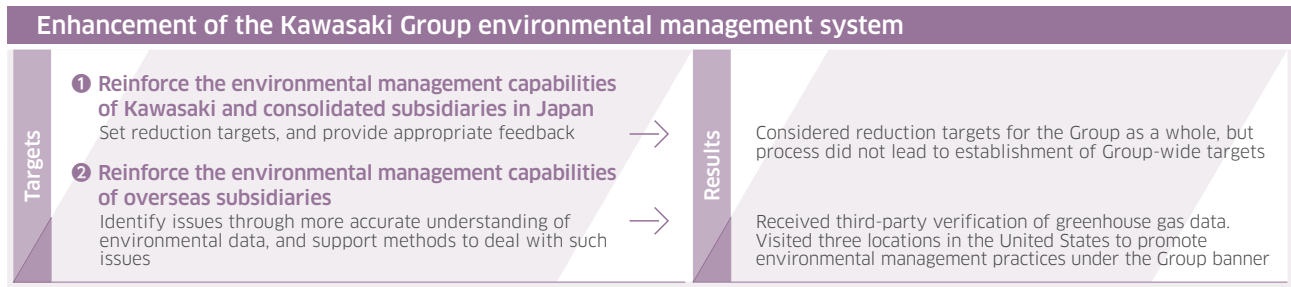


Establishment of Environmental Management Systems

Key Strategies and Targets under Eighth Environmental Management Activities Plan (FY2014–FY2016) and Fiscal 2016 Results



Toward Establishment of Environmental Management Systems

In our environmental management activities, we quantitatively assess the results of production activities through IT systems and repeatedly improve our operations.

In fiscal 2016, we added about 1,500 monitoring points into K-SMILE, a system introduced in fiscal 2014 to promote energy-saving activities through visualization of energy consumption at the production stage. This brings the total number of monitoring points to about 5,000.

We utilize ECOKEEP, an internal information management system introduced in fiscal 2012, to track progress on environmental management targets, manage environmental data and issue an electronic manifest for industrial waste.

1. Kawasaki Group EMS

To promote environmental management throughout the Group, Kawasaki and its subsidiaries embrace the practice of building an environmental management system.

As of fiscal 2016, all of the Company's manufacturing sites and domestic and overseas subsidiaries have either obtained ISO 14001 certification or simplified EMS certification, or established EMS through self-declaration. Details on the scope of environmental management within the Group and the latest information on the establishment of EMS are provided below. At sites that have already implemented an EMS, efforts are being directed into the collection of environmental data and the sharing of such data. Representatives began visiting sites, starting with large-scale operations, to ensure common policy on environmental management from a Group-wide perspective and to share information on local EMS status. In fiscal 2016, representatives made stops at three production sites in the United States.

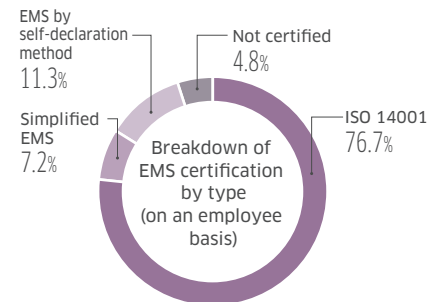


Figure 15: Breakdown of EMS Certification, by Type, within the Group (on an employee basis)

Note: Denominator is number of employees within the Group on a consolidated basis.

Table 5: Current Situations for Acquiring ISO 14001 (JIS Q 14001) Certification for Kawasaki Production Bases

Internal companies	Date acquired	Registration	
Ship & Offshore Structure Company	Kobe Works	Aug. 2002	DNV GL
	Sakaide Works	Aug. 2002	DNV GL
Rolling Stock Company	Feb. 2002	LRQA	
Aerospace Company	Feb. 2002	BSK	
Gas Turbine & Machinery Company	Gas Turbine Division	Mar. 2000	LRQA
	Machinery Division	Dec. 2000	NK
Plant & Infrastructure Company	Nov. 1999	JICQA	
Motorcycle & Engine Company	Feb. 2000	DNV GL	
Precision Machinery Company	Nishi-Kobe Works	Feb. 1998	DNV GL
	Robot Division	Mar. 2011	DNV GL

LRQA: Lloyd's Register Quality Assurance Limited, JICQA: JIC Quality Assurance Ltd., NK: Nippon Kaiji Kyokai (ClassNK), BSK: Bouei Kiban Seibi Kyoukai (Defence Structure Improvement Foundation), DNV GL: DNV GL Group

