



SUBARU

2013 Environment





Environmental Vision

Message from the Chairman of the Environmental Committee

Promoting environmental initiatives for the sustainable development of society

I sincerely thank you for your exceptional understanding and continued support of the company.

In recognition of environmental problems, Fuji Heavy Industries, Ltd. (FHI) formulated a Voluntary Plan for the Environment in 1993, which treated environmental initiatives as a business challenge.

The 5th Voluntary Plan for the Environment FY2013–FY2017, which follows up from the 4th plan, was announced in 2012. This report covers the follow-up status of each environmental issue; namely, the global warming countermeasures, resource recycling, pollution prevention and reduction of hazardous chemicals, and environmental management.

This report also considers the SUBARU XV Hybrid, which launched in June 2013 featuring Subaru's first hybrid system. This model is equipped with a horizontally-opposed engine and symmetrical AWD, and achieves excellent fuel economy while supporting driving enjoyment with peace of mind.

Although the business environment surrounding the company is continually in flux, whatever the circumstances, we stick to our environmental initiatives with the aim of achieving sustainable development of society.

With the above in mind, I would like to ask for your further support for our future.



Mitsuru Takahashi
Director and Corporate Executive Vice President
Chairman of the Environmental Committee

Environmental Policy

Environmental Policy [Established in April 1998, revised in March 2010]

In recognition of the close relationship between the global environment and business activities, we will deliver "Green Products" from "Clean Plants and Offices" through "Green Logistics" and "Clean Dealers" to customers in order to ensure the sustainable development of society.

Also, while strictly observing laws and regulations, local agreements and industrial codes, we will commit ourselves to contributing to society and local communities, voluntary ongoing improvement and the prevention of pollution.

- Green Products - Design and R&D of environmentally friendly Subaru brand products
- Clean Plants - Reduction of environmental burden in the production process
- Clean Offices - Reduction of environmental burden through our business operations
- Green Logistics - Reduction of environmental burden in the distribution of products
- Clean Dealers - Support to dealerships in their environmental preservation activities
- Upgrading of Management - Contribution to the society, information disclosure and stepped up environmental activities by the whole Subaru Group

Summary of the 5th Voluntary Plan for the Environment (FY2013 to FY2017)

FHI has established the 5th Voluntary Plan for the Environment for the period FY2013 to FY2017. Based on our Environmental Policy, we have set even higher environmental protection targets while adding new environmental measures to ensure compliance with laws and regulations and to foster cooperation on environmental issues within the automobile industry. Based on this plan, we will contribute to society through our products, striving always to produce even greener products at green plants and offices and delivering them to customers via green logistics and dealers.

Our entire Group shares this plan and works together to ameliorate and eliminate environmental problems on a continuous basis. Our environmental initiatives introduced here are categorized into four groups: global warming countermeasures, resource recycling, pollution prevention and reduction of hazardous chemical usage, and environmental management.

The 5th Voluntary Plan for the Environment

Global Warming Countermeasures



Launched hybrid cars in the market in 2013



Improved fuel economy by 30% compared to previous models



Introduced horizontally-opposed direct injection turbo engines

Made horizontally-opposed diesel engines compliant with Euro 6

Fully conformed fuel economy and greenhouse gas standards worldwide

Implemented CO₂ emissions reduction initiatives in domestic and overseas plants

Promoted Eco Driving Assist Devices

Resource Recycling



Continued collection of used bumpers



Maintained zero emission from production sites in Japan and overseas

Designed new vehicles to be highly recyclable, aiming for 95% recycling rate by 2015

Pollution Prevention and Reduction of Hazardous Chemical Usage



Added models achieving emission levels 75% lower than 2005 gasoline standards



Developed technologies to enhance fuel economy, improve and reduce emissions, and reduce noise

Complied with laws and regulations in each region (e.g. EU directives)

Reduced VOCs and substances on the PRTR

Continued initiatives to reduce to zero environmental accidents or claims that exceed legal standards in each country

Environmental Management



Expanded development and implementation of advanced safe driving assist systems (e.g., EyeSight)



Promoted Group-wide ISO 14001 certification, including affiliates

Publicly disclosed wide range of environmental information



Supported maintenance of Eco Action 21 certification by domestic dealers

Publicly disclosed Life Cycle Assessment (LCA) data



Implemented greening initiatives that respected biodiversity



Expanded implementation of Supplier CSR Guidelines to business partners of the Aerospace and Industrial Products Companies

The 5th Voluntary Plan for the Environment (FY2013 to FY2017)

 [1. Global Warming Countermeasures](#) [PDF]

 [2. Resource Recycling](#) [PDF]

 [3. Pollution Prevention and Reduction of Hazardous Chemical Usage](#) [PDF]

 [4. Environmental Management](#) [PDF]



Environmental Management

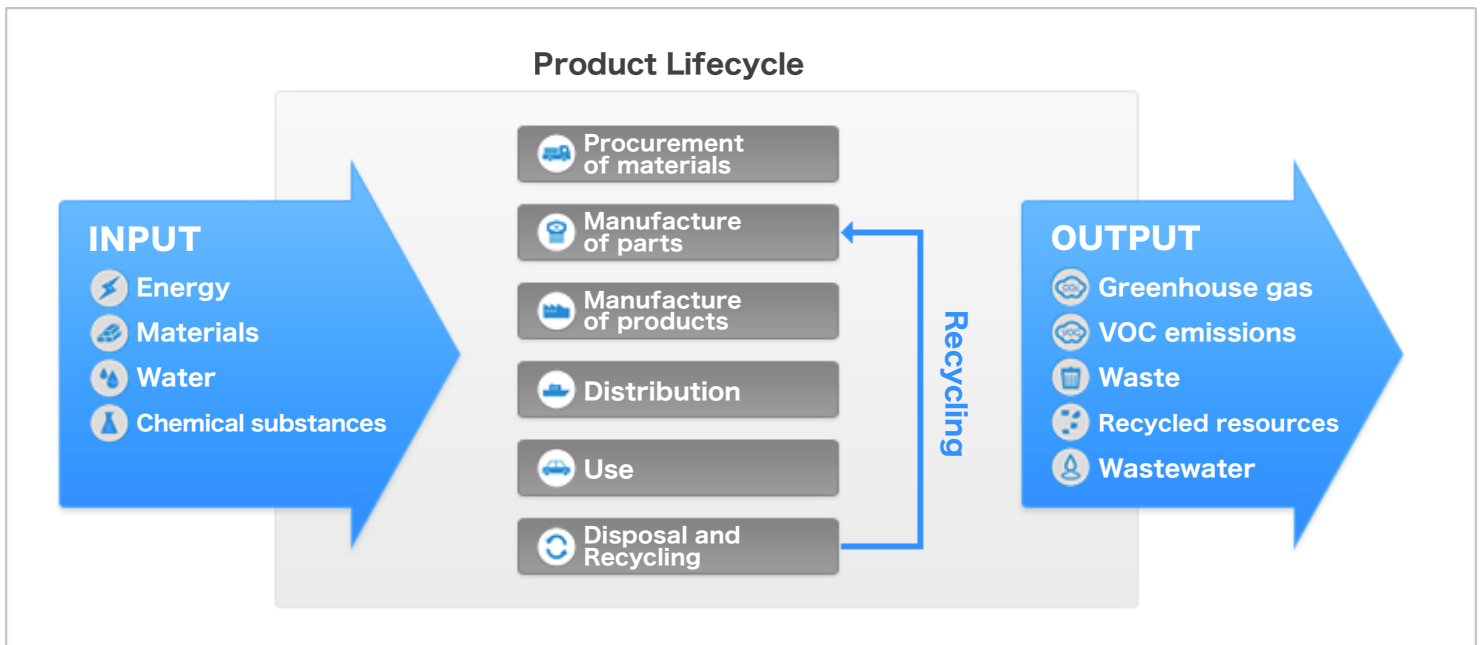
Interaction of Global Environment and Business Activities

The Fuji Heavy Industries Ltd. (FHI) Group recognizes environmental conservation as one of the most important issues that we face, and promotes environmental management by the Group as a whole.

Our products have an impact on the environment throughout their life cycle stages, including the procurement of materials, manufacture, use, and disposal, because of the use of resources such as energy and materials and because of the emission of greenhouse gases and the generation of waste.

In order to reduce the life cycle environmental impact of our products, we are implementing environmental measures in all stages of our business activities across the supply chain including R&D design, procurement, production, transportation, sales, and disposal.

Environmental Impact on Business Activities



Creation of a Low-carbon Society

The FHI Group endeavors to promote measures for controlling CO₂ emissions across the value chain.

We believe that we can make a contribution to the creation of a low-carbon society through the development and launch of low-emission and eco-friendly vehicles, improvements in the fuel economy of general-purpose engines, and the reduction of aircraft weight by the use of the composite material technology.

The FHI Group as a whole strives to prevent global warming by improving fuel economy, saving energy and reducing CO₂ emissions in its manufacturing activities, and improving transportation efficiency in its logistic activities.

- Automotive Business: R&D and launching of fuel efficient vehicles and eco-cars
- Industrial Products Company: Improvement of fuel economy of general-purpose engines
- Aerospace Company: Weight saving through the use of composite material technology
- All Divisions: Proactive involvement in saving energy and controlling CO₂ emissions

Environmental Risk Management

We are managing and reducing the environmental risks posed by our business activities.

For example, we have set out environmental criteria for warehouses storing hazardous materials, painting-related facilities, and wastewater treatment facilities to reduce the risks to the environment posed by these sites, such as leaks.

In FY2013, we added paint dregs recovery equipment to our painting pits for odor control, installed noise insulation for baler presses and soundproof sheet on the perimeters of our plant sites, among other measures.



