



Environmental Data Book 2018

ROHM Co.,Ltd.

INDEX

Outline of ROHM's	_____	2
Environmental Conservation Activities		
● Environmental Policy	-----	2
● Environmental Objectives	-----	3
● Targets and Results based on Environmental Policy	-----	4
● Environmental Management System	-----	5
Environmental Report	_____	6
● Highlights of Environmental Impact	-----	6
● Changes in Emissions of Environmentally Hazardous Substances	-----	8
● Transition of Water input	-----	10
● CO2 Emissions under the Scope3 Standard	-----	11
● Independent Verification of Environmental Data	-----	12
● Environmental Accounting	-----	13
● Approaches to Environmental Communications	-----	15
● Environmental Awards	-----	16

○ Period covered by this Report

Fiscal year 2017: April 1, 2017 to March 31, 2018

○ Scope of this Report

Covering 13 domestic bases and 9 overseas bases

Although RMT was not eligible for aggregation until FY2016 from FY2011 under the influence of the flood in Thailand, it was added from FY2017.

Kionix is not eligible for aggregation currently.

ROHM Shiga is not also eligible for aggregation in FY2017.

○ Abbreviated names for the Overseas Affiliates

For the purposes of this Report, the names of the Overseas Affiliates are abbreviated as follows:

REPI: ROHM Electronics Philippines, Inc.	(Philippines)
RIST: ROHM Integrated Systems(Thailand) Co.,Ltd.	(Thailand)
RSC: ROHM Semiconductor(China) Co.,Ltd.	(China)
REDA: ROHM Electronics Dalian Co.,Ltd.	(China)
RWEM: ROHM-Wako Electronics(Malaysia) Sdn.Bhd.	(Malaysia)
RMPI: ROHM Mechatech Philippines, Inc.	(Philippines)
RMT: ROHM Mechatech(Thailand) Co.,Ltd.	(Thailand)
Kionix: Kionix, Inc.	(America)

Environmental Policy

ROHM's Environmental Policy

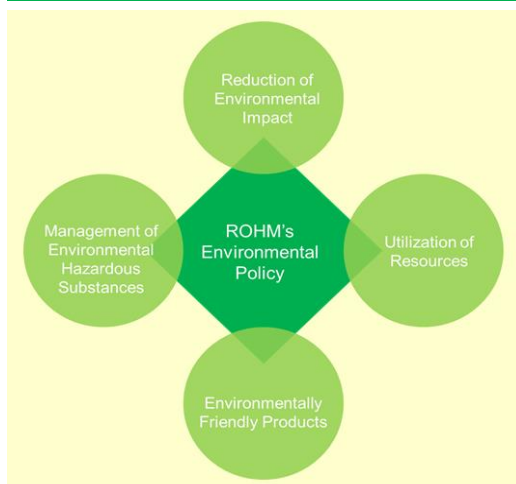
ROHM's everlasting conscientiousness to preserve the global environment contributes to the healthy existence of humanity and to the continued prosperity of the company.

1. Conserve energy by initiating innovative methods in all corporate activities.
2. Develop environmentally-conscious products that minimize the environmental burden by employing responsible processes throughout the life cycle of each product.
3. Give priority to the procurement of materials and products that have the least levels of adverse impact on the environment.
4. Promote effective utilization of resources and strive for the prevention of pollution and conservation of biodiversity toward the realization of a sustainable society.
5. Comply with international and national environmental laws and regional agreements and other customer requirements to which we have agreed.
6. Endeavor to train employees and encourage our constituents to actively care for their surroundings and the global environment.
7. Develop positive relationships with the community through contributions to the local environment and the proper disclosure of environmental data.
8. Continuously improve subjects by creating and carrying out the environmental objectives, and their action plans to enhance environmental performance.

ROHM established an Environmental Policy applicable to the entire ROHM Group on October 20, 1997 pursuant to the provisions in the International Environmental Standards ISO 14001.

In response to the 2015 revision of ISO 14001, item No.4,5,8 were added and revised on March 3, 2017.

ROHM's Approaches toward Global Environmental Conservation



ROHM has been working on a variety of environmental conservation activities centering on the Environmental Policy.

We believe that corporate activities contributing to the environment are to manufacture environmentally friendly products and yet to reduce our own environmental impact in manufacturing them. Particularly for the prevention of global warming, we are active in a range of the reduction of CO₂ and other greenhouse gases emitted from our business operations.

In addition, we will define long-term environmental targets and policy from the perspective of biodiversity, and have approaches to realize sustainable society.

Outline of ROHM's Environmental Conservation Activities

Environmental Objectives

○Response to Legal Requirements

We shall certainly comply with environmental laws and requirements relating to all business activities and voluntarily promote to reduce the environmental impacts.

○Objectives and Targets of Voluntary Activities

1. CO₂ production countermeasures in each site

[Policy] Work to help stop global warming through overall energy conservation and the reduction of global greenhouse gas emission.

[Objectives] (1) Reduce CO₂ emission by 25% in FY2020 from the actual results of FY2005.

(2) Reduce CO₂ emission(per production unit) by 50% in FY2020 from the actual results of FY1990.

(3) Reduce global greenhouse gas emission (PFC's, SF6, and etc.) by minimum 50% in FY2020 from the actual results of FY1995.

2. CO₂ countermeasures through value chain

[Policy] With the scientific techniques and various kinds of calculation tools including LCA, CO₂ reduction activities are promoted.

By developing the environmentally-conscious products in alignment with 'NEXT50', contribution to the CO₂ reduction at the time of use is considered.

[Objectives] (1) Reduce CO₂ emission through the value chain by 10% in FY2020 from the actual results of FY2010.

(2) Increase the ratio of environmentally-conscious products developments to 100% by FY2020.

3. Reduction of environmental impact

[Policy] Reduce the amount of materials discharged to the air and water, and strive to preserve the Global environment.

[Objectives] (1) Reduce the amount of handling volume of PRTR substances (per production unit) by 10% in FY2020 from the actual results of FY2010.

(2) Reduce VOC emission by 40% in FY2020 from the actual results of FY2000.

