



# Environmental Report 2008

Environmental Management

Energy and Resource Conservation

Material Balance

Environmental Accounting

## Environmental preservation and “All quality aspects on the job” to achieve it

The year 2008 marks the start of the commitment period under the Kyoto Protocol. In parallel with the progress of this period, we must prepare medium- and long-term visions looking ahead to the post-Protocol years beginning in 2013. The year will also be a genuine test of our orientation as manufacturers toward further bolstering our capabilities for compliance with laws and regulations to cope with the European Union (EU) REACH rules in addition to the EU and China RoHS directives to which we have already adapted. We at SMK regard compatibility with the global environment as a corporate duty and have positioned it as a key management objective. We are determined to share this task at all stages of business while pushing steadily ahead with our activities for global environmental preservation, day by day, as a good corporate citizen and member of the electric/electronics industry.

For this reason, as we provide for the unified deployment of measures to save energy and resources at SMK sites around the world, it will be vital for us to see that each and every employee shares the same ideals and to align their vectors of awareness on the issues. The vector for eliminating waste points to the goal of “All quality aspects on the job” which compels us to take up the challenge of zero defects. This is because defective goods not only erode profits but also result in the waste of precious resources in the process of manufacturing, transporting, and selling them. They therefore cause a needless increase in greenhouse gas emissions. We must always bear it in mind that the negative effects are hardly confined to our sites; instead, they extend to the upstream

suppliers of materials, the downstream final manufacturers, and the logistics and sales channels.

“All quality aspects on the job” is not a task solely for the manufacturing division. It equally requires “sales quality” in the phase of order placement and receipt, “clerical quality” on the part of the supporting teams in offices, and “management quality” for good corporate governance. This is why we consider it essential to mount companywide approach to environmental preservation and its achievement.

This report sets forth the results of our efforts to preserve the environment in fiscal 2007. We are resolved to press ahead with our concerted efforts to preserve the global environment over the coming years as well, and ask for your continued guidance and support in our endeavors.

May 2008



**Terutaka Ikeda**  
Chairman and  
Chief Executive Officer

**Tetsuya Nakamura**  
President and  
Chief Operating Officer

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### About This Report

**Reporting period** FY2007 (April 1, 2007–March 31, 2008)

#### Scope of totalization

Sites in Japan	Toyama Works and Toyama Technology Center
Head Office (Togoshi)	Hitachi Works
Gate City Office (Osaki)	Ibaraki Works
Osaka Branch	Yamato Works
Nagoya Branch	<b>Subsidiaries in Japan</b>
Kanagawa Sales Office	Toyama Showa Co., Ltd.
Ibaraki Sales Office	Showa Denshi Co., Ltd.
Hokuriku Sales Office	Yatsuo Denshi Kogyo Co., Ltd.
Fukuoka Sales Office	Ibaraki SMK Co., Ltd.
Overseas Sites	SMK Electronics (Phils.) Corporation
<b>ASIA</b>	SMK Korea Co., Ltd.
SMK High-Tech Taiwan Trading Co., Ltd.	<b>EUROPE</b>
SMK Electronics (H.K.) Ltd.	SMK Europe N.V.
SMK Trading (H.K.) Ltd.	SMK (U.K.) Ltd.
SMK Dongguan Gaobu Factory	SMK Hungary Kft.
SMK Electronics (Shenzhen) Co., Ltd.	<b>NORTH AMERICA</b>
SMK Electronics Trading (Shanghai) Co., Ltd.	SMK Electronics Corporation U.S.A.
SMK Electronics Singapore Pte. Ltd.	SMK Manufacturing, Inc.
SMK Electronics (Malaysia) Sdn. Bhd.	SMK Electronica S.A. de C.V.

#### CO<sub>2</sub> emissions

In past issues of the SMK Environmental Report, we applied conversion coefficients for emissions in Japan to the entire SMK Group. Beginning with the 2008 issue, the calculations are to be in conformance with the standards of the Federation of Electric Power Companies of Japan for sites in Japan and the GHG Protocol for those in overseas sites.

#### Access to corporate information

Our website discloses data profiling our company, IR information, product descriptions, and past environmental reports.

<http://www.smk.co.jp/>

Contact: Environmental Protection Department, SMK Corporation  
TEL: +81-3-3785-5058 FAX: +81-3-3785-2904

## Searching for the advisable shape of our future as a global citizen

With the start of the commitment period under the Kyoto Protocol, more attention is being focused on prevention of global warming as an agenda shared by all humankind in common. At SMK, we also have accorded prevention of global warming a key management objective and we are taking positive-minded initiatives to preserve the environment.

As a first step, we established a Corporate Environmental Preservation Committee within our corporate social responsibility (CSR) Committee as one of corporate governance. While aligning vectors among all members, the entire SMK Group is promoting environmental preservation activities with a view to heightening levels of stakeholder satisfaction and corporate value.

Our long-standing activities in the aspect of environmental management based on ISO 14001 are constantly advancing at each site. We have constructed mechanisms for assessing and examining cases of successful activities on the site level and having them applied globally, and are putting them into operation at each site.

It should be added that environmental problems are also a major item in our 7<sup>th</sup> medium-term business plan, which we launched in fiscal year 2007. To this end, we are taking action on the tasks of reduction of CO<sub>2</sub> emissions and waste, control of environment-hazardous substances contained in products, and strengthening of environment-friendly design.

Nevertheless, the real issues lie outside this dimension. We must ask ourselves how to link the present to the future and how to reconcile the interests of the corporation with those of society as a whole.

