

Environment

Message from the Chairman of the Environmental Committee

Implementing Environmental Measures to Achieve Sustainable Development

The third Earth Summit "(Rio + 20)" was held in Rio de Janeiro in June 2012. One year after the organization of the first Earth Summit in Rio de Janeiro in 1992, FHI established its Environmental Committee. Since then, we have been fostering environmental measures, committed to achieving sustainable development as stated in our Environmental Policy. As a manufacturer of transportation, we are determined to fulfill our social responsibility towards the solution of global environmental problems throughout our business operations, including the development of products, procurement of parts, manufacturing and transportation of products, and sales activities.

In order to implement environmental initiatives in a systematic manner, we integrated the environmental management systems across all our sites, including the head office, and obtained ISO 14001 certification for this integrated system. This system has made it possible for us to manage environmental issues centrally and more efficiently.

In March 2011, all SUBARU dealers and base in Japan obtained the "Eco Action 21" environmental management system certification from the Ministry of the Environment as part of their efforts to improve their environmental measures. Also, outside Japan, four FHI Group companies, namely SIA, SOA, SCI, and SRD acquired ISO 14001 certification. Moreover, in May 2012, SIA acquired ISO 50001 certification for its energy management system, with a view to improving its environmental measures in North America.

We are thus pressing forward with environmental measures across our supply chain, establishing the necessary systems on a group-wide basis.

In our 4th Voluntary Plan for the Environment (for FY2008 to FY2012), we set out the target, "to make contributions to society through our products by offering our customers greener products through a system of environmentally clean plants, logistics networks and dealers, and by carrying out appropriate environmental activities, including compliance with laws, regulations, and agreements and cooperation with the automotive industry." Not only FHI but also other Group companies have been sharing this target as one of their corporate principles and conducting activities towards resolving a range of environmental problems involving the Group. As a result, we have achieved successful results in most of our environmental activities.

We have newly formulated the "5th Voluntary Plan for the Environment (for FY2013 to FY2017)" as a follow-up to the 4th plan. In this new plan, we have set out new targets and objectives to meet as many requests from our stakeholders as possible, while adhering to our basic principles. We will report on the progress being made with this new plan in our future CSR reports.

The environment surrounding FHI, including global environmental problems, has been continuing to change, but we will continue to implement environmental measures to achieve sustainable development.



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

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 the 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 environment-friendly SUBARU brand products written CSR Policy
- **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

Environmental Management

Interaction of Global Environment and Business Activities

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).

Creation of a Low-Carbon Society

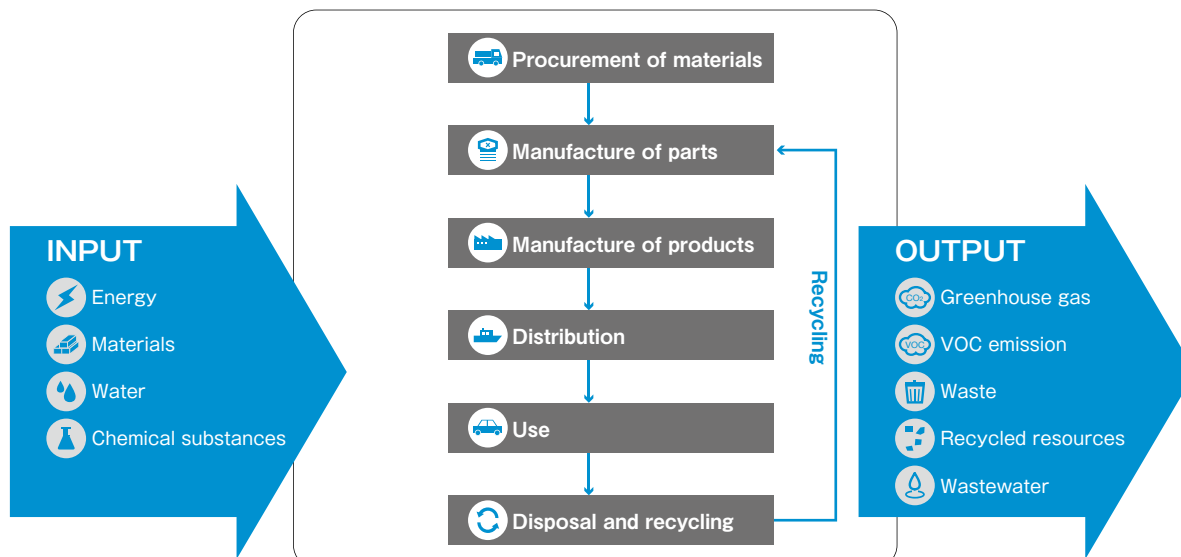
We believe that we can make a contribution to the creation of a low-carbon society through the development and release of low-emission and eco-friendly vehicles, improvements in the fuel economy of general-purpose engines, and the reduction of aircraft weight by the use of the composite materials technology. We are also implementing measures to reduce CO₂ emissions from our business operations. For example, the new head office building to which we will move in 2014 is designed to be an S-class building under CASBEE*1.

*1 CASBEE: Comprehensive Assessment System for Built Environment Efficiency

- **Automotive** ————— R&D and launching of fuel efficient vehicles and eco-cars
- **Industrial Products** — Improvement of fuel economy of general-purpose engines
- **Aerospace** ————— Weight saving through composite materials technology
- **All Divisions** ————— Proactive involvement in saving energy and controlling CO₂ emissions

Environmental Impact of Business Activities

Product Lifecycle



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.

Before starting the driving tests of completed automobiles near the edge of our premises, we undertook noise assessments and established a soundproof fence, giving due consideration to the outer appearance and green space. Thanks to the fence, noise levels have been lowered by approx. 17 to 18 dB.



Soundproof fence erected giving due consideration to green space

Organization

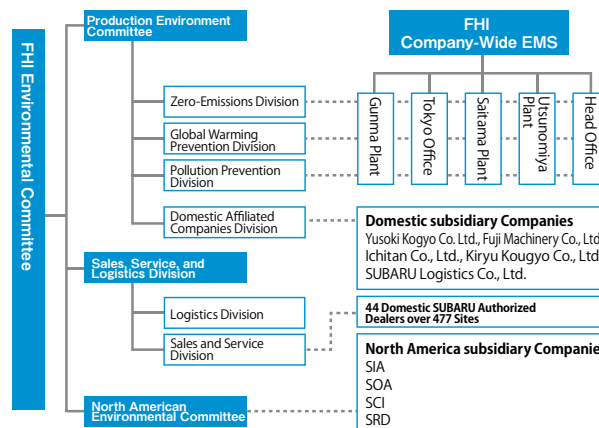
The FHI Group environment management system is structured around the Company-Wide Environmental Management System (EMS) and the Environmental Committee that works across the business divisions to implement the Environmental Policy and the Environmental Voluntary Plan. The director appointed for environmental issues represents the Company-Wide EMS and serves as chairperson of the Environmental Committee, conducting twice-yearly reviews. We actively promote environmental protection activities through comprehensive management of progress and revising the direction of future efforts.

Establishing an EMS/EnMS of the FHI Group

Categories	Manufacturing Division/Office				Dealership	
	FHI	Suppliers	Domestic Affiliated Companies	Overseas Affiliated Companies	Domestic Dealerships	Overseas subsidiary Dealerships
Divisions	Integrated EMS Gunma Manufacturing Division Tokyo Office Utsunomiya Manufacturing Division Handa Plant Handa West Plant Saitama Manufacturing Division Head Office Yusoki Kogyo K.K. F.A.S.Co., Ltd.	Green procurement suppliers Total: 655	Fuji Machinery Co., Ltd. Kiryu Industrial Co., Ltd. Ichitan Co., Ltd. Yusoki Kogyo K.K. Total: 4	SIA (Producing) *1 SRD (Research & Development) Total: 2	All domestic SUBARU dealerships Total: 44	SOA*, SCI Total: 2
Acquired EMS/EnMS	ISO14001	ISO14001, EA21, or self-assessment	ISO14001	ISO14001/ISO50001 ²	EA21	ISO14001

*1 Three subsidiary companies (SIA, SOA and SRD) have already obtained ISO 14001 integrated certification.
² SIA acquired both ISO 14001 and ISO 50001 certification.

FHI Group Environmental Organization Chart (as of March 2012)



Establishing the Environmental Management System

We are keen to build a group-wide environmental management structure. An EMS has been established and external certifications acquired across business sites, business partners, domestic and overseas consolidated manufacturing companies, and SUBARU dealerships at home and abroad. In particular, in March 2011, all 44 domestic dealers over 477 sites obtained Eco Action 21 certification. This was the first achievement in Japan for a manufacturer-led dealership. Further, in May 2012, Subaru of Indiana Automotive, Inc. (SIA), our North America production sites, became the first U.S. car manufacturing plant to receive ISO 50001, an international certification for energy management systems. The plant continues to improve its energy management.

Through global business activities as a part of the FHI Group, we are also working on "Green Procurement" in the supply chain and a comprehensive EMS across our nine business sites. We will further expand our EMS and Green Procurement activities that require a reduction of substances with environmental impact to include our business partners inside and outside Japan.

Environmental Communication

We value the close communications maintained with the communities neighboring our business sites. This is why we set up multiple contact channels and publish environmental information in a variety of ways, such as our CSR report and through the Internet, as a reliable corporation and to provide peace of mind to our stakeholders. In the SUBARU Visitor Center located in 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.



Intranet for FHI

Environmental information disclosed on the Internet for each model



Recycle Lab

Participating in Eco-Products 2011

We have participated in the Eco-Products exhibition every year, regarding it as an important opportunity to meet a range of people who are interested in the environment and to introduce our environmental measures to them. We have received comments from many of the visitors to our booth, who were surprised by the fact that FHI, which is manufacturing SUBARU automobiles, is also engaged in other business fields. In Eco-Products 2011, we introduced our eco-friendly products, which people do not usually notice in their daily lives, by displaying actual products and using images, and publicized a range of measures that we are fostering for the environment. sions also have areas to demonstrate their waste recycling efforts.



SUBARU Booth in Eco-Products 2011

Environmental Communication for Children

FHI had been distributing a brochure on the "SUBARU automobile manufacturing process" to children coming to the visitor center. We had also been publishing a "special CSR report" to show SUBARU social and environmental measures to fifth and sixth graders of elementary schools and "Factory Story" for the online introduction of our production factories. In FY2013, we published a new brochure for children by combining the contents of these three publications.

We created this brochure by incorporating the opinions of people who had made tours of our factories. In the brochure, the manufacturing process is explained in an easy-to-understand manner and a range of information is provided, including our environmental initiatives and measures.



Brochure for children, which introduces the SUBARU automobile manufacturing process

Environmental Education and Awareness

We provide employees with a range of environmental education according to their job ranks and job details, deeming it as one of its social responsibilities to conduct activities towards resolving environmental problems.

In April 2011, we provided the 199 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, SUBARU environmental policies and environmental protection activities, and the importance of making individual efforts by introducing specific examples to participants.

We also held a seminar to develop internal ISO 14001 auditors to enhance the internal auditing system for the ISO 14001 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 as candidates for internal auditors. We also invited employees of affiliated companies to this seminar, in order to build a more environment-friendly value chain. We will continue providing environmental education and fostering awareness among employees.



Teaching material for the seminar held to develop internal auditors for the ISO 14001 system

Online Education for Employees

In December 2011, about 700 employees at the head office received online education on environmental protection and were tested on their level of understanding using the in-house e-learning system.



Top page of e-learning system

Approaches to Biodiversity

Based on our environmental policy, FHI protects biodiversity making reference to the “Guidelines for Private Sector Engagement in Biodiversity (Ministry of the Environment)” and the “Declaration of Biodiversity by Keidanren—Guide to Action Policy (Keidanren).”

SOA, which sells SUBARU automobiles in the United States, established a “Rain Garden” within the premises of its head office, jointly with Rutgers University and a local soil protection organization. In the garden, employees are growing plants that are certified by the State government to contribute to environmental protection, which will eventually help purify the water in nearby rivers. The Rain Garden project also raised the environmental awareness of those living here, who are now highly motivated to clean local riverheads. In FY2013, the company will create another garden giving due considerations to biodiversity and with the participation of local citizens.

In Japan we own a number of forests, which extend to over 194 hectares in total. We thin the forests to develop and manage them. The reservoirs located within the premises of our sites are used as water sources for local agriculture. Also, a walking path was established in Kanayama, Ota City, by the SUBARU Group Local Exchange Organization, where weeds were removed and azaleas grown with support from local people.



Retention basin within a SUBARU facility



Paulownia tree in the site

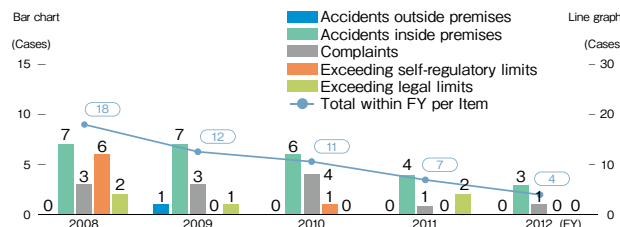


Flowers growing around the site

Compliance with Environmental Laws

The total number of complaints received concerning environmental issues, cases exceeding the legal limits, and accidents have all declined over the last five years.

