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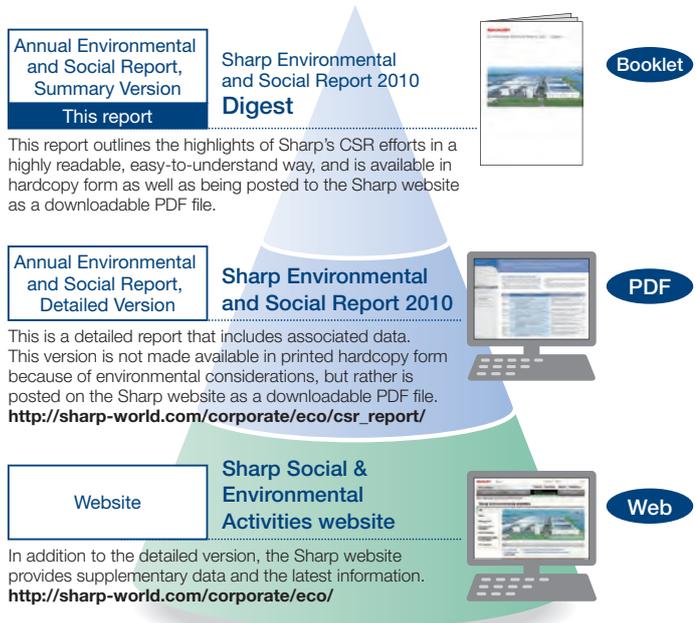
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## ■ Sharp Environmental and Social Report 2010, and System for Information Disclosure

Information on Sharp's efforts toward corporate social responsibility (CSR), particularly the environmental and social dimensions of CSR is made available in the following three formats to meet the needs of various stakeholders.



## ■ Period and Items Covered

**Period covered:**  
 Fiscal 2009 (April 2009 to March 2010)  
 However, some efforts prior to and after this period are also included.

**Coverage:**  
 Sharp Corporation, along with its domestic and overseas subsidiaries and affiliates.

**Boundary of environmental performance data:**  
 Sharp Corporation and consolidated subsidiaries.  
 Note that the category "plants" includes non-consolidated subsidiaries and affiliated companies.

## ■ Referenced Guidelines

- Environmental Reporting Guidelines (2007 Version), Ministry of the Environment, Japan
- Sustainability Reporting Guidelines Version 3.0 (2006, Japanese), Global Reporting Initiative (GRI)

## ■ About the Cover



Conceptual rendering of GREEN FRONT SAKAI (when completed). GREEN FRONT SAKAI is a state-of-the-art, environmentally advanced manufacturing complex that mass-produces energy-saving LCD panels and energy-creating solar cells. See pages 9 and 10 for details.

## ■ Independent Assurance Report

The Sharp Environmental and Social Report 2010 – Digest – has been independently assured by KPMG AZSA Sustainability Co., Ltd., which wrote the following report.



## Concept of CSR (Corporate Social Responsibility)

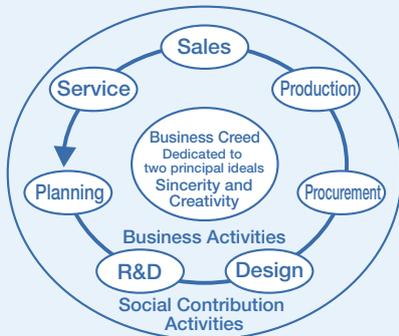
### Sharp Contributes to Society Through Its Manufacturing and Technology-Oriented Business

"Make products that others want to imitate." These words, spoken by Sharp founder Tokuji Hayakawa, embody Sharp's management concept. As a manufacturer, Sharp contributes to society by being the first to make products that meet the needs of a new era. Successive generations of Sharp leaders have, in their own way, pursued this concept by making products that contribute to society and in the process created a corporation that is known and trusted by society.

In 1973, Sharp clarified the unchanging spirit of its founder in the company's business philosophy and business creed. The business philosophy states that Sharp aims for mutual prosperity with society and stakeholders—the foundation of CSR today—by "contributing to the culture, benefits and welfare of people throughout the world." The business creed calls for "Sincerity and Creativity" and all employees must hold to it and follow it in order to realize the business philosophy.

Sharp's goal is to realize its business philosophy through business activities and through social contribution activities that make the most of the strengths and traits of the Sharp Group. Endowed with a "gene of creativity" since its founding, Sharp will continue to create one-of-a-kind products and fulfill its social responsibility, acting and behaving sincerely as a corporation that is trusted by all.

#### ■ Achieve the tenets of the business philosophy by promoting "Sincerity and Creativity" in all business practices



#### Realization of Business Philosophy

- Perspective of social contribution through business activities  
"Contribute to the culture, benefits and welfare of people throughout the world"
- Perspective concerning employees  
"It is the intention of our corporation to grow hand-in-hand with our employees"
- Perspective concerning stakeholders  
"Prosperity is directly linked to the prosperity of the entire Sharp family"

#### Business Philosophy

We do not seek merely to expand our business volume. Rather, we are dedicated to the use of our unique, innovative technology to contribute to the culture, benefits and welfare of people throughout the world. It is the intention of our corporation to grow hand-in-hand with our employees, encouraging and aiding them to reach their full potential and improve their standard of living. Our future prosperity is directly linked to the prosperity of our customers, dealers and shareholders ... indeed, the entire Sharp family.

#### Business Creed

Sharp Corporation is dedicated to two principal ideals:

#### "Sincerity and Creativity"

By committing ourselves to these ideals, we can derive genuine satisfaction from our work, while making a meaningful contribution to society.

Sincerity is a virtue fundamental to humanity ... always be sincere. Harmony brings strength ... trust each other and work together. Politeness is a merit ... always be courteous and respectful. Creativity promotes progress ... remain constantly aware of the need to innovate and improve. Courage is the basis of a rewarding life ... accept every challenge with a positive attitude.

## Corporate Vision: Eco-Positive Company

Sharp has set two business visions: "Contribute to the world through environment- and health-conscious business, focusing on energy-saving and energy-creating products" and "Contribute to a ubiquitous society\* with one-of-a-kind LCDs." And Sharp has made becoming an "Eco-Positive Company" its corporate vision, reflecting the ideal state Sharp aims to achieve throughout its business activities.

\* A "ubiquitous society" refers to how the whole of society will be connected through the rapid development of IT infrastructure and networks will always be accessible to users.

### What's an Eco-Positive Company?

By "Eco-Positive Company," Sharp means a company that works with all stakeholders in creating solutions that have significantly more positive impact on the environment than the negative impact caused by company operations.

A particular focus is the reduction of greenhouse gas emissions. By fiscal 2012, Sharp's goal is to have emission reductions that result from customer use of Sharp energy-creating and energy-saving products be more than double the total greenhouse gas emissions from business activities. To this end, Sharp is developing and promoting the use of solar cells and energy-saving products as well as reducing its emissions.

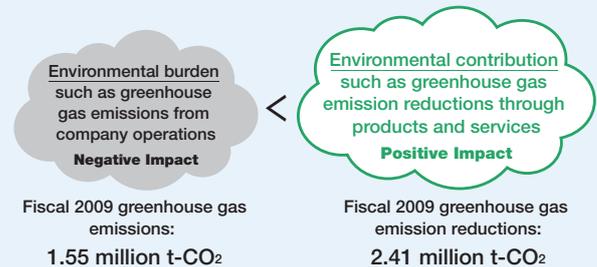
In fiscal 2009, Sharp emitted 1.55 million t-CO<sub>2</sub>, but use of Sharp energy-creating and energy-saving products contributed to emission reductions of 2.41 million t-CO<sub>2</sub>, approximately 1.6 times the amount of Sharp's emissions.

### Eco-Positive Strategy

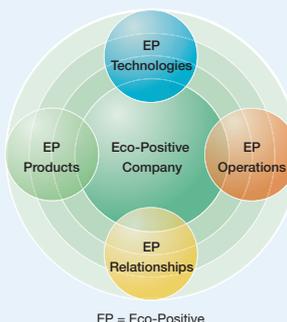
Sharp's Eco-Positive Strategy of environmental measures is geared to achieving its corporate vision.

While building on the environmental protection know-how gained over the years, Sharp is working with all stakeholders in four aspects of its Eco-Positive Strategy across the entire value chain.

#### ■ Corporate Vision: Eco-Positive Company



#### ■ The Four Aspects of the Eco-Positive Strategy



- Eco-Positive Technologies**  
Generate new business through one-of-a-kind environmental technologies
- Eco-Positive Products**  
Expand contributions to protecting the environment through products and services
- Eco-Positive Operations**  
Reduce environmental impacts in product engineering and manufacturing
- Eco-Positive Relationships**  
Enhance corporate value through involvement with the community

EP = Eco-Positive

# Contributing to Achieving a Green Society by Providing Solar Power and Energy-Efficient Products on a Global Basis Based on Proprietary Technologies and Original Product Engineering



GREEN FRONT SAKAI (conceptual rendering)



Katsuhiko Machida, Chairman

Mikio Katayama, President

## Sharp's Commitment to Solar Cells Recognized with an IEEE Milestone\*<sup>1</sup>

Recently, Sharp Corporation's achievements in the commercialization and industrialization of solar cells from 1959 to 1983 have been recognized as an IEEE Milestone, an award given by the IEEE, the world's largest professional association for electrical, electronics, information, and telecommunications engineering.

Whenever Sharp founder Tokuji Hayakawa spoke of the future, he would begin by citing the potential of solar energy. He once said, "If we could invent a way to make electricity using the unlimited light of the sun, what it would contribute to humanity would be immense."

Our predecessors at Sharp, starting with our founder, began researching solar cells 51 years ago, and with a large measure of ingenuity and many creative ideas, they succeeded in mass-producing them four years later. From that day forward, even when solar cell applications were limited to lighthouses and space satellites, our predecessors continued their unceasing R&D efforts, working for the stable generation of electricity in harsh environments. That dedication earned high praise from the IEEE.

The dream of contributing to the future of humanity that our predecessors laid out, and the spirit of creativity vigorously pushing them forward to make that dream come true, form the DNA of Sharp, and has most assuredly been passed down even today.

\*<sup>1</sup> The IEEE Milestone, established in 1983, honors significant technological innovations in the areas of electrical, electronics, information, and telecommunications engineering that have contributed to the betterment of society and the development of industry.

## With the Goal to Be an Eco-Positive Company, Sharp Is Expanding Its Global Efforts to Contribute to the Environment

Sharp has established two business visions: "Contribute to the world through environment- and health- conscious business, focusing on energy-saving and energy-creating products" and "Contribute to a ubiquitous society\*<sup>2</sup> with one-of-a-kind LCDs." In terms of its corporate activities as a whole, Sharp has defined its corporate vision as being an "Eco-Positive Company," the ideal state Sharp aims to achieve.

"Eco-Positive Company" means a company that works with all stakeholders in creating solutions that have a positive impact on the environment. Sharp is pursuing an Eco-Positive Strategy aimed at making this a reality. This strategy has four aspects: Technologies, Products, Operations, and Relationships, and Sharp is proactively deploying this strategy on a global scale as the basis of its efforts toward the environment.

Examples of successes of this strategy in fiscal 2009 include commercializing the LED AQUOS LCD TV and LED lighting products, which deliver significant energy savings, starting mass production of blue LED chips, re-using a total of 5,050 tons of used plastic recycled based on proprietary Sharp technology, achieving targets for percentage of net sales for Super Green Products and Devices for the fifth straight year, achieving Super Green Factory status for 24 plants in Japan and abroad, curbing greenhouse gas emissions and reducing discharges of waste, etc. for the Sharp Group as a whole, and starting operations at its LCD panel and solar cell plants at GREEN FRONT SAKAI.