The specific requirements on this front are nothing less than nurturing the strength needed for victory in the mega-competition and striking the perfect balance between management and environmental concerns, all while continuing work on the major agenda. These consist of product assessments to the ends of size and weight reduction, and resource saving, provision of eco-products, and the challenge of complete defect elimination.

It goes without saying that a corporate enterprise is an aggregate of its employees, and can only open up its future potential by means of their vision and power as individuals. The entire process begins with thinking by each and every employee of the SMK Group on the question of why we must take vigorous action on environmental problems ourselves at this time.

As both a corporate employee and a global citizen, I myself intend to join hands with all the other SMK people in searching for the advisable shape of our future.

May 2008

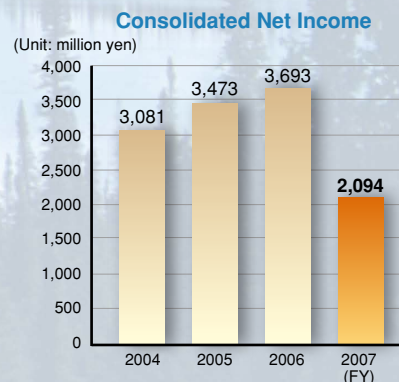
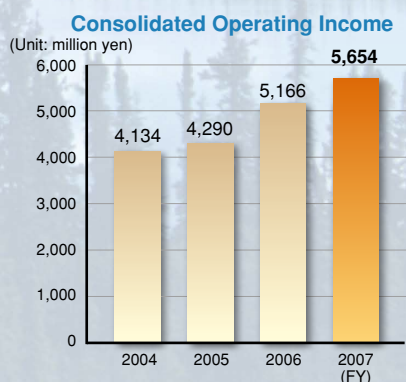
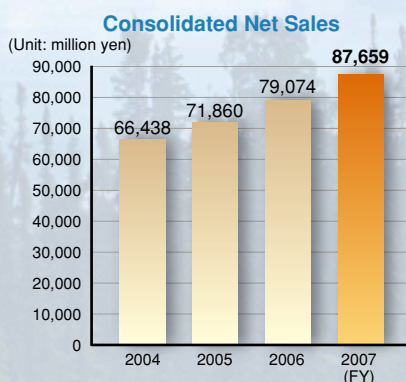


**Yoshio Sakurai**  
Vice President of  
Environment Div.

### Corporate Profile (as of March 31, 2008)

<ul style="list-style-type: none"> <li>• <b>Name</b></li> <li>• <b>Established</b></li> <li>• <b>Registered</b></li> <li>• <b>Primary Businesses</b></li> </ul>	<p>SMK Corporation April 1925 January 15, 1929 Manufacturing and sales of electronic components for use in electrical equipment, communications equipment, electronic equipment, industrial machinery, IT equipment and other applications.</p>
<ul style="list-style-type: none"> <li>• <b>Capital</b></li> <li>• <b>Number of Employees</b></li> <li>• <b>Head Office</b></li> </ul>	<p>7,996 million yen 14,869 (Groupwide) 5-5, Togoshi 6-chome, Shinagawa-ku, Tokyo 142-8511 Japan TEL: +81-3-3785-1111 FAX: +81-3-3785-1878 URL: <a href="http://www.smk.co.jp/">http://www.smk.co.jp/</a></p>

<ul style="list-style-type: none"> <li>• <b>Major Products</b></li> </ul>	<p>Switches / Remote control units / Keyboards / Control panel units / Electret condenser microphones / Earphone-microphone assemblies / Camera modules / AC adaptors / Cradles / Antennas / Crimp connectors / FPC and FFC connectors / Board-to-board connectors / RF coaxial connectors / Interface connectors / Card connectors / Power connectors / Metal ferrules / Jacks and pin jacks / DC power supply plugs/jacks / Fuse holders / Connectors for solar cell modules / Resistance sensitive touch panels / Optical touch panels / Bluetooth modules</p>
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## SMK Environmental Charter

### 1. Basic Philosophy

The SMK Group pursues environmental preservation as well as economic development, by integrating its current technological strengths and creating advanced technology. As a good corporate citizen, every one of us will contribute to the promotion of sustainable global development.

### 2. Action Guidelines

- (1) Develop environmentally friendly products
- (2) Reduce waste by using everything to its fullest extent
- (3) Preserve natural resources and saving of energy
- (4) Encourage 3R (reduce, reuse and recycle)
- (5) Realize waste-free procurement and manufacturing

### Organization to Promote Environmental Preservation

In SMK, Group policies, targets, and initiatives related to environmental preservation are deliberated upon and determined by the Corporate Environmental Preservation Committee, which is chaired by the vice president of the Environment Div. Major items are subject to deliberation and determination at the Executive Officer's Meeting. Upon determination, they are deployed at all sites inside and outside Japan. At each business site, the local Environmental Preservation Committee decides local policies, targets, and initiatives in accordance with group policies, targets, and initiatives taking locally specific issues into consideration and puts them into practice.