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



Cases of Exceeding Environmentally Regulated Values in FY2012

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 FY2012.

Environmental Complaints Received in FY2012

We are striving to reduce environmental complaints to zero, but received one complaint in FY2012.

Name	Number of Cases	Details	Main Corrective Measures
Studio SUBARU	1 (noise)	Complaint about noise from the power generator (in Nov. 2011)	Moved the power generator as a temporary emergency measure, and will replace it with one with low noise

Environment-related Accidents in FY2012

We are implementing measures to reduce environmental incidents to zero, including those giving no impact to outside our premises. In FY2012, we had three incidents within our premises but had no incidents giving impact to outside the premises.

Name	Number of Cases	Details	Main Corrective Measures
Gunma Manufacturing Division	2 (water pollution)	Leakage of water-soluble paint to the water purification tank within the premises (June, 2011)	Reeducation on the treatment of water-soluble paints
		Discharge of industrial waste (sludge) to a road within the premises (Oct. 2011)	Provision of training to the manager to prevent the reoccurrence of similar problems
SUBARU Parts Center	1 (water pollution)	Spill of oil from two 20-liter oil cans within the premises (Aug. 2011)	Posting of a cautionary statement

Environmental Accounting (FHI Group's Results in FY2012)

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*1 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.) Please refer to pages 9 to 13 in the Supplementary Volume for Data related to 2006 Environmental & Social Report for details on calculation method.

*1 Calculation method has been partly changed from FY2006 data collection

Method Used for Calculating the Environmental Cost and the Amount of Money Invested in Facilities

The amount of money invested (Amount invested \geq 25 million yen) in facilities that have been introduced for both environmental and other purposes, plus related costs (maintenance management 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:

Amount invested in facilities, environmental cost = K x (amount invested in the manufacturing facilities, maintenance cost, etc.)
This K is an environmental impact factor that is calculated by the following scheme:
 $K = (\text{Total amount invested} - \text{Amount invested without energy saving targets}) / \text{Total amount invested}$

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 of facilities invested is not included in the environmental cost from the view point of placing value on cash flow. Small expenses such as fixed asset tax and insurance cost are also extracted from the total. Environmental cost and economic effect by environmental facilities are only recorded for 3 years starting from the 2nd year after the facilities are put into operation.

FY2012 Calculation Result

Environmental costs came to 17.7 billion yen on an unconsolidated basis, up 1.35 billion yen (8.2%) from the previous fiscal year, while it amounted to 18.5 billion yen on a consolidated basis, up 1.31 billion yen (7.6%) year-on-year. The cost increase was mainly due to an increase in research and development costs (increased by 1.3 billion yen on an unconsolidated basis). The ratio of environmental cost to sales, which is one of the environmental management indexes used on a consolidated basis, came to 1.26%.

Results of Environmental Cost and Trial Effect for FY2012

Item	Group	Environmental Costs (¥mil)						Environmental Investment (¥mil)					
		Unconsolidated			Consolidated			Unconsolidated			Consolidated		
		FY2010	FY2011	FY2012	FY2010	FY2011	FY2012	FY2010	FY2011	FY2012	FY2010	FY2011	FY2012
(1) Cost in the business area	① Pollution prevention cost	316	310	306	515	462	447	54	102	116	56	103	155
	② Global environmental conservation cost	47	41	53	90	71	84	343	90	195	352	99	235
	③ Resource circulation cost	416	447	466	774	772	777	1	0	0	5	0	1
(2) Upstream and downstream costs	Cost for collection, recycling, resale, and proper disposal of used products. Difference from typical goods and services procurement	143	140	158	143	140	158	-	-	-	-	-	-
(3) Administration cost	Cost for monitoring environmental impact. Cost for the implementation and maintenance of an environmental management system. Cost for environmental training of employees	95	84	92	141	178	127	-	-	-	-	-	-
(4) R&D cost	R&D cost to develop products that contribute to environmental conservation	14,774	15,179	16,474	15,049	15,421	16,749	1,026	814	788	1,026	821	792
(5) Social activity cost	Cost related to donation or financial support of environmental groups	62	107	106	65	109	109	-	-	-	-	-	-
(6) Environmental remediation cost	Cost related to environmental conservation measures for the aquatic, ground, and geologic environments	102	80	94	116	90	99	-	1	0	-	1	0
(7) Other costs		7	0	0	14	0	0	-	-	-	-	-	-
Grand Total		15,964	16,388	17,748	16,907	17,243	18,550	1,424	1,007	1,099	1,439	1,024	1,183

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

Calculation of Economic Effects for FY2012

Item	Economic effects (in millions of yen)	
	Unconsolidated	Consolidated
Reduction in energy cost due to energy conservation	179	225
Proceeds from the recycling of metals, waste liquids and cardboard boxes as valuable resources	1,207	2,363
Reduced 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, SCI, and SRD

Environmental Performance

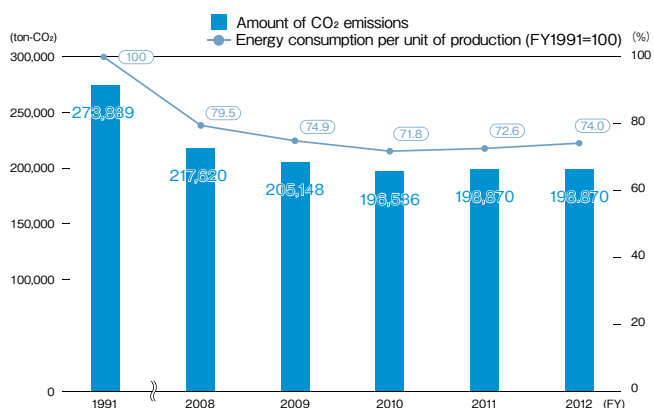
Environmental Performance

The main aspects of our environmental performance in FY2012 are as shown in the following graphs. CO₂ emissions, waste generation, emission of PRTR chemical substances and the use of water have increased from the previous year. This is due to increased production volumes of each plant compared to the previous year.

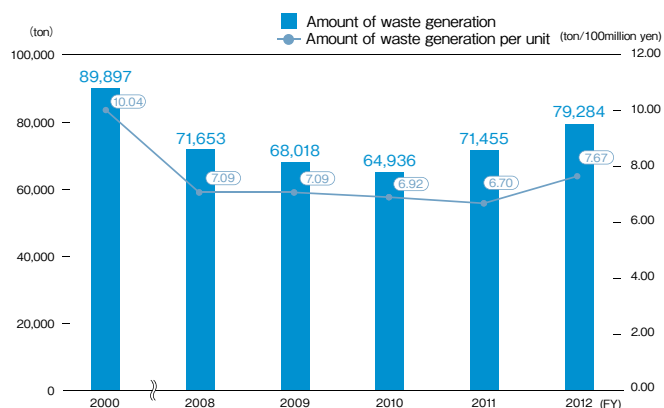
We have achieved zero emissions*1 since FY2005 in terms of landfill waste.

*1 FHI's definition of zero emissions: The total amount of landfill waste (waste materials directly landfilled + waste materials landfilled after intermediate treated) is less than 0.5% of the total amount of waste materials excluding scrap metal (industrial waste + industrial waste subject to special control + general waste from business operations).

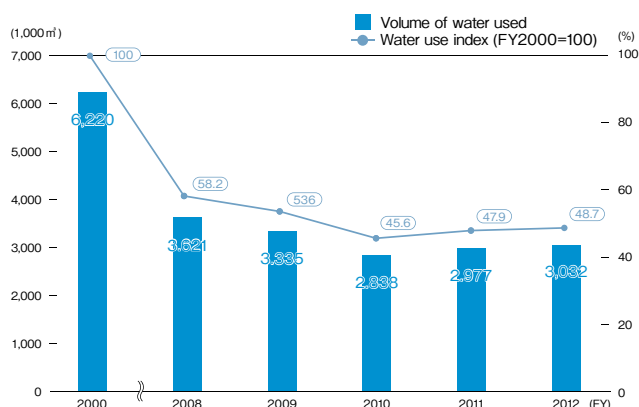
Amount of CO₂ Emissions and Energy Consumption per Unit of Production at All Manufacturing Plants



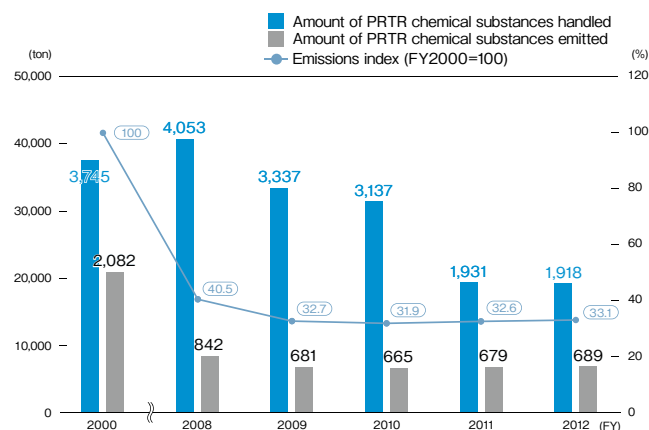
Waste Generation (includes scrap metal sold)



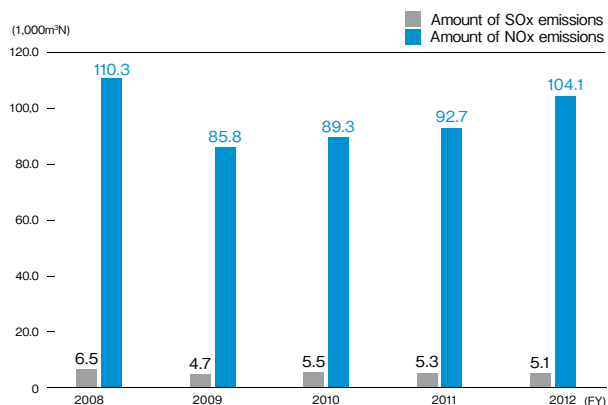
Volume of Water Used at All Manufacturing Plants



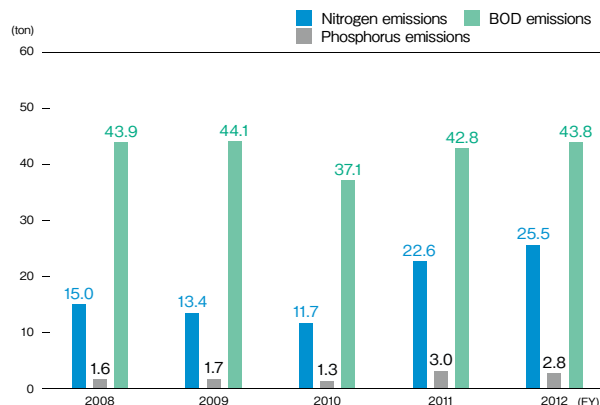
Amount of PRTR Chemical Substances Used and Emitted at All Manufacturing Plants



Amount of NOx and SOx Emissions



Amount of Nitrogen, Phosphorus, BOD Emissions



Reducing VOC Emissions

The amount of VOCs emitted from the automobile coating process was 47.3 grams per square meter in FY2012, down 48.2% from the FY2001 level. This was due to a decrease in the use of cleaning thinner and an increase in the recovery rate of used thinner. In the new coating factory opened in 2007, use of a water-based coating has been fostered to substantially reduce VOC emissions.



New coating factory

Preventing Soil and Underground Water Pollution

We have voluntarily conducted soil and underground water surveys at all manufacturing plants since 1998 and have reported the results to the government. We are continuously conducting sampling surveys of underground water even at manufacturing plants where purifying measures for soil and underground water have already been taken, such as the Utsunomiya Manufacturing Division, and continue to report the results to the government.

Status of Storage and Disposal of Equipment Containing PCB

We store PCB appropriately in accordance with the laws and regulations related to PCB. We applied and registered early for the disposal of equipment (such as transformers and condensers we currently store) containing high concentrations of PCB. The disposal process commenced in FY2012.



Loading PCB waste to a truck

Summary of the Activities Conducted in Line with the 4th Voluntary Plan for the Environment (FY2008 to FY2012)

In FY2007, FHI formulated the 4th Voluntary Plan for the Environment as its voluntary environmental protection plan to be implemented during the period from FY2008 to FY2012. In this section, we will report on activities conducted during the five years.

We have achieved the targets for almost all the activity items, but have yet to attain the targets for some items. During FY2013 and beyond we will conduct environmental protection activities to achieve the targets set out in the 5th Voluntary Plan for the Environment, which we have newly formulated as a plan for the period from FY2013 to FY2017.