Paint dregs recovery equipment



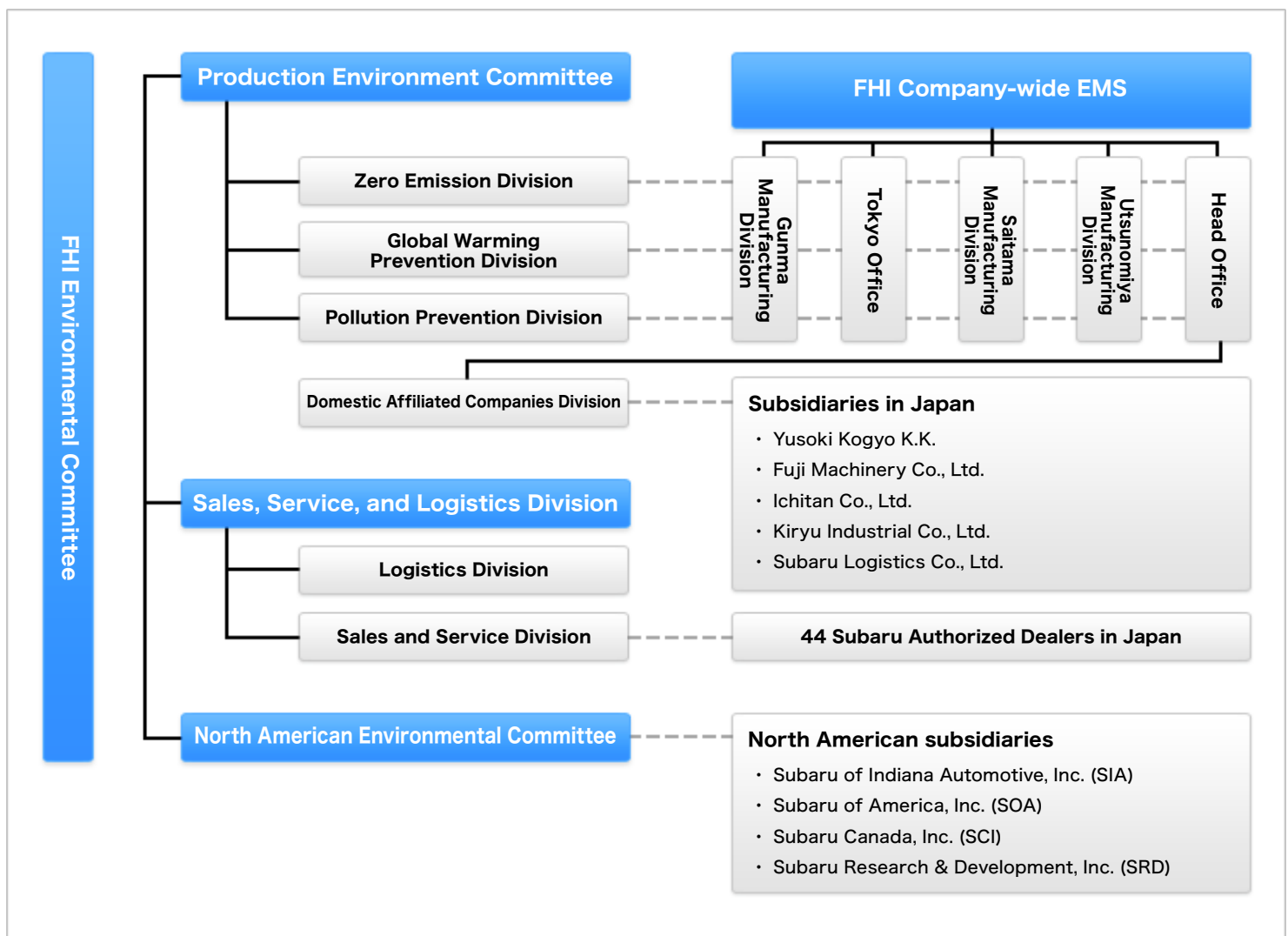
Baler press noise insulation

Organization

Established to implement the Environmental Policy and Voluntary Plan, FHI's environmental management organization comprises two main entities that cross corporate divisions: the Company-wide Environmental Management System (EMS) and the Environmental Committee.

Serving as the head of the Company-wide EMS and the chairperson of the Environmental Committee, the director responsible for environmental issues conducts environmental reviews twice a year. We proactively implement environmental protection activities, comprehensively managing our progress and continuously revising the direction of future efforts.

FHI Group Environmental Management Organization (as of June 2013)



Establishing the Environmental Management System

We are keen to build a Group-wide environmental management structure. An EMS has been established and external certifications have been acquired across business sites, business partners, domestic and overseas consolidated manufacturing companies as well as Subaru dealerships at home and abroad.

In March 2011, all 44 domestic dealers and their 477 outlets obtained Eco Action 21 (EA21) certification. This was the first achievement in Japan for a manufacturer-led dealership.

Further, in May 2012, Subaru of Indiana Automotive, Inc. (SIA), our manufacturing plant in North America, became the first U.S. car manufacturing plant to receive ISO 50001, an international certification for Energy Management Systems (EnMS). Additionally, in March 2013, Subaru Logistics Co., Ltd., received ISO14001 certification.

Besides these achievements, through global business activities as the FHI Group, we continue to promote Green Procurement in the supply chain, with an integrated environmental management system covering nine company offices, and promote the required reduction of environmentally hazardous substances.

Establishing an EMS/EnMS of the FHI Group

Categories	Manufacturing Division/Office				Dealership	
	FHI	Suppliers	Domestic Affiliated Companies	Overseas Affiliated Company	Domestic Dealerships	Overseas Dealerships
Divisions	Integrated EMS Gunma Manufacturing Division Tokyo Office Utsunomiya Manufacturing Division Handa Plant Handa West Plant Head Office Yusoki Kogyo K.K. F.A.S. Co., Ltd.	Green procurement suppliers Material suppliers	Fuji Machinery Co., Ltd. Kiryu Industrial Co., Ltd. Ichitan Co., Ltd. Yusoki Kogyo K.K. Subaru Logistics Co., Ltd. Total: 5	SIA (Production)	All domestic Subaru dealerships Total: 44	SOA, SCI Total: 2
Acquired EMS/EnMS	ISO14001	ISO14001, Eco Action 21, or self-assessment	ISO14001	ISO14001/ISO50001	Eco Action 21	ISO14001

Approaches to Biodiversity

Based on our environmental policy, FHI protects biodiversity making reference to the “Guidelines for Private Sector Engagement in Biodiversity” and the “Declaration of Biodiversity – Guide to Action Policy by Keidanren, Federation of Economic Organizations.”

As part of our biodiversity initiatives, we conducted a survey of ecosystems in greenbelt in the vicinity of the Oizumi Plant of the Gunma Manufacturing Division. Survey results confirmed the presence of more than 50 species of plants in the areas, including evergreen broad-leaved trees. In addition, it was confirmed that predators occupying a comparatively high position in the ecosystem were to be found among the animals.

From the current survey, we observed factors enabling various life-forms to inhabit the greenbelt neighboring the Oizumi Plant, and came to appreciate that the area provided an oasis for many plants and animals.

Besides this, in its continued cultivation of azaleas, the Subaru Community Exchange Association laid down the “Subaru Azalea Avenue” in Kanayama, Ota City, where local residents cooperate with grass mowing.

We are also involved in biodiversity conservation overseas.

For instance, at the Subaru of Indiana Automotive, Inc. (SIA) manufacturing plant in the U.S., they are developing the “Prairie Grass Project”.

The wild prairies of the Midwest are becoming increasingly denuded year on year.

The grass can sequester more carbon dioxide than trees to help offset CO₂, and provides the optimum environment for habitation by native birds. By growing the prairie including wildflowers, SIA is helping the generic diversity of the Indiana specific wild plants and choking out invasive plants.

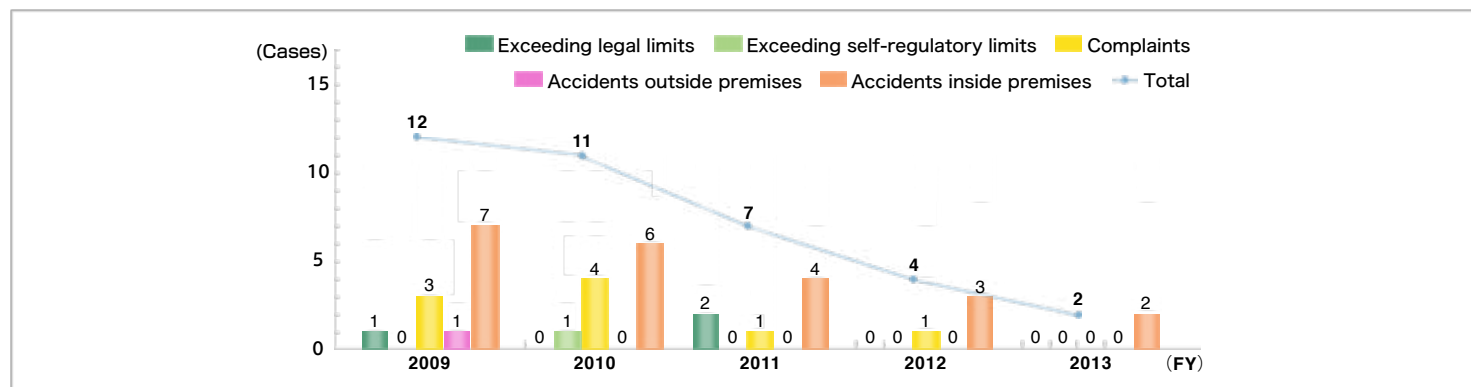
We will continue with activities aimed at harmony with the natural environment of various regions, as we promote global biodiversity conservation initiatives.



Compliance with Environmental Laws

We strive to comply with environmental laws and regulations, and reduce environment-related accidents and complaints to zero. The chart below shows the status of current five years.

Transition in the Number of Environmental Incidents, Accidents, and Complaints



◎ Status of Compliance with Environmental Laws in FY2013

We have set our voluntary standards, which are 20% stricter than the environmental standards set by law. We are committed to achieving “zero non-compliance” with both the legal and voluntary standards and achieved this target in FY2013.

◎ Environmental Complaints Received in FY2013

Record of complaints was zero.

◎ Environment-related Accidents in FY2013

We are striving to achieve the goal of zero accidents, both on and off premises. Although there were no incidents of off-premises leakages, two incidents were recorded on-premises. We accordingly put measures in place to prevent recurrence of these incidents.

Name	Number of Cases	Details	Main Corrective Measures
Gunma Manufacturing Division	2 (water pollution)	May 2012: Waste fluid was flowing out of the waste fluid tank. The leakage was contained on the premises.	Work procedure was revised and equipment was improved.
		November 2012: Fluid was flowing out of the coating surface treatment tank. The leakage was contained on the premises.	Work procedure was revised and equipment was improved.

Environmental Accounting (FHI Group's Results in FY2013)

Index and Calculation Method of Environmental Cost and Economic Effect

With reference to the guidelines of the Ministry of the Environment, FHI formulated its own guidelines according to its environmental conservation activity organization, based on which the environmental cost and economic effects are calculated. The same method is applied to FHI Group companies.

Method Used for Calculating the Environmental Cost and the Capital Expenditures

Capital expenditures (amount invested ≥ 25 million yen) that have been introduced for both environmental and other purposes, plus related costs (maintenance cost etc.), and finally labor cost are calculated on differential or pro-rata basis. For example, investment amount and environmental cost for energy saving at one manufacturing facility is calculated as follows:

$$\text{Capital Expenditures, Environmental Cost} = K \times (\text{Capital Expenditures, Maintenance Cost, etc.})$$

This “K” is an environmental impact factor that is calculated by the following scheme:

$$K = (\text{Total amount invested} - \text{Amount invested without energy saving purposes}) / \text{Total amount invested}$$

Regarding small facilities whose investment amount is less than 25 million yen, and anything purchased primarily for environmental purposes, any costs related to these environmental facilities, such as investment amount and maintenance cost, are all included in the calculation. Please note that depreciation cost is not included in the environmental cost from the viewpoint of cash flows. Small expenses such as fixed assets tax and insurance costs are also extracted from the total. Environmental cost and economic effect by environmental facilities are only recorded for three years starting from the second year after the facilities are put into operation.

FY2013 Calculation Result

Environmental cost came to 18.5 billion yen on a non-consolidated basis, up 0.79 billion yen (4.4%) from the previous fiscal year, while it amounted to 19.4 billion yen on a consolidated basis, up 0.87 billion yen (4.7%) year-on-year. The cost increase was mainly due to an increase in research and development (R&D) costs (increased by 0.68 billion yen on a non-consolidated basis). The ratio of environmental cost to sales, which is one of the environmental management indexes used on a consolidated basis, came to 1.02%.

Results of Environmental Cost and Trial Effect for FY2013

Item	Group	Environmental Cost (Millions of yen)						Environmental Investment (Millions of yen)					
		Non-consolidated			Consolidated			Non-consolidated			Consolidated		
		FY 2013	FY 2012	FY 2011	FY 2013	FY 2012	FY 2011	FY 2013	FY 2012	FY 2011	FY 2013	FY 2012	FY 2011
(1) Cost in the business area	1. Pollution prevention cost	395	306	310	543	447	462	167	116	102	215	155	103
	2. Global environmental conservation cost	32	53	41	48	84	71	360	195	90	376	235	99
	3. Resource recycling cost	515	466	447	900	777	772	0	0	0	0	1	0
(2) Upstream and downstream costs	Cost for recycling of used products/ Cost for difference from typical goods and services procurement	163	158	140	163	158	140	-	-	-	-	-	-
(3) Administration cost	Cost for monitoring environmental impact/ Cost for the implementation and maintenance of an EMS/ Cost for environmental training of employees	95	92	84	151	127	178	-	-	-	-	-	-
(4) R&D cost	R&D cost to develop products that contribute to environmental conservation	17,149	16,474	15,179	17,426	16,749	15,421	1,763	788	814	1,764	792	821
(5) Social activity cost	Cost related to donation or financial support of environmental groups	91	106	107	93	109	109	-	-	-	-	-	-
(6) Environmental remediation cost	Cost related to environmental conservation measures for the aquatic, ground, and geologic environments	98	94	80	99	99	90	6	0	1	6	0	1
(7) Other cost		0	0	0	0	0	0	-	-	-	-	-	-
Grand Total		18,537	17,748	16,388	19,423	18,550	17,243	2,295	1,099	1,007	2,362	1,183	1,024

Note: Due to rounding, the sum may not exactly match the corresponding total.

