Environmental Action Plan and FY 2001 Results

Third Environmental Action Plan

Our basic corporate principle states that "Toyota Industries believes that economic growth and conservation of the natural environment are compatible. It strives to offer products that are clean, safe and of high quality." In accordance with this principle, we devised our First Environmental Action Plan in March 1993 which clarified our basic policies and action guidelines related to environmental issues.

In the dawning of the 21st century, we made environmental awareness a key management issue. In August 2000, we revised the second plan and established the Third Environmental Action Plan to guide our environmental conservation activities, aiming to realize harmony between our corporate activities and the global environment and to engage in the creation of a recycling-oriented society.

In FY 2001, we implemented the environmental activities described on the following page, each with its individual target, based on this action plan.

Third Environmental Action Plan

Basic Policies	Action Guidelines	Targets	Action Policies
1. Conduct corporate activities that are considerate of the environment at every stage of the product's life cycle from development through design, production, use, and disposal, to provide clean and safe products to society. 2. Strive to intensify environmental management, including that of consolidated subsidiaries, for the further advancement of corporate activities that support environmental conservation. 3. Promote social contribution efforts, information disclosure, and awareness through wide-ranging cooperation with society on environmental conservation with the ultimate aim of achieving a better global environment.	1. Develop and provide clean products with minimal environmental impact (1) Thoroughly implement environmental considerations in development and design (2) Promote environmentally preferable purchasing*1	Improve fuel efficiency	• Achieve best-in-class fuel efficiency in all countries and regions and reduce CO_2 emissions • Improve fuel efficiency and reduce CO_2 emissions through the development of energy-conservation technologies
		Reduce exhaust gases	• Tailor measures in accordance with usage environments
		Develop clean-energy vehicles*2	• Launch new vehicles in accordance with market conditions • Develop clean products that meet market needs
		Improve recyclability	• Promote recyclable designs contributing to the target of a 95% recycling rate by 2015 • Expand the use of recycled materials
		Control and reduce substances of concern	• Conduct worldwide management of chemical substances
		Reduce noise	• Further reduce noise from all sources in our automobiles and forklift trucks
		Prevent global warming due to car air conditioners	• Develop compressors that are compatible with new alternative refrigerants to HFCs*3
		Strengthen environmental assessment at the development and design stages	• Conduct prior assessments of all environmental impacts throughout products' life cycles from the very first stage of development and design
		Strengthen cooperation with business partners	• Promote environmentally preferable purchasing through strengthened cooperation with business partners
	2. Promote manufacturing that strives for zero emissions*4 (1) Further reduce environmental impact through resource and energy conservation (2) Voluntarily set, carry out, and monitor targets through the Environmental Committee	Set global warming preventive measures	• Actively promote CO_2 reduction initiatives CO_2: Reduce total emissions by 5% compared with FY 1990 levels by March 2006 (10% by FY 2010) Promote thorough energy conservation programs
		Strictly control and reduce the use of substances of concern	• Heighten proper control and voluntary reduction of chemical substances used in production processes PRTR*5: Reduce total emissions of targeted substances by 50% compared with FY 1998 levels by March 2006 VOCs*6: Promote total emissions reduction and reduce emissions from painting lines by 50% compared with 1998 levels by March 2006
		Reduce waste and conserve resources	• Reduce waste for achievement of zero emissions Zero emissions: Eliminate direct landfill disposal at all plants by March 2004 • Promote paperless operations by enhancing in-house IT network systems
		Curtail water use	• Various initiatives
		Conduct logistics streamlining measures	• Improve transport efficiency and promote CO_2 reduction and resource conservation through the reduction of packing materials
	3. Expand environmental management systems (1) Strengthen cooperation with our subsidiaries and suppliers (2) Grasp environmental conservation costs and their benefits	Expand environmental management systems	• Develop basic policies and organize administration systems for group companies • Acquire ISO 14001 certification at group companies
		Enhance environmental accounting systems	• Develop environmental accounting systems
	4. Actively participate in public environmental conservation efforts as an upstanding corporate citizen (1) Engage in the creation of a recycling-oriented society (2) Thoroughly implement active information disclosure and communicate with local communities	Conduct efforts to create a recycling-oriented society	• Participate in initiatives in the public sphere aimed at the achievement of a 95% recycling rate by 2015
		Promote community involvement	• Broaden dialogue with local communities and intensify commitment to greenery activities
		Promote public relations and disclosure activities	• Expand environmental communications

