3. The Environment

To contribute to the preservation of our environment, the azbil Group focuses on reducing not only the environmental impact of its own business activities, but also the environmental impact at its customers' sites through its core businesses, and engages in a wide range of environmental preservation activities.

This section presents the environmental initiatives of the azbil Group.

For general information on our initiatives for management and society, please refer to http://www.azbil.com/csr/eco/index.html























azt;



azbil report 2011 43



The Environment

Contributing to Global Environmental Preservation



Tadashi Hirooka Managing Executive Officer Yamatake Corporation



Yamatake's Fujisawa Technology Center

The azbil Group has set a target of reducing the volume of CO₂ emissions by 10% or more from the level of fiscal year 2006, ended March 31, 2007, by fiscal year 2013, ending March 31, 2014. All employees are involved in energy conservation initiatives.

We also promote environmental preservation activities based on the azbil Group Environmental Charter.

Results for Fiscal Year 2010, Ended March 31, 2011, and Future Plans

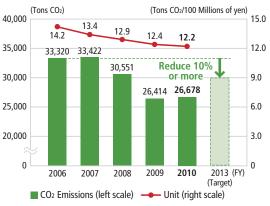
The azbil Group Environmental Management Committee, led by the Environmental Management Officer, promotes and reviews environmental issues and management plans for the entire Group. To conserve energy in our business activities, we classify facilities (air conditioning, lighting, etc.) and production lines as categories on a horizontal axis, with an "equipment improvements" list and an "operation improvements" list as the vertical axis, to create a total of four groups of items. We then prioritize them before we carry out various improvement measures. In fiscal year 2010, the azbil Group reduced the volume of its CO₂ emissions by 19.9% from the level of fiscal year 2006 to 26,678 tons. In the same period we improved CO₂ emissions on a per sales basis by 14.0%.

In fiscal year 2010, Yamatake engineers deployed the know-how gained from Yamatake's practical experience at other Group company factories by making on-site diagnoses and proposing various improvement initiatives. In fiscal year 2011, ending March 31, 2012, and beyond, we will implement an energy management system based on these proposals (see page 48).

Raising the awareness of each individual employee is important in order to improve our operations. To do so, we conduct ongoing employee training in this area (see page 52).

In addition, we are working to reduce CO₂ emissions by promoting environmentally friendly designs and technologies.

CO₂ Emissions: Results and Targets



- * Scope: Yamatake, Yamatake & Co., Yamatake Control Products, Yamatake Care-Net, Safety Service Center Headquarters, Kimmon Manufacturing and its consolidated subsidiaries in Japan, Yamatake Mizuho, Royal Controls, and Taishin
- * The figures for CO₂ emissions use a fixed coefficient (0.378 kg CO₂/kWh).
- * Includes estimates of air-conditioning energy and other figures.

Advancing Toward Achievement of a Low-Carbon Society

We demonstrate some of the energy conservation technologies and expertise accumulated through initiatives taken at Yamatake's Fujisawa Technology Center so far in our Factory Energy Conservation Tour. A wide range of people take this tour, from people in charge of energy conservation at other companies or foreign governments to elementary school pupils and members of the general population. Since its inception in May 2002, the program has received positive evaluations and as of the end of fiscal year 2010, the total number of participants had reached more than 9,800. In addition, we provide products, services, and solutions that support the energy conservation practices of our customers as part of our contribution to the environment through our business operations (see pages 18 and 51). We also conducted on-site calculations and assessments of CO₂ reduction for our customers for the first time in fiscal year 2010 (see page 47).

The azbil Group contributes to global environmental preservation by reducing CO₂ emissions in its business activities and by working to reduce CO₂ emissions throughout society.

Environmental Objectives, Targets, and Results

The azbil Group is actively taking measures to achieve its goal of minimizing the impact placed on the environment by its business activities. These include measures to conserve energy and resources, prevent pollution, and manage chemical substances.