### Environmental Management Systems

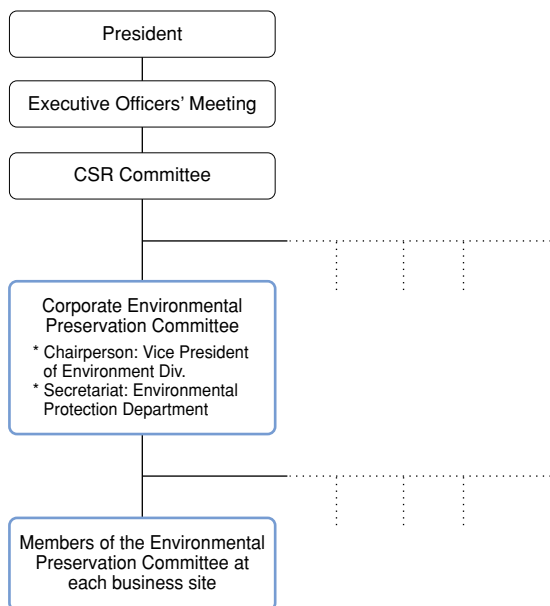
SMK's environmental management systems are based upon the international standards of ISO 14001. In the system, besides complying with laws and regulations as a matter of course, action plans are established in accordance with the groupwide and office policies as well as complying with laws and regulations. The internal audits check the result of the activities, and indicate the incompleteness to be improved, if any. The corporate management assesses the system, gives directions, and reviews policies and plans, to improve the effectiveness of the entire system. Beginning in fiscal 2007, members of the Environmental Protection Department decided to make more frequent visits to our sites in other countries for on-the-spot confirmation that they are accurately ascertaining levels of environmental burden and properly carrying out preservation activities, and provision of guidance as necessary. Besides promoting measures that proved effective in Japan in other countries, these visits are aimed at raising the level of the Group as a whole by, for example, introducing effective measures taken at one site to others.

### Environmental Education

SMK implements environmental education as part of the curriculum of layer-specific and professional education provided throughout the Group. In addition, each business site makes its own annual education plans.

SMK is also putting resources into the education of internal environmental auditors in order to bolster our internal environmental auditing, because it is an important activity for the effective and on-going operation of our environmental management system. We are having instructors not only to furnish such education in Japan but also to make visits to overseas sites for the same purpose. In activities to mitigate global warming and otherwise preserve the environment, it is vital to heighten the environmental awareness of each and every employee and to have the activities take root. We are going to continue improving programs to enable each and every employee to take action evidencing concern for environmental preservation not only in the company but also in daily life.

### Organization for Environmental Preservation



Environmental education at SMK Electronics (Phils.) Corporation



Corporation Education of internal auditors (Head Office)

## Summary of Environmental Preservation Activities in FY 2007

With the start of the 7<sup>th</sup> medium-term business plan in fiscal 2007 (fiscal 2007–2009), SMK began using global data including our overseas sites. Fiscal 2007 (ended on 31 March 2008) was the first year of this plan. The table below shows the situation as regards attainment of our fiscal 2007 targets.

### • Reduction of CO<sub>2</sub> Emissions

SMK was unable to attain the target due to leading investments for production facilities in preparation for increased output. As we have installed energy-saving facilities on a priority basis, we intend to decrease the level of CO<sub>2</sub> emissions per unit of production value through full use of the energy-saving facilities.

### • Reduction of Waste

Although the level of waste discharge per unit of production

value increased because of the switch to in-house performance of painting and molding processes, SMK managed to reduce amounts for landfill waste by vigorous efforts to recycle resources. We are going to promote even more extensive recycling.

### • Control of Environment-Hazardous Substances Contained in Products

SMK compiles basic information (e.g., data on the constituents of parts and materials) on the raw materials we purchase. We have made arrangements enabling easy retrieval of data by designers and other in-house personnel.

### • Strengthening of Environment-Friendly Design

SMK has built a system to determine the status of product assessment and ensure its performance.

Self-assessment A: attained B: insufficiently-attained C: not attained

Task items	Medium-term targets (FY2007–2009)	FY 2007		Self-assessment
		Target	Achievement	
Reduction of CO <sub>2</sub> emissions	CO <sub>2</sub> emission level per unit of production value*1: 10% reduction relative to FY2005 (FY2009 target: 0.30 tons-CO <sub>2</sub> /million yen)	8% reduction relative to FY2005 Target: 0.31 tons-CO <sub>2</sub> /million yen	15% increase 0.38 tons-CO <sub>2</sub> /million yen	C
Reduction of waste	Industrial waste discharge per unit of production value*2: 15% reduction relative to FY2005 (FY2009 target: 0.0196 tons/million yen)	7% reduction relative to FY2005 Target: 0.0214 tons/million yen	3% increase 0.0237 tons/million yen	C
	Landfill waste amount: 50% reduction relative to FY2005 (FY2009 target: 112.8 tons)	24% reduction relative to FY2005 Target: 171.4 tons	43% reduction 129.3 tons	A
Control of environment-hazardous substances contained in products	Tightening of coordination with manufacturers of materials and parts, and review of databases	Compilation of basic information guaranteeing absence of environment-hazardous substances (data on the constituents of parts and materials)	Currently being compiled for each constituent part and material	B
Strengthening of environment-friendly design	Rooting of product assessment activities	Full implementation of assessments	Construction of a setup for making assessments for all subject products	A