Calculation of Economic Effect for FY2013

Item	Economic effect (Millions of yen)	
	Non-consolidated	Consolidated
Reduction in energy cost due to energy conservation	240	246
Proceeds from the recycling of metals, waste liquids and cardboard boxes as valuable resources	1,256	2,320
Reduction in use of raw materials due to recycling (reduced packaging materials cost)	5.98	5.98

Companies included in the consolidated calculation

Five subsidiaries in Japan : Yusoki Kogyo K.K., Fuji Machinery Co., Ltd., Ichitan Co., Ltd., Kiryu Industrial Co., Ltd., and Subaru Logistics Co., Ltd.

Four subsidiaries outside Japan : SIA, SOA, SRD and SCI



Environmentally friendly Automobiles

Fuel Economy

Approaches and Strategy to Fuel Economy

An automobile releases CO₂ emissions as its fuel is consumed. Automobile manufacturers have made great efforts on saving the volume of fuel used, but now it is also considered as their important task to reduce CO₂ emissions and contribute to the global warming prevention. The idea for dealing with environmental issues is shifting to the total volume control.

Compared with other automobile manufacturers, Subaru is unique in terms of offering carefully selected models and producing cars that embody driving safety and pleasure by combining a horizontally-opposed engine, symmetrical AWD, and integrated safety performance. In today's environmental circumstances, we hope to provide customers with a range of products that they truly want by making the best use of our uniqueness.

In Japan, we are sequentially releasing models in the entire lineup to surpass the 2015 Fuel Economy Standards. Since introducing the new generation Boxer engine, we have deployed technologies to improve fuel economy such as the lightweight, high-efficiency Lineartronic CVT, low drag coefficient car bodies with enhanced aerodynamics and an idling stop system in the Legacy, Impreza and Forester. In addition, the Legacy and Forester adopt the next-generation Boxer direct injection turbo engine and high-torque-ready Lineartronic CVT, achieving smooth, high performance as well as exceptional environmental efficiency.

In June 2013, we introduced a hybrid system that delivers dramatically improved fuel economy while letting drivers experience the unique performance.

We will continue to improve fuel economy from now on, producing innovation for the future to offer vehicles with the distinctive character and high quality customers can enjoy.

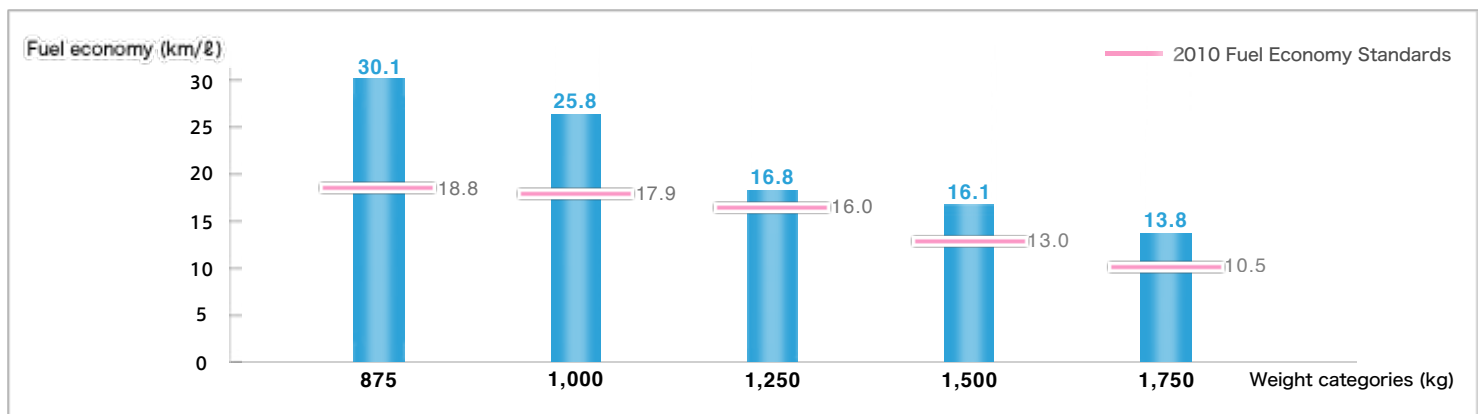
Fuel Economy Standards

Japan: Clearing the 2010 Fuel Economy Standards in All the Weight Categories

Gasoline-powered passenger cars meeting the 2010 Fuel Economy Standards accounted for about 92% of the total production, clearing the 2010 Fuel Economy Standards in all the weight categories. Gasoline-powered mini trucks met the Standards in all weight categories in FY2002. All models met the Standards in FY2003 and thereafter.

Looking towards the 2015 Fuel Economy Standards, we have already achieved standards that gain us four out of nine weight categories, while the proportion of vehicles that achieved this is 77% of the total production.

Status of Achievements for the 2010 Fuel Economy Standards



U.S. : Meeting the 2012 Model Year Corporate Average Fuel Economy (CAFE) Standards and Greenhouse Gas (GHG) Standards

We met the 2012 model year CAFE standards for passenger vehicles and light trucks as a whole. In addition, we also met the 2012 model year standard for the newly begun GHG regulations.

By clearing fuel economy and CO₂ regulations that are becoming increasingly severe worldwide, Subaru is set to further the spread of vehicles with greater fuel economy in the global market.

Low Exhaust Emissions

Basic Concept of Low Exhaust Emissions

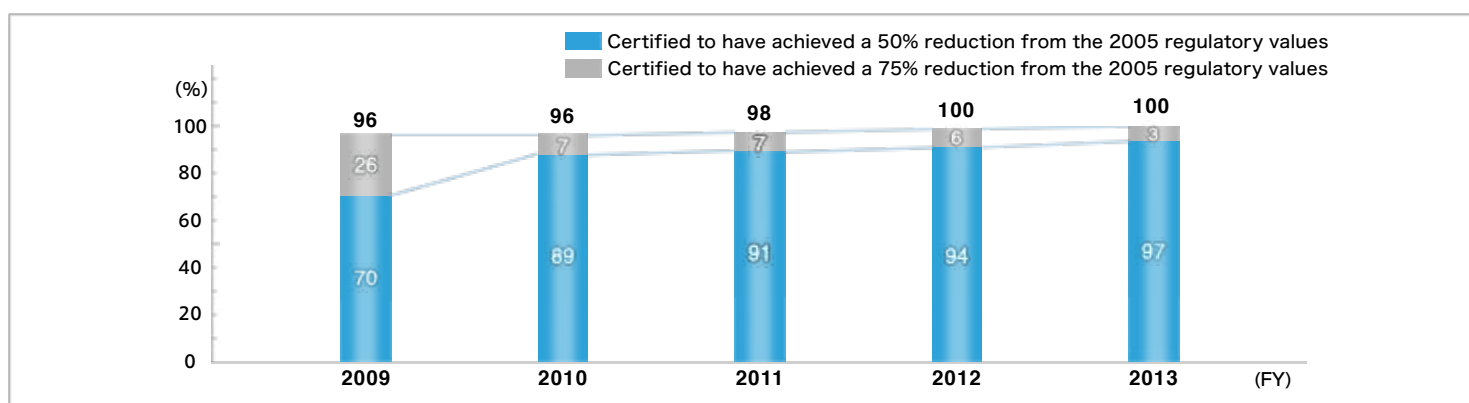
Substances such as carbon monoxide (CO), hydrocarbon (HC), nitrogen oxide (NOx), and particulate matter (PM) which are emitted from automobiles, are a cause of air pollution in metropolitan areas where there is intensive motor traffic. In order to improve the state of the air, Subaru is gradually launching low emission vehicles (certified LEV by the Ministry of Land, Infrastructure, Transport and Tourism) that meet standards stricter than the regulations.

We shall strive to conform with exhaust gas standards that are becoming increasingly strict worldwide, and sequentially introduce ever greener automobiles to the market.

Increases in the Number of Models Certified to be Low-emission Vehicles

All Subaru vehicles equipped with Natural Aspiration(N/A) engines are certified by the Japanese Ministry of Land, Infrastructure, Transport and Tourism to have achieved a 75% reduction from the regulatory values specified in the 2005 emissions standards, and such vehicles accounted for 97% of the total production quantity of Subaru gasoline-powered passenger cars. All vehicles produced by Subaru are certified low-emission vehicles (certified to have achieved a 50% reduction from the 2005 regulatory values).

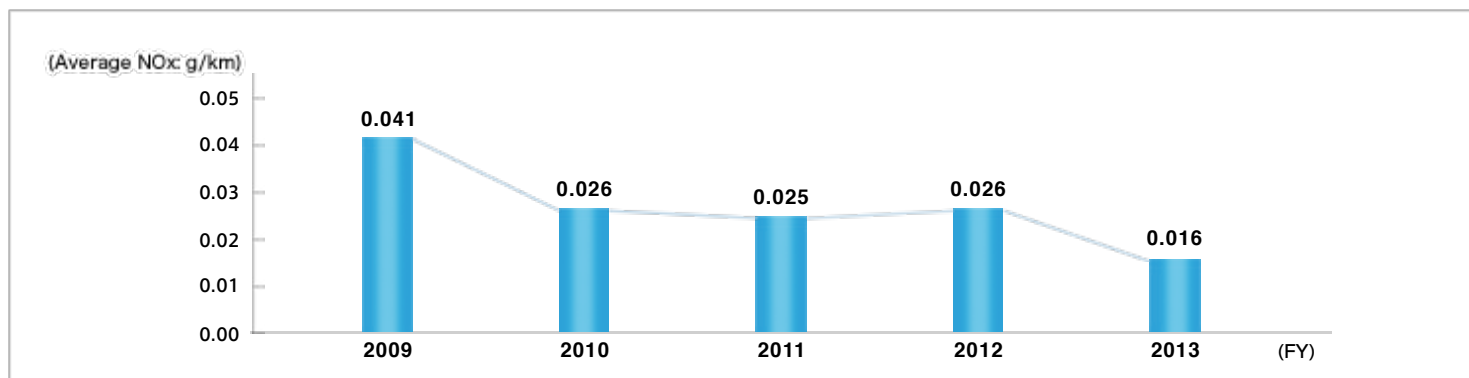
Percentage of Low-emission Gasoline-powered Passenger Cars



Year-on-year Reduction of NOx Emissions by the Release of Low-emission Vehicles

Highly concentrated NOx disturbs human health, causes acid rain and is considered to impact the environment in various other ways. The volume of NOx emissions from Subaru vehicles have been changing over years due to the release of a series of low-emission vehicles, including those meeting the government's certification, as shown in the following graph.

Average NOx Emissions of Subaru Vehicles^{*1}



*1 Calculated from the values meeting corresponding regulation (JC08CH, 10.15 + JC08C mode) at the time of shipment. In the case of models which are not applicable to the current test mode, the NOx value is calculated from the regulation value or conversion value applicable to the current test mode. The current mode means the JC08CH mode for new models and the combined mode of the 10.15 mode and the JC08C mode for existing models.

	Passenger cars		Trucks	Percentage of total
	Standard-sized cars	Mini cars	Mini cars	
Certified to have achieved a 75% reduction from the 2005 regulatory values	0	20	17	0%
Certified to have achieved a 50% reduction from the 2005 regulatory values	105,997	35,086	1,742	85%
Total	105,997	35,106	1,759	85%
Total shipment of FY2013				167,390

Noise Reduction

We are also committed to effectively reducing vehicle noise from such prime sources as tires, engines and intake and exhaust systems.

