

# Initiatives for the Environment

The Furukawa Electric Group is striving to reduce its environmental impact throughout the product lifecycle.

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Access Cable Company  
Asahi Electric Works Co., Ltd.  
Inoue Manufacturing Co., Ltd.  
NTEC Ltd.  
FCM Co., Ltd.  
Okano Electric Wire Co., Ltd.  
Okumura Metals Co., Ltd.  
Kyowa Electric Wire Co., Ltd.  
Furukawa Electric Ecotec Co., Ltd.  
Shodensha Co., Ltd.  
Seiwa Giken Inc.  
Totoku Electric Co., Ltd.  
FITEC Corporation  
Furukawa Automotive Systems Inc.  
Furukawa Sangyo Kaisha Ltd.  
Furukawa C&B Co., Ltd.  
Furukawa Industrial Plastics Co., Ltd.  
Furukawa-Sky Aluminum Corporation

Furukawa Precision Engineering Co., Ltd.  
Furukawa Techno Material Co., Ltd.  
Furukawa Electric Advanced Engineering Service Co., Ltd.  
Furukawa Electric Industrial Cable Co., Ltd.  
The Furukawa Battery Co., Ltd.  
Furukawa Logistics Corporation  
Furukawa Life Service Inc.  
Miharu Communications Inc.  
Riken Electric Wire Co., Ltd.  
Furukawa Magnet Wire Co., Ltd.

Detailed data is provided in our CSR Data Book (PDF).

<http://www.furukawa.co.jp/english/csr/report/index.htm>



# Environmental Management

The Furukawa Electric Group conducts its environmental protection activities to achieve the objectives set forth in its 2012 Medium-Term Plan for Environmental Preservation Activities, in accordance with the Basic Philosophy and Action Guidelines of its Basic Environmental Policy.

## Furukawa Electric Basic Environmental Policy

### Basic Philosophy

We, the employees of the Furukawa Electric Group, recognize that preservation of the global environment is a serious issue confronting the international community, and we pledge to contribute to a sustainable future for the world through technological innovation that utilizes our strength in advanced materials.

### Action Guidelines

1. We shall comply with environmental laws and regulations as well as the demands of our customers and others, setting ever higher environmental targets as we continuously improve our global environmental conservation efforts.
2. We shall strive to develop products that are friendly to the Earth, and create new environmental businesses.
3. We shall strive to reduce environmental risk by incorporating anti-climate change and resource conservation/recycling considerations, as well as a reduction in the use of environmental impact-causing substances, across the entire product lifecycle.
4. We shall evaluate the ecological impact of all of our businesses, and strive for the preservation of biodiversity and sustainable use of resources.
5. We will seek harmony with the natural environment and local communities through dialogue with our stakeholders.

## Environmental Management Promotion Organization

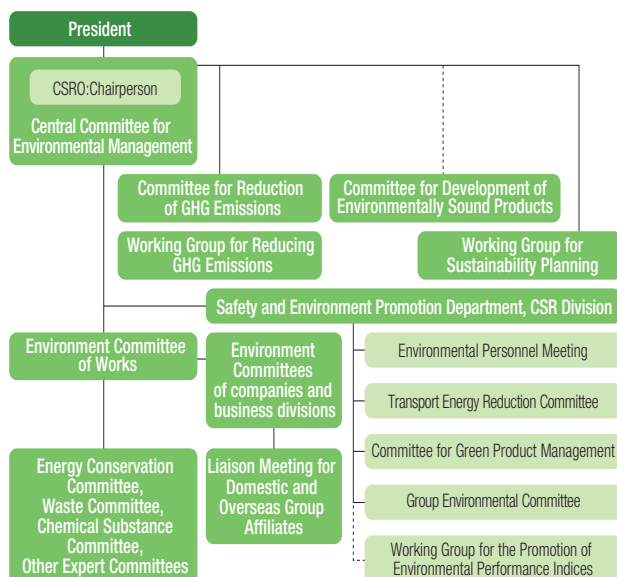
### Management Organization

The Furukawa Electric Group's Central Committee for Environmental Management, headed by the chief social responsibility officer (CSRO) and answering directly to the president, meets quarterly to formulate Group environmental management targets and follow up on their status. To reinforce Group environmental management, in April 2011 we inaugurated the Environmental Committee. Targeting

Group companies in Japan, this committee integrates the twice-yearly Liaison Meeting for Consolidated Environmental Management and the Committee for Consolidated Environmental and Green Product Management. This committee is working to promote environmental activities throughout the Group in accordance with consistent environmental targets.

Fiscal 2013 will be the final year for the Furukawa Electric Group's 2012 environmental protection targets. Therefore, in February 2012 we set up the Working Group for Sustainability Planning, a cross-company organization chaired by the CSRO. The aim of this working group is to formulate a medium- to long-term environmental management plan.

