

## Our Philosophy

Protection of the environment will surely be the world's biggest challenge in the twenty-first century, and one that will require greater emphasis on eco-oriented thinking and activities.

In line with its corporate philosophy of "contributing to society through broad-ranging activities in the areas of measurement, control, and information," Yokogawa is already addressing the issue in all aspects of its business.

Under the concept of delivering Enterprise Technology Solutions, Yokogawa helps maximize the efficiency with which customers use energy and resources by supplying a huge variety of measuring instruments, sensors, analyzers, control systems, and application packages. Not only does this approach boost productivity, but it also reduces environmental impact and thus helps forge a sustainable society.

Yokogawa operates an environmental management system that complies with ISO14001 and targets "zero emissions."

Yokogawa places top priority on environmental protection and is striving to reduce the environmental impact of all production activities, including product designing, manufacturing facilities and lines, procurement, and logistics. Yokogawa has even set up an "environmental accounting" system that helps encourage the reuse of resources across Yokogawa group companies worldwide.

In accordance with the corporate philosophy, "Individually, we aim to combine good citizenship with the courage to innovate," Yokogawa fosters environmental awareness in all employees and encourages them to consider environmental protection in their work based on the principle of harmonious coexistence with local communities.

December 1999



A handwritten signature in black ink that reads "Isao Uchida".

**Isao Uchida**  
President



A handwritten signature in black ink that reads "Yutaka Wakasa".

**Yutaka Wakasa**  
Director of Environmental  
Management

## Corporate Profile

**Company Name:** Yokogawa Electric Corporation

**Start of Business:** September 1915

**Establishment:** December 1920

**President:** Isao Uchida

**Capital:** 32,306,000,000 yen (as of March 1999)

**Employees:** 6,049 (as of March 1999)

**Principal Office:** 2-9-32 Nakacho, Musashino-shi, Tokyo 180-8750, Japan

**Sales:** 168.0 billion yen (independent), 280.2 billion yen (consolidated) in 1998

**Scope of Business:** Development, manufacturing, distribution, and servicing of control and information equipment, measuring instruments, aerospace instruments, analytical instruments, and devices

## Data Sources

This report is based on data of the headquarters in Mitaka, Tokyo, the Kofu plant, and the Komine plant (No. 2 plant of Yokogawa Finetech Corporation).

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# Environmental Management System

## 1. Environmental Philosophy and Policy

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**Based on the corporate policy of “As a company, our goal is to contribute to society through broad-ranging activities in the areas of measurement, control, and information. Individually, we aim to combine good citizenship with the courage to innovate,” Yokogawa Electric Corporation drew up the Company’s Environmental Management Rules (a corporate code for the environment) in March 1996 and enacted the Environmental Philosophy and Environmental Policy. Yokogawa’s activities are firmly rooted in these policies, and the Company strives to protect the environment in order to achieve a sustainable society.**

### ■ Environmental Philosophy

Yokogawa Electric Corporation recognizes the crucial importance of protecting the earth's environment for future generations, and acts appropriately in all its businesses by utilizing the skills of its employees and working closely with local communities.

The Company's ultimate goal is "zero emissions." Yokogawa has set up an environmental management system that meets the international standard ISO14001 across its global group companies, and continues to improve the system.

### ■ Environmental Policy

#### 1) Promotion of Environmental Awareness

To promote awareness of global environmental protection, Yokogawa Electric Corporation provides training to ensure that all employees know and understand the Company’s Environmental Management Rules and this Environmental Policy. Yokogawa Electric Corporation encourages employees to engage in environmental protection activities, such as at the local community level, in order to develop a sense of environmental awareness.

#### 2) Continuous Improvement of Environmental Management System

While practicing the ISO14001 environmental management system, Yokogawa Electric Corporation continuously strives to improve the system and its environmental performance and thus help protect the earth’s environment.

#### 3) Practice of Environmental Protection Activities

Yokogawa Electric Corporation institutes a section at its headquarters to provide instructions and advice to each of its sites and Yokogawa group companies all over the world in order to develop environmental protection activities throughout the global Yokogawa network.