Overview of the 4th Voluntary Plan for the Environment

We are making every effort to prevent global warming

- We will continue working to improve fuel economy with every full vehicle model change and annual model change.
- We will reduce CO₂ emissions at manufacturing plants by 15% compared to FY1991 levels by FY2011.
- Regarding logistics, we will reduce energy consumption per unit by 5% compared to FY2007 levels by the end of FY2012.
- We will promote the development and marketing of products that use clean energy, such as electric vehicles and wind turbine systems

We will address various environmental issues by making continuous improvements throughout all stages

- We will make further progress in reducing emissions produced by our automobile lineup and promote popularization of low emissions vehicles.
- We aim to achieve a 95% recycling ratio in 2015 by taking recyclability into account in new model designs.
- We will reduce emissions of VOCs per painted surface area of bodies (g/m²) in vehicle production lines by 30% compared to FY2001 levels by the end of FY2011.
- We will reduce the amount of land filled waste by controlling sources of waste and continuing zero emissions at all manufacturing plants.
- We will promote green procurement, which requires suppliers in and out of Japan to establish Environmental Management Systems and reduce substances with environmental impact.
- We will support the environmental activities of dealers.
- We will conduct social contribution activities and disclose environment-related information.

[1] Green Products

Item	Targets and Actions	FY 2012 Plans	Results for FY2012	Overall Results for FY2008 to FY2012	Ev. Evaluation ○: Achieved ×: Not Achieved
Improving fuel economy [Automobiles]	◇Continue to improve fuel economy (FE) for every full model change and annual model change.	◇Continue to improve fuel economy (FE) for every full model change and annual model change.	◆Improved fuel economy by approx. 20 to 27% for the new IMPREZA by adopting the new-generation BOXER engine, new Lineartronic system and idle stop function, improving aerodynamic performance, and reducing the body weight.	◆Achieved higher fuel economy in all weight classes by continuing full and annual model changes.	○
	◇Increase models that achieve FY2010 FE Standards.	◇The scope of vehicles which meet the FY2010 FE Standards by over 15% improved to be expanded.	◆Increased the percentage of vehicles performing 15% better or more compared to the FY2010 FE Standards from 71.5% in FY2011 to 81.3%.	◆Increased the number of vehicles meeting the FY2010 FE Standards every year.	○
	◇Promote improvement of FE toward the FY2015 FE Standards.	◇FE to be improved continuously to meet the FY2015 FE Standards.	◆For the new IMPREZA and TREZIA, released models meeting the FY2015 FE Standards.	◆Released vehicles meeting the FY2015 FE Standards into the market.	○
Cleaner exhaust emission [Automobiles]	◇Improve on technology which has already achieved a 75% reduction on the FY2005 FE Standards for exhaust emissions in order to further reduce exhaust emissions and promote the use of low exhaust emission vehicles.	◇Further increase the number of cars certified with emissions reduced by 75% from the FY2005 FE Standards. (Vehicles to be produced by FHI)	◆Increased the percentage of SUV-LEV vehicles from 91% in FY2011 to 94%.	◆Increased the number of vehicles achieving emissions by 75% lower than the FY2005 FE Standard year-on-year by applying emissions reduction technology.	○
Developing products using clean energy	◇Hybrid vehicles: Develop a new hybrid system etc. in collaboration with new alliance partner. ^{*1}	◇Development of a new hybrid system to be continued.	◆Promoted the development of a new hybrid system for release in the market in 2013.	◆Developed a new hybrid system for release in the market.	○
	◇Electric vehicles: Develop vehicles for launch on the market in addition to business use. ^{*1}	◇The production of the Plug-in STELLA discontinued, but joint verification tests with relevant municipalities to be continued.	◆Conducted demonstration experiments on the Plug-in STELLA jointly with related local governments.	◆Promoted the development of EVs for release into the market as vehicles for business use, and leased the Plug-in STELLA to national and local governments and corporations.	○
	◇Continue development of wind turbine systems and market expansion. ^{*2}	◇The first large-scale wind power generation system scheduled to start operations at a mountainous site.	◆Started operations of the first large-scale wind power generation system at a mountain site as planned.	◆Began producing, selling, and operating the SUBARU 80/2.0 large-scale wind power generation system in 2008.	○
	◇Expand market for applied products which use LPG/CNG engines. ^{*2}	◇The development of the 3kW engine for the RV generator to be continued with production startup in Feb. 2012.	◆Made progress to start the production of LPG engines for 3kW RV generators by ensuring high durability and meeting exhaust gas and OEM requirements.	◆Released the LPG/CNG dual fuel engine in the market in FY2010 and made preparations for the release of LPG engines for generators in FY2012, thereby achieving the target of "releasing a product using an LPG/CNG engine," as set at the start of the 4th Voluntary Plan.	○
Improving recyclability [Automobiles]	◇Improve design to increase recyclability in new models to achieve a recycling rate of 95% in 2015.	◇Maintain the recycling rate at over 95%.	◆Recycling rate realized 98.9%, thereby achieving the target of "95% or higher" ◆Used highly recyclable olefin resin as material in almost all new automobiles.	◆Continued to achieve the target of "95% or higher recycling rate" ◆Expanded the use of olefin resin in new models to foster the 3Rs and designed products giving more consideration to their recyclability, for example by decreasing the number of components.	○
Reducing substances with environmental impact [Automobiles]	◇Enhance management of substances with environmental impact and further reduce the use of such substances.	◇Replacement of lead compounds with non-lead substitutes will be promoted step by step.	◆Discontinued use of lead in soldering for switches, relays, etc. for almost all new models in 2011, thereby reducing total use of lead.	◆Based on the voluntary action plan set out by the Japan Automobile Manufacturers Association, discontinued or reduced the use of four substances of concern (lead, mercury, cadmium, and hexavalent chromium) and achieved the targets in 2007, while also fostering lead-free soldering for electric and electronic parts.	○
Reducing exterior noise	◇Continue to promote development of technology to reduce noise that is compatible with both fuel economy improvement and exhaust emissions reduction.	◇Continue to promote development of technology to reduce noise that is compatible with both fuel economy improvement and exhaust emissions reduction.	◆For the new IMPREZA, adopted the new-generation BOXER engine and CVT Lineartronic system to provide excellent fuel economy and comfortable acceleration with optimal engine speed, while also reducing noise levels on urban roads.	◆Introduced technologies for higher fuel economy and lower exhaust gas emissions, including the new CVT, FB engine, and vehicle weight reduction technologies, while reducing noise from vehicles.	○
Curbing global warming regarding air conditioning refrigerants [Automobiles]	◇Promote further reduction in the amount of refrigerant (HFC134a) per vehicle.	◇Reduction of the used amount and leaks to be promoted as before.	◆Equipped new models with energy-saving cooling devices, thereby reducing the use/leakage of coolants.	◆Reduced the use and leakage of coolants as planned.	○
	◇Advance the development of air conditioner with low GWP refrigerant.	◇Study on alternative refrigerants in place of HFC134a to be promoted.	◆Developed and started manufacture of an air conditioner equipped with HFO-1234yf alternative coolant.	◆Developed an air conditioner using alternative coolants as planned.	○
Research on traffic environments [Automobiles]	◇Work further on Intelligent Transport Systems (ITS) that realize a safe and comfortable motorized society.	◇The development of the advanced safe driving assist system "EyeSight (ver.2)" to be promoted for wider application. ◇Involvement in Intelligent Transport System (ITS) and the Advance Safety Vehicle (ASV) project will be promoted.	◆Expanded the use of the "EyeSight (ver.2)" advanced safe driving support system (in more models and markets) and promoted further development of the system. ◆Participated in the 5th ASV project and fostered the initiative, while accelerating measures for smart traffic control to mitigate congestions on expressways.	◆Applied the "EyeSight (ver.2)" advanced safe driving support system to products for the creation of a safe and comfortable motorized society. ◆Participated in the 4th ASV project, developed a driving support system based on inter-vehicle and road-vehicle communications, and verified the effects of the system through demonstrative experiments.	○
Developing environment-related products and businesses	◇Advance environment-related businesses such as development of refuse collection vehicles and environmental equipment and devices. ^{*3}	◇The annual sales target for the "Fuji-mighty Electra" set at 12 units for CO ₂ reduction by 42 tons a year and noise reduction. ◇Target CO ₂ reductions of about 166 tons a year by promoting the modal shift to ocean transport.	◆Sold 17 "Fuji-Mighty Electra" units, thereby contributing to reductions of both CO ₂ emissions and noise levels. ◆Promoted modal shift to marine transportation, thereby reducing CO ₂ emissions by 138 tons a year.	◆As for refuse collection vehicles, released the "Fuji-Mighty Electra" in the market, thereby contributing to CO ₂ emissions and noise reduction. ◆Promoted modal shift to marine transportation for the transportation of refuse collection vehicles to West Japan and won a commendation.	○

*1 SUBARU Automotive Business *2 Eco Technologies Company *3 Industrial Products Company

[2] Clean Plants

Item	Targets and Actions	FY 2012 Plans	Results for FY2012	Overall Results for FY2008 to FY2012	Ev. Evaluation ○: Achieved ×: Not Achieved
Curbing global warming	◇ Aim to reduce CO ₂ emissions by 15% from manufacturing plants compared to FY1991 level by FY2011.	◇ CO ₂ emissions to be reduced by 15% against FY1991. [Add-on challenge: We will proceed with carbon dioxide reduction by 22% against FY1991.]	◆ Reduced CO ₂ emissions by 26.0% from FY1991 level to 202,721 tons-CO ₂	◆ Reduced CO ₂ emissions by 26.0% from FY1991 level to 202,721 tons-CO ₂	○
Control and reduction of substances with environmental impact at manufacturing plants	◇ Continue reducing emissions of PRTR chemical substances to the environment.	◇ Reduce PRTR emissions to 620 tons.	◆ Emissions of PRTR substances totaled 673 tons (633 tons for the Gunma Manufacturing Division).	◆ Proactively adopted alternatives containing no PRTR substances.	- *1
	◇ Reduce VOC emissions (g/m ²) in vehicle production lines by 30% compared to the FY2001 level by the end of FY2011.	◇ Reduction of VOC emissions in g/rt to be reduced by 30% or more against FY2001 to be maintained. [Add-on challenge target: 49.7 g/rt, a reduction by 45.7% against FY2001.]	◆ Reduced VOC emissions by 48.2% from FY2001 level to 47.3 g/m ² by reducing the use of thinner at coating facilities and strictly managing VOC recovery equipment.	◆ Introduced thinner recovery equipment that could be easily cleaned and maintained to the manual coating process, as well as to updated/newly introduced coating machines.	○
	◇ Reduce environmental risks through Environmental Risk Assessment and totally eliminate the occurrence of incidents, claims and cases where voluntary standards are exceeded.	◇ Preventative response to risks and communication with residents nearby to be stepped up and activities for "zero" in all items to be promoted.	◆ Recorded 3 in-plant spills and 1 noise complaint. ◆ Carried out environmental risk assessment at the launch of new model and reduced environmental impact in regard to noise and odor.	◆ Steadily implemented risk prevention activities based on environmental risk assessment. ◆ Continued "risk communication" with local people.	×
Reducing waste generated at manufacturing plants	◇ Reduce the amount of waste materials by controlling sources of waste including increasing yield ratio, reducing removal stock, increasing coating efficiency and improving packaging.	◇ Additional measures will be taken to control emissions.	◆ 538 tons of sold waste from the metal polishing process as resources and excluded it from industrial waste. As a result, the amount of industrial waste came to 79,284 tons, down 11.8% from FY2000 level.	◆ Conducted activities to reduce waste generation and save costs in 2007 and 2008, and focused on cost reduction in and after 2009, while selling waste as resources for further waste reduction.	○
	◇ Continue zero emissions (zero level of landfilled waste both directly and indirectly).	◇ Zero emissions to be continued.	◆ Continued to achieve zero emissions through the appropriate conclusion and management of agreements with waste disposal companies.	◆ Continued to achieve zero emissions by ensuring compliance with laws and selecting disposal companies for appropriate waste disposal.	○
Saving water resources	◇ Aim to reduce amount of water used at manufacturing plants by 45% compared to the FY2000 level by FY2012.	◇ Water usage to be reduced by 45% against FY2000. [Add-on challenge target: Reduction by 49.2% against FY2000.]	◆ Reduced water use by 51.3% from FY2000 level to 3,032,000 m ³ .	◆ Reduced water use by 51.3% from FY2000 level to 3,032,000 m ³ .	○
Green purchasing activities	◇ Request domestic and overseas suppliers to reduce substances with environmental impact and to establish an Environmental Management System (EMS). The following are the targets for establishing EMS. - Automotive Business Unit and Industrial Products Company: Maintain the completed system. - Eco Technologies Company and Aerospace Company: Aiming to complete establishment of the system.	◇ New suppliers are in need to establish EMS and maintain the status of 100% of our suppliers' EMS establishment.	◆ Fully completed for 52 suppliers. - Automotive: 17 - Aerospace: 0 - Eco Technologies: 1 - Industrial Products: 34	◆ Fully Completed the establishment for a total of 655 companies. - Automotive: 388 - Aerospace: 79 - Eco Technologies: 51 - Industrial Products: 137	○
	◇ To reduce substances with environmental impact, adhere to the schedule of laws, regulations and agreements such as the EU directive.	◇ Efforts to reduce environmental load substances to be continued.	- Automotive: Conducted a survey on suppliers' lead-free solder measures. - Aerospace: Confirmed the non-use of regulated substances in purchased materials. - Eco Technologies: Checked the safety of purchased materials.	◆ Conducted surveys and reduced the use of substances of concern in purchased materials to ensure compliance with laws and regulations, such as EU directives.	○
	◇ Set CSR procurement guidelines, and disseminate these to the suppliers.	◇ CSR procurement guidelines to be set up for distribution to suppliers.	- Aerospace, Eco Technologies, and Industrial Products: Began preliminary examinations for the formulation of CSR guidelines.	- Automotive: Published "CSR guidelines for suppliers" and distributed copies to suppliers.	○

*1 The scope of evaluation was (-) following the revision of the PRTR Act concerning data for FY2011 onwards. Reduction activities, however, have been continued.