### Environmental management promotion organization



### Receiving Third-Party Verification

Our seven manufacturing works and all domestic affiliates participating in consolidated environmental management are acquiring ISO 14001 certification. Our overseas affiliates are collecting data and constructing management systems to this end.

## Environmental Accounting

The Furukawa Electric Group conducts environmental accounting in conformance with the environmental accounting guidelines published by the Ministry of the Environment. The Furukawa Electric Group's overall environmental conservation costs in fiscal 2012 came to ¥1.6 billion in investment and ¥6.1 billion in expenses.

 Environmental Accounting  
<http://www.furukawa.co.jp/english/csr/emiroment/accounts.htm>

# Environmental Education

The Furukawa Electric Group focuses on education and other activities to raise groupwide environmental awareness in accordance with its Basic Environmental Policy.

## Environmental Education System and Environmental Education Programs

The Furukawa Electric Group conducts various types of environmental education to cultivate among employees the understanding that is necessary to conduct environmental activities and raise their environmental consciousness.

In fiscal 2012, 45 employees attended our ISO 14001 Internal Environmental Auditor Course, 34 attended our FGMS\* Auditor Course, and 16 participated in our EMS Upgrade Seminar.

\* Furukawa branding Green products Management System

### Environmental education programs

Category of educational training	Content	New recruits	General employees	Mid-career employees	Management
Education for new recruits (once a year, mandatory)	General environmental protection activities	Training for new recruits			
EMS activities (as needed, mandatory)	Environmental Policy and purpose, goals and general knowledge pertaining to the environment				
ISO14001-related education (two-day course) (twice a year, voluntary)	Requirements of ISO standards, environmental regulations, procedures for internal environmental audits, various drills				
One-day brush-up course (once a year, mandatory)	Trends in environmental regulations, various drills to brush up auditing skills				
Environmental subjects (as needed, voluntary)	Environmentally sound design				
	Environmental regulations				
	Control of chemical substances contained in products				
Consolidated environmental management seminars	Seminars by experts on priority issues				

## Environmental Awards System

To ramp up our environmental activities, in fiscal 2011 we introduced an environmental awards system. There are three award categories for Furukawa Electric on a standalone basis: expanding sales of environmentally sound products, global warming prevention activities, and group activities. Affiliated companies are awarded for overall environmental activities.

### Award for Efforts to Increase Sales of Environmentally Sound Products

We provide the Award for Expanding Sales of Environmentally Sound Products to further promote sales of environmentally sound products. Each company is ranked by number of

registrations and its percentage sales of environmentally sound products, with the top companies receiving awards.

In fiscal 2012, the Superior Excellence Award was given to the Energy & Industrial Products Company.

### Global Warming Prevention Activity Award

To promote activities at the business divisions to prevent global warming, we have initiated the Global Warming Prevention Activity Award. This award is given to divisions that take superior initiative, and is tied to the improvement in motivation.

There were 14 entries for this award in the current fiscal year, six more than in the preceding year. In addition to three initiatives in the preceding year, including the development and commercialization of superior environmental technologies and internal production process improvements leading to reduced CO<sub>2</sub> emissions, we received reports on 11 ongoing projects. These included such measures as proper operation of a compressor, updates to high-efficiency lighting equipment, reducing standby power and thermal insulation processing.

As a result of the judging, the Copper Foil Division won the Superior Excellence Award for its process improvement measures that contribute to the substantial reduction of electricity used in the manufacturing process. In addition, we have granted two Excellence Awards and six Effort Awards.

## Environmental Group Activity Presentation Meetings

We began holding our Environmental Group Activity Presentation Meetings in 2010 to promote a variety of environmental activities. At this event, each recommended group announces the content and results of environmental activities. Committee members review outstanding activities, with a focus on initiatives that are innovative and can be deployed groupwide.

The second of these meetings was held at corporate headquarters in September 2011, and presentations were made by seven teams recommended by each Works. Following strictly impartial judging by 10 committee members, including the CSRO, the Hiratsuka Works' "Energy Conservation Activities Related to MCPET Production" was selected for the Superior Excellence Award. Initiatives by the Copper Tube Division and the Yokohama Works also received Excellence Awards.



Environmental Group Activity Presentation Meeting



# Material Flow

The Furukawa Electric Group strives to reduce various kinds of environmental impact, resource use and energy consumption in the course of conducting business.

## Environmental Impact of the Furukawa Electric Group in Fiscal 2012

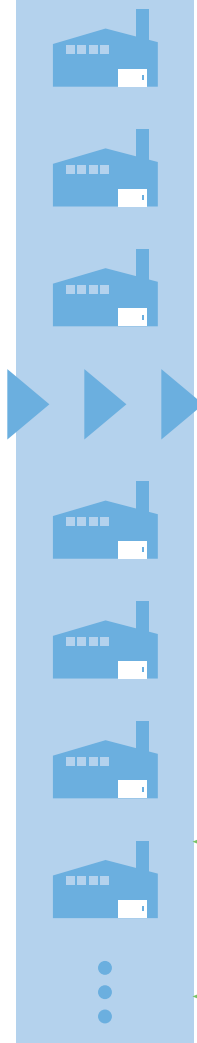
Data has been compiled for Furukawa Electric, its 28 affiliated companies in Japan and 44 affiliated companies overseas.