Each site and group company abides by this Environmental Policy of Yokogawa Electric Corporation; sets forth its own environmental policy, objectives, and goals; and takes specific steps toward environmental protection. The state of implementation is reviewed periodically by internal and external environmental assessments so that the system may be continuously improved and environmental pollution prevented. The following aspects are considered when deciding such environmental policy, objectives, and goals:

- Adherence to legal controls and social agreements
- Development, manufacturing, sales, and services of environment-friendly products
- Activities to reduce the amount of waste and promote recycling, toward the target of “zero emissions”
- Reduction of consumption of resources and energy (to reduce greenhouse gas emissions)
- Harmonious coexistence with local societies

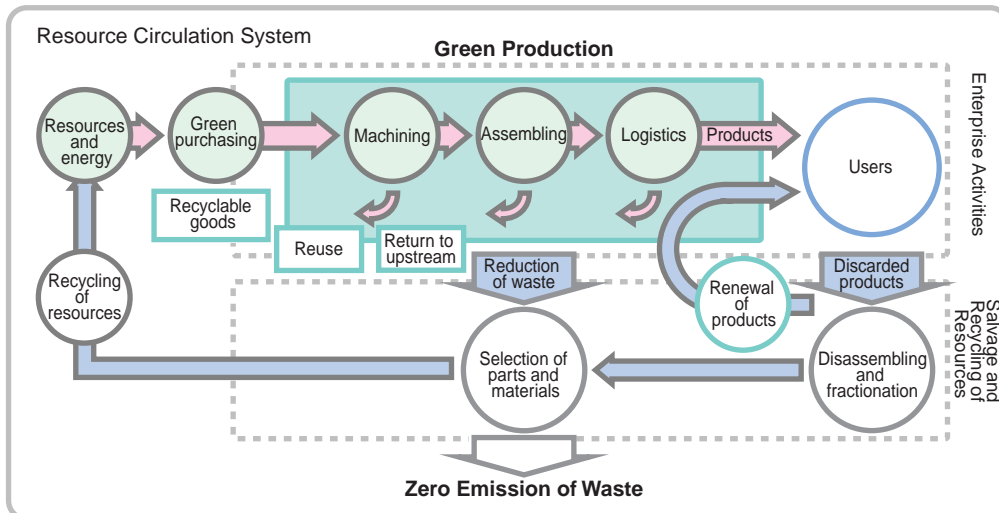
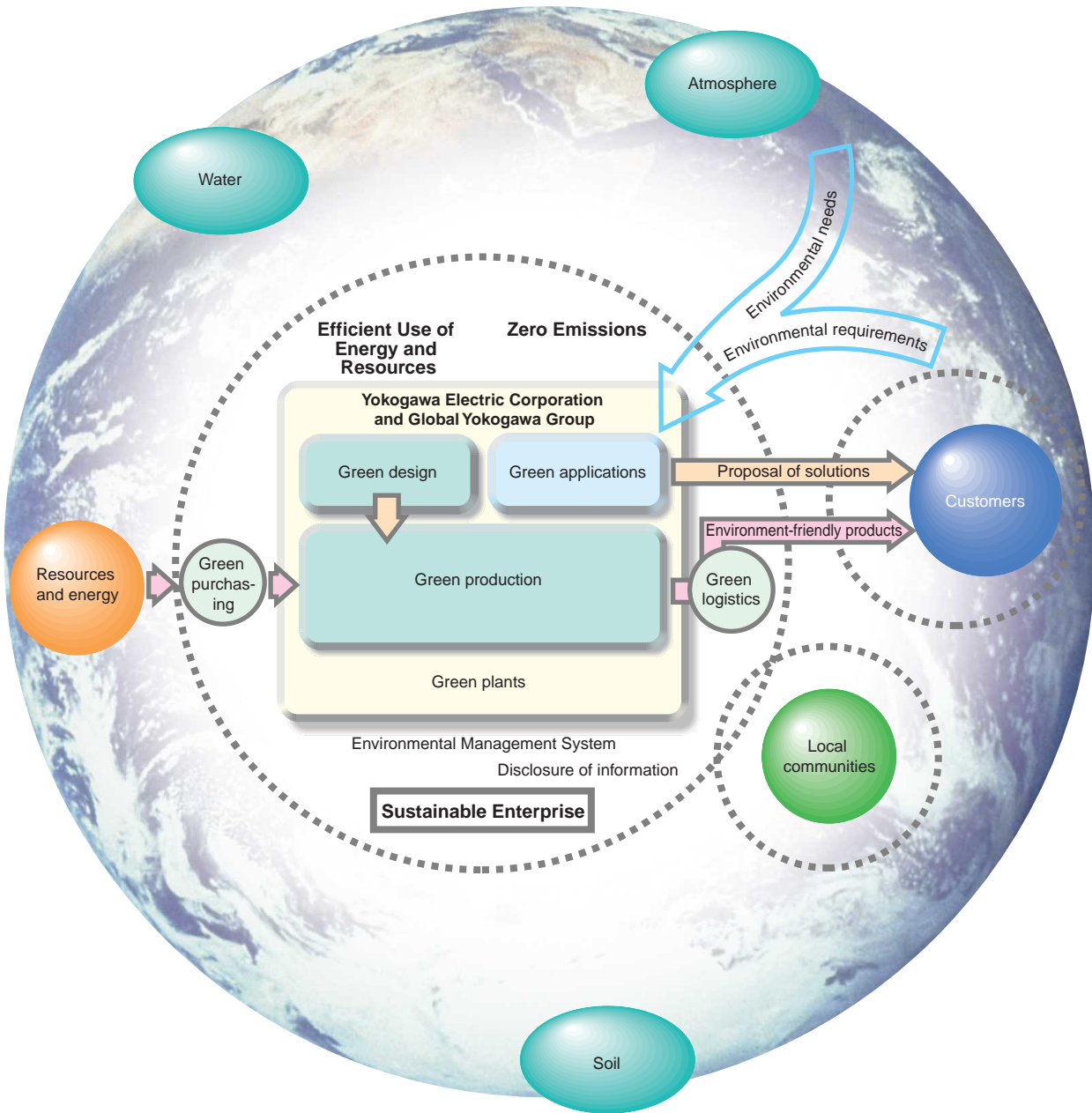
#### 4) Environmental Protection as a Business Principle