[3] Green Logistics

Item	Targets and Actions	FY 2012 Plans	Results for FY2012	Overall Results for FY2008 to FY2012	Ev. Evaluation ○: Achieved ×: Not Achieved
Reducing the environmental burden caused by logistics	◇ Be certain of meeting the Revised Energy Saving Law. - Try to reduce energy used per sale by 5% compared to FY2007 by the end of FY2012.	◇ The Revised Energy Saving Act to be surely addressed. [The energy used per unit is to be reduced by 5% against FY2007 by the end of FY2012] Add-on challenge target: 25% reduction against FY2007.	◆ Steadily achieved targets and continued reduction measures.	◆ Fostered efficient transportation of completed vehicles, the most energy-consuming of our transportation activities, while facing various changing factors.	○
	◇ Offer support and cooperation to environmental activity groups.	◇ Efforts to hike the reuse rate of current foam materials to be continued. (Target: 95%)	◆ Increased the reuse rate of foam materials to 96.9%, exceeding the target.	◆ Implemented measures to foster the reuse of materials, expanding the target over engine subcomponents, rear quarter glasses, column shifts, gear boxes, drive shafts, and rear differentials by the first to fourth rounds of the activity.	○

[4] Clean Dealers

Item	Targets and Actions	FY 2012 Plans	Results for FY2012	Overall Results for FY2008 to FY2012	Ev. Evaluation ○: Achieved ×: Not Achieved
Promoting environmental conservation activities at dealers	◇Support environmental conservation activities by dealers.	◇Voluntary environmental conservation activities by dealers leveraging the "Eco-Action 21" ^{*1} to be backed up.	◆Dealers continuously conducted voluntary environmental activities based on "Eco-Action 21". ◆Dealers in the Kanto and Tohoku regions saved electricity in response to power shortages resulting from the megaquake and achieved substantial cost reductions.	◆All dealers and bases attained "Eco-Action 21" certification as the foundation to conduct environmental activities as a team. ◆As a result, they can now share information about their measures while reducing their costs (electricity, etc.) by fostering voluntary environmental activities.	○
	◇Continue to collect used bumpers.	◇Collecting used bumpers to be continued.	◆Recovered 33,376 used bumpers. (down 6,462 from the FY2011 level)	◆Steadily continued the recycling of used bumpers, and in FY2013 will renew the recovery system applied to dealers to increase the number of used bumpers recovered.	○
	◇Continue to collect changed warning flares.	◇Collecting changed warning flares to be continued.	◆Recovered 129,750 replaced warning flares (down 4,650 from the FY2010 level).	◆Continued recovery and recycling of warning flares.	○
	◇Continue to comply with the ELVs Recycling Law.	◇Compliance with the ELVs Recycling Law to be continued for higher recycling rate.	◆Recycling based on the Act on Recycling, etc. of ELVs. - In FY2012, recovered 25,774.5 tons of shredder dust (ASR) from 164,618 ELVs and recycled 24,156.5 tons, thereby increasing the ASR recycling rate to 93.7% and achieving the statutory rate for 2015 (70%). - Also recovered 200,635 airbags from 87,037 ELVs and sent 16,063.5 kg to recycling facilities, of which 15,033.6 kg were recycled, thereby increasing the recycling rate to 93.6% and achieving the statutory rate of 85%. - Recovered CFCs (37,071.7kg) from 132,636 ELVs and properly disposed of them	◆ASR recycling rate increased by more than 20% from 72.9% in FY2008 to 93.7% as a result of the efforts made for recycling, including the use of new recycling facilities. Achieved zero ASR landfill since May 2011 and will further increase the recycling rate in and after FY2013.	○

*1 Eco-Action21: The environmental management system based on ISO14000 set by the Ministry of the Environment to help environmental activities of small- to medium-sized corporations.

[5] Improving Environmental Management

Item	Targets and Actions	FY 2012 Plans	Results for FY2012	Overall Results for FY2008 to FY2012	Ev. Evaluation ○: Achieved ×: Not Achieved
Implementation of Social Contribution Activities	◇Continue to join environmental events, communicate with local residents at plants, and welcome visitors to plant tours. ◇Continue to join cleaning and tree-planting activities in local communities around plants. ◇Offer support and cooperation to environmental activity groups.	◇Participation in environment-related events to be continued.	◆Continued cleanup activities around sites. ◆Continued recovery of eco-caps.	◆Continued to organize factory tours, held events within the premises, and gave environmental classes. ◆Accepted study visits of junior and senior high students to the head office.	○
Information Disclosure of Environmental Information	◇Continue to publish social and environmental (S&E) reports, and aim at releasing S&E information through publicity channels from time to time. ◇Improve and upgrade the contents of S & E reports (e.g., compliance with guidelines, and reports including affiliates).	◇Environment-related information to be disclosed via CSR Reports and Eco-Products Exhibitions.	◆Participated in "Eco-Products" in FY2012 (participant since 2008) to publicize the company's environmental activities.	◆Published social and environmental reports up to 2008 and have published the CSR report since FY2010 to provide the public with the company's environmental information, while making efforts to improve both paper and online reports to make them more intelligible and useful for stakeholders.	○
Implementation of Environmental Education and Awareness Activities	◇Continue to incorporate social and environmental education into the company education system and put it into practice. ◇Continue to implement educational campaigns through company education newsletters and various media. ◇Continue to implement lectures and presentations of operation improvement case studies at work-sites.	◇The environmental education and motivation activities to be continued.	◆Created additional copies of the environmental card to distribute to temporary staff. ◆Continued to provide internal ISO auditor training. ◆Continued to provide new employees with environmental education.	◆Fostered energy conservation activities and continued environmental education for higher environmental performance.	○
Environmental Management System Establishment	◇Continue to improve the EMS at all business sites with ISO 14001. ◇Continue to improve cooperation with subsidiaries and establish consolidated EMS.	◇EMS under ISO 14001 systems to be continuously improved.	◆Maintained consolidated EMS through the group of domestic subsidiaries in charge and through the North America Environmental Committee.	◆Integrated the EMSs of the company's five sites into an efficient and effective EMS and acquired ISO 14001 certification for the integrated system in February 2010.	○
Approach to the Revised Energy Conservation Law	◇Work out mid- and long-term energy saving plans and control standards to promote efficient management of progress by an environmental data collection system.	◇Energy used per unit to be reduced by 1% annually.	◆FY2012 results: Per-unit energy use increased to 13.81 kJ/100 million yen, up 5.8% year on year.	◆In progress to achieve a 1% reduction per year on average for the five-year period.	— ^{*2}

*2 Will be evaluated after obtaining final data on energy usage for the five years from FY2010 to FY2014.

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

FHI has formulated the 5th Voluntary Plan for the Environment targeting the period from FY2013 to FY2017. Based on our environmental policy, we have set even higher environmental protection targets in the plan, while also incorporating appropriate environmental measures in it, such as those to ensure compliance with laws and regulations and to foster cooperation within the industry. Based on the plan, we will make contributions to society through our products, specifically by shipping even greener products from our clean plants and offices to customers through clean dealers by green logistics. The entire FHI Group will share the plan as the Group's guidelines and proactively make improvement efforts to solve a range of environmental problems in the fields of Global Warming Countermeasures, Resource Recycling, Pollution Prevention and Reduction of Hazardous Chemical Substance Usage, and Environmental Management, as introduced below.



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

[1] Global Warming Countermeasures

Field	Item		Target/Initiative(FY2017)
A. Green Products	Improving fuel economy	Automobiles	<ul style="list-style-type: none"> ◆Continue to improve fuel economy through full model changes and annual model changes. ◇Improve fuel economy by 30% compared with previous models through innovative shift to environmental engines/CVT. ◇Introduce horizontally opposed direct-inject engines to the market.
		Industrial products	<ul style="list-style-type: none"> ◆Improve fuel economy to ensure compliance with fuel economy/GHG emissions standards in each country/region. ◇Japan: Meet the 2015 Fuel Economy Standards without fail. ◇Overseas: Meet the fuel economy/GHG emissions standards in each region.
	Using clean energy	Automobiles	<ul style="list-style-type: none"> ◆Release a hybrid car into the market. ◇Release a hybrid car into the Japanese market in 2013. ◆Conduct research to release EVs in the market. ◇Foster research into EVs. ◆Improve diesel engines to expand their sales in the market. ◇Promote measures to comply with the Euro 6 regulation for horizontally opposed diesel engines.
		Automobiles	<ul style="list-style-type: none"> ◆Establish technologies to reduce exhaust gas and improve fuel economy by applying electronic control to general-purpose engines. ◇Increase the number of models for fuel-injection general-purpose engines and foster their market introduction.
	Curbing global warming regarding air conditioning refrigerants	Automobiles	<ul style="list-style-type: none"> ◆Promote the development of air conditioners using refrigerants with low global warming potentials. ◇Further promote the development of air conditioners using refrigerants with low global warming potentials.
B. Clean Plants, Logistics and Offices	Manufacturing plants	Automobiles	<ul style="list-style-type: none"> ◆Reduce CO₂ emissions per unit of sales at domestic manufacturing plants. ◇Reduce CO₂ emissions per unit of sales by 10% from the FY2007 level by FY2017 at domestic manufacturing plants. ◆Foster CO₂ emissions reduction activities at overseas manufacturing plants. ^{*1} ◇Set the medium-term CO₂ emissions reduction targets and conduct activities to attain them at overseas manufacturing plants.
		Industrial products	<ul style="list-style-type: none"> ◆Ensure compliance with the Act on the Rational Use of Energy. ◇Reduce per-unit energy use by 1% every year. (comparing to: FY2007)
	Offices	Industrial products	<ul style="list-style-type: none"> ◆Ensure compliance with the Act on the Rational Use of Energy. ◇Reduce per-unit energy use by 1% across the company (including offices) every year. (comparing to: FY2010)

[2] Resource Recycling

A. Green Products	Improving recyclability	Automobiles	<ul style="list-style-type: none"> ◆Continue to implement measures to comply with the Act on Recycling, etc. of ELVs. ◇Promote design suitable for recycling for new models to increase the actual recycling rate to 95% by 2015. ◆Continue to implement measures to make parts and materials more detachable/separable.
B. Clean Plants and Offices (Dealers)	Manufacturing plants	Automobiles	<ul style="list-style-type: none"> ◆Continue the appropriate disposal of waste and the suppression of waste generation. ◇Continue the appropriate management of waste and the suppression of waste generation by increasing the yield and packaging methods. ◆Continue zero emissions (zero landfill waste either directly or indirectly) at both domestic and overseas plants. ◇Continue zero emissions at both domestic and overseas plants. ◆Reduce water use at both domestic and overseas plants. ◇Reduce water use across Group companies in and outside Japan.
		Industrial products	<ul style="list-style-type: none"> ◆Continue the recovery of used bumpers. ◇Continue the recovery of used bumpers.
	Offices (Domestic dealers)	Automobiles	<ul style="list-style-type: none"> ◆Continue the recovery of used bumpers. ◇Continue the recovery of used bumpers.