4. Effective use of resources

[Policy] Strive for the effective use of valuable resources and the protection of water resources that are fundamental to environmental biodiversity.

[Objectives] (1) Maintain zero emission in domestic group consolidated and reduce waste generation(per production unit) by 40% by FY2020 from the actual results of FY2000.

(2) Reduce waste generation(per production unit) in overseas group consolidated by 60% by FY2020 from the actual results of FY2000.

(3) Reduce water input volume by 10% in FY2020 from the actual results of FY2009.

5. Promotion of original environmental activities in each site

[Policy] In consideration of the environmental impact in site ,implementation of a new project, etc., set up an original target and carry out an environmental activity.

[Objectives] Considering it as the activity which can be completed at a given single fiscal year, the objectives does not set it.

Outline of ROHM's Environmental Conservation Activities

Targets and Results based on Environmental Policy

The ROHM Group defines targets and approaches based on the environmental policy and objectives to formulate an action plan each year toward the accomplishments of the targets and approaches and promote positive activities.

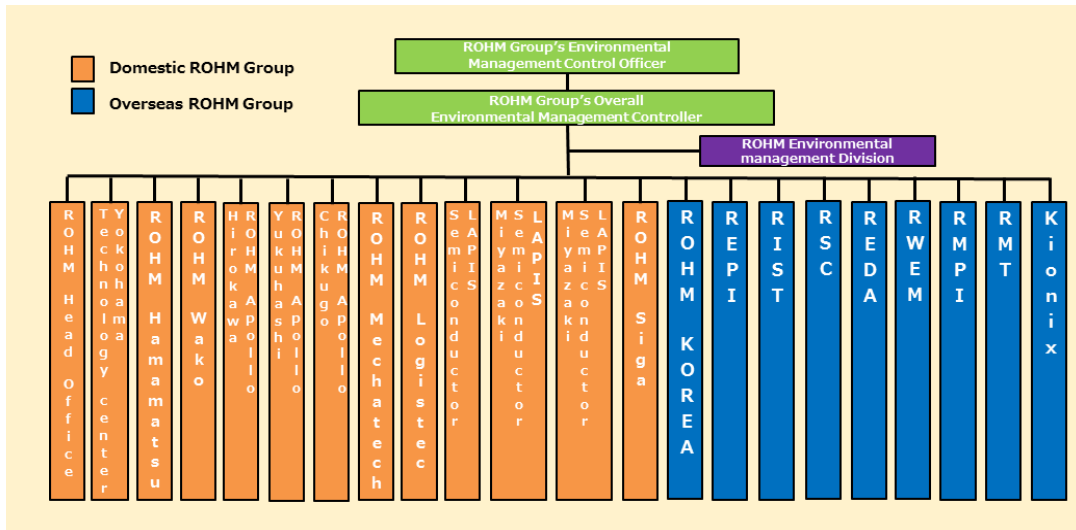
【Targets and Results in Fiscal Year 2017】

Targets in Fiscal Year 2017	Results in Fiscal Year 2017	Evaluation
【CO₂ production countermeasures in each site】		
① Reduce FY2017 CO ₂ emission by 1% from currently predicted value according to the quantity of production of FY2017. ② Reduce CO ₂ emission (per production unit) by 1% in FY2017 from the actual results of FY2016. ③ Reduce FY2016 global greenhouse gas emission (PFC's, SF ₆ , and etc) by 0.5% from currently predicted value according to the quantity of production of FY2017.	① CO ₂ emission was reduced by 3.9% from currently predicted value according to the quantity of production of FY2017. ② CO ₂ emission (per production unit) was reduced by 10.0% from the actual results of FY2016. ③ FY2017 global greenhouse gas emission (PFC's, SF ₆ , and etc) was reduced by 10.7% from currently predicted value according to the quantity of production of FY2017.	☆☆☆
【CO₂ countermeasures through value chain】		
① Establish the operation model to calculate global greenhouse gas with equivalent to Scope3 Standard, and expand the categories officially. ② Increase the ratio of environmentally-conscious products developments to 85% by FY2017.	① The operation model to calculate global greenhouse gas with equivalent to Scope3 Standard was established, and eight categories are disclosed. ② The ratio of environmentally-conscious products developments was 98%.	☆☆☆
【Reduction of environmental impact】		
① Maintain the amount of handling volume of PRTR substances (per production unit) in FY2017 as the results of FY2016. ② Reduce VOC emission by 0.5% in FY2017 from currently predicted value according to the quantity of production of FY2016.	① The amount of handling volume of PRTR substances (per production unit) were reduced by 8.5% from the actual results of FY2016. ② VOC emissions was reduced by 1.0% from currently predicted value according to the quantity of production of FY2017.	☆☆☆
【Effective use of resources】		
① Maintain zero emission in domestic group consolidated and maintain waste generation(per production unit) in FY2017 as the results of FY2016. ② Maintain waste generation(per production unit) in overseas group in FY2017 as the results of FY2016. ③ Reduce water input volume by 1% in FY2017 from the predicted value according to the quantity of production of FY2017.	① Zero emission in domestic group consolidated was maintained as the results of FY2016. Waste generation(per production unit) in FY2017 was reduced by 0.2% from the actual results of FY2016. ② Waste generation(per production unit) in overseas group was reduced by 8.4% from the actual results of FY2016. ③ Water input volume was reduced by 2.9% from the predicted value according to the quantity of production of FY2016.	☆☆☆

