group (within the scope of our environmental accounting) and utilize it in our efforts to reduce environmental impacts further, efforts are made to grasp the overall environmental performance of the Group.

Approximately 80 items are investigated concerning the consumption of fuel, electricity and water in FY2004, and the result is utilized to lower the environmental impact.
Overview of the Environmental Impact of the SANYO Group

The SANYO Group is positively promoting environmental conservation activities at a wide range of business activities, including efficient usage of resources and energy, and reduction of waste, over the whole lifecycle of the products and services.

FY2004 GEMS Environmental Conservation Indicators

<table>
<thead>
<tr>
<th>Energy</th>
<th></th>
<th>Raw material</th>
<th></th>
<th>Water</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Electricity</td>
<td>522 m</td>
<td>132,000 kL</td>
<td></td>
<td>Groundwater</td>
<td>2.4 m³</td>
</tr>
<tr>
<td>Natural gas</td>
<td>73.55</td>
<td>75,000 kL</td>
<td></td>
<td>Water other</td>
<td>1.0 m³</td>
</tr>
<tr>
<td>LPG</td>
<td>10</td>
<td>10,000 kL</td>
<td></td>
<td>than</td>
<td>1.0 m³</td>
</tr>
<tr>
<td>Heavy oil</td>
<td>13</td>
<td>13,000 kL</td>
<td></td>
<td>groundwater</td>
<td>1.0 m³</td>
</tr>
<tr>
<td>Kerosene</td>
<td>400</td>
<td>400 kL</td>
<td></td>
<td>Total</td>
<td>125 m³</td>
</tr>
<tr>
<td>Volatile oil</td>
<td>300</td>
<td>300 kL</td>
<td></td>
<td>material</td>
<td>205 t</td>
</tr>
<tr>
<td>Total energy</td>
<td>230</td>
<td>230,000 kL</td>
<td>crude oil equivalent</td>
<td></td>
<td>input</td>
</tr>
</tbody>
</table>

| Water resource  | 125 m³|
| Total material input | 205 t |

| Electricity     | 522 m| 132,000 kL   |
| Natural gas     | 73.55| 75,000 kL    |
| LPG             | 10   | 10,000 kL    |
| Heavy oil       | 13   | 13,000 kL    |
| Kerosene        | 400  | 400 kL       |
| Volatile oil    | 300  | 300 kL       |
| Total energy    | 230  | 230,000 kL   |

| CO₂ emission | 404,000 t |
| Industrial waste | 54,000 t |
| General waste | 7,000 t   |
| Recyclable resources | 8,000 t |
| Final landfill disposal | 120 t   |
“Sustainability Report 2005”

Reduction of Environmental Impact in Products

We strive to develop and expand “environmentally-friendly products” reducing the environmental impact via reduction of energy consumption, efficient usage of recycled materials, outstanding product durability, easier structure to recycle, and reduction of usage of chemical substances with environmental impact.

Strategy and Development Concepts for Environmentally-Friendly Products

The SANYO Group is positively promoting the development of environmentally-friendly products considering the various effects on the environment.

Based on product assessment where the product’s environment impact is preliminarily evaluated, we are making efforts to promote the 3Rs (reduce, reuse, and recycle), as well as energy and resource conservation by reducing the electricity, water and fuel consumption. We are also banning or reducing the use of chemical substances with high environmental impacts that have recently attracted much public attention.

From FY2004, every new product being developed must at least meet a specific level for all of the above-mentioned environmental considerations, so that all the of these products are environmentally-friendly.

Among these environmentally-friendly products, those having cleared stricter criteria are registered as “E21 products.”

Sustainability Report 2005

Environmentally-friendly products on display at “Eco Products 2004”

“Eco Products 2004,” the biggest comprehensive environmental exhibition in Japan, was held over three days between the 9th and 11th of December, 2004 at Tokyo Big Site. Approximately 450 companies participated in the event, displaying a wide range of environment-related products such as environmentally-friendly materials, energy-saving consumer electronics, and waste recycling systems, etc. Approximately 125,000 people visited the exhibition, which exceeded the number of visitors in the previous year.

At the SANYO booth, solar cells, rechargeable batteries, “α-Electrolyzed water” series, consumer electronics products subject to green procurement and those with lead-free solder, and others were displayed. These products were exhibited in 6 areas reflecting “home” under the booth’s main theme, “Ecology starts at home”, set according to the business domain of “Energy and Ecology”.

On the central stage, the live violin performance was carried out at the opening. Areas were also prepared where the mechanism of solar cell and electrolysis technology was explained in an easy-to-understand quiz form and where visitors enjoyed taking pictures for souvenirs using a digital camera and a photo printer. Both areas attracted many visitors from children to adults.
Sustainability Report

Reduction of Environmental Impact in Products

**Products**

**Product Assessment**

The SANYO Group is promoting development of products, taking the 3Rs (Reduce, Reuse and Recycle) into account, to help realize a recycling-oriented society in the 21st century. In order to promote these 3Rs and reduce the environmental impact of its products, the SANYO Group is exercising preliminary product assessment at the design and prototyping stages.

The product assessment is carried out in accordance with our own guidelines. The first edition of the guidelines was issued in 1992, followed by a revised edition in response to the “Revised Recycling Law” which came into force in April 2001.

The evaluation method has been changed from the previously used qualitative techniques to the current quantitative techniques to indicate the results of assessment for each item in numerical values. As a result, more objective assessment has become possible, with clearer targets for product assessment items. The specific assessment items include reduction in volume and weight of products and packaging materials, reduction of types of material, displaying the content of the resin components, improved rate of recyclability of used products, promotion of product design which takes account of the ease of separation and classification for waste treatment.

The SANYO Group applies the product assessment not only to the products subject to the law but also to a wide range of products within the SANYO Group. This is why product designers are trained in recycling practice at recycling plants so that they design highly recyclable products based on the knowledge acquired from the experience.

In order to continue these activities overseas, the product assessment manual and assessment sheets are produced in English and Chinese, which are sent to the Group companies overseas.

* Law for the Promotion of Effective Utilization of Resources

**E21-Series Certification System**

Environmentally-friendly products which satisfy the evaluation criteria established by SANYO are registered as the “E21-series products.” With this system, we enhance the environmentally-friendly features of our products, promote development of such products, and expand their sales. These items are clearly display E21 mark to help customers in selecting a product.

**E21 mark**

For an easy-to-understand indication of environmentally-friendly features, every E21 product bears an E21 mark with a short description of its features.

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**The evaluation items applied are as follows.**

| 2. Use of recycled resources and components | 6. Ease of waste classification | 10. Energy savings when the product is in use |
| 3. Longer product durability | 7. Ease of disassembly and separation | 11. Information disclosure |
| | | | 14. Reduction of environmental impact in the distribution stage |
| | | | 15. Recyclability of rechargeable batteries |

**Conditions for Registration**

1. The product must exceed the in-house score standard in the product assessment.
2. The product does not contain environmentally-hazardous substances, use of which is banned by ourselves.
3. Components of the product are assessed for environmentally-hazardous substances.

The product must satisfy all three conditions above and at least one of the conditions below (1) – (3).

(1) The product is an environmentally-harmomious product which satisfies the achievement level of 3R requirements, energy-saving features (less consumption of electricity, water and fuel), and cleanliness (lower content of environmentally-hazardous substances).

(2) The product is an environmentally-harmomious product with distinguished features (a leading product in the industry, first in the industry, award-winning, etc.)

(3) The product is an environment-conserving product with distinguished features.

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**Number of Products Subjected to Assessment by Fiscal Year (accumulated total)**

<table>
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<tr>
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<tbody>
<tr>
<td></td>
<td>1,133</td>
<td>1,386</td>
<td>1,527</td>
<td>1,607</td>
<td>1,690</td>
<td>1,686</td>
<td>1,916</td>
<td>2,363</td>
<td>2,562</td>
<td>2,862</td>
</tr>
</tbody>
</table>

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**E21-Series Products**

- Refrigerator Split-type air-conditioner (EX series 56, 45, 36, 28, 25, 22)
- Split-type air-conditioner SAP-EX28R
- Dehumidifier SDH-Z7 Dehumidifier without CFC
- Digital movie camera DMX-C5
- Digital camcorder DMX-MC100
- Electric hybrid bicycle CY-SN243D, CY-SN263D, CY-SQ263, CY-SR273D
- Vacuum cleaner SC-XW22F, SC-XW33F
- Refrigerator SR-FS44J
-shuffle player
- Inversor
- Water purifier
- No polystyrene foam is used.
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The SANYO Group aimed to achieve the sales ratio of the E21-series products of 25% in FY2004. The result in FY2004 was 41.7%, which exceeded the target. We will update the name, E21, raise the registration requirement, and aim to achieve 30% in FY2005 and 35% in FY2006.

### Examples of major E21-series products

<table>
<thead>
<tr>
<th>Product name</th>
<th>Model</th>
<th>Environmentally-friendly features</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum cleaner</td>
<td>SC-XW22F, SC-XW33F</td>
<td>A cyclone vacuum cleaner which does not require consumable paper bags</td>
</tr>
<tr>
<td></td>
<td></td>
<td>By fitting a tissue paper in front of a filter, the filter needs to be cleaned 1/15 times less than the conventional model (compared to the 2003 model, SC-XWN25)</td>
</tr>
<tr>
<td>Electric hybrid bicycle</td>
<td>CY-SN243D, CY-SN263D, CY-SQ263, CY-SR273D</td>
<td>By adoption of the system charging electricity generated in a motor part during high-speed run (Eco-rechargeable mode), the mileage at full charge is twice as long (increased from approx. 28 km to 56 km) (compared to the 2003 model, CY-SJ 263D)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>No polyurethane foam is used.</td>
</tr>
<tr>
<td>Dehumidifier</td>
<td>SDH-Z7</td>
<td>Dehumidifier without CFC</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Contents are also displayed for a resin component of 25g or less.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Circuit boards with lead-free solder</td>
</tr>
<tr>
<td></td>
<td></td>
<td>LCD back light without mercury</td>
</tr>
<tr>
<td>Refrigerator</td>
<td>SR-FS44J</td>
<td>2004 energy saving Top Runner target value was achieved</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Cyclopentane, which does not have global warming effect, is used for heat insulation</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of fluorocarbon-free refrigerant R600a</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of lead-free solder for printed circuit boards and suction pipes</td>
</tr>
<tr>
<td>Split-type air-conditioner</td>
<td>SAP-EX28R</td>
<td>Leading energy-saving performance in the industry (as of July 2005)</td>
</tr>
<tr>
<td></td>
<td>(EX series 56, 45, 36, 28, 25, 22)</td>
<td>Use of R410A, a new refrigerant which does not destroy ozone layer.</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of lead-free solder, deviny material and components with neither hexavalent chromium nor cadmium nor mercury</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Use of natural energy by connecting to the solar cell module (separately sold)</td>
</tr>
<tr>
<td>Natural refrigerant heat pump hot</td>
<td>SHP-TCH37D</td>
<td>Use of tap water instead of antifreeze for floor heating circuit</td>
</tr>
<tr>
<td>water supply unit</td>
<td></td>
<td>Use of CO2 refrigerant, which does not destroy the ozone layer</td>
</tr>
</tbody>
</table>

List of E21-series products


(Japanese only)
Reduction of Environmental Impact in Products

Technology Development for Environmentally-Friendly Products

Power Generation with Biogas Fuel Cells

We have developed a technology to generate high-purity methane gas by purifying and condensing the biogas made from fermented cow manure and to eliminate a minute amount of impurity, such as hydrogen sulfide and ammonia contained in the surrounding air. With these technologies, we have also succeeded in power generation by solid polymer-type fuel cells using biogas. (Research sponsored by the Ministry of Agriculture, Forestry and Fisheries of Japan)

Environmentally-Friendly Treatment Technology for Semiconductor CMP Process Wastewater

We have successfully developed and commercialized an efficient solid-liquid separation system for the wastewater from the semiconductor chemical mechanical polishing (CMP) process that contains fine grinder grains (product name: Slurrycloser®, manufactured and marketed by SANYO Aqua Technology Co., Ltd.). This system does not require chemical agent such as coagulant. In addition, this system reduces the electricity consumption to 1/7, and a waste amount to 1/10 compared with a filtering system for the same purpose (UF membrane). The investment is recouped within two years at a site where whole-quantity industrial waste disposal treatment is carried out, as well as contributing significantly to reduce industrial waste.

High Performance HIT Solar cell

We have achieved the world's highest level conversion efficiency at 21.5% for the HIT solar cell in the laboratory situation, using a newly developed technology. The HIT solar cell has the layered structure of thin films of amorphous silicon and single crystalline silicon, and its environmental impact in manufacturing is small. With this technology, the SANYO Group is producing solar cell panels which have the highest output per installed area in the world.

Highly Efficient Direct Electrolysis Technology for Producing Recycled Water

There has been a rising need to recycle water from sewage water for uses such as equipment rinsing. As a result of research commissioned by the Sewage Bureau of the Tokyo Metropolitan Government, we have successfully developed a technology that easily produces germ-free, colorless and odorless recycled water from simply treated sewage water. A propriety electrolysis technology (sterilization with electrolysis) has been realized by combination of our high-efficiency bipolar direct electrolysis module and our direct electrolysis technology for producing recycled water. Field test are continuing at the latter stage of purifying tank at the moment, which shows the reduction in the rinsing cost to 1/10 of the conventional method by replacing the water supply with recycled water. This technology can be used in the sewage-treatment plants across the country as well as in recycled water markets around the world.

The electrolytic nitrogen removal system won the “Electrical Science Technology Award”

The electrolytic nitrogen removal device, which is an electrolytic industrial water treatment system, was awarded the “52nd Electrical Science Technology Award (Oh-M Technology Award)” by the Promotion Foundation for Electrical Science and Engineering, and Mr. Hiro, manager of Acua BU, Commercial Technology Division, received the award. (November 19, 2004)

This award is given every year to commend persons of merit who have contributed to electrical science and to promote development of scientific technology in Japan. 34 devices and systems were selected and 82 people were commended this year.

Three products including Gas Heat Pump Air Conditioner received the Electrical Load Equalization Device and System Award

At the 7th Electrical Load Equalization Devices and System Award by the Heat Pump & Thermal Storage Technology Center of Japan, the Industrial Air Conditioner and the natural refrigerant heat pump hot water supply unit with high output and multi functions received the “Heat Pump & Thermal Storage Technology Center Chairman’s Award.” (June 14, 2005)

This commendation recognizes that three of our devices clearly exceed the 5 evaluation criteria of “electrical load equalization effect,” “energy efficiency,” “environment-conserving effect,” “economic efficiency,” and “novelty and creativity.” The three devices commended are the gas heat pump air conditioner with HFC refrigerant R410A “K1 series”, the high-efficiency steam double absorption freezer “Steam Consumption 3.5kWh/R1 Series”, and the high-output multifunctional natural refrigerant heat pump hot water supply system “ShF/TCH-157D.”
Development of Energy Conserving Products

We are working to develop products which consume as little energy as possible when in use. As a result, we have developed a number of the most energy efficient products in the industry.

Changes in Electrical Power Consumption (Large-TV)

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual power consumption</th>
<th>Compared with benchmark year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1995</td>
<td>195</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>199</td>
<td></td>
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<tr>
<td>1997</td>
<td>186</td>
<td></td>
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<td>1998</td>
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<td>1999</td>
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<td>2000</td>
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<tr>
<td>2003</td>
<td>138</td>
<td></td>
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<tr>
<td>2004</td>
<td>138</td>
<td></td>
</tr>
</tbody>
</table>

Changes in Electrical Power Consumption (Refrigerator)

<table>
<thead>
<tr>
<th>Year</th>
<th>Annual power consumption</th>
<th>Compared with benchmark year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>71.4</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>49</td>
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<tr>
<td>1997</td>
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<td>2002</td>
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<tr>
<td>2003</td>
<td>24.2</td>
<td></td>
</tr>
<tr>
<td>2004</td>
<td>18.2</td>
<td></td>
</tr>
</tbody>
</table>

Changes in Electrical Power Consumption (Air Conditioner: cooling)

<table>
<thead>
<tr>
<th>Year</th>
<th>Power consumption</th>
<th>Compared with benchmark year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1990</td>
<td>1,240</td>
<td></td>
</tr>
<tr>
<td>1996</td>
<td>1,020</td>
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<tr>
<td>1997</td>
<td>980</td>
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<td>2003</td>
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<tr>
<td>2004</td>
<td>48.8</td>
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</table>

Changes in Electrical Power Consumption (Air Conditioner: heating)

<table>
<thead>
<tr>
<th>Year</th>
<th>Power consumption</th>
<th>Compared with benchmark year</th>
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</thead>
<tbody>
<tr>
<td>1990</td>
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<td>1996</td>
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<td>25.9</td>
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<tr>
<td>2004</td>
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</table>

Annual electrical power consumption

Monthly power consumption

Compared with benchmark year

Environmental Performance

Reduction of Environmental Impact in Products
Green Procurement - Efforts to Reduce Chemical Substances with Environmental Impacts

Following the recent rise in the awareness of environmental issues, demand to reduce or ban use of chemical substances in products is growing both in Japan and overseas.

The SANYO Group has been promoting green procurement according to the “Green Procurement Guidelines” since March 2000. In May 2002, the Group made an extensive revision to the existing internal rules and publicly disclosed guidelines concerning green procurement in order to respond to these demands. As a result, the “Green Procurement Standards,” which put together the unified standards for the SANYO Group, was published, and the SANYO Group entered the “Second stage of green procurement.”

This activity aims to strengthen the management of chemical substances among a variety of environmental impact. Since October 2003, the “environmental information” is added in the delivery specifications to show that chemical substances are a “part of product specifications” and a “part of product quality.”

In April 2004, the “Management Standards for Environmentally Hazardous Substances” was issued. This clarifies the management standard of the chemical substances included in our products. At the same time, “Consent to non-use,” and “Certificate of non-use” are demanded from the suppliers in order to procure goods that satisfy the standard. The Group will actively promote “green procurement” according to the standards, where “goods which satisfy our own environmentally-friendly standards” are sourced from “suppliers who are actively involved with environmental conservation.”

These actions are also an effort to respond to the EU RoHS Directive, which regulates the use of 6 substances, namely, lead, mercury, hexavalent chromium, cadmium, PBB and PBDE.

The “Consent to non-use” is provided accompanied with the delivery specifications, and the “Certificate of non-use” is provided at the first delivery of the product, from suppliers.