[3] Pollution Prevention and Reduction of Hazardous Chemical Substance Usage

A. Green Products	Reduction in exhaust gas	Automobiles	<ul style="list-style-type: none"> ◆Foster the introduction of low-emission vehicles for the improvement of air quality. ◇Japan: Increase the number of FHI's automobile models achieving emissions by 75% lower than the 2005 emission standards. ◇Overseas: Foster the introduction of low-emission vehicles to improve air quality in each country and region.
	Reduction in noise	Automobiles	<ul style="list-style-type: none"> ◆Develop technologies to achieve higher fuel economy and reduction in exhaust gas and noise. ◇Develop noise reduction technologies in consideration of the driving conditions on urban roads.
	Reduction in the use of substances of concern	Automobiles	<ul style="list-style-type: none"> ◆Foster management and reduction in the use of substances of concern. ◇Enhance the management of chemical substances used in products. ◆Overseas: Ensure compliance with related laws and regulations, including the EU directives. ◇Develop technologies to foster replacement with substances with lower environmental impact.
B. Clean Plants	Management and reduction in the use of substances of concern at manufacturing plants	Automobiles	<ul style="list-style-type: none"> ◆Continue to reduce the release of PRTR substances to the environment. ◇Identify and manage the chemical substances regulated by the PRTR law and reduce the use of these substances. ◆Further reduce per-unit VOC emissions (g/m²) from manufacturing lines. ◇Reduce per-unit VOC emissions to below 41.3 g/m². (a 54.9% reduction from the FY2001 level) ◆Conduct activities to reduce leakages of hazardous substances to outside the premises, complaints, and non-compliance with the legal standards to zero. ◇Conduct activities to reduce environmental incident, complaints, and non-compliance with the legal standards to zero. ◇Set stricter voluntary standards and conduct small-risk elimination activities.
		Industrial products	<ul style="list-style-type: none"> ◆Conduct activities to reduce leakages of hazardous substances to outside the premises, complaints, and non-compliance with the legal standards to zero. ◇Conduct activities to reduce environmental incident, complaints, and non-compliance with the legal standards to zero. ◇Set stricter voluntary standards and conduct small-risk elimination activities.

[4] Environmental Management

A. Green Products	Research on traffic environments	Automobiles	<ul style="list-style-type: none"> ◆Work further on ITS and foster the development of traffic accident prevention technologies for a safer and more comfortable motorized society. ◇Foster measures for the development of an advanced safety vehicle (ASV). ◇Foster measures for the development of a driving safety support system (DSSS). ◆Foster the use of the advanced safe driving system and develop technologies to further sophisticate it. ◇Develop more technologies for the expanded use of the "EyeSight (ver. 2)" advanced safe driving system.
	Promotion of lifecycle assessments	Automobiles	<ul style="list-style-type: none"> ◆Disclose more lifecycle assessment (LCA) data. ◇Disclose LCA data starting with cars that have undergone full model changes.
Improving Environmental Management	Green procurement activity	Automobiles	<ul style="list-style-type: none"> ◆Request both domestic and overseas suppliers to establish and maintain environmental management systems. ◇Request suppliers, including new supplies to maintain the systems. ◆Reduce the use of substances of concern. ◇Review and revise the green procurement guidelines as necessary. ◆Set the supplier CSR guidelines and distribute the copies to suppliers. (Aerospace and Industrial Products Companies) (Already set and distributed by the automotive business unit) ◇Encourage suppliers to enhance the management and reduce the use of substances of concern in parts and materials. ◆Set the guidelines and increase suppliers' awareness of the guidelines.
		Industrial products	<ul style="list-style-type: none"> ◆Support all dealers in maintaining the "Eco Action 21" certification. ◇Support all dealers in maintaining the "Eco Action 21" certification. ◆Give support to dealers' environmental activities. ◇Support the voluntary implementation of environmental measures, such as energy conservation and waste reduction measures under the "Eco Action 21".
		Automobiles	<ul style="list-style-type: none"> ◆Continue to participate in environmental events, make exchanges with local inhabitants, and hold plant tours. ◇Proactively continue to hold plant tours and events within the premises, and give environmental classes. ◆Continue to conduct cleanup and greening activities, including biodiversity conservation efforts. ◇Continue cleanup activities around the premises. ◆Give support to environmental organizations' activities. ◇Foster greening activities in consideration of biodiversity conservation.
	Disclosure of Environmental Information	Automobiles	<ul style="list-style-type: none"> ◆Timely disclose environmental information through regular publication of reports and other documents. ◇Report about environmental activities in the CSR report and provide latest information at the website. ◆Improve and enhance the content of environmental reports. (compliance with the environmental reporting guidelines, inclusion of Group companies in the scope of reporting) ◇Foster compliance with the environmental reporting guidelines and improve the content of environmental reporting.
		Industrial products	<ul style="list-style-type: none"> ◆Participate in environmental fairs to publicize the company's environmental measures. ◇Continue to participate in Eco-Products to widely publicize the company's eco-friendly products and services.
	Implementation of environmental education and awareness activities	Automobiles	<ul style="list-style-type: none"> ◆Continuously enlighten employees through in-house magazines and other media. ◇Hold more education, enlightenment and presentation events for the environment. ◆Continue to hold lectures and workplace meetings to present improvement examples.
		Industrial products	<ul style="list-style-type: none"> ◆Maintain ISO 14001 certification for the integrated EMS at all the bases. ◇Share the internal auditing and environmental education systems for more rational EMS activities. ◆Make continuous improvements to the EMS. ◇Encourage more subsidiaries to acquire certification for the integrated EMS to level up the system. ◆Increase cooperation with subsidiaries to maintain and enhance the consolidated EMS.
	Environmental Management System Establishment	Automobiles	<ul style="list-style-type: none"> ◆Increase cooperation with subsidiaries to maintain and enhance the consolidated EMS. ◇Encourage more subsidiaries to acquire certification for the integrated EMS to level up the system.

*1 SIA

*2 Eco-Action21: The environmental management system based on ISO14000 set by the Ministry of the Environment to help environmental activities of small- to medium-sized corporations.

Clean Products

Approaches and Strategy to Fuel Efficiency

Compared with other car manufacturers, SUBARU is unique manufacturer in terms of offering carefully selected models and producing cars that embody driving safety and fun by combining a horizontally-opposed engine, symmetrical AWD, and integrated safety performance.

In today's environmental era, we hope to provide customers with a range of products that they truly want by making the best use of our uniqueness. Our primary focus is to improve fuel efficiency, followed by innovation and then final good is to offer cars that meet customer's needs.

In Japan we will release a series of products with fuel economy higher than the FY2015 Fuel Economy Standards for all the classes by starting with the new IMPREZA, which is equipped with a new-generation BOXER engine (entirely remodeled for the first time in 21 years), a new, lighter

and more energy-efficient Lineartronic CVT, and also with a lighter and low-resistant body.



(From rear left) Hideyuki Arai, Yoshio Yamanaka
(From frontleft) Masaya Kudo, Toshiro Sekine (PGM),
and Yoshiyuki Shimizu
Environmental PGM Group SUBARU Engineering Division

Fuel Economy Standards

Japan Clearing the FY2010 Fuel Economy Standards in All the Weight Categories

Gasoline-powered passenger cars meeting the 2010 Fuel Economy Standards accounted for about 94% of the total production, clearing the FY2010 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.

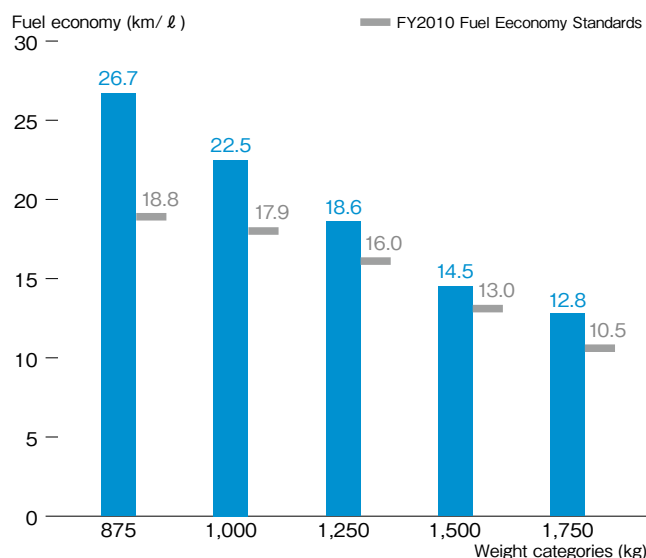
The number of automobiles which meet the FY2010 Fuel Economy Standard for Eco-car Tax Break System has accounted for 81.3% of the total, an increase of 9.8 points compared with FY2011.

United States Meeting the Model Year 2011 Corporate Average Fuel Economy (CAFE) Standards

We met the MY2011 CAFE standards for passenger vehicles and light trucks as a whole.

We will make further efforts to release vehicles with higher fuel economy to meet the fuel economy standard and CO₂ emissions standards that are becoming stricter and stricter across the globe.

Compliance with the FY2010 Fuel Economy Standards



Improving the Engine

For the first time in 21 years, we developed a new-generation engine to replace the EJ engine long mounted on SUBARU vehicles. The FB engine developed to meet an increase in the needs for higher environmental performance provides higher fuel efficiency and practical output performance focusing on medium- to low-speed torque, in addition to having the inherent merits of a horizontally opposed engine. This engine will be the mainstream next-generation engine for SUBARU vehicles.

As for the lineup of the engine, three types are available, including 2.5-liter, 2.0-liter and new 1.6-liter engine replacing the conventional 1.5-liter engine. Except for the engine block, almost the same components are adopted for the three types to achieve both high fuel economy and output performance. The new 1.6-liter engine, with the displacement increased by 100 cc compared with a conventional 1.5-liter engine, has higher output performance across the speed range, optimizing linear responses to acceleration to improve both comfort in driving and fuel economy.



FB engine

Improving the Transmission

We developed a light, compact and highly environment-friendly CVT. This transmission, by being used in combination with the new-generation BOXER engine, provides far better environmental performance and engine performance. In particular, the chain-type CVT adopted for the new Lineartronic system provides both a wide transmission range and high transmission efficiency for higher fuel economy. At the same time, the CVT enables smooth transmission as its feature and allows the vehicle to make linear responses according to the driver's intention.



New Lineartronic CVT

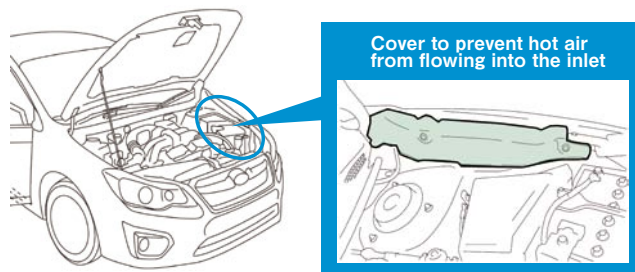
Measures to Improve the Actual Fuel Economy of All Vehicles

We are proactively improving the fuel economy of its vehicles for users. Specifically, we are improving the engine and transmission characteristics, reducing air resistance and the rolling resistance of tires, and decreasing the engine load through optimal air conditioning with a view to increasing fuel economy without compromising comfort in driving and the in-vehicle environment.

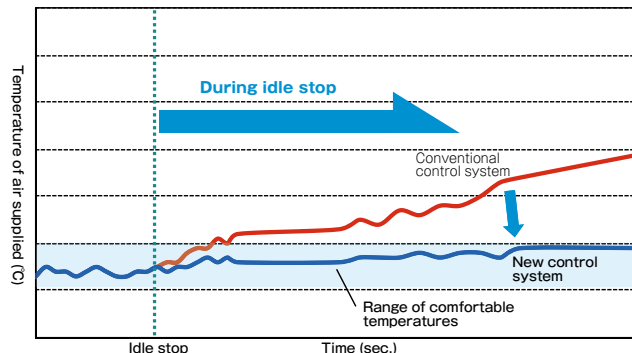
For the new IMPREZA, we added a cover to prevent hot air inside the engine room from flowing into the air conditioner inlet, while also devising a better method to introduce external air to the engine room to save energy used for air conditioning.

Moreover we have devised a means to keep the in-vehicle space comfortable even while the engine is being stopped by the idle stop function. To maintain the air conditioning performance level even while the engine is being stopped especially in summer, the air conditioner is controlled in a more exquisite manner. For example, we have added a temperature sensor to inside the air conditioning system to keep the temperature and amount of air supplied from the system at a comfortable level. We have thus made it possible to prolong the idle stop duration to increase fuel economy while keeping the in-vehicle space comfortable.

We will continue to improve the actual fuel economy of our vehicles giving due consideration to the environment.



Temperatures of the air supplied by the air conditioning system during idle stop



Approaches and Strategy to Eco Driving Assist Devices

We introduced Eco Driving Assist Devices—the Eco Gauge and Shift-Up Indicator (for MT vehicles)—to the LEGACY in 2006, for better man-machine communications. Since then, the number of models featuring these devices has gradually increased.

The new IMPREZA is now equipped with a more readable Eco Gauge (all vehicles) and Shift-Up Indicator (except North American models), as well as an idle stop system, the first among SUBARU cars.

We will continue to develop Eco Driving Assist Devices that enable drivers naturally to drive in an environment-friendly manner through easy-to-read devices.