\*<sup>2</sup> A "ubiquitous society" refers to how the whole of society will be connected through the rapid development of IT infrastructure and networks will always be accessible to users.

## Propagating Product Manufacturing That Contributes to Achieving a Green Society to Countries Around the World from GREEN FRONT SAKAI

GREEN FRONT SAKAI is an environmentally advanced manufacturing complex that brings together the world's most advanced technologies and knowledge, with the goal of making products befitting the green society to come.

Sharp has constructed an LCD panel plant that employs 10th-generation glass substrates, the first in the world to do so, and a solar cell plant with a maximum production capacity of 1 GW per year. The former became operational in October 2009, and the latter went into operation in March 2010. With the participation of many leading companies spanning multiple fields, Sharp is building a revolutionary production system with low environmental impact by gathering together their knowledge and expertise.

In addition, Sharp has begun working with Osaka Prefecture University to carry out joint research at GREEN FRONT SAKAI on plant cultivation and waste recycling, with the goal of creating new technologies and generating new knowledge that will contribute to the coming era.

Up to now, Sharp has constructed plants for front-end processes (initial fabrication and sub-assembly) for LCD panels and solar cells in Japan, but in the future, Sharp intends to make GREEN FRONT SAKAI the mother factory that serves as a model for building plants in consuming regions overseas in cooperation with leading local companies. Sharp has already begun production projects for LCD panels in China and for solar cells in Europe, and will develop product engineering and manufacturing for "local production for local consumption" on a global basis that will contribute to the development of local industry.

In addition, in the solar energy field, Sharp is aiming to be a total solutions company involved in every aspect of the value chain—from production of solar cell materials and solar modules to system integration and even as far as being an independent power producer.

The light of the sun showers down across our whole planet. Energy from solar power generation can be produced for local consumption in every country in the world. There are many newly emerging economies and developing nations in regions where the abundant amount of solar radiation is ideal for solar power generation, and the demand for total solutions for energy and industry in those locations is enormous.

## Fulfilling Social Responsibilities as a Member of the International Community Based on a Business Philosophy and Business Creed of "Sincerity and Creativity"

The balance of power in the international community has undergone a tremendous change in the wake of the collapse of Lehman Brothers. In addition, the need to shift to a green society dedicated to preserving the global environment is becoming more urgent.

In the midst of a rapidly changing business environment, Sharp is focusing on promoting business activities that contribute to development of society by making the achievement of the aforementioned visions its goal, while at the same time ensuring that the Sharp Group as a whole fulfills its social responsibility as a member of the international community.

Sharp is moving ahead with global efforts, taking into account the expectations of and requests from stakeholders, including strengthening its management system, which comprises corporate governance and compliance, product safety and customer satisfaction activities, return of profits to shareholders, human resource development and workplace health and safety, and social contribution activities. In addition, Sharp will continue to support the 10 principles of the United Nations Global Compact related to human rights, labour, the environment, and anti-corruption, which it joined in June of last year, and strengthen related policy measures.

By building on its foundation of manufacturing and technological competence, Sharp's aim in the years to come is to fulfill its proper social responsibility and become a corporate group that has earned the trust of society based on its business philosophy and business creed of "Sincerity and Creativity."

Sharp will work to disclose information concerning its corporate activities, and sincerely consider and make the valued opinions from all of its stakeholders reflected in management activities.

We look forward to hearing your frank comments and opinions.

June 2010

Chairman  
Katsuhiko Machida



President  
Mikio Katayama

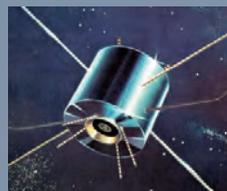


# Aiming to Achieve a Green Society

Sharp first began R&D on solar cells in 1959, and four years later, in 1963, succeeded in mass-producing them. Since then, Sharp has been constantly engaged in product commercialization and in pushing forward with application development. Looking ahead to the green society that is to come, Sharp is working to provide total solar energy solutions and promote the wider use of solar power around the world.



Lighthouse on Ogami Island, Nagasaki Prefecture, Japan (installed in 1966) (Photo: Japan Coast Guard)



Ume application satellite (launched in 1976) (Photo: JAXA [Japan Aerospace Exploration Agency])

## Sharp's Commercialization and Industrialization of Solar Cells Recognized as IEEE Milestone

Sharp's achievements in the commercialization and industrialization of solar cells from 1959 to 1983 have been recognized as an IEEE Milestone from the IEEE, the world's largest professional association for electrical, electronics, information, and telecommunications engineering.

The IEEE Milestone honors significant technological innovations in the areas of electrical, electronics, information, and telecommunications engineering that have created unique solutions and contributed to the betterment of society and the development of industry. To earn IEEE Milestone recognition, the achievement must have been accomplished at least 25 years ago.

This recognition represents high praise for Sharp's efforts to bring solar cells into practical use and to contribute to the solar cell industry with products for applications ranging from

lighthouses and space satellites to housing. This is Sharp's second IEEE Milestone, having been awarded one in 2005 for leading the industry in the development of electronic calculators from 1964 to 1973. It is also the 14th IEEE Milestone for a Japanese company.

### Sharp's History of Solar Cell Commercialization and Industrialization 1959 to 1983

- 1959 Starts R&D in solar cells
- 1963 Succeeds in the mass production of single-crystal solar cells
- 1966 Installs a 225W solar module (the world's largest, at the time) on the Ogami Island Lighthouse in Nagasaki Prefecture, Japan
- 1967 Starts development of solar cells for outer space
- 1976 Sharp solar cells installed on the Ume application satellite (Sharp is the only solar cell manufacturer in Japan certified by JAXA [Japan Aerospace Exploration Agency])
- 1983 Starts development of amorphous solar cells

## High Expectations for the Development of Technologies That Will Expand the Use of Clean Energy Derived from Solar Power

I was deeply impressed by all of Sharp's tireless efforts related to solar cells. Looking at their initial applications, it would never have been a very profitable business just from the likes of lighthouses and space satellites, but they persisted and never gave up. In addition, I admire the fact that Sharp is the only manufacturer in Japan certified by the Japan Aerospace Exploration Agency (JAXA) to supply solar cells for satellite use. Plus, given that they are used in lighthouses and on satellites, the quality and reliability demanded is extremely high, and I imagine dealing with that was also no easy matter.

We can say that the steady development and accumulation of such technologies have led to the development of today's solar power generation, and this is perfectly reflected in the evaluation that accompanies the recognition with this IEEE Milestone.

As for my hopes for Sharp, I would very much like to see Sharp make AC/DC power distribution systems that can use the DC electricity generated by solar power systems directly in the home without suffering losses from the need to convert to AC power. I would like to see this become the standard in the industry in cooperation with homebuilders.

Further, I would like Sharp to resolutely take up the challenge of developing technologies that make practical use of solar power even for global problems such as desalination and agriculture.



Isao Shirakawa, Ph.D.  
IEEE Life Fellow and Member of IEEE Kansai Section Executive Committee; Professor Emeritus, Osaka University



Winery, California, US



Expo '70 Commemorative Park, Osaka, Japan



Central Bank of the Netherlands, Amsterdam, The Netherlands



Football stadium, Mainz, Germany



Environment Agency, Oxford, UK



Solar power plant, Sonnen, Bavaria, Germany



Salzburg Airport, Austria



CIS Tower, Manchester, UK

## R&D and Initiatives to Expand the Use of Solar Energy Spanning Half a Century

The year was 1959 when Sharp began R&D on solar cells. Sharp saw the potential of clean energy early on, and with the strong determination of successive company heads, Sharp has been working on the development of solar power generation and promoting its widespread use for half a century.

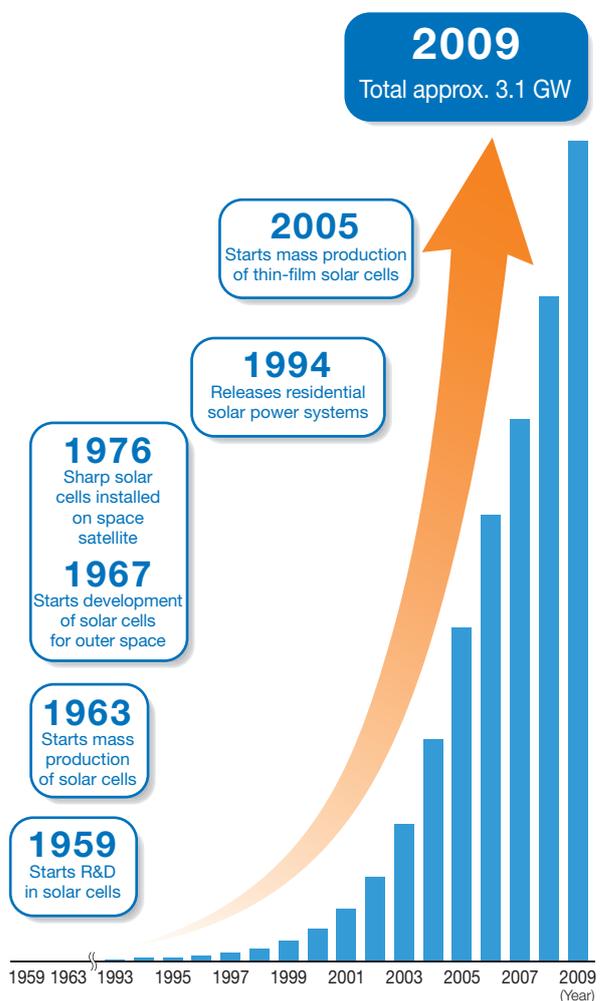
After four years of trial and error following the start of research, Sharp succeeded in mass-producing solar cells in 1963. When development first began, costs were still high, and the main application was stand-alone power generation in locations where the electric power grid did not reach, for example, remote lighthouses. In 1966, Sharp completed a 225-watt solar power system for a lighthouse on Ogami Island in Nagasaki Prefecture, at the time, the world's largest such installation. And in 1967, the company began development of solar cells for use in outer space, which were installed on the application satellite Ume, launched in 1976. As of March 2010, Sharp solar cells are in use on more than 160 space satellites and at lighthouses in more than 2,500 locations.

Sharp solar cells continue to serve as a valuable source of energy, and have been proven reliable even in harsh environments such as lighthouses exposed to intense wind and rain, and in outer space where they are subject to severe temperature fluctuations. Since then, Sharp has made the most of this technology in developing residential solar power systems in 1994 and for the mass production of thin-film solar cells in 2005, which are being actively used around the globe.

As a result of these efforts that span over half a century, Sharp's cumulative production of solar cells reached 3.1 GW (gigawatts)\* by the end of 2009, estimated to be the equivalent of approximately one-sixth of the total global solar cells in use, based on data published by organizations such as the International Energy Agency (IEA).