<table>
<thead>
<tr>
<th>Purchased products</th>
<th>Survey items</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Product assessment</td>
</tr>
<tr>
<td>Assembled products designed by other parties (ASSY), finished products (including OEM), and accessories.</td>
<td>☐</td>
</tr>
<tr>
<td>Parts and Materials</td>
<td>☐</td>
</tr>
</tbody>
</table>

Supplier Environmental Management (Supplier Survey)

Establishing partnerships with suppliers is essential in promoting green procurement. In the period from October to December every year, the SANYO Group surveys the state of the environmental management systems among our suppliers.

In the case of new suppliers, we execute a similar survey when the first transaction takes place. The survey is conducted using the Internet where the supplier directly enters their answers.

Survey site for the supplier’s green procurement system
Environmental Friendliness of Products (Product Survey)

With regard to the environmental friendliness of purchased goods, each facility requests the supplier for the survey when a purchase of new goods takes place. The registration and answers are provided via the Internet, and the information is shared within the company. If goods do not meet the purchase standard of the SANYO Group, measures for improvements are taken before purchase decision of the goods is made. Through the promotion of green procurement, the Group aims to reduce chemical substances contained in products, as well as to support the suppliers’ efforts for the environment.

The SANYO Group believes the most important aspect of green procurement is the appropriate control of chemical substances contained in the products, components and materials. Thus in 1998, the Group established the “Chemical Substances Control System” which unifies the management of chemical substances in products in the whole company. This system contains approximately 600 chemical substances in a database, based on laws and regulations as well as our own standards.

In 2003, the SANYO Group joined the Japan Green Procurement Survey Standardization Initiative which was established primarily by the electric and electronics industry in Japan. We are currently investigating 29 substance groups specified by the Initiative.

In addition, the SANYO Group has specified chemical substances which are prohibited for use in manufacturing process, and the non-use for product to be purchased is confirmed at the time of purchase.

When a finished product is purchased, the product is evaluated according to our product assessment standards, and only those products which have met the standards are purchased.

Overseas Briefing Sessions for Green Procurement

In the EU, the use of lead, mercury, hexavalent chromium, cadmium and designated bromine fire retardants (PBB and PBDE), which are currently contained in electrical and electronic products, will be banned after July 2006. In order to promote green procurement for products shipped for the EU at manufacturing sites overseas, the SANYO Group has been holding briefing sessions to ensure the manufacturing companies in China, which produce a large amount for the EU, are fully aware of the requirements and to request business partners for their cooperation.

Status of green procurement briefing session
1. SANYO Sales & Marketing Corporation and the Corporate Environment Center
   A briefing session for green procurement was held in Shenzhen, China for related companies and OEM suppliers. (May 2004)
2. Dalian SANYO Air Conditioner Co., Ltd. and the Corporate Environment Center
   A briefing session was held in Dalian, China, for related companies in Dalian industrial district and the surrounding area. (May 2004)
3. AV Company
   A briefing session was held in Shenzhen for related companies and business partners of SANYO Techno Sound Inc. (June 2004)
4. Electronic Device Company
   Explanations were provided to persons responsible for the environmental management at SANYO Electric (Shekou) Co., Ltd. (October 2004)
5. Home Appliance Company (former Amenity Solutions Company)
   Explanations were provided to persons in charge at Shenyang SANYO Air Conditioner Co., Ltd., and Guangdong SANYO Air Conditioner Co., Ltd. (July 2004)
6. Commercial Company
   Sufficient explanations of green procurement promotion and the control system of RoHS 6 substances were provided at related companies in Dalian. (December 2004, February 2005)

Use of Green Procurement System

In the 2nd stage of green procurement, the survey system was extensively revised and the green procurement system was restrucutred in December 2002. The new system is based on responses via the Internet.

The survey of goods also started in April 2003, where suppliers report via the Internet the chemical substances with environmental impacts contained in the components and materials. In May 2004, the English version of the survey was introduced, and the survey of overseas suppliers started.

This green procurement system allows SANYO to promote purchasing of goods and product development with minimum impact on the environment from product planning and design through to disposal after use.
Reduction of Environmental Impact in Products

Products

Recycling of Home Appliances

Our recycling achievement in FY2004, in total of 4 items specified by the Home Appliance Recycling Law (Law for Recycling of Specified Kinds of Home Appliances), was 1,188,000 units recovered, and 1,186,000 units recycled. All 4 items exceed the legal standard for the recycling ratio. In these activities, understanding and cooperation were obtained as before from those who dispose of used products, retailers and central and local governments.

Home Appliance Recycling Law - Promotion Activities

Promotion activities, for SANYO retailers (SMILE Group)

The “Recycle School for Retailers” has been held since May 2003 at our recycle plant, JFE Urban Recycle Corporation in Kawasaki city, in order to promote the retailers of the Home Appliance Recycling Law. RBN Co., Ltd. in Himeji city was added as a new activity venue, expanding the scope of activity to cover the Kansai and Chugoku regions.

54 people from retailers (SMILE group) have attended the “Recycle School for Retailers” so far. The comments received from participants includes: “The Recycle School for Retailers made me realize the importance of recycling home electric appliances. My awareness has been changed and I would like to make good use of it in sales activities in the future.”

Compliance with the Container and Packaging Recycling Law

To comply with the “Container and Packaging Recycling Law,” the SANYO Group has been calculating the consumed volume of containers and packaging materials per year since FY2000 when the law came into force. The annual volume is reported to the Japan Containers and Packaging Recycling Association, a designated corporation, and a recycling contract is exchanged. In this way, we are fulfilling our duty to recycle our containers and packaging materials.

Law for promotion of sorted collection and recycling of containers and packaging

* Number of Specified Waste Home Electric Appliances Recycled

<table>
<thead>
<tr>
<th></th>
<th>Air conditioner</th>
<th>Television</th>
<th>Refrigerator</th>
<th>Washing machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of products recovered</td>
<td>171,521</td>
<td>294,262</td>
<td>356,387</td>
<td>366,307</td>
</tr>
<tr>
<td>Number of products recycled</td>
<td>171,479</td>
<td>294,308</td>
<td>357,676</td>
<td>363,039</td>
</tr>
</tbody>
</table>

* Ratio of recycling

<table>
<thead>
<tr>
<th></th>
<th>Air conditioner</th>
<th>Television</th>
<th>Refrigerator</th>
<th>Washing machine</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio of recycling</td>
<td>83</td>
<td>85</td>
<td>68</td>
<td>70</td>
</tr>
<tr>
<td>Legally required standard</td>
<td>90 or more</td>
<td>55 or more</td>
<td>50 or more</td>
<td>50 or more</td>
</tr>
</tbody>
</table>

* Volume of Recovered Refrigerants

<table>
<thead>
<tr>
<th></th>
<th>Air conditioner</th>
<th>Refrigerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Recovered volume</td>
<td>93,070</td>
<td>38,688</td>
</tr>
</tbody>
</table>

* Valuable resources recovered from 4 items of disposed home appliances

<table>
<thead>
<tr>
<th></th>
<th>Air conditioner</th>
<th>Refrigerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total weight Air conditioner</td>
<td>13,133 t</td>
<td>5,133 t</td>
</tr>
<tr>
<td>Total weight Refrigerator</td>
<td>6,133 t</td>
<td>6,662 t</td>
</tr>
<tr>
<td>Total weight Washing machine</td>
<td>7,754 t</td>
<td>1,754 t</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th></th>
<th>Air conditioner</th>
<th>Refrigerator</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subtotal Iron</td>
<td>57.6%</td>
<td>12.1%</td>
</tr>
<tr>
<td>Subtotal Copper</td>
<td>9.6%</td>
<td>1.9%</td>
</tr>
<tr>
<td>Subtotal Aluminum</td>
<td>28.8%</td>
<td>64.3%</td>
</tr>
<tr>
<td>Subtotal Mixture of nonferrous and ferrous metals</td>
<td>6.9%</td>
<td>0.6%</td>
</tr>
<tr>
<td>Subtotal Picture tube glass</td>
<td>21.9%</td>
<td>21.9%</td>
</tr>
<tr>
<td>Subtotal Other valuable resources</td>
<td>1.2%</td>
<td>0.6%</td>
</tr>
</tbody>
</table>

* Volume applied as a container and packaging user (expected discharge volume)

<table>
<thead>
<tr>
<th></th>
<th>Corrugated cardboard</th>
<th>Other paper packaging</th>
<th>Styrofoam</th>
<th>Sheets and bags</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2002</td>
<td>12,716,125</td>
<td>101,945</td>
<td>87,390</td>
<td>93,603</td>
<td>180,993</td>
</tr>
<tr>
<td>FY2003</td>
<td>11,027,532</td>
<td>115,521</td>
<td>67,159</td>
<td>73,738</td>
<td>140,897</td>
</tr>
<tr>
<td>FY2004</td>
<td>10,518,329</td>
<td>185,835</td>
<td>69,781</td>
<td>78,909</td>
<td>148,690</td>
</tr>
</tbody>
</table>

* Volume applied as a container and packaging manufacturer (expected discharge volume)

<table>
<thead>
<tr>
<th></th>
<th>Corrugated cardboard</th>
<th>Other paper packaging</th>
<th>Styrofoam</th>
<th>Sheets and bags</th>
<th>Subtotal</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2002</td>
<td>3,607,765</td>
<td>84,762</td>
<td>33,007</td>
<td>40,717</td>
<td>73,725</td>
</tr>
<tr>
<td>FY2003</td>
<td>4,307,930</td>
<td>87,480</td>
<td>50,911</td>
<td>40,745</td>
<td>91,655</td>
</tr>
<tr>
<td>FY2004</td>
<td>5,296,347</td>
<td>167,364</td>
<td>44,158</td>
<td>48,436</td>
<td>90,595</td>
</tr>
</tbody>
</table>
Recycling of Rechargeable Batteries

As the world’s leading manufacturer of portable rechargeable batteries, SANYO has been working positively to recover and recycle rechargeable batteries. As well, SANYO has been playing a core role in constructing recovery routes at the “Portable Rechargeable Battery Recycling Center,” which was established within the Battery Association of Japan in April 2001.

In April 2004, the “Portable Rechargeable Battery Recycling Center” was constructively dissolved and the “JBRC,” a limited liability intermediate corporation was established in order to expand the scope of rechargeable battery recovery and recycling. SANYO played an important role as a promoter in founding the corporation. SANYO will continue to be actively committed to increase the amount of rechargeable batteries recovered and recycled.

◆ Portable Rechargeable Battery Recovery System

Recycling of Personal Computers

According to the “Revised Recycling Law,” every PC manufacturer is obliged to recover and recycle used PCs which were manufactured by themselves.

To comply with this law, SANYO has established a system to promptly recover our used PCs when it is requested by the customer.

In constructing this system, SANYO designated distributors who can recover used PCs from anywhere in Japan and waste treatment providers who can recycle them.

In FY2004, we have recovered and recycled 2,600 units of desktop PCs and 4,000 units of CRT displays. Please see our website for details.

Law for Promotion of Effective Utilization of Resources

◆ Recovery system of PCs (Home-Use PCs are also recovered.)

WEB http://www.sanyo.co.jp/recycle/pcrecycle/index.htm
Countermeasures against Global Warming

“We care for people and the earth” is the corporate slogan of the SANYO Group. It expresses our desire to coexist with many people without destroying the environment. In order to put this into action, we uphold “business activities which aim for the formation of a sustainable society,” in the group environmental policy, and we are striving to reduce the emission of greenhouse gases such as CO₂ to prevent global warming.

Restraining the CO₂ Emissions

Achievements of our Group Environmental Management System (GEMS)

Targets are set for CO₂ emission reduction at 16 major sites in Japan which form part of the GEMS, and the countermeasures against global warming are being implemented.

FY2004 saw new additions to the GEMS, including Nishikinohama plant of Clean Energy Company, SANYO Semicon Device Co., Ltd., and other semiconductor sales companies, Kyusyu branch of SANYO Electric Logistics Co., Ltd. The scope of data collection expanded as a result, but we have managed to contain the total CO₂ emissions to 404,000 t-CO₂, which is at a similar level to the previous fiscal year’s result of 400,000 t-CO₂. This is mainly due to upgrading the manufacturing equipment and facilities to energy saving models as well as improving and streamlining the manufacturing process.

On the other hand, the sales CO₂ unit volume, which we aim to reduce, decreased in FY2004 by approximately 18% compared to the FY2004 target which was the “reduction of 20% compared to FY1999.” This was mainly caused by the slow sales of high value-added products such as digital cameras, mobile phones and high-performance devices, and also by the reduced production of semiconductor related products due to the effects of the Niigata Chuetsu earthquake.

We will continue our efforts to reduce CO₂ emissions by promoting energy conserving and efficient manufacturing in accordance with the sales CO₂ unit volume reduction plan set by the GEMS.

Aggregate Performance of Our Domestic Facilities

In the SANYO Group, other domestic facilities in Japan outside the GEMS are also striving to reduce CO₂ emissions by establishing their own EMS system and setting the energy conservation target. The total CO₂ emissions* of the domestic facilities within the Group (including the GEMS) was 747,000 tonnes in FY2004, an increase of approximately 4.2% from the previous fiscal year. This increase is mainly attributed to the increased production of rechargeable batteries and other clean energy related products on which we have emphasized. The FY2004 results, on the other hand, rose significantly by 42% compared to FY1990. The major cause was the increase of energy consumption in the manufacturing process along with the increase in production of semiconductors, electronic components, batteries, etc., especially in the early 1990s. Under such circumstances, each facility is continuing its effort by conserving energy in production and air conditioning systems, switching fuels from kerosene to natural gas, installing a cogeneration system, utilizing new energy such as solar cell, etc., to contain the increase in CO₂ emissions as much as possible amidst the expanding production.

SANYO Electric Co., Ltd. and the manufacturing facilities of related companies in Japan will continue making these efforts, and promote more efficient and streamlined production processes.

* The LCD section, which was sold in FY2004, is excluded from the total. Thus, the numerical values in comparison with FY2003 and FY1990 are calculated by subtracting the emission from LCD section from the actual value of each fiscal year.

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**Note:** The sales of products which are produced overseas are excluded from the total sales this time in order to evaluate the sales CO₂ unit amount more accurately.
Curtailing the Emission of Greenhouse Gases Other than CO₂

Reducing the Emission of Greenhouse Gases

In the manufacturing process of semiconductors and related products, the SANYO Group uses greenhouse gases such as perfluorocarbon (PFC), sulfur hexafluoride (SF₆), and hydrofluorocarbon (HFC). Efforts are being made to reduce the usage and emission of these gases and to replace them with other substances in order to prevent global warming.

Since FY2003, we have replaced hexafluoroethane (C₂F₆) in the semiconductor clearing process, with perfluoropropane (C₃F₈) which has relatively low Global Warming Potential (GWP). At the same time, the gas emissions were reduced by improving the reaction process. In FY2004, improvement was completed for all processes by changing the gas. In addition, the gas emissions were made to the minimal by installing the reaction gas elimination devices.

As a result, the emission of greenhouse gases other than CO₂ was reduced by 18.7% compared to the previous fiscal year. The decrease was partly due to the smaller production at Niigata SANYO Electronic Co., Ltd., after the Niigata Chuuetsu earthquake in October. Compared to FY1995, the ratio increased by 13%, and we will continue to promote reduction of greenhouse gas emission, mainly PFC.

The SANYO Group is currently investigating the use of carbonyl fluoride (COF₂) which barely emits greenhouse gases after reaction in order to further reduce the environmental impact.

Greenhouse gases: Substances that have global warming effects due to their characters that allow solar energy of sunlight to pass through, while absorbing the heat (infra-red radiation) released from earth’s surface, thus limiting the temperature of the earth’s surface from cooling. The Kyoto Protocol specifies 6 substances as greenhouse gases, namely, carbon dioxide (CO₂), methane (CH₄), dinitrogen monoxide (N₂O), hydrofluorocarbon (HFC), perfluorocarbon (PFC) and sulfur hexafluoride (SF₆).

Global Warming Potential (GWP): An indicator to represent the degree of effects on the global warming. The degree is calculated based on CO₂ as “1.”

The Global Warming Potential of CO₂: 1

The Global Warming Potential of CO₂: 9.2

(Source: “Guidelines to calculate the greenhouse gas emissions by business entities” by the Ministry of Environment.)

About COF₂

COF₂ has the Global Warming Potential of less than 1, and the atmospheric lifetime (the time when the gases are naturally degraded and resolves in the atmosphere) is short at less than an hour. When it is used in the cleaning process of semiconductors, it reduces the cleaning time by 20%, while there is no issue relating to substitution in terms of extraction rate, reliability, quality of semiconductor (epitaxial) wafer membrane (stress, refraction factor) and particles. COF₂ is more costly than CO₂ and other gases, but we are considering it a possible alternative.

MMTCE: A short form for Million Metric Tons Carbon Equivalent. The equation is the following:

\[ \text{MMTCE} = \frac{Q_i}{(12/44) \times \text{GWP}_{i,109}} \]

where Qi is the weight (kg) of the gas emitted during treatment and GWP₁₀₉ is the Global Warming Potential. The smaller the value is, the less impact it has on the global warming.

The figure is based on the experimental result at SANYO Electric Co., Ltd.. In the experiment, greenhouse gas emissions from one cleaning process was measured when CO₂ was used for cleaning gas and when COF₂ was used, with the Fourier Transform Infrared Spectroscopy (FTIR), which is a highly-sensitive measuring method. Then MMTCE was calculated for each gas. When the case of CO₂ was taken as “100,” the value for COF₂ was equivalent to 3, hence the statement “reduction by 97%.”

Greenhouse gas emissions other than CO₂ by the SANYO Group domestic facilities (compared to FY1995) (CO₂ equivalent)

Greenhouse gas emissions other than CO₂ by the SANYO Group domestic facilities (CO₂ equivalent)
Energy Conservation and Energy Creation

The SANYO Group is actively working on “Energy Conservation” to reduce energy consumption and CO₂ emissions in business activities and “Energy Creation” to create clean energy from solar power in order to restrain global warming and resource depletion and contributes to global environment conservation. “Energy Conservation” and “Energy Creation” are significant themes of environment conserving activities of the Group.

Energy Conservation

Introduction of Cogeneration System

The SANYO Group has been actively introducing cogeneration systems at its facilities (factories and large-scale buildings) to achieve independent power generation. At the same time, the waste heat (heat energy) from the system is fully utilized to produce steam and hot water, which is then used for cooling and warming of production processes and facilities. The usage of waste heat improves the energy efficiency at the facilities, curtailing the increase in the energy consumption in total.

The cogeneration system is currently in operation at 5 facilities in the SANYO Group.

