Ensuring Transparency and Reliability

The J-POWER Group works to improve environmental management and ensure legal compliance in all its business activities. It also discloses a wide range of environmental information. Through good communications with stakeholders, we strive to earn society's trust.

Continually Improving Our Environmental Management

With the aim of conducting environmental conservation activities based on our corporate philosophy, in 1997 we decided to introduce environmental management systems (EMS) complying with the ISO 14001 international standard for environmental management. By 2002 we had completed EMS introduction at all J-POWER sites and by the end of fiscal 2005 all parent company power stations had obtained ISO 14001 certification.

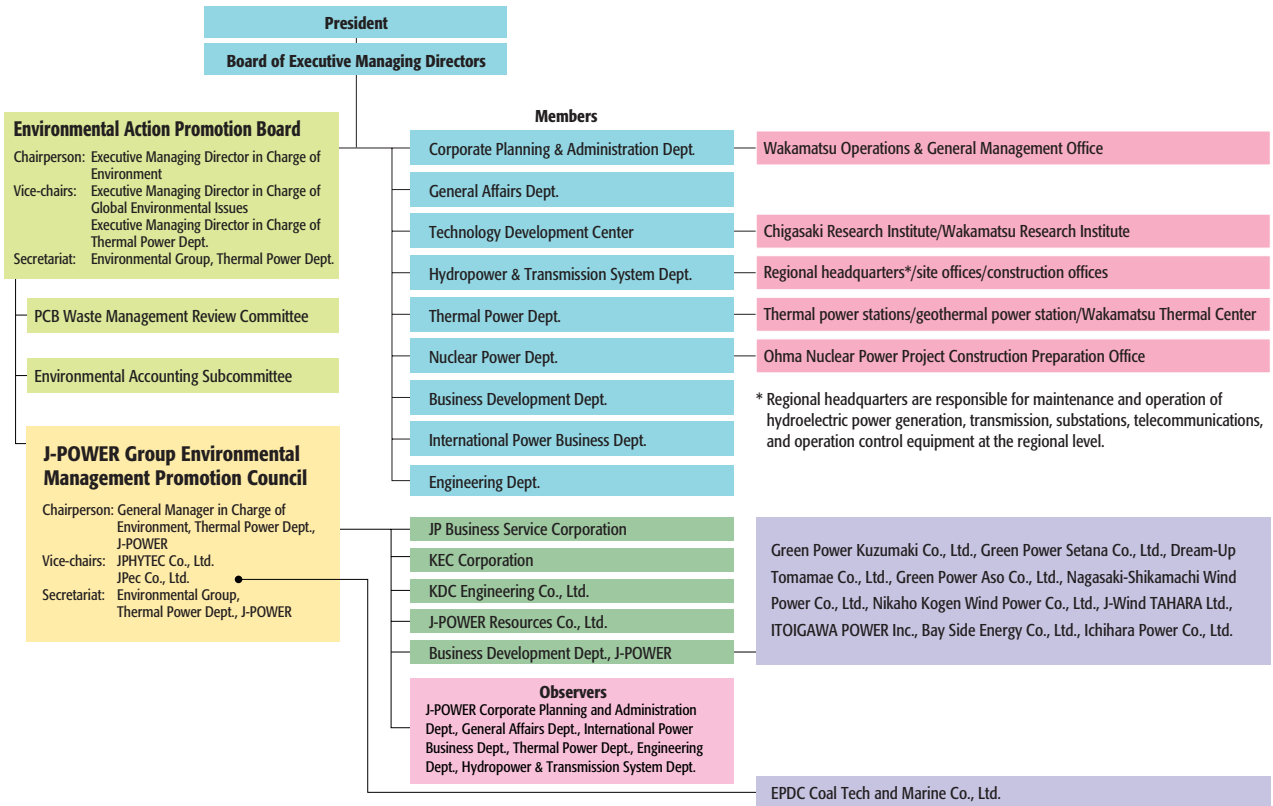
Major group companies have already completed EMS introduction, and the entire group is working to ensure that all consolidated subsidiaries will have EMS in place by the end of fiscal 2007.

◆ Environmental Management Structure

The Environmental Action Promotion Board was established to discuss, coordinate, and report on overall environmental management in the J-POWER Group. It is led by an executive managing director in charge of environment and made up of relevant executives and divisional heads. In addition, the J-POWER Group Environmental Management Promotion Council was established as a subgroup of the board to encourage cooperation and coordination throughout the group.