Outline of ROHM's Environmental Conservation Activities

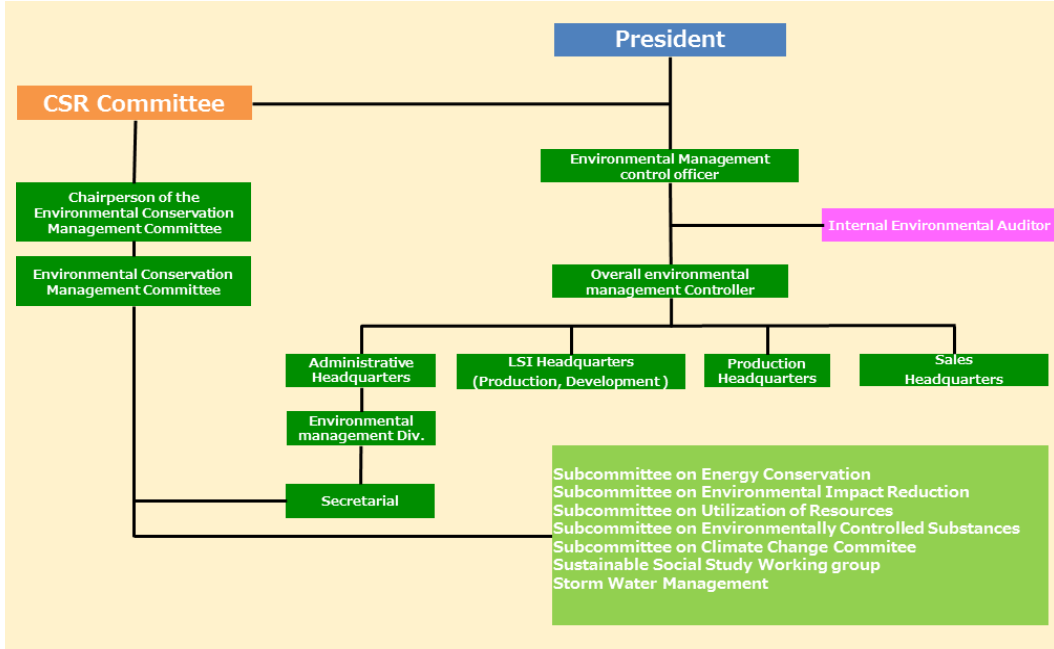
Environmental Management System

ROHM Group's Environmental Management Promotion System



ROHM has deployed across the ROHM Group an environmental management system designed to be shared among the Group on the basis of the International Environmental Standard ISO 14001 and all employees have been working on continual environment improvements. Furthermore, the ROHM Group has been implementing constant environmental activities from a global perspective on a consolidated basis.

ROHM Head Office Environmental Management Promotion System

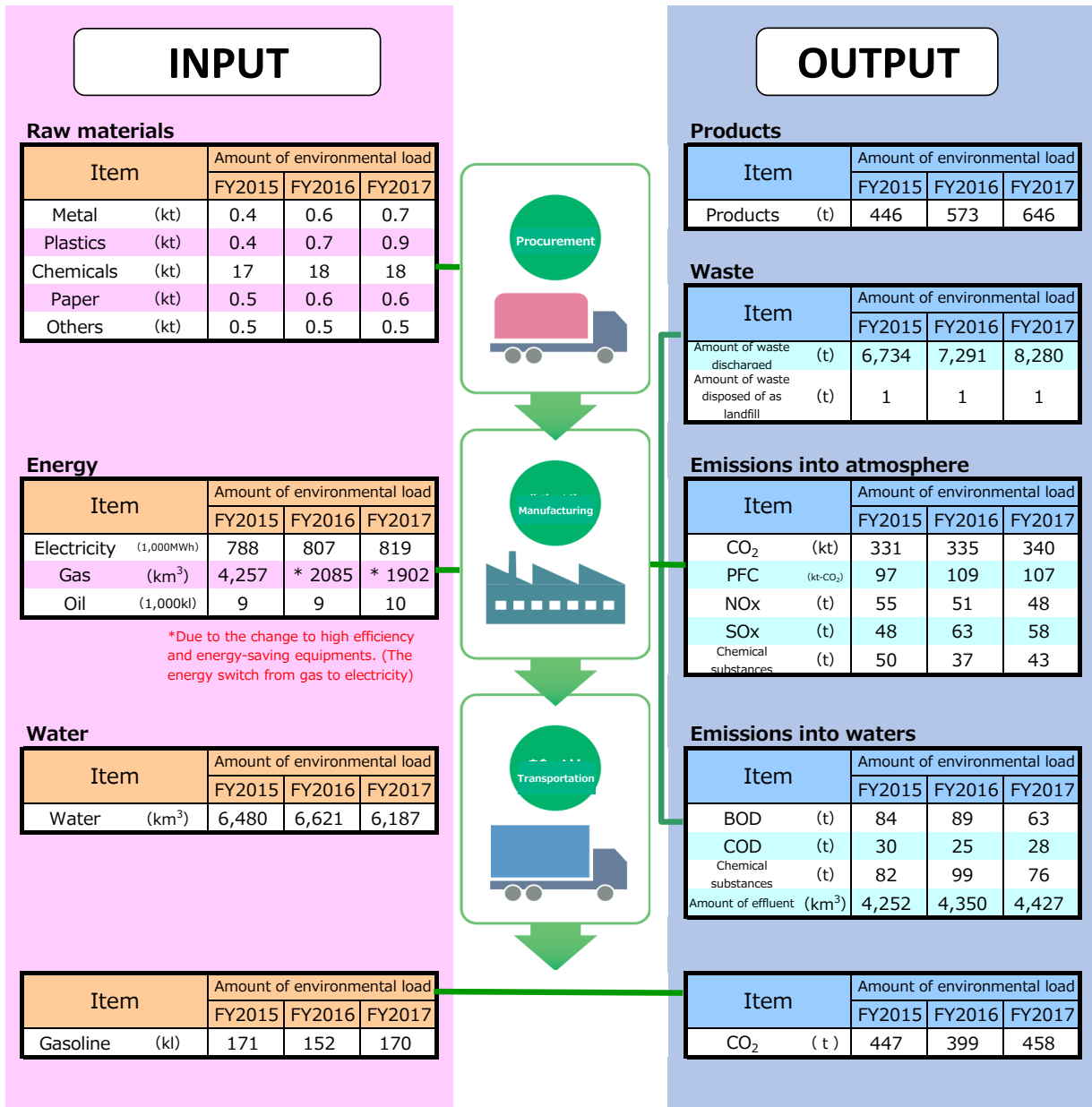


ROHM started the environmental management promotion system in its Head Office in 1990 mainly to conduct pollution prevention activities, and rebuilt it afterward to a promotion system taking environmental conservation with a view to the global environment as a principle behind its activities. In this rebuilt promotion system, the "Environmental Conservation Measures Committee" that deliberates significant policies and measures relating to the environmental activities, and five Subcommittees and two Working group that comprise the Committee are playing an important role in the promotion system. The Subcommittees are composed of experts in the relevant field, engineers, and related national qualification holders, and the chairpersons of the Subcommittee serve as members of the Environmental Conservation Measures Committee. The Management Committee and Subcommittees and Working group meetings are held regularly.