	Objectives	Targets for Fiscal Year 2010	Results for Fiscal Year 2010	Plans for Fiscal Year 2011
Eco-Factories, Eco-O	offices			
Reduction of CO ₂ Emissions ¹	By fiscal year 2013, reduce by 10% or more compared to fiscal year 2006	Conduct initiatives to achieve environmental objectives	19% reduction (compared to fiscal year 2006)	Continue toward objective
	Comply with the Act on the Rational Use of Energy	Appropriate action	Obtained complete understanding of HVAC energy, etc.	Continue toward objective
Reduction of Copy Paper Purchased	By fiscal year 2012, reduce by 30% compared to fiscal year 2006	Conduct initiatives to achieve environmental objectives	21% reduction (compared to fiscal year 2006)	Continue toward objective
Prevention of Other Environmental Pollution	Incur no incidents of noncompliance Completely discontinue use of dichloromethane ²	Incur no incidents of noncompliance Completely discontinue use of dichloromethane ²	1 incident of noncompliance Completely discontinued use of dichloromethane ²	No incidents of noncompliance
Eco-Products, Eco-So	ervices			
Environmentally Friendly Design	Achieve LCA ³ implementation rate for new products: 100%	100%	50%	Continue upgrade
	Promote implementation of LCA for existing products	Upgrade promotion	Held company seminar	Continue upgrade
	Compliance with regulation of chemical substances used in products	Appropriate action	Conducted response	Continue response
Green Procurement	Green procurement rate: maintain at 95%	95%	97%	Maintain procurement rate by educating/instructing suppliers
Eco-Communication				
Raising Environmental Awareness	Promote education for employees and their families, and education through interaction with local communities	Support certification under Eco-Test	Held company seminar	Continue support for certification under Eco-Test
		Hold environment education programs for families of employees	Provided testing location for Children's Eco-Test ⁴	Continue various measures
	Work for biodiversity	Conduct beach cleaning activities, etc.	Implemented	Conduct beach cleaning, greenery preservation activities, etc.
			Reached agreement with Fujisawa City regarding greenery preservation activities	

1. Covers Yamatake, Yamatake Control Products, Yamatake Mizuho, and Taishin

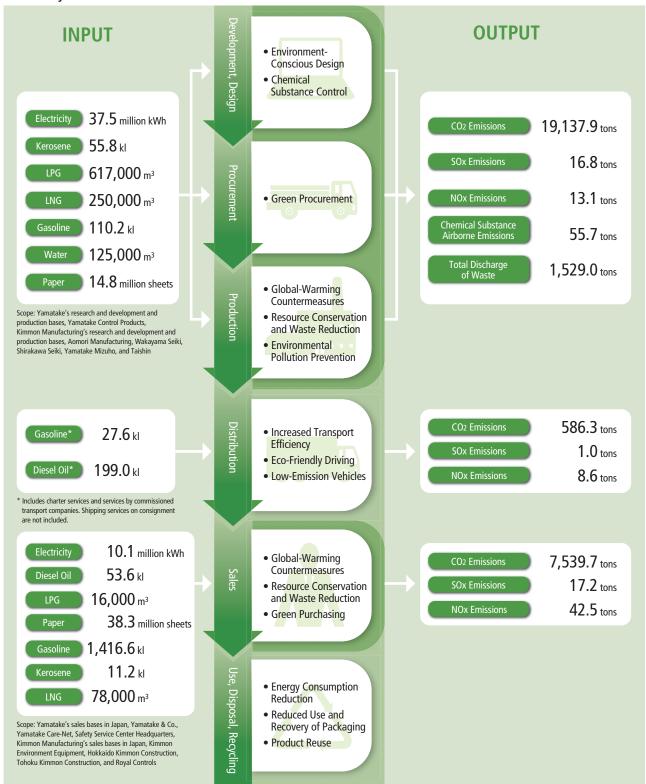
2. Excluding certain specialty products.

3. Life Cycle Assessment

4. Certification by The Ecological Literacy Association for Children, a non-profit organization

Material Balance

The azbil Group strives for preservation of the environment in all phases of the product life cycle, from development and design to use, disposal, and recycling. We undertake quantitative analysis of the environmental impact of our business activities and adopt measures to reduce it.