Based on the J-POWER Group Environmental Action Guidelines reviewed annually by management (see pp. 83-84), J-POWER business units and group companies with EMS in place draw up their own Environmental Action Plans. They periodically review and evaluate their initiatives and revise measures to be taken (based on a PDCA cycle).

J-POWER Group Environmental Management Organization Chart (FY 2005)



◆ An Outline of EMS and the Operational Units Implementing It

Each business unit in the J-POWER Group establishes and operates EMS for planning/design, construction, and maintenance/operation, while continually striving to make improvements. Group companies engaged in maintenance and management of power plants operate EMS in conjunction with J-POWER maintenance/operating business units (thermal and geothermal power stations, regional headquarters).

J-POWER

* ISO 14001 certification received

Category	Business Unit Name	Outline
Planning/ design	Engineering Dept.*	Introduced and operates EMS for construction of generation facilities as well as to ensure new business projects are environmentally responsible from the planning and design stage. Obtained ISO 14001 certification in February 2001.
Construction	Ohma Nuclear Power Project Construction Preparation Office Isogo Thermal Power Station No. 2 Unit Construction Office Ohma Main Transmission Line Construction Office West Tokyo Transmission Line Construction Office	Introduced and operate EMS to ensure implementation of measures arising out of environmental impact assessment, such as prevention of water pollution, noise and vibration, and the reuse of byproducts.
Maintenance/ operation	Thermal power stations* (Isogo, Takasago, Takehara, Tachibanawan, Matsushima, Matsuura, Ishikawa Coal), Onikobe Geothermal Power Station*, regional headquarters (Hokkaido, East Japan, Chubu, West Japan)	Introduced and operate EMS in accordance with environmental laws, regulations, and agreements in order to take measures aimed at reducing environmental load. Introduction began in 1998 with Matsuura Thermal Power Station, which completed introduction at the end of fiscal 2001. The station obtained ISO 14001 certification in June 1999. In fiscal 2004 all other coal-fired and geothermal power stations obtained ISO 14001 certification. The scope of certification includes J-POWER Group company JPec. In fiscal 2005 ISO 14001 certification covering J-POWER and group company JPHYTEC was received for each regional headquarters (Hokkaido, East Japan, Chubu, West Japan), including hydropower and transmission facilities.
Other	Technical research centers (including Chigasaki Research Institute) Wakamatsu Operations & General Management Office (including the Wakamatsu Research Institute and Wakamatsu Thermal Center)	
	Head Office	Introduced EMS for head office building.
	Total: 20 business units (as of March 2006)	

J-POWER Group Companies

*ISO 14001 certification received (including expansion of scope of certification to cover group company)

Group Company	Outline
Consolidated subsidiaries including JPHYTEC Co., Ltd.*, JPec Co., Ltd.*, JP Business Service Corporation	Introduced EMS and are continually striving to improve. Introduction of EMS will be extended to other companies. Some business units/divisions have also obtained ISO 14001 certification.
KEC Corporation*	IT Maintenance Division obtained ISO 14001 certification in March 2005, followed by all head office divisions and some branch functions in December 2005. Preparations are under way to extend scope of certification to cover the entire company by the end of fiscal 2006.
IPP wind power generation companies	Tahara Seaside Wind Farm has completed EMS introduction. EMS scheduled for introduction at other wind farms during fiscal 2006.
IPP & PPS thermal generation companies (ITOIGAWA POWER Inc., Ichihara Power Co., Ltd.*, Bay Side Energy Co., Ltd.)	ITOIGAWA POWER Inc. introduced EMS in November 2005 and Bay Side Energy Co., Ltd. in April 2006. Ichihara Power Co., Ltd. obtained ISO 14001 certification via expansion of scope of certification in April 2006.

◆ Environmental Information for Employees

In order to enhance environmental management and raise group employees' awareness, information is made available for all employees to view at any time through media such as electronic bulletin boards, an environmental information network, and the *J-POWERs* group magazine.