In all of its activities, Yokogawa Electric Corporation endeavors to supply environment-friendly products and solutions and thus help protect the environment.

#### 5) Disclosure of Information

This Environmental Policy of Yokogawa Electric Corporation is disclosed to the public.

Concept of Global Environmental Protection Activities



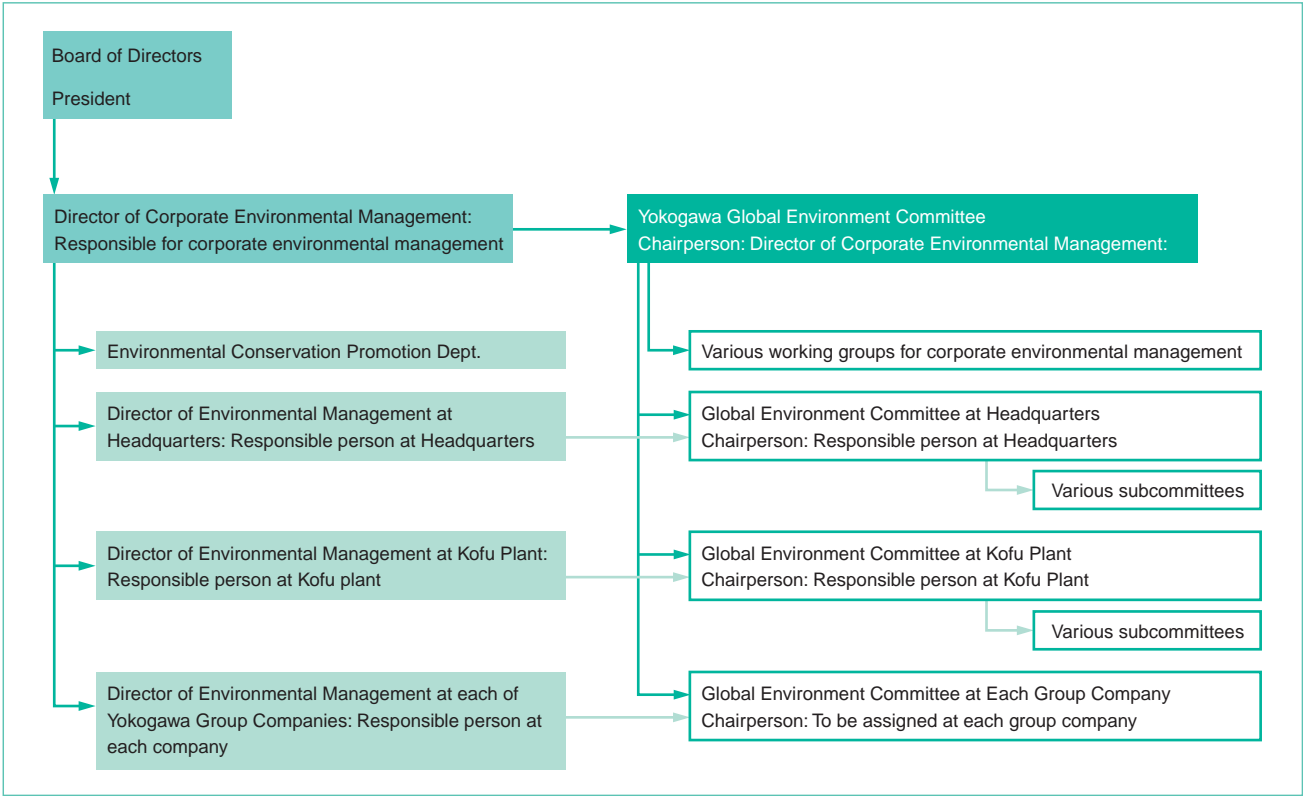
# Environmental Management System

## 2. Environmental Organization

**In October 1995, we formed the Yokogawa Global Environment Committee. This committee sets the Company's policy on general environmental protection activities and then publicizes the policy; coordinates between sites; surveys affiliated working groups; as well as approves items to be reported to the Board of Directors on issues of major importance. Based on the corporate policy, individual sites and group companies then draw up environmental protection plans and implement them. Critical issues are reported to and discussed at Board of Director meetings.**

**In Yokogawa Electric Corporation, no special department is assigned to environmental protection activities; rather, each employee is encouraged to preserve the global environment through his or her work.**

Environmental Management Organization



### 3. Environmental Targets

Throughout its activities from product development to delivery, Yokogawa Electric Corporation complies with all environmental laws and regulations, and actively works to protect the environment. To ensure that its environmental protection activities are continuously improved upon, appropriate targets are set for prioritized items every fiscal year and then efforts made to meet those targets.

#### ■ Targets for 2000

The targets for 2000, as well as targets and results for each year up to 2000, are as follows. (Years in this table are fiscal years.)

Item	Targets for 2000	Targets for 1998	Results for 1998	Targets for 1999
Environment-friendly product development	Reduce CO <sub>2</sub> emission during development and design of environment-friendly products by 25%.	In each section, start enforcing the improved development and design systems for at least one model.	Done for 21 models. (Among these, 11 models were developed.)	In each section, enforce the improved development and design systems for at least one model.
	Complete the rules for designing environment-friendly products.	Enact eco-material selection criteria.	Done.	Enact a standard for use of eco-materials. Build a database containing criteria for eco-material selection.