*1 Environmentally preferable purchasing: Procurement of parts and materials that takes into consideration the supplier's ISO 14001 status and the presence of substances of concern in the procured materials and parts
*2 Clean-energy vehicles: Electric forklift trucks and compressed natural gas (CNG)-powered forklift trucks
*3 HFCs: Hydrofluorocarbons. HFCs were used as substitutes for CFCs, but pressure has risen to reduce their use because they contribute to global warming.

Results of Activities in FY 2001

To promote our third action plan, each specialized subcommittee and the General Secretariat act as the main contacts. Each theme is passed through the specialized subcommittees and then implemented by the related department. The following outlines our targets for FY 2001 and the results achieved.

In FY 2001, owing to the fact that the Higashichita Plant became fully operational and because of increased production, we were not able to achieve our comprehensive targets for energy, VOCs, and waste. However, we made improvements in our energy consumption and VOC emissions against sales over the previous year.

In July 2002, a launch was planned for a plant in Higashiura. We are carrying out environmental activities based on last year's results. Moreover, we established concrete numerical targets for the usage of water resources, distribution, and packaging materials, in an effort to further our environmental activities.

FY 2001 Targets and Results

Assessment: ○ Target achieved △ Unattained portion of stated target was less than 10% × Unattained portion of stated target was more than 10%

FY 2001 Targets	Results	Assessment	Reference
Develop energy-saving weaving machinery	• Reduced the energy consumption of the water-jet loom	○	P.18
Cleaner exhaust gases from diesel engines	• Developed the 1HD-FTE diesel engine	○	P.18
Plans for a clean energy vehicle	• Plans under consideration	–	–
Review the Recyclability Evaluation Method	• Surveyed a method connected with evaluating recycling potential	○	P.17
Survey on hazardous substances	• Surveyed the lead, cadmium, and hexavalent chromium content in parts	○	P.16
Lower noise level of diesel engines	• Developed the 1HD-FTE diesel engine	○	P.18
Develop a compressor that uses a new type of refrigerant	• Development under consideration	–	–
Create an LCA manual	• Reviewed LCA method	×	P.14-15
Incorporate into Design Review (DR)	• Established DR rules at 6 divisions	○	P.10
Expand environmentally preferable purchasing know-how	• Surveyed the level of environmental awareness at suppliers • Held a meeting to explain environmentally preferable purchasing	○	P.19
Total CO_2 emissions: 366,400 t-CO_2	• Total CO_2 emissions: 388,300 t-CO_2	△	P.26-27
CO_2 emissions against sales: 56.8 t-CO_2/¥100 million (sales)	• CO_2 emissions against sales: 56.1 t-CO_2/¥100 million (sales)	○	
Reduce CO_2: 12,800 t-CO_2	• Reduced CO_2: 15,800 t-CO_2	○	
Total emission of PRTR-designated substances: 825 tons	• Total emission of PRTR-designated substances: 689 tons	○	P.20-23
Total VOC emissions: 1,268 tons	• Total VOC emissions: 1,814 tons	×	
Promote zero landfill waste	• Achieved zero emissions at Nagakusa, Kariya, Kyowa, Takahama, and Hekinan plants	○	P.28-29
Survey current conditions at the divisions	• Surveyed all plants and pinpointed processes with large consumption • Installed a flow meter (Compressor Division, Nagakusa Plant)	○	P.30
Survey current conditions at the divisions	• Surveyed at all plants • Established in-house standards to measure CO_2 emissions and materials used for packaging during distribution	○	P.31
Expand range covered by ISO 14001 certification (development/design)	• Acquired certification for Textile Machinery, Compressor, and Engine Divisions and TOYOTA Material Handling Company	○	P.9-11
Establish a group environmental management system	• Established a working plan (domestic production plants)	○	
Support the acquisition of ISO 14001 certification (4 domestic subsidiaries)	• Acquired ISO 14001 certification at Tokyu, ST-LCD, Nishina, and Tokaiseiki	○	
Clearly define in-house accounting standards	• Established standards for environmental accounting	○	P.12-13
–	–	–	–
Offer support based on the theme of the global environment (5 cases)	• Provided support to the Japan Eagle and Hawk Research Center and Keidanren Nature Conservation Fund (5 events)	○	P.32-33
Employee volunteer activities (10 cases)	• Clean-up activities, support of iris cluster environmental preservation activities (11 events)	○	
Publish an environmental report	• Published the Environmental Report 2001 (August 2001)	○	
Disclose in-house activities on an environmental Web site	• Created an environmental Web site (opened from April 1, 2002)	○	
Enhance internal communications using a newsletter (6 cases)	• 11 articles on the environment in the in-house magazine	○	