Example of Introduction at a manufacturing site—Tokyo Plant

At our Tokyo Plant, one of the biggest cogeneration systems of its kind in Japan was installed in 1998. Since then, the system has been supplying electricity and heat energy within the plant by own generation and waste heat utilization. The system uses natural gas (city gas 13A) for its fuel. It curtails NOx emission at combustion, while CO₂ emissions is low, and it is high in combustion efficiency.

The total electricity consumption at the Tokyo Plant was 300,000 MWh in 2004, 180,000 MWh (61%) of which was generated by the cogeneration system.

The amount of steam produced by the waste heat was 250,000 tons in FY2004. The energy consumption curtailing effect was equivalent to 19,000 kL of kerosene, or approximately 50,000 tons of CO₂.

The system is in operation 24 hours a day, and the operating method is seasonally adjusted to maximize the total energy efficiency throughout the year. For example, the air intake for gas turbines is cooled in summer to raise the electricity output while implementing measures to ease electricity peaks. In winter, the steam generated is used to preheat the system.

Example of Introduction in Office Buildings—Head Office Buildings

A cogeneration system was introduced at each of SANYO’s Head Office Buildings (Buildings No. 1 and No. 2) in Monguchi city in Osaka. They generate approximately 60% of the energy consumed in these buildings. In addition, the waste heat from the system is used to heat water, which is then utilized for heat source of absorption refrigerators as well as heating. In this way, all the energy necessary for cooling and heating the buildings is supplied. As a result of utilizing waste heat, we conserve energy equivalent to approximately 100 kL of crude oil, with the effect of reducing the CO₂ emissions by approximately 1,300 tons* per year between the two buildings.

* The emission coefficient of the thermal power generation of 0.63kg-CO₂/kWh is used for the CO₂ conversion.
Energy Creation

Installation of Photovoltaic Power Generation Systems

The SANYO Group has been committed to developing and disseminating clean energy technology, using solar power. As well as producing and selling modules for photovoltaic generation, we promote the usage of clean energy within the Group. The photovoltaic generation systems have been installed at 9 facilities, including Gifu Plant and Head Office.

Photovoltaic power generation system on the roof and sidewalks of the SANYO Head Office Building

<table>
<thead>
<tr>
<th>Facilities</th>
<th>Generation capacity (kW)</th>
<th>Electricity generated (kWh)</th>
<th>CO2 equivalent (t-CO2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gifu Plant</td>
<td>641</td>
<td>562,608</td>
<td>388</td>
</tr>
<tr>
<td>Head Office Building</td>
<td>118</td>
<td>81,672</td>
<td>56</td>
</tr>
<tr>
<td>Saga SANYO Industries Co., Ltd.</td>
<td>100</td>
<td>120,412</td>
<td>83</td>
</tr>
<tr>
<td>SANYO Electric Logistics Co., Ltd.</td>
<td>100</td>
<td>99,329</td>
<td>69</td>
</tr>
<tr>
<td>Tokushima Plant</td>
<td>85</td>
<td>83,600</td>
<td>58</td>
</tr>
<tr>
<td>Tokyo Plant</td>
<td>40</td>
<td>44,798</td>
<td>31</td>
</tr>
<tr>
<td>Daito Plant</td>
<td>30</td>
<td>15,678</td>
<td>11</td>
</tr>
<tr>
<td>SANYO Seimitsu Co., Ltd.</td>
<td>20</td>
<td>17,717</td>
<td>12</td>
</tr>
<tr>
<td>SANYO Energy Nandan Co., Ltd.</td>
<td>20</td>
<td>20,600</td>
<td>14</td>
</tr>
</tbody>
</table>

The emission coefficient of the thermal power generation of 0.69kg-CO2/kWh is used for the CO2 conversion.

Solar Ark

The 21st century is often referred to as the “century of the environment.” It was at the beginning of this century in December 2001 that the “Solar Ark,” our photovoltaic power generation system, was completed as the symbol of the SANYO Group which continues to pursue the possibility and the dream of clean energy. It is in the shape of a gigantic ark, measuring 315 meters in length and weighing approximately 3,000 tons. 5,046 solar panels cover the exterior walls with one of the biggest generation capacities in the world of up to 630 kW. The direct-current electricity generated by the system is converted to alternate current by the power conditioner. The voltage is then raised to 6,600 V before it is supplied to the Gifu Plant via the substation on the premises.

Approximately 563,000 kWh was generated in FY2004, with the effect of reducing CO2 emissions by 388 tons¹. This is equivalent to 150 kL of kerosene. The second phase of system construction started in the second half of FY2004, and in March 2005, approximately 11kW of solar panels were added.

The “Solar Ark” is registered as a partnership business² of the EXPO 2005 Aichi Japan. It is open to visitors for free.

¹ The emission coefficient of the thermal power generation is used for the CO2 conversion.
² Business planned to exhibit in the vicinity of the EXPO 2005 Aichi Japan in order to create a synergic effect with the EXPO. Applications are invited by the Japan Association for the 2005 World Exposition, and businesses and events of the applying corporations and research institutions are registered after review.

Solar Ark – exterior appearance

Solar Wing
Countermeasures for Fluorocarbon

Non-Use of Fluorocarbon in Refrigerators

In order to protect the ozone layer, hydrofluorocarbon (HFC), which does not have an ozone-destroying effect, has often been used for refrigerators to replace specified chlorofluorocarbon (CFC) and hydrochlorofluorocarbons (HCFC). However, HFC has a few hundreds to 10,000 times more impact on the global warming than CO₂; so the SANYO Group is promoting the shift to hydrocarbons (isobutene and cyclopentane; HC) which have lower global warming potential.

Amongst others, Home Appliance Company has been proceeding with the non-use of fluorocarbon in the refrigerator refrigerant and heat insulator forming agent by switching from fluorocarbons to HC. In FY2003, the shift from HCFC to cyclopentane was completed for the forming agent in the production of home refrigerators. The refrigerant for the 4 major domestically produced models was also changed from HFC to isobutene. In FY2004, non-use of fluorocarbon was completed for all home refrigerators produced in Japan and all small to medium sized home refrigerators except for 1-door type produced overseas.

Recovery of Fluorocarbons (CFC, HCFC, HFC)

Fluorocarbons, which are used as refrigerants in refrigerators and air-conditioners, have effects on destroying the ozone layer and global warming when released into the atmosphere. In order to prevent these effects, the Consumer Domestic Sales Headquarters is ensuring the recovery of fluorocarbon that would otherwise be emitted as gas when the equipment is repaired, disposed or relocated. We have a system in place to recover fluorocarbons from anywhere in Japan with our 104 recovery points equipped with recovery devices, cylinders and recovery manuals.

The recovered fluorocarbons are safely disposed of by the fluorocarbons disposal firms. In order to ensure smooth hand-over, each of our recovery points has access to a network provided by fluorocarbons disposal firms. A real-time communication with such firms as well as prompt and sure hand-over is achieved by inputting the recovery information into the computer.

Environmental Improvement Activities in Logistics Businesses

Higher Efficiency in Delivery—SANYO Electric Logistics Co., Ltd.

SANYO Electric Logistics Co., Ltd. offers the logistics solution services which aim to achieve higher efficiency in storage, loading, unloading, shipping and delivery using the 3PL*. SANYO Electric Logistics is proceeding with environment conserving activities based on its own Environmental Management System (EMS), to promote energy conservation and waste reduction by inviting participation from business partners who carry out transport and delivery business on contract, as well as its own 14 locations across the country.

In particular, the Company aims to “reduce the auto emission from delivery vehicles.” Each location across the country endeavor to reduce the auto emission by increasing the “number of improvements implemented to make the delivery more efficient.” The Company is building a network that connects its locations and relevant companies in order to realize comprehensive and consolidated distribution and to promote shared delivery and round-trip transportation with high efficiency.

*Practice of outsourcing services in which all corporate logistics functions are commissioned to one logistics agent.

Comprehensive and consolidated distribution

- Product shipment, factories
- Platform warehouse
- Large-size vehicles for long distance delivery
- Delivery of products to electrical appliance shops, etc.
- Small-size vehicles for short distance delivery
- Shared delivery
- The overall travel distance by all types of lorries is shortened by combining shared delivery with consolidated delivery.
- Delivery of products
- Fuel is conserved and CO₂ emission is reduced.

Waste Reduction Results

<table>
<thead>
<tr>
<th>Year</th>
<th>Amount of final disposal (t) (%)</th>
<th>Amounts of fluorocarbons recovered by the SANYO Group (amounts recovered by the Consumer Domestic Sales Headquarters)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2001</td>
<td>3,447</td>
<td>25,190</td>
</tr>
<tr>
<td>2002</td>
<td>11,779</td>
<td>25,190</td>
</tr>
<tr>
<td>2003</td>
<td>5,982</td>
<td>25,190</td>
</tr>
<tr>
<td>2004</td>
<td>(data not available)</td>
<td>(data not available)</td>
</tr>
</tbody>
</table>
**Modal Shift**

In addition to raising the efficiency by using larger vehicles, SANYO Electric Logistics Co., Ltd. is also promoting the modal shift which utilizes rail transport and coastal marine transportation.

For example, Tottori branch is expanding its use of JR freight, Japan Freight Railway Company (5 ton containers), and the ratio of rail transport to the total shipment improved from 3.6% in FY2002 to 4.79% in FY2003. Ship transport has started since August 2004 at the rate of 5 to 6 units a month (15 ton containers). Adding this to the rail transport, the ratio of modal shift is 4.75%.

In February 2005, the Kinki Branch carried out a test transport using JR freight (10 tons, 31 feet wing container) between Umeda in Osaka and Hakata in Kyushu (approximately 700 km) on four occasions. Measures to reduce the loading time and the cost are currently under review.

In June 2005, our active promotion to utilize rail transport was commended by the Railway Freight Association. We will continue our effort to raise efficiency in transport in order to reduce CO₂ emissions further.

---

**Waste Reduction Measures**

**Waste Reduction Results**

The SANYO Group has been making efforts to reduce the ratio of final disposal by landfill along with the establishment of the GEMS in 2000. We achieved zero emissions in FY2002 (the SANYO definition of zero emission = the ratio of final disposal by landfill to the total industrial waste of 1% or less) within the GEMS. The past achievements are shown on the graph. The ratio of final disposal by landfill was maintained below 0.3% for both FY2003 and FY2004. Since FY2004, we have been aiming at a medium-term goal to achieve complete emission for all the sub-sites within the GEMS, while maintaining the final disposal rate of 0.3% or less. However, unlike manufacturing sites where the majority of waste is industrial and recyclable, in the case of sales companies and offices, waste is predominantly domestic which needs to be incinerated by the local administration, so some waste may still remain for disposal by landfill.

The fundamental solution to this issue is to curtail the waste generation, and we are working to transform the by-product from the manufacturing process into valuable resources for sale, rather than to be disposed of as waste.

---

**Turning the by-products from processes into valuable resources**

**Turning the Silicone Sludge into Valuable Resources**

Waste water from the manufacturing process of semiconductors contains microparticles of silicone, and it has been a costly process to separate the silicone sludge from service water for waste disposal.

The SANYO Group has developed a waste water treatment system, “Aquacloser.” The system extracts service water from waste water at low cost. After the extraction of service water, it then solidifies the remaining waste water which contains the silicone sludge with the dehydration device to create pure silicone paste for commercial use as molten steel deoxidizing substances for steel converter and electric furnaces.
Sustainability Report

Reduction of Environmental Impact in Business Activities

Process

Measures against Chemical Substances

Pollutant Release and Transfer Register (PRTR*)

<table>
<thead>
<tr>
<th>Substance No.</th>
<th>Substance name</th>
<th>Amount used</th>
<th>Amount released</th>
<th>Amount transferred</th>
<th>Amount eliminated</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Zinc compounds (water soluble)</td>
<td>52.04</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>16</td>
<td>Aniline</td>
<td>27.32</td>
<td>7.71</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>25</td>
<td>Antimony and its compounds</td>
<td>24.15</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>40</td>
<td>Ethylbenzene</td>
<td>1.77</td>
<td>1.60</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>43</td>
<td>Ethylene glycol</td>
<td>1.45</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>45</td>
<td>Ethylbenzene</td>
<td>1.45</td>
<td>0.10</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>50</td>
<td>Calcium and its compounds</td>
<td>4,942.97</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>63</td>
<td>Xylenes</td>
<td>36.60</td>
<td>24.55</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>64</td>
<td>Xylenes</td>
<td>14.70</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>85</td>
<td>n-C8-naphthenes</td>
<td>52.47</td>
<td>1.82</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>100</td>
<td>Cobalt and its compounds</td>
<td>4,457.29</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>101</td>
<td>2-hydroxyethyl acetate</td>
<td>2.46</td>
<td>0.74</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>105</td>
<td>2-dodecanol</td>
<td>5.90</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>144</td>
<td>Dichloroacetic acid</td>
<td>1.93</td>
<td>1.18</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>172</td>
<td>p-Dichlorobenzene</td>
<td>2.29</td>
<td>0.18</td>
<td>0.00</td>
<td>0.00</td>
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<tr>
<td>179</td>
<td>Benzene</td>
<td>7.76</td>
<td>0.22</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>179</td>
<td>Toluene</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>202</td>
<td>Naphthalene</td>
<td>3.67</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>211</td>
<td>Toluene</td>
<td>1.69</td>
<td>0.50</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>224</td>
<td>n-Butylbenzene</td>
<td>1.10</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>227</td>
<td>Toluene</td>
<td>8.92</td>
<td>6.94</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>230</td>
<td>Lead and its compounds</td>
<td>11.49</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>231</td>
<td>Nickel</td>
<td>5,619.93</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>232</td>
<td>Nickel compounds</td>
<td>3,118.14</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>233</td>
<td>Chromium</td>
<td>2.91</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>235</td>
<td>Arsenic and its inorganic compounds</td>
<td>1.21</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>253</td>
<td>Hydrazine</td>
<td>1.57</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>260</td>
<td>Pyrocatechol</td>
<td>17.22</td>
<td>1.38</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>269</td>
<td>Technetium</td>
<td>15.01</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>283</td>
<td>Hydrogen fluoride and water soluble salts</td>
<td>3,320.00</td>
<td>60.66</td>
<td>11.51</td>
<td>0.00</td>
</tr>
<tr>
<td>311</td>
<td>Manganese</td>
<td>1,015.83</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>18,691.39</td>
<td>50.39</td>
<td>11.54</td>
<td>0.00</td>
</tr>
</tbody>
</table>

* Less than 0.000002 tons released per year

Reduction of PRTR Substance Emission

The SANYO Group sets the target to reduce the emission of PRTR substances in the GEMS environmental action plan, and endeavors to achieve the target. In FY2004, we succeeded in reducing the PRTR emissions by 86% compared to FY1999. Our emission reduction measures include: 1) replacing the organic solvents (xylene, toluene) used in the coating process with other substances, such as water-based coating; 2) shift from CFC substitute to non-fluorocarbons; and 3) installation of hazardous emission removal devices. We will continue our effort to reduce PRTR substance emission by reducing amount of PRTR substances used, improving the process of facilities and equipment, etc., shifting to alternative substances, and thorough recovery of generated substances.

Since FY1997 the SANYO Group has been investigating the emission status of environmental pollutant from all the facilities in Japan including subsidiaries. Based on the findings, efforts are being made to curtail the waste generation so that the environmental impact will be reduced. More specifically, the processes where chemical substances are used are identified, and an accurate understanding of where these substances are finally emitted to is obtained. After that attempts are then made to change the process so that the chemical substances are not used, or improve the process to reduce the amount used. In some cases, we discontinue the products which contain the specific chemical substances and replace them with alternative products.
Implementation of Management System for Chemical Substances

**System Overview**

All facilities of the SANYO Group in Japan including subsidiaries have introduced the management system for chemical substances one after another since FY2003, and the harmful substances contained in the input materials (substances subject to PRTR Law) are centrally controlled concerning the transaction volume, emission volume and transported volume.

In FY2004, this management system has been almost completed for all the domestic facilities, enabling the aggregation of data for consumed, emitted, and transported volumes of PRTR substances for the overall Group, by each corporation, each facility and each internal company. The system also enables each department on site to find out in no time the amount of harmful substances contained in the input materials. Based on these data, we will endeavor to reduce consumption and emission of harmful substances by replacing them with alternative substances, and investigating and improving the production process.

**VOC emission reduction by process improvement—an example of Commercial Company**

Commercial Company manufactures showcases for food items at convenience stores and grocery shops. The manufacturing process used to use coating materials (paint) which contains organic solvent for coating. However, in FY2003, full-scale shift to powder coating was implemented, and by FY2004, the process was fully converted to powder coating process which does not emit any VOCs such as xylene and toluene. In FY2003, Prodox Co., Ltd., a subsidiary of Commercial Company, which was established as a joint venture in July 2002 between the Food System Division of SANYO Electric Co., Ltd. and Ariga Co., Ltd., started to build the EMS. It obtained the ISO14001 certification in February 2004, and is now proceeding with environmental improvement activities on a continuous basis.

Ariga Co., Ltd. has been using trichloroethylene in the rinsing process of supermarket show cases since before the creation of a joint venture. However, in April 2004, the company commenced the reduction activities according to the instruction from the SANYO Group (August 1998) which bans the use of organic chlorine solvent. Ariga implemented changes to the materials used for parts that are processed, and to the method of processing, as well as replacing the solvent with an alternative. As a result, the full phase-out of trichloroethylene was achieved in October of FY2004.

**VOC emission reduction through installation of organic emission treatment system—an example of Semiconductor Company**

Semiconductor Company has installed the organic emission treatment system at the Gifu Plant (1 unit) and Tokyo Plant (2 units). The system recovers the organic compounds in the emissions from manufacturing processes.

The system is characteristic in that it does not use filters. It limits the emission of organic compounds into the atmosphere by absorbing them in the activated charcoal, then converting it to a liquid before recovering. It significantly reduces the VOC emissions into the atmosphere, including xylene, n-butane, and alcohols, and recovers them efficiently.

The system at the Tokyo Plant recovers approximately 7 tons of xylene a year, which is a 98% recovery rate for xylene. The overall recovery amount of VOCs is approximately 120 tons, which is recycled as the combustion improver at the clean center on the same site.
Measures against Chemical Substances

Management of Items that Contain PCBs

Polychlorinated biphenyls (PCBs) have excellent electrical characteristics, so they have been imported and manufactured in large quantities and used widely in large electrical condensers and transformers and partly in small condenser chips in electrical products. However, the import and production were banned by law in 1974 after their toxicity became apparent, and the possessors of the PCB-containing products, such as companies, were obliged to store and report the possession of PCBs under the Waste Disposal and Public Cleansing Law, though adequate disposal methods have not yet been established.