Corporate	Reduce CO <sub>2</sub> emission from energy consumption by 9.5% from 1991.	Reduce by 2.6% from 1991.	Reduced by 5.4% from 1991.	Reduce by 7.7% from 1991.
Headquarters	Reduce power consumption per unit floor space by 20% from 1991.	Reduce by 15.6% from 1991.	Reduced by 17.1% from 1991.	—
	Reduce CO <sub>2</sub> emission from energy consumption per unit floor space by 20% from 1991.	—	Reduced by 16.7% from 1991.	Reduce by 18.8% from 1991.
Effective use of energy	Reduce power consumption per unit of retail price-based sales by 50% from 1991.	Reduce by 41% from 1991.	Reduced by 33.6% from 1991.	—
	Kofu plant	Reduce power consumption per unit floor space by 12.5% from 1996.	—	Reduced by 7.2% from 1996.
Komine plant	Reduce power consumption per unit run time by 15% from 1995.	Reduce by 10% from 1995.	Reduced by 15% from 1995.	—
	Reduce power consumption per unit run time by 7% from 1998.*	—	Reference year*	Reduce by 4% from 1998.
Amount of paper used	Reduce the amount of paper used by 27% from 1996.	Reduce by 12% from 1996.	Reduced by 14.3% from 1996.	Reduce by 18.6% from 1996.
Green purchasing		Enforce the green purchasing program.	Switched paper and office equipment to recycled paper and energy-saving equipment.	Apply the eco-material selection criteria to select materials to be procured and expand the green purchasing.
	Stimulate the green purchasing program.	Provide instructions and advice for environmental protection to suppliers and subcontractors.	Done for 7 vendors.	Provide instructions and advice for environmental protection to more suppliers and subcontractors.
Amount of waste	Reduce the amount of waste (excluding paper) by 53% from 1995.	Reduce by 9.5% from 1995.	Reduced by 29.0% from 1995.	Reduce by 43.7% from 1995.
	Raise the recycling ratio of waste paper to 90% at Headquarters.	Achieve recycling ratio of 80%.	Achieved ratio of 82.1%.	Achieve recycling ratio of 85%.
Reduction of amount of toxic substances used	Phase out HCFCs (substitutes for CFCs).	Fix the method of cleaning using substitute materials.	Done. Reduced the amount of purchase to 6.6 tons.	Implement the cleaning method using substitute materials in 2 manufacturing lines. Reduce the amount of purchase to 6.5 tons.
Environmental management system	For major manufacturing companies in the Yokogawa group (min. 18 sites), obtain ISO14001 approval.	Obtain approval for 5 Yokogawa group companies.	Done for 5 companies.	Obtain approval for another 6 Yokogawa group companies.

\* The reference year was re-set at the Komine plant.