### INPUT

Category	Domestic	Overseas	Unit
<b>Raw materials</b>			
Copper	155,258	164,397	tons
Aluminum	280,542	40,681	tons
Iron	4,515	10,826	tons
Nickel	568	—	tons
Chromium	165	—	tons
Manganese	1,507	—	tons
Magnesium	4,943	—	tons
Other metals	40,700	—	tons
Rubber	46	—	tons
Glass	132	1,493	tons
Plastic	46,878	46,999	tons
<b>Energy</b>	<b>17,918</b>	<b>6,589</b>	<b>TJ</b>
Electricity (purchased electricity)	1,076,320	526,321	MWh
Electricity (hydroelectric power)	147,835	22,840	MWh
Electricity (solar power)	15	—	MWh
City gas	40,944	4,319	1,000 m <sup>3</sup>
LPG	40,118	2,325	tons
Heavy fuel oil A	11,223	1,042	kl
Kerosene	14,500	7	kl
Light oil	789	109	kl
<b>Water</b>	<b>26,938</b>	<b>2,148</b>	<b>1,000 m<sup>3</sup></b>
Industrial water	20,165	74	1,000 m <sup>3</sup>
Groundwater	5,575	327	1,000 m <sup>3</sup>
Tap water	1,198	1,747	1,000 m <sup>3</sup>
<b>Chemical substances</b>			
Volume handled <sup>*1</sup>	57,329	—	tons
<b>Packaging<sup>*2</sup></b>			
Cardboard	900	—	tons
Wood	37,156	74,405	tons
Plastic	1,079	3,883	tons
Paper	601	557	tons
<b>Paper<sup>*3</sup></b>	<b>1,084</b>	<b>—</b>	<b>tons</b>

### Furukawa Electric

Seven works,  
28 domestic  
affiliated companies  
and  
44 overseas  
affiliates



### OUTPUT

Category	Domestic	Overseas	Unit
<b>Waste</b>			
Total waste generated	64,730	32,460	tons
Final waste disposal	1,014	7,170	tons
Recycling amount	59,709	17,201	tons
<b>Atmospheric emissions</b>			
CO <sub>2</sub>	819,835	393,108	tons-CO <sub>2</sub>
SO <sub>x</sub>	132	—	tons
XO <sub>x</sub>	736	—	tons
Soot	35	—	tons
<b>Chemical substances</b>			
Volume emitted	151	—	tons
Volume transferred	304	—	tons
<b>Wastewater</b>	<b>24,065</b>	<b>1,261</b>	<b>1,000 m<sup>3</sup></b>
Public waterways	22,855	510	1,000 m <sup>3</sup>
Rivers	21,298	218	1,000 m <sup>3</sup>
Sea	1,554	0	1,000 m <sup>3</sup>
Other	2,783	292	1,000 m <sup>3</sup>
Sewer	1,210	751	1,000 m <sup>3</sup>
BOD	69	—	tons
COD	71	—	tons
SS	53	—	tons
<b>Product shipping volume</b>	<b>924,927</b>	<b>—</b>	<b>tons</b>
<b>Product collection volume</b>	<b>5,483</b>	<b>—</b>	<b>tons</b>
Type of cable	4,963	—	tons
Plastics	438	—	tons
Metals	82	—	tons
<b>Volume of water recycled and reused</b>	<b>115,017</b>	<b>659,871</b>	<b>tons</b>

\*1 PRTR-listed substances

\*2 Cardboard, wood, plastic, and paper used in product shipping

\*3 OA paper, copy paper, etc. used at plants and offices

# Targets and Performance (Environment)

The Furukawa Electric Group is proceeding with environmental conservation activities against medium-term targets in its 2012 Medium-Term Plan for Environmental Preservation Activities and the annual plan based upon it.

## Activity Targets and Performance in Fiscal 2012

The Furukawa Electric Group defines medium-term targets every three years. (For fiscal 2012, these were in the form of the 2012 Medium-Term Plan for Environmental Preservation Activities.) Each year, we establish targets for environmental protection activities based on these plans. In addition to developing these activities at all of the Furukawa Electric Works, we are also making progress in consolidating the overall Group targets and activities by reflecting them in the environmental targets at each affiliate through the efforts of

the Group Environmental Committee.

In fiscal 2012, we reached many of our targets in the categories of reducing emission of gases that cause global warming and lowering VOC emissions. However, we fell short of our targets in a number of activities. In fiscal 2013, we will redouble our efforts to do so from fiscal 2012 on, with the goal of fulfilling our 2012 Medium-Term Plan for Environmental Preservation Activities for the Group overall.