Following to the new Impreza released in 2011, we have adopted the new-generation Boxer engine and Lineartronic CVT for the new Forester released in November 2012 to achieve both high fuel economy and comfortable acceleration with the optimal engine speed, while also reducing the noise level on urban roads.

Management of Chemical Substances (Operation of the IMDS)

Since the enforcement of the Registration, Evaluation and Authorization of Chemicals (REACH) regulations, a range of chemical substances has been regulated in various countries across the world, and also the automobile industry is required to disclose information and foster management regarding the use of chemical substances in automobiles.

We are enhancing its supply chain management by using the IMDS to identify the names and amounts of chemical substances used in several ten thousands of parts that comprise its automobiles.

Through these measures we are discontinuing the use of substances of concern (lead, mercury, cadmium, hexavalent chromium, etc.), replacing regulated substances with alternatives and fostering the disclosure of REACH-related information.

Use of Clean Energy

Fossil fuels, which are mainstream fuels for automobiles, are limited resources and now the diversification of automobile fuels is required, including the use of biofuels and other renewable energy.

For all Subaru gasoline-powered vehicles, we have completed the measures to meet the requirements for E10 fuel (E3 fuel in Japan) and the requirements (on the functions and reliability) for B7 fuel for diesel-powered vehicles.

We will continue to implement measures to foster the diversification of automobile fuels toward the creation of a sustainable motorized society.

Life Cycle Assessment (LCA)

LCA is implemented to ascertain the environmental impact of one vehicle and pursue environmental impact reduction by bundling together environmental impact reduction activities over the entire vehicle life cycle (in each step from production, through shipping and use to disposal).



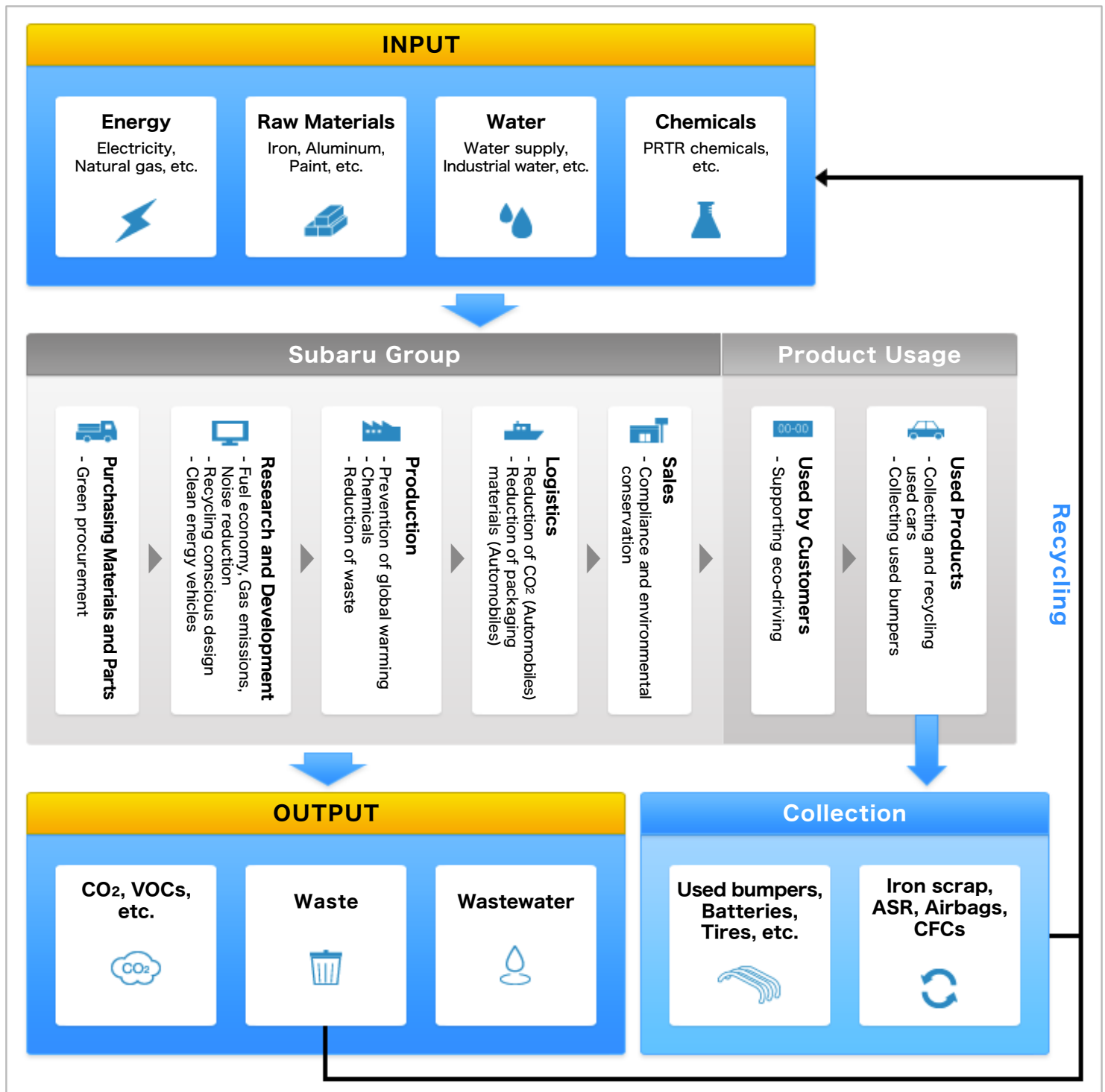
Plant and Office Initiatives

Main Input Resources and Emission Matters in Automobile Manufacturing

We are a transportation manufacturer focusing on automobiles. Automobiles, a convenient and comfortable form of transportation, are now indispensable for our life. On the other hand, automobiles draw on limited global resources and emit CO₂, which causes global warming. We strive to realize an affluent automobile society and must work even harder for a better future.

Subaru accepts the task of working towards the fusion of a global environmental response with the benefits of automobiles by considering environmental impacts and reducing the environmental burden throughout the entire life cycle of automobiles, including development, production, use, disposal, and recycling.

Overall Environmental Burden for the Automotive Business



Approaches to Preventing Global Warming

We have installed a total of six natural gas cogeneration systems in the Utsunomiya and Gunma Manufacturing Divisions, and Subaru General Training Center. These systems not only generate power but also utilize exhaust heat for air conditioning and other purposes. In July 2012 we installed an additional cogeneration system in the Gunma Manufacturing Division.

As well as these cogeneration systems, we have been implementing various means of CO₂ emissions reduction and energy saving, such as reducing standby electricity and making energy intensive processes more efficient.

Although the total emissions volume varies from year to year due to changes in production volume, a total of about 224 thousand tons of CO₂ was emitted in FY2013.

This was 18% lower than the level of FY1991.

The FY2013 reduction in CO₂ emission volume recited in the 5th Voluntary Plan for the Environment revealed a 29% reduction compared with FY2007.

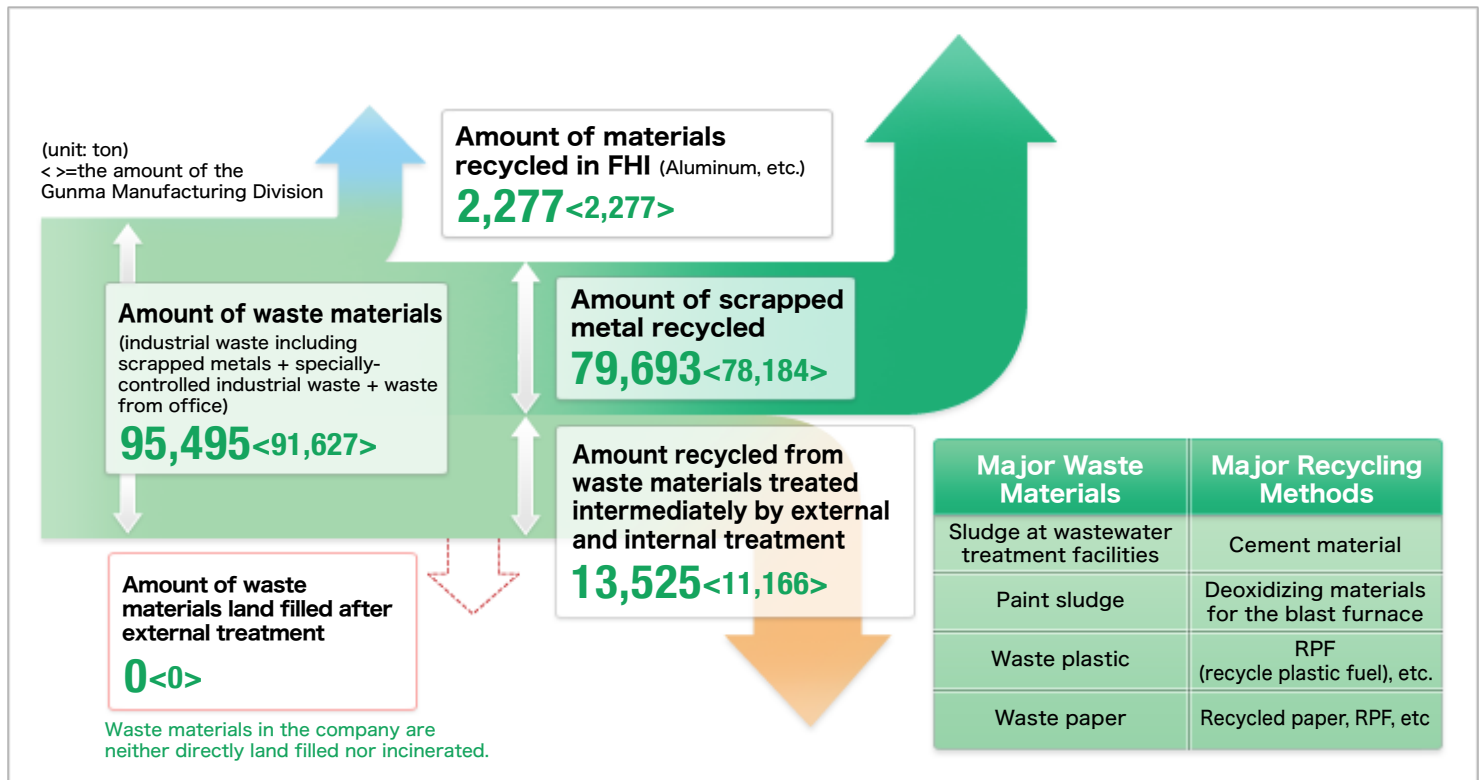


Gunma Manufacturing Division
The Main Plant's cogeneration system

Waste Reduction

All manufacturing plants have maintained zero emission for waste materials since FY2005. Outline of waste materials generated and treated in FY2013 is as follows.

Outline of Waste Materials Generated and Treated at All Manufacturing Plants and Automobile Manufacturing (Gunma Manufacturing Division) in FY2013



Reducing VOC Emissions

The amount of volatile organic compounds (VOCs) emitted from the automobile coating process was 49.5 grams per square meter in FY2013, down 45.8% from the FY2001 level. This was due to a decrease in the use of cleaning thinner and increase in the recovery of used thinner, as well as partial use of a water-based coating.

Preventing Soil and Underground Water Pollution

FHI has voluntarily undertaken soil and groundwater surveys at our facilities since 1998, and implemented purification measures and groundwater monitoring as required.

Since the Soil Contamination Countermeasures Act came into effect in 2003, we have implemented notifications and examinations in accordance with the law.

Status of Storage and Disposal of Equipment Containing PCB

We store polychlorinated biphenyl (PCB) waste material.