In August 2001, however, the Law Concerning Special Measures against PCB Waste came into force, and efforts began by the central government for adequate national PCB disposal projects. At the same time, PCB-holding corporations became obliged by law to report their PCB storage to the government every year until an adequate national PCB disposal system is established and disposal of PCBs actually begins. In October 2001, the reporting rule for the Electric Business Act was revised. As a result, it became mandatory to report the currently active (i.e., it is connected to an electric line) PCB-containing electric transformers and condensers to the Director-General of the local Bureau of Economy, Trade and Industry within one year.

The SANYO Group is appropriately reporting its PCB-containing items to the relevant authority according to the laws and regulations.

Appropriate Management and Storage of PCB-containing Items

After the enforcement of the new law, the SANYO Group established the “Regulations for Controlling PCB-Containing Items” in the Group Environmental Management System. We are continuing to ensure that each facility stores PCB-containing items appropriately and reports the possession to the authority according to the national storage standard.

With regard to the management system, we have expanded the scope of the system in order to manage some of the buildings owned by ourselves, related companies and collaborating companies in addition to those specified by the GEMS.

The major PCB-containing items managed mainly by our environmental sections are electrical power condensers attached to the buildings (approximately 300 units including those in storage and in use) and condenser chips recovered from some discarded home appliances and old fluorescent ballasts (approximately 110,000 units).

Concerning the disposal of PCBs, we are proceeding with our preparation to cooperate with the PCB disposal project by the Japan Environmental Safety Corporation (JESCO). The JESCO has been encouraging the PCB possessors to pre-register for pre-adjustment. This is said to be for the reason that the disposal system needs to maintain its operation rate at 100% as the disposal capacity is at the minimum to be able to dispose of the domestic PCBs within the time limit set by the government. It is our policy to respond to the request from JESCO and to cooperate with the pre-registration and adjustment.
Measures against Soil and Groundwater Contamination

From the mid to late 1990s, the SANYO Group surveyed almost all of the manufacturing facilities, including domestic subsidiaries, concerning the usage history of organochlorine compounds and possible soil and groundwater contamination as a result. In addition, the Group has been conducting surveys on heavy metal contamination since 1999.

1. Contamination by Organochlorine Compounds

The environmental pollution by organic chlorine solvents has come under close scrutiny since the 1990s. The SANYO Group conducted a survey on almost all of its 36 manufacturing sites in Japan including the subsidiaries between the mid to late 1990s. Contamination that exceeds the environmental standard was found at some plants within the premises, and measures were taken for decontamination or removal by excavation after it was reported to the administrative bodies. The current status is as shown in the table on the right.

2. Heavy-metal Contamination

In response to the public attention on the environmental pollution by heavy metal since the late 1990s, the SANYO Group in Japan has been investigating the contamination status by heavy metal since 1999. The investigation is currently in progress, and measures including decontamination or removal by excavation are being taken for sites where contamination has been confirmed.

Conservation of Water Resources

The water consumption by the SANYO Group* in FY2004 was just over 22 million m³, approximately 40% of which was used by the semiconductor businesses. Semiconductor Company including its related companies is making efforts toward the “Water Recycle” as well as commercializing the semiconductor waste water treatment technology as a system. This system is sold both within and outside the company, and new technologies are also being developed based on this technology.

* According to the scope of environmental accounting

Changes in the Water Consumption (The SANYO Group: domestic and overseas)

<table>
<thead>
<tr>
<th>Year</th>
<th>Groundwater</th>
<th>Domestic</th>
<th>Overseas</th>
</tr>
</thead>
<tbody>
<tr>
<td>2000</td>
<td>506</td>
<td>757</td>
<td>1,402</td>
</tr>
<tr>
<td>2001</td>
<td>572</td>
<td>777</td>
<td>1,514</td>
</tr>
<tr>
<td>2002</td>
<td>431</td>
<td>577</td>
<td>2,039</td>
</tr>
<tr>
<td>2003</td>
<td>1,854</td>
<td>379</td>
<td>2,039</td>
</tr>
<tr>
<td>2004</td>
<td>379</td>
<td>1,854</td>
<td>2,039</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Year</th>
<th>Groundwater</th>
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<th>Overseas</th>
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<td>2000</td>
<td>506</td>
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<tr>
<td>2004</td>
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<td>1,854</td>
<td>2,039</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Facility</th>
<th>Contamination situation</th>
<th>Measures</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo Plant</td>
<td>Trichloroethylene, etc.</td>
<td>Decontamination in progress</td>
</tr>
<tr>
<td>Shiga Factory</td>
<td>cis-1, 2-dichloroethylene, etc.</td>
<td>Decontamination in progress</td>
</tr>
<tr>
<td>Kasai Factory</td>
<td>Trichloroethylene, etc.</td>
<td>Decontamination in progress</td>
</tr>
<tr>
<td>Kanto SANYO (Omama)</td>
<td>Trichloroethylene</td>
<td>Decontamination in progress</td>
</tr>
<tr>
<td>Former Yoshigawa Factory</td>
<td>Trichloroethylene, etc.</td>
<td>Countermesures completed</td>
</tr>
<tr>
<td>Sanyo Horitech</td>
<td>cis-1,2-dichloroethylene</td>
<td>Countermesures completed</td>
</tr>
</tbody>
</table>

Progress Status of Heavy Metal Contamination Surveys

<table>
<thead>
<tr>
<th>Facility</th>
<th>Status of survey</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tokyo Plant</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Ashikaga Factory</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Sumoto Factory</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Tokushima Factory</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Tokonabe Factory</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Research Laboratories</td>
<td>Complete</td>
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</tr>
<tr>
<td>SANYO Mediatec, Mochizuki Factory</td>
<td>Complete</td>
<td>Countermeasures completed</td>
</tr>
<tr>
<td>Daiho Factory</td>
<td>Complete</td>
<td>Countermeasures completed</td>
</tr>
<tr>
<td>Former Yoshigawa Factory</td>
<td>Complete</td>
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</tr>
<tr>
<td>Gifu Factory</td>
<td>Complete</td>
<td>No problems</td>
</tr>
<tr>
<td>Shiga Factory</td>
<td>in progress</td>
<td>-</td>
</tr>
<tr>
<td>Kasa Factory</td>
<td>in progress</td>
<td>-</td>
</tr>
<tr>
<td>Other subsidiaries</td>
<td>in progress</td>
<td>-</td>
</tr>
</tbody>
</table>

Development of a High-efficiency Technology for the Recycling of Hydrofluoric Acid Waste

In July 2005, our R&D Headquarters, the Human Ecology Research Center, and SANYO Aqua Technology Co., Ltd, a subsidiary of our semiconductor company, successfully developed a recycling technology of hydrofluoric acid waste, based on the accumulated technology for semiconductor waste water treatment (already on the market as Aquacloser and Slurrycloser). This technology is unprecedented in that it does not rely on the level of fluorine concentration of the waste liquid and yet it achieves both the quality of the treated water which satisfies the fluorine wastewater quality standards (8mg/L) and recovery of high-purity fluorite (98%). This system can be applied not only to the hydrofluoric acid waste from semiconductor plants but also to that from the degradation process of fluorocarbon gases.
The SANYO Group is promoting environmental communication via interaction with society both regionally and globally, and with children who will lead the next generation in order to raise the awareness of environmental conservation and to achieve a sustainable society.

**Environmental Communications**

Addressing the Environmental Issues at the Global Level by Participating in an International Conference, WBCSD (World Business Council for Sustainable Development)

**About joining the World Business Council for Sustainable Development**

In March 2005, SANYO joined the “World Business Council for Sustainable Development (WBCSD),” which promotes business efforts for the environment on a global scale. WBCSD was established in 1995 in order for the business community to contribute in the development of a sustainable global society. It comprises top management of approximately 175 corporations around the world. At the WBCSD general assembly held in Nagoya city, Japan, in June 2005, SANYO cooperated in preparing to hold the meeting, as well as participating in some of the meetings including the Council Meeting,¹ LD Meeting,² and the major WG Meeting.³

¹ Meeting of the representative members
² Meeting of the delegates
³ Meeting of the working groups

**Background to Joining the WBCSD**

SANYO has been deliberating on the way to sustain both environmental efforts and economic development. While recognizing that it is an issue that requires cooperation amongst various business sectors and industries and that what a single company can solve is somewhat limited, we have been seeking a way forward. In March 2005, we decided to join the WBCSD, the international council which aims to realize a sustainable global society.

**The Aim of Participation**

WBCSD continues to make recommendations and implement hands-on activities towards sustainable development, based on three pillars, namely, “economic development,” “environmental balance,” and “social progress.” SANYO participates in the activities as a member and makes contributions towards the realization of a sustainable society. At the same time, SANYO obtains the information and best practices (successful case examples) from participation in the Council and applies the information to the global environmental measures of the SANYO Group.

**Specific Measures**

In order to address global environmental issues which spread beyond the boarders and generations, such as global warming and the effects of chemical substances on humans, the SANYO Group is consolidating the structure to establish the global EMS before the end of FY2007. The new environmental management structure will provide an essential base for establishing an international collaborative and cooperative framework amongst countries and industries in the future.

**Current Status**

The EMS of the SANYO Group is currently structured focusing on the domestic facilities (GEMS and independent EMS), and our overseas manufacturing facilities have their own EMS. Based on this current status, we will strive to establish a more complete and across-the-Group EMS from a global perspective.

In the global EMS, similar to the domestic EMS, we will classify the environmental issues broadly into the following three areas, each of which will have the environmental aims and targets, and we will implement various activities.

1. The issue of global warming
2. The issue of waste reduction
3. The issue of chemical substance management

**Outlook**

The WBCSD, which we joined recently, plays an important role in terms of the above mentioned issues and the inter-industrial collaboration which is expected to be needed in the future. As well, many of the WBCSD missions and aims correspond to our management philosophy and environmental policy.

For example, concerning “Leadership in the business community” and “Policy formulation,” we would like to have our views reflected on the opinions of the business community worldwide.

Based on the guiding principle of the WBCSD to “show the progress made by the business community in the environment, resource utilization and social responsibility of corporations, and to share the best practices amongst the WBCSD members,” we will absorb the many actual examples and deploy them in the global development of the SANYO Group environmental management.
Risk Communication to Promote the Dialogue with the Local Area

Chemical substances and products containing them are common in our daily life in the modern society. However, the environmental risk involved with the chemical substances, namely, the effects on human health and ecology, is not often fully understood by non-specialists. This is why the role of “risk communication” is attracting attention. “Risk communication” promotes the sharing of information about chemical substances among the general public, industry and the administration, contributes to formation of a common understanding of chemical substances, and promotes mutual communication to arrive at a social consensus regarding environmental risk management.

“Risk communication” in general refers to the communication which discloses information, both convenient and inconvenient, to all the people concerned equally to form a consensus regarding the bearing of risk. However, when factory officials and local residents discuss emission of chemical substances from a factory and its effects on the health of the local residents based on objective data regarding toxicity, scale of contamination and the effects on the human body, this is sometimes referred to as “risk communication” in a much narrower sense.

Under such social situation, the SANYO Group is conducting risk communication, examples of which are as follows.

Participation in the Gifu Seino Area Chemical Substances Communication Conference

As 50% of chemical substances emissions in the Gifu prefecture is concentrated in the Seino area, the Gifu Prefecture Regional Development Bureau Seino Office served as the intermediary to establish the above mentioned residents-industry-academia-government conference for the local corporations and residents to discuss chemical substances, hence promoting risk communication and reducing the chemical substances emission into the environment. SANYO participated in the Second Risk Communication of FY2004 held at Ogaki Information Studio, Swink Hall, on December 17, 2004. Kazuhiro Yamamoto, senior manager of Gifu Area General Affairs department on behalf of the Gifu facility explained the “Regional Communication,” while Masahiro Hashimoto, on behalf of the Semiconductor division explained the “Handling and Emission of Chemical Substances at the facility” to the representatives of the local residents.

In the question and answer session, questions were asked by the residents using technical terms, indicating the high level of interest in environmental issues. We will continue with the risk communication on a variety of occasions.

Environmental Education and Solar Ark

Cultivating the Spirit of Environment and Science

The “Solar Lab,” SANYO’s Solar Energy Museum, aims to encourage children who will lead the future to be more interested in global environmental issues and science and technology concerning photovoltaic power generation, etc. via planning and developing exhibitions, original workshops and science shows that would leave a lingering impression in the visitors’ mind.

The Solar Lab is also utilized as a venue for a number of environmental education sessions organized by the Gifu prefecture. “Gifu Earth Environment School,” which is one of those sessions, was established at the same time as the Solar Ark, is gaining recognition as a venue for regional lifelong learning and as the destination for school field trips.

Gifu Earth Environment School

The Gifu Earth Environment School was founded in June 2002 to promote the interest of children in nature and science with the goal of cultivating future environmental conservation leaders. The students are elementary school children and their parents in the Seino Area of Gifu Prefecture. A variety of programs and experiences are provided by this school, including lectures on environmental philosophy, ecological living and firefly breeding. Workshops are also given on topics such as photovoltaic power generation and natural dyeing using plants, and study visits are made to other environmental related facilities in Gifu Prefecture. This school is open 12 times a year on the 2nd Saturday every month, which is Gifu Citizen Environment Day.

In fiscal 2004, 37 pairs (73 people) participated.
Environmental Communications

Supporting a Wide Variety of Environmental Education and Awareness Promotion Activities

General consumers increasingly want to learn about the activities for prevention of global warming and reduction of waste, and about other activities for environmental conservation.

Here, we use Solar Ark to provide a place where both men and women, young and old, can acquire knowledge of the Earth’s environmental problems—that is, what is happening now, and what we can do about it, etc. Every year many people attend the Solar Ark, some as part of their lifelong educational programs, while elementary school pupils and junior and senior high-school students do so as part of their social studies. In addition, we accept Energy Conservation & New Energy Study Groups for foreign trainees from the Energy Conservation Center, Japan, training inspection by professional educators (teachers and members of Boards of Education, etc.) and corporate staff training.

In addition to these study and inspection programs, an ongoing series of easily understood environmental lectures is given that identifies the factors and mechanisms behind environmental destruction, and introduces the practical environmental activities of the SANYO Group. We also actively cooperate with and support events, held outside the facilities, that encourage interest in science and the environment, for example the Gifu Symposium sponsored by Gifu University and the Environmental Festival sponsored by Ogaki City.

In winter, the Solar Ark Jogging Meet is held in conjunction with local schools. With health as the keyword, Solar Ark staff members are promoting an increase in interest in the global environment among local children.

Gifu Youngsters’ Science Festival at the Solar Ark

The Youngsters’ Science Festival is held annually in every prefecture throughout Japan. The Gifu regional festival was held at the Solar Ark in June 2005, as it had been the year before. Over the two days of the event, 11,310 participants gathered at the Solar Ark. It was mainly supported by the Gifu Prefectural Board of Education, and attended by local science teacher and student volunteers. The event created a powerful impression of the Solar Ark as a key facility in global environmental problems and science education by offering many scientific experimental workshops at a single location. The Festival Executive Committee was financially supported by the SANYO Environmental Fund.

Workshop and Science Show

The staff of the Solar Cell Laboratory, the “Solar Lab”, with those of the Japan Science Foundation, every year create a rich menu of scientific experimental projects that are fun for parents and children to construct and that encourage a scientific attitude. There are Saturday workshops on the themes of spectroscopes and diffraction gratings, special menu workshops in the spring, summer and winter holidays, charge-free workshops on weekdays, and group workshops for schools and children’s groups. A cumulative total of 3,300 participated over the period from 2002 through 2004. Then, from 2004, the new and original “Science Show” was planned and developed, which allows some participation by adults, and not limited to just children. This is aimed at extending the reach of these activities. From 2005, the Tokai Chapter of the Japan Society of Applied Physics (JASP) has joined in with a “Science Refresher Class” for children up to junior high school and provides thoroughgoing support for educational activities.
Activities Linked with Regional Science Centers

The Japan Science and Technology Agency (JST), an independent administrative institution, works with Science Centers in the regions to encourage cooperation for science activities with local schools. In Gifu Prefecture, the prefectural science center, “Science World” plays a central role in association with the Hida Kiyomi Nature Center, the Gifu Academy of Forest and Culture, Gifu City Science Museum and SANYO’s Solar Lab. Each institution supports science education by undertaking certain fields of study best suited to its expertise, giving scientific demonstrations at schools and inviting elementary pupils and junior high school students to perform experiments and attend “hands-on” classes.

The Solar Lab implemented experiential activities in five schools for some 400 pupils in 2004, including a “hands-on” energy class for a Kobe primary school. This energy class received the Director’s Award from the Agency for Natural Resources and Energy at the 14th annual awards for facilities engaged in energy-related publicity sponsored by the Information Center for Energy and Environment Education.

As an enterprise engaged in actual production, and having the solar energy museum, which is rare amongst institutions worldwide, we are committed to providing improved educational materials in science.

“Coco Chan” Activities

The SANYO Electric workers’ union, in its regular bulletin for members, has been calling on members and their families to participate in the “Coco Chan” activities of the industry-wide Japanese Electrical Electronic & Information Union for the last eight years. “Coco Chan” is a cartoon character used to illustrate the activities. (“Chan” is the affectionate form of “San,” the Japanese “Mr./Ms.”)

These activities introduce energy-saving measures that can be devised by anyone with even the slightest awareness of environmental issues in daily life, and urge that they should be put into action. The program runs every year from June through September, during which time families check their energy savings, thus spreading awareness of the issue. In 2004, 1,095 people responded, and ongoing participation was encouraged by drawing lots among participants and sending commemorative gifts to the winners.

SSTH Wins the Prime Minister of Thailand’s Environmental Conservation Award.

SANYO Semiconductor Thailand (SSTH) received the Prime Minister’s outstanding enterprise award for 2005 in the environmental preservation category. The award honored SSTH for its active environmental effort within the local community, that is to promote reuse of wastewater by the adoption of “Aquacloser”, wastewater treatment systems by SANYO Aqua Technology Co., Ltd., and recycling of waste materials, etc.

The waste materials recycling system took three years to develop. It takes plastic wastes from the semiconductor manufacturing process, burns them as fuel in the process of making cement, and then uses the resulting ash as a raw material of the cement itself.

SSTH has also received outstanding enterprise awards in the safety management category (in 2001), in quality control (2003) and in productivity (2004), making this the fourth such award and the third in successive years.

SSTH’s Director Pornchai responded to the award by saying “We are deeply honored to receive the Prime Minister’s award for environmental conservation. The award will encourage even greater awareness of the environment, and is sure to assist sales activities for wastewater-treatment systems. We will not fall into complacency over the award, but will work to achieve even higher standards.”