\* 1 GW = 1,000 MW = 1,000,000 kW

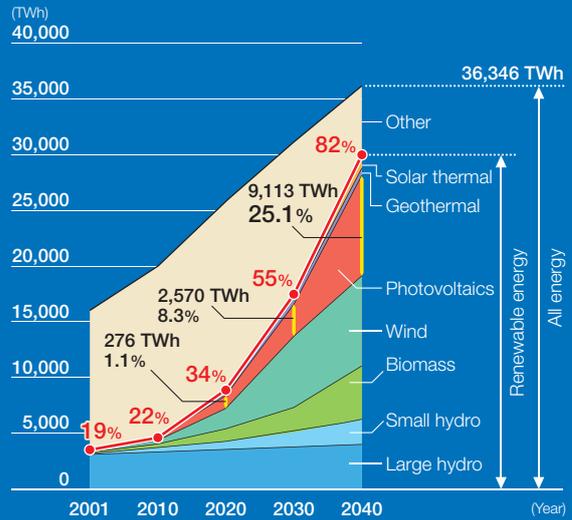
### Sharp's Cumulative Solar Cell Production Volume





Solar cell plant at GREEN FRONT SAKAI that began operations in March 2010

## Forecast for World Electricity Demand



Source: Created by Sharp based on *Renewable Energy Scenario to 2040*, published by the European Renewable Energy Council (EREC) and reports of the German Advisory Council on Global Change (WBGU)  
 1 TWh = 1,000 GWh = 1,000,000 MWh = 1,000,000,000 kWh  
 % is the percentage of all energy.

### Strengthening Development of Both Crystalline and Thin-Film Solar Cells

Up to now, Sharp has been expanding its solar energy business focusing on crystalline solar cells. But in an effort to significantly broaden the potential of solar cells, Sharp has now pushed ahead to improve the performance of thin-film solar cells and expand their production. Compared to crystalline solar cells, thin-film solar cells use approximately one-hundredth the amount of silicon and require fewer steps in the production process. In addition, because production efficiency can be readily increased, mass production is expected to reduce the cost of power generation.

In October 2008, Sharp raised the production capacity for thin-film solar cells at its Katsuragi Plant (Katsuragi City, Nara Prefecture) from 15 MW/year to 160 MW/year, and in March 2010, began thin-film solar cell production of 160 MW/year as the first deployment of the solar cell plant at GREEN FRONT SAKAI (in Sakai City, Osaka Prefecture).

Crystalline solar cells feature high conversion efficiencies, and are ideal for residential applications where the available space for installation is limited. Thin-film solar cells suffer only a small amount of reduction in output in regions with high ambient temperatures, and so are ideal for large-scale power generation systems in warm-temperature climates.

Sharp is promoting the wider use of both crystalline and thin-film solar cells on a global basis to meet a wide range of needs based on their respective characteristics.

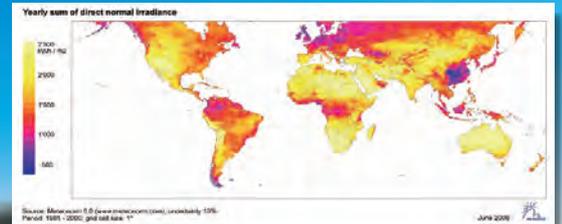
### Aiming to Be a Total Solar Energy Solutions Company

Looking at medium- to long-term demand trends for photovoltaic power generation, solar energy is expected to continue to grow globally, based on world electric power demand forecasts (see graph above) from the European Renewable Energy Council (EREC). Forecasts indicate that photovoltaic power generation will account for as much as one fourth of total world electric power demand in 2040.

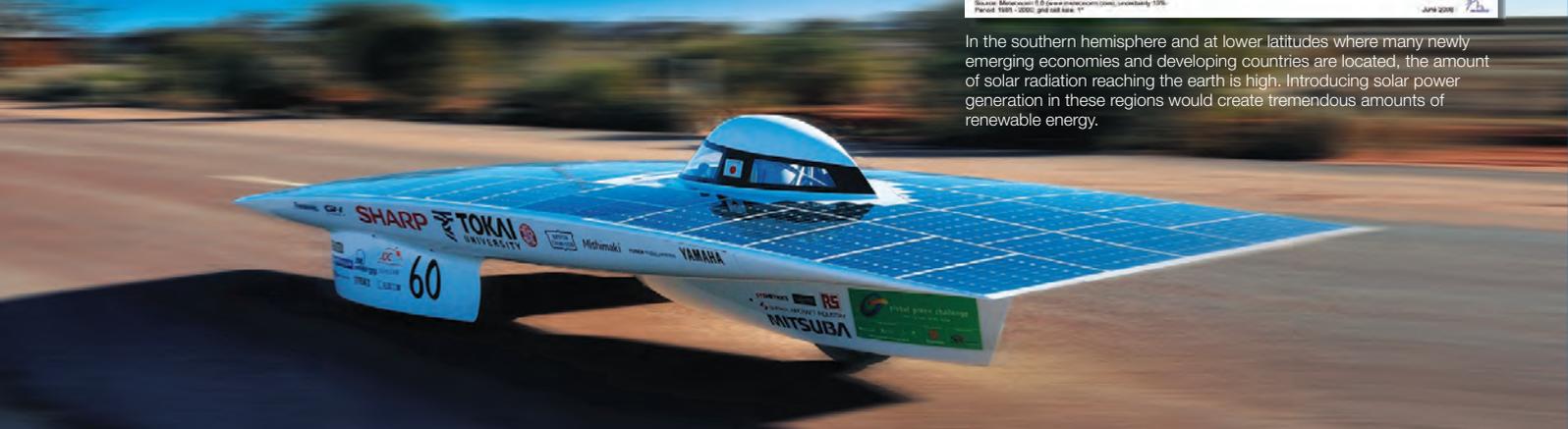
Demand in Europe, which has grown significantly in recent years, has hit a temporary plateau, reflecting the impact of the financial crisis, but in the medium term, it is predicted that this market will continue to expand as a result of large-scale power generation projects. In the United States, construction of a large number of large-scale power systems is being planned, such as the mega-solar energy projects proposed under the Green New Deal initiative.

Up to now, Sharp has been building solar cell plants in Japan, but to meet burgeoning demand in all areas of the globe, Sharp plans to develop such plants in local areas in the future, based on tie-ups with the local companies. Sharp will push “local production for local consumption” in which all links in the value chain—from procurement of materials to production and sales—will be completed within the consuming region.

In addition, Sharp is aiming to be a total solutions company, handling all aspects of the value chain for solar power generation, from the materials for solar cells and production of cell modules, to system integration and even being an independent power producer.



In the southern hemisphere and at lower latitudes where many newly emerging economies and developing countries are located, the amount of solar radiation reaching the earth is high. Introducing solar power generation in these regions would create tremendous amounts of renewable energy.



The Tokai Challenger, a solar car equipped with Sharp compound solar cells (cell conversion efficiency 30%) driven by a team from Tokai University, won the Global Green Challenge, one of the world's largest solar car races. The team covered the approximately 3,000-kilometer course across the Australian continent at an average speed of over 100 km per hour for an impressive win! (October 2009)

### Aiming to Reach Grid Parity

In R&D on solar cells spanning more than 50 years, Sharp has consistently taken up the challenge to lower costs. Specifically, Sharp has been conducting R&D to raise conversion efficiencies, create resource-saving designs that reduce the amount of silicon used, and develop highly efficient production technologies.

Based on these efforts, Sharp has so far more than doubled the conversion efficiency of crystalline solar cells, about halved the thickness of the silicon wafer, and lowered costs by 90% or more. In addition, Sharp has also been conducting R&D on thin-film solar cells.

However, the cost of electricity generated by photovoltaic installations today is still relatively high compared to other forms of power generation, and reaching "grid parity," the point at which the cost of photovoltaic electricity is equal to or cheaper

than existing grid power, will be absolutely essential to bring about the widespread use of solar power.

As countries around the world are achieving remarkable economic progress, we will no longer be able to expand the consumption of limited fossil resources. Solar power, which makes electricity from the unlimited light of the sun, will play an extremely important role.

Sharp will be working in cooperation with local governments and businesses in many parts of the world to develop total solutions based on "local production for local consumption" involving the entire value chain of solar power generation. Through this effort, Sharp intends to reach grid parity and contribute to the achievement of a green society through the accelerated growth of solar power generation.

### Challenging the "Triple 50" Looking Toward 2050

According to a forecast for global electricity demand (see previous page) by the European Renewable Energy Council (EREC), it is assumed that 9,113 TWh per year will be met by photovoltaic power generation, accounting for one-fourth of the total demand for electric power worldwide in the year 2040. To achieve this, 9 TW (terawatts) of solar cells will need to be installed on the planet, and for that, each year, new production lines with capacity equivalent to 109% of the previous year will have to be built in the future. These lines will have to run at full capacity for 30 years, and the solar cells produced will have to generate electricity for 30 years. Naturally, innovations in technology will be essential to achieve this.

Looking ahead to the year 2050, Sharp has set a goal called "Triple 50." This is a development goal to, first, increase cell conversion efficiency to 50%, next, extend the power generating life of solar cells to 50 years, and finally, lower the cost of solar modules to 50 yen per watt.

All of these goals are extremely ambitious, and to achieve them, even as progress is being made toward total solutions based on "local production for local consumption", including R&D on smart grids and home energy management systems, Sharp is pushing ahead with R&D by gathering knowledge and expertise from around the world.



**Tetsuroh Muramatsu**  
Executive Officer  
Group General Manager  
Solar Systems  
Development Group  
Sharp Corporation

# GREEN FRONT SAKAI Is Fully Operational!

One of the world's most environmentally advanced factories is now mass-producing energy-saving LCD panels and energy-creating solar cells. GREEN FRONT SAKAI is a culmination of Sharp's proprietary expertise and contributes to the creation of a new age of electronics while also manufacturing products in the most environmentally friendly way.

## Making Energy-Saving and Energy-Creating Panels

Located in Sakai City, Osaka Prefecture, GREEN FRONT SAKAI is a cutting-edge plant that produces energy-saving LCD panels and energy-creating solar cells in one complex.

The LCD panel plant, which went onstream in October 2009, uses 10th-generation glass substrates, the world's largest\*\*1, to produce energy-saving 40-inch and larger LCD panels employing Sharp's proprietary UV<sup>2</sup>A technology\*2.

Operations began in March 2010 at the solar cell plant, where 1,000-by-1,400-mm glass substrates are used to produce thin-film solar cells that use just approximately one hundredth the amount of silicon used in crystalline solar cells.

\*1 As of October 2009.

\*2 Abbreviation of Ultraviolet-induced Multi-domain Vertical Alignment. Photo-alignment technology that can precisely control the alignment of liquid crystal molecules using a manufacturing method based on UV light exposure.



Portions indicated by dotted lines and rooftop solar cell panels are an artist's concept of the completed appearance. The area outside the GREEN FRONT SAKAI site differs from the area's actual appearance.

GREEN FRONT SAKAI



10th-generation glass substrate



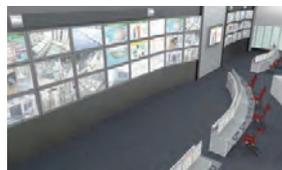
Thin-film solar cell panel

## Coproduction Means Environmentally Friendly, Efficient Operation

GREEN FRONT SAKAI brings together cutting-edge technology companies that function as one virtual company, with coproduction and coexistence the keywords towards achieving environmentally friendly, efficient operation.

An integrated energy management center makes energy sources visible (estimated usage volume, danger prediction, optimized operation, etc.) through the use of green IT, large-screen LCDs, and broadband connectivity. This makes it possible to reduce the energy and power usage of the entire factory complex.

An inter-building transport system running between the plants reduces lead-time. It also cuts CO<sub>2</sub> emissions during transportation and allows for ultra-efficient production.