Table 6: Domestic Subsidiaries

Oversight organization	Company	EMS level*/ Date of establishment	
		EMS level*	Date of establishment
Ship & Offshore Structure Company	Kawasaki Techno Wave Co., Ltd.	1	Aug. 2000
	Kawaju Support Co., Ltd.	2	Dec. 2005
	Kawasaki Marine Engineering Co., Ltd.	3	Apr. 2013
	KHI JPS Co., Ltd.	3	Mar. 2008
Rolling Stock Company	Alna Yusoki-Yohin Co., Ltd.	1	Nov. 2008
	Kawasaki Rolling Stock Component Co., Ltd.	1	Aug. 2002
	Kawasaki Rolling Stock Technology Co., Ltd.	1	Aug. 2002
	Kansai Engineering Co., Ltd.	3	Aug. 2002
	Sapporo Kawasaki Rolling Stock Engineering Co., Ltd.	2	Jun. 2011
Aerospace Company	Nichijo Manufacturing Co., Ltd.	2	Oct. 2005
	Kawaju Gifu Engineering Co., Ltd.	1	Feb. 2002
	Kawaju Gifu Service Co., Ltd.	1	Feb. 2002
	KGM Co., Ltd.	1	Feb. 2002
Gas Turbine & Machinery Company	NIPPI Corporation	1	Dec. 2006
	Kawaju Akashi Engineering Co., Ltd.	1	Mar. 2000
	Kawasaki Thermal Engineering Co., Ltd.	1	Apr. 2002
	Kawasaki Machine Systems, Ltd.	1	Mar. 2000
	Kawasaki Prime Mover Engineering Co., Ltd.	1	Dec. 2002
Plant & Infrastructure Company	Kawasaki Naval Engine Service, Ltd.	3	Aug. 2016
	KEE Environmental Construction, Co., Ltd.	1	Dec. 2003
	EarthTechnica M&S Co., Ltd.	3	Apr. 2013
	Kawasaki Environmental Plant Engineering Co., Ltd.	1	Jun. 2002
	Kawaju Facilitatech Co., Ltd.	2	Jul. 2013
	Kawasaki Engineering Co., Ltd.	3	Oct. 2009
Motorcycle & Engine Company	EarthTechnica Co., Ltd.	1	Sep. 2000
	Kawasaki Motors Corporation Japan	1	Feb. 2008
	K-Tec Corp.	1	Dec. 2014
	Technica Corp.	3	Mar. 2012
Precision Machinery Company	Autopolis	2	Dec. 2011
	Union Precision Die Co., Ltd.	1	Jul. 2006
	Kawasaki Hydromechanics Corporation	1	Jun. 2007
Head Office	Kawasaki Robot Service, Ltd.	1	Apr. 2012
	Kawasaki Trading Co., Ltd.	1	Dec. 2004
	Kawaju Service Co., Ltd.	1	Feb. 2000
	Kawasaki Technology Co., Ltd.	3	Oct. 2011
	Kawasaki Life Corporation	2	Jul. 2006
	K Career Partners Corp.	2	Mar. 2007
	Benic Solution Corporation	2	Feb. 2006

Table 7: Overseas Subsidiaries

Oversight organization	Company	Location	EMS level*/ Date of establishment	
			EMS level*	Date of establishment
Rolling Stock Company	Kawasaki Rail Car, Inc.	U.S.A.	3	Jul. 2015
Gas Turbine & Machinery Company	Kawasaki Gas Turbine Asia Sdn. Bhd.	Malaysia	3	Mar. 2013
	Kawasaki Gas Turbine Europe GmbH	Germany	3	Mar. 2013
	Wuhan Kawasaki Marine Machinery Co., Ltd.	China (PRC)	1	Jul. 2009
Plant & Infrastructure Company	KHI Design & Technical Service Inc.	Philippines	3	Nov. 2011
Motorcycle & Engine Company	Kawasaki Motors Corp., U.S.A.	U.S.A.	3	Mar. 2013
	Kawasaki Motors Pty. Ltd.	Australia	3	Mar. 2013
	PT. Kawasaki Motor Indonesia	Indonesia	3	Jan. 2012
	KHITKAN Co., Ltd.	Thailand	1	Dec. 2011
	Kawasaki Comonants da Amazonia Ltda	Brazil	3	Jun. 2013
	Kawasaki Motores do Brasil Ltda.	Brazil	3	Jun. 2013
	Kawasaki Motors Europe N.V.	Netherlands	3	Feb. 2014
	Kawasaki Motors (Phils.) Corporation	Philippines	3	Jan. 2012
	Kawasaki Motors Manufacturing Corp., U.S.A.	U.S.A.	1	Apr. 2003
	Kawasaki Motors Enterprise (Thailand) Co., Ltd.	Thailand	1	Dec. 2011
Precision Machinery Company	Canadian Kawasaki Motors Inc.	Canada	3	Feb. 2013
	Kawasaki Precision Machinery (Suzhou) Ltd.	China (PRC)	1	Dec. 2007
	Kawasaki Precision Machinery (UK) Ltd.	UK	1	Nov. 2001
	Kawasaki Chunhui Precision Machinery (Zhejiang) Ltd.	China (PRC)	1	Nov. 2012
	Flutek, Ltd.	South Korea	1	Nov. 2005
	Kawasaki Robotics (Tianjin) Co., Ltd.	China (PRC)	3	Nov. 2012
	Kawasaki Robotics GmbH	Germany	3	Nov. 2012
Head Office	Kawasaki Robotics (U.S.A.) Inc.	U.S.A.	1	Feb. 2006
	KHI (Dalian) Computer Technology Co., Ltd.	China (PRC)	3	May 2013