Environmental information network

Medium	Title	Content
Electronic bulletin board	Environmental laws, regulations, and data	• Implementation and revision of laws and regulations
	Information on environmental management and events	• Social trends • In-house environmental events • EMS
	Forum on nature, the environment, and animals, and plants	• Forum for free exchange of opinions among employees
Intranet	Environment information network	• Overview of laws and regulations • Overview of EMS • Environmental education and training

◆ Education and Training

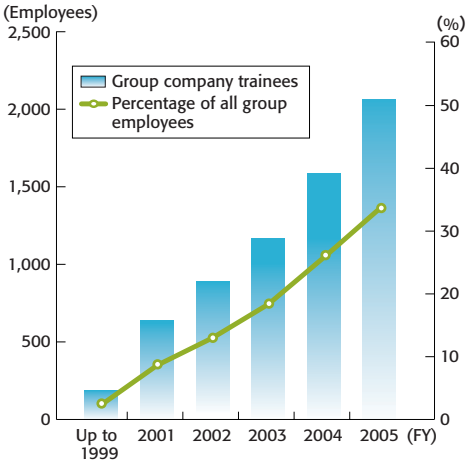
The J-POWER Group conducts a range of internal and external environmental training programs to raise employee awareness and cultivate a sense of personal responsibility regarding environmental issues. In fiscal 2005 new courses were added to the e-learning-based environmental education program available to group employees. An environmental awareness survey was also conducted in conjunction with the e-learning program. Including group employees, a total of 2,057 staff members have taken the course for EMS internal environmental auditors.

Environmental In-House Training in Fiscal 2005

Category	Topics	Trainees	Main content
Overall environmental management	Environmental report study groups	Approx. 760	J-POWER Group's efforts
Basic training for EMS operation	Internal environmental auditor training	470	Requirements of ISO 14001, internal environmental audit method
	Follow-up training for internal environmental auditors	35	Practice in identifying nonconformance, etc.
E-learning	Basic knowledge of environmental issues	569	General environmental issues
	J-POWER Group's efforts (group-wide)	1,940	Status of environmental efforts, etc.
	EMS course (system outline)	1,776	Outline of ISO 14001
	EMS course (advanced)	1,218	Requirements of ISO 14001, audit method, etc.
	Total	Approx. 6,768	

Note: Most training was aimed at all group employees
*Includes employees of non-consolidated subsidiaries and partner companies outside the group

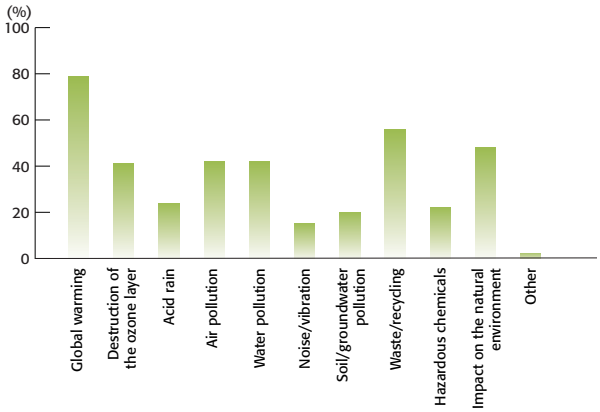
Cumulative Number/Percentage of Employees Who Have Received Internal Environmental Auditor Training



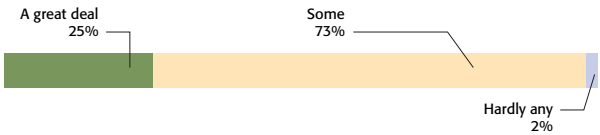
Extract from Group Employee Environmental Awareness Survey

(Results as of the end of March, 2006. Questionnaires distributed to 3,542 employees. 1,706 responses)

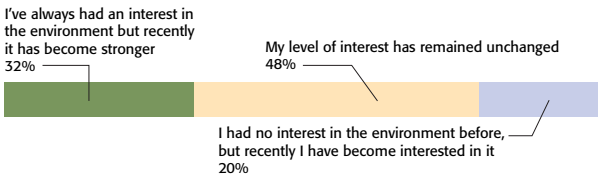
■ What environmental issues are you interested in?
(Multiple responses allowed)



■ In terms of your work and everyday life, how much interest do you have in the environment?



■ If you answered "a great deal" or "some," how has your thinking on the environment changed?



◆ Environment-Related Official Qualifications

At power stations and other facilities, staff members with formal qualifications, such as Manager in Charge of Pollution Control Certificates, are assigned to positions where they can facilitate day-to-day environmental conservation activities. We will continue to provide employees with guidance and support to acquire various qualifications, with the aim of improving their knowledge and skills.