Toward processing, we stored PCB pollutants, etc., in specified containers and conducted transportation packing registration.



Status of work on storage in specified containers

Making Office Lighting More Efficient

We strive to save energy, not only at our manufacturing sites but also in our offices.

In FY2013, in an effort to save energy on office lighting, we renewed the existing 1,578 lighting fixtures at our Tokyo Office, Technology Buildings 1 and 2, and Omiya Subaru Building with high-efficiency fixtures incorporating reflectors and LED lights, thereby cutting power consumption by approximately 220 thousand kwh per year.

We will continue to make efforts to save energy with this kind of lighting as well as with air conditioning and other office equipment.

Approaches to Logistics

Reducing Environmental Burden by the Completed Vehicles Transportation

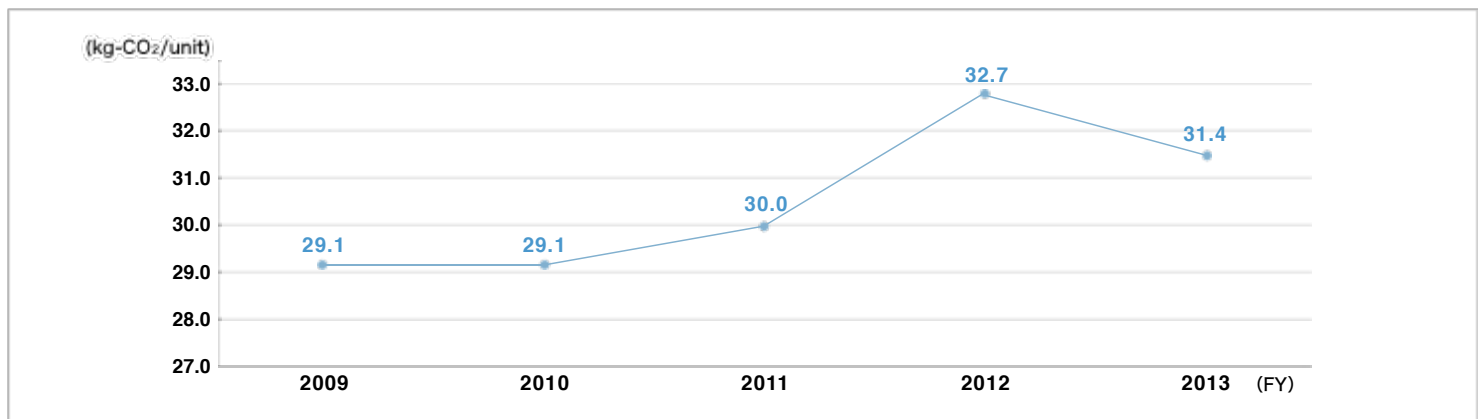
We have contributed to reducing environmental burden caused during the transportation of completed vehicles by improving transportation efficiency through such means as setting optimum transportation routes, promoting modal shifts and improving loading efficiency.

In FY2013, by promoting the cooperative transport of completed vehicles with other companies in the same industry, the total of consigned-to and consigned-from vehicles was 19,216 units, approximately 6% increase compare to the previous year.

Further, in FY2013, manufacturing of our mini cars was completely switched to OEM, and the shipping volume from Western Japan increased. For this reason, we strove to reduce our CO₂ emissions and improve loading efficiency by revising the transportation route and shorten the transportation distance.



CO₂ Emissions per Unit during Transportation



Reuse of Packaging Materials

Subaru Logistics Co., Ltd., which handles packing designs for knockdown parts, has been involved in activities to reduce environmental burden, primarily focusing on the reuse of packaging materials.

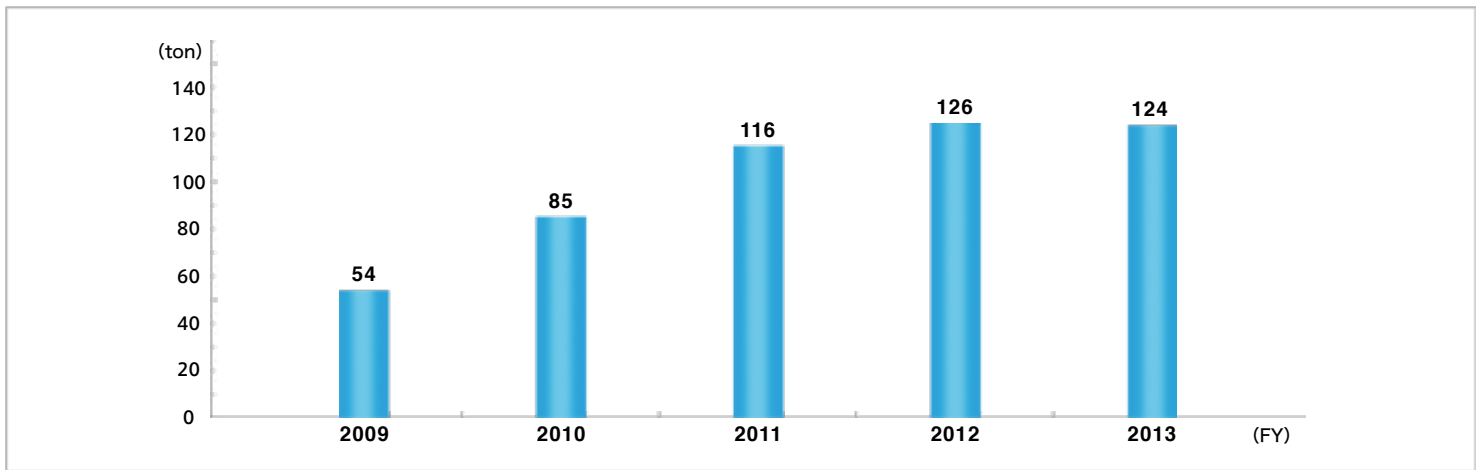
They started a project in the latter half of FY2006 to reuse packing materials of polystyrene foam for engine parts. The 1st stage started in March 2006, followed by the 2nd from December 2007, the 3rd from March 2009, 4th from June 2011, and 5th from July 2012 throughout which the reuse of the foamed materials for the rear differential gears was stepped up.

We will continue working to extend the reuse of packing materials for reduction of environmental burden.

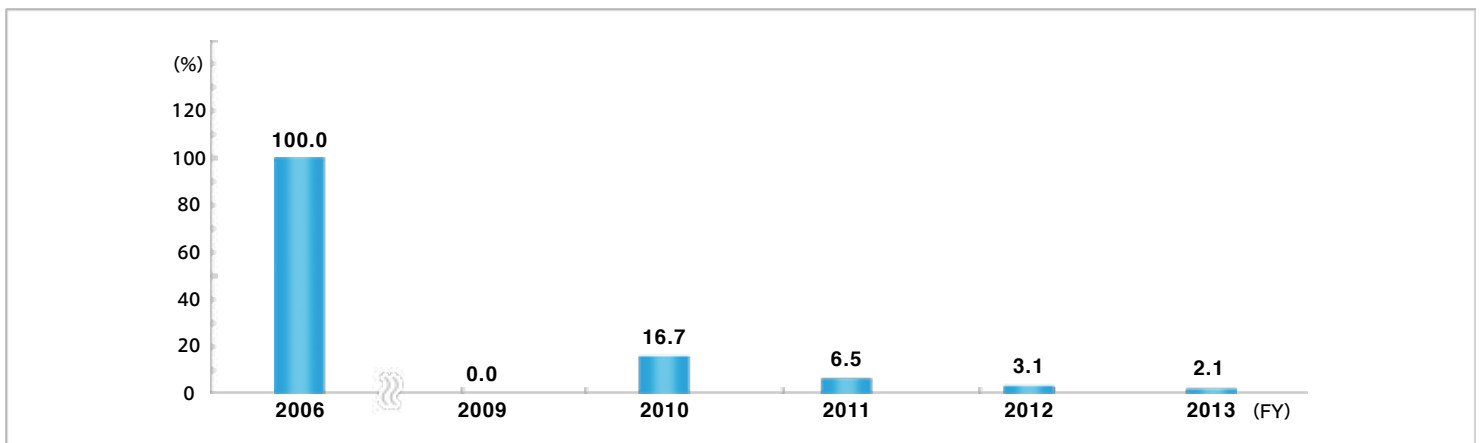


Reuse inspection and storage conditions of foam material

Amount of Polystyrene Foam Packaging Materials for Reuse



Amount of Newly Purchased Polystyrene Foam Packaging Materials





Approaches to Sales

All Domestic Dealers Obtain “Eco Action 21” Certification

In order to reinforce the environmental conservation efforts by Subaru domestic dealers, we have actively encouraged them, as well as providing support, to implement the “Eco Action 21” environmental management system created by the Ministry of the Environment based on ISO 14001.

The dealers under TOKYO SUBARU Inc. first received certification in January 2009, followed by all the other dealers in Japan (44 companies) by March 2011.

We will continue to support dealers with their voluntary environmental conservation activities.

Zero Emission by Dealers

Since April 2012, in support of environmental protection, FHI and Subaru dealers have been reinforcing appropriate treatment for waste generated in our business activities.

We reviewed conventional treatment methods and with the collaboration and cooperation of each company and industry body involved in recycling, expanded zero emission activities and aimed at domestic resource recycling. Contents of these activities are wide ranging, and include used lead-acid batteries, waste oil, used tires and metal.

We believe that by promoting zero emission activities at dealers closest to stakeholders, we are enabling the advancement of environmental conservation that will become more familiar.

By promoting corporate responsibility, effective use of resources and appropriate treatment on a nationwide scale, we believe it possible to provide a safe and secure environment in addition to providing products.

Use of LEDs for Store Lighting at Dealers

As one environmental consideration measure, we have begun to make efforts towards the introduction of LED lighting at our dealer premises, too.

We are promoting the changeover to LED lighting at any time. During building reconstruction and refurbishing, besides the fluorescent lamps used as base lighting in showrooms and maintenance shops, metal-halide lighting such as spot lamps, mercury lamps and other lighting for the exterior are switched to LED.

In addition, while providing showroom space where customers can comfortably spend time, in order to further improve the efficiency of lighting and air conditioning due to these LEDs, we also provide criteria such as showroom ceiling height and suitable lighting deployment plans.

Implementing these measures has resulted in a 40 to 50% reduction in lighting power consumption. We also standardized the measures in “SUBARU Store Guidance,” and are expanding their use at dealers nationwide.



Automobile Recycling

Promotion of Recycling Conscious Design

In order to utilize limited resources, we promote recycling conscious design in manufacturing automobiles.

Advances in Wiring Harness Dismantling

Wiring harnesses use large amount of copper. If the harnesses can be removed from used cars before they are shredded, the collection and separation of iron and copper will be enhanced and their value as resources will increase.

We are conducting studies for a harness layout and structure to enable efficient retrieval in a shorter time. The results of these studies are benefitting the 5th Legacy (released in Japan in 2009) and following models.



Material Identification Improvement

It is most important that the materials composing each part can be recognized easily when we recycle. We first started to identify the types of materials used in plastic parts in 1973—even before guidelines for the industry were established.