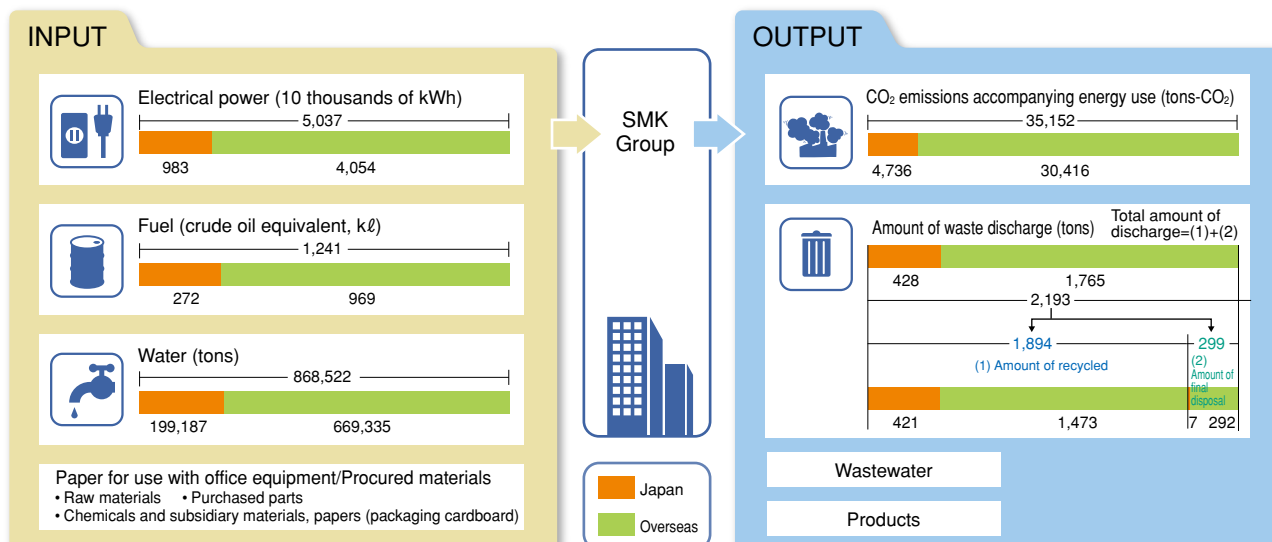
\*1: CO<sub>2</sub> emissions per unit of production value = CO<sub>2</sub> emissions divided by production value

\*2: Waste discharge per unit of production value = industrial waste discharge divided by production value

## Material Balance

SMK is endeavoring to ascertain and reduce levels of environmental hazard in each process (design and development, production, and sales).

The figure below shows the material balance of the entire Group in fiscal 2007, both in Japan and overseas.



## Environmental Accounting

Since fiscal 2000, SMK has practiced environmental accounting in accordance with the guidelines established by Japan's Ministry of the Environment. We apprehend the costs and benefits of environmental preservation at all SMK Group sites, and make a quantitative assessment of the results.

### Environmental Preservation Costs and Benefits

Unit: million yen

Category	Major Activities	Environmental Preservation Cost				Economic Benefits Accrued		Environmental Conservation Benefit (Materials)	
		Investment		Expense		Amount	Year-on-Year	Consumption/Output Savings	Year-on-Year
		Amount	Year-on-Year	Amount	Year-on-Year				
Business area costs	Pollution prevention costs	10.0	313%	33.4	77%	0.0	—	Use of Environment Hazardous Substances: <b>-3.9 tons</b>	—
	Global environmental preservation costs	45.5	64%	30.9	170%	2.4	43%	CO <sub>2</sub> emissions per unit of production value: <b>-0.05 tons-CO<sub>2</sub>/million yen</b>	—
	Resource circulation costs	0.0	—	49.6	113%	187.5	100%	Landfill waste amount: <b>109 tons</b> Industrial waste discharge per unit of production value: <b>0.002 tons/million yen</b>	—
	Sub-total	55.5	74%	113.9	108%	189.9	98%		
Upstream / downstream costs	Green procurement	0.0	—	4.2	61%	0.0	—		
Administration costs	Education for environmental management Elimination of Environment Hazardous Substances	0.0	0%	196.3	98%	0.0	—		
R&D costs	Development of environment-friendly products	0.0	—	67.9	171%	0.0	—		
Social activity costs	Initiatives to expand green space of works	0.0	—	8.3	104%	0.0	—		
Environmental remediation costs		0.0	—	0.0	—	0.0	—		
Total environmental preservation costs		55.5	69%	390.6	108%	189.9	98%		

#### Environmental Preservation Cost

The environmental preservation cost in fiscal 2007 consisted of 56 million yen for capital investments (down 25 million yen from fiscal 2006) and 391 million yen for expenses (up 30 million yen). The investment costs include 9 million yen of investment for domestic group and 47 million yen for overseas group, while the expenses include 299 million yen for domestic and 92 million yen for overseas, respectively.

##### ◎ Major topics

- Most of the investment costs were spent for the upgrading of air-conditioning systems and other facilities to energy-saving models for more efficient use of electric power.
- The pollution prevention cost increased to 313 percent of the level of the previous year, mainly as a result of the introduction of an on-line system for water quality management of plating wastewater.
- Administration costs accounting for almost half of the total expenses amounted to 98 percent, approximately the same level as the previous year. A key component is the labor cost which is required to monitor the inclusion of certain Environment Hazardous Substances in mass-produced products, complying with the EU RoHS directive.
- In contrast, research and development costs increased to 171 percent of the level of the previous year. This increase reflected higher labor cost to examine the raw materials of products at the stage of prototype design, responding to the rising customer's demands to comply with further restrictions on the use of Environment Hazardous Substances.

#### Economic Benefits

In fiscal 2007, the economic benefits amounted to 190 million yen (20 million yen from Japan and 170 million yen from overseas sites), or 98 percent, which is approximately the same level as the previous year.

##### ◎ Major topics

- Most of the economic benefits came from the revenue on sales of recyclable waste (non-ferrous metal scrap, iron scrap, and plastic scrap).
- The overseas group has a much larger share of the total economic benefits than that of the domestic group, with higher revenue from sales of waste due to their integrated production system from material processing through to assembly, while the domestic group outsource most of their products.

#### Environmental Conservation Benefits

- The use of Environment Hazardous Substances increased by 3.9 tons, while CO<sub>2</sub> emission per million yen worth of output increased by 0.05 tons. These results were attributed to the increase in chemical substances due to the expansion of overseas production, as well as the lower energy efficiency with increased electricity usage resulted from the installation of additional facilities.
- The waste discharge per million yen worth of output decreased by 0.002 tons and the landfill waste amount decreased by 109 tons. We made several efforts to reduce the entire amount of landfill waste by setting a target for landfill disposal reduction focusing on our medium-term business plan.