As of the end of March 2006

Qualification	No. of holders
Professional Engineer, Construction Division (Construction Environment)	13
Professional Engineer, Environment Division (Environmental Conservation Planning)	2
Professional Engineer, Environment Division (Conservation of the Natural Environment)	4
Manager in Charge of Pollution Control, Senior Level	18
Manager in Charge of Pollution Control, Air (Types 1-4)	252
Manager in Charge of Pollution Control, Water Quality (Types 1-4)	586
Manager in Charge of Pollution Control, Noise	94
Manager in Charge of Pollution Control, Vibration	40
Manager in Charge of Pollution Control, General Dust	2
Manager in Charge of Pollution Control, Specific Dust	2
Manager in Charge of Pollution Control, Dioxins	23

Qualification	No. of holders
Manager of Specially Controlled Industrial Waste	277
Technical Manager in Charge of Industrial Waste Final Disposal Site	41
Technical Manager in Charge of Waste Disposal Facilities	572
Biotope Design Supervisor (Grades 1 & 2)	18
Biotope Construction Supervisor (Grades 1 & 2)	16
Technical Supervisor for Landscape Construction, Grades 1 & 2	32
Chief Electrical Engineer, Classes 1-3	759
Radiation Protection Supervisor, Classes 1 & 2	103
Energy Supervisor, Electricity	173
Energy Supervisor, Thermal	241
Manager in Charge of High-pressure Gas Production and Storage (Classes A, B, & C)	1,163

Qualification	No. of holders
Hazardous Materials Officer, Class A	152
Boiler Technician (Special Grade, Grades 1 & 2)	1,863
Boiler Mechanic	37
Works Supervisor for Specific Chemicals	804
Manager in Charge of Poisonous and Deleterious Substances (General and Specific)	11
Works Supervisor for Organic Solvents	407
Sanitation Manager, Classes 1 & 2	339
Certified Measurer, Environment	8
Work Environment Measurement Expert (Classes 1 & 2)	52
EMS Auditor (Prov. Auditor)	27

◆ Environmental Incidents

Seven environmental incidents occurred between May 2005 and March 2006. On each occasion a press release was issued and improvements were made to facilities and procedures to prevent a recurrence. Note that none of the incidents resulted in any impact on the surrounding environment.

Location	Situation/Response
Aso-Nishihara Wind Farm No. 4 Unit (Aso-gun, Kumamoto Prefecture)	On July 20, 2005 more than 10 liters of oil used to regulate windmills was leaked and scattered onto grassland. The cause of the leak was a damaged oil seal. The scattered oil was recovered and improvements were made to the facility to prevent a recurrence.
Tachibanawan Thermal Power Station (Anan-shi, Tokushima Prefecture)	On October 11, 2005, wastewater containing coal particles was discharged into the sea from the wastewater treatment plant in the coal unloading and transporting facility shared by J-POWER's Tachibanawan Thermal Power Station and Shikoku Electric Power Co. Inc.'s Tachibanawan power station (volume discharged: approximately 10 m^3). The cause was a blocked filter in the water treatment facility. Improvements were made to the facility and operating procedures.
Matsuura Thermal Power Station (Matsuura-shi, Nagasaki Prefecture)	During regular monitoring of treated wastewater on October 27, 2005, selenium levels were found to be higher than usual. The cause was investigated and operating procedures tightened up.
Isogo Thermal Power Station No. 2 Unit Construction Office (Yokohama-shi, Kanagawa Prefecture)	On January 17, 2006, approximately 13 m^3 (according to J-POWER investigations) of rainwater with a pH of 10.3 flowed into the sea from the main building construction yard. Water with high pH levels resulting from contact with concrete blocks used on the site as backfill material is treated in a turbid water treatment plant before being discharged, but this incident occurred when water overflowed from a storage tank before being treated and was discharged by a different route from usual. As well as introducing tighter procedures for monitoring and control, measures were taken to prevent such discharge.
Owase No.1 Power Station (Owase-shi, Mie Prefecture)	On January 18, 2006, insulating oil containing a low level of PCBs leaked from a transformer in a PCB storage depot on the power station site. It seeped into a section of the storage depot's exterior wall and an infinitesimal amount of PCB contamination was detected only in the soil directly below. The oil leaked from an insulator joint on the transformer. The contaminated soil was removed and the transformer in question was stored under more stringent conditions.
Sakuma Power Station (Hamamatsu-shi, Shizuoka Prefecture)	During work being carried out on the power station site on January 25, 2006, a can containing diesel oil was accidentally knocked over and approximately 3 liters of diesel flowed into a nearby river. An oil fence was immediately deployed to prevent spreading and the leaked oil was recovered.
Takehara Thermal Power Station (Takehara-shi, Hiroshima Prefecture)	On March 1, 2006, approximately 11 m^3 (according to J-POWER investigations) of rainwater with a pH of 9.7 flowed into the sea from a rainwater drainage outlet on the power station site. The cause was a portion of coal ash that had not been recovered during cleaning operations. Cleaning equipment and procedures were revised and a gate was installed on the drainage outlet.