*Level 1: ISO 14001 registration
Level 2: Simplified EMS certification
Level 3: Self-declaration of EMS establishment

TOPICS

In order to share information related to environmental management, we visited three business locations in the United States, including Kawasaki Motors Manufacturing Corp., U.S.A., our largest overseas production site, in fiscal 2016.

Enhancement of the Kawasaki Group's Environmental Management System

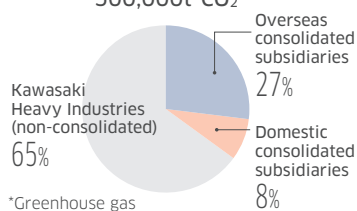
Environmental Risk Reduction

The environmental load of subsidiaries in Japan and overseas during fiscal 2016 accounted for 35% of the entire Group's CO₂ emissions, 38% of waste emissions, and 19% of water consumption, and management for the entire Group is thus required.

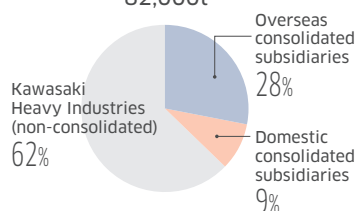
The Group has production bases in Europe, North America, South America, China, and Southeast Asia, in addition to Japan, and conducts operations according to the rules in each country and region. Even in the face of these differing situations, we set and follow up on targets for our environmental load, promote communication throughout the entire Group, and work to reduce environmental risks.



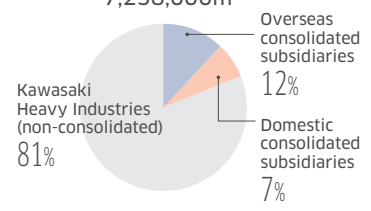
GHG* Emissions 500,000t-CO₂



Waste Emissions 82,000t



Water Consumption 7,258,000m³



Kawasaki Rail Car, Inc.

In 1985, Kawasaki established a subsidiary to locally produce commuter train cars for the Port Authority Trans-Hudson (PATH) PA-4 subway in New York. Kawasaki Rail Car (KRC) was established in 1989, under this subsidiary, to assume its parent's operations. Located in the New York suburb of Yonkers, KRC utilizes its geographical location to provide a range of services, including final assembly, testing and after-service of rolling stock, to New York City Transit and other customers in the region.

In 2015, the company introduced an EMS based on self-declaration and assigned a manager with environmental responsibilities to oversee environmental management practices.

Kawasaki Motors Manufacturing Corp., U.S.A.

Lincoln Plant

The Lincoln Plant of Kawasaki Motors Manufacturing, located in Lincoln, Nebraska, is a production base with a consumer products division as well as a rolling stock division. The company acquired ISO 14001 certification in 2003, and in fiscal 2016, achieved its environmental cost target—that is, expenses linked to electricity, city gas, water, wastewater and waste—of less than 0.773% of sales through monthly confirmation of progress toward this target and steps to reach the destination.

The Lincoln Plant is working on various fronts to make operations more environment-friendly, including such efforts as adjusting the placement of localized lighting, introducing sensor-equipped LED lighting, utilizing reusable containers and fixtures, switching from air driven tools to battery powered tools, and recovering drain steam.



Fixtures Enabling Container Storage
A dedicated reusable fixture is used on the end underframe of a railway car to enable standard container storage. As a result, the transport efficiency between Japan and the U.S. has been improved, and the reduction of wood waste has been realized.