Reducing Society's Impact on the Environment

The azbil Group actively contributes to society by providing products and solutions that support initiatives to reduce environmental impact. In fiscal year 2010, ended March 31, 2011, we calculated and assessed the effectiveness of CO₂ reduction at our customers' business locations in order to quantitatively determine our contribution to society through our business operations.

Calculating the Effectiveness of CO₂ Reduction

We launched a project to measure and assess the effectiveness of CO₂ reduction, not only to reduce CO2 emissions from our own business activities, but also to determine the extent to which CO₂ emissions have been reduced at our customers' business locations. As a first step, we calculated and assessed the effectiveness of CO2 reduction in "a next-generation environmental control business that contributes to comfort, safety and global environmental preservation" - our own Building Automation business. In the future we will make similar calculations for our Advanced Automation and Life Automation businesses. By quantitatively indicating our contribution to a sustainable society, we will work to raise awareness of the environmentally beneficial work of the azbil Group.

(1) By a BAS¹ or Automatic Control System



1. BAS: Building Automation System

2. Calculation of CO₂ reduction effects from actual figures for the previous 10-year period using the published specific energy consumption unit for each building type, based on total floor area

(2) By Our ESCO³ Service



CO₂ Reduction at Customers' Sites 6 thousand tons/year⁴

- 3. ESCO: Energy Service Company
- 4. Calculation of actual volume of CO2 reduction for the previous 10-year period for each building (actual measured values before and after implementation of ESCO services)

(3) By Maintenance and Management Services





5. Calculation of CO2 reduction effects from actual figures for the previous 10-year period using the published specific energy consumption unit for each building type, based on total floor area

Assessing the CO₂ Reduction Benefit for Society through Our Business Operations

We categorized numerical data on CO2 reduction in the Building Automation business into three areas: (1) the effect in new and existing buildings of installing a building automation system; (2) the effect of energy conservation equipment and systems related to our ESCO service; and (3) the effect from maintenance and building management services in existing buildings. We then compared the amount of CO2 with the results if our products or solutions had not been employed at our customers' business locations.

6

We also calculated the amount of CO₂ reduction during power consumption by our products during use and found a reduction of nearly 1,600 tons of CO2 by customers who switched from old products to new products.

Our calculations showed a total CO2 reduction of 1.29 million tons annually, or roughly 0.1% of Japan's entire CO2 emissions (approximately 1.3 billion tons). Through our work, we believe we have been able to quantitatively evaluate our contribution to reducing society's impact on the environment.

From left

Kana Mizutani Masaki Hirata Environmental Marketing Department Marketing Headquarters **Building Systems Company** Yamatake Corporation

Tomoharu Takaishi Product Marketing Department Marketing Headquarters **Building Systems Company** Yamatake Corporation



Eco-Factories and Eco-Offices

Our business operations inevitably increase our environmental impact. However, we believe that it is important to supply customers with products and services that minimize energy and resource use. To efficiently use precious resources and energy, we actively conduct energy and resource conservation and waste reduction activities.

Prevention of Global Warming

Yamatake's Initiatives

Yamatake has adopted a wide range of energy conservation measures tailored to the characteristics of each factory and office, based on sources ranging from employee suggestions to advanced technologies. Continuing on in fiscal year 2010, ended March 31, 2011, directors in charge of each large-scale workplace and employees responsible for each building, area, or department determined targets for reduction of CO₂ emissions at each location and promoted related efforts.

In fiscal year 2011, ending March 31, 2012, with a focus on electrical power conservation measures for the summer, Yamatake will enhance its systems for visualizing anticipated electricity use and strengthen energy-saving measures throughout the company.

Developments for Group Factories

We aim to reduce CO₂ emissions at each of our Group factories by applying Yamatake's hands-on expertise in energy conservation and its on-site experience with its customers.