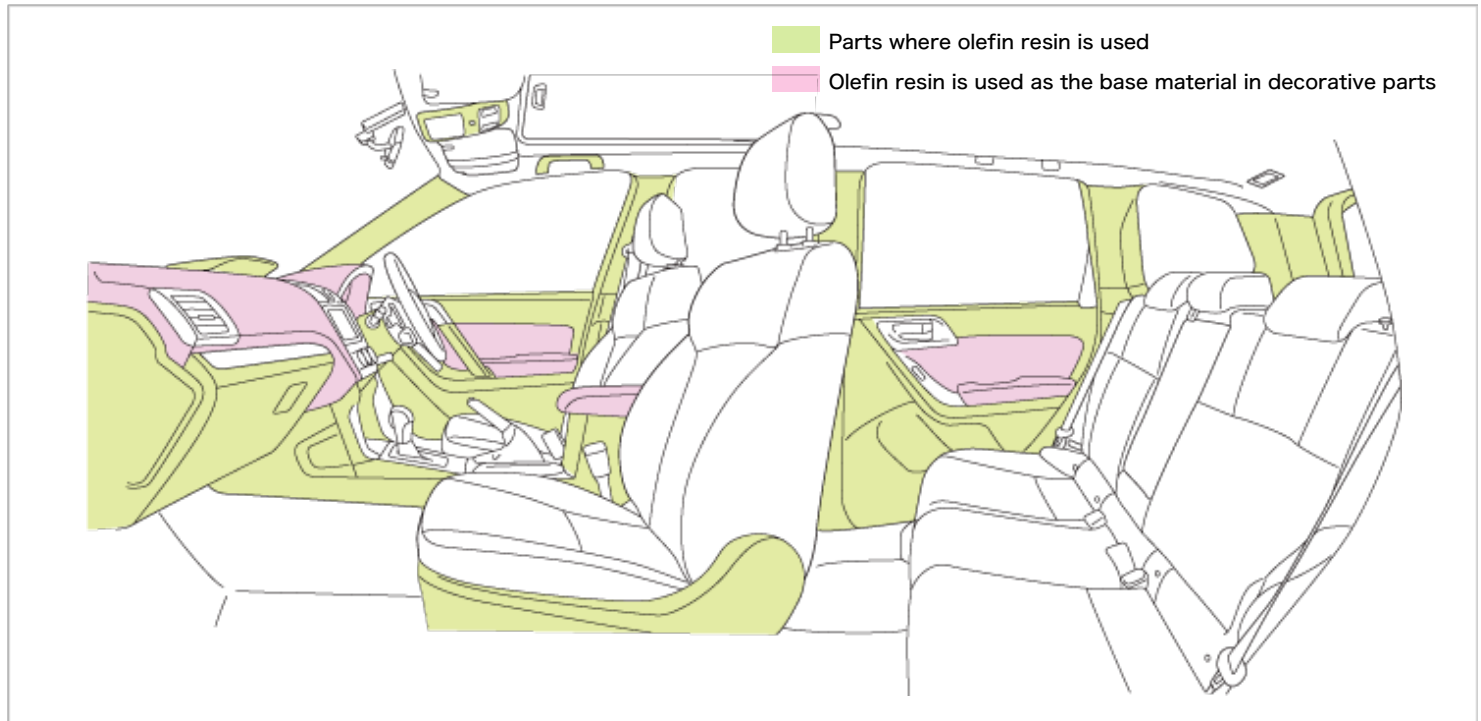
Traditionally, material identification labels were placed on hard-to-see inner surfaces, so the material could not be checked unless disassembled. Now, the identification location has been changed so that parts can be sorted without disassembly before recycling for more efficient operations.

From 2001, we changed the bumper material identification positions on all models, including the Legacy, Impreza, Forester, Exiga, and the BRZ.



Easily Recycled Materials

We use olefin resin, which is extremely easy to recycle, as the resin material for the interiors and exteriors of most FMC and new models. We will continue to expand usage of recyclable materials.



Reduction of Employment of Substances for Environmental Concern

We are actively working on reducing the environmental impact from End-of-Life Vehicles (ELV).

Reduction Target and JAMA*s Voluntary Action Program

Substance	Target (period achieved)	Details of Reduction Efforts
Lead	Since Jan. 2006	Reduce the amount per vehicle produced to less than 1/10 of 1996 level
Mercury	Since Jan. 2005	Use prohibited, except a few applications (e.g., minute amounts in combination panels, discharge headlights, and liquid crystal panels of GPS systems)
Cadmium	Since Jan. 2007	Use prohibited
Cadmium Chromium (VI)	Since Jan. 2008	Use prohibited

*JAMA: Japan Automobile Manufacturers Association, Inc.

Reducing VOCs in Vehicle Interiors

In order to reduce the use of VOCs, such as formaldehyde and toluene, which can cause nose and throat irritation, we are revising the substances contained in the components and adhesive agents used in vehicle interiors.

In the Legacy, Impreza, Forester, Exiga, and BRZ, we achieved the voluntary target by JAMA* by reducing the concentrations of the 13 substances defined by the Ministry of Health, Labor and Welfare. And, in the future, we will continue our efforts to reduce the levels of VOCs and such substances to make the environment in vehicle interiors ever more comfortable.

* Voluntary target by JAMA: To reduce interior concentrations of the 13 substances identified by the Ministry of Health, Labor and Welfare to levels equivalent to or lower than the figures stipulated in the guidelines for new models (produced and sold in Japan in 2007 and after) under the Voluntary Approach in Reducing Cabin VOC Concentration Levels initiated by JAMA.

Processing of End-of-Life Vehicles (ELVs)

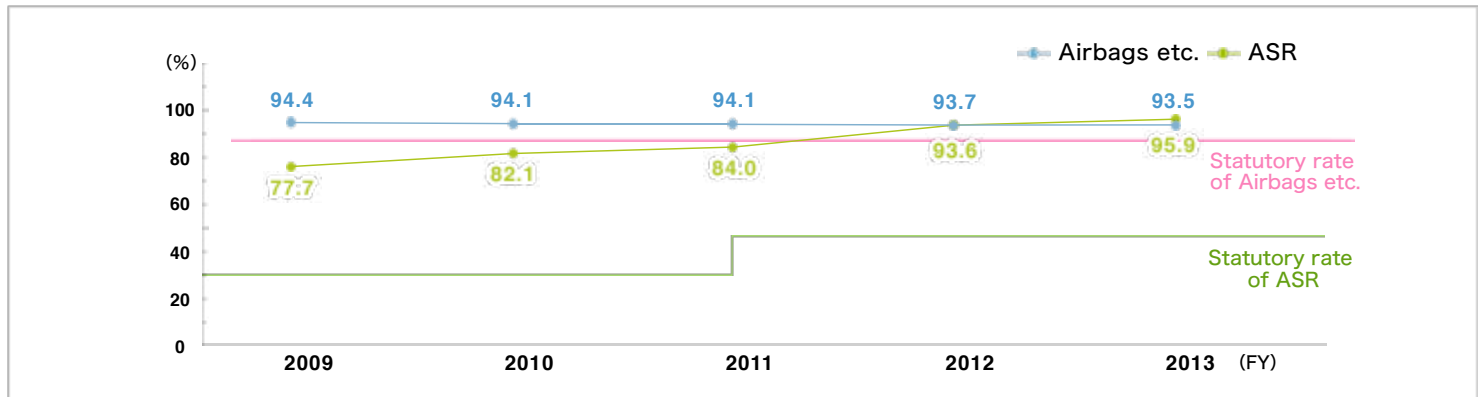
The End-of-Life Vehicle Recycling Law (Automobile Recycling Law) enforced in 2005 obligates automobile manufacturers to fully remove and appropriately treat “Automotive Shredder Residue (ASR),” “Chlorofluorocarbons (CFCs),” and “Airbags.”

The ASR recycling rate for FY2013 was 95.9%, exceeding the legal standard of 50%. We continue to update our environmental record, combining this achievement of zero landfill which was attained in May 2011.

In addition, we attained an airbag recycling rate of 93.5%, again exceeding the legal standard, which is set at 85%.

Also, the entire amount of recovered CFCs has been suitably treated.

Statutory Rate and Recycling Rate of ASR and Airbags etc.





Environmental Communication

Environmental Communication

We value the relations with all our stakeholders, and to this end have set up communication channels. We widely disseminate environmental information in each medium, and through such means as CSR reports and the website, strive to be a reliable corporation that brings peace of mind to our stakeholders. In addition, we disclose environmental information to communities neighboring our business sites, producing a “Site Report” for each of our plants.

In the Subaru Visitor Center located at the Gunma Manufacturing Division, our environmental efforts are explained in an exhibition corner called the Recycle Lab. The Utsunomiya and Saitama Manufacturing Divisions also have areas to demonstrate their waste recycling efforts.



Environment Website



Environmental information per model



Recycle Lab

Environmental Communication for Children

At the Gunma Manufacturing Division, we continue to welcome study visits to the plant as part of elementary school education. In FY2013, we had around 80 thousand children visit the site.

As a communication tool for children, we distribute a booklet which introduces the automobile manufacturing process and our environmental initiatives and is useful in the education of schoolchildren during their visits to the plant.

Available on our website, the “Factory Story” has contents describe the manufacturing processes involved at an automobile plant and explain the various mechanisms of the automobile. Additionally, in March 2013, we launched a new educational site for children known as “SUBARU KIDS.” Designed for children, the site explains in simple terms, our environmental initiatives and our involvement in traffic safety, and makes learning enjoyable for both children and their parents.

We plan to further enhance communication with children in the future.



SUBARU KIDS



FACTORY STORY

Environmental Education

We provide employees with a range of environmental education programs tailored to their needs, deeming it one of our social responsibilities to conduct activities aimed at resolving environmental problems.

In April 2012, we provided the 320 new employees of the Automotive business unit with education on environmental protection. An employee in charge of environmental issues served as the lecturer for the course, and briefed attendants on global environmental problems, our environmental policy and environmental protection activities, and the importance of making individual efforts by introducing specific examples to participants.

We also held a seminar to develop ISO14001 internal auditors to enhance the internal auditing system for the ISO14001 environmental management system and to foster environmental protection activities conducted at our workplaces. In the two-day seminar held with an invited external lecturer, participants received education for internal auditors.

In January 2013, approximately 700 employees at our Head Office received environmental conservation education using an E-learning system, and took tests to assess their level of understanding.

We believe it is important for employees to be fully aware of environmental problems and environmental efficiency on a daily basis, and to exercise this awareness in business and environmental activities. To this end, we continue to promote environmental education and enlightenment for employees.



ISO14001 internal auditor training seminar materials



E-Learning

Corporate Studies for Educators

From August 23 through 24, we participated in a training program, “Private Sector Studies for Teachers,” held by Keizai Koho Center (Japan Institute for Social and Economic Affairs), which accepted teaching staff from elementary schools, junior high schools, high schools and vocational schools.

The training program enabled teachers to deepen their understanding of approaches to corporate activities and environmental initiatives, with that aim of putting the training experience into practice in their respective educational facilities and in the management of schools.

The training included visiting our automobile manufacturing plant at the Gunma Manufacturing Division, taking test drives on our test course, attending meetings for exchanges of opinions at a vocational training facility and other opportunities to experience matters particular to an automobile manufacturer. In addition, we provided lectures on our CSR and environmental initiatives as well as personnel training, so that teachers could enhance their understanding of the company.



Approaches to the Global Environmental Activities

Subaru Group organizes the North American Environmental Committee (NAEC), involving the four manufacturing and sales subsidiaries in North America, SIA, SOA, SCI and SRD which have a particularly high environmental impact among our overseas subsidiaries. This committee shares and spreads successful cases with member companies to promote efficient and streamlined environmental activities.

In FY2013, the NAEC held meetings in June and November. NAEC member companies reported their environmental activities to the Committee and we also reported our environmental activities being undertaken in Japan. We are encouraging this Committee to further share the related information across the world.

Members of the NAEC companies had already acquired ISO 14001 Environmental Management System Certification by 2005.

They are working on pollution prevention and reduction of environmental burdens through educational training, on-site legal compliance programs, internal auditing, and other measures.

On May 2012, SIA received ISO 50001 Certification, becoming the first car manufacturing plant in the U.S. to achieve this internationally recognized accreditation. ISO 50001 details the requirements for energy management systems (EnMS).

SIA's accreditation demonstrates its environmental leadership within the automobile industry. SIA was also the first U.S. car manufacturing plant to achieve ISO 9001 Quality Management System Certification and ISO 14001 Environmental Management System Certification.

Major Overseas Subsidiary Companies

SRD: _____
Subaru Research & Development, Inc.