Integrated energy management center



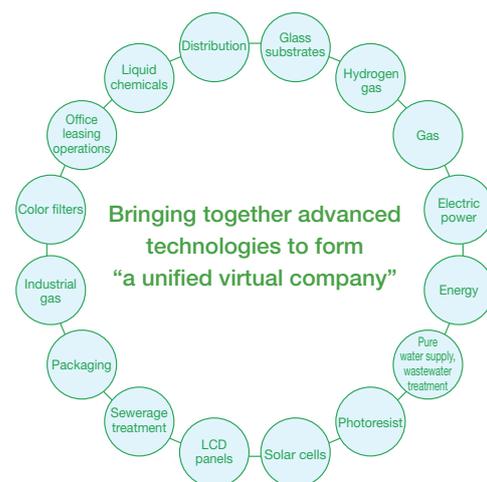
Inter-building transport system

## One of the World's Most Environmentally Advanced Factories

Available space such as the roofs of buildings on the site grounds is being used to install a solar power generation system that will provide a portion of the power used by the factories.

Energy-efficient, long-lasting LED lighting fixtures are being installed throughout the site—the approximately 100,000 LED lighting fixtures will constitute one of the world's largest such installations. Some outdoor LED fixtures will have built-in solar cells.

Other environmentally friendly features include walkways paved with water-permeable bricks made from discarded LCD panel glass, and low-pollution electric vehicles used on the site.



LED lighting used throughout the site



Water-permeable bricks used for walkways

### Solar power generation

Sharp will be increasingly active as an energy company that uses clean solar energy to generate electricity.



Sumitomo Corporation project in the Canary Islands, Spain



### Products incorporating solar cells

Sharp is actively creating products that incorporate solar cells, to support a convenient lifestyle with minimal environmental impact.



### DC eco-friendly houses

Sharp is creating electric appliances that run on DC power. They can use the DC current from the solar cells, without loss.



### Eco-friendly offices

Sharp suggests ways to make offices both environmentally friendly and more productive through measures such as installing solar cells for power generation, installing energy-efficient LED lighting fixtures, introducing products with Plasmacluster Ion technology, and adopting highly efficient videoconferencing systems that use large-screen displays.



### Development of new LCDs

New innovations in LCDs make possible a variety of new applications, such as the use of LCD panels as signboards.



## GREEN FRONT



Simulated photo

### Solar cells for automobiles

Electricity generated by solar cells mounted on the roof of a car can supplement the power requirements of the vehicle's operation.

### Plant cultivation using technologies such as trigeneration

Sharp uses power from solar cells as well as CO<sub>2</sub> and heat from its factories to cultivate plants. In addition, technologies such as LED illumination and Plasmacluster Ion generators are creating new possibilities for agriculture.

## Coexistence with the Local Community

GREEN FRONT SAKAI strives to work in harmony with the surrounding communities.

Sakai has been selected as an environmental model city by the Japanese government. GREEN FRONT SAKAI is contributing to the city's efforts to become a low-carbon municipality under the "Cool City Sakai" initiative.

An advanced water treatment plant allows GREEN FRONT SAKAI to treat wastewater from the public sewer treatment system and use it to meet a portion of water requirements for production processes. Heat is also collected from treated wastewater for use in air conditioning systems.

Through the establishment of an ecology laboratory jointly with Osaka Prefecture University, technologies like solar power and LED lighting are used in plant cultivation and recycling of waste materials. And should a natural disaster occur, GREEN FRONT SAKAI will provide water and electricity to disaster evacuation parks located adjacent to the factory complex.

## Working to Build a Green Society

GREEN FRONT SAKAI is also the hub of efforts to build a green society by implementing a series of eco-initiatives. New LCDs using energy-efficient panels, products incorporating solar cells, solar power generation businesses, the DC eco-friendly house running on direct current (DC) power, eco-offices combining environmental friendliness and productivity, and plant cultivation using trigeneration<sup>\*3</sup>—through such environmentally friendly plant operations and energy-creating and energy-saving technologies, Sharp is contributing to the creation of a green society.

<sup>\*3</sup> The use of electricity generated by solar cells, and CO<sub>2</sub> and heat from factories.

## Eco-Friendly and Highly Efficient Operations Make for an Environmentally Advanced Manufacturing Complex



**Kohki Narita**  
General Manager  
Energy Management  
Department  
GREEN FRONT SAKAI  
Planning Center  
Sharp Corporation

GREEN FRONT SAKAI brings together 19 companies including material producers and utilities providers, which work with Sharp's LCD panel and solar cell plants to create one virtual company that is environmentally friendly and highly efficient.

Efforts to become an environmentally advanced factory in cooperation with Sakai City in its "Cool City Sakai" initiative include joint R&D with nearby Osaka Prefecture University at its ecology laboratory at GREEN FRONT SAKAI and collaboration with the adjacent sewerage works to recycle wastewater.

# Environmental Protection and Community Service in

Consumer electronics manufacturing and sales company PT. Sharp Electronics Indonesia (SEID) and electronic components manufacturing company PT. Sharp Semiconductor Indonesia (SSI) make environmental protection a cornerstone of their management, and both companies carry out a wide range of environmental protection and community service activities.

## Sharp in Indonesia

Sharp first established a production plant in Indonesia in 1970. In 1995, it established PT. Sharp Semiconductor Indonesia (SSI) for the manufacture of electronic components such as ICs and opto-devices, and in 2005 PT. Sharp Electronics Indonesia (SEID) for the manufacture and sale of TVs, refrigerators, and audio products. After over 40 years in business, Sharp has become a familiar corporate citizen of the country, well known by Indonesians as a popular brand name for TVs and home appliances such as refrigerators.

## Environmental Protection Activities at Production Plants

The over 17,000 islands that make up Indonesia are home to a bounty of nature and a diversity of life forms. Today, however, the country is faced with pressing environmental problems like rain forest depletion and air and water pollution originating in urban areas.

Both companies make environmental protection a cornerstone of their management. SSI was certified for ISO 14001 in 2000 and SEID in 2006. Besides reducing the environmental footprint of their factories, the two companies are using their unique traits and strengths in a range of community environmental protection activities.

## SEID and SSI's Community Environmental Protection Activities



SEID partners with NGO 89.2 FM Green Radio to plant trees in Gunung Gede Pangrango National Park



SSI planted 1,000 mangrove trees along the beach at Pantai Samudra Baru, Karawang, West Java



SEID is an official sponsor of Earth Hour 2010 in Indonesia, sponsored by the WWF (World Wide Fund for Nature)



Through the Sharp Environment Idea Award, SEID encourages students in Indonesia to come up with innovative ideas for products and environmental measures



SEID is promoting coral growth in the seas of Bali, Manado, and Pramuka Island



SSI led environmental education and cleanup activities at a local elementary school

## SEID “Eco Greener” Campaign

“Eco Greener” is a slogan that SEID is using for environmental efforts in both its business activities and community service. The company is reducing the environmental impact of its offices and factory by using solar power, recycling paper, and gathering wastewater in a bio-treatment tank to use it for things like watering gardens. And through environment-related events, product exhibits, and social action programs around the country, SEID is working with NGOs, the mass media, and the general public to raise environmental awareness among the community.



Solar energy gathered in the daytime powers Sharp billboards like this in Jakarta and Bali at night



At the Eco-products International Fair 2010, the largest international environmental fair in Asia, SEID displayed Sharp solar cells and energy-efficient products

## Protecting the Environment, Helping Communities

Protecting the environment is crucial to business growth. SEID has pledged to do everything it can to reduce the environmental impact of its factory while contributing to environmental protection and the betterment of society. The company's creative environmental and social contribution activities include teaming up with NGOs and other groups to protect rain forests and coral reefs, and sponsoring environmental idea contests for students.

To achieve its goal of becoming an eco-positive company and an integral member of society, SEID is putting all its energy into activities to protect the environment.

Standing, from left: Wahyu Murdowo, Administration Division; Satoru Hashimoto, Administration & Finance Director; Fumihiro Irie, President; Ryunosuke Kitagawa, Brand Strategy Group Director; Gina Handriany, Brand Strategy Group; Indra Pasosong, Administration Division  
Front row, from left: Siti Nurmala, Administration Division; Cahyatih K, Administration Division; Novita Asri Ningtyas, Brand Strategy Group; Pandu Setio, Brand Strategy Group



## SSI Achieves Super Green Factory Status in Fiscal 2009

SSI is using Sharp's environmental management system to reduce the environmental impact of its factory and raise employee environmental awareness. Eco-efforts at the factory include using energy-efficient air conditioning, recycling water used for air conditioning, and adjusting delivery truck schedules to reduce CO<sub>2</sub> emissions. Employee awareness is raised through regular education activities and one-day and one-week environmental initiatives, as well as through volunteer environmental protection and cleanup activities in the local community. These efforts led to Super Green Factory\* (SGF) status for SSI in fiscal 2009.



Reducing the factory's environmental impact by installing water recycling equipment on the cooling tower

\* Based on Sharp's own certification system.



Employee awareness is raised through a weekly “Environmental Day” and a semi-annual “Environmental Week”

## Fostering Eco-Positive People

SSI, which started operations in 1996, has focused itself on environmental sustainability management for years, and this paid off with the company's recent achievement of Super Green Factory (SGF) status. Besides reducing environmental impact from its business activities, the company uses environmental and social contribution activities to raise environmental awareness among employees, their families, and local students and residents.

Besides stepping up its efforts to become an eco-positive company, SSI will strive to foster a society of “eco-positive people” in Indonesia.

Standing, from left: Dian Ambarwati, Administration Department; Akira Murakami, Administration Director; Yoshiharu Kuroda, President; Endah Karyani, Administration Department  
Front row, from left: Fachruddin Rachman, Administration Department; Agus Saptana, Administration Department; Hendry Hariadi, Production Control Department; Tri Pambudi, Administration Department; Fry Harly, Administration Department



# Multifaceted Approach to Biodiversity

Under the Sharp Group Policy on the Sustainable Support of Biodiversity, the Sharp Group carries out a multifaceted approach in which it protects biodiversity in business activities and social action programs at all worldwide bases.

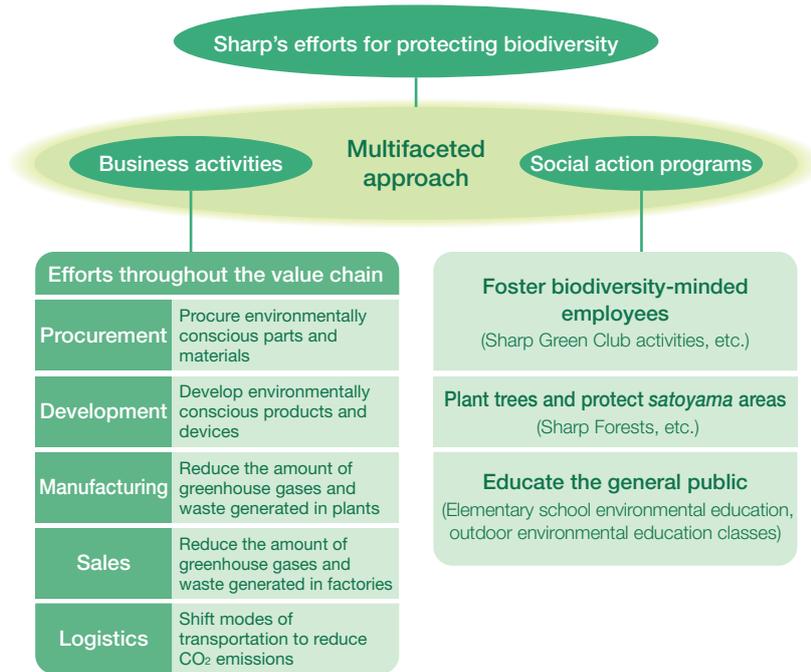
## Contribute to Biodiversity Protection Through Business and Social Action Programs

Biodiversity refers to the existence of a variety of ecosystems, species, and genes. With the modern world's environmental pollution, more and more species are becoming extinct and ecosystems are in danger. Since companies both affect and benefit from biodiversity, it is crucial that they protect and make sustainable use of it in all of their business activities.