Yamatake Mizuho began implementing CO₂ reduction measures in fiscal year 2010. Yamatake Mizuho is a core factory of the azbil Group that produces flow measurement equipment, including electromagnetic flowmeters and water meters. In particular, the flow calibration rig it completed in December 2008 has attracted substantial attention from various sectors as one of Japan's largest calibration devices. With the establishment in fiscal year 2010 of a framework to expand calibration services for electromagnetic flowmeters to non-azbil Group products, the company's energy usage is expected to increase in the future. Consequently, it has considered adopting a system for making the usage of air, gas, and water, in addition to electricity, more visible, and has investigated and identified energy conservation topics. In fiscal year 2011, Yamatake Mizuho will



One of Japan's largest flow calibration rigs, completed in December 2008

construct this visualization system while conducting energy-saving measures as needed.

Conserving Resources

Reducing Paper Use

We are working to reduce the use of paper resources by applying IT in our general operations. Initiatives such as using electronic bulletin boards to share information and switching to e-forms are underway. By fiscal year 2012, ending March 31, 2013, Yamatake aims to reduce the volume of paper used by 30% from the level in fiscal year 2006, ended March 31, 2007. In fiscal year 2010, we achieved a 21% reduction from the fiscal year 2006 level.

Reducing Water Use

In addition to conducting various measures to conserve water, we reuse purified water and we use rainwater. We will continue these measures in fiscal year 2011 and beyond as we work to reduce the volume of water used.

Reducing Waste

Waste generated at our factories and offices is carefully sorted by material and type. We are currently rethinking the way we collect waste, while continuing to educate our employees thoroughly in waste separation methods to ensure that all resources are reused and recycled. In fiscal year 2011 and beyond, we will continue our efforts to separate waste and to limit the total volume of waste we produce.

Preventing Environmental Pollution

The azbil Group conducts regular monitoring and measurement of exhaust gas and wastewater, maintains abatement systems, properly manages chemicals, and conducts emergency preparedness training. In fiscal year 2010, wastewater from operations at Yamatake's Fujisawa Technology Center exceeded limits, and we submitted a report to the relevant authorities and carried out appropriate improvement measures.

Environmental Regulation Compliance

In fiscal year 2010, the azbil Group did not violate any laws, was not penalized or fined, and was not subject to any litigation or complaints concerning environmental matters.

Environmental Initiatives with Electric Vehicles

Introduction of Electric Vehicles

Electric vehicles ("EVs"), which have attracted attention as an environmentally conscious mode of transportation, have been in active use at Yamatake's Narita Sales Office since January 2011, generally being charged at night and used during the day to reduce the environmental impact of our business activities.

Collaboration with Customers in Environmental Initiatives

Having announced its vision of being the "World's Leading Eco-Airport," Narita International Airport held an exhibition and test drives of EVs for airport-



related companies on January 28, 2011. All airport-related businesses have joined forces to address environmental needs with the aim of increasing the use of low-emission vehicles. Our Narita Sales Office contributed to its customers' environmental efforts by providing an EV for the test-drive event.

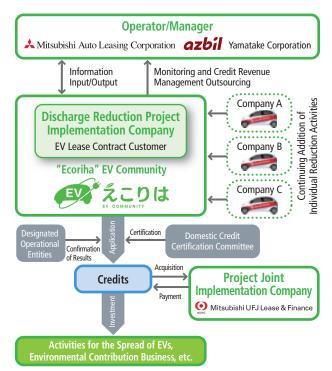
"Ecoriha" EV Community

Yamatake is promoting the forward-looking use of Japan's Domestic Clean Development Mechanism. Together with Mitsubishi Auto Leasing Corporation and Mitsubishi UFJ Lease & Finance Company Limited, we have launched the world's first emission reductions business program for EVs. In this project, the CO₂ emission reductions achieved through EV use by companies and local governments that participate in the "Ecoriha*" EV community were certified as emission credits by the Domestic Credit Certification Committee in March 2011.

Yamatake participates in "Ecoriha" as a discharge reduction project implementation company. The CO_2 emission reductions as a

Introducing Electric Vehicles (EVs)

result of EV use at the Narita Sales Office will be certified as emission credits and used to play a role in society in the future.