Activities	Environmental preservation activity targets for fiscal 2012	Performance in fiscal 2012			
		Furukawa Electric	Rating	Affiliated companies	Rating
Waste reduction activities	97% or more recycling rate (95% or more for affiliates)	97%	○	89.2%	×
	Affiliates zero emissions achievement ratio: 80%	—	—	74%	×
Activities to prevent global warming	14% reduction in greenhouse gas emissions compared with fiscal 2001 level	18.8% reduction	○	20.5% reduction	○
	4% reduction in energy consumption compared with fiscal 2008 level	11.8% reduction	○	12.6% reduction	○
	1% reduction in specific energy consumption for manufacturing compared with the previous fiscal year	Achieved at 7/21 Divisions	×	Achieved at 12/17 Works	×
	5% reduction in specific energy consumption for transportation compared with fiscal 2007 level (1% reduction at affiliates compared to the previous fiscal year)	13.8% reduction	○	Achieved at 8/12 Works	×
Chemical substance management activities	Furukawa Electric: 10% reduction in emissions of volatile organic compounds compared with fiscal 2008 level <sup>*1</sup>	27.7% reduction	○	—	—
	Affiliated companies: 42% reduction in emissions of volatile organic compounds compared with fiscal 2005 level <sup>*2</sup>	—	—	58.9% reduction	○
Green activities	Procurement rate for 52 general-purpose products: 100%	100%	○	Achieved at 6 companies	○
	Expand to Group companies	Expanded to 15 Group companies			○
Eco-design activities	Sales ratio for environmentally sound products: 25% or greater (Furukawa Electric only)	40.0%	○	—	—
Biodiversity preservation	Establish biodiversity impact guideline	Evaluation of risk and determination of issues with regard to biodiversity			△
	Examine models for biodiversity action				

\*1 Revised by adding hydrocarbon-based detergent (Subject: All VOCs)

\*2 As has been the case up to now, mainly two substances (toluene and xylene)

## Fiscal 2013 Activity Targets

As fiscal 2013 will be the last year for the 2012 Medium-Term Plan for Environmental Preservation Activities, we will intensify groupwide efforts to achieve the plan's final goals.

With regard to chemical substance management

activities, we have revised affiliated companies' targets for reducing VOC emissions. As for Furukawa Electric on a standalone basis, their new management target is all VOCs.

Activities		Environmental preservation activity targets for fiscal 2013	2012 Medium-Term Plan for Environmental Preservation Activities
Waste reduction activities	Recycling rate	99% or more (97% or more for affiliates)	99% or more recycling rate
	Group zero emissions achievement ratio	Affiliates zero emissions achievement ratio: 90%	Affiliates zero emissions achievement ratio: 90%
Activities to prevent global warming	Greenhouse gas emissions	Reduce by 15% compared to fiscal 2001	Reduce by 15% compared to fiscal 2001
	Energy consumption	Reduce by 5% compared to fiscal 2008	Reduce by 5% compared to fiscal 2008
	Specific energy consumption for production	Reduce by 1% compared to the previous fiscal year	Reduce by 1% compared to the previous fiscal year
	Specific energy consumption for transportation	Reduce by 6% compared to fiscal 2007 (Furukawa Electric only)	Reduce by 6% compared to fiscal 2007 (standalone only)
Chemical substance management activities	VOC emissions volume	Furukawa Electric: Reduce by 15% compared to fiscal 2008	Optimal management of the quantity of chemical substances consumed
		Affiliated companies: Reduce by 1% compared to the previous fiscal year <sup>*1</sup>	
Green activities		Procurement rate for 52 general-purpose products: 100%	Expansion of general purpose green products
		Expand to affiliates	
Eco-design activities		Sales ratio for environmentally sound products: 45% or greater (Furukawa Electric only)	Increase in the development and sale of environmentally sound products
		Conduct of LCA for all important products: 100%	
Biodiversity preservation		Formulation of biodiversity guidelines and creation of structures	Formulation of guidelines and establishments of systems

\*1: Targets all surveyed VOCs

# Environmentally Sound Products

The Furukawa Electric Group certifies and registers low-environmental impact products as “environmentally sound products,” and promotes their use.

## Environmentally Sound Products and the e-Friendly Accreditation System

The Furukawa Electric Group certifies and registers as environmentally sound products those products with improved performance compared to existing products in the categories of materials and parts purchasing and manufacture, use, distribution and disposal.

We have created the “e-Friendly” environmental mark to identify such environmentally sound products. This mark is placed on those products, as well as in catalogs.