Adoption of Battery Powered Tools
By switching from less energy-efficient compressed air driven tools to more efficient battery powered tools, we reduce the energy required to assemble our products.

Maryville Plant

The Maryville Plant of Kawasaki Motors Manufacturing, located in Maryville, Missouri, is a production base that focuses on general-purpose engines. The plant has obtained ISO 14001 certification and sets environment-oriented targets each fiscal year, which underpins its efforts in environmental management. In fiscal 2016, activities were directed toward boosting the recycling ratio, from the prevailing 75%, to 78%, and recycling 80% of the waste generated through new construction, and both targets were achieved. In Missouri's "Strive for 75" initiative to recycle more than 75% of waste, the Maryville Plant achieved a recycling ratio in excess of 80% for two consecutive years and was recognized with a state environmental excellence award from the non-profit Missouri Waste Control Coalition.

The Maryville Plant undertakes various practices to enhance its environmental footprint, including routine washing and reuse of gloves, efforts to raise its exchange ratio by sorting out valuables, taking ordinary waste out of industrial waste for separate disposal, and boosting transportation efficiency and cost efficiency by utilizing waste management companies that can dispose several types of waste.



Missouri Environmental Excellence Award
The Maryville Plant received a state environmental excellence award from the non-profit Missouri Waste Control Coalition.

Left: Steve Bratt (Vice President, Plant manager)
Right: Todd Turner (Supervisor, Maintenance Environmental & Recycling)

2. Compliance with Laws and Regulations

Within the Kawasaki Group, environmental management activities are undertaken in the Group's efforts to comply with environmental laws and regulations. In fiscal 2016, there were two cases requiring improvement with pipe dismantling work within some plants, including one for late notification of construction work such as the release of specified dust.

Regarding construction projects for upgrading plant facilities, we will work closely with contractors, regardless of project scale, to fulfill our responsibility as the ordering party.

3. Risk Management

In addition to approaches based on Company-wide risk management structures, we hold liaison conferences from time to time for personnel with environmental responsibilities at Group companies to ensure adherence to environmental laws and regulations, dissemination and full understanding of legal revisions, and the enhancement of their capabilities. These conferences, which are held under the direction of the head office, focus on compliance with environmental laws and regulations to preempt environmental accidents and other situations.

In fiscal 2016, no revisions were made to applicable laws, and therefore, no new approaches to legal risk were implemented.

4. Promoting Environmental Communication

● Raising Environmental Awareness

We conduct programs designed to enhance perception and awareness of environmental issues among each and every employee so that they can act with greater environmental consciousness in the community and at home in addition to the workplace.

- Articles in the Kawasaki internal bulletin
- President's message for Environment Month
- Distribute information, such as environmental data and case examples of energy savings, through intranet



Table 8: Number of Qualified Pollution Control Managers

Air	83
Water	72
Noise, vibration	42
Others	80
Total	277

Table 9: Number of Qualified Energy Managers

Energy managers	77
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● Environmental e-Learning

To maintain and improve environmental awareness among employees throughout the domestic Group, we offer environmental e-learning opportunities to new employees. This ongoing process is aimed at new employees at Kawasaki and domestic consolidated subsidiaries. In fiscal 2016, approximately 1,800 people participated in the environmental e-learning courses. The attendance rate was 93%.

● Cultivating Qualified Managers

To enrich management activities emphasizing energy and the environment, we are striving to cultivate individuals with legal qualifications required under laws and regulations related to energy and the environment. In addition, as an internal qualification, we offer training for internal ISO 14001 environmental auditors, through which 94 employees qualified as internal environmental auditors in fiscal 2016.

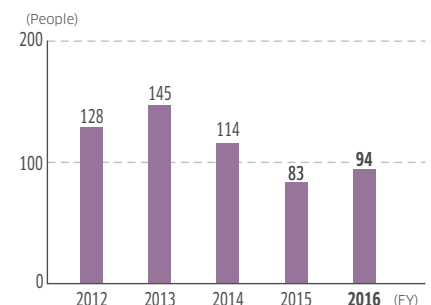


Figure 16: Number of Completed Training of Internal Environmental Auditors (ISO 14001)

Key Strategies and Targets under Ninth Environmental Management Activities Plan (FY2017–FY2019)

Enhancement of environmental management systems

Targets

① Reinforce environmental management capabilities and lower environmental risk

- Certified business sites to complete transition to ISO 14001: 2015
- Visit domestic and overseas production sites to better pinpoint status of environmental management