*4 Zero emissions: Toyota Industries defines zero emissions as the reduction of more than 95% of landfill waste, compared to FY 1998 levels.
*5 PRTR: Pollutant Release and Transfer Register
*6 VOCs: Volatile Organic Compounds

Environmental Management System

Organization

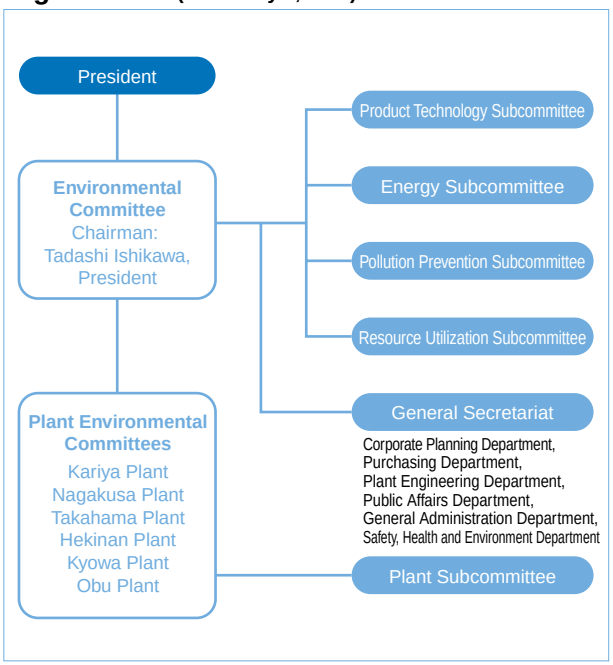
To promote environmental conservation activities throughout the company, the Environmental Committee, chaired by the president, makes decisions on corporate environmental policies and follows up on important environmental activities taken.

Furthermore, to promote activities associated with key issues, we developed four specialized subcommittees which stand below our Environmental Committee. They are the Product Technology, Energy, Pollution Prevention, and Resource Utilization subcommittees.

To smoothly implement the policies and decisions of the committee and subcommittees at each production site, each plant maintains its own Plant Environmental Committee, chaired by the environment conservation director, and specialized subcommittees to handle environmental activities.

In order to strengthen environmental communications and public contributions, we dissolved the Communications and Public Relations Subcommittee in FY 2001 and have incorporated the Public Affairs Department and the General Administration Department into the General Secretariat for the Environmental Committee.