President Wakabayashi receiving the trophy

SSTH representatives who attended the award ceremony (Director Pornchai is on the left in the front row)
A very varied cross-section of people form the stakeholders of the SANYO Group, from our customers, business partners, shareholders and investors, local community, and our employees — men and women, children and the elderly, Japanese and many other nationalities.

The SANYO Group seek to share with these people in sustainable development, and we are committed to becoming an indispensable element. We will discharge our social responsibilities in close communication with our stakeholders.
Market in
The SANYO Group always seeks to provide the products that will satisfy our customers’ wants. In view of today’s rapidly diversifying lifestyles, we pay careful attention to the opinions of a wide variety of customers in the marketplace, and actively make use of this information in our product development. We see one of our prime responsibilities as a manufacturer to be the ongoing provision of safe, high-quality products from the customers’ viewpoint.

Special Feature
Everything begins with listening to the customer’s opinions. That is the starting point for all SANYO product development.

Working with Our Customers .................P61-65
Working with Our Business Partners .............P66
Working with Our Shareholders / Investors ......P67
Working with Our Employees ..................P68-73
Working with Local Communities ..........P74-76
Everything begins with listening to the customer’s opinions. That is the starting point for all SANYO product development.

SANYO, to fulfill its responsibility for its products to the customers, is committed to product development that reflects and completely satisfies customer requirements. To make this possible, SANYO has set up a Customer Center charged with handling all everyday inquiries and consultations about our products, and requests for servicing etc. from customers. In addition, our Home Appliance (HA) company has set up a “Customer Lifestyle Research Group” which mainly plays a role of collecting customer’s opinions positively, so as to ensure that these are reflected at every stage of the process from proposals for product concepts, through to planning, development and sales.

The SANYO Organizations and Approaches to Gather Customer Opinions

From 1994, SANYO established a Lifestyle Software Research Dept. that regularly performed monitoring research by mailing questionnaires to customers. In 1999, a Woman-Friendly Project*1 was initiated specifically to stimulate the creation of products that would embody the opinions of women customers.

The Customer Lifestyle Research Group has inherited this attitude of listening carefully to the customer’s opinions since October 2002, when it first established (initially as Life Innovation Planners [LIPS], which was subsequently renamed in July 2005). Ever since, this group has sought to anticipate needs in daily living. Also, in order to grasp consumer awareness and product evaluations by customers after purchase, it has concentrated on performing in the whole cycle of work from research to verification of the research results and exploiting the customer’s opinions in product development. It also runs the “Oeuf Club”*2 whose members are our customers and implements market research for members.

*1 This is an in-house project formed in February 2000, whose members are women customers, intended to encourage their participation in product creation and to make them fans of the company. It was occasioned by a comment of former President Aquino of the Philippines, who was then an outside director, “You should bear in mind to make more woman-friendly products.”

*2 Oeuf is the French word for egg, and this members’ organization was formed in July 2000 with the idea of working with our customers to give birth to something new: We ask to join the club customers who filled in the user’s card (registration card) included with all SANYO products and responded to the follow-up questionnaire on their satisfaction with the products. They become members for two years. As of June 2005, there were 2,034 members.
The Specialized Customer Lifestyle Research Group is Central in Listening Sincerely to the Customer’s Opinions

Purpose-directed research gathers customer’s opinions.

The Customer Lifestyle Research Group seeks to create products that truly satisfy customers, and has established a number of research methods to encourage them to express their various opinions.

For example, it performs “exit surveys” for the purchasers at the shop to confirm their purchase motivation, and interviews of customers to ascertain their degree of satisfaction or any points of dissatisfaction. In order to investigate the different potential needs of each age group and lifestyle, it carries out surveys of user satisfaction, regular postal questionnaires and fax-based surveys, group interviews and home-visit surveys for members of the “Oeuf Club” who are our partners for product creation.

Here, as an example of product development based on these surveys, we introduce the DW-SX3000 dishwasher and drier, a hit product in 2003 that originated in a postal survey.

A hit product that arose from a customer survey—A dishwasher and drier that uses kitchen detergents.

By 2002, improvements made by each manufacturer to its own dishwasher/drier products were eliminating performance differences between them. At this point, those responsible for product planning and the Customer Lifestyle Research Group noticed that surveys at the shop and others revealed a feeling that special dishwasher detergents were expensive. They therefore identified the ability to use standard kitchen detergents as the point of appeal for a new product.

A postal survey of “Oeuf Club” members in February 2003 revealed that 30% of users felt restricted by having to use special dishwasher detergents. Home-Appliance (HA) company immediately started development work based on confidence in the potential need evident from these results.

On October 1, 2003, we launched sales of the DW-SX3000 dishwasher/drier, emphasizing the sales point that it was “the first in the world to allow use of standard kitchen detergents.” It immediately became such a hit that stores found it hard to keep them in stock.

The Customer Lifestyle Research Group functions as a consumer advocate.

The Customer Lifestyle Research Group also performs fax-based surveys to grasp key needs, visits homes to investigate the ways products are actually used, and conducts group interviews to confirm the viability of proposed products, serving at every stage from information gathering through actual product development.

It also plans events designed to increase the number of company “fans,” and experiments with new ways to obtain detailed opinions and evaluations of products.

In this way, the Customer Lifestyle Research Group is familiar with customer realities, adopting their perspective in evaluating product planning, and so serving as a consumer advocate.

SANYO is committed to learn from customers, and to continue developing products that will delight them.

Our responsibilities and our approach

Listening Intently to the Customer’s Opinions in Creating Products

Kiyoko Tani, Customer Lifestyle Research Group, Engineering & Development Unit, Company Management Office, HA Company

I want customers to use our products for as long as possible. And my dream is to create quite new categories of product that did not exist before. Completely intent on listening to the customer’s opinions, I aim to create products with well thought-out concepts that will be thought typical of SANYO.

Column Protecting Members’ Personal Information

The Customer Lifestyle Research Group has been entrusted with personal information by approximately 2,000 members of the “Oeuf Club”, and takes great care to manage such information. Members’ information is stored on head office’s host computer and protected by access codes known only a few responsible persons. It is forbidden to store this personal information on PCs or on removable media, so even in the unlikely event of PC theft, members’ information will not leak to outsiders.

In reports on the results of questionnaires etc., sent within the company by E-mail etc., personal information including member’s names are not used, but member’s number only are listed.
Working with Our Customers

The SANYO Group provides a wide range of products, from electrical goods through electronic components to industrial equipment, and we fulfill our responsibility to our customers pursuing an ongoing dialog with the priority on quality and safety of the products including servicing.

“Customer-First” as Both Management Philosophy and Principles of Conduct

Since its foundation, SANYO Electric Co., Ltd. has been committed to placing priority on customer satisfaction in our business activities. Customer-First concept is expressed explicitly in SANYO’s Management philosophy and principles of conduct.

All company officers and employees keep this in mind in their daily work, and each seek to relate their own activities to putting customer satisfaction first.

Customer Satisfaction Is Pursued in All Corporate Activities.

The level of customer satisfaction relating to products and services is determined by customers and not by the company that provides such products and services. We must keep customers satisfied from the time of purchase, through the period of use and finally at the time of product disposal to raise the overall level of customer satisfaction. Thus, employees in all sections, from the sales and service people who directly meet with customers to members in the planning, engineering, production and quality management cooperate to improve the level of customer satisfaction.

For the company required by its CSR in recent years, to enhance quality of overall management including social aspects as well as that of the products and services, it is necessary for the company to satisfy customers and society. To improve the quality of management, the SANYO Group is promoting Customer Satisfaction Diagnosis based on the Japan Quality Award (JQA) Criteria. In accordance with the results of Customer Satisfaction Diagnoses, we are making efforts to improve and enhance job execution as well as develop customer satisfaction strategies.

JQA: The Japan Quality Award was founded in 1995 by the Japan Productivity Center for Socio-Economic Development. Giving this award is one of the major activities of the center’s Management Quality Improvement Program to support development of organizations that achieve performance excellence by customer-focussed management. Award-winning organizations are determined by referring to JQA Criteria, which reflect the latest management principles for responding to changing social needs.

In Order to Raise Product Quality Which Forms the Basis of CS

In manufacturing business, product quality is the most fundamental item for increasing customer satisfaction. Aware of this, the SANYO Group has provided “Basic Rules for Quality Management” as group-wide top-level rules governing product quality, and “Basic Principles about Quality” in which it says “offering useful and harmless products that satisfy customers” is the most important consideration among the social responsibilities of a corporation.

For SANYO, product quality comprises not only safety, reliability and usability of the product itself and its basic functions, but also good pre-sales services such as instruction manuals, warning labels, and a way of providing product information, including its usage, and after-sales servicing. The interface with the customer in servicing is vitally important. The Basic Principles about Quality are inseparably linked to The Basic Principles about Customer Relations.

In fiscal 2004, a company-wide innovation program was started to thoroughly implement the “Quality First” principle targeting a reconfigured quality assurance system.

With this in view, quality-control section in head office implemented purchase inspections to confirm that our brands of products in the marketplace met the standards of the “Electrical Appliance and Material Safety Law of Japan” and on-the-spot inspections of each manufacturing or importing operation to confirm proper quality control and legal compliance. By these measures, we strengthened the system of enforcing strict compliance with the relevant laws.

The approach was not restricted to manufacturing but also included a wide variety of workplaces in sales and distribution. In all such workplaces, inspections, using our own check sheets for quality achievement, were made of systems designed to ensure product quality and the system of risk management, promoting an ongoing program of quality-control improvements in the PDCA cycle.

From fiscal 2005, our main policies and objectives have been to “strengthen the global quality assurance system”, “strengthen quality risk management”, and to “implement overseas our information system for customer satisfaction.”

Elements of Customer Satisfaction

- **Customer satisfaction in a broad sense**
  - (4) Social aspects
    - Brand trust
    - Corporate ethics
    - Environmental consciousness
    - Social contributions
  - (3) After-sales service
    - Repair
    - Regular maintenance, etc.
  - (2) Before-sales service
    - Consultation with customers
    - Advertisements, etc.
  - (1) Products
    - Standard quality (no faults, etc.)
    - Attractive quality (added value, etc.)

- **Customer satisfaction in a narrow sense**
  - (4) Social aspects
  - (3) After-sales service
  - (2) Before-sales service
  - (1) Products
Elements of Customer Satisfaction

Customer satisfaction in a broad sense

Customer satisfaction in a narrow sense

1. Products (product quality)
   - Standard quality (no faults, etc.)
   - Attractive quality (added value, etc.)

2. Before-sales service
   - Consultation with customers
   - Advertising, etc.

3. After-sales service
   - Repair
   - Regular maintenance, etc.

4. Social aspects
   - Brand trust
   - Corporate ethics
   - Environmental consciousness
   - Social contributions

Basic Principle about Quality (established in Jan. 1986)
Offering useful and harmless products that satisfy customers is the most important consideration among the social responsibilities of a corporation, and is the basis for its development. For this reason, we are committed to quality management that places the utmost priority on quality.

Basic Principles about Customer Relations (established in Dec. 1992)

1. Always consider the perspective of the customer and give priority to customer satisfaction.
2. The true target is the hearts of the customers. Always react in a way that will leave a positive impression in the memories of customers.

Basic Policy about Customer Relations (established in Dec. 1992)

1. Build systems that make it easy for customers to approach our group.
2. Respond appropriately to the customer’s goodwill.
3. Actively provide the information that customers want.
4. Incorporate customer’s opinions in management.

In Order to Provide Safe and Reliable Products

Safety Is Assessed in the Largest Product Safety Testing Laboratory

In order to provide safe products that the customer can use with confidence, we built a new Safety Testing Laboratory which, when it opened in February 2004 at SANYO’s Tokyo Plant, was the largest in the industry.

The laboratory engages in preventative safety measures by evaluating and verifying the safety of products and components in continuous operations under a wide variety of the most severe conditions to ensure that none will ever give rise to fire or smoke hazards. Its results are employed in the design and development of products throughout our various divisions.

The combustion gases generated during the tests were “decontaminated” by exhaust-gas processing equipment in the laboratory, with full consideration for environmental protection.

Product Safety Information Is Appropriately Disclosed

The SANYO Group has an unending commitment to harmless, high quality technologies, products and services, and provides safety information for the proper, safe usage of products and services as detailed in the panel on the right.

In the unlikely event that we find a particular product presents any kind of safety problem, we put customer safety first and immediately disclose the information, inspect the suspect part, and repair or replace it to minimize customer inconvenience.

Important announcements are always prominently displayed on our corporate website, and we earnestly request that customers should take note of them in the safe operation of our products.

The Main Methods of Providing Product Safety Information

1. When a product is found to have a safety-related problem, we display an “Important Announcement” on our corporate website, and provide guidance about inspections and repairs.

2. On the theme of proper product usage, we regularly provide lecturers at government organs such as Consumer Centers. With the aim of contributing to consumer education we also produce instructional videotapes on the right way to use products and present them to consumer centers, consumer organizations, schools, fire services, etc.

3. For 26 categories of product that have been used for many years, we have produced a “Tender Loving Care” guidebook that specifies items to be checked and any special care to be taken in their continued use. As well as showing this on our website, we distribute copies to customer via sales outlets or when repairs are made. Basic knowledge and information about batteries and their proper handling is also provided on our website under the title “The Academy of Battery Whys and Wherefores.”

4. Our instruction manuals and product catalogs always provide the telephone numbers of information desks that can advice on usage or other product-related matter.
**In Order to Provide Safe and Reliable Products**

At 104 locations throughout Japan, SANYO home appliances are inspected and repaired.

SANYO Consumer Marketing Co., Ltd. has our after-service organization for consumer home appliances, having 104 locations in a service network as of July 2005 that provides the full range of inspection and servicing for SANYO home electronics products, including peripheral equipment and software.

This organization’s objective is to provide Swift, Reliable and Obliging service that will delight the customers, and it is contributing to customer satisfaction by fast and accurate work. When service engineers visit the homes of customers, they ask for cooperation in filling out questionnaires, to ensure that the customer’s voice is reflected in high quality service.

From April 2004, to increase customer satisfaction by upgrading the skills of service engineers, ten leading and highly skilled “support staff” were appointed to travel around the 104 nationwide locations, in a new effort to teach both technical skills and how to develop a better manner of interacting with the customers. The results of this effort are appearing as high evaluations in opinions expressed by customers and the assessments of customer satisfaction with our servicing by external organizations, and will be used to effect further improvements.

We will continue to take very seriously the opinions of our customers and provide service of such high quality that it will leave them with a lasting impression. Also, by carrying out the proper inspections and repairs and so enabling customers to use their products regularly and habitually, this will therefore reduce the environmental impact of scrapping them.

We value dialog with customers

We set up desks to respond directly to the customers

SANYO has provided information desks to deal with the various matters raised and request made by customers. In our catalogs we show the guidance for purchasing inquiries, and in our instruction manuals we show the guidance for general inquiries and repairs, and accept telephone calls, faxes and letters. Our Customer Center is the general location for all purchase inquiries and questions concerning how to handle products, while our after-service divisions take care of servicing inquiries. Our corporate website also provides similar guidance to the information desks, and provides for discussions via E-mail.

**Appropriate Publicity and Advertising Activities**

To ensure that the appropriate information is sent to our customers, the SANYO Group has specified in its compliance guidelines the requirement for “appropriate advertising” and all public relations and advertising activities are conducted accordingly. In practical terms this means rigorous compliance with the relevant laws within Japan, including antitrust law, act against unjustifiable premiums and misleading representations, unfair competition prevention law, pharmaceutical affair law, copyrights law, trademarks law, act concerning protection of personal information, and the agreements on fair competition. We also rigorously observe the standards and voluntary agreements of the Japan Advertisers Association, Inc. (ethical considerations), the Japan Newspaper Publishers and Editors Association (standards in newspaper advertising), the Japan Magazine Advertising Association (standards in magazine advertising), the National Association of Commercial Broadcasters in Japan (standards in broadcasting), and the Japan Advertising Review Organization. In addition to these, staff responsible for publicity and advertising of home electrical and electronic products participate in in-house training about the fair-competition agreement on the descriptions of home electrical and electronic manufacturing industry, and keep up to date with information on the latest changes.

In order to ensure thorough compliance with the above, SANYO channels all domestic (Japanese) media purchases and advertising creation through the Advertising Dept., which is responsible for the integrated system of controlling advertising. The system also ensures that appropriate expressions in the advertising are used by having parallel reviews performed by a number of responsible staff.

Overseas, we obtain information on advertising restrictions via our agencies in each country, and if these are unclear, we confirm them with the agency concerned and discuss how to proceed.

◆ Compliance Guidelines (Extracts)

**Appropriate advertising**

We will implement appropriate advertising and publicity. We will not use inaccurate description or expressions, nor ones that would mislead our customers.
Responses at the Customer Center

At the Customer Center, dialog is always based on basic principles and policy about customer relations, under the slogan “Fast, accurate and friendly.” The customers are always put first in our efforts to respond.

The Customer Centers are manned all-year round, readily enabling all to call at their own convenience, and specialist staff always stand by to handle specific problems assisted by the introduction of an interactive voice recognition (IVR) system.

In fiscal 2004, opinions expressed by customers were reflected in improvements to our instruction manuals and to product functions, and the hours of operation were extended from the previous 9:00 to 5:00 to 9:00 to 6:30. We also extended the free call service to mobile phones, which had previously been impossible.

From now on, as products are given more sophisticated and complex functions, we will be improving the knowledge and skills of our staff, seeking to provide them with the specialized ability to handle a wide range of inquiries and requests appropriately.

Content of Customer Center Inquiries (in fiscal 2004)

| Total no. of Inquiries | Product operation 46.6% 179 thousand | Servicing 24.3% 90 thousand | Purchase 24.4% 94 thousand | Other Inquiries, etc. 4.6% 18 thousand |

Protecting and Managing Personal Information

In April 2004, a common policy for the protection of personal information, and corporate rules, were drawn up to ensure that personal information is fully protected. At the corporate website, details of the rules affecting the protection of personal information are disclosed, with the site privacy policy.

In fiscal 2004, as well as completing the system to ensure the protection of personal information, a succession of trainings was given to officers and employees of the company to raise their awareness. A handbook on the protection of personal information was also produced and distributed. This covers the legal obligations, group policy, compliance with corporate rules, heightening awareness, identifying the types of personal information, their characteristics, the opportunities to gather it.

In future, in order to ensure the widespread circulation of corporate rules and complete compliance with them, we will soon introduce the PDCA cycle complemented by audits.