Integrated two special committees has been organized to LCA and CFC emission so far into Climate Change Committee for active promotion of climate change, and added Sustainable Social Study Working group in order to intensify our effort regards to Environment held up by SDGs.

Highlights of Environmental Impact

Domestic Bases



Overseas Bases

INPUT

Raw materials

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
Metal	(kt)	3.5	4.0	* 6.8
Plastics	(kt)	3.9	4.2	4.8
Chemicals	(kt)	2.6	3.0	3.4
Paper	(kt)	2.3	2.7	3.0
Others	(kt)	0.7	0.7	0.7

* Restarted the aggregation of RMT.

Energy

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
Electricity	(1,000MWh)	594	595	661
Gas	(km3)	* 1599	* 1946	* 2145
Oil	(1,000kl)	* 2	* 0	* 0

* It is because the boiler fuel of REDA was changed from coal to town gas that the amount of the gas used increased. It is based on use abolition of coal that the amount of the oil was decreased. (In China, coal energy's amount convert to heavy oil energy's amount.)

Water

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
Water	(km3)	3,435	3,720	4,081

Procurement

Manufacturing

Transportation

OUTPUT

Products

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
Products	(t)	8,121	8,964	10,345

Waste

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
Amount of waste discharged	(t)	5,652	5,496	6,044
Amount of waste disposed of as landfill	(t)	499	529	615

Emissions into atmosphere

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
CO ₂	(kt)	227	231	256
NO _x	(t)	* 63	3	0
SO _x	(t)	* 66	0	0
Chemical substances	(t)	1	1	1

*In FY2015, the private electric generator using heavy oil was used, due to the electric shortage in REPI.

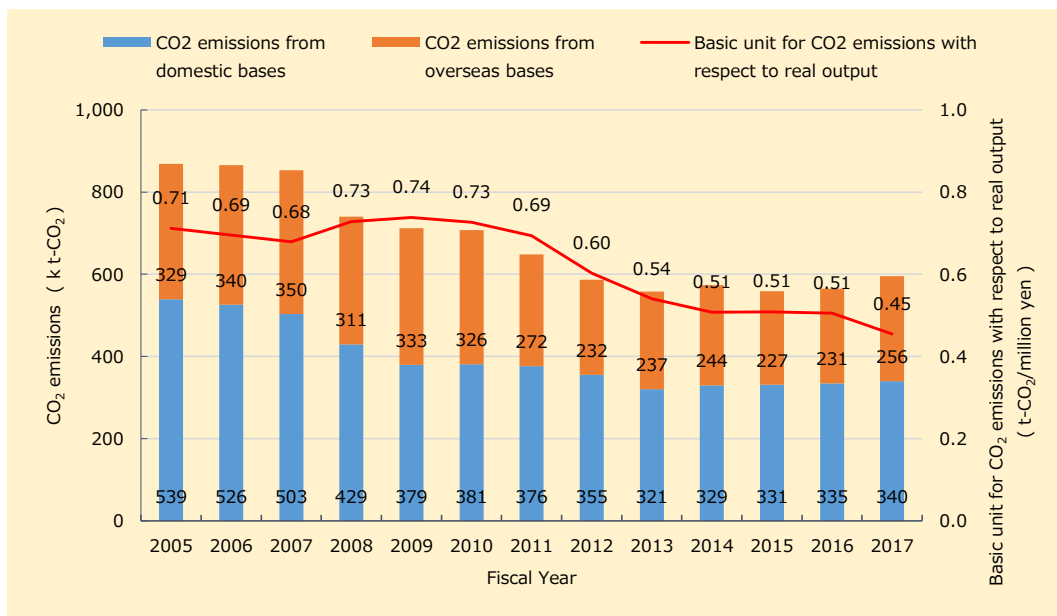
Emissions into waters

Item		Amount of environmental load		
		FY2015	FY2016	FY2017
BOD	(t)	13	14	21
COD	(t)	49	55	76
Chemical substances	(t)	1	1	1
Amount of effluent	(km3)	1,372	1,563	1,827

Changes in Emissions of Environmentally Hazardous Substances

Changes in CO₂ Emissions

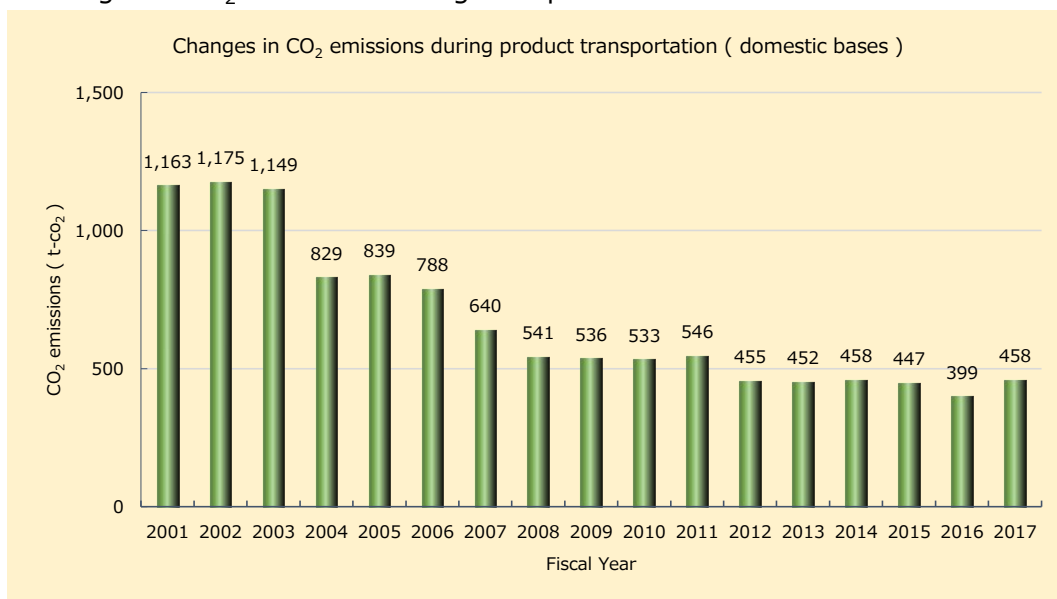
Changes in CO₂ emissions from the ROHM Group (domestic and overseas bases)



ROHM has been pushing ahead with and boosting the shift of downstream process overseas due to the globalization of production bases. This resulted in the reduction of CO₂ emissions from domestic bases by 31% in fiscal year 2017 compared to fiscal year 2005.