Organization (As of July 1, 2002)



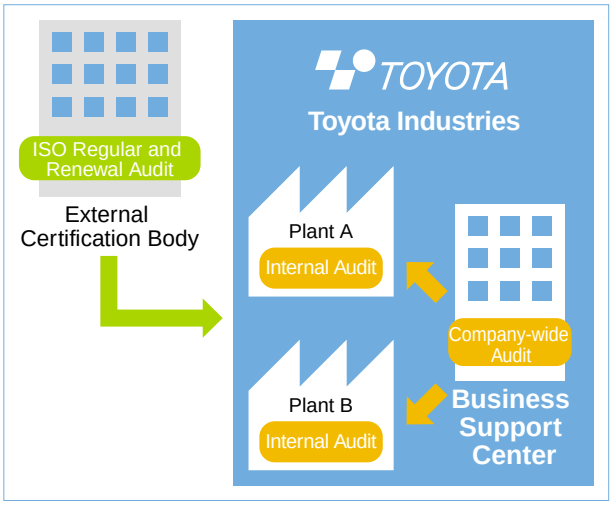
Environmental Audits

At Toyota Industries, we not only undergo regular ISO audits but also check our environmental conservation activities by conducting voluntary audits within the company based on our environmental management system.

Within the company there are two types of environmental audits. One type is an internal "self-check" audit performed at the plant level. The other is a company-wide audit, performed for all of the plants, planned by the Business Support Center (BSC) and performed by a team of qualified individuals within the company.

During FY 2001 the internal and company-wide audits were performed four times and five times, respectively. Due to the increased stringency of the internal audits, we were judged to have no major problems in our system with only three cases of minor incidents and thirty-one observational notes in the ISO regular and renewal audit performed.

Environmental Audit Process



Environmental Education and Awareness Program

It is important for our environmental conservation activities that every employee is aware of what impact our company may have on the environment and what they can do to help.

Therefore we provide our employees with environmental education, training, and awareness activities.

ISO 14001 Audit Cases Reported

ISO 14001 Requirements	Minor Incidents	Observational Notes	Total
Environmental policy	0	0	0
Planning	1	9	10
Implementation and operation	0	7	7
Checking and corrective action	0	11	11
Management review	2	4	6
Total	3	31	34

"Checking and corrective action" improvements are required to achieve the target of reducing plastic waste.

Environmental Education

At Toyota Industries, we supply multi-level environmental education for all employees based on the environmental management system at the plant level, as well as company-wide ISO 14001 internal auditors' training.

Employees are divided into groups according to position (workers, supervisors, and managers), and thoroughgoing courses are systematically tailored to each group.

In addition to general education, we also train personnel who work with important environmental-related equipment to handle any emergency that may have a significant impact on the environment.

The company-wide ISO 14001 internal auditors' training is carried out to nurture environmental management system auditors and prepare leaders to guide the company's environmental conservation activities. In FY 2001, eight training sessions were held and a total of 155 employees became qualified internal auditors.

Awareness Program

To further environmental activities and promote environmental awareness within the company, every year, we invite external specialists to conduct seminars.

For FY 2001, we invited the general manager of the environment division of Toyota Motor Corporation, Mr. Kiyoshi Masuda. He addressed the importance of environmental management in his lecture entitled, "Toyota Environmental Management in the 21st Century."

Because this lecture covered a topic which is crucial to consolidated environmental management, we invited members of our subsidiaries and affiliates to take part in the event as well. As a result, many directors from our group companies participated.

Consolidated Environmental Management

To ensure that our environmental efforts extend beyond the parent company, we are working to establish a consolidated environmental management system that covers all of our subsidiaries and affiliates in the entire group.

In March 2001, we held an explanatory meeting for our subsidiaries and affiliates and now all of them have implemented the development of a environmental management system. Moreover, to assist in implementing environmental management systems in our group companies, we have provided them with environmental education. We are willing to continue this assistance in the future. In addition, four more domestic group companies acquired ISO 14001 certification in FY 2001.

Training for Emergency Situations

Environmental Management System Auditors

		FY 2000	FY 2001
CEAR registration	Lead auditors	1	1
	Auditors	1	1
	Provisional auditors*	11	12
Within the company	Internal auditors	353	508

*This also includes those that passed the auditor training course.