Kenichi Yamamoto
Deputy General Manager
Total Vehicle Performance Integration Dept.
SUBARU Engineering Division

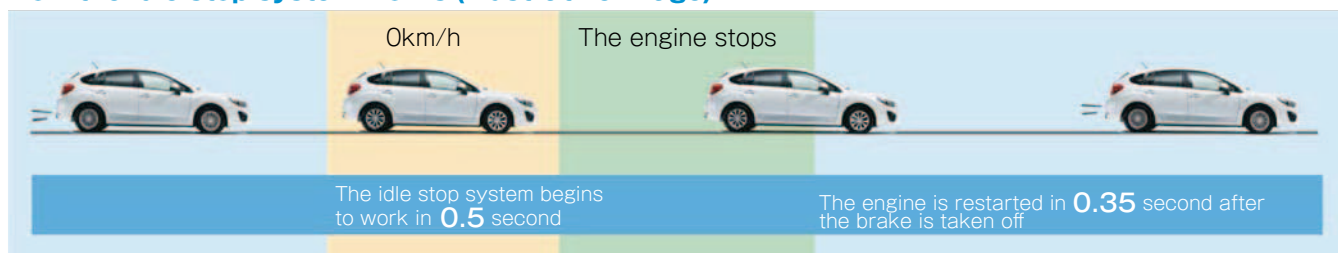
Idle Stop System

We developed a unique SUBARU idle-stop system to increase fuel economy without compromising comfort in driving from drivers' viewpoint.

While a driver of a car equipped with an idle-stop system using a general starter can restart the vehicle only after the engine completely stops, a driver of a car equipped with an

idle stop system using a tandem solenoid starter can restart the vehicle even before the engine completely stops. We have therefore adopted the latter starter for our idle stop system, which allows drivers to restart their cars immediately after coming to a stop at a traffic signal or in congestion.

How the idle stop system works (illustrative image)



Displaying Fuel Economy Information

Eco Gauge

The Eco Gauge needle indicates fuel efficient driving. Drivers can expect to improve fuel economy by about 5% (in-house testing) by consciously controlling the accelerator to keep the needle in the “+” or “green” direction.



Shift-up Indicator

When an optimal engine rpm is reached, the indicator starts blinking, prompting the driver to shift up.



Low Exhaust Emissions

Basic Concept of Low Exhaust Emissions

Substances such as carbon monoxide (CO), hydrocarbons (HC), and nitrogen oxides (NOx), which are emitted from automobiles, are one of the causes 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 by the Ministry of Land, Infrastructure, Transport and Tourism) that meet standards stricter than the regulations.

We are launching low emission vehicles that meet strict global regulations to the market.

Target of Low Exhaust Emissions

With further technical developments, we are working to expand low emission models which outperform the 2005 emission standards by 75% reduction.

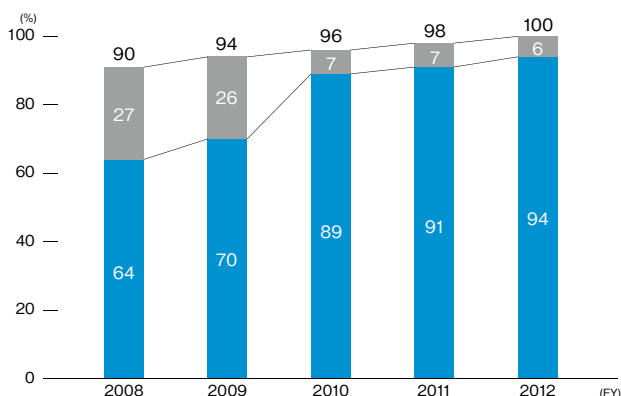
Increases in the Number of Models Certified to Be Low-Emission Vehicles

All SUBARU vehicles equipped with NA 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 94% of the total production quantity of SUBARU gasoline-powered passenger cars, with the percentage of models certified by the Ministry to be low-emissions vehicles reaching nearly 100% of the total.

We will continue to make efforts to release even more low-emission vehicles.

Percentage of Low-Emission Gasoline-Powered Passenger Cars

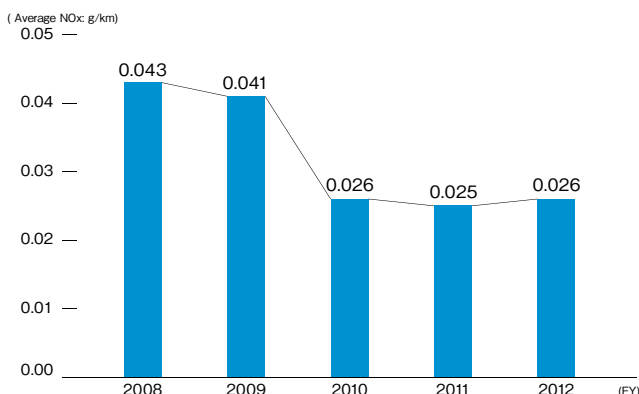
- Certified to have achieved a 50% reduction from the 2005 regulatory values (★★★)
- Certified to have achieved a 75% reduction from the 2005 regulatory values (★★★★)



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

High concentrations of NOx are worried to harm human health, cause acid rain, and give various other adverse impacts to the environment. 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. FHI will continue to release low-emission vehicles into the market.

Average NOx Emissions of SUBARU Vehicles*1



*1 Calculated from the values meeting corresponding regulation (10.15 + JC08 mode) at the time of shipment. The current mode means the JC08 mode for new models and the combined mode of the 10.15 mode and the JC08 mode for existing models.

Trends in Shipments of Cars Certified as Low Emission in FY2012

(Shipments of cars certified to have high fuel economy with low economy and low emission*2)

		Passenger car		Truck		Percentage of total
		Standard cars Small cars	Mini cars	Standard cars Small cars	Mini cars	
Low-emission car	Electric vehicle	0	0	0	0	0 (0%)
	Certified to have achieved a 75% reduction from the 2005 regulatory values (★★★★)	76,439	32,118	0	40	108,597 (61.8%)
Car certified to have high fuel economy with low emissions	Certified to have achieved a 50% reduction from the 2005 regulatory values (★★★)	466	467	0	1,810	2,743 (0.5%)
Total		76,905	32,585	0	1,850	111,340 (62.3%)
Total shipment						178,689 (100%)

*2 Cars which achieved in advance the FY2010 fuel economy standard based on the Energy Saving Act and were certified as low emission cars according to the low-emission cars certification procedure.

Noise Reduction

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

For the new IMPREZA released in December 2011, we have adopted the BOXER engine and new-generation Lineartronic CVT 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 REACH regulations*1, 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.

FHI is enhancing its supply chain management by using the IMDS*2 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.

*1 REACH regulations are implemented in Europe on all chemical substances to ensure that the substances are managed and controlled according to the risks they might pose to human health and the environment.

*2 The International Material Data System (IMDS) is a system managed by the Japanese, American and European automobile companies.

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 fuels to replace conventional fuels.

For all SUBARU gasoline-powered vehicles sold across the world, FHI has completed the measures to meet the requirements for E10 fuel (E3 fuel in Japan) for gasoline-powered vehicles and the requirements (on the functions and reliability) for B7 fuel for diesel-powered vehicles.

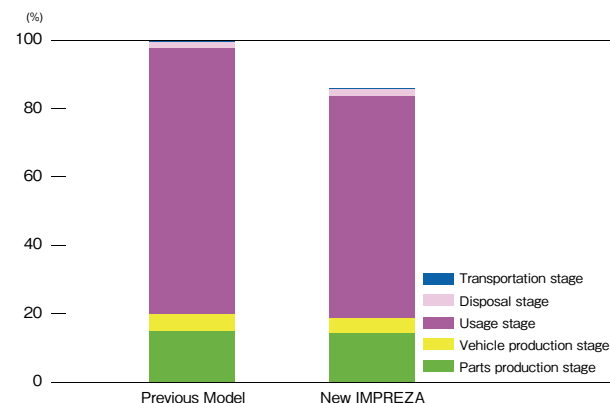
We will continue to implement measures to foster the diversification of automobile fuels toward the creation of a sustainable motorized society.

Life Cycle Assessment

Life Cycle Assessment (LCA) quantitatively evaluates the environmental impact across the entire life cycle of a vehicle. We are working to reduce the environmental impact throughout the life cycle of our cars.

According to the LCA carried out on the new IMPREZA, which was fully redesigned in FY2012, overall CO₂ emissions for the car have been reduced by 14% compared to the previous model.

LCA of New IMPREZA



VOICE

SUBARU's LCA includes calculations concerning a number of parts used in a car. The calculation formula was based on studies conducted over several models that are actually on the market. In determining the appropriate formula, we considered reliability and objectivity by comparing and testing the results using different calculation methods.

Yoshitada Michiie
Environment and Safety Policy Planning Dept.
SUBARU Engineering Division



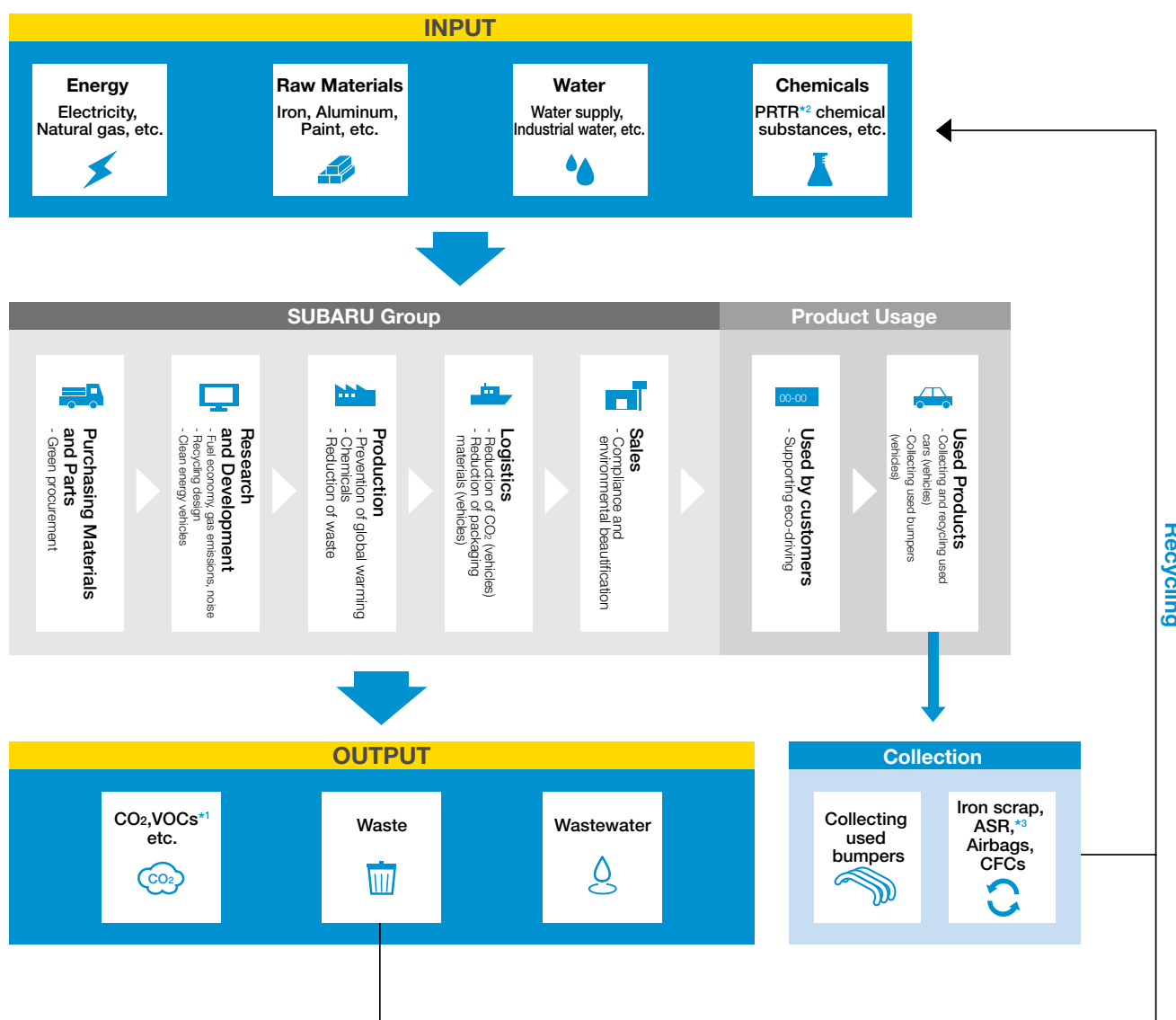
Clean Plants and Offices

Major Resource Inputs and Waste Emissions in Car Manufacturing

We are a transportation manufacturer focusing on automobiles. Automobiles, a convenient and comfortable form of transportation, are now indispensable for living in a modern society. On the other hand, automobiles draw on limited global resources as materials and fuels. Consequently, they emit CO₂, which causes global warming, as well as other air pollutants. We have to work very hard to realize an affluent

automobile society but fully understand that automobiles also have disadvantages as well as their benefits. With these in mind, we must work even harder for a better future. SUBARU accepts the task of working towards the fusion of a global environmental response (drastically improving fuel economy and reducing gas emissions) with the benefits of automobiles (pleasant driving, comfort, and reliability) 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



*1 VOC: Volatile Organic Compounds. Chemicals that are volatile at normal temperature, including formaldehyde and toluene. Regarded as one of the causes of photochemical oxidants.