Furthermore, the basic unit for CO₂ emissions with respect to real output reduced by 61% in fiscal year 2017 compared to fiscal year 1995.

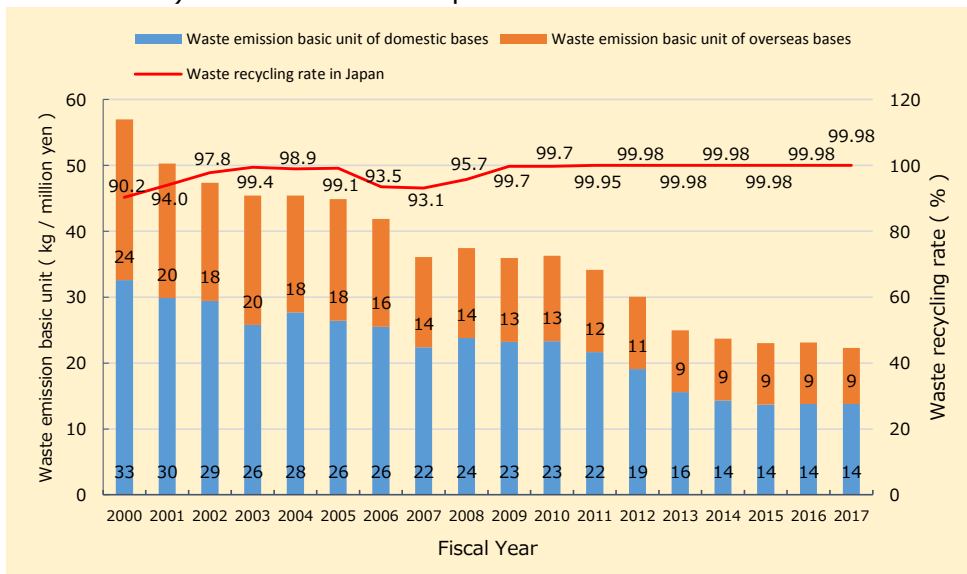
Changes in CO₂ emissions during transportation



Amid growing social concerns about environmental impact reduction in the logistics field, ROHM has been working on the reduction of CO₂ emissions caused by fuel consumption through transportation by road since fiscal year 2004 with measures taken for the transportation of products from production bases, including improvement in loading efficiency and the optimization of delivery frequency by the use of cross-docking. In FY 2016, it decreased due to the change to fuel-efficient trucks, however in FY2017, it increased due to the production increase.

Changes in Emissions of Waste

- Waste emission basic unit (domestic and overseas bases) and recycling rate (domestic bases) of the ROHM Group



Regarding measures to reduce the volume of waste, ROHM Group companies optimize the amount of incoming and secondary materials and strive to increase yield as well as thoroughly separate unneeded materials generated to obtain valuable resources.

In addition, the ROHM Group has defined a waste recycling rate of at least 99% as 'zero emissions.' And after reaching this target at all domestic companies in fiscal year 2009, the group continues to strive towards a true 100% recycling rate (99.98% in fiscal year 2017).

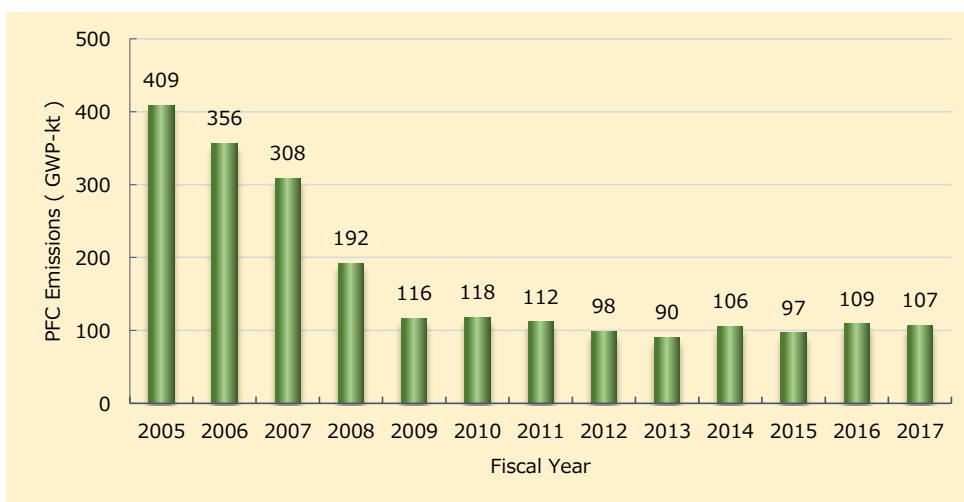
Waste emission basic unit were reduced by 60% from the 2000 level.

Changes in PFC Gases

- Changes in PFC Gas Emissions

What is PFC gas (Perfluorocarbon gas)?