Mechanism to Reflect Uses Customer Opinions in Product Development

In order to reflect opinions received from customers in our corporate activities, the opinions and requests made to the Customer Center and to service and other divisions of the company are shared throughout the company over the corporate LAN after being registered in the customer satisfaction information system. The daily accumulation of opinions and requests are analyzed for trends, and problems with products and services identified, which are then reported on a monthly basis via E-mail to top management and the divisions involved.

Further, each business headquarters is, by its own independent methods, conducting dialog with its individual and corporate customers, and sharing the results of this dialog with planning, engineering, quality and manufacturing divisions so as to ensure that they are reflected in new product planning, that quality is improved, and defective products in the marketplace rapidly identified so as to improve the quality of both products and servicing.

On handling personal information
Advancing Universal Design

Creating Products that are Safe and Easy-to-Use for All Customers

In order to satisfy all customers who use our products, it is vital to provide products that are equally safe and easy-to-use for everyone. Aware of this, the SANYO Group gives detailed consideration to the entire process of product development, recognizing the needs of the widest variety of customers, including the elderly, those with disabilities, children, expectant mothers, etc., so as to improve ease of use.

The SANYO Universal Design Guide and Typical Products

Easy-to-understand
Use terms and displays that anyone can understand.

Beautiful
Pursue elegant shapes which would engender a feeling of attachment

Easy-to-use
Make operation simple so that anyone can do it.

Very safe
Give full consideration to safety in use.

No effort to use
Require no special effort by anyone to use it.

 Moving Kitchen: XG-70

- A simple switch operation alters the counter height to anywhere between 73 and 80cm.

IH Cooker: IC-BF1 (C)
- Audio guide provides audible confirmation of operating procedures.
- Braille labels on the operating panel and the plug to assist operation and plug-in location.
- Guard ridge around the top plate prevents saucepans slipping off.

Drum-Type Washing Machine/ Drier: AWD-GT961Z (S)
- Top-open drum, which combines advantages of drum-type and vertical units, for easy insertion and removal of laundry.
- Non-detergent cycle and water-purifying cycle to remove bacteria, using electrolyzed-water for health and the environment consideration.
- Child lock prevents tampering.

Bone-Conduction Telephone: TEL-KU2
- A cordless handset using bone conduction that allows hard-to-hear voices to be heard.
- “Slow” setting can slow down conversation to make it easier to follow.
- Has loud ring tone and light display to warn of incoming calls.
- Large, highly legible tilting LCD and large buttons.

Rice Cooker: ECJ-GZ10 (SP)
- Audio guide provides audible confirmation of the state of the rice and the operating procedures.
- The large, highly legible display prevents operational errors.
- Simple, easy-to-use center control keys.

Basic Policy for Procurement Activities

The SANYO Group conducts its business activities with its corporate slogan “We Care for People and the Earth”, seeking to realize symbiosis with the environment, the world and the society as an enterprise in the 21st century.

- Global and open procurement
  We will perform open procurement activities both in Japan and overseas, providing equal opportunities to all suppliers and seeking always the best quality, price, and delivery date to give the highest possible satisfaction to our customers.

- Fair and transparent selection of suppliers
  We will, in selecting our suppliers, strive to make strictly fair and impartial overall assessment based on our group’s procurement standards.

- Partnership
  We will, through fair business dealings with our suppliers, deepen mutual understanding as a “good partner” to fulfill each role and build relationships of mutual trust.

- Symbiosis with the environment
  We will advance “green procurement” that is the purchase of goods with little impact on the environment preferentially from suppliers positive to environmental protection, and seek to realize symbiosis with the environment.

- Legal Compliance and Information Management
  We will, in procurement activities, observe strictly the laws and social norms of Japan and the other countries related to our business operations. We also keep strict control of the proprietary information that we may acquire through our procurement activities in order to maintain its confidentiality.

The SANYO Group seeks to form good partnerships with its suppliers that enable both parties to contribute to society, and seek the understanding and cooperation of its suppliers for these efforts.
Working with Our Business Partners

The SANYO Group purchases a wide variety of materials and components, and we work with our suppliers to maintain good relationships based on fair dealing, protection of their proprietary information in joint development work with them and legal compliance.

To Maintain Fair Business Relationships

We ensure fair-trading practices with our suppliers.

The SANYO Group thoroughly and rigorously enforces the regulation in our Compliance Guidelines that calls for fair dealings with our suppliers.

In fiscal 2004, each company in the group held meetings to announce its policy towards suppliers, materials purchasing departments held a variety of explanatory meetings, and we actively participated in exchanges of opinion at exhibitions of materials arranged by supplier.

We have also taken the opinions of our suppliers into account in our product planning, production activities and reduction in materials cost, etc. The results of such dialog or communication are reported, from the material purchasing department in each company, to each company’s president and other related departments such as product planning, technology and design development, quality control and production planning.

In order to be able to supply the market with better products, we intend to continue exchanges of information with our various suppliers, building good partnerships with them based on fair business practices.

Basic Policy for Procurement Activities

The SANYO Group conducts its business activities with its corporate slogan “We Care for People and the Earth”, seeking to realize symbiosis with the environment, the world and the society as an enterprise in the 21st century.

- **Global and open procurement**
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  We will, through fair business dealings with our suppliers, deepen mutual understanding as a “good partner” to fulfill each role and build relationships of mutual trust.

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  We will, in procurement activities, observe strictly the laws and social norms of Japan and the other countries related to our business operations. We also keep strict control of the proprietary information that we may acquire through our procurement activities in order to maintain its confidentiality.

The SANYO Group seeks to form good partnerships with its suppliers that enable both parties to contribute to society, and seek the understanding and cooperation of its suppliers for these efforts.

Compliance with the Subcontract Act

The group, in procuring materials and components, respects the provisions of the Act against Delay in Payment of Subcontract Proceeds, Etc, to Subcontractors (“the Subcontract Act” and avoids delays in payment to each subcontractor even where the act does not apply. According to the Act revised on April 1, 2004, the SANYO group has reconfigured its system for ensuring compliance with the Subcontract Act and, through the system, not only increases awareness of subcontract issues among officers and staff in related divisions but also checks the state of subcontract dealings in surveys of compliance with the Antitrust Law (see the following section), seeking to ensure full compliance and prevent non-compliance before it can arise.

The SANYO Group has also prepared internal rules on compliance with the Subcontract Law. Under its provisions, each company or headquarters has created a compliance committee on subcontract law, ensuring thorough awareness of the legal issues and encouraging the proper transactions with subcontractors.

Surveys of Compliance with the Antitrust Law

The SANYO Group confirms compliance with the provisions of the Antitrust Law in business and seeks to prevent any non-compliance before it can take place, by implementing regular surveys of managers in divisions, such as sales, purchasing, engineering and production.

The surveys are carried out in face-to-face interviews with managers by a person responsible for promoting compliance with the Antitrust Law in each company, using our own checklist based on the Guidelines provided by the relevant authority. The results of the surveys are reported to each company’s president, and when concerns arise over any item of the checklist, the necessary improvements are enforced.

In fiscal 2004, in addition to the previous system of interviews, a new written questionnaire was introduced, and the number of those surveyed was increased. Several items of concern were identified and improvements were immediately enforced.

Protecting Suppliers’ Proprietary Information

In 1992, SANYO provided, in our internal rule on trade secret management, the policy on protecting proprietary information and the system for ensuring compliance with them. Therefore, proprietary information is managed and protected according to the internal rules and confidentiality agreements signed with our business partners.

In fiscal 2004, there was a review of IT-related internal rules, including IT security*, as part of efforts to strengthen control over the handling of electronic information. No leakage of proprietary information of our business partners took place in fiscal 2004.

We are committed to the ongoing protection of all proprietary information of our business partners.

* Rules concerning information security, in-house networks and the use and scrapping of PCs.
Working With Our Shareholders / Investors

The SANYO Group, in order to secure profits for shareholders and investors while at the same time ensuring sustainable progress as an enterprise, engages in investor relations (IR) activities with the stress on the disclosure of information and communications.

IR Activities Based on the Appropriate Disclosure of Information

Our policy for information disclosure and Investor Relations (IR) activities

SANYO makes appropriate disclosures of important information to shareholders, investors and other stakeholders, not only the financial aspects but also covering environmental and other social responsibilities.

We see the transparent, unbiased and continuous disclosure of information to our shareholders and investors as being of prime importance. While we naturally provide timely information in conformity with timely disclosure rules of stock exchange of Japan, we also pursue a policy of timely and unbiased disclosure that goes beyond regulatory requirements in the form of meetings to explain our financial statements and our business strategy. By so doing, we assist shareholders and investors in their assessments and investment decisions, and seek to ensure smooth and equal trading in securities (SANYO shares and bonds).

Concerning our IR activities, we complement our information disclosure by active dialogs with our shareholders and investors, and are committed to reflecting their opinions in our corporate activities, seeking to increase our corporate value and to build enthusiasm for the company.

The Situation with Respect to Shareholders

Shareholdings by category of shareholder

(As of March 31, 2005)

As of March 31, 2005, there were 257,255 shareholders, about a 40,000 increase over the previous year.

- Securities companies: 1.7%
- Financial institutions: 38.5%
- Individuals and others: 43.3%
- Foreign citizens: 8.6%
- Other companies: 7.9%

Socially Responsible Investment (SRI)

The concept of socially responsible investment, which accords importance to a corporation's activities towards the environment and society in reaching investment decisions, has been rapidly gaining influence not only in the West but also more recently in Japan. SANYO, by disclosing both its financial situation and activities in discharging its responsibilities to society, including the environment, seeks to approach would-be long-term investors who make an investment in terms of SRI.

SANYO is currently included in the Morningstar Socially Responsible Investment Index and a number of Japanese SRI funds and eco-funds.

IR Activities that Meet Shareholder and Investor Needs

SANYO, while following its own IR policy, seeks to meet the needs of shareholders and investors in different situations and with different requirements by its IR activities. Through these IR activities, the opinions we receive from shareholders and investors are immediately informed from the departments responsible for IR to top management so that they can be reflected in future business and IR activities.

Shareholder Meeting with the Stress on Comprehensible Reports and Dialog

SANYO's ordinary general meeting for shareholders, which attracts over 1,000 participants every year, is held with the aim of giving clear and readily comprehensible reports on the business, and responding respectfully to questions and opinions from shareholders.

For the many shareholders who cannot attend our shareholder's meeting, we record the proceedings and disclose them by distributing the video recordings under the heading “Investor Relations” on our corporate website shortly afterwards. In order to get as many shareholders as possible to exercise their voting rights, we have also made it possible for them to vote over the Internet.

Active Communications with Institutional Investors and Analysts

For institutional investors and analysts, we frequently provide opportunities to visit our factories in Japan and overseas. Also, explanatory meetings for our financial statements are held quarterly, with an annual meeting to explain corporate policy and business strategy, and individual visits follow the publication of our financial statements. We also cooperate actively with requests for interviews from institutional investors and analysts.

Creating Opportunities to Provide Individual Shareholders and Investors with Information

We provide a wide range of information to individual shareholders and investors through our business reports and other publications mailed to them and our corporate website available to them. Business reports are designed to ensure that the content is readily understandable by all shareholders, and summarizes the nature of our business and financial statements using many photographs and graphs.

In fiscal 2004, we began a new initiative by participating in an IR event addressed to the individual investor. This event was sponsored by security companies, and our booth attracted approximately 3,500 individual investors, enabling us to give far-reaching explanations of our attractions and our business activities.

IR Information Disclosure on Our Website

“Investor Relations” on our website includes information on a wide variety of SANYO Group activities, and displays or receives requests to send materials such as annual reports, fact books, and other information. To encourage two-way communications with our shareholders and investors, the forms requesting these materials have spaces for adding opinions about SANYO.

In fiscal 2004, we updated the site with the stress on increasing the ease of use, navigation and search functions.
The SANYO Group seeks to provide fair employment and treatment, and to secure fully the health and safety of employees. To ensure the growth of the enterprise, and of all its employees, we are working to strengthen educational and training programs for employees and to improve and expand our personal system.

**Fair Employment and Treatment**

**Our Basic Policy on Human Resources**

As our policy on human resources, we believe “the foundation of the company is people: improve yourself, and utilize the abilities of others.” Every employee should feel that their job is worthwhile, while we provide an environment that enables each of them to do their best.

We have been implementing measures on our policy so that the talents of individuals are actively cultivated and are assigned to relevant jobs at appropriate times, with fair and impartial assessments of their work.

Furthermore, recruitment, employment and treatment of employees shall show no discrimination on the grounds of gender or personal history, while we strive to create workplaces that give full respect to the individual human rights and individuality of all employees.

**The Schematic Diagram of Human Resources Policy**

- **Human resources policy** — “the foundation of the company is people: improve yourself, and utilize the abilities of others”
  - Improved corporate competitiveness in a tough global market
  - Establishment of high profitability framework
  - Satisfaction of individuals and contributions to society attained simultaneously
  - Creation of higher added value
  - Self-realization and increased motivation
  - Formulation of “challenge teams” (associates)
  - Building a partnership between the corporation and its employees
  - Environments that allow for challenge and ability development
  - Cultivation and utilization of human resources
  - Evaluation and treatment based on individual performance

**The Condition of Our Employees**

The SANYO Group is operating businesses on a worldwide scale, and as of March 2005, it employed a total of 96,023 around the world.

At our overseas locations, local people were employed mostly in the manufacturing division, but in recent years, as our operations have become more global, local employees have also been employed in research and development, management, quality control and service division, etc. In the future, we plan to further enhance our personal system such as work evaluation, employment and education.

- **The number of Employees by gender (Non-consolidated)**

<table>
<thead>
<tr>
<th></th>
<th>2000</th>
<th>2001</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>16,111</td>
<td>13,903</td>
<td>13,066</td>
<td>13,652</td>
<td>12,834</td>
</tr>
<tr>
<td>Women</td>
<td>4,001</td>
<td>3,336</td>
<td>3,101</td>
<td>3,157</td>
<td>2,853</td>
</tr>
<tr>
<td>Total</td>
<td>20,112</td>
<td>17,239</td>
<td>16,167</td>
<td>16,809</td>
<td>15,687</td>
</tr>
</tbody>
</table>

- **The number of Employees by gender (Consolidated)**

<table>
<thead>
<tr>
<th></th>
<th>FY2004</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Men</td>
<td>49,844</td>
<td>49,844</td>
</tr>
<tr>
<td>Women</td>
<td>46,179</td>
<td>46,179</td>
</tr>
</tbody>
</table>

- **The number of employees by region in fiscal 2004 (Consolidated)**

<table>
<thead>
<tr>
<th>Region</th>
<th>Men</th>
<th>Women</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>North America</td>
<td>2,210</td>
<td>53,203</td>
<td>55,413</td>
</tr>
<tr>
<td>Europe</td>
<td>2,447</td>
<td>38,113</td>
<td>40,560</td>
</tr>
<tr>
<td>Asia</td>
<td>6,076</td>
<td>1,312</td>
<td>7,388</td>
</tr>
<tr>
<td>Japan</td>
<td>28,231</td>
<td>5,692</td>
<td>33,923</td>
</tr>
<tr>
<td>Others</td>
<td>50</td>
<td>50</td>
<td>100</td>
</tr>
</tbody>
</table>

- **Average wages / length of service per employee (Non-consolidated)**

<table>
<thead>
<tr>
<th></th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Average wages</td>
<td>6,284,918</td>
<td>6,523,436</td>
<td>6,614,362</td>
</tr>
<tr>
<td>Average years</td>
<td>19 years</td>
<td>19 years and 4 months</td>
<td>19 years and 3 months</td>
</tr>
<tr>
<td>of employment</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Men</td>
<td>19 years and 6 months</td>
<td>19 years and 10 months</td>
<td>19 years and 7 months</td>
</tr>
<tr>
<td>Women</td>
<td>16 years and 10 months</td>
<td>17 years and 3 months</td>
<td>17 years and 8 months</td>
</tr>
</tbody>
</table>
SANYO, in accordance with the group’s Principles of Conduct and Compliance Guidelines, seeks to promote fair and impartial recruiting practices. Recent graduates and those already in employment are recruited and considered for employment in accordance with the law and without limitations of gender or nationality.

As a result, due to the increasing participation of women in society and the internationalization of our business, the proportion of women and of non-Japanese among recent graduates employed in clerical work in Japan has risen. Changing attitudes to employment by young people and our desire to recruit exceptional candidates have led us to consider the appointment of those who have been working for up to three years at another company since graduation on exactly the same terms as new graduates (i.e., for potential employment).

We also intend to make more effort into recruiting mid-career candidates, particularly for positions in engineering divisions that are strategically important to our business.

### Employment Figures (non-consolidated)

<table>
<thead>
<tr>
<th>Job Type</th>
<th>2002</th>
<th>2003</th>
<th>2004</th>
</tr>
</thead>
<tbody>
<tr>
<td>Office Worker</td>
<td>65</td>
<td>118</td>
<td>143</td>
</tr>
<tr>
<td>Engineer</td>
<td>210</td>
<td>261</td>
<td>232</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>245</td>
<td>345</td>
<td>348</td>
</tr>
<tr>
<td>Female</td>
<td>30</td>
<td>34</td>
<td>27</td>
</tr>
<tr>
<td>New Graduate/</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Experienced</td>
<td>233</td>
<td>239</td>
<td>205</td>
</tr>
<tr>
<td>Experienced</td>
<td>42</td>
<td>140</td>
<td>170</td>
</tr>
</tbody>
</table>

### Expanding Employment Opportunities for Women

SANYO formed a joint management and labor investigative Positive Action* Committee in 1993 that regularly discusses issues such as how to expand quickly women’s employment opportunities.

Measures to prevent sexual harassment include the establishment of a sexual harassment hotline in 1999 and provision of trainings to improve employee awareness and create pleasant working environments for women.

We intend to ensure that the necessary policies are implemented so that employees can work regardless of gender.

* The voluntary and proactive efforts of a company to eliminate actual gaps that arise between male and female workers due to fixed concepts about role division based on gender and past practice.

### Reemployment after Retirement (at age 60 or later)

SANYO actively encourages reemployment, and has responded to employees who wish to use their skills after their retirement by introducing a system of reemployment and part-time employment, etc.

Company policy calls for expansion of reemployment after retirement.

### Employment of People with Disabilities

We have been actively increasing job opportunities for those with disabilities so that they can work with others and enjoy the satisfaction of working.