#### Totalization Procedure

1. SMK's environmental accounting practices adhere to the Environmental Accounting Guidelines 2005 published by Japan's Ministry of the Environment.
2. Data was collected for the period from April 2007 to March 2008.
3. Figures for environmental preservation cost, economic benefit (monetary), and environmental preservation benefit (in terms of material quantity) are based on data for all expenses (including depreciation cost) and equipment investment required for the preservation activities, and the benefit accrued from them in monetary terms and quantity-reducing effects at all SMK up sites, domestic and foreign.
4. The accounting covered all sites, branches, and sales offices in Japan and overseas, and the subsidiaries in Japan (for more details, see the totalization scope on page 1).
5. Data for environmental conservation benefits indicated a decrease in amount compared with the previous fiscal year. Rates of change relative to the previous year are not presented for use of Environment Hazardous Substances and CO<sub>2</sub> emissions per unit of production value, because they increased. Landfill waste amount and waste discharge per unit of production value is neither presented, because there were no decreases in these categories relative to the previous year.
6. Economic benefits accrued are clearly demonstrable and do not include speculative benefits.
7. For the Environment Hazardous Substances in the category of environmental preservation benefits, the totalization subjects were the substances regulated under the Law Concerning Reporting, etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management (Pollutant Release and Transfer Register, or PRTR Law).

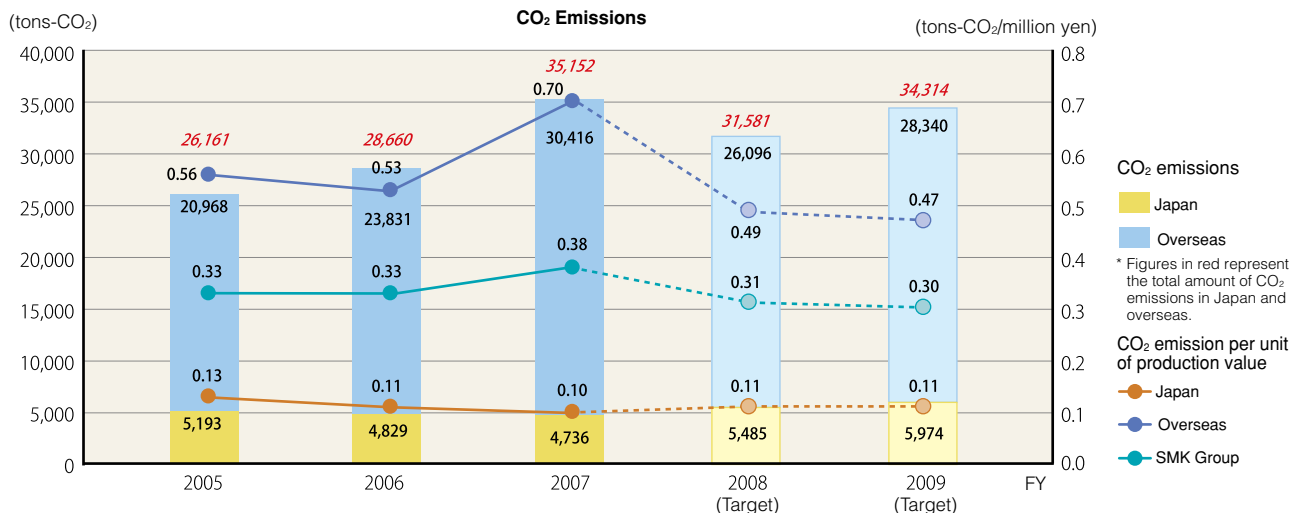
## Energy and Resource Conservation Initiatives

SMK is taking more initiatives to improve energy efficiency and bolstering activities for energy conservation. Toward the goal of business activities that do not waste resources, SMK is striving to reduce landfill waste amount to zero, "zero emissions", and building systems for resource recycling.

### Energy Conservation Initiatives

	(vs. FY2007)	
	Japan	Whole SMK Group
CO <sub>2</sub> emissions per unit of production value	91%	115%
CO <sub>2</sub> emissions	98%	123%

© SMK is promoting energy-conserving activities using the level of CO<sub>2</sub> emissions per unit of production as a control indicator. In fiscal 2007, CO<sub>2</sub> emissions of the entire SMK Group increased substantially to 123 percent of the level of the previous year. The main factors were the increase in overseas output and an improvement in the production systems with the installation of more facilities to meet our future production expansion plans.