Note: The following four incidents occurred in April 2005.

1) High selenium levels in a groundwater monitoring well at a final disposal site for industrial waste (Matsushima Thermal Power Station).
2) Discharge of untreated wastewater into the sea (Ichihara Power Station, Bay Side Energy Co., Ltd.)
3) Underground leakage of heavy oil (Class A) (on Okutadami Power Station site)
4) Discharge into the sea of sponge balls used for cleaning (Isogo Thermal Power Station)

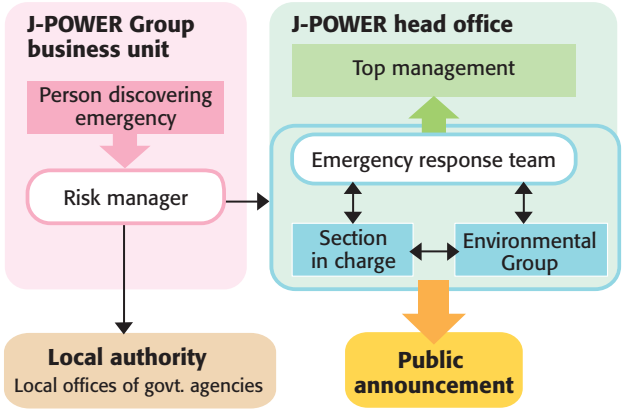
● Further details of these incidents and the measures taken are available in the 2005 Environmental Management Report.
http://www.jpower.co.jp/english/company_info/environment/er_2005index.htm

◆ Response and Information Disclosure in the Event of an Environmental Emergency

In the event of an environmental emergency:

1) The risk manager at each business unit will take the necessary steps to prevent damage from spreading, as well as contact the relevant local organizations, the head office emergency response team, and the head office section in charge of the business unit.
2) The head office emergency response team will promptly report to top management and provide information on the emergency to the media and other interested parties.

Response and Information Disclosure in the Event of an Environmental Emergency



Legal Compliance

In fiscal 2005 outflows of rainwater with pH levels exceeding the standards set by the Water Pollution Prevention Law (pH 5.0 to 9.0) occurred at the construction site for the Isogo Thermal Power Station's new No. 2 unit and at Takehara Thermal Power Station. Steps have been taken to prevent a recurrence (see p.53).

◆ Main Environmental Laws

Name	Main business subject to the law
Environmental Impact Assessment Law Electric Utilities Industry Law	Forecasting and assessment of environmental impact of power plant construction on surrounding areas
Air Pollution Control Law	Control of SOx, NOx, and soot and dust emissions resulting from power plant operation
Water Pollution Control Law	Control of wastewater discharge from power stations to public waterways
Noise Regulation Law	Control of noise from operation of power stations and substations and construction of facilities
Vibration Regulation Law	Control of vibration from operation of power stations and substations and construction of facilities
Offensive Odor Control Law	Control of offensive odors from operation of power stations and substations
Factory Location Law	Greening of sites for power stations and other facilities
Industrial Water Law	Pumping of underground water used for power generation
Natural Parks Law	Construction of power stations, substations, transmission facilities, and communication equipment in national, quasi-national, and prefectural parks
River Law	Intake of water from rivers for power generation and construction of generating facilities in river areas
Pollutant Release and Transfer Register (PRTR) Law	Management of release to the environment of chemicals used in power stations
Waste Management and Public Cleansing Law	Proper management of waste generated from business activities
Law Concerning the Improvement of Pollution Prevention Systems in Specific Factories	Appointment of manager in charge of pollution control in power plants

◆ Environmental Conservation Agreements

When constructing a thermal power plant, the J-POWER Group concludes an environmental agreement with the local authorities and strives to fully comply with the relevant terms.

While the content of environmental conservation agreements varies somewhat according to the particular characteristics of the site or region, the agreements generally cover the following points and include quantitative commitments on air and water quality.

- Air pollution control measures
- Water pollution control measures
- Noise and vibration control measures
- Offensive odor control measures
- Measures for the protection of the natural environment
- Accident response measures

Environmental conservation agreements concluded regarding J-POWER Group thermal power stations are set out in the chart below.