Currently, disabled employees are working in various offices and facilities where their abilities can be optimally developed, including specially designated subsidiaries SANYO Heart Ecology Co., Ltd., which cultivates flowers and vegetable seedlings, and Harima SANYO Industry Co., Ltd., which mainly packages batteries. The employment ratio*1 for the disabled in the SANYO Group was 1.95% as of June 2005.

We also intend to increase the number of such specially designated subsidiaries, and to create stable workplaces and employment opportunities for those with disabilities throughout the entire group.

* These are subsidiaries that satisfy certain conditions, including employing those with disabilities in at least 20% of the number of workforce. Under the provisions of the law for employment of the disabled, the number of workforces of such subsidiaries can be consolidated with those of the parent company, in calculating the ratio of disabled employees for the parent company.

* This was a calculation made for SANYO, two specially designated subsidiaries, and 12 subsidiaries that have been authorized for consolidation in the disabled persons employment grouping. Calculations from fiscal 2004, as reported to the Ministry of Health and Welfare.

* This is a new system introduced with a revision of the law for employment of the disabled that took place in October 2002, by which authorization is given to companies that meet certain conditions and whose parent company already possesses specially designated subsidiaries, in which case such companies, like the specially designated subsidiaries, can also be consolidated with the parent company’s employment of disabled persons.

### Trends in the Ratio of Disabled Employees

<table>
<thead>
<tr>
<th></th>
<th>SANYO Electric Co., Ltd.</th>
<th>The SANYO Group (calculated beginning in 2004)</th>
<th>Japanese private corporation average</th>
</tr>
</thead>
<tbody>
<tr>
<td>June 2001</td>
<td>1.68</td>
<td>1.49</td>
<td>1.60</td>
</tr>
<tr>
<td>June 2002</td>
<td>1.98</td>
<td>1.47</td>
<td>1.46</td>
</tr>
<tr>
<td>June 2003</td>
<td>1.97</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>June 2004</td>
<td>1.96</td>
<td>1.48</td>
<td></td>
</tr>
<tr>
<td>June 2005</td>
<td>1.95</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Human Resources Policy and Cultivation

Cultivating Human Resources

We support self-realization as well as increased motivation of employees through extensive training programs to cultivate human resources. These programs are not imposed by the company but are offered to help employees develop their own career plans, and provide a diversity of opportunities to employees who have solid targets for their lives and are making continuous efforts to achieve them.

Supporting the Balancing of Work and Family Life

In addition, we are creating a pleasant working environment for employees who want to balance work and family life. To this end, we have introduced systems for maternity, child care and nursing (maternity leave, leave or shorter working hours for child care, family care or nursing, and reemployment of ex-workers who resigned for these reasons).

In future, in accordance with the law advancing measures to support the upbringing of the next generation (passed in April 2005) we intend to further increase and enhance these systems.

◆ The SANYO Group Human Resources Cultivation Map (as of April 2005)

◆ Work and Family Support

<table>
<thead>
<tr>
<th>Content</th>
<th>SANYO</th>
<th>Legal requirements</th>
</tr>
</thead>
<tbody>
<tr>
<td>Leave for child care</td>
<td>Up to the end of March after reaching age one year</td>
<td>Up to age one year</td>
</tr>
<tr>
<td>Child-rearing system (shorter working hours)</td>
<td>Up to three months after reaching the age of three, The first year after enrolling in elementary school</td>
<td>Up to the age of three</td>
</tr>
<tr>
<td>Restrictions on Overtime Work</td>
<td>Upon application by those bringing up children until they graduate from elementary school</td>
<td>Upon application by those bringing up children under elementary school age</td>
</tr>
<tr>
<td></td>
<td>Up to 20 hrs in any one month</td>
<td>Up to 24 hrs in any one month</td>
</tr>
<tr>
<td></td>
<td>Up to 150 hrs in any one year</td>
<td>Up to 150 hrs in any one year</td>
</tr>
<tr>
<td>Family Support System</td>
<td>Grant of 500,000 yen on birth of first child, 700,000 on birth of second, 900,000 on birth of third, Child-rearing assistance: 100,000 yen per year, etc.</td>
<td></td>
</tr>
<tr>
<td>Special leave for wife's maternity</td>
<td>Up to five days paid leave.</td>
<td></td>
</tr>
<tr>
<td>Welfare Loan System</td>
<td>Up to 2 million yen for child-rearing expenses.</td>
<td></td>
</tr>
<tr>
<td>Nursery Care Room</td>
<td>Available in some workplaces.</td>
<td></td>
</tr>
<tr>
<td>Home Nursery Service</td>
<td>Discount tickets issued up to third grade of elementary school.</td>
<td></td>
</tr>
</tbody>
</table>
Fair Assessment and Fair Treatment

Achievement-Based Pay Scales

SANYO makes clear what is expected of each and every employee and discloses the elements of performance on which assessments will be based, and evaluates according to the nature of the work and the success in performing it. This motivates employees to try for the very best results, building a corporate climate that encourages each employee’s creativity and personal growth and seeks to make SANYO a company that provides employees with more rewarding experiences.

Target Management System

A target management system, called the “challenge system,” has been introduced, as a suitable tool for evaluating the performance and achievement of each employee through their efforts to fulfill clear-cut job targets. Assessing the results achieved by each employee not only yields the appropriate pay scales and promotions but also leads to work that generates higher added value and the personal growth of the individual. The results of the assessments are explained to each employee and are used in setting targets for the subsequent year.

The System of Pay Scales and Promotions

The new system of pay scales was introduced in fiscal 2000, and the previously implemented system of uniform annual raises was abolished in 2001, when an assessment-based annual pay raise system according to which the pay raises for all workers are determined based on their individual annual performances was introduced. The range of raise assessment has been set fairly wide so that pay raises are more proportional to performance results.

Promotions, too, are no longer based on seniority, but on a review of the actual requirements of the position. Age limitations for promotion to each position were abolished. As a result, employees who achieve results can be promoted however, young they are, and we are seeing managers in their 20s.

Our Approach of Employee Inventions

SANYO, to provide employees with incentives for invention, has set up the inventor reward system for employee inventions and internal “Incentive Rule” to reward inventions made within the company. The rule covers rewards when the application is made, early rewards for outstanding inventions when they appear to be particularly promising, actual payments for inventions that are used by SANYO, and rewards to the inventor equivalent to a part of the royalty income from other companies that the patent may generate, and also to a part of any income produced by contributions to cross-licensing agreements, etc. Patents that make a significant contribution to the company’s business and results are eligible for special awards at the annual Convention of Engineering Invention*, etc., where employees’ achievements in inventions are recognized and publicized internally.

SANYO has always updated the Incentive Rule appropriately in response to changes in the social environment, and when Japanese Patent Law was changed (came into force in April 2005), affecting the provision of employee inventions, we immediately amended the rule and the inventor reward system accordingly. This involved not just discussions among employees and modification of level of the rewards but extended to future changes in the rule to cover in-house know-how that does not lead to a patent application.

However, there is no well-established methodology for appropriate evaluation of inventions. We are also aware that those who are eligible for rewards are not necessarily regular employees or retirees of the company but may also need to include those dispatched temporary from other companies. We therefore intend to keep the provisions of the Incentive Rule under review.

In fiscal 2004, rewards were given in accordance with the provisions of the Incentive Rule, as in previous years, but in fiscal 2005 we intend to implement them in accordance with revised rule that reflect the changes in Patent Law.

SANYO does not reflect achievements in invention in regular personnel treatment.

* This is an event in the SANYO Group’s engineering calendar. It is mainly attended by engineers, introducing the results of their research and reporting on the development of certain topical products. It is held with the aim of stimulating exchanges between engineers and their professional growth. It is attended by our top management.
Building Good Management/Labor Relations

Encouraging Dialog with the Union

The SANYO Group considers dialog and good relations between the company and its employees and their union as very important. Discussions of working conditions, etc., frequently take place between representatives of SANYO and representatives of the SANYO Electric workers’ union of which employees of SANYO and its main domestic subsidiaries become a member (membership about 20,000). Leaders of both management and union attend the Joint Management-Labor Conference which is held regularly. At the Joint Management-Labor Conference, top management explains management policy and listens to the voices of employees from the union side, and seeks to reflect them in management of the company. Joint Management-Labor Conferences are also held regularly at each facility, with similar efforts to achieve mutual understanding.

Focusing on Occupational Health and Safety

Policy

When a series of serious major disasters occurred in Japanese manufacturing industry in 2003, the SANYO Group sets important objectives for fiscal 2004 to strengthen our risk management system and to preserve and improve the health of employees, and this significantly strengthened health and safety systems.

The risk management system was strengthened not only for manufacturing but also for sales divisions, in both of which procedures for reporting and other measures in health and safety systems were reviewed. This resulted in setting up frameworks and procedures to ensure that more accurate information on health and safety would be more rapidly conveyed from each workplace to top management.

From fiscal 2005, past industrial accidents have been analyzed in detail, and we took thoroughgoing measures to prevent and reduce the occurrence of similar industrial accidents. In terms of health and hygiene management, we implemented thoroughgoing health checks with follow-up where indicated by the results so as to preserve and improve the health of employees.

Basic Policy for Health and Safety

1. Achieve zero industrial accidents in the workplace
2. Promote overall health
3. Hold health and safety activities for all employees

Action Policy for Fiscal 2005

Safety Management
Reduce industrial accidents arising from administrative and material factors

Health and hygiene management
Strengthen mental health management, commit to measures needed to prevent health impairment through overwork, and rigorously implement follow-up diagnoses after health checkups.

The Damage Caused by the Niigata-Chuetsu Earthquake

The Niigata-Chuetsu earthquake that struck on 23 October 2004 caused heavy damage to the group’s semiconductor device production facilities at Niigata SANYO Electronics Co., Ltd. Production was forced to a halt and some employees were required to wait at home. We adopted the following measures towards employees affected by the earthquake.

In terms of industrial accidents, four accidents took place due to falling objects and obstructions when fleeing for safety, and one of the victims received treatment in hospital. However, there were no serious injuries.

Employees working at Niigata SANYO Electronics were dealt with as follows:

- Employees unable to attend for work from the day of the earthquake on 23 October until November 8 received full pay.
- Employees unable to attend for work from November 8, 2004 through March 10, 2005, received 60% of their pay.
- Every employee was retained in employment.
- Employees whose homes were damaged or for whom commuting to their homes would have been difficult were housed in the dormitories for single men and single women which escaped damage.
- Employees who assisted in the restoration work were provided with lunch and evening meals at company expense (until 8 Nov. 2004)
- Cash gifts were made to express sympathy for the disaster.

For the Areas Surrounding Niigata SANYO Electronics, SANYO took the following actions:

- Provided relief supplies (food and drink, etc.) to the City Hall and the immediately surrounding areas.
- Semiconductor company personnel volunteered to serve the local inhabitants.
The Priority on Health and Safety

Activities for Health and Safety

The SANYO Group’s health and safety system is under the overall control of the Officer responsible for General Affairs/Human Resources Administration, with local organizations for health and safety having been formed under the control of general managers in each division. There is also a Safety and Health Committee formed of representatives of management and labor, industrial doctors, and members of the health insurance society. The Central Health and Safety Committee assesses the previous year’s activities and decides policy for the coming year, while at each division, local Health and Safety Committees practice health and safety management with methods according to the characteristics and the situation of each business under the group-wide health and safety action policy.

Every year, a group-wide Health and Safety Conference is held with approximately 1,300 participants including top management and persons in charge of the workplace at each division. The conference participants achieve a common awareness of the current situation and report advances made in workplace activities, in order to heighten awareness of health and safety issues.

When industrial accidents have taken place, an accident report is sent to the person in charge of health and safety and measures to prevent reoccurrence of similar accidents are taken, and at workplaces where there has been an increase in the number of industrial accidents occurring, the Health and Safety Committee takes a leading role in arranging patrols and inspections to ensure thoroughgoing implementation of accident prevention measures.

At divisions where the Occupational Safety and Health Management System* has been introduced, the review of risk management and internal audits are carried out to ensure ongoing continual improvements in the management system, as well as having the local Health and Safety Committee hold meetings to report successful improvement activities.

* In order to further reduce industrial accidents and to advance the systematic and stable management of health and safety by successfully inheriting the proper experience and functions of the person responsible for health and safety, etc., the Plan-Do-Check-Act (PDCA) cycle is followed, clarifying related processes and forming an ongoing continual system.

Mental Health Measures

To ensure the physical and mental health of employees, SANYO has a number of measures for mental health.

First, mental health trainings, primarily for managers, and calling upon outside lecturers, are given to ensure more accurate and deeper understanding of mental health in the workplace and to encourage recognition of problems as they arise.

From fiscal 2003, mental health information is being provided to employees over the corporate intranet. In practical terms, this means providing checklists for self diagnosis and introductions to the counseling and other services provided by industrial health centers in each location. For managers actually responsible for health and safety, possible practical approaches to care are listed, and they are made aware of their role in linking their staff to industrial doctors, or staff in charge of employee health management, or consultants and other outside specialists.

As a result, referrals from managers or senior staff are increasing, and early recognition of problems is leading to the best possible handling of them.

We also takes its own distinctive approaches at each location. Activities to heighten awareness of health care are performed, such as the distribution by E-mail of “Health Care Mail” including a wide spectrum of information besides mental health and education of “active listening” for mental health counseling, in close association with the industrial doctors and other medical staff of the local industrial health centers.
Communications with Local Communities

Providing Opportunities to Visit Factories

As part of its communications with local communities, each SANYO factory actively encourages visitors, whether as part of education in the schools or as training of central and local government officials. In fiscal 2004, a total of 9,724 visitors of 355 groups visited when the 6 factories’ visits were combined.

The Daito Factory

The Daito Factory welcomed a party of about 100 children of fifth grade in elementary school and showed them over the digital camera production lines, and introduced them to SANYO’s environmental preservation activities. We also gave them an opportunity to use the products in taking photographs of each other. The children reported that they had “enjoyed themselves” or “learned something.” The teacher also told us that it had been educationally valuable to be able to hold one of the actual printed circuit boards in his hands and look at it.

The Shiga Factory

The Shiga Factory was asked to cooperate by helping students of Technical High School in Osaka with their post-graduation course studies. A total of 31 came—second-year students and the teacher responsible for career counseling for them. We had them visit the integrated production line for automatic washing machine/driers. To deepen their understanding of the factory we gave them detailed explanations of the main processes. The students were interested in the notice-boards on which the technical training given to employees and target setting by employees were displayed, looking at them attentively.

Social Contribution Activities

Volunteer Activities by Employees

The “Environment for All” Campaign

The SANYO Committee to Encourage Volunteers, set up by the management and labor, has been carrying out the Environment for All campaign on the themes of environmental preservation and international cooperation since 1999. Its main activity is an overseas work camp in Sarawak, Malaysia where pollution of river water caused by extensive destruction of forests has become a problem.

In October 2004, the fifth overseas work camp was held and ten employees from the SANYO Group participated. They stayed in one of the local villages and cooperated with the residents, building and installing water tanks and piping for the water supply system to catch water for daily living.

International Coastal Cleanup Activity

The SANYO Group endorsed the aim of International Coastal Cleanup Activities started by the US nonprofit group, the Ocean Conservancy and has been participating since 1992. Worldwide in scope, it is intended not only to clean the beaches but also to survey the quantity and types of garbage left on them. Its purpose is to formulate environmental protection measures based on the analysis of pollution sources. A total of 972 employees of the SANYO Group had participated by the end of 2004.
Social Contribution Activities

Supporting Employee Volunteer Activities

Volunteer Vacations / Volunteer Temporary Leaves

SANYO employees wishing to take part in volunteer or community activities for local community on workdays are allowed to take up to six extra paid holidays per year. Employees planning to participate in long-term volunteer activities are allowed to take temporary leaves for a period from one month to less than a year.

◆ Examples of past activities

Volunteer Vacations
Participation in overseas work camps, mangrove planting on Iriomote island, support of welfare facilities, reading volunteers, disaster relief services, and help with a marrow donor registry.

Volunteer Temporary Leaves
Participation in the Overseas Cooperation Volunteers (OCCV) service (including a predeparture training period) and planning and advertising activities for the Japan Marrow Donation Registry Promotion Conference (JMDRRC).

Patronage of the Arts

Supporting Osaka Cultural and Artistic Activities

We are committed to the promotion of art and culture in Osaka, and cultivation of the talents of young artists. We support the Hakujitsukai art promotion group with awards and the Osaka Symphoniker Orchestra with funding.

Inviting Children of Traffic Victims to the SANYO Professional Baseball All Star Games

Every year, we invite children who have lost parents in traffic accidents to the SANYO Professional Baseball All-Star Game that we regularly sponsor. Fourteen years have passed since 1991, when this program started, and the number of children invited has reached 1,650. On the days of games, our employee volunteers guide the children to their seats and distribute box lunches to help them enjoy the event.

◆ Cooperation by the National Agency for Automotive Safety & Victims’ Aid (We commit to the Agency the selection of children and their families who are invited and the contact with them.)

Working with local citizens and NPOs / NGOs, etc.

SANYO is increasing its cooperation with representatives of the local community and local NPOs and NGOs through the participation in volunteer activities for environmental protection, events arranged by local government and local communities activities. From now on, we will seize more such opportunities for effective dialogs to build better relationships.

In fiscal 2005, we plan to participate in the Kansai CSR Forum*, proposed by the Osaka Voluntary Action Center, a Social Welfare Corporation (NPO) in order to have a dialog with NPOs and NGOs more.

◆ The forum, initiated in 2005, provides opportunities to consider the state of corporate CSR and, for those engaged in practical CSR activities, to challenge and inspire each other.

http://cw1.zaq.ne.jp/osakavol/ccc/ccccsr.html
The SANYO Environmental Fund

The completion of the world’s largest photovoltaic power generation system, Solar Ark (in December 2001, see P46) encouraged SANYO to establish “the SANYO Environmental Fund” for many kinds of environmental protection activities. This followed in April 2002, with the amount of the fund reflecting the economic effect of the Solar Ark installation. With its secretariat in the Quality, CS & Environment Unit (now, Corporate Environment Center) of SANYO Electric Co., Ltd., the SANYO Environmental Fund has been financially supporting sincere environmental conservation activities by volunteer organizations and NPOs.

Since the foundation was formed, it has completed its first and second terms, and from April 2004 it has started its third term. Total contributions to 18 projects over the three years from April 2002 through March 2005 totaled approximately 24 million yen.

Main Donation Activities in Fiscal 2004

To support relief activities in the areas affected by the Niigata-Chuetsu Earthquake and Typhoon No.23, charity donation achieved a total of 15 million yen which was presented to Ojiya City and Sumoto City, and to employees affected by the disaster.