Based on the Sharp Group Policy on the Sustainable Support of Biodiversity, the company formulated detailed measures, the Sharp Biodiversity Initiative, in November 2009. The initiative's aim is to ensure the protection and sustainable use of the world's biodiversity through business activities and social action programs.

Sharp has detailed measures in each step of the value chain for ensuring that business activities exert minimal impact on biodiversity. And in social action programs, Sharp strives to continue carrying out activities that match the lifestyles and environment of each community and region.

In addition, Sharp has made biodiversity check lists and distributed these to bases around the world. The check lists explain the link between environmental measures and biodiversity as well as are used to regularly monitor the progress of environmental activities at each base. In the near future Sharp will quantitatively check progress at each base according to assessment standards so that the entire Sharp Group can better protect biodiversity.



### Biodiversity Protection a Simultaneous Worldwide Effort

In the past, environmental measures have first been introduced in Japan and then transplanted to overseas Sharp bases at a later date. But Sharp's new biodiversity initiative was launched simultaneously worldwide, with production bases in the UK and parts of Asia getting an enthusiastic early start. Sharp will continue these efforts on a worldwide scale while incorporating the ideas of Sharp people in charge of activities in different countries.



**Takahiro Ishida**  
Assistant Manager (right)  
**Emi Miura**  
Junior Manager (left)  
Environmental Planning Department  
Environmental Protection Group  
Sharp Corporation

# Main Efforts in the Area of Management

To continue to be a company that has the trust of people and society, Sharp is working for continuous improvement in the area of management that covers corporate governance and compliance, the foundation of its business activities.

## Corporate Governance

Sharp is engaged in integrated production—from development to the manufacture and sale of products in a wide range of fields. Each of these areas is highly specialized, yet there is a close interrelation between them. Consequently, a management system is required in which directors who have a strong grasp of each area work closely with the R&D and manufacturing divisions in order to facilitate speedy decision-making and business execution. Under such a concept, Sharp, as a company with statutory auditors, is continuously improving the quality of its management while strengthening the Director/Corporate Auditor system.

Specifically, Sharp introduced the executive officer system in June 2008, and appointed an outside member to the Board of Directors in June 2009. And in April 2010, to ensure the smooth functioning of the executive officer system, Sharp revamped its governance system to more clearly separate supervisory and important decision-making functions from business execution functions.

Sharp has also designated three of four current corporate auditors as outside auditors, and has strengthened their capability to monitor and hold management in check by establishing the Internal Audit Division as an organization that works with the Board of Corporate Auditors.

## United Nations Global Compact

Sharp became a participant in the United Nations Global Compact in June 2009 to promote CSR. Since then, Sharp has set concrete targets for its efforts in support of the 10 principles of the Global Compact in the areas of human rights, labour, the environment, and anti-corruption, and is working to further promote these efforts throughout the Sharp Group.



## Promoting BRM (Business Risk Management)

In order to control and mitigate the risk of losses and compliance violations, Sharp has made BRM (business risk management) indispensable in fulfilling its corporate social responsibility. The company has identified and is particularly managing more than 100 “specific risks” that could have a major impact on management.

Sharp is also committed to continuously reviewing and improving its BCP (business continuity plans) for ensuring the safety of employees and their families and for facilitating the continuation of business operations in the case of an emergency, such as a major earthquake or an outbreak of a new strain of influenza.

## Efforts Towards Compliance

Sharp defines compliance as “observing company regulations and social codes of conduct, including laws and corporate ethics,” and regards it as the foundation of fulfilling its CSR. Accordingly, Sharp is pursuing on a global basis efforts to promote management practices where compliance is given first priority.

In fiscal 2009, the Compliance Committee met every three months to plan compliance measures and to confirm the implementation of these measures for the entire Sharp Group from a global perspective. In addition, while Sharp already had a legal affairs chief and staff members at each Sharp Corporation business group and affiliated company in Japan, in fiscal 2009, Sharp finished the process of appointing legal affairs staff members at the four overseas regions (US, Europe, China, Asia/Africa), as part of efforts to strengthen the compliance system internationally.

To foster legal and ethical awareness and ensure compliance with the law and social norms, Sharp Corporation and affiliated companies hold educational programs in Japan relating to compliance, including job-level-specific training and specialized training in specific fields. In fiscal 2009, Sharp provided compliance training based on the Sharp Group Compliance Guidebook in Japan and overseas. Sharp plans to work on the ongoing implementation of compliance training.

## Efforts in Information Security and Personal Information Protection

Sharp has established a basic policy on information security and a basic policy on the protection of personal information, and has constructed an in-house management system. Each year, Sharp implements measures such as conducting internal audits and e-learning training.

As a result, Sharp Corporation and six affiliated companies in Japan have acquired Privacy Mark\* certification.

\* A certification given to businesses that comply with the Japanese Industrial Standards (JIS) for personal information protection.

## Intellectual Property Strategy and Protection

Sharp regards its strategy on intellectual property as one of its most important management measures, and is promoting it together with its business strategy and R&D strategy. Sharp also uses its intellectual property assets to the fullest possible advantage. At the same time, Sharp is firmly committed to protecting its own intellectual property rights, while respecting the intellectual property rights of others. As of the end of March 2010, Sharp's patent holdings consisted of 17,501 Japanese patents and 22,568 foreign patents.

# Aiming to Contribute to the Environment

Sharp aims to achieve its corporate vision of becoming an Eco-Positive Company, and not only takes the environment into account in all its business activities, but also pursues what will create positive outcomes for the environment. These pages introduce just some of Sharp's achievements.

## Technologies

### Developing Unique Environmental Technologies

Sharp is working to develop unique environmental technologies to raise the environmental performance of its products and devices, and to lower the environmental impact of its production facilities.

One example of Sharp's one-of-a-kind environmental technologies is closed-loop plastic material recycling technology that repeatedly recovers plastic from used consumer electronics and reuses it in parts of new consumer electronics for the Japanese market. In fiscal 2009, the volume of plastic derived from this technology that was reused in new products increased to 1,200 tons, and the total volume of plastic recycled since fiscal 2001 reached 5,050 tons.

## Products

### Developing Products and Devices with High Environmental Performance

Along with having guidelines for environmentally conscious design, Sharp sets objectives for the development of environmentally conscious products and devices as well as assessment criteria for certification as such.

All new products since fiscal 1998 have met the assessment criteria necessary to be designated as environmentally conscious Green Products (GP). Sharp has been certifying GPs for the Japanese market that offer a particularly high level of environmental performance as Green Seal Products (GS Products), and certifying GS Products with the highest possible levels of environmental performance as Super Green Products (SGP). In fiscal 2009, Sharp began applying these efforts to products for overseas markets.

Sharp calls those environmentally conscious devices that meet its assessment criteria Green Devices (GD). Devices from among GD with the highest possible levels of environmental performance are certified as Super Green Devices (SGD).

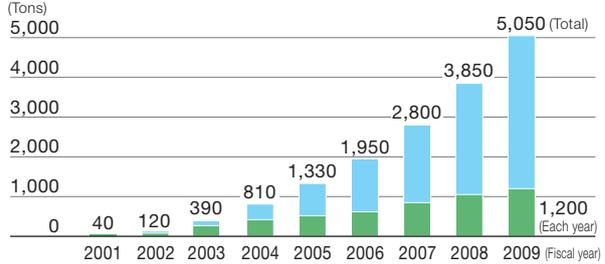
Both SGP for the Japanese market and SGD exceeded their sales ratio targets for the fifth consecutive year in fiscal 2009.

### Expanding the Recycling of Used Products

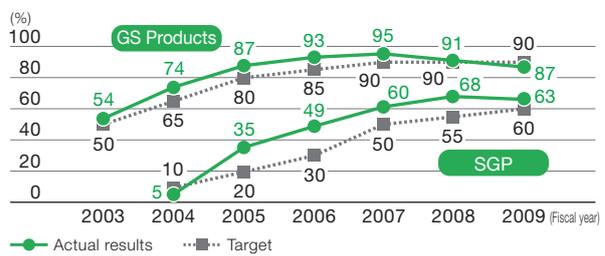
As a member of the B Group\*<sup>1</sup> for home appliance recycling, Sharp has constructed and is operating a highly efficient recycling system based on 18 recycling plants in Japan. In fiscal 2009, Sharp processed and recycled about 2.1 million units (up 43% over the previous fiscal year) of the four types of home appliances designated under the Law for Recycling of Specified Kinds of Home Appliances. The recycling rates exceeded the legal standard for all four kinds of appliances.

\*<sup>1</sup> The B Group consists of Sharp Corporation, Sanyo Electric Co., Ltd., Sony Corporation, Hitachi Appliances, Inc., Fujitsu General Ltd., Mitsubishi Electric Corporation, and other companies.

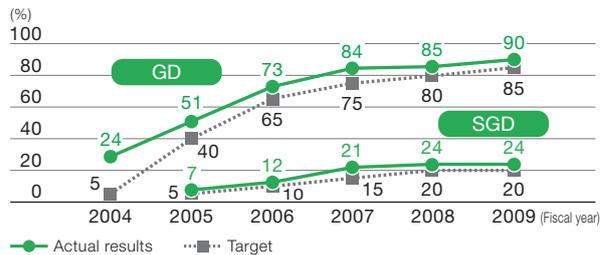
### Use of Plastic Recycled Through the Closed-Loop Material Recycling Process in Japan



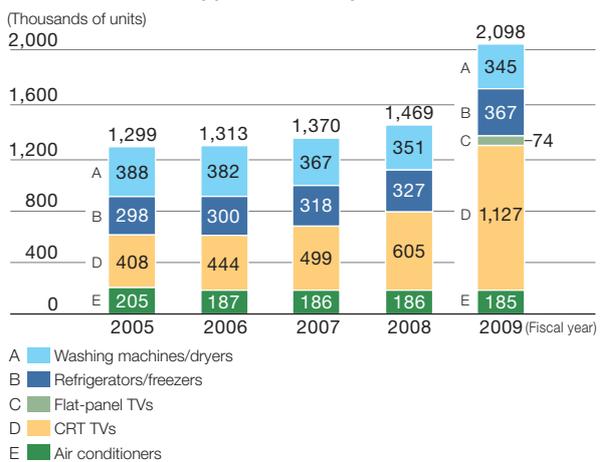
### Ratio of SGP and GS Products to Net Sales in Japan



### Ratio of SGD and GD to Net Sales



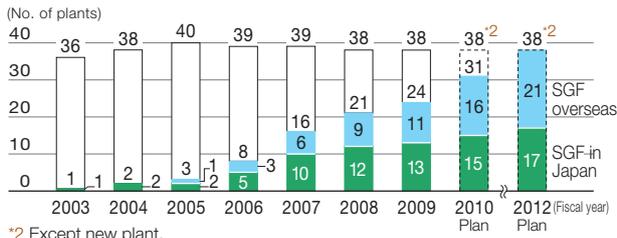
### Sharp Corporation's Processed and Recycled Units for the Four Home Appliances in Japan



### Sharp Corporation's Recycling Rate of the Four Home Appliances in Japan (Fiscal 2009)

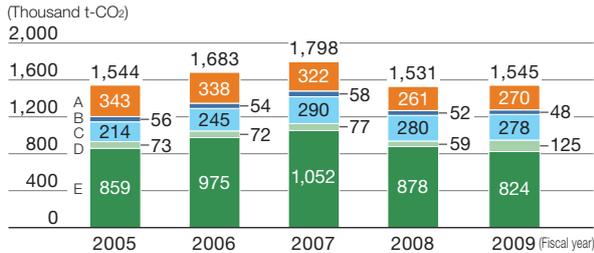
	Air conditioners	CRT TVs	Flat-panel TVs	Refrigerators/freezers	Washing machines/dryers
Recycling rate (Unit:%)	90	90	80	77	89
Legally required recycling rate	70	55	50	60	65

### Number of SGF Certified Plants



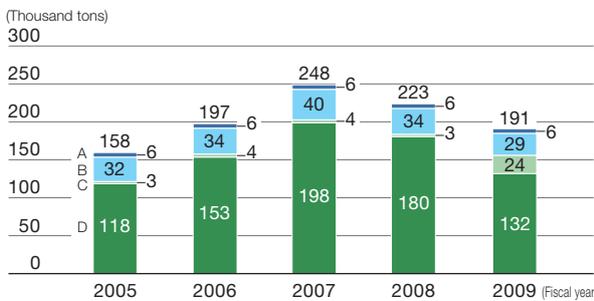
\*2 Except new plant.