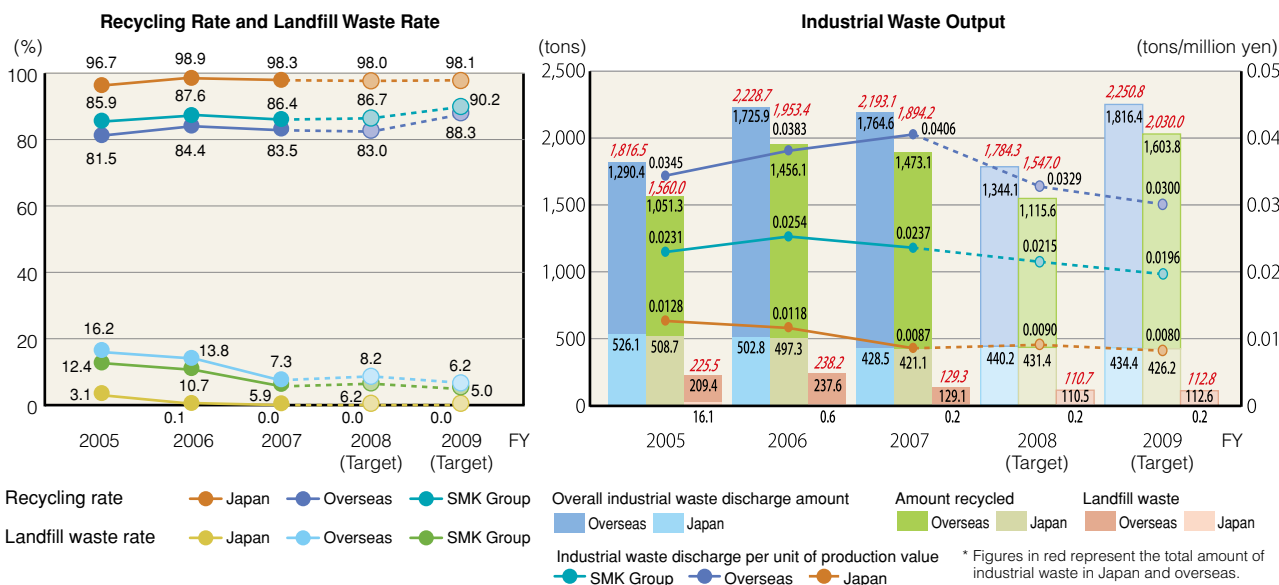


### Resource Conservation Initiatives

	(vs. FY2007)	
	Japan	Whole SMK Group
Industrial waste discharge per unit of production value	74%	93%
Overall industrial waste discharge amount	85%	98%
Recycling amount	85%	97%
Landfill waste amount	17%	54%

© Aiming for zero emissions, SMK is promoting to reduce the landfill disposal. In fiscal 2007, we have achieved to reduce the landfill waste amount of the entire SMK Group to 54 percent of the level of the previous year. We set a target of landfill disposal reduction as part of our medium-term business plan, which started from fiscal 2007. As a result, overseas production systems have been upgraded, thereby, we have successfully managed to reduce the amount of landfill waste entirely.

© For the industrial waste, we have reduced the waste discharge per unit of production in fiscal 2007 to 93% of the level of the previous year, by improving our production process.





## Energy and Resource Conservation Topics

### Head Office Group

#### Application of heat-shield film

In fiscal 2007, SMK followed the replacement of all air-conditioning units in the building housing our head office in Togoshi in fiscal 2006 with the affixation of film to windowpanes to shield interior space from the heat of solar light on the southern side of the building.

This not only increased the air-conditioning efficiency (projected decreases of power consumption by 30 kWh) but

also improved the labor environment, because it lowered the solar warmth perceived by employees by 9 degrees as compared to the level without air conditioning.

At the head office, which is the center of office work, we are going to continue working to save power by turning off lights with the cooperation of each and every employee, and strive to improve the environment while making plans for energy conservation measures entailing additional capital investment.

### Toyama Group

Toyama Works\*, Hokuriku Sales Office\*, Toyama Showa Co., Ltd.\*, Showa Denshi Co., Ltd.\*, and Yatsuo Denshi Kogyo Co., Ltd.\*

\*Asterisks indicate sites that have received ISO 14001 certification.

#### Vigorous investment for energy-conserving facilities

Toyama Works is vigorously investing in facilities that take account of CO<sub>2</sub> emissions through energy conservation in order to mitigate global warming.

In fiscal 2007, the Works made diverse investments for energy-conserving facilities including inverter-type compressors (see photo at right); use of inverters for industrial water pumps, air conditioners, and illumination; heat-shielding coatings for roofs, and heat-shielding film for windowpanes. This is anticipated to bring a CO<sub>2</sub> emission reduction of about 72 tons per year due to reduced use of A-type fuel oil.

We intend to continue studying and implementing investment in facilities that are gentle to the earth.



Inverter-type compressor

### Hitachi-Ibaraki Group

Hitachi Works\*, Ibaraki Works\*, Ibaraki Sales Office\*, and Ibaraki SMK Co., Ltd.\*

\*Asterisks indicate sites that have received ISO 14001 certification.

#### Installation of environment-friendly hot water boilers

The boiler for space heating in the No. 4 building of Ibaraki Works reached the time for replacement. Ibaraki Works took the occasion to install an environment-friendly unit that delivers a better energy efficiency (see photo at right).

##### 1) Reduction of energy use

- Reduction of A-type fuel oil consumption by 4,100 ℓ/year (25%)  
(Decrease in annual A-type fuel oil use from the former 16,300 ℓ to 12,200 ℓ)

##### 2) Reduction of CO<sub>2</sub> emissions

- Decrease by 11,070 kg-CO<sub>2</sub>/year (25%)  
(Decrease in annual CO<sub>2</sub> emissions from the former 44,010 kg to 32,940 kg-CO<sub>2</sub>)  
\* Figures for reduction are projections.

The Hitachi-Ibaraki Group plans to continue installing facilities with a view to reducing CO<sub>2</sub> emissions and saving energy.