Environmental Seminar

Environmental Education at a Subsidiary

Environmental Management System

ISO 14001 Certification

Our Progress

■Progress towards ISO 14001 Certification Including Product Design and Development

Since the Nagakusa Plant acquired certification in 1997, all six of our plants except for the Higashichita and Higashiura plants were ISO 14001 certified in the production sector by March 2001.

We strove to expand our existing ISO 14001 certifications for production to product design and development in FY 2001. In the course of the October 2001 renewal audit for the Kariya Plant, the technical departments of the Textile Machinery Division and the Compressor Division acquired certification that included product design and development for the first time. The technical departments of the Engine Division, located in the Hekinan Plant, and the TOYOTA Material Handling Company, located at the Takahama Plant, also acquired certification that included product design and development in November and December, respectively. These certifications led to RvA*1 certification, an authoritative accreditation.

We will continue to strive for certification including product design and development in the vehicle technical department and the Kyowa Plant in the future.

In FY 2001 our headquarters acquired ISO 14001 certification. The Higashichita and the Higashiura plants expect to acquire certification by March 2003.

■Our Efforts toward ISO 14001 Certification in Product Design and Development

Using the methods below, the technical departments of the Textile Machinery, Compressor, and Engine divisions, as well as TOYOTA Material Handling Company, were able to acquire ISO 14001 certification.

• Evaluation of Environmental Aspects of Products and Establishment of "Guidelines for Evaluating the Environmental Impacts of Products"

To acquire ISO 14001 certification in product design and development, it is necessary to identify environmental aspects of products and then select significant environmental aspects. Therefore, the Product Technology Subcommittee issued "Guidelines for Evaluating the Environmental Impacts of Products," and implemented a prior assessment system at the development stage of every technical department.

We use the identified significant aspects to plan environmental management programs as well as environmental objectives and targets. Using Design Review (DR) we are always checking their progress. With DR we also research the needs of the customer, market information, and the various environmental laws and regulations related to our products.

• Publication of List of Environmental Regulations and Environmental Regulation News

The Product Technology Subcommittee compiled a list of identified environmental regulations as well as the latest regulation news and published an environmental regulations newsletter. The list and newsletters contain resources on recycling, environmentally preferable purchasing, eco-labels and a list of substances of concern useful for all of our divisions.

Environmental Regulation News

• Environmental Regulations

In every division we promote the identification of the rules and regulations concerning the environment of our products, as well as the regulations of ISO 14001 and other environmental requirements.

• Training for Designers and Internal Auditors

To ensure designers' proficiency, the Product Technology Subcommittee administered training and then a test on substances of concern guidelines and recycling design guidelines for designers in TOYOTA Material Handling Company and the Kyowa Plant. The designers that passed the test were registered and a series of training standards were issued.

Internal auditor training that incorporates content required for product design and development so as to enable audits of those fields has been carried out twice. This has permitted the training of internal auditors in the product design and development fields, making continual improvement in the future a possibility.

Internal Auditor Training

*1 RvA is the abbreviation of Raad voor Accreditatie, a Dutch institution of certification.

Subsidiaries and Affiliates' Progress in ISO 14001 Certification

In FY 2001, four of our domestic subsidiaries and affiliates (Tokyu Co., Ltd., ST Liquid Crystal Display Corp., Nishina Industrial Co., Ltd., and Tokaiseiki Co., Ltd.) acquired ISO 14001 certification. Among our overseas subsidiaries, Toyota Industry (Kunshan) Co., Ltd., Kirloskar Toyoda Textile Machinery Ltd., and TD Deutsche Klimakompressor GmbH also acquired certification. Except for BT Group, acquired as a subsidiary in FY 2000, all of our overseas production facilities acquired the certification.

From a consolidated environmental management point of view, we fully support all subsidiaries and affiliates in their efforts to achieve ISO 14001 certification in the future.