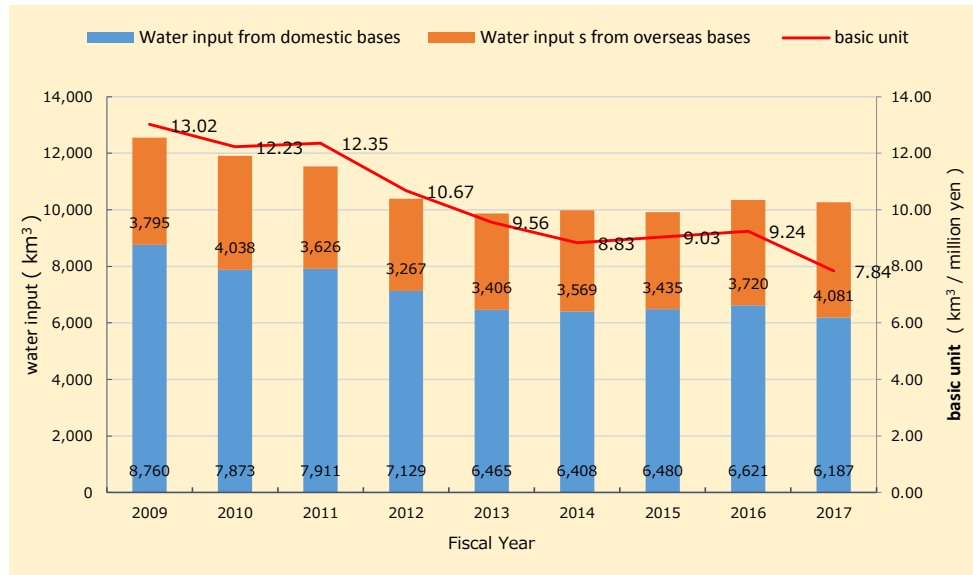
PFC gas is a material essential for fine processing of semiconductors, especially ICs. This PFC gas will turn to a greenhouse gas that produces greenhouse effect 6,500 times as high as CO₂ when it is released into the atmosphere. The semiconductor industry has determined a target for reduction in the PFC gas emissions and promoted the installation of PFC gas treatment systems used to dissolve PFC gases and eliminate the greenhouse effect.



ROHM is planning the reduction by introducing of PFC gas treatment systems, due to the increase in PFC gas emissions in FY2016.

Transition of Water input

■ RHOM Group's transition of water input and output level



ROHM group expands the semiconductor wafer manufacturing consumes a large amount of water in domestic and overseas.

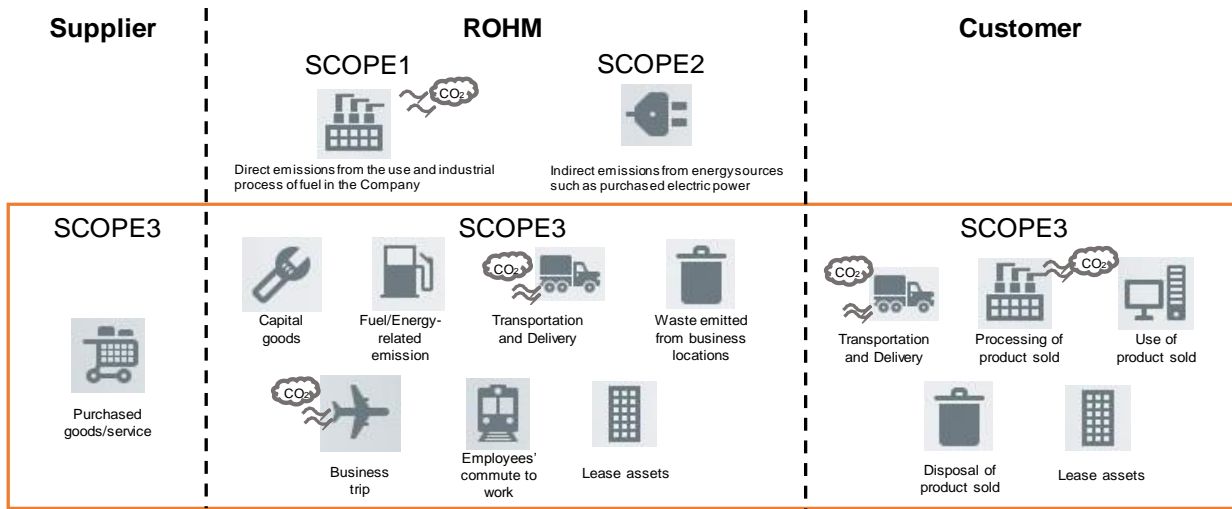
The raw water input for semiconductor manufacturing is high cost resources used after processing hyper pure water, so it is necessary to not disposable but recycle or reuse for water-saving efforts.

We consider it is obvious that reducing input of limited water is friendly to environment, and reducing risk of business continuity can be possible if water-saving measure works even if water shortage is happen by climate change.

Then, we promote the reduction activities with setting a reduction target of water input, and we reduced 18.2% of water input in FY2017 compared with FY2009.

CO₂ Emissions under the Scope3 Standard

Domestic and Overseas Bases



CO₂ emissions from the ROHM Group's business operations in fiscal 2017

Category of Scope Protocol			CO ₂ Emissions (t-CO ₂)	Outline of calculation
SCOPE 1 (Direct emissions)			36,002	Direct emissions from facilities in our Company's own business locations
SCOPE 2 (Indirect emissions from energy sources)			559,484	Emissions associated with the production of energy purchased by our Company's business locations
SCOPE 3 (Emissions from any sources other than Scope1 and Scope2, such as Company's supply chains)	Classification	Category		Outline of calculation
	Upstream	1 Purchased product / service	450,016	Emissions associated with the manufacture of purchased products (materials / parts)
	Upstream	2 Capital goods	157,110	Emissions from capital goods (equipment) invested by our Company
	Upstream	3 Fuel- and energy-related activities not included Scope1 and Scope2	52,396	Emissions associated with the procurement of fuel and energy used in our Company's business locations
	Upstream	4 Transportation and Delivery (Upstream)	41,581	Emissions associated with the distribution of sold product from the Plant→Logistics base→Consumer
	Upstream	5 Waste emitted from business operations	381	Emissions associated with the transportation and treatment of waste generated in our Company's business locations
	Upstream	6 Business trip	1,947	Emissions associated with the business trips of employees
	Upstream	7 Employers' commute to work	698	Emissions associated with the movement of employees when they commute to our Company to work
	Upstream	8 Lease assets (Upstream)	114	Emissions associated with the operation of leasing cars lent by our Company
	Downstream	9 Transportation and Delivery (Downstream)		
	Downstream	10 Processing of product sold		
	Downstream	11 Use of products sold		
	Downstream	12 Disposal of product sold		
	Downstream	13 Lease assets (Downstream)	-	Not covered
	Downstream	14 Franchising	-	Not covered
Downstream	15 Investment			

Independent Verification of Environmental Data

The ROHM Group received an independent verification of its environmental impact data by Bureau Veritas Japan Co., Ltd. in order to disclose information to society with higher transparency and reliability.