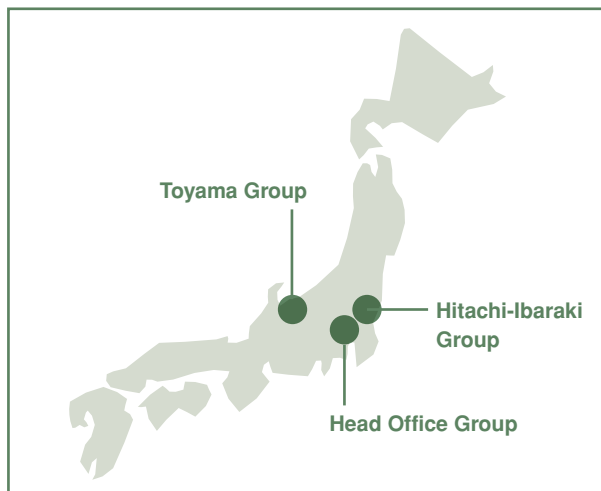


Environment-friendly hot water boilers for space heating

#### Participation in activities for preservation of the natural environment

In the nature-rich Hitachi district, many of our employees are taking part in the annual campaign to beautify the Ishihama seashore. The Uno-Misaki Cape, which juts toward the seashore, is one of the major habitats for Temminck's cormorants in all of Japan. Through the campaign, we got a keen realization that the flocks of cormorants come and the nature along the Ishihama seashore is preserved precisely because the sea is clean. In the future as well, we are going to take an active part in the campaign and help to preserve the natural environment so that the district will always be blessed with this natural beauty and its habitat for the cormorants. In addition, we are participating in the following activities for preservation of the natural environment.

- Clean-up of the Kitahama seashore in the city of Kitaibaraki
- Clean-up of the Isohara seashore in the city of Kitaibaraki
- Clean-up of the grounds of the Ishi industrial estate





### SMK Electronica S.A. de C.V. (SMK Mexico)

SMK Mexico participated in the Reforestation Project chaired by the Environmental Protection Agency (EPA). This project was inaugurated to commemorate Earth Day; instituted in April 1970. Companies are supplied with 150 seedlings for planting by their employees and family members. On April 14, 2007, 150 seedlings arrived at SMK Mexico and were distributed to all employees. Seedlings planted from previous years have taken root and many are already one meter tall!



#### Introduction of a CSR activity logo for SMK Mexico

Created by the employees of SMK Mexico, this logo symbolizes CSR activities at the company. The colors and leaves represent the harmonization of SMK, the environment, and economic activities. We are making extensive use of the logo as the symbol of CSR activities at SMK Mexico.

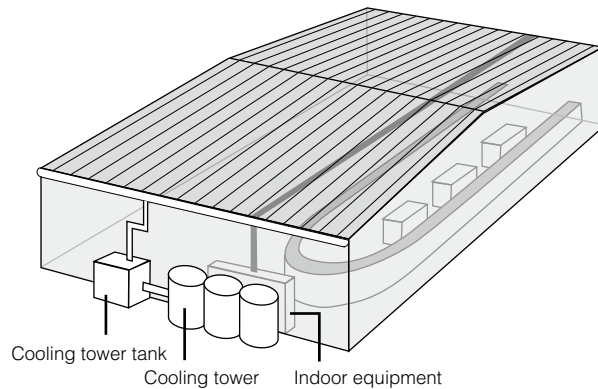


### SMK Electronics (Malaysia) Sdn. Bhd. (SMK Malaysia)

Situated close to the equator, Malaysia has summery weather all year around. In the dry season, water is apt to be in short supply, and restrictions are sometimes imposed on use. SMK Malaysia launched a project in fiscal 2007 upon studies of the issue.

In this connection, SMK Malaysia began to use rainwater as water for the cooling tower on the air conditioning system in December 2007. We collect rain that falls on the plant roof by means of piping, put it through a filter composed of wire mesh and sponge, deposit in the cooling tower tank, and use it in the cooling tower of the air conditioning system.

To save even more water, we are making plans for use of rainwater collected by the same procedure in fire extinguisher systems and toilets in the plant.



### SMK Dongguan Gaobu Factory (SMK Dongguan Factory in China)

SMK Dongguan factory in China replaced generator noise-proofing facilities and smoke treatment units that had become superannuated in order to prevent environmental pollution. Besides performing periodic checks and monitoring for these facilities, the factory decided to set tougher in-house standards in managing them to see that they do not exceed those set by Guangdong Province for noise and smoke emissions.

The Dongguan factory is equipped with facilities for treatment of wastewater from plating processes. It has set voluntary

standards for management of effluent quality and otherwise striven to prevent water pollution. In response to policy determined by China's environmental protection agency for prevention of pollution caused by wastewater through a joint government-industry effort, the factory installed automatic metering and sampling units at the drain outlet to tighten control (see the photo at bottom left). Data for wastewater treatment are sent in succession to the agency, which also can reconfirm samples if necessary. The factory has therefore made complete arrangements to prevent environmental pollution by wastewater.

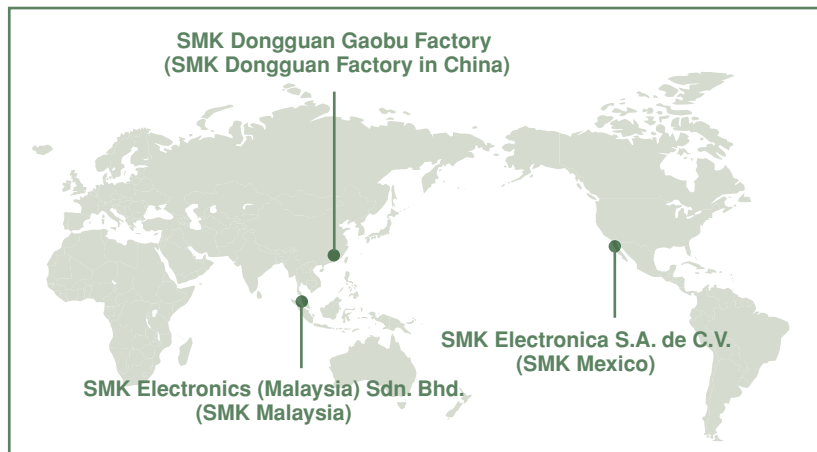
Full automatic effluent quality sampling system



pH level display



Flow volume display (instantaneous flow and cumulative flow)



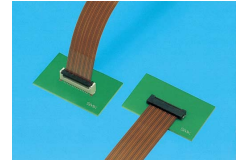
## Creation of Environment-Friendly Products

SMK has instated an environmental management system based on ISO 14001, the international standard, at all of the works around the world and all sites in Japan. Throughout the entire cycle from material use to disposal of waste, SMK makes thorough reviews from the standpoint of environmental preservation and is promoting development and design premised on the 3Rs of "reduce," "reuse," and "recycle."