Companies/Facilities that Have Acquired ISO 14001 Certification and Date

Category	Company/Facility		Location	Certification Date
Toyota Industries' Plants and Offices in Japan	Nagakusa Plant		Obu, Aichi	October 1997
	Kariya Plant		Kariya, Aichi	October 1998 (October 2001*1)
	Takahama Plant		Takahama, Aichi	December 1998 (December 2001*1)
	Hekinan Plant		Hekinan, Aichi	November 1999 (November 2001*1)
	Kyowa Plant		Obu, Aichi	January 2000
	Obu Plant		Obu, Aichi	March 2000
	Kariya Plant (Headquarters)		Kariya, Aichi	October 2001
Domestic Consolidated Subsidiaries	TIBC Corporation		Obu, Aichi	January 2000
	Tokyu Co., Ltd.		Niwa-gun, Aichi	November 2001
	ST Liquid Crystal Display Corp.		Chita-gun, Aichi	January 2002
	Nishina Industrial Co., Ltd.		Kamiminochi-gun, Nagano	January 2002
	Tokaiseiki Co., Ltd.		Iwata, Shizuoka	March 2002
Overseas Consolidated Subsidiaries	Toyota Industrial Equipment Mfg., Inc.		U.S.	June 1999
	Michigan Automotive Compressor, Inc.		U.S.	June 1999
	Toyota Industrial Equipment, S.A.		France	January 2001
	Toyota Industry (Kunshan) Co., Ltd.		China	October 2001
	Kirloskar Toyoda Textile Machinery Ltd.		India	January 2002
	TD Deutsche Klimakompressor GmbH		Germany	March 2002
	BT Group	BT Industries AB	Mjölby, Sweden (PT*2)	November 1997
			Mjölby, Sweden (MT*3)	November 1997
		BT Raymond Inc.	Brantford, Canada	March 1999
			Greene, U.S.	February 2001

*1 Acquisition in product design and development sectors
*2 PT is the abbreviation of Powered Truck and refers to a specialized plant for powered trucks.
*3 MT is the abbreviation of Manual Truck and refers to a specialized plant for hand pallet trucks.

ISO 14001 Acquisition Pending

Category	Company/Facility		Location	Target Certification Date
Domestic Plants	Higashichita Plant		Handa, Aichi	By March 2003
	Higashiura Plant		Chita-gun, Aichi	By March 2003
Domestic Consolidated Subsidiaries	Taikoh Transportation Co., Ltd.		Kariya, Aichi	October 2002
	Izumi Machine Mfg. Co., Ltd.		Obu, Aichi	November 2002
	Iwama Loom Works, Ltd.		Niwa-gun, Aichi	March 2003
Overseas Consolidated Subsidiaries	BT Group	BT Products AB	Antwerp, Belgium	By March 2003
		Lift-Rite Inc.	Brampton, Canada	By March 2004
		Cesab Carrelli Elevatori S.p.A.	Bologna, Italy	Under consideration
		BT Raymond Inc.	Muscatine, U.S.	By March 2003

Environmental Accounting

In our Third Environmental Action Plan, established in August 2000, one of the policies which we listed was the establishment of an environmental accounting system for use in the management of our operations. Environmental accounting is positioned as one of our key issues.

By actively disclosing the findings of our environmental accounting, we can provide a better picture of our environmental activities to a larger number of interested parties. At the same time, we aim to use environmental accounting as a method to assess our operations and to support the further promotion of our environmental conservation activities and improve performance.

Environmental Accounting in FY 2001

The following is a report on our findings for FY 2001.

Environmental accounting during FY 2001 was done on a parent-only basis (excluding the Higashiura Plant).