SIA: _____
Subaru of Indiana Automotive, Inc.

SCI: _____
Subaru Canada, Inc.

SOA: _____
Subaru of America, Inc.





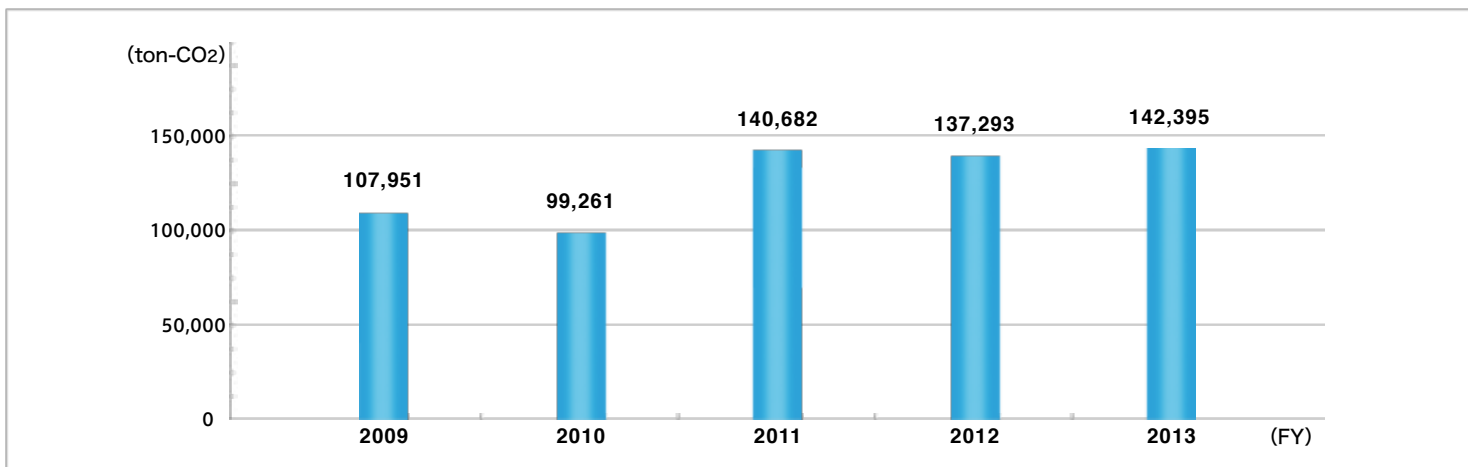
Approaches to Global Warming Prevention

To counter the serious issue of global warming, each of our North American companies is working hard to reduce total CO₂ emissions through various measures. The amount of CO₂ emitted by the four companies in North America in FY2013 totaled 142,395 tons-CO₂, increased around 4% compared with FY2012. This is due to the influence of increased production by SIA, although the amount of CO₂ produced per unit of production has decreased.

As the CO₂ emission volume increases along with the increased production volume, each of our North American companies is making various efforts to reduce CO₂.

For instance, at SOA, they have changed lighting fixtures at their head office to LED lights, and changed computer monitors to the energy-saving LED type, as part of their energy-saving activities.

CO₂ Emissions (total of four companies in North America)

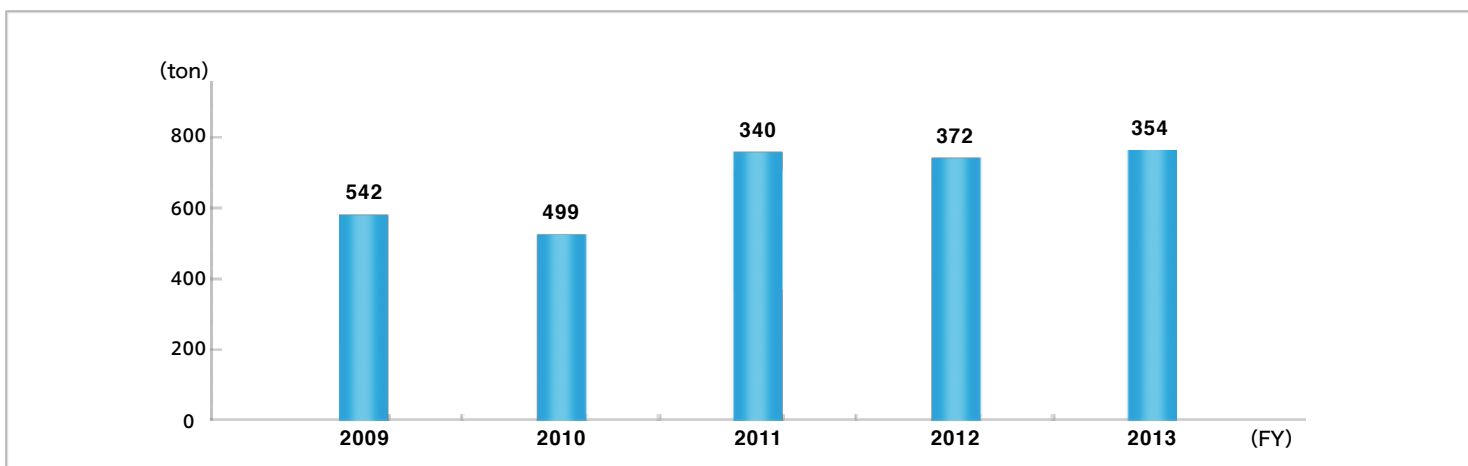


Efforts to Reduce Waste Materials

The amount of waste disposal by landfill of our four North American companies in FY2013 was 354 tons, a slight decrease of 5% compared with the FY2012 figure of 372 tons. Moreover, SIA has had a continuing record of zero landfill since 2004.

As part of their effort to reduce waste, SIA uses the filter cake emitted from their painting plant as a raw material in cement, thereby promoting waste recycling. The process commenced practical application from the first half of FY2013, in an effort to further reduce waste.

Landfill Waste Amount (total of four companies in North America)



Other Activities

Subaru Eco-friendly Dealer Program

Subaru of America, Inc. (SOA) takes great pride in not solely involved in selling high-quality Subaru vehicles, they are putting their efforts into environmental conservation.

As part of their environmental commitment, SOA developed a “Subaru Eco-friendly Dealer Program” and a pilot was announced in 2011. A dealership can achieve Subaru Eco-friendly Dealer status by meeting the following five key areas.

- 1 Energy efficiency
- 2 Water conservation
- 3 Recycling
- 4 Waste management
- 5 Community involvement

A formal announcement and program registration to our dealerships went out in late 2012. They aim to have an overall participation rate of 20% during the next two to three years.



Sustainia 100

Subaru of Indiana Automotive, Inc. (SIA) was named a top ten finalist, among 100 nominees globally, for the Sustainia Initiative.

The Sustainia Award is a new, global award recognizing tangible and available sustainability solutions across sectors and markets.

The Sustainia Award was launched by the global Sustainia Alliance and the Scandinavia’s leading independent think tank, Monday Morning, in collaboration with Governor Mr. Arnold Schwarzenegger.

SIA was nominated for having the “Best Resource Solution” for their zero landfill manufacturing. On October 2012, CSR representative from the company attended the award gala in Copenhagen, Denmark.





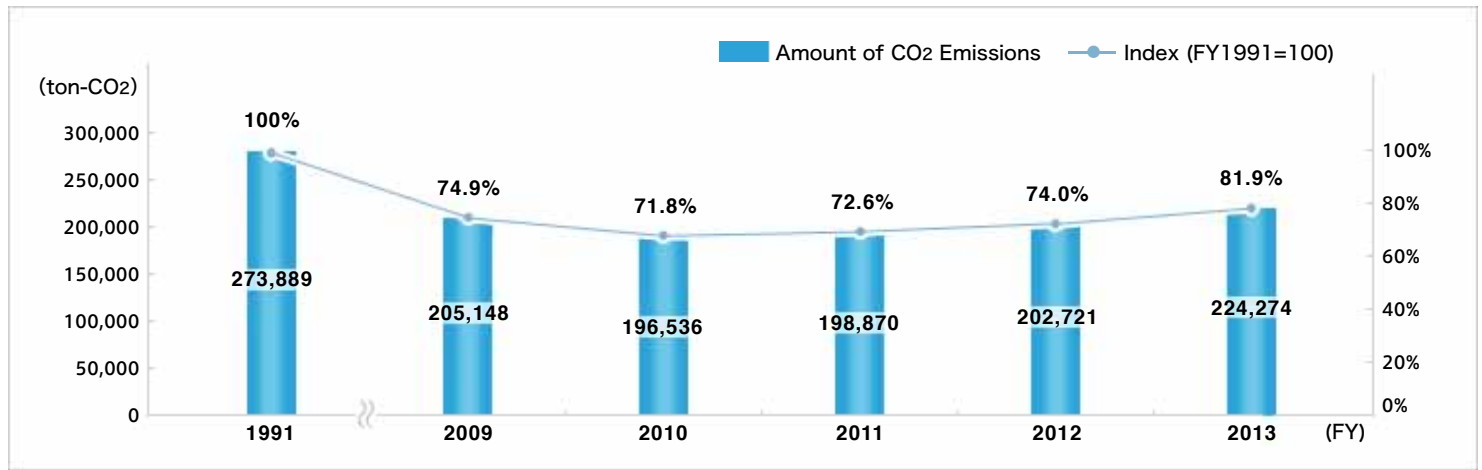
Environmental Performance

The main aspects of FHI's environmental performance* in FY2013 are shown in the following graphs.

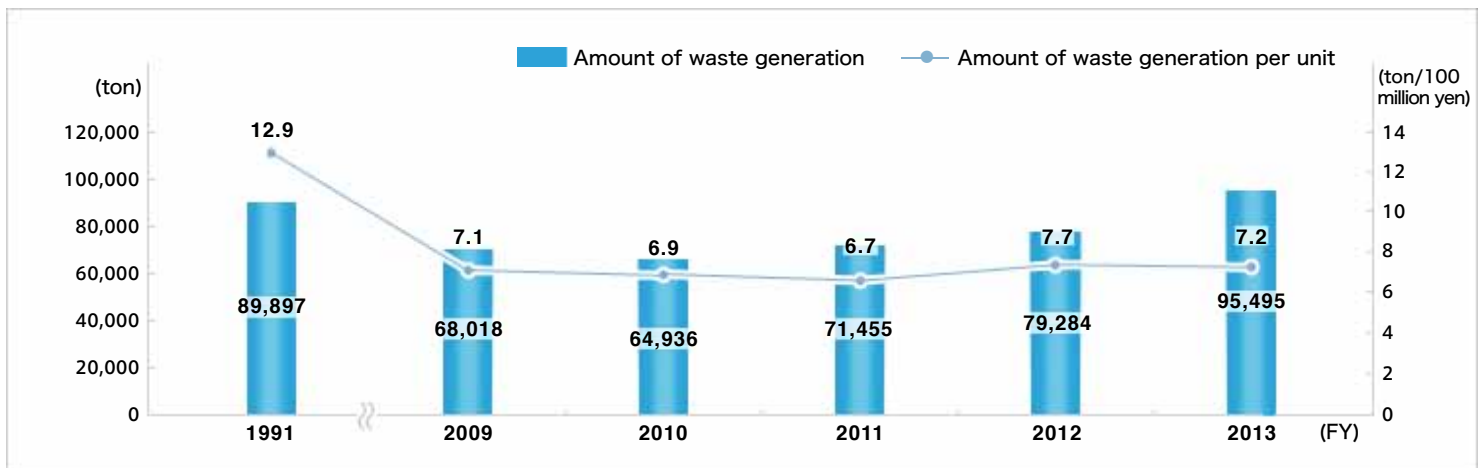
CO2 emissions and waste generation have increased from the previous year. This is due to increased production volumes of each plant compared to the previous year.