* "Ecoriha" is a registered trademark of Mitsubishi Auto Leasing Corporation.

Contributing to the Spread of EVs

Under the current Act on the Rational Use of Energy, the amount of power supplied to EVs by an office can be subtracted from the amount of energy use reported. However, the record-keeping needed to track the amount of power supplied is cumbersome. Yamatake has developed a potentially better method, and is now testing it by comparing the actual measured value of power supplied at the Narita Sales Office with the value calculated by EV telematics. If successful, this method will encourage more companies to use EVs.

Since its establishment, the Narita Sales Office has contributed to preservation of the environment with energy-saving proposals for customers at the "gateway to Japan." At the same time, we in Narita are working to reduce our own environmental impact. With the consent of the owner of our building, we set up a recharging station and introduced EVs in January 2011. We look forward to using the experience of the Narita Sales Office to enhance the business activity of the azbil Group and to contribute to the creation of smart cities and smart communities in Japan.



The design on the cars, which incorporates the words "electric vehicle" in our corporate color, is getting attention in the vicinity around the office and at the sites the vehicles visit. I hear from employees that this has

raised their consciousness of the environment, giving me a sense of the effect on environmental awareness.

Yoshinori Kuwana Manager Narita Sales Office Higashikanto Branch Building Systems Company Yamatake Corporation



Eco-Products and Eco-Services

Based on environmental design guidelines formulated by Yamatake in 1997, we actively promote the development of products, services and solutions that are environmentally friendly from the development stage to the end of their life cycle, including material selection, handling of chemical substances, energy-saving design, ease of proper disposal, and environmental information disclosure.

The Environmentally Friendly Green Control Cabinet

Development of the Green Control Cabinet

Yamatake has begun sale of the Green Control Cabinet, which was developed as an environmentally friendly cabinet for housing automatic control equipment such as controllers for use in its Building Automation business.

The Green Control Cabinet uses hot-dipped 55% aluminum zinc alloy-coated sheet steel (JIS G 3321), commonly called Galvalume sheet steel, * with superior corrosion resistance to the conventional baked-on coating, which uses organic solvents. As a result, its manufacture emits fewer volatile organic compounds (VOCs) than the manufacture of the previous product.

*Galvalume sheet steel is a registered trademark of Nippon Steel Corporation in Japan.



Previous product

Green Control Cabinet

The Green Control Cabinet is compliant with the 2010 version of the Japanese government's *Standard Specifications for Public Works Construction (Mechanical Equipment Construction).* The latest version of these standard specifications lists sheet steel that has been treated for corrosion (including hot-dipped 55% aluminum zinc alloy-coated sheet steel [JIS G 3321]) as an environmentally friendly alternative for automatic control panels. We promptly made the product commercially available as our response to the societal trend represented by this revision to the standard specifications.

In addition, a change in the assembly method from welding to riveting



Assembly with rivets

allows the Green Control Cabinet to be assembled efficiently even by unskilled workers. Together with the substantial reduction in the coating process, this shortens production lead time, thus

reducing energy use.

The rivet-fastened structure also facilitates disposal, as the rivets can simply be removed when disposing of the cabinet.

Initiatives Using LCA

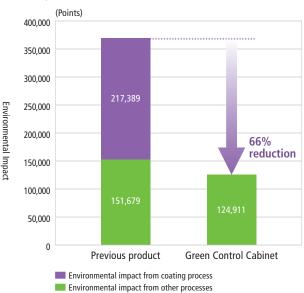
Life Cycle Assessment (LCA) is a method for comprehensively evaluating and quantifying the environmental impact of each stage of a product's life cycle, from raw material procurement to manufacturing, shipment, use, and disposal.

In fiscal year 2003, ended March 31, 2004, Yamatake started an initiative using LCA to reduce the environmental impact of its automatic control panels. As a result, we recognized that the use of organic solvents in the coating process was having a significant impact on the environment.

Our consideration of the LCA analysis led to the following initiatives.