[Scope of Verification]


Scope 1 and 2 : 12 domestic sites

Scope 3, Category 4 Upstream Transportation and Distribution :

Product transportation between 8 domestic manufacturing sites, 1 domestic logistics center, 6 overseas manufacturing plants , and 9 overseas sales companies and domestic and overseas

**Environmental Performance Data
Independent Verification Report**

To: Rohm Co., Ltd.



Bureau Veritas Japan Co., Ltd. (Bureau Veritas) has been engaged by Rohm Co., Ltd. (Rohm) to conduct independent verification of its environmental data selected for inclusion in its Environmental Data Book 2018 (the Data Book), issued under the responsibility of Rohm. The aim of the verification is to consider the accuracy of environmental data detailed in the Data Book and to provide a verification opinion based on objective evidence.

1. Verification Outline
Environmental Impact data generated through business operations in FY2017 (April 1, 2017 through March 31, 2018)

Scope of Verification	Site Visited	Verification Methodology
Energy use through business operations of Rohm Group's 12 sites within Japan	- Rohm's head office - Rohm Apollo Co., Ltd Yukuhashi Factory	- Review of documentary evidence produced by Rohm's head office and the sites visited - Interviews with relevant personnel of Rohm's head office and the sites visited - Site inspection and review of data monitoring procedures - Comparison between the reported data and supporting documentary evidence
CO ₂ emissions from energy use through business operations of Rohm Group's 12 sites within Japan		
Category 4 of Scope 3 GHG emissions accounted in line with the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard'	- Rohm's head office	- Review of documentary evidence produced by Rohm's head office - Interviews with relevant personnel of Rohm's head office - Comparison between the reported data and supporting documentary evidence

This verification was conducted using Bureau Veritas' standard procedures and guidelines for external verification of non-financial reporting, based on current best practice. Bureau Veritas refers to the International Standard on Assurance Engagements (ISAE) 3000 in providing a limited assurance for the scope of work stated herein.


2. Findings
On the basis of our methodology and the activities described above:
- Nothing has come to our attention to indicate that the reviewed information within the scope of our verification is inaccurate and does not provide a fair representation of the performance for the defined period.
- It is our opinion that Rohm has established appropriate systems for the collection, aggregation and analysis of quantitative data within the scope of our verification.

Bureau Veritas has implemented a code of ethics across its business which is intended to ensure that all our staff maintain high standards in their day-to-day business activities. We are particularly vigilant in the prevention of conflicts of interest. Bureau Veritas activities for Rohm are for sustainability reporting verification only and we believe our verification assignment did not raise any conflicts of interest.

Environmental Performance Data

GREENHOUSE GAS EMISSIONS VERIFICATION STATEMENT

To: Rohm Co., Ltd.



May 25, 2018

Bureau Veritas Japan Co., Ltd. (Bureau Veritas) was engaged by Rohm Co., Ltd. (Rohm) to conduct verification of the greenhouse gas (GHG) emissions for FY 2017 reported in its Environmental Data Book 2018.

1. Scope of Verification
Rohm requested Bureau Veritas to verify, to a limited level of assurance, the accuracy of the following GHG information:
1) Scope 1 and Scope 2 GHG emissions:
CO₂ emissions from energy use through business operations of Rohm Group's 12 sites within Japan for the period of April 1, 2017 through March 31, 2018
2) Scope 3 GHG emissions accounted and reported in line with the GHG Protocol's 'Corporate Value Chain (Scope 3) Accounting and Reporting Standard':
Category 4 – the emissions from transportation of products sold by Rohm Group for the period of April 1, 2017 through March 31, 2018

2. Methodology
Bureau Veritas conducted the verification in accordance with the requirements of the international standard 'ISO 14064-3:2006', Greenhouse gases - Part 3: Specification with guidance for the validation and verification of greenhouse gas assertions'.
As part of Bureau Veritas' assurance, the following activities were undertaken:
- Interviews with relevant personnel of Rohm responsible for the identification and calculation of GHG emissions;
- Review of Rohm's information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions; and
- Audit of a sample of source data to check accuracy of quantified GHG emissions.

3. Conclusion
Based on the verification work and processes followed, there is no evidence to suggest that the GHG emissions assertions shown below:
- are not materially correct and are not a fair representation of the GHG emissions, as per the scope of work;
- are not prepared in accordance with the methodology for calculating GHG emissions established and implemented by Rohm.

Verified greenhouse gas emissions		
Scope 1	Scope 2 (location-based)	Scope 3 (Category 4)
30,061 t-CO ₂ e	306,459 t-CO ₂ e	41,581 t-CO ₂ e

[Statement of independence, impartiality and competence]
Bureau Veritas is an independent professional services company that specializes in Quality, Health, Safety, Social and Environmental management with over 180 years history in providing independent assurance services. No member of the verification team has a business relationship with Rohm, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest. Bureau Veritas has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities. The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes.