### Amount of Sharp Group's Greenhouse Gas Emissions



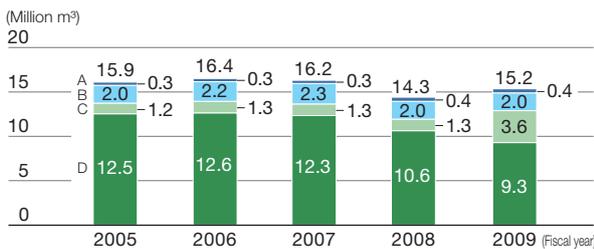
- A PFC emissions
- B CO2 emissions from offices in Japan and overseas
- C CO2 emissions from plants of overseas subsidiaries and affiliated companies
- D CO2 emissions from plants of subsidiaries and affiliated companies in Japan
- E CO2 emissions from 10 Sharp Corporation plants
- In calculating PFC emissions, prior to fiscal 2005, values for global warming potential were taken from the IPCC's Second Assessment Report (SAR). For fiscal 2006 and later, the values used were taken from the IPCC's Third Assessment Report (TAR).
- Emissions from the Toyama Plant (Toyama City, Toyama Prefecture) were included beginning in fiscal 2006.
- Emissions from the Advanced Materials & Energy Engineering Laboratories (Kashiwa City, Chiba Prefecture) and Sharp Display Products Corporation were included beginning in fiscal 2009.
- Refer to page 79 of the Environmental and Social Report 2010 (detailed version) for the CO2 emission coefficients used.

### Amount of Waste, etc. (Including Valuable Resources) Discharged by the Sharp Group



- A Offices in Japan and overseas
- B Plants of overseas subsidiaries and affiliated companies
- C Plants of subsidiaries and affiliated companies in Japan
- D 10 Sharp Corporation plants
- Emissions from the Toyama Plant were included beginning in fiscal 2006.
- Emissions from the Advanced Materials & Energy Engineering Laboratories and Sharp Display Products Corporation were included beginning in fiscal 2009.

### Amount of Water Used by the Sharp Group



- A Offices in Japan and overseas
- B Plants of overseas subsidiaries and affiliated companies
- C Plants of subsidiaries and affiliated companies in Japan
- D 10 Sharp Corporation plants
- Emissions from the Toyama Plant were included beginning in fiscal 2006.
- Emissions from the Advanced Materials & Energy Engineering Laboratories and Sharp Display Products Corporation were included beginning in fiscal 2009.

## Raising the Level of Environmental Performance in Factories

Sharp has set guidelines for raising the level of environmental performance at its factories. Sharp uses its own assessment standards for designating factories with a certain level of environmental performance as Green Factories (GF) and those with exceptionally high levels of environmental performance as Super Green Factories (SGF).

By fiscal 2009, 24 out of Sharp's 38 plants worldwide had reached SGF status.

SGF II, an initiative for plants that have attained SGF certification, is now underway.

## Curbing Greenhouse Gas Emissions

The Sharp Group was able to hold its greenhouse gas emissions in fiscal 2009 to an increase of 1% compared to the previous fiscal year. By strengthening efforts and extending them even to production equipment as well as utility equipment<sup>\*3</sup>, the 10 factories of Sharp Corporation were able to reduce CO2 emissions by 6% compared to the previous fiscal year, and by 22% compared to fiscal 2007 levels. In October 2009, operations began at Sharp Display Products Corporation, which carries out highly efficient manufacture of energy-saving LCD panels at GREEN FRONT SAKAI (in Sakai City, Osaka Prefecture, Japan). Despite this expansion in business, Sharp was able to limit its increase in greenhouse gas emissions through cutting-edge environmental technologies and highly efficient operation.

\*3 Ancillary services and equipment such as power, air conditioning, etc.

## Minimizing and Recycling Waste

In fiscal 2009, the Sharp Group in Japan and overseas discharged less waste, etc.<sup>\*4</sup> than the previous fiscal year. Overall Sharp was able to achieve a 14% reduction in the total amount of waste, etc. discharged. The 10 Sharp Corporation plants reduced emissions of waste, etc. by 27% compared to the previous fiscal year and by 33% compared to fiscal 2007. The Kameyama Plant (Kameyama City, Mie Prefecture) and the Mie Plant (Taki Township, Mie Prefecture), in particular, contributed greatly by reducing a significant amount of waste fluid. Sharp Display Products Corporation curbed emissions of waste, etc. by constructing a new system to reclaim spent developer solution within the GREEN FRONT SAKAI complex.

\*4 Waste and valuable resources recovered from waste.

## Effectively Using Water Resources

The amount of water used by the Sharp Group in fiscal 2009 increased by 6% over the previous fiscal year due to the startup of Sharp Display Products Corporation. However, the water used by all of Sharp Corporation's 10 plants was down 12% thanks to thorough recycling measures and a drop in production volume.

# Examples of Environmental Efforts

## SGP LED AQUOS LCD TV

Australia



LC-52LE700X

### No. 1 in Energy Efficiency\*1

\*1 Comparison based on values made public by companies under MEPS. As of January 2010.

- Achieved a 7-star rating, the industry's highest, under Australia's MEPS (Minimum Energy Performance Standards) program.
- Features high image quality and even higher energy efficiency by combining a next-generation LCD panel that uses newly developed UV<sup>2</sup>A technology for brighter images with less light, with an LED backlight that offers precise, efficient control of light.
- Annual power consumption: 363 kWh/year

## SGP Digital B/W MFP

North America



MX-M260

### Energy Efficient

- TEC value\*2 of 1.71 kWh, a 41% reduction compared to the previous model (AR-M257).

### Third-Party Environmental Certification

- ENERGY STAR®



\*2 Typical amount of energy consumed in a hypothetical week measured as stipulated under the ENERGY STAR program. Value is for total electricity consumed during five days of use, cycling between full operation and Sleep mode or turned off, and two days in Sleep mode or turned off.

## AGP<sup>3</sup> Thin-Film Solar Module

Europe



NA-F128G5

### High-Efficiency Energy Creation

- Highly efficient energy creation using unlimited sunlight.
- Module conversion efficiency 9.0%, an improvement of 5.9% over the previous model (NA-F121G5).
- Because thin-film silicon solar cells can be fabricated using low-temperature processes at less than 200°C and because there are fewer steps in the production process, they can be manufactured using less energy than conventional crystalline silicon solar cells.

\*3 AGP: Advanced Green Products. Environmentally conscious products for overseas markets.

## SSEC in China Achieves SGF Certification

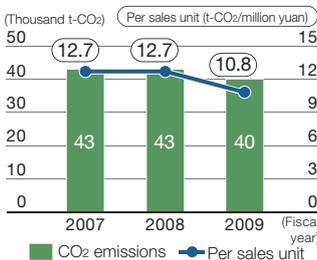
Shanghai Sharp Electronics Co., Ltd. (SSEC)\*4 in China acquired ISO 14001 certification in 1998, and has been working continuously to reduce its impact on the environment, including reducing CO<sub>2</sub> emissions by installing energy-efficient equipment, reducing waste by re-using packaging materials used to ship products, and properly managing chemical substances. In particular, this factory, which is located in Shanghai City where water is a serious problem, is concentrating on reducing the amount of the water it uses by introducing equipment to recycle water after inspections of the heat exchangers in air conditioners. In fiscal 2009, SSEC was able to reduce both CO<sub>2</sub> emissions and supplied water compared to the levels of the previous fiscal year. In addition, SSEC was able to hold down the amount of waste, etc. As a result of such activities, SSEC acquired SGF status in fiscal 2009, based on Sharp's own certification system. It has also received high marks from the city of Shanghai, as shown in the table to the right.

Fiscal Year	Accreditation
2005	Shanghai Exemplary Clean Manufacturer
2007	Green Company in the Pudong New Area, Shanghai
2008	Green Company in the Pudong New Area, Shanghai Shanghai Exemplary Clean Manufacturer
2009	Water-Saving Company of Shanghai Shanghai Exemplary Clean Manufacturer

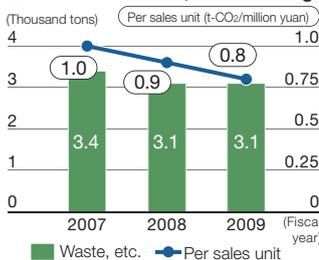


\*4 SSEC manufactures air conditioners, refrigerators, washing machines, and air purifiers.

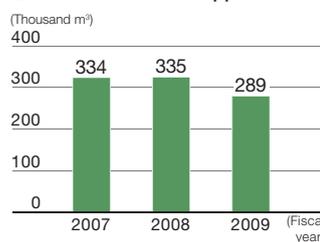
### CO<sub>2</sub> Emissions



### Amount of Waste, etc. Discharged



### Amount of Water Supplied



Reported by  
Chi Xiao Yun  
Environment and  
Quality Management  
Division  
SSEC

## SUK in the UK Achieves Green Office Certification

All staff members at Sharp Electronics (U.K.) Ltd. (SUK), Sharp's sales subsidiary in the UK, work together under the leadership of senior management to help protect the environment.

SUK carries out various measures to reduce its environmental impact, including the installation of energy-saving equipment and a motion-sensor lighting system, the use of recycled paper, and the installation of solar panels on SUK office roofs. In July 2009, SUK introduced a recycling scheme for discarded toner cartridges.

SUK is also keen to raise awareness about the importance of environmental protection and to encourage employees to proactively do their part to save the environment. Related activities include displaying educational, environment-related banners and posters throughout SUK offices and participating in a government-promoted bike commute program.



Solar cells for installation on buildings and educational material on solar power displayed in the reception area



Eye-catching environmental banners and posters

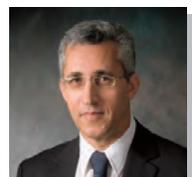


Carbon Trust Standard certified

From November 23 to 27, 2009, SUK held a Green Week event where, with the help of external presenters, unique programs were implemented each day on four themes, one of which was global warming. For stakeholders, SUK introduces Sharp's environmental activities through sales promotion materials, its website, ads, and exhibitions, and works to expand sales of Sharp energy-saving products.

As a result of these efforts, SUK achieved Green Office status in fiscal 2009, based on Sharp's own certification system. And, after rigorous assessment, Sharp subsidiaries in the UK, including SUK, were certified for the Carbon Trust Standard, proving that we have taken real action on climate change.

SUK will continue to make efforts to minimize the impact of its business activities on the environment by promoting best practices and encouraging its staff to get involved in protecting the environment.