The e-Friendly mark

### Environmentally sound product categories

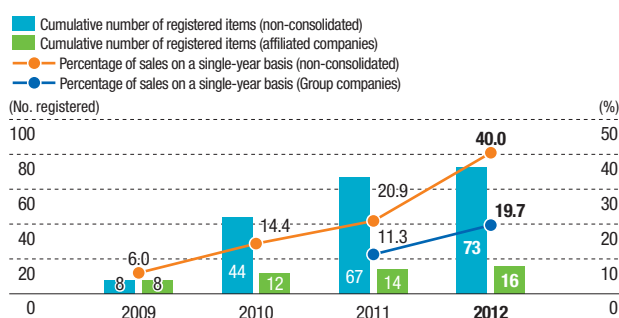
Category	Content
Prevention of global warming	Products with functions that help in the reduction of emissions as well as the absorption and stabilizing of greenhouse gases
Zero emission	Products made from recycled materials, products designed with easy-to-recycle components, products made from materials or with design facilitating volume reduction for lowering waste volume, products designed to share common components with other products or products designed as common components.
Elimination of materials that have an impact on the environment	Products that do not lead to an increase in the use of ozone-depleting substances during the manufacturing process, do not contain harmful substances above regulatory limits and do not generate harmful substances above these limits during use or disposal.
Resource savings	Products that result in overall energy savings by such means as reducing the use of raw materials and components as well as scarce resources, featuring enhanced longevity, allowing easier product and component maintenance, and reducing the use for resources in packaging.

## Expanding Environmentally Sound Products

We are working to increase our overall percentage of environmentally sound products. We set targets based on percentage of sales, and confirm our progress and success on this basis.

In fiscal 2012, on a standalone basis Furukawa Electric reached its target for environmentally sound products of 40.0% of total sales, surpassing its goal of 25% or more. (The groupwide result was 19.7%) For fiscal 2013, we have raised this target to 45% or more, and we will continue with efforts accordingly.

### Environmentally sound products as a percentage of sales



## Environmental Performance Index (“Visualization”)

In order to create environmental performance indicators for major product lines, the Furukawa Electric Group is using life-cycle assessment (LCA) to “visualize” CO<sub>2</sub> emissions.

In fiscal 2012, we performed LCAs on 22 additional product lines and created Product Category Rules (PCR) guidelines. This effort brought the total number of product lines up to 40, allowing us to use environmental performance indicators for products accounting for approximately 50% of total net sales.

In fiscal 2013, we will implement LCA evaluation targets for all major production lines. We will use the results of our calculations to define numerical targets for our next medium-term plan and employ them on research and development on environmentally sound products.

### Implementation of LCA evaluations on product lines

Company Business Division	2011	2012
Energy and Industrial Products Company	4	5
Telecommunication Company	9	11
Electronics and Automotive Systems Company	4	3
Metals Company	1	3
Total	18	22

### Examples of Degree of Social Contribution (NC-WS Electrodeposited Copper Foil)

For one product on which LCA has been calculated, NC-WS electrodeposited copper foil, we calculated the degree of contribution to CO<sub>2</sub> reduction if the product were actually used in the lithium-ion batteries of electric vehicles.

At Eco-Products 2011, we introduced the results of these calculations and the degree of social contribution made by NC-WS.



Poster displayed at Eco-Products 2011

The use of Furukawa Electric's copper foil would result in an estimated savings of 1.28 million tons per year by 2020.

# Environmentally Conscious Production/ Chemical Substance Management

The Furukawa Electric Group to enhance sustainability by reducing the environmental impact of production and distribution processes and appropriately managing chemical substances.

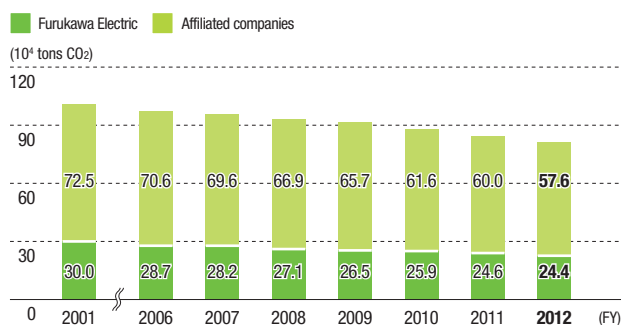
## Reducing Greenhouse Gas Emissions

### Initiatives at Works

The majority of the Group's greenhouse gas emissions consist of CO<sub>2</sub> generated from electricity, fuel and other energy sources. As emissions from manufacturing processes account for a large proportion, we work on reducing emissions by increasing the efficiency of production processes, switching fuels, replacing equipment with more efficient alternatives, insulating hot areas and other measures.