### Halogen-Free Products

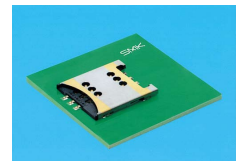
#### 0.5-mm Pitch Connector for Shielded FPC, EF-5D Series

Directed to flat panel displays (LDC/PDP) and other home electronic appliances, the connectors use double-sided FPC/FFC for high-speed signal wiring. They are suitable for high-speed serial transfer such as LVDS and TDMI (HDMI), and match an impedance of 100 ohms. The unique "front-flip lock" structure assures high levels of operability and contact reliability, and the original double-sided contact structure is intended as an EMI Solutions. Materials were selected with RoHS Directive compliant and are not contained halogen.



#### 6-pins SIM Card Connector (Low-Profile Type)

These connectors are for SIM cards, which are used in mobile telephone terminals of the GSM type, the unified European standard for digital mobile telephones (conformance with GSM11.11). In plate-type models with a card guide, the mounted height of the connector is only 1.45 mm, the lowest in the world. The connectors meet the need for smaller and thinner mobile telephones. The adoption of a card guide plate with holds on the top as well as the side assures higher contact reliability even with the lower profile. Materials were selected with RoHS Directive compliant and are not contained halogen.



#### Rectangular Connector compatible with Terrestrial Digital Broadcast

Connecting antennas and tuners, these connectors are designed for car navigation systems that can handle digital terrestrial broadcasting (built-in digital terrestrial tuner). With its push-on mold lock feature, the plug-receptacle mating offers a perfect connection. The compact structure makes the connectors suitable for host equipment downsizing. There are two types of receptacle: one-pin for one-segment broadcasts tuners and two-pin for terrestrial digital broadcasts of 12 segments. Materials were selected with RoHS Directive compliant and are not contained halogen.



### Solderless Products

#### Dome Switches

SMK's Single-Dome Switch applies a spring contact that fixes the switch into place by pushing the set enclosure against it. This eliminates the need for soldering for attachment to the set, which is consequently solder-free. The product also contributes to the environment because it is lead-free.



### Products saving energy and resources

#### AC Adapters for MobileTelephones

Reduction of the size and weight of the main unit makes these adapters 40 percent lighter than the conventional ones and saves resources. They also save energy, because the standby power consumption was reduced by 80% from 100 to 20 milliwatts.



### Products for saving resources and recycling

#### Remote Control Units for Air-Conditioning Systems

In these units, the molded components are made thinner and weigh 12 percent less. The units weigh 9 percent less than the conventional ones and consequently save resources. In terms of total weight, 65.6 percent of the parts can be recycled.



### Products for ecology equipment

SMK is developing some sorts of components for use in eco equipment such as photovoltaic power generation systems and light-emitting diodes (LEDs). Through them, we are making a positive contribution to reduction of CO<sub>2</sub> emissions and conservation of energy.

Our Connector for Photovoltaic Modules are relay types for interconnection of such modules. Their unique waterproof structure facilitates cable waterproofing, and offers excellent workability and protection from water. LED Sockets are used to connect boards and LEDs. Using these sockets make it possible to reuse LEDs, which are mounted directly on the board, and therefore reduces environmental burden. With a structure making it easy to attach and detach LEDs, the sockets deliver excellent workability.



## SMK Networks

### Sites in Japan

Head Office (Togoshi)	Hokuriku Sales Office
Gate City Office (Osaki)	Fukuoka Sales Office
Osaka Branch	Toyama Works and Toyama Technology Center
Nagoya Branch	Hitachi Works
Kanagawa Sales Office	Yamato Works
Ibaraki Sales Office	

### Major Subsidiaries in Japan

Toyama Showa Co., Ltd.  
 Showa Denshi Co., Ltd.  
 Yatsuo Denshi Kogyo Co., Ltd.  
 Ibaraki SMK Co., Ltd.



### EUROPE

SMK Europe N.V.  
 SMK Europe N.V., U.K. Branch  
 SMK Europe N.V., France Branch  
 SMK Europe N.V., Munich Office  
 SMK Europe N.V., Dortmund Office  
 SMK Corporation Helsinki Office  
 SMK (U.K.) Ltd.  
 SMK Hungary Kft.

### ASIA

SMK High-Tech Taiwan Trading Co., Ltd.  
 SMK Electronics (H.K.) Ltd.  
 SMK Trading (H.K.) Ltd.  
 SMK Dongguan Gaobu Factory  
 SMK Electronics (Shenzhen) Co., Ltd.  
 SMK Electronics Trading (H.K.) Ltd. Shenzhen Office  
 SMK Electronics Trading (Shanghai) Co., Ltd.  
 SMK Electronics Int'l Trading (Shanghai) Co., Ltd.  
 SMK Electronics Trading (Shanghai) Co., Ltd. Beijing Office  
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 SMK Electronics (Malaysia) Sdn. Bhd.  
 SMK Electronics (Phils.) Corporation  
 SMK Korea Co., Ltd.  
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 SMK Electronics Corporation U.S.A., East Office  
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