Reported by  
Djelloul Kitter  
Regulatory &  
Environment Division  
SUK

# Offering Products and Services That Deliver Peace of Mind and Satisfaction

Constantly thinking from the customer's point of view in order to develop and provide products and services that customers find useful is one of Sharp's fundamental values. Sharp is also applying customer feedback toward making better products that customers can rely on for years and is striving to improve sales and after-sales service. Sharp seeks to satisfy customers so that they choose Sharp now, next time, and every time.

## Product Quality and Safety, Customer Satisfaction

Sharp's CS Promotion Group leads company-wide, collaborative efforts in the business groups, domestic affiliates, and overseas bases to continuously improve product quality and safety, and customer satisfaction.

Product safety is based on adherence to the safety standards, laws, and regulations of every country. In addition, Sharp has its own technical safety standards, which are applied to all products. Through these standards, Sharp aims to ensure complete safety even when rare and unexpected problems arise. To ensure an even higher level of safety, Sharp revises the standards whenever the need arises.

Also, Sharp is adjusting its system for ensuring product safety overseas. Along with responding in a timely manner to changes in the social situation and revisions to laws pertaining to product safety, Sharp will continue to increase its efforts at offering products that customers can use with peace of mind.

## Applying Customer Feedback to the Making of Products

In order to deliver products that customers find easy to use and to boost customer satisfaction, Sharp is implementing VOC (Voice of the Customer) activities so that customer evaluations and opinions are put to use when products are made.

Employees in charge of areas such as planning, development, and design can freely access anonymous customer feedback sent to Sharp's major call centers. Sharp investigates what problems customers actually face and what they actually want, and then incorporates its findings into the specifications and design of its products.

Also, Sharp gains an understanding of customer needs and complaints that the customers themselves are not even aware of through interviews and product testing (usability tests), where customers actually operate products, and improves products based on these results. Through activities such as these, Sharp is raising the appeal of its products.

Sharp also promotes the manufacture of products that take into consideration universal design, so many more customers can comfortably use its products. The developers themselves evaluate the products by wearing tools (such as cataract goggles, weights, and gloves) that simulate the experience of the elderly.



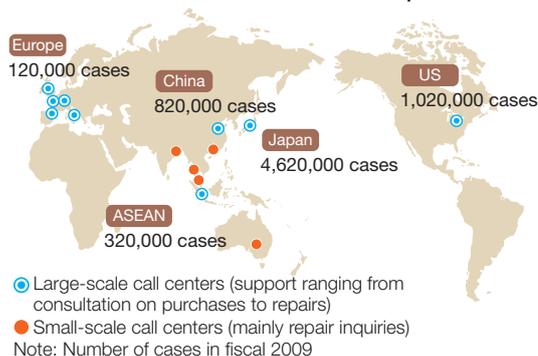
Developers observing the user during testing

## Global Customer Support System

Sharp has established call centers in Japan and at major overseas bases, and adequately responds to customer inquiries.

The large-scale call centers in and outside Japan assume the role of a control tower. For example, if a customer calls for repair service, the call center diagnoses whether the product is broken or not by asking questions, and immediately contacts the service base or agent after confirming the symptoms of the problem and the cause. For cases such as this, Sharp has a system in place that connects its call centers and service bases and agents via a network and allows the company to keep track of the progress from repair request to completion. Additionally, small-scale call centers, in cooperation with Sharp sales and marketing divisions, work firmly rooted in their local communities and contribute to improved customer satisfaction and expanded sales.

### Call Centers and Number of Customer Inquiries Handled



## Disclosure of Information When Quality Problems Arise

In the event that a Sharp product is found to be responsible for injury to customers or for damage to property, Sharp will disclose relevant information immediately in newspapers and via its website, or through other methods. Sharp also has contact points to directly receive inquiries from customers and is striving to keep quality problems to an absolute minimum.

During fiscal 2009, Sharp notified customers as below, providing free-of-charge inspection, repair, and product recovery.

### Free-of-Charge Inspection and Repair

- Refrigerator/Freezer for Japan (January 2010)**  
 If anything became lodged between the refrigerator and its door, various problems would occur, making it difficult or even impossible to open or close the door. And forcibly opening or closing the door in such a situation raised the risk of the door becoming unhinged. Sharp advised customers on the safe use of its refrigerators and conducted free inspections and parts replacement.
- AV Center Computer Monitor and LCD IT TV for Japan (June 2009)**  
 A defective film condenser part in the power supply section raised the risk of smoke and strange odors being emitted from inside the monitor and TV. Sharp conducted free inspections and parts replacement.

# Mutual Prosperity with Suppliers and Dealers

Sharp conducts its procurement activities on the basis of fair evaluation, ensuring that all companies are provided with equal opportunities. Sharp aims for mutual prosperity with business partners by building relationships of cooperation and trust through dialogue and communication that deepen mutual understanding. Sharp is also promoting CSR activities throughout the entire supply chain.

## Determining Procurement Based on Providing Equal Opportunity and Fair Evaluation

Sharp has formulated Basic Purchasing Principles that contribute to a prosperous coexistence with business partners. The Principles stipulate impartiality and fairness in all purchasing activities and the creation of a relationship of cooperation and trust with suppliers.

## Promoting CSR Measures Throughout the Supply Chain

To help its business partners (suppliers) gain an understanding of Sharp's CSR philosophy and promote concrete measures toward CSR among suppliers, Sharp created its own Sharp Supply-Chain CSR Deployment Guidebook and made it available on the Sharp website in Japanese, English, and Chinese editions. Through this initiative, Sharp is requesting that suppliers around the world step up their efforts in areas related to CSR.

This guidebook conforms to the Supply-Chain CSR Deployment Guidebook produced and distributed by the Japan Electronics and Information Technology Industries Association (JEITA). Suppliers around the world are making full use of its content to guide their own concrete efforts in the principal areas related to CSR that are covered by international standards.



Sharp Supply-Chain CSR Deployment Guidebook (Japanese, English, and Chinese editions)

## Deploying Supply Chain CSR Measures on a Global Basis

Since fiscal 2007, Sharp has been gradually implementing CSR Procurement Surveys for suppliers of production and procurement bases in Japan and China. In fiscal 2009, in addition to these partners, Sharp introduced the same survey to local suppliers for production and procurement bases in Europe, North America, and Asia. As a result, the deployment to all Sharp Group production and procurement bases around the world is complete.

In the future, Sharp will work together with suppliers to continuously raise the level of its CSR efforts through regular surveys and visits to production sites to verify the status of CSR efforts, and will strive to contribute to the development of a sustainable society throughout the entire supply chain.

## Working Together with Dealers in Their Efforts for the Environment

Sharp's sales companies in Japan provide assistance to dealers to gain certification under a commendation system entitled Dealer of Excellence in Promoting Energy-Efficient Products, sponsored by the Energy Conservation Center, Japan.

In fiscal 2009, 98 of the dealers who worked with Sharp received Dealer of Excellence certification for the first time. Naruden Inc. of Wakayama Prefecture received the Economy, Trade and Industry Minister's Prize, and Life Page Fujiden of Yamaguchi Prefecture won the Environment Minister's Prize.

# Appropriate Return of Profits and Information Disclosure

One of the most important management principles for Sharp is to return a portion of profits to shareholders. Through general shareholders' meetings and IR (investor relations) activities that respond to the diversifying needs of investors, Sharp is promoting communication with shareholders and investors, and the valuable feedback of these stakeholders is applied toward management improvements.

## Basic Policies Concerning Profit Sharing

Sharp considers distributing profits to shareholders to be one of the most important management issues. While maintaining consistently stable dividend payouts, and while considering its consolidated business performance, financial situation, and future business development in a careful and comprehensive manner, Sharp implements a set of measures to return profits to its shareholders. For fiscal 2009, Sharp distributed a year-end dividend of 10 yen per share, an increase of 3 yen compared to an interim dividend of 7 yen, due to improved business performance. The total annual dividend was 17 yen per share.

### Net Income per Share (Consolidated) and Cash Dividends per Share

Fiscal year	2005	2006	2007	2008	2009
Net income (yen)	80.85	93.25	93.17	▲114.33	4.00
Cash dividends (yen)	22	26	28	21	17

## IR Activities Designed to Meet the Diversifying Needs of Investors

Sharp proactively engages in communication with shareholders and investors through domestic and overseas IR activities.

Information on the IR website is constantly being updated and expanded, as Sharp strives to provide information needed by investors in a timely manner. There is also a site for individual investors, where they can easily access relevant information presented in an easy-to-understand format that employs layman's language, charts, graphs, and figures.

Other activities in fiscal 2009 included hosting briefings on quarterly financial results and business strategies, giving factory tours, and holding IR meetings with leading institutional investors.



IR website

# Creating a Fair, Positive, and Progressive Workplace

Sharp stresses the importance of basic human rights and personal dignity, provides opportunities for growth to enthusiastic employees, fosters the diverse abilities of all employees, and promotes a workplace that utilizes employee diversity. It also has systems for helping employees maintain a healthy balance between their work and home lives, and it strives to create a workplace that offers employees mental and physical well-being.

## Respect for Basic Human Rights and Personal Dignity, Good Labor-Management Relationship Through Dialogue

As a matter of policy, Sharp protects basic human rights and personal dignity and prohibits both child and forced labor, as it works to ensure respect for human rights and endeavors to prevent human rights violations. Moreover, both domestically and internationally, Sharp aims to promote efforts in line with the human rights and labor standards stipulated in the United Nations Global Compact, in which Sharp participated in June 2009.

Sharp respects employees' right to organize and right of collective bargaining, and works to strengthen trusting relationships with labor unions.

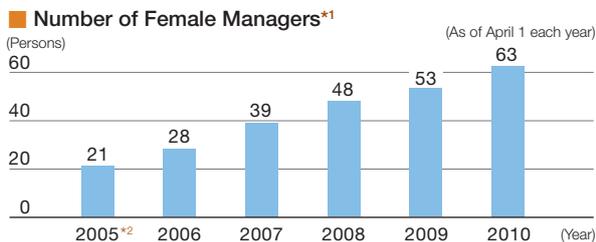
Sharp has regular opportunities for labor-management dialogue through such forums as the Central Labor-Management Council in Japan, European Works Councils, and employee representative assemblies in China.

## Personnel, Education, and Training Systems That Value Employee Initiative and Diversity

To increase its global competitiveness and to bring out the character, motivation, and creativity of each employee, Sharp systematically promotes human resource development through a variety of personnel, education, and training systems. These include next-generation human resource development systems, talent-development and motivation-boosting programs, and education, training, and self-development support systems.

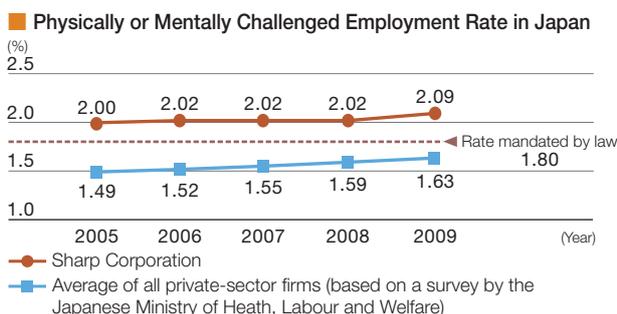
## Efforts Toward Diversity

Sharp initiated the Corporate Affirmative Action for Women Strategy Program as the first step in diversity management—utilizing the diversity of employees—in June 2005 in Japan. At present, Sharp is promoting total diversity, including utilizing the skills and talents of non-Japanese employees in Japan, employing the physically or mentally challenged, and reemploying retirees who have reached mandatory retirement age.