Total Group GHG emissions came to 820,000 tons of CO<sub>2</sub> in fiscal 2012, a reduction of 20.0% against fiscal 2001 levels, and energy consumption was down 12.3% compared with fiscal 2008 levels. On a non-consolidated basis, we achieved an equivalent of 244,000 tons of CO<sub>2</sub>, a reduction of 18.8% compared to fiscal 2001. [▶ CSR Data Book](#)

### Greenhouse gas emissions



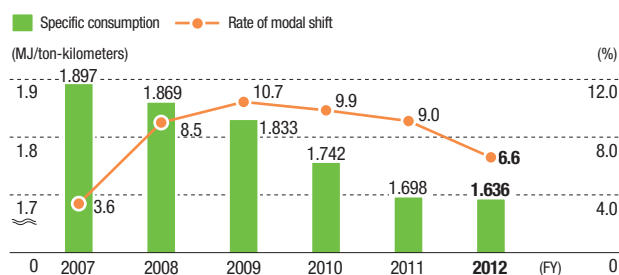
\*1 The emissions coefficients of the respective power companies are used to convert power use volumes.

\*2 CO<sub>2</sub> emissions attributable to hydroelectric power are deemed to be zero.

### Initiatives in Logistics

In fiscal 2012, total transportation volume for the Furukawa Electric Group decreased 3.2% year-on-year to 460 million ton-kilometers. Of this total, Furukawa Electric alone accounts for 133 million ton-kilometers, down 1.0% compared with fiscal 2011. The Company decreased CO<sub>2</sub> emissions by 2.6% year-on-year to 14,900 tons, due largely to

### Modal shift and specific consumption (Furukawa Electric)



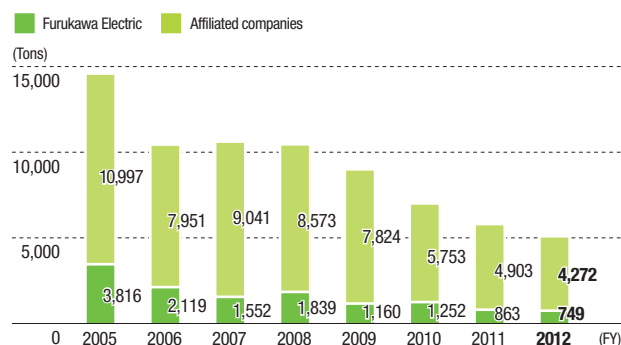
enhancements in loading rates. In addition, Furukawa Electric achieved a reduction of 13.8% in specific consumption from fiscal 2007. Despite such factors as a decrease in long-distance shipping and a downward trend in the modal shift rate, we will continue to promote modal shifts, increased loading rates, joint shipping and similar measures to decrease the energy used in shipping. [▶ CSR Data Book](#)

## Reducing Waste

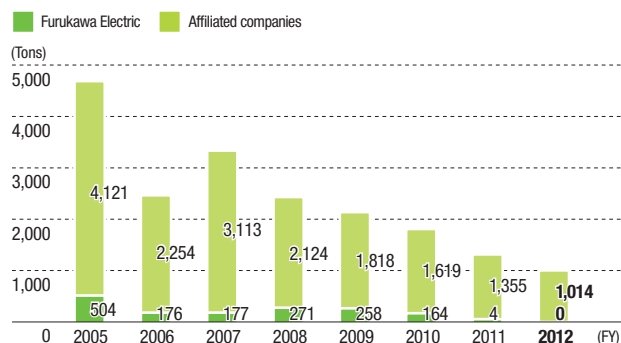
The Furukawa Electric Group began taking action to reduce outsourced waste disposal in fiscal 1994, and launched zero emission efforts in fiscal 2002 for reducing the volume of final disposal to less than 1% of the total volume of waste by directly transporting waste from each works to final disposal sites.

As a result of our efforts to meticulously sort waste and recycle waste acid and sludge into useful resources, the overall level of outsourced waste (which was not recycled) disposal for the Group for fiscal 2012 fell by 66.1% compared with fiscal 2005 to 5,021 tons. Also, the volume of waste directly sent to landfills fell by 78.1% (to 1,014 tons) in comparison to fiscal 2005 for Group companies in Japan, disposal for Furukawa Electric alone was zero.

### Non-recyclable waste volumes



### Direct landfill disposal



Also, in fiscal 2012, the target waste recycling rate (the ratio of recycled waste compared to total waste volume) was 95% or more for affiliated companies and 97% or more for Furukawa Electric on a standalone basis. Furukawa Electric met this objective, at 97.0%, but affiliated companies fell below their target, reaching 89.2%. [▶ CSR Data Book](#)

## Green Activities

### Response to Customer Requests

When the Group receives a request from a customer for information concerning chemical substances in our products, it conducts a thorough environmental examination. We also monitor trends in laws and regulations covering the chemical substances contained in products and compile and update data as it becomes available, allowing us to respond promptly to customer requests. Furthermore, by collecting information from industrial organizations and conducting seminars, as well as participating in research groups, we can monitor environmental regulations and standards and social issues/items of concern. This enables us to incorporate customer needs in our environmental conservation targets.