* Manufacturing Divisions covered: Gunma, Utsunomiya, Saitama and Tokyo

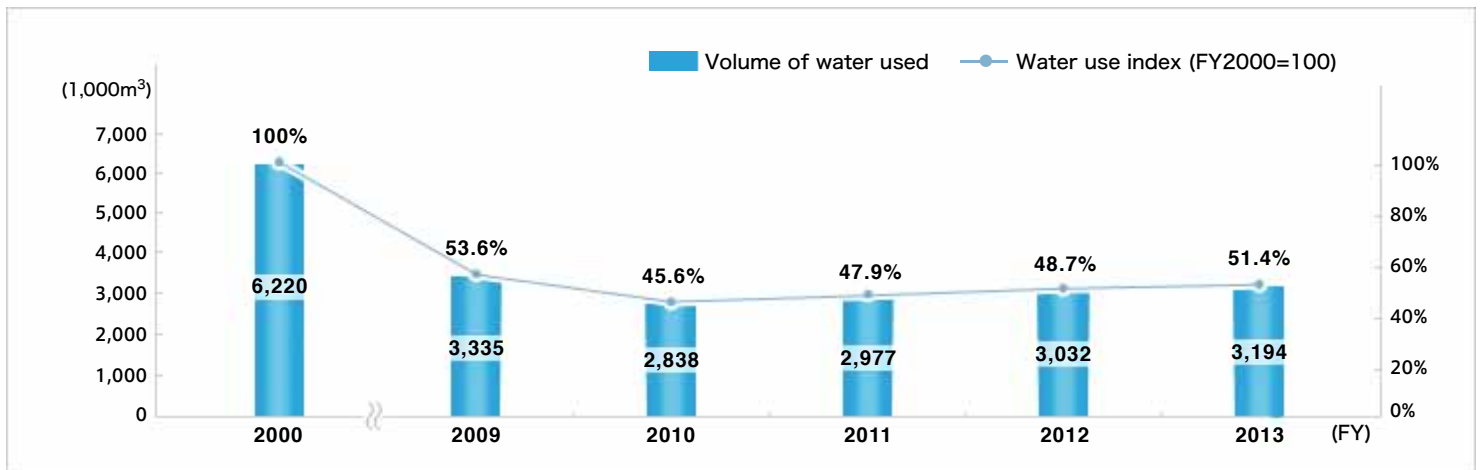
CO2 Emissions



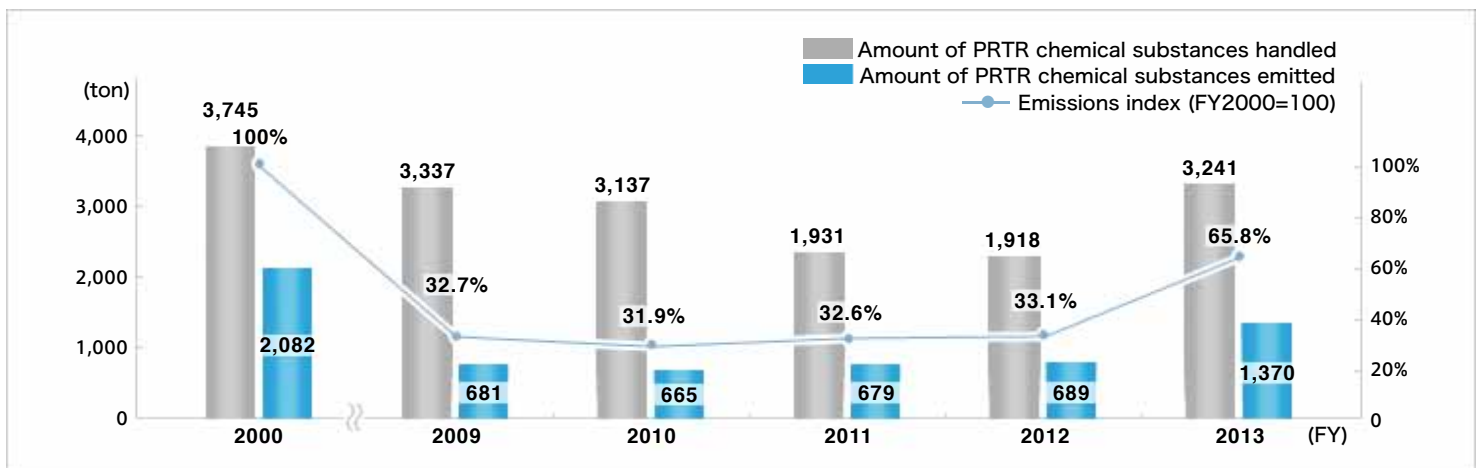
Waste Generation (includes scrap metal sold)



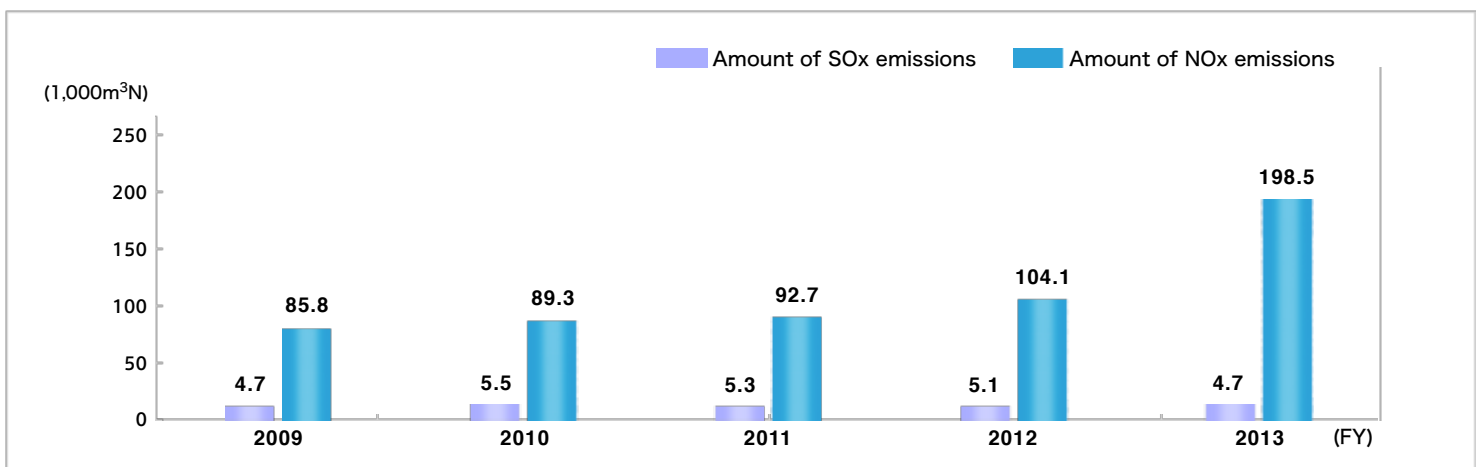
Volume of Water Used



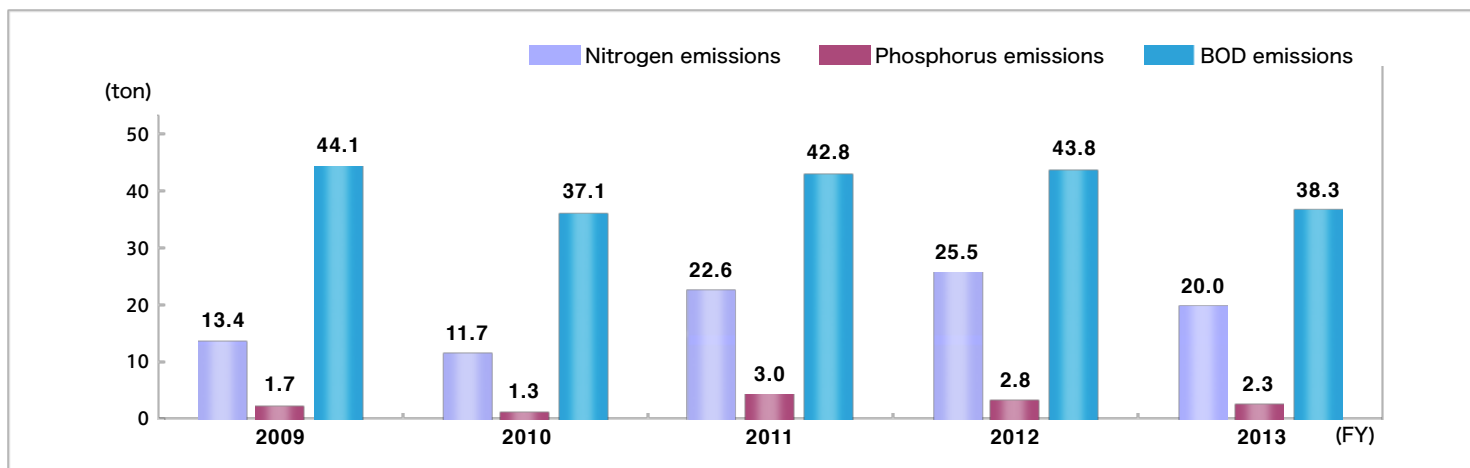
PRTR Chemical Substances



NOx and SOx



Nitrogen, Phosphorus and BOD



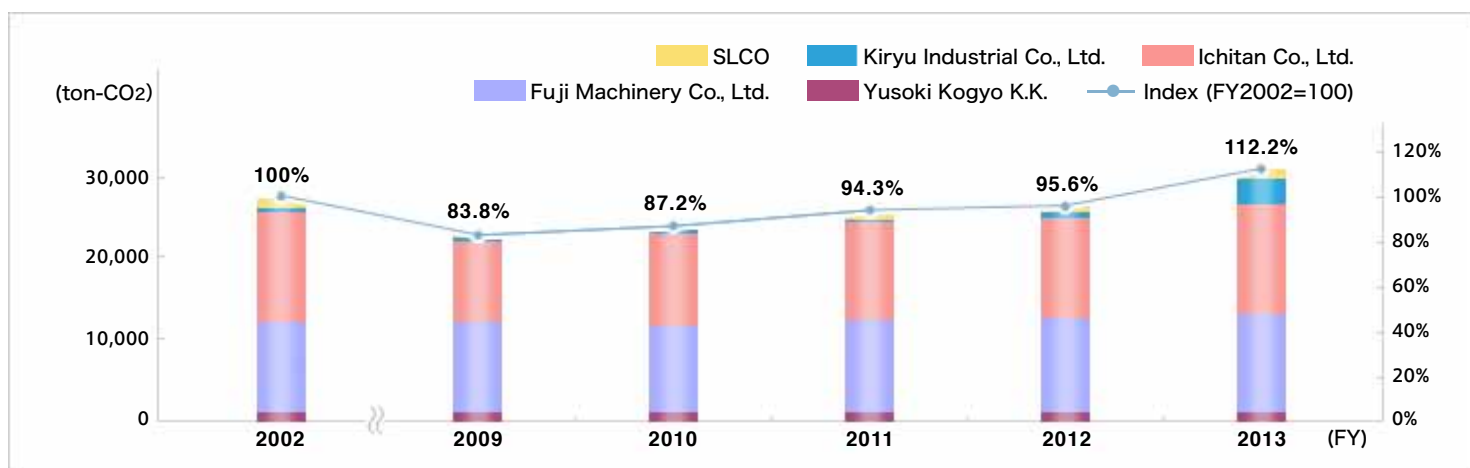
Affiliated Companies in Japan

The main aspects of environmental performance of five domestic affiliated companies* in FY2013 are shown in the following graphs.

CO₂ emissions and waste generation have increased from the previous year. This is due to increased production volumes of each company compared to the previous year.

* Five affiliated companies: Yusoki Kogyo K.K., Fuji Machinery Co., Ltd., Ichitan Co., Ltd., Kiryu Industrial Co., Ltd. and Subaru Logistics, Co., Ltd. (SLCO)

CO₂ Emissions



Waste Generation