# Environmental Management System

## 4. Environmental Management System Audits

Since obtaining ISO14001 accreditation (an international standard for environmental management), we have been carrying out ISO14001 internal audits of our environmental management systems and procedures in compliance with ISO14010 to 14012. The findings of the internal audits are reported to the director of environmental management and reviewed periodically by the management. Also, an external authorized audit organization carries out an audit annually.

### 1) Result of Internal Environmental Audits

An internal environmental audit assesses, for each section, (1) whether the program for improving the environmental management system is being carried out, and (2) control of legally regulated items. Internal environmental audits began in December 1996 at the Kofu plant, June 1997 at the Headquarters, and July 1997 at the Komine plant, and have been held approximately twice a year at each site.

### 2) Training Course for Internal Auditors

Since July 1996, the in-house training course for internal auditors has been held periodically, and some 349 employees had been licensed as internal auditors by the end of fiscal 1998 (147 from Headquarters, 46 from Kofu plant, and 156 from group companies). These in-house training courses are taught by in-house instructors who are certified by the Japanese Auditors Board (JAB) as official environmental auditors (15 persons as of the end of fiscal 1998).

In fiscal 1998, 19 persons were selected from among the chief internal auditors who had undergone the training course and who are assigned as audit managers, and a special training course was held to improve their skills.

Results of Training Courses for Internal Auditors

Fiscal Year	Times Course Planned	Times Course Held	Number of Trainees	Total
1996	4	4	97	97
1997	4	5	111	208
1998	4	5	141	349

### 3) External Environmental Audits

In addition to the internal audits, even after ISO14001 approval, an authorized organization for ISO14001 accreditation (a third-party inspection body) conducts a survey every year, and every three years assesses whether approval should be renewed. Thus, strict maintenance and control as well as continuous improvement of the environmental management system are required. The Headquarters, Kofu plant, and Komine plant have already been subject to this review and were highly commended.

In October 1998, a survey was carried out at the Headquarters in order to include the sales function into the scope of approval, and sales were thus successfully added to the scope of ISO14001 approval.



A Periodic Survey

## 5. Communication

**We value the views of others on our environmental protection activities.**

In addition to this report, our Internet homepage is an invaluable means of achieving complete disclosure of environmental information. An intranet is used for in-house communication.

In the management system, (1) a specified section always promptly responds to requests and survey results from customers, public organizations, industrial associa-

tions to which we belong, academic organizations, and other bodies and persons, and records are centrally managed; and (2) information, comments, suggestions, and claims are collected from customers and local communities, and reflected in our environmental protection activities.

YOKOGAWA Environmental Report on Internet at [http://www.yokogawa.co.jp/Environment/index\\_e.htm](http://www.yokogawa.co.jp/Environment/index_e.htm)

## 6. Environmental Training

**To minimize the environmental impact of corporate activities as a whole, each employee must consider the environment in his or her work. To this end, we continuously provide environmental training.**

Our training courses provide a wide range of education on the environment, for those who have just joined the company, employees changing assignments, and specialists.

In fiscal 1998, we instructed all of our 6,000+ employees on the basics of environmental protection using our own training video, and we also distributed the Environmental Protection Pocketbook to all employees. By reviewing these logs of training and participation in voluntary activities, on "Environment day" we rewarded those groups and persons who had done exceptionally well.

For employees working in workshops that have major environmental impact or those in charge of green design, we provide specific training. In addition, we offer detailed training courses for specialists and for those who wish to acquire and maintain recognized qualifications.

In addition to these various training programs, we added environmental protection to the categories of QC activities (called "LETS" in Yokogawa), and held forums at which the results were presented.



Environmental Protection Pocketbook

List of Environment-related National Qualification Holders

License Code	Application	Number of Holders
SE103 or 104	Handling of dangerous substances, class 1 or 2	127
SE108	Chief worker for handling of specific chemicals	53
SE118	Management of toxic substances and poisons	8
SE170	Chief worker for use of lead	13
SE205	Energy management (electricity management)	3
SE208	Measurement of environmental values	7
SE218-	Management of pollution prevention (for air pollution)	18
SE228-	Management of pollution prevention (for water pollution)	28
SE236	Management of pollution prevention (for noise)	11
SE238	Management of pollution prevention (for vibration)	5
SH164	Chief worker for handling organic solvents	134

To boost environmental awareness, "Green Times" is issued periodically, and the publication has now been moved to the intranet to reduce the use of paper. In June every year, which has been designated "Environmental Protection Month," various events including the award ceremony and lectures are held to raise employee awareness of environmental protection.



Green Times Printed



Green Times on Intranet