### Response to Overseas Regulations (REACH Regulations, RoHS Directive)

Substances of very high concern (SVHCs)\* that are included in the Candidate List under the REACH regulations are updated twice each year. Each time additional SVHCs are published, the Furukawa Electric Group researches the status of its use of such substances. As of the end of fiscal 2012, we had conducted checks on 73 substances.

\* Substance of Very High Concern. Use or marketing of SVHCs requires approval, and manufacturers are liable to submit notification if an SVHC exceeds 0.1% weight content.

### Regular Auditing under the Furukawa Branding Green Products Management System (FGMS)

Our FGMS Regular Auditing in fiscal 2012 was conducted through self-checking and auditing at a Works of Furukawa Electric, four factories of affiliate companies, and two factories of affiliates' suppliers. To control chemical substances contained in products, we will continue to monitor environmental risks, and expand and implement auditing according to degree of importance.

### Expansion of Green Procurement (General-Purpose Products) to Group Companies

We encourage the purchasing of OA equipment, office supplies and other items that conform to the Green Purchasing Law. Extending these activities to include

affiliated companies, in fiscal 2012 we designed items for conformance at 15 affiliated companies. We continue to purchase conforming items.

Also, purchases of items for use in our products are made based on our Green Procurement Guidelines, with the selection of appropriate items based on the FGMS system at the supplier and confirmation of data on chemical substances contained in the products. We continue to implement Green Procurement in regard to our main suppliers and products purchased, and henceforth aim to expand it for application to all components.

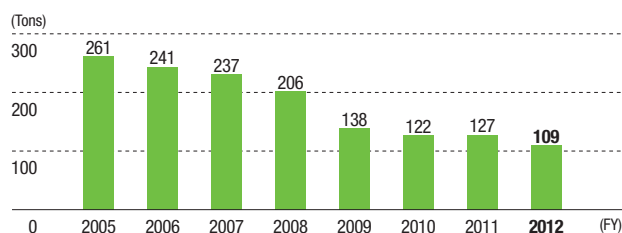
## Chemical Substance Management Activities

The Group works to reduce emissions of harmful chemical substances. In particular, we make every effort to actively reduce emissions of volatile organic compounds, one cause of photochemical smog. [▶ CSR Data Book](#)

Overall Group emissions (of toluene and xylene) in fiscal 2012 were down 58.3% compared to fiscal 2005.

Among Group companies in Japan, there remains one that uses organic chlorine compounds, and we are considering the phasing out of their use at this company.

### Emissions of volatile organic compounds (Group total: toluene and xylene)



### Appropriate Management of Chemical Substances

At the Furukawa Electric Group, we confirm the properties and applicable laws and regulations regarding all chemical substances we use during the manufacturing process on their Material Safety Data Sheets and administrate them.

We also monitor the usage volume of chemical substances listed in the PRTR Law\*. [▶ CSR Data Book](#)

\* Law Concerning Reporting, Etc. of Releases to the Environment of Specific Chemical Substances and Promoting Improvements in Their Management

### Reducing Emission of Volatile Organic Compounds

We are voluntarily working to reduce emissions of VOCs. The main targets are toluene, acetone and n-decane.

In fiscal 2012, we reduced emissions 27.7% against fiscal 2008 levels, surpassing our target of a 10% reduction.



# Environmental Risk Management

The Furukawa Electric Group recognizes the potential risks of environmental impact resulting from its business activities and formulates countermeasures for each type of risk.

## Preventing Soil and Groundwater Pollution

The Furukawa Electric Group engages in the management of specific toxic substances and conducts regular inspections for leaks to prevent the pollution of soil and groundwater in nearby communities. We reduce the risk of pollution through measures to prevent leaks and through ongoing efforts to switch to substitute substances.

In fiscal 2012, we continued proper disposal of the slag stored in the Oyama area (a site of the former Furukawa Magnesium Co., Ltd.). Soil remediation through excavation and removal has been conducted at locations where site examinations have found contamination. We will confirm our plans as we continue with this work. Also, groundwater measures conducted in the previous fiscal year were ongoing at the site of the former Ibaraki Factory of Aoyama Kinsho Co., Ltd.

## Effort to Prevent Atmospheric and Wastewater Pollution

At each of the Furukawa Electric Group's works and the business bases of affiliated companies, we maintain voluntary control limits and manage operations to avoid exceeding regulatory limits, such as those prescribed by the Air Pollution Control Law and Water Pollution Control Law. Atmospheric and wastewater quality data was all within regulatory limits at each works in fiscal 2012.

 **Management status at works**  
<http://www.furukawa.co.jp/english/csr/emiroment/risk.htm>

## PCB Management

The Furukawa Electric Group monitors the amount of PCB-containing equipment at each of our Works and affiliate company sites, and conducts proper storage and management. Based on this information, we register with the Japan Environmental Safety Corporation and entrust waste processing in accordance with plans. In fiscal 2012, processing of managed substances commenced at the Mie Works and the Copper Tube Division. Also, condensers and transformers removed from our facilities are examined for PCB content on a case-by-case basis. We are also proceeding with planned analyses of equipment containing even small amounts of PCB, with all examinations slated for completion by fiscal 2013.