\*1 Managers at Sharp Corporation in Japan, including personnel posted to domestic affiliates.

\*2 Corporate Affirmative Action for Women Strategy Program started in 2005.



—●— Sharp Corporation  
—■— Average of all private-sector firms (based on a survey by the Japanese Ministry of Health, Labour and Welfare)

## Promoting Efforts to Achieve a Work-Life Balance

In line with its promotion of diversity, Sharp supports its employees by creating a rewarding, safe, and healthy workplace. Sharp helps them achieve a work-life balance that will enable them to lead rich lives both at work and at home.

Sharp is systematically expanding various programs pertaining to childcare and nursing care, such as those for reducing working hours and for allowing family-care leave. To create a workplace that is conducive to utilizing such programs, Sharp is working to familiarize employees with the programs and to promote their use by providing information via the Sharp intranet.

These efforts have been highly appraised from outside the company, with Sharp receiving certification from the Japanese Ministry of Health, Labour and Welfare based on the Act on Advancement of Measures to Support Raising Next-Generation Children.



The next-generation certification mark (nicknamed Kurumin) shows that the company is certified by the Ministry of Health, Labour and Welfare.

## Aiming for a Secure, Safe, and Healthy Workplace

Every three months, Sharp Corporation holds Central Health and Safety Committee Meetings that bring the company and the labor union together to confirm the status of company-wide health and safety efforts and share valuable information. It has also organized a team consisting of Central Health and Safety Committee members to conduct health and safety inspections at each plant.

Each business location holds regular meetings of the Health and Safety Committee as well as Health and Safety Council meetings to further improve the health and safety of subcontractor employees permanently stationed within Sharp sites.

The result of these continuing measures is that Sharp's frequency rate\*3 of lost-worktime industrial accidents in 2009 was 0.20. Sharp's frequency rate is consistently below the national average for the manufacturing industry.

Moreover, Sharp aims to acquire OHSAS 18001\*4 certification at all Sharp Corporation production sites. Four sites have already acquired certification, and a further six sites are making efforts to acquire certification in fiscal 2010.

Sharp is also making efforts to acquire OHSAS 18001 or certification for occupational health and safety management system standards in each country for its overseas manufacturing bases, and plans to globally strengthen its occupational health and safety management.

In addition, to enhance mental health care and support employees taking or returning from medical leave, Sharp has improved its counseling system and has been conducting various mental health care training and educational activities.

\*3 Indicator that represents the incidence of industrial accidents per million work hours (one day or more of suspended operations).

\*4 One of the occupational health and safety management system certification standards, and is the most widely and internationally used standard today.

# Social Contribution Activities as a Corporate Citizen

Based on its business philosophy “to contribute to the culture, benefits and welfare of people throughout the world” and as a corporate citizen, Sharp addresses various social challenges with a global viewpoint and conducts community-based social contribution activities, aiming for a harmonious coexistence with society.

Sharp recognizes environment, education, and social welfare as priority fields, has created structures and systems for these activities, and voluntarily and continuously tackles these areas.

## Three Important Fields of Social Contribution Activities



### Environmental Field

Sharp works closely with local communities to protect the environment. Jointly established by Sharp and its labor union, the Sharp Green Club (SGC) carries out activities, such as cleanup campaigns and Sharp Forest work, at all production sites and sales and service bases in Japan. Cleanup campaigns and forest preservation work are also among the activities conducted at bases outside of Japan.

#### Case Study Outdoor Environmental Education Classes at Sharp Forests

In August 2009, Sharp conducted outdoor environmental education classes at the Konoyama Sharp Forest in Osaka Prefecture directed at students who have taken elementary school environmental education classes (see below) to teach them forestry preservation and the importance of regenerating *satoyama* (areas between the foot of mountains and arable land), which they cannot learn about at their desks.



### Educational Field

Sharp is undertaking educational activities directed at children, on whose shoulders the future will rest. Since fiscal 2006, Sharp has conducted environmental education activities in collaboration with the Weathercaster Network (WCN) and with the cooperation of the Asaza Fund at a total of 500 elementary schools in Japan annually. From fiscal 2009, craftsmanship education classes are being given at a total of 100 elementary schools across the nation annually.

Sharp is also undertaking environmental education directed at elementary school students around the world, notably in the United States and China since fiscal 2008.

#### Case Study Sharp Environmental Education Reaches Over 100,000 Children

By January 2010, classroom presentations had been given in a total of approximately 1,500 schools, reaching 100,000 children. In addition, in April 2010, this activity was highly appraised and received the Minister's Award from the Ministry of Education, Culture, Sports, Science and Technology at the 19th Grand Prize for the Global Environment Award.\*1



\*1 One of the most respected and oldest environmental awards in Japan.

This environmental lesson at Haze Elementary School in Sakai City, Osaka Prefecture brought the total of children taught to over 100,000

### Social Welfare Field

Sharp is globally promoting various community-based activities, such as the employment of the physically or mentally challenged, job assistance for the physically or mentally challenged by offering sales opportunities to vocational training centers\*2, environmental education classes for physically or mentally challenged children, and support through donations.

#### Case Study Activities at a Special Subsidiary

Sharp Tokusen Industry Co. supports social participation by and employment opportunities for the physically or mentally challenged by changing and expanding its operations to fit the development of Sharp Corporation's electronics business and by providing work experience training.

Sharp Tokusen Industry's approach to expanding the employment of the physically or mentally challenged received recognition in October 2009 when the Osaka Prefectural Association of Employment Development gave the company an award for being a “company that contributed to the employment of persons with disabilities.” A Sharp Tokusen Industry employee also received an award for long-time service.



\*2 A workplace for the physically or mentally challenged who have difficulty gaining immediate employment at corporations and businesses.

## TOPICS

### Worldwide Initiative for Supporting Biodiversity

May 22 is the United Nations International Day for Biological Diversity. In support of this day in 2010, Sharp carried out various activities for the protection of biodiversity in 27 countries and regions where it has offices and bases. A range of activities suited to each region were conducted, including biodiversity lectures, planting trees, tending forests, and protecting the habitats of wild birds.

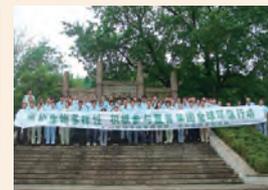
Maintenance of bamboo grove near ancient burial mound (Japan)



Environmental class for children (Malaysia)



Preserving national park grounds (China)



Tree planting (France)



# Outline of the Sharp Group

Sharp's business activities comprise "Consumer/Information Products" that are actual consumer electronics and information products, and "Electronic Components" that provide the key components of electronic products. By undertaking the development of both key devices based on proprietary technologies and their application products, Sharp aims to inspire and impress customers by bringing forth never-before-seen, one-of-a-kind products and devices, and by pioneering new markets.

## Corporate Profile

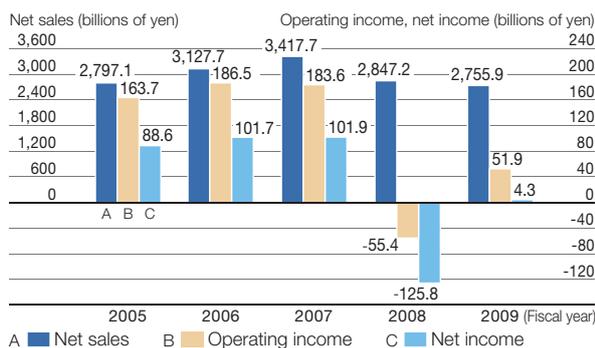
Name Sharp Corporation  
 Head Office 22-22, Nagaïke-cho, Abeno-ku, Osaka, Japan  
 Representatives Katsuhiko Machida, Chairman  
 Mikio Katayama, President  
 Founded September 15, 1912  
 Operations\*1 Manufacture and sales of audio-visual and communication equipment, health and environmental equipment, information equipment, LCDs, solar cells, and other electronic devices  
 Capital Stock\*1 204,675 million yen (rounded down to the nearest million)  
 Number of Employees\*1 Consolidated: 53,999  
 Entire Sharp Group: 61,734  
 31,696 in Japan  
 30,038 overseas  
 (4,471 Americas, 4,177 Europe, 21,071 Asia, 319 other)  
 \*1 As of March 31, 2010

## The Sharp Group at a Glance (as of March 31, 2010)

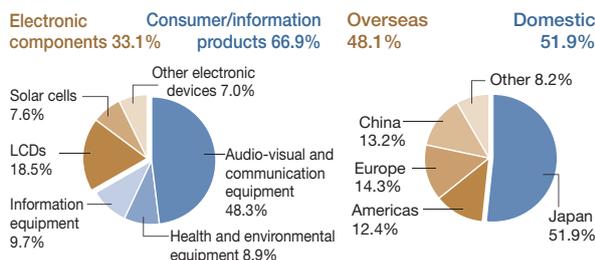
- Consolidated subsidiaries: 57 (13 in Japan, 44 overseas)
- Overseas structure

Sales subsidiaries	30 companies in 25 countries/regions
Manufacturing bases	23 companies in 14 countries/regions
R&D bases	4 companies in 3 countries/regions
R&D company and parts supplier	1 company in 1 country/region
Finance company	1 company in 1 country/region
Representative offices	2 offices in 1 country/region
<b>Total</b>	<b>61 companies/offices in 26 countries/regions</b>

## Net Sales, Operating Income, and Net Income (Consolidated)



## Fiscal 2009 Consolidated Net Sales by Product Group (Component Ratio) and by Region (Component Ratio)



## Main Products



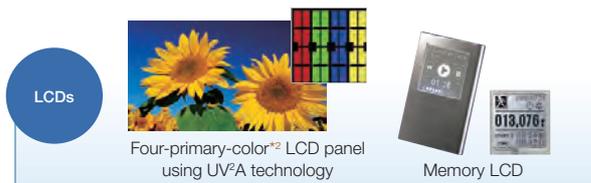
LCD TVs, color TVs, projectors, DVD recorders, Blu-ray Disc recorders, Blu-ray Disc players, mobile phones, PHS (personal handy-phone system) terminals, mobile communications handsets, personal computers, electronic dictionaries, calculators, facsimiles, telephones



Refrigerators, superheated steam ovens, microwave ovens, air conditioners, washing machines, vacuum cleaners, air purifiers, dehumidifiers, humidifiers, electric heaters, small cooking appliances, Plasmacluster Ion generators, LED lights, solar-powered LED lights



POS systems, handy data terminals, electronic cash registers, LCD color monitors, information displays, digital MFPs (multifunction printers), options and consumables, software, FA equipment, ultrasonic cleaners



TFT LCD modules, duty LCD modules, System LCD modules  
 \*2 The use of four primary colors is a concept designed for LCDs, and differs from the conventional three-primary-color concept of light and color.



Crystalline solar cells, thin-film solar cells



CCD/CMOS imagers, LSIs for LCDs, microcomputers, flash memories, analog ICs, components for satellite broadcasting, terrestrial digital broadcast tuners, RF modules, network components, laser diodes, LEDs, optical pickups, optical sensors, components for optical communications, regulators, switching power supplies

# SHARP

Sharp enjoys a superb reputation for its active CSR efforts in Japan and around the world.

As of September 2010, the following SRI\* ratings agencies had given Sharp a favorable CSR rating or included Sharp in their SRI indices.

\* Socially Responsible Investment

- FTSE4Good Global Index (UK)
- FTSE KLD Global Climate 100 Index (US)
- Ethibel Sustainability Index (Belgium)
- Morningstar Socially Responsible Investment Index (Japan)
- oekom research AG (Germany), Corporate Responsibility Prime Status



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