- (1) We shifted from baked-on coatings that use organic solvents to baked-on powder coatings that emit virtually no VOCs.
- (2) With the objective of reducing the energy used for baked-on coatings, we reviewed the materials we were using and considered alternatives to welding as the fastening method. As a result, we developed a rivet-fastened structure and decided to construct the cabinet out of hot-dipped 55% aluminum zinc alloy-coated steel sheet (JIS G 3321), which is compliant with the standard specifications mentioned above.

LCA Analysis Results



Note: Environmental impact generated at each stage of the product life cycle is represented as points using SimaPro 7, an LCA software product developed by PRé Consultants.

ENEOPT™ Energy-Saving Solution for Factories

"Optimizing Energy with azbil"

Thus far, we have responded to the individual needs of our customers by developing a wide range of optimized energy controls for air, steam, cold water, warm water, electricity, gas, and others. Starting in fiscal year 2009, ended March 31, 2010, we have worked together with our customers to achieve energy savings with the ENEOPT energy-saving solution for factories, which organizes, standardizes, and packages the technologies and tools used in these optimized individual controls, leveraging the comprehensive capabilities of the azbil Group.

The use of ENEOPT begins with our search, in partnership with the customer, for energy-saving ideas. After draft proposals and effectiveness studies, we implement specific energy-saving solutions such as facility upgrades or operational improvements. The process is grounded in a bottom-up approach by which we accumulate individual ideas tailored to the on-site needs of the customer, find out what results these ideas produce, and build on that knowledge for the next round of improvements.



It is important that energy-saving activities be enjoyable as well as ongoing. The ENEOPT logo uses an "O" in the shape of a smile to symbolize our desire for everyone involved in energy-saving activities, including the on-site customer, to enjoy their efforts. Our key phrase is "Optimizing energy with azbil." Based on abundant expertise accumulated over many years in measurement and control, we

continue to provide "first-hand" solutions led by those who are on site with the customer.

Activities of ENEStaff on the Front Lines of **Our Energy-Saving Efforts**

Energy specialists called ENEStaff in our sales offices throughout Japan actively seek to help customers save energy by understanding the needs of customers from their perspective and promptly responding to those needs on site. (ENE- is pronounced approximately as in the first two syllables of en-e[r]-gy.) The main role of ENEStaff is to introduce the functions of the EneSCOPE™ energy management and analysis system for energy use visualization, which is the first step in saving energy, and to identify issues to be resolved through dialogue with the customer. ENEStaff members also make presentations based on actual customer data to provide a better sense of the value of energy-saving practices. Viewing actual demonstrations to gain a sense of the ideas and effectiveness of energy-saving practices also helps to unearth new issues. The ENEStaff program started in fiscal year 2009 with one member, and in fiscal year 2010, ended March 31, 2011, a total of 15 ENEStaff members were active in branches and sales offices across Japan.



FNFStaff

Achieving Energy Savings Together with Our Customers

From the initial start-up phase of the ENEStaff program we have worked together with our customers to achieve energy savings. We seek not only to demonstrate how easy it is to use EneSCOPE, but also to explain in easy-to-understand terminology how the concept of visualization is linked to resolving energy conservation issues. Our demonstrations using actual customer data are very popular, and we believe they have led to new discoveries and awareness among customers. Through direct dialogue on site, we can discover the issues customers are having problems with and want to solve. It is important to consider solutions together with the customer on the site, rather than one-sidedly presenting a proposal for Yamatake Corporation improvements. We are encouraged by customer feedback that praises our easy-to-understand explanations and our advice for problem-solving. Also, we learn a great deal by resolving issues side-by-side with our customers.

Sakiko Kawabata (left) Kansai Instrumentation Department **Engineering Headquarters** Advanced Automation Company

Asuka Nakagawa (right) Chubu Instrumentation Department Engineering Headquarters Advanced Automation Company Yamatake Corporation



Eco-Communication

The azbil Group works not only to raise each employee's environmental awareness, but also to promote environmental awareness in local communities in order to achieve a sustainable society. We foster communication on environmental issues both inside and outside the Group by supporting the study of the environment by individuals, the activities of Eco-People, and the environment-conscious lifestyles of our employees and their families.