Environmental Conservation Costs (Units: millions of yen)

Cost Categories		FY 2001 Cumulative Results			Purpose	Page
		Investment	Expense	Total		
Business area costs	Pollution prevention	1,394	944	2,338	• Management of chemical substances • Prevention of pollution (air, water, noise, vibration, and odors)	20-25
	Prevention of global warming	113	1,123	1,236	• Curtail the greenhouse gas emissions (CO_2, CFCs, etc.)	23, 26, 27
	Resource recycling	58	421	479	• Suitable disposal of waste emitted from business sites and reduction of such waste • Effective use of resources	28-30
Upstream/downstream costs		9	30	39	• Gap between cost of materials procured through environmentally preferable purchasing and through normal channels • Reduction of environmental impact such as from packaging and distribution	31
Management costs		1	513	514	• Establishment and operation of an environmental management system • Communication and environmental training • Plant greenery around offices and in areas surrounding the business site	6-9, 32, 33
R&D costs			1,512	1,512	• Personnel costs related to the development of environmentally conscious products • Personnel costs related to the development of production technology for reducing environmental impact	14-18
Social activity costs			5	5	• Social activities encompassing contribution, support, and information exchange with groups and local residents to preserve the environment	33
Environmental damage costs		297	331	628	• Survey and treatment of past pollution (soil, underground water, etc.)	24
Total		1,872	4,879	6,751		

Note: We measure the effects of our investments over a one-year period. For this reason, depreciation is not included under expenses.
The difference and proportions of investments and expenditures that serve several purposes have been calculated.

Effects of Environmental Performance

Environmental Conservation Categories			Effects in FY 2001 (Reduction)	Page
Business area benefits	Input resources	Energy [Figures in ( ) have been converted to represent CO_2 emissions]	23,889 MWh (15,767 t-CO_2)	26-27
		Water resources	104,400 m^3	30
	Substances of concern	Release and transfer of PRTR-designated substances	364 tons	20-21
		VOC emissions	298 tons	22
		Greenhouse gas emissions*1 [Figures in ( ) have been converted to represent CO_2 emissions]	HFC-134a*2: 2 tons (2,600 t-CO_2)	23
	Industrial waste	Emission of sludge from the treatment of wastewater	72 tons	28-29

Note: Effects of environmental performance are actual effects stemming from our environmental conservation measures. The effects obtained were measured over a one-year period.
*1 This figure represents hydrofluorocarbons and other greenhouse gases (excluding CO_2). CO_2 emissions are calculated under the effects of energy reduction from the input of resources.
*2 HFC-134a is another name for 1,1,1,2-tetrafluoroethane.

Economic Effects of Environmental Conservation Measures (Unit: millions of yen)

Categories		FY 2001	Purpose	Pages
Energy savings		346	• Reduced expense for energy savings	26-27
Reduced usage of substances of concern		7	• Lower raw material costs through reducing usage of substances of concern	20-23
Resource recycling	Gain on sale of reusable materials	646	• Business profit from the sale of reusable materials	28-29
	Disposal and recycling of waste	2	• Lower disposal cost owing to reduction of industrial waste	
Water conservation		3	• Lower water bill owing to conservation and more effective usage of water	30
Total		1,004		

Note: Earnings included above are those actually recorded in the company's FY 2001 financial statements.
Reductions in expense are mainly only those for which actual effects were obtained from environmental conservation measures. The effects obtained were measured over a one-year period.

Environmental Accounting

In FY 1999, we began environmental accounting, at which time we also began to accumulate relevant data.

Up until FY 2000, we had accumulated data on a company-wide basis. In accordance with the environmental accounting guidelines released by the Ministry of the Environment, our headquarters amassed data on investment and those expenses related to environmental conservation for the entire company.

From FY 2000, to improve the reliability of the information in our environmental report, we began implementing independent review. At that time, an independent review agency proposed a method for tallying environmental accounting data, as a means of helping us to improve our environmental conservation activities.

We not only incorporated this proposal, but decided to further improve the precision of our calculations and enhance the internal usage of environmental accounting. In FY 2001 we worked to create well-defined, in-house standards, using the ministry's 2002 Environmental Accounting Guidelines as a reference, and began implementing these accounting practices at each of our plants.

To ensure full compliance with these standards, we held meetings at each of our plants to explain procedures and conducted environmental accounting for FY 2001 on a site basis.