 **Number of instruments containing PCB**  
<http://www.furukawa.co.jp/english/csr/emiroment/risk.htm>

## Response to Asbestos Concerns

Although our company does not currently produce or import any products containing asbestos, some of the industrial-use products we made and sold in the past did contain asbestos. These include electrical wiring for ships, and fire-resistant products for constructing telecommunications and electrical power facilities, etc. For details please visit our homepage.

In addition, we are currently examining the buildings and plants of Furukawa Electric and our affiliates to determine if asbestos-containing building materials have been used. Inspections for asbestos dispersal in buildings in which spray-on materials had been used have confirmed the presence of asbestos, and removal work or containment measures have been taken to prevent future dispersal. We have also proceeded to replace equipment and fixtures in which asbestos insulation has been used so as to prevent dispersal, with planned replacements of all items which are currently not dispersing asbestos with items not containing it. For other items, we conduct regular inspections and introduce alternates during facility renewals.

 **Response to Asbestos Concerns (Details)**  
<http://www.furukawa.co.jp/english/csr/emiroment/risk.htm>

## Environmental Accident Response

At the Furukawa Electric Group, we conduct annual checks for conceivable, clear environmental impact so as to prevent environmental accidents or prevent widespread impact in the event of an accident. We also conduct simulation drills that presuppose post-accident responses.

We regularly confirm environmental laws and other regulations to determine items requiring compliance, and we endeavor to comply accordingly. According to our fiscal 2012 survey on the status of our regulatory compliance, we were not in material violation of any regulations.

# Biodiversity Preservation

Based on the three points of emphasis that the Furukawa Electric Group established in 2011, we conducted initiatives to minimize the impact of our business activities on biodiversity.

## Three Important Biodiversity Effort Categories

We established the following three important biodiversity categories to specify Group biodiversity efforts, in recognition of the fact that our business, products and services are the result of biodiversity, and of our impact, whether positive or negative, on eco-systems.

### Biodiversity Preservation: Three Important Categories

1. Assess the impact of business practices on eco-systems, and work to minimize the negative impact and maximize the positive.
2. Promote sustainable resource use in consideration of biodiversity preservation through anti-climate change measures, resource conservation, and resource re-use, as well increasing efforts to reduce the use of environmental impact-causing substances.
3. By raising the consciousness of each individual, we actively promote biodiversity preservation in tandem with society.

## Evaluating Relationships between Operations and Biodiversity and Analyzing Risks

Between August 24 and November 11, 2011, the Furukawa Electric Group worked extensively to determine all the business risks related to biodiversity, and we began taking part in a project to clarify outstanding issues. We recognized that to develop specific actions related to biodiversity preservation, we first needed to determine the current status. We outsourced the consulting on this project to a

specialist in this field, Response Ability, Inc., which analyzed and evaluated the relationships between the Group's overall businesses and biodiversity.



Holding internal workshops as one aspect of the project

## Project Outcomes

Through this project, we recognized the existence of biodiversity-related risks at all stages of recycling Furukawa Electric Group products. Based on this knowledge, we ascertained seven management issues involving the management of individual risks that should lead to Furukawa Electric's increased competitiveness.

## Environmental Management Issues and Action Plans

### Seven Environmental Issues

- Establish long-term vision and long-term targets for environmental management
- Create an organizational structure to support long-term environmental activities
- Promote environmentally conscious research and development
- Shift to sustainable energy
- Formulate guidelines (raw materials, land use, water, etc.)
- Promote the 3Rs (reduce, reuse and recycle)
- Communicate with multiple stakeholders

### Action Plans

- Create a long-term plan for sustainability
- Incorporate biodiversity into R&D policy
- Take action in individual biodiversity-related themes that will have a rapid effect

- Establish working group to create a long-term plan for sustainability
- Formulate the next medium-term plan and organize a working group for individual themes

## Project Implementation Flow

### Kick-off meeting

- Share the objectives of risk analysis
- Explain basic information related to companies and biodiversity

### Hearings at individual divisions

- Determine and organize each division's risks
- Help each person in charge understand the relationship between their work and biodiversity

### Internal workshops

- Share hearing results
- Reconfirm risks
- Identify major risks
- Determine the ideal state to reach by 2020

Of these, we identified the creation of a long-term vision for environmental management as a priority. We gathered people from related divisions to formulate a working group (the Sustainability Plan Working Group) to create a medium- to long-term plan on environmental management. To ensure a fit between this long-term vision and the next medium-term plan, we will share information and encourage communication among all related teams.

From fiscal 2013, to make our biodiversity preservation initiatives more concrete, we will draw up guidelines related to land use, procurement and other items.