Environmental Awareness for Employees

Promoting Eco-Test Study and Certification

Judging that its scope is suitable for the systematic study of global environmental problems, the azbil Group recommends that employees study for and pass the Certification Test for Environmental Specialists (the Eco-Test) sponsored by the Tokyo Chamber of Commerce and Industry. Interested employees have been voluntarily obtaining this certification since it became available in 2006. Since fiscal year 2009, ended March 31, 2010, Yamatake has included the test in its system of incentives for self-improvement. This has spurred many more employees to study for the Eco-Test.

Examples of Activities of Eco-People¹ (People Who Have Passed the Eco-Test)

A company tour for individual investors sponsored by Sawakami Asset Management Inc. was held at Yamatake's Fujisawa Technology Center. After a presentation on the azbil Group's businesses and a Factory Energy Conservation Tour, Eco-People took on the role of facilitators for a group discussion among participants on how to reduce CO₂ emissions at home.

Eco-People participating in this program noted, "I was concerned whether the discussion

would get moving, but tour participants ended up working together nicely to come up with a very enriching discussion," and "I felt it was a great opportunity to work with individual investors, with whom I rarely interact directly in my work."



Group discussion

1. Eco-People is a registered trademark of The Tokyo Chamber of Commerce and Industry.

Hosting Voluntary Seminars

In fiscal year 2010, ended March 31, 2011, the azbil Group hosted voluntary seminars for employees aiming to pass the Eco-Test and for those who previously passed but want to acquire the most up-to-date ecology-related knowledge.

The enhanced environmental awareness employees gain by studying for the Eco-Test contributes to the use of environmental knowledge on the job, reduces the environmental impact of our workplaces, and increases the number of employees seeking to obtain more specialized certifications. We believe these factors help to raise the level of the azbil Group's environmental activities. For that reason, the azbil Group will continue to encourage employees to study for and acquire certification by the Eco-Test.

Environmental Awareness for Local Communities Environmental Awareness through Self-Initiated Projects at Designated Manager Facilities

The Building Automation business currently manages 35 facilities in Japan as the designated manager under the Designated Manager System.² Each designated manager facility is active in conducting grassroots activities including "Eco-Kids" and "Eco-Flower Planter" workshops as well as conducting events such as eco-craft-making and offering lectures that contribute to environmental preservation.

These self-initiated projects and projects jointly executed with the local community are implemented under targets for reducing environmental impact set out for each department, which encompass the entire activity starting from the planning stage. This includes the selection of environmentally aware themes as well as earth-friendly materials for use throughout the activity to ensure that each event or lecture is conducted with the environment in mind.

Designated Manager System: A system established when the Local Autonomy Act was partially revised in September 2003. The system allows a local government to outsource the management and operation of a public facility to a private-sector manager it specifies.

Chain of Eco-Actions Grows from the "Little Eco-Declaration"

Since fiscal year 2010, we have been promoting the "Little Eco-Declaration," which urges event and lecture participants to meet one of three environmentally friendly challenges: "Don't waste electricity!" "Conserve water!" or "Carry your own water bottle!" Participants choose one of these three and declare their choice by putting a magnet on a special reusable eco-declaration board.

In fiscal year 2010, a total of 28 events and lectures involving 3,977 eco-declarations were held as either self-initiated projects or joint

projects with the local community. These ecological actions are expected to yield a reduction in CO₂ emissions of approximately 110 tons per year. Moreover, the Little Eco-Declaration serves as the first link in a chain of continuing environmentally friendly actions, with some participants also independently proposing their own eco-actions at the events.



Little Eco-Declaration

Aiming for Human-Centered Designated Manager Operations

Going forward, we will continue to conduct human-centered designated manager operations by fostering kinship with local communities and environmental awareness through means such as implementing environmentally conscious self-initiated projects and eco-actions involving the Little Eco-Declaration.