*2 PRTR: Pollutant Release and Transfer Register. System for tracking, compiling, and reporting on the discharge, usage, and transportation of pollutant chemicals.

*3 ASR: Automobile Shredder Residue. Residue after scrapped metals for recycling have been removed from shredded car bodies. Also known as Shredder Dust.

Approaches to Preventing Global Warming

We have installed a total of six natural gas cogeneration systems in Utsunomiya Manufacturing Division, Gunma Manufacturing Division, 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 as a countermeasure against power supply shortages.

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 203,000 tons of CO₂ was emitted in FY2012. This was 26% lower than the level of FY1991. We successfully achieved our FY2012 target set in the 4th Voluntary Plan for the Environment, which was a "15% reduction for the total CO₂ emissions volume against FY1991," and then realized our subsequent target to "further reduce CO₂ emissions by 22% against the FY1991 level."

Energy Saving During Summer

Power shortages have become increasingly serious following the Great East Japan Earthquake. During summer 2011, when supply insufficiencies were common, we participated in reducing the nation-wide peak power usage as a member of the automobile industry by altering our business closing days from weekends to Thursdays and Fridays. We also managed to keep power consumption at our business sites, where power is supplied by Tokyo Electric Power Co., Inc., down to 85% of the allowance by increasing the efficiency of our business operations and introducing our own power generation systems.



Energy saving promotion poster

Our Efforts

Shinjuku SUBARU Building, Omiya SUBARU Building, SUBARU General Training Center

Super Cool Biz as an Energy Saving Measure

In the Shinjuku SUBARU Building, Omiya SUBARU Building, and SUBARU General Training Center, we adopted the "Super Cool Biz scheme" from June 1 to October 31 as a part of our FY2012 summer energy saving measures. The Super Cool Biz scheme allows employees to wear light and less formal clothing in the office during the summer time so

that they can work comfortably with the room temperature set to 28°C+1°C. This group effort by many employees resulted in reducing power consumption by 15% during the period.

Our Efforts

System Data Center

Reducing the Number of Servers

The System Data Center is replacing its servers with energy-saving models one by one. The new models can host multiple systems on a single server, and we are further reducing the number of servers by integrating them. The maximum number of servers possessed by the Center was about 350, which was reduced by 45 at the end of March 2012. This can be converted to an 88,695 ton-CO₂ emissions reduction^{*1} per year. The fewer the number of servers, the less the heat to be exhausted. Thus, the workload of the air conditioners has also been reduced, as well as our power usage contract. We are continuing our efforts by aiming to reduce the

number of servers to approximately 100 by the end of FY2017.

*1 The calculation uses the government-recommended CO₂ emission factor (0.375 kg-CO₂/kWh), suggested in the Ministerial Ordinance Concerning Calculation of Carbon Dioxide Equivalent Greenhouse Gas Emissions by Specified Emitters' Business Activities (Ordinance of the Ministry of the Environment No. 3 of 2012).

Our Efforts

SUBARU Parts Distribution Center

Replacing SUBARU Parts Distribution Center Lighting with LED Lights

SUBARU Parts Center has been systematically updating the premises' lighting. In March 2012, we changed all the lighting in the premises from conventional fluorescent lights to LED lights—which have the advantage of much lower energy consumptions—as a part of our energy saving activities. The replacement LED lights achieved a 61.9% reduction in lighting

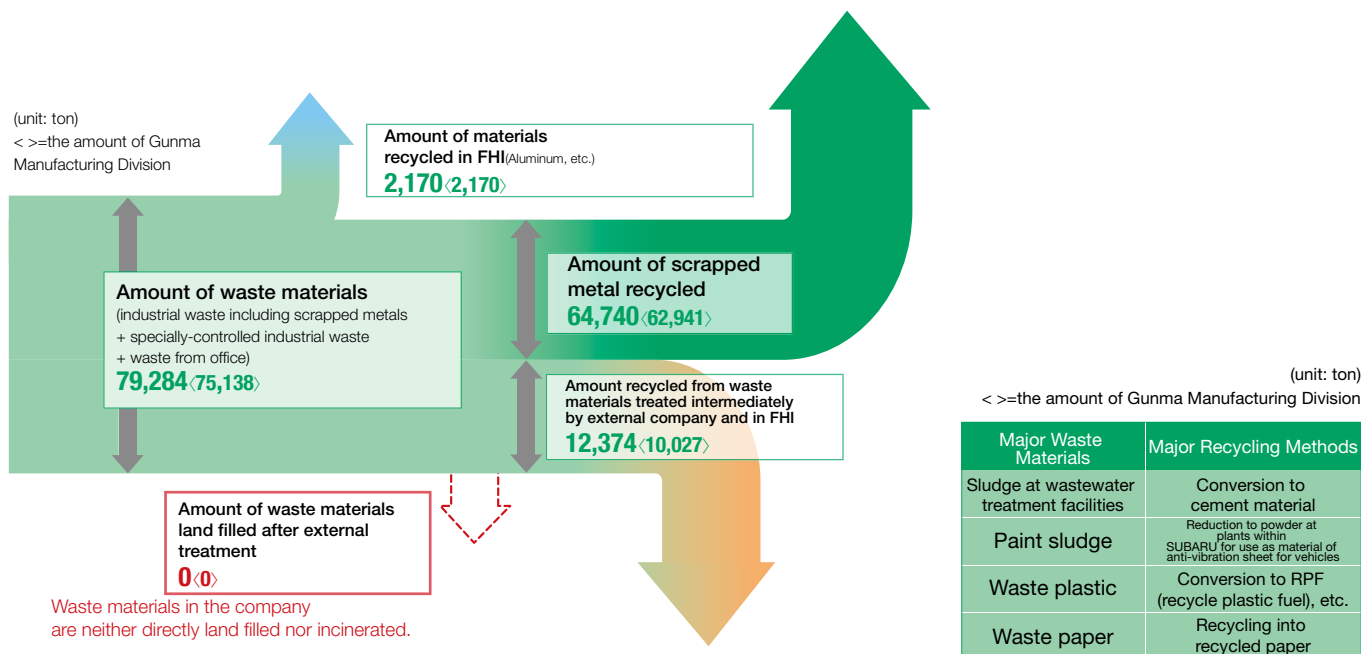
power consumption, while also increasing brightness by 1.3 times over previous levels, where necessary.

Waste Reduction

Maintaining Zero Emissions for Waste Materials at All Manufacturing Plants

All manufacturing plants have maintained zero emissions for waste materials since 2004. Outline of waste materials generated and treated in FY2012 is as follows.

Outline of Waste Materials Generated and Treated at All Manufacturing Plants and Automobile Manufacturing (Gunma Manufacturing Division) in FY2012

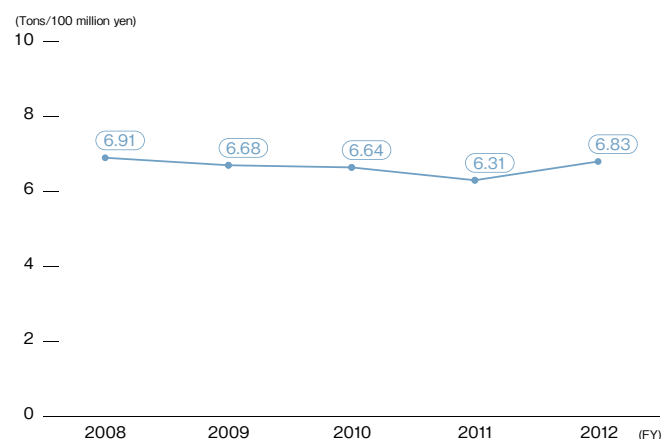


Efforts to Reduce Waste Materials

Since we consider that the generation of waste materials itself is a "waste," we have been making a continuous effort to achieve "zero emissions" and to curb the generation of waste materials.

We have been striving to effectively utilize resources by improving the yield ratio of raw materials used in the production stages and enhancing coating efficiency at paint factories. The right graph shows the indexes obtained by dividing the ratio of the amount of by-products under the laws for the Promotion of the Effective Utilization of Resources. In FY2012, we got the best result ever: 6.83 ton/100 million yen.

Amount of By-products Generated to outputs of Products



Green Logistics

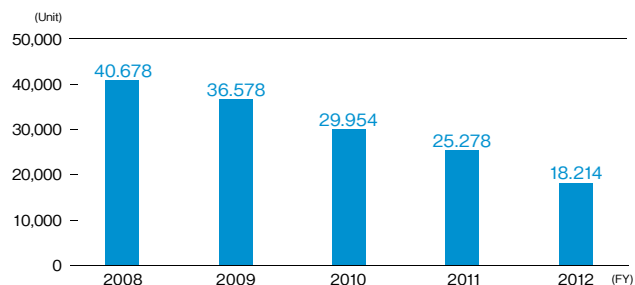
Reducing Environmental Burden by the Completed Vehicles Transportation

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

In FY2012, 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 18,214.

As we pulled out from mini car production in FY2012, all the cars for shipment became standard-sized cars. Although this increased the total shipping weight, the shipping fuel efficiency was limited to a fall of less than 1% from the previous year by promoting eco-driving and improving vehicle equipment, such as by increasing the usage of a digital tachographs in cooperation with transportation companies.

Number of Vehicles Carried through Cooperative Transport

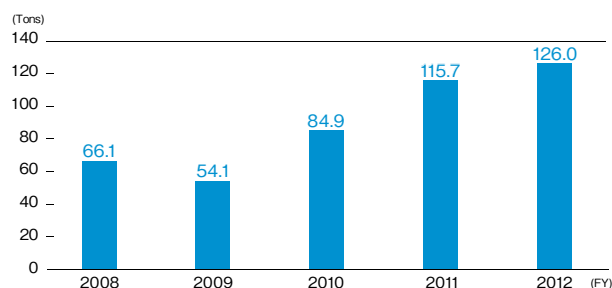


Reuse of Packaging Materials

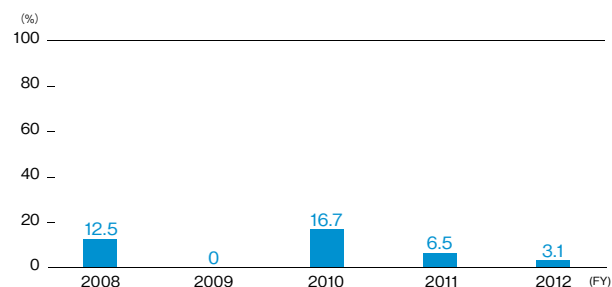
SUBARU Logistics Co., Ltd., which handles packing designs for knockdown parts, has been involved in activities to reduce environmental burden primarily focusing on the reuse of packaging materials. They started a project in the latter half of FY2006 to reuse packing materials of expanded polystyrene foam for engine parts. The 1st stage started in March 2006, followed by the 2nd from December 2007, the 3rd from March 2009, and 4th from June 2011 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.

Amount of Styrene Foam Packaging Materials for Reuse



Amount of Newly purchased Styrene Foam Packaging Materials



Status of reuse checking and keeping of packaging materials

Clean Sales and Services

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 first received certification in January 2009, followed by all the other SUBARU authorized dealers in Japan (44 companies) by March 2011. SUBARU will continue to support dealers with their voluntary environmental conservation activities.



Koshinetsu/Hokuriku SUBARU certification ceremony



Shizuoka SUBARU certification ceremony

Utilization of Recycled Resin Made from Used Bumpers

SUBARU is utilizing recycled resin for some of the interior and exterior components in its cars. This resin is made from the used bumpers collected through SUBARU dealers.



Collected used bumpers

Our Efforts

CHIBA SUBARU

Environmental Volunteer Activities

CHIBA SUBARU conducts a variety of environmental activities. As a part of the orientation for new starters, employees participate in clearing the areas near the office together with the local volunteer group. Last year the volunteers cleaned up the nearby beach. Such activities will raise awareness among new employees that "we are not simply helping in environmental activities, but are actually contributing to the local community as members of society."

We installed a donation box in each business site eight years ago and the money offered by employees and customers is donated to prefectural environmental groups to help recover nature in the area. We also organize a charity market on "Thanks Day," which takes place twice a year, and the profit from the market is donated to the Red Cross Society and Fukushima Prefecture. Finally, three years ago we introduced ecocap collection boxes to collect PET bottle caps in different business sites. The collected caps are sent to an NPO that uses them to fund vaccines for children in developing countries. Our social contributions thus span the range from local to international.



Automobile Recycling

Promotion of Recycling Conscious Design

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

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 and following models.