To support those affected by the earthquake along the coast of Sumatra and the tsunami that followed in the Indian Ocean, charity donation achieved a total of 4,800,000 yen that was donated to the Japan Red Cross and the Asia Volunteer Center (an NPO). Group companies located in Southeast Asia—the Philippines, Malaysia, Singapore, Indonesia and Vietnam—also engaged in their own independent charity donation activities, and these, with funds from each company, totaled 19 million yen in donations to the various national Red Cross or Red Crescent organizations.

In addition to disaster relief, donations were made and support given for regional exchanges, international cultural exchanges, and the promotion of cultural, academic and sports when we consented to the aim of such activities.

Support and Donations to Various Groups

The SANYO Environmental Fund Support Recipients (April 2002 to March 2005)

<table>
<thead>
<tr>
<th>Name of organization</th>
<th>Location</th>
<th>Theme of activity</th>
<th>FY</th>
</tr>
</thead>
<tbody>
<tr>
<td>Osaka Junior Chamber, Inc.</td>
<td>Chuo-ku, Osaka City</td>
<td>Program to create an abundant earth</td>
<td>2002</td>
</tr>
<tr>
<td>Society for Constructing a Citizen Power Station – Otsu</td>
<td>Otsu City, Shiga Prefecture</td>
<td>Activity sponsored by Otsu Environmental Forum</td>
<td>2002</td>
</tr>
<tr>
<td>Otsu Environmental Forum</td>
<td>Otsu City, Shiga Prefecture</td>
<td>Environment-oriented citizen movement based at the photovoltaic power generation station constructed by citizens</td>
<td>2002</td>
</tr>
<tr>
<td>Anpachi-cho, Anpachi-gun, Gifu Prefecture</td>
<td>Anpachi-gun, Gifu</td>
<td>Planting of ecological trees at Heartia Anpachi, a lifelong learning complex in Anpachi-cho</td>
<td>2002</td>
</tr>
<tr>
<td>NPO Mori-no-kai</td>
<td>Miki-machi City, Gifu Prefecture</td>
<td>Support for maintenance of tropical rain forests and global environmental efforts</td>
<td>2002</td>
</tr>
<tr>
<td>NPO Asia Volunteer Center (AVC)</td>
<td>Kita-ku, Osaka City</td>
<td>South-South Project for mangrove reforestation in Plicat-Biarawak</td>
<td>2003</td>
</tr>
<tr>
<td>Kasa YumeKoko Club</td>
<td>Kasa City, Hyogo Prefecture</td>
<td>Fabrication of a solar car</td>
<td>2003</td>
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<tr>
<td>Osaka Council, Boy Scout Association of Japan</td>
<td>Chuo-ku, Osaka City</td>
<td>Environmentally conscious experiential activities — “We are environmental Pioneers”</td>
<td>2003</td>
</tr>
<tr>
<td>NPO KANKYONET 21</td>
<td>Isezaki City, Gifu Prefecture</td>
<td>Consideration of and actions for countermeasures against global warming</td>
<td>2003</td>
</tr>
<tr>
<td>Youngsters’ Science Festival – Gifu Festival Executive Committee</td>
<td>Gifu City, Gifu Prefecture</td>
<td>2003 Gifu Youngsters’ Science Festival at the Solar Ark</td>
<td>2003</td>
</tr>
<tr>
<td>Amanogawa Cleanup Society</td>
<td>Maruichi City, Osaka Prefecture</td>
<td>Natural environment conservation in Katano City around the Amanogawa River, and support for healthy youth</td>
<td>2003</td>
</tr>
<tr>
<td>NPO Fujitsu Club</td>
<td>Mishima City, Shizuoka Prefecture</td>
<td>Mt. Fuji environmental education software development project</td>
<td>2003</td>
</tr>
<tr>
<td>ECO-SAITAMA</td>
<td>Saitama City, Saitama Prefecture</td>
<td>Ecological living in life-abundant gardens</td>
<td>2003</td>
</tr>
<tr>
<td>Ecosystem Conservation Society Japan</td>
<td>Tosihama-ku, Tokyo</td>
<td>Provision of information and teaching aids, as well as support for leader training to create a special area in Nepal where people can coexist with wildlife</td>
<td>2003</td>
</tr>
<tr>
<td>Otsu Environmental Forum</td>
<td>Otsu City, Shiga Prefecture</td>
<td>Supporting the Otsu Environmental Fund’s raw garbage recycling business “Soil reformation trends and the quality of cultivated vegetables” analyzing business</td>
<td>2004</td>
</tr>
<tr>
<td>Soni National Nature Children’s Center</td>
<td>Soni Village, Uda-gun, Nara Prefecture</td>
<td>Teaching young people the importance of nature through experiences of activities in nature and staying overnight; enriching strengthening their minds bodies in the “Kids’ Adventure Club” and the “SONI Winter Wonderland.”</td>
<td>2004</td>
</tr>
<tr>
<td>Youngsters’ Science Festival – Executive Committee</td>
<td>Gifu City (Science Education, Faculty of Education, Gifu University)</td>
<td>2004 Gifu Youngsters’ Science Festival at the Solar Ark</td>
<td>2004</td>
</tr>
<tr>
<td>NPO Nature Science Club</td>
<td>Logaki City, Gifu Prefecture</td>
<td>Gifu Earth Environment School</td>
<td>2004</td>
</tr>
</tbody>
</table>

A Summary of the SANYO Environmental Fund and the Activities it has Supported

http://www.sanyo-ecokikin.jp (Japanese only)
**List of ISO14001 Certified Companies (as of March 31, 2005)**

<table>
<thead>
<tr>
<th>Type of certification</th>
<th>Domestic/Overseas</th>
<th>Name of company (date of certification acquisition)</th>
<th>Manufacturing/Sales/Other</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Entire GEMS</strong></td>
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<tr>
<td>Domestic</td>
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<tr>
<td>SANYO Electric Co., Ltd.</td>
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<td>SANYO Sales &amp; Marketing Corporation</td>
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<tr>
<td>SANYO Electric Logistics Co., Ltd.</td>
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<tr>
<td>NTT DATA SANYO System Corporation</td>
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<tr>
<td>SANYO Technosound Co., Ltd.</td>
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<tr>
<td>SANYO Multimedia Sales Co., Ltd.</td>
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<td>SANYO MAVIC MEDIA Co., Ltd.</td>
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<tr>
<td>Tottori SANYO Electric Co., Ltd.</td>
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<tr>
<td>Torisan Business Service Co., Ltd.</td>
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<td>Koyes SANYO Industry Co., Ltd.</td>
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<td>Heinra SANYO Industry Co., Ltd.</td>
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<tr>
<td>SANYO Air-conditioners Corporation</td>
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<tr>
<td>SANYO Consumer Marketing Co., Ltd.</td>
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<tr>
<td>SANYO Living Supply Co., Ltd.</td>
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<tr>
<td><strong>Independent</strong></td>
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<tr>
<td>Domestic</td>
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<tr>
<td>SANYO Electronic (Tai-Chung) Co., Ltd.</td>
<td>&lt;9/95&gt;</td>
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<tr>
<td>Kanto SANYO Semiconductors Co., Ltd.</td>
<td>&lt;6/97&gt;</td>
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<tr>
<td>Techno Device Co., Ltd. (included in Kanto SANYO Semiconductors Co., Ltd.)</td>
<td>&lt;5/97&gt;</td>
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<td>SANYO Energy Twibl Co., Ltd.</td>
<td>&lt;10/97&gt;</td>
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<tr>
<td>Tottori SANYO Electric Co., Ltd., Photonics BU</td>
<td>&lt;12/97&gt;</td>
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<tr>
<td>Sendai SANYO Industries Co., Ltd. (included in Tottori SANYO Electric Co., Ltd. Photonics BU)</td>
<td>&lt;12/97&gt;</td>
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<td><strong>Overseas</strong></td>
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<tr>
<td>SANYO Electronic (Tai-Chung) Co., Ltd.</td>
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<tr>
<td>SANYO Industries ILK Limited</td>
<td>&lt;12/96&gt;</td>
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<tr>
<td>Korea Tokyo Silicon Co., Ltd.</td>
<td>&lt;4/98&gt;</td>
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<tr>
<td>SANYO Energy (Hong Kong) Company Limited</td>
<td>&lt;5/97&gt;</td>
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<td>P.T. SANYO Energy Batam</td>
<td>&lt;7/97&gt;</td>
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<td>SANYO Electric Home Appliances Suzhou Co., Ltd.</td>
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<td>Dalian SANYO Cold-Chain Co., Ltd.</td>
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<td>SANYO Semiconductor (Shanghai) Ltd.</td>
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<tr>
<td>Korea Tokyo Electronic Co., Ltd.</td>
<td>&lt;9/97&gt;</td>
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<tr>
<td>SANYO Manufacturing Corporation</td>
<td>&lt;8/97, 11/97&gt;</td>
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<td>Shenzhen SANYO Hualiang Electric Co., Ltd.</td>
<td>&lt;12/97&gt;</td>
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<tr>
<td>SANYO Air-conditioners Manufacturing Singapore Pte. Ltd.</td>
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<td>Korea T T Co., Ltd.</td>
<td>&lt;12/97&gt;</td>
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<tr>
<td>SANYO Electric (Shanghai) Ltd.</td>
<td>&lt;12/97&gt;</td>
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<td>SANYO Component Europe GmbH</td>
<td>&lt;1/98&gt;</td>
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<tr>
<td>SANYO Energy (UK) Company Limited</td>
<td>&lt;1/98&gt;</td>
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<tr>
<td>Dongguan Huajiang SANYO Motor Co., Ltd.</td>
<td>&lt;2/98&gt;</td>
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<tr>
<td><strong>Note 1:</strong> Tottori SANYO Electric Co., Ltd. LED Business Unit in the last fiscal year was changed to Photonics BU. Tottori SANYO Electric Co., Ltd. LCD Business Unit was integrated to SANYO EPOS Ion Imaging Devices Corporation.</td>
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<tr>
<td><strong>Note 2:</strong> Since the last fiscal year, SANYO Home Appliance Vietnam Corporation was changed to SANYO HA Asean Corporation, Ltd., Tianjin Lantian SANYO Energy Co., Ltd. to SANYO Energy (Tianjin) Co., Ltd., Dalian Meica Electronics Co., Ltd. to Dalian SANYO Meica Electronics Co., Ltd., and SANYO Energy Europe Ltd., was to SANYO Component Europe Ltd.</td>
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<tr>
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<td>2. Profile</td>
<td>P4</td>
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<tr>
<td>3. Governance Structure and Management Systems</td>
<td>P9-12</td>
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<td>4. GRI Context Cont</td>
<td>P7-9</td>
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<td>5. Performance Indicators</td>
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<td></td>
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<tr>
<td>Change in retained earnings at end of period</td>
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<tr>
<td>Subsidies received broken down by country or region</td>
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<tr>
<td>Total sum of taxes of all types paid broken down by country</td>
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<tr>
<td>(interest on debt and borrowings, and dividends on all other benefits, and redundancy payments) broken down in terms of cash and in-kind donations</td>
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<td>3. Governance Structure and Management Systems</td>
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<tr>
<td>Total payroll and benefits including wages, pension, other benefits, and redundancy payments (broken down by country or region)</td>
<td>P68</td>
</tr>
<tr>
<td>Percentage of contracts that were paid in accordance with agreed terms, excluding signed penalty arrangements</td>
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<tr>
<td>Energy</td>
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<tr>
<td>Greenhouse gas emissions (CO2, CH4, N2O, HFCs, PFCs, SF6)</td>
<td>P43-44</td>
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<tr>
<td>Water</td>
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<tr>
<td>Total water use</td>
<td>P52</td>
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<td>Products and Services</td>
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<tr>
<td>Percentage of total sales of products sold in the event thatIs said to be product sold that is reclaimable at the end of the product’s useful life and percentage that is actually reclaimed</td>
<td>P53-54</td>
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<tr>
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<tr>
<td>Compliance</td>
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<tr>
<td>Incidents of and fines for non-compliance with all applicable international conventions / agreements, treaties, and national, sub-national, regional, and local regulations associated with environmental issues</td>
<td>P53-32</td>
</tr>
<tr>
<td></td>
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<tr>
<td>Overall</td>
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<tr>
<td>Total environmental expenditures by type</td>
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### GRI (Sustainability Reporting Guidelines 2002) Table

<table>
<thead>
<tr>
<th>Content</th>
<th>Pages</th>
</tr>
</thead>
<tbody>
<tr>
<td>LA6</td>
<td>Description of formal joint health and safety committees comprising management and worker representatives and proportion of workforce covered by such committees</td>
</tr>
<tr>
<td>LA7</td>
<td>(Stand) injury, lost day, and absentee rates and number of work-related fatalities (including subcontracted workers)</td>
</tr>
<tr>
<td>LA8</td>
<td>Description of policies or programs for the workplace and beyond on HIV / AIDS</td>
</tr>
<tr>
<td>LA9</td>
<td>Average hours of training per year per employee by category of employee</td>
</tr>
<tr>
<td>LA16</td>
<td>Specific policies and programmes for skills management or for lifelong learning</td>
</tr>
<tr>
<td>LA17</td>
<td>Description of policies, guidelines, corporate structures, and procedures to deal with all aspects of human rights relevant to operations, including monitoring mechanisms and results</td>
</tr>
<tr>
<td>LA10</td>
<td>Description of strategies and programmes to address this issue, including monitoring systems and results of monitoring</td>
</tr>
<tr>
<td>LA11</td>
<td>Description of freedom of association and collective bargaining policies, as well as monitoring systems to ensure compliance and results of monitoring</td>
</tr>
<tr>
<td>HR1</td>
<td>Description of policies, guidelines, corporate structures, and procedures to deal with all aspects of human rights relevant to operations, including monitoring mechanisms and results</td>
</tr>
<tr>
<td>STG1</td>
<td>Description of strategies and programmes to address this issue, including monitoring systems and results of monitoring</td>
</tr>
<tr>
<td>HCL</td>
<td>Description of policy to prevent forced and compulsory labour and extent to which this policy is visibly stated and applied, as well as description of procedures / programmes to address this issue, including monitoring systems and results of monitoring</td>
</tr>
<tr>
<td>CS1</td>
<td>Description of policies to manage impacts on communities in areas affected by activities, as well as description of procedures / programmes to address this issue, including monitoring systems and results of monitoring</td>
</tr>
<tr>
<td>SD2</td>
<td>Description of policy, procedures / management systems, and equal opportunities for managing political lobbying and contributions</td>
</tr>
<tr>
<td>PR1</td>
<td>Description of policy for preserving customer health and safety during use of products and services, and extent to which this policy is visibly stated and applied, as well as description of procedures / programmes to address this issue, including monitoring systems and results of monitoring</td>
</tr>
<tr>
<td>PR2</td>
<td>Description of policy, procedures / management systems, and equal opportunities for adhering to standards and voluntary codes related to advertising</td>
</tr>
<tr>
<td>PR3</td>
<td>Description of policy, procedures / management systems, and equal opportunities for consumers privacy</td>
</tr>
</tbody>
</table>

### Reference Information

**SANYO Technical Company Brochure**

**Innovation Group R&D H.Q.**

**Contact's EDINET System**

**Finance Headquarters  Accounting Unit**

**Corporate Communications Headquarters**

**Where to get information**

[http://www.sanyo.co.jp/giho/](http://www.sanyo.co.jp/giho/)

**Telephone Facsimile**

+81 (6) 6994-1572

+81 (6) 6992-0009
To: SANYO Electric Co., Ltd.

Introduction
Det Norske Veritas AS (DNV) has reviewed “Sustainability Report 2005” published by SANYO. SANYO is responsible for the contents of the report and DNV is responsible for conducting a high-level independent review of the report to establish whether the information reported is accurate.

Review scope and procedures
Currently there are no formal generally accepted international sustainability reporting and verification standards. Therefore, DNV has referred to the Draft Japanese guidelines for environmental reporting verification (Ministry of Environment, Japan, 2004) and emerging good practices and guidance. DNV’s review was conducted at Corporate Environmental Center and CSR Unit at SANYO’s Headquarters (Marien City, Osaka, Japan) on 11 August 2005 and has not included any other site visits. DNV has therefore not reviewed the reliability of data management systems at the SANYO’s local sites and nor verified data presented in the report. No other stakeholder engagement was conducted.

Overview of review processes
DNV reviewed the following items, through document review and interviews with management responsible for processes to collect and interpret information from individual sites, at SANYO’s Headquarters, and focused on:
(1) Reliability of data management systems at the SANYO’s Headquarters, covering the collection and interpretation of the information received from individual sites.
(2) Consistency of information presented in the report with supporting documents obtained during the interview process on a sample basis.

Results of the review
As a result of the review, we are not aware of any material modification that should be made to the parameters, environmental accounting indicators and other information in the SANYO’s report, consistent with the information DNV reviewed at the Headquarters.

Takashi Watanabe
Project Leader
DNV Certification, Japan

Gunnar Serr
General Manager
DNV Certification, Japan

Contacts for Public Materials

<table>
<thead>
<tr>
<th>Publicity materials</th>
<th>Form</th>
<th>Where to get information</th>
<th>Inquiries</th>
<th>Telephone</th>
<th>Facsimile</th>
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</thead>
<tbody>
<tr>
<td>Company Brochure</td>
<td>Printed material (Japanese/English)</td>
<td>Corporate Communications Headquarters Media Relations Unit</td>
<td>+81 (6) 6991-1181</td>
<td></td>
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<tr>
<td>Annual Report</td>
<td>Printed material (Japanese/English)</td>
<td>Finance Headquarters IR Unit</td>
<td>+81 (6) 6991-1181</td>
<td>+81 (6) 6992-0009</td>
<td></td>
</tr>
<tr>
<td>Financial Statements</td>
<td>Printed material Electronic media</td>
<td>Finance Headquarters Accounting Unit</td>
<td>+81 (6) 6991-1181</td>
<td>+81 (6) 6994-1572</td>
<td></td>
</tr>
<tr>
<td>SANYO Technical Review</td>
<td>Electronic media</td>
<td>Innovation Group R&amp;D H.Q. Engineering Cross Function Unit</td>
<td>Get information from the web site (Japanese only) (<a href="http://www.sanyo.co.jp/gbo/">http://www.sanyo.co.jp/gbo/</a>)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Let's conduct business and our lives in an environment-friendly manner!

SANYO Electric Co., Ltd.

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About Cover

The SANYO Group is committed to becoming an indispensable element to the earth and life—the people who live on it. In other words, an entity like the sun itself. Our cover shows a sunflower motif that recalls the image of the sun, and thus symbolizes the new SANYO Group.