FY 2001 Environmental Accounting Results

During the fiscal year, our environmental conservation costs totaled ¥6.75 billion, including investments of ¥1.87 billion and expenses of ¥4.88 billion.

Investments accounted for 27.7% of all environmental conservation costs. The core of this investment was used for facilities at the Higashichita Plant. Other major spending was related to the introduction of pollution prevention facilities such as underground water purification and an exhaust gas combustion system to reduce VOC emissions.

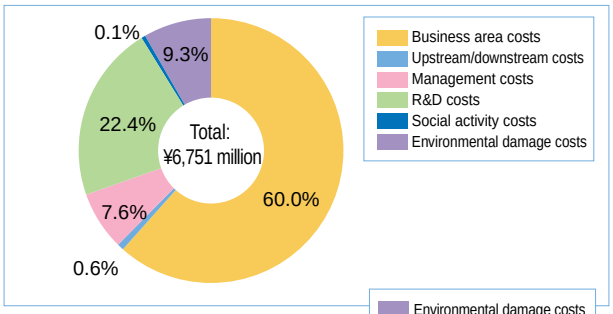
The major portion of expenses covered maintenance and management costs for environmental facilities and personnel costs. Environmental damage costs associated with measures to purify underground water represented 9.3% of environmental conservation costs, or ¥630 million.

In addition, R&D costs for developing environmentally conscious products accounted for 22.4% of all environmental conservation costs, or ¥1.5 billion. In contrast, the economic effects from the implementation of environmental measures was ¥1.0 billion.

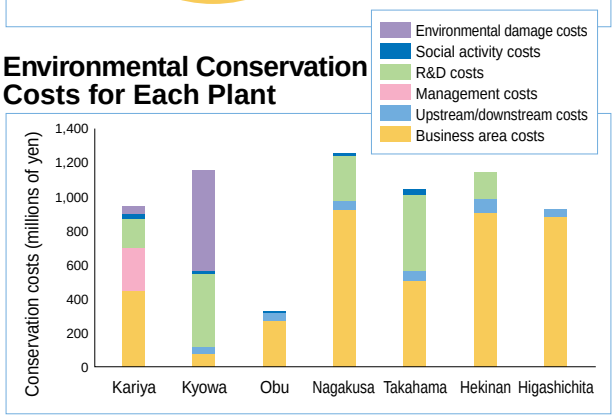
Energy savings and the gain of sale of reusable materials were the two largest contributors to economic effects. In FY 2001, we added items that enabled us to achieve reliable expense reduction.

Environmental Accounting Information Session

Environmental Conservation Costs



Environmental Conservation Costs for Each Plant



Breakdown of Environmental Costs for Each Plant

Plant	Main Business Activities	Key Features
Kariya	Maintaining headquarter functions, developing and manufacturing textile machinery, developing compressors, processing and assembling parts	• Headquarters are based here, therefore management activity costs are high • Incurred environmental damage costs
Kyowa	R&D of various technologies, R&D of electronics technologies, manufacturing electronic components, developing and manufacturing press equipment and facilities used in the automotive industry, performing engine assessments, processing compressor parts, producing plastic/glass for automobiles	• Incurred environmental damage costs • R&D costs were high as this plant handles the development of technologies
Obu	Dissolution of aluminum, processing compressor parts, manufacturing foundry parts (This line is to be transferred completely to Higashichita in FY 2002.)	• Environmental conservation costs were relatively low owing to a revision of business operations in FY 2000
Nagakusa	Developing and assembling automotive equipment	• Business area costs were high in FY 2001 owing to the implementation of VOC and zero emissions measures
Takahama	Developing industrial equipment, processing and assembling parts	• R&D costs were high owing to the development of a green fuel vehicle
Hekinan	Developing engines, processing and assembling parts	• Business area costs were high owing to the implementation of energy conservation measures in FY 2001
Higashi-chita	Began operation in FY 2000 (fully operational in FY 2001) Manufacturing foundry parts	• Incurred business area costs (investment) owing to the building of a new plant