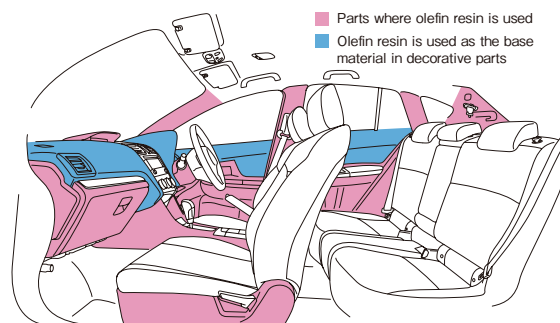
Material Identification Improvement

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 car models, including the LEGACY, IMPREZA, FORESTER, EXIGA, and the BRZ.



Easily Recycled Materials

We are using Olefin Resin, which is extremely easy to recycle, as the resin material for the interiors and exteriors of most new and remodeled vehicles. We will continue to expand usage of recyclable materials.



Reduction of Substances of Environmental Concern

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

Reduction Targets and JAMA's*1 Voluntary Action Program for New Models

Substance	Target (period achieved)	Details of Reduction Efforts
Lead	Since Jan. 2006	Reduce the amount per a 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

*1 JAMA: Japan Automobile Manufacturers Association, Inc.

Our Efforts

Aiming at Recycling Conscious Design

We are promoting the importance of vehicle design that allows easy disassembly in the annual CS training session for young technicians in their second year in the company. As a result of such efforts, recycling-conscious designs are being increasingly employed. For example, all SUBARU cars now have air conditioner valves above the engine space so that the CFC gas can be more easily removed.

SUBARU Engineering Division



Reducing VOCs*1 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*2 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.

*1 VOC (Volatile Organic Compounds)

Organic compounds easy to volatilize at ordinary temperatures, such as formaldehyde and toluene. Recently thought to be one of primary factors in "sick house syndrome," which can cause irritation to the eyes, nose, and throat when entering new houses or buildings.

*2 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 vehicle 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 (ELV)

The Act on Recycling, etc. of End-of-Life Vehicles (Automotive Recycling Law) enforced in 2005 obligates car manufacturers to fully remove and appropriately treat "automobile shredder residue," "CFCs," and "airbags." We joined the "Automobile Shredder Residue Recycling Promotion Team (ART)" particularly to achieve appropriate treatment of shredder residue and promote recycling.

In the first year after the Automotive Recycling Law enforcement, we achieved a 70% recycling rate compared to the minimum 30% standard specified by the law. In FY2012, we raised this to 93.7%—significantly greater than the minimum legal specification of 50%. These results attribute to the recycling rate improvement measures implemented through the united efforts of the Team and existing recycling facility partners, as well as the rising number of new recycling facility partners.

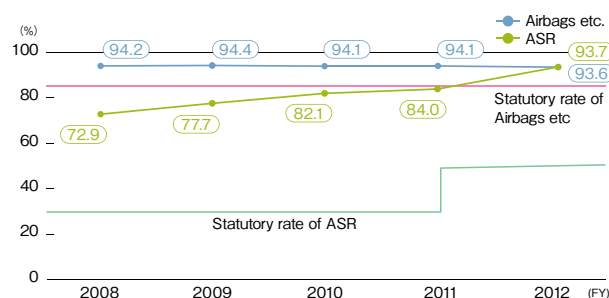
The recycling situation in the first half of FY2012 was particularly difficult due to the aftermath of the Great East Japan Earthquake. While several major recycling facilities were closed due to significant damage, the Team redirected the shredder residue to other operating facilities and to newly contracted facilities. Through such efforts, the Team managed the abovementioned 93.7% recycling rate, nearly 10% better than the 84.0% result for FY2011.

In such difficult situations, the Team also realized the zero disposal of "automobile shredder residue" in landfills in May 2011, which was originally our aim for the end of FY2012 (March 2012). We have maintained this record every month since then.

Along with other car manufacturers, Article 28 of the Automotive Recycling Law applies to us as we handle more than 90% of the automobile shredder residue.

We will continue to work together with other Team members and manufacturers to improve the recycling rate and contribute further to protecting the global environment.

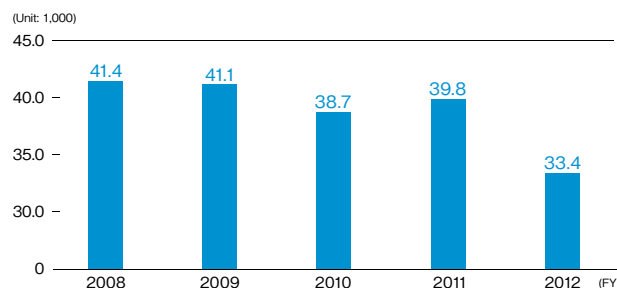
Statutory rate of recycling of ASR · Airbags etc.



Statutory recycling rate

ASR: 30%-(FY2006-FY2010)
50%-(FY2011-FY2015)
70%-(FY2016-)
Airbags etc.: 85%-

Number of Scrapped Bumpers Collected



Parts Produced from Scrapped Bumpers

Car Model	Parts
LEGACY	Trunk trim
FORESTER	Under floor cover
IMPREZA	Trunk trim

V O I C E

Our year started with handling the aftermath of the Great East Japan Earthquake. Some of the disaster-affected recycling facilities were forced to cease operations for about four months immediately following the Earthquake. To cope with such an extreme situation, the Automobile Shredder Residue Recycling Promotion Team (ART*3) united all efforts in distributing the recycling work across other facilities. As a result, the recycling rate significantly increased over the previous year, and we achieved zero waste sent to landfill within the term. Not only as a member of ART, but also as a member of Fuji Heavy Industries, I am proud that I was able to contribute in improving the recycling rate. We will continue to work on increasing the recycling rate, promptly responding to environmental changes.



Ikuo Tamura
Article 28 Compliance Team Leader
Automobile Shredder Residue
Recycling Promotion Team
Environmental Promotion Office

*3 ART: Automobile Shredder Residue Recycling Promotion Team

Environmental Activities of Overseas subsidiary Companies

Approaches to Global Environmental Activities

North American Environmental Committee

SUBARU Group organizes the North American Environmental Committee (NAEC), involving the four manufacturing and sales subsidiary companies in North America, SIA, SOA, SCI and SRD which have a particularly high environmental impact among our overseas subsidiaries. This committee meets twice yearly (or as needed) to share and spread successful cases with member companies, promoting efficient and streamlined environmental activities.

In FY2012, the NAEC held meetings in June and November. NAEC member companies reported their CSR and environmental activities to the Committee, and we also reported our environmental activities being undertaken in Japan. We are encouraging this Committee to further share SUBARU-related information across the world.

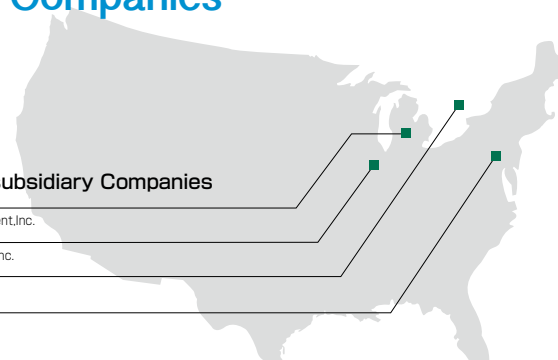
Establishing an Environmental Management System

All members of the North American Environmental Committee, that is, SIA, SOA, SCI, and SRD, had already acquired ISO 14001 Environmental Management System certification by December 2006 and have retained this certification since then. SIA, SOA, and SRD received integrated certification in FY2010. 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 28, 2012, SIA received ISO 50001 Certification from an international ISO certification body, DEKRA Certification, Inc., becoming the first car manufacturing plant in the U.S. to achieve this internationally recognized accreditation.

Major Overseas subsidiary Companies

- SRD: Subaru Research & Development, Inc.
- SIA: Subaru of Indiana Automotive, Inc.
- SCI: Subaru Canada, Inc.
- SOA: Subaru of America, Inc.



ISO 50001 details the requirements for energy management systems (EnMS), announced in 2011 as the international standard that provides organizations with management strategies to increase energy efficiency, reduce costs, and improve energy performance. SIA's accreditation demonstrates the company's commitment to continual improvement in the area of energy conservation and its environmental leadership within the auto industry. SIA was also the first U.S. car manufacturing plant to achieve ISO 9001 Quality Management Certification and ISO 14001 Environmental Management Certification.



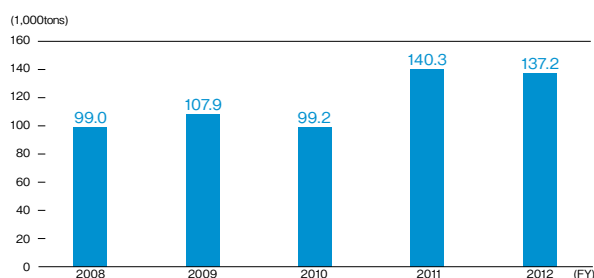
SIA Celebrating ISO Certification
(From Left) Tom Easterday (Sr. Vice President), Pierre Salle (DEKRA Certification, Inc.), Brent Lank (Energy Management System Administrator), Jim Edwards (Energy Specialist), Darring Spragg (Energy Manager), and Masaki Okawara (President & CEO)

Curbing Global Warming Activities

Achievements in FY2012

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 FY2012 totaled 137,293 tons-CO₂, a decrease of about 2.1% compared with 140,303 tons-CO₂ in FY2010.

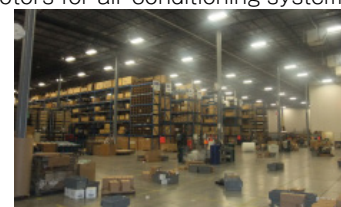
CO₂ Emissions



In order to reduce CO₂ emissions when production volumes are increasing, our North American companies are gradually replacing their lighting systems with low-energy consumption models.

SCI replaced 293 metal halogen lights in its warehouse and the Technical Training Center with T8 LED tubes, and installed 188 motion sensors in the warehouse to eliminate needless lighting when no staff are present. Within the first year of the installation, energy usage was reduced by 22.5%.

In SIA, 44 compressor motors for air conditioning systems were replaced with Variable Frequency Drives (VFDs). This successfully reduced annual CO₂ emissions by 4,638 tons-CO₂.

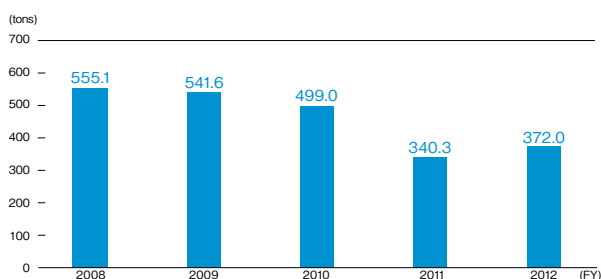


Efforts to Reduce Waste Materials

FY2012 Results

FY2012 disposal in landfills by the four companies in North America reached 372.0 tons, which is approximately 9% higher than 340.3 tons in FY2010. This was due to the significant increase in their business operations.

Landfill Waste Amount



The 3R Activities on Waste

The four companies in North America promote activities based on the 3Rs (Reduce, Reuse, and Recycle) to reduce the amount of waste generated.

SIA started composting three tons of scraps from its cafeteria. The compost is shared among employees and used in their gardens.

SRD aims to attain their recycle targets by holding regular 5S Days.*1 On the 5S Day, monthly recycling facts and tips are posted to all employees through emails, and recycling training sessions are held.



*1 5S are Seiri (Tidiness), Seiton (Orderliness), Seiso (Cleanliness), Seiketsu (Standardization), and Shitsuke (Discipline).

Other Activities

Earth Day 2011

The four companies in North America participated in the Earth Day and Earth Hour to raise environmental awareness among employees and help sustain energy resources.

In April 2011, SOA employees volunteered at Saddler's Woods near their office, to help clear trails, remove invasive plant species, and collect trash and debris. Also, a group of Western Region employees participated in a cleanup at the Bluff Lake Nature Center to remove invasive plants.



New Auto Parts Distribution Training and Office Complex Receives "LEED Silver"

November 2011 saw the opening of our "LEED Silver" Auto Parts Distribution Training and Office Complex in Portland. This facility further enhances SOA's environmental credentials, demonstrating a commitment to sustainable construction practices.



Environmental Education

SIA was accepted as a member of the Indiana Environment Stewardship Program in 2009, based on an evaluation of SIA's proactive participation in environmental activities. In FY2012, SIA gave presentations concerning the SIA's Environment Stewardship activities to more than 73 companies and over 1,000 members. SIA was also honored with "the Green Manufacturing Award" from the American Manufacturing Strategy Awards (AMSA) committee in recognition of their environmental schemes undertaken in the plant, and inducted into the AMSA Hall of Fame.

SRD Recognized as a Clean Corporate Citizen

Subaru Research and Development, Inc. (SRD) has once again been recognized as a Clean Corporate Citizen by Michigan State in June 2011, marking a total of six years. SRD is also a 4th term of participation in the Washtenaw County Community Partners for the Clean Streams program.