Power station	Local authority
Isogo Thermal Power Station	Yokohama-shi
Takasago Thermal Power Station	Takasago-shi, Hyogo Prefecture
Tachibanawan Thermal Power Station	Anan-shi, Tokushima Prefecture
Takehara Thermal Power Station	Takehara-shi, Hiroshima Prefecture
Matsushima Thermal Power Station	Saikai-shi, Nagasaki Prefecture
Matsuura Thermal Power Station	Matsuura-shi, Nagasaki Prefecture Imari-shi, Saga Prefecture
Ishikawa Coal-fired Power Station	Uruma-shi, Okinawa Prefecture
Itoigawa Power Station, ITOIGAWA POWER Inc.	Itoigawa-shi
Ichihara Power Station, Bay Side Energy Co., Ltd.	Ichihara-shi, Chiba Prefecture
Ichihara Power Station, Ichihara Power Co., Ltd.	Ichihara-shi, Chiba Prefecture

Allowable Level Set by Ordinance Exceeded in Fiscal 2002

In September 2002 the manganese concentration in discharge from the coal-ash final disposal site for Isogo Thermal Power Station exceeded the allowable level specified in Kanagawa prefectural ordinances.* Countermeasures were promptly taken, and as a result no abnormalities have since occurred.

Work at the landfill site was completed in March 2006, and procedures are now being taken to discontinue use of the site.

* Exceeding of allowable level: Manganese concentrations in wastewater discharged into a river from the final disposal site in Chigasaki-shi, Kanagawa Prefecture reached 1.1 mg/l, exceeding the allowable level of 1 mg/l or less specified by a Kanagawa prefectural ordinance on conservation of the living environment.

Green Purchasing

Conscious of the need to promote the "greening" of communities and economies and build recycling-based societies, we have adopted J-POWER Group Green Purchasing Guidelines. The entire group is engaged in green purchasing efforts including use of recycled paper and energy-saving office equipment such as PCs and photocopiers.

Promoting Green Purchasing

The scope of our green purchasing efforts goes beyond office supplies to encompass a broad range of initiatives, including purchase of other products used in our business activities and consideration of environmental factors when setting contractual specifications for ordering work from subcontractors to encourage environmental responsibility on the part of suppliers.

The chart below outlines the results of our green purchasing efforts for office supplies and other products in fiscal 2005.

◆ FY 2005 Green Purchasing

	Green purchasing volume	Green purchasing percentage
Copy paper (A4 equivalent)	57.22 million sheets	92%
Toilet paper	88,000 rolls	94%
Office equipment	117 units	40%
Uniforms/work clothes	6,826 units	99%
Vehicles	129 units	55%
Stationery	50,818 units	65%
Electrical appliances	52 units	73%
Other equipment	425 units	64%
Lighting	269 units	48%

◆ Uniforms & Work Clothes

As part of our efforts to reduce environmental load, since fiscal 2004 material made from recycled PET bottles has been adopted as standard for all J-POWER Group uniforms and work clothes.

Work clothes featuring material made from recycled PET bottles.

◆ Office Desks

As a rule all replacement desks and related furniture comply with the Green Purchasing Law.

"Jpark," J-POWER Head Office

Contributing to Greater Efficiency—Constructing the Green Purchasing Data Management System

Power Employee

Natsuko Fujii
IT Department, JP Business Service Corporation

Fujii originally joined JP Business Service Corporation on the administrative staff, but when she was in her sixth year there in 2004 she decided make a career change to better herself and became a systems engineer. After having a child and taking childcare leave she returned to work and now she is engaged in developing environmental data processing systems and training materials for environmental e-learning courses.

In fiscal 2005 Fujii was also involved in developing systems related to green purchasing. The J-POWER Group had been making progress on green purchasing for some time, but until that point data such as purchase records had been managed on a virtually manual basis using Excel spreadsheets. Because of that, collating data would often become a tremendously time-consuming task due to careless mistakes in data entry and so on. To resolve this issue, a team of five including her spent three months hammering out a system that would be easy for everyone to understand and use. As a result, accurate data could be collected and the time required for collating data was drastically reduced.

So she has two roles: as an engineer and as a mother. Like all working mothers, she finds that life can be pretty demanding, both physically and mentally. She said "No matter how much time we have, it never seems to be enough, but look on the positive side—it also means we get twice the fulfillment and twice the sense of achievement!"

And she continued smiling gently, "No matter how tired I am, when I get home and see my child's smiling face, I can't help but feel all my energy surging back, ready for the next day, just like hitting the 'reset' button."