Greenhouse Gas Emissions
Verification Report

Environmental Accounting

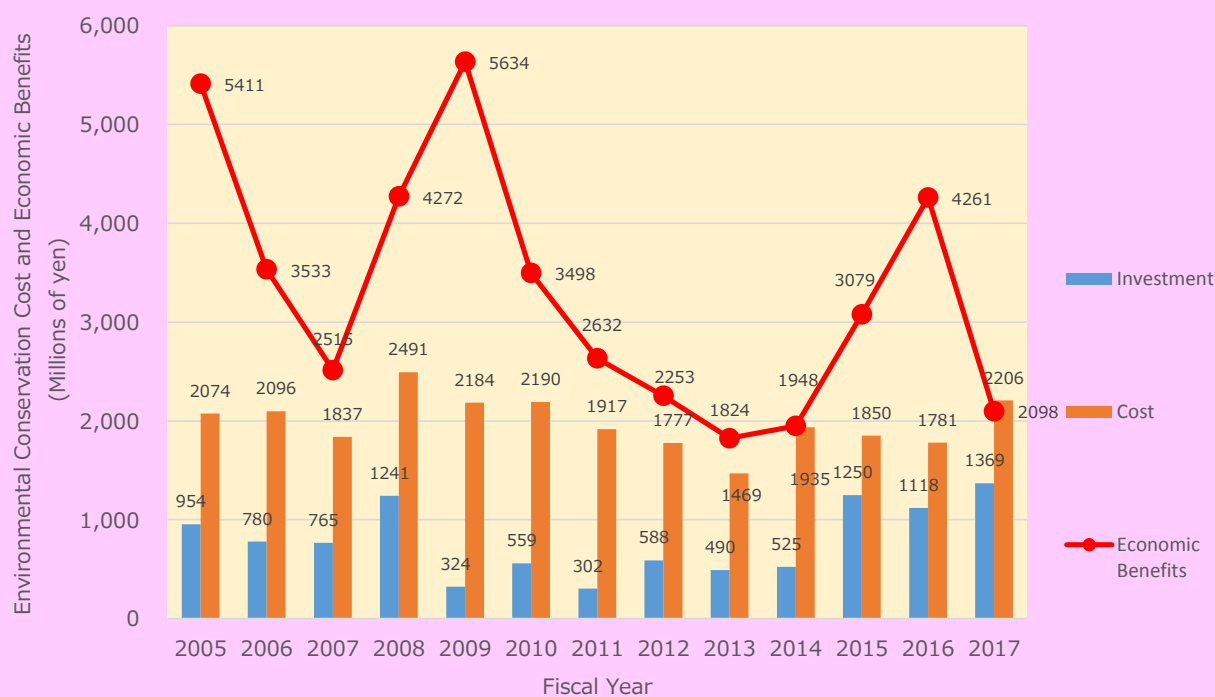
Domestic Bases

(Unit: Millions of yen)

Category of cost under the Guidelines	FY 2 0 1 5			FY 2 0 1 6			FY 2 0 1 7		
	Investment	Cost	Economic Benefits	Investment	Cost	Economic Benefits	Investment	Cost	Economic Benefits
Pollution prevention cost	172	1,034	-	216	1,126	-	482	1,382	-
Global environmental conservation cost	1,057	238	1,932	879	111	*3,198	876	92	694
Resource recycling cost	1	258	1,147	11	305	*1,063	8	354	1,404
Administration cost	21	316	-	12	237	-	2	375	-
Social activity cost	0	4	-	0	2	-	0	3	-
Environmental remediation cost	0	0	-	0	0	-	0	0	-
Others	0	0	-	0	0	-	0	0	-
Total	1,250	1,850	3,079	1,118	1,781	4,261	1,369	2,206	2,098

* Updating to the energy-saving equipment in each site was promoted.

Investment and Cost vs. Economic Benefits (Domestic Bases)



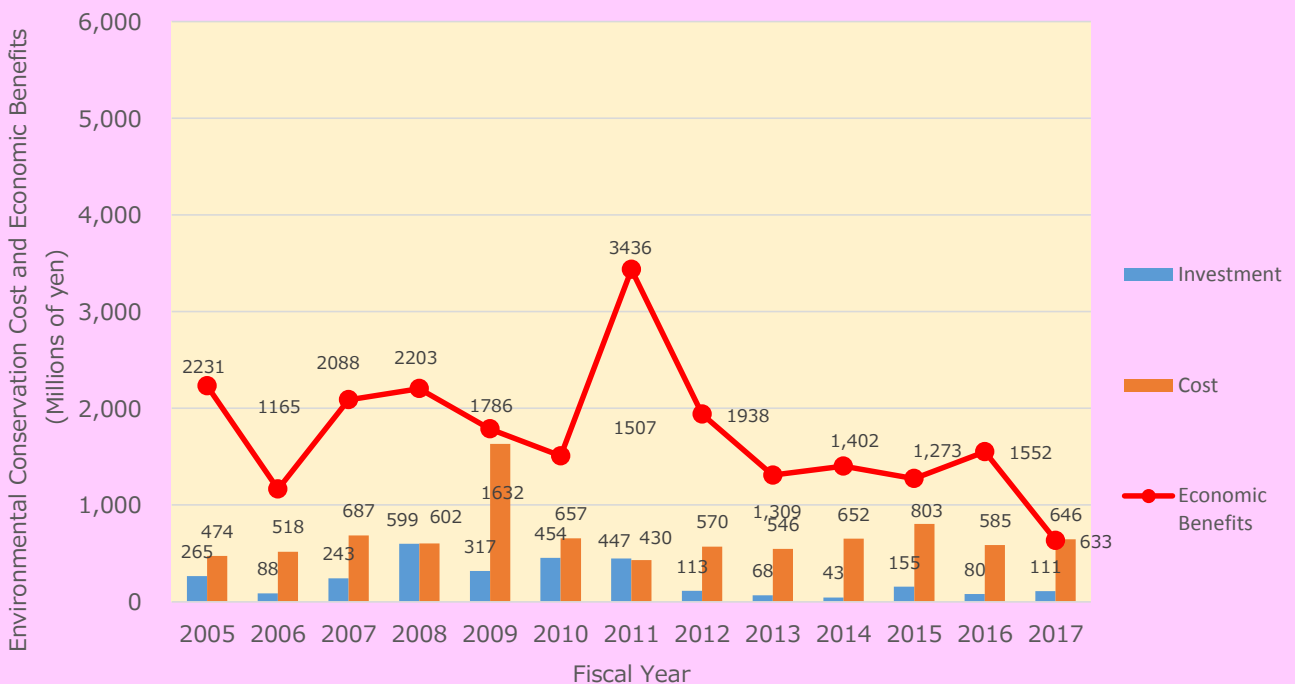
Overseas Bases

(Unit: Millions of yen)

Category of cost under the Guidelines	FY 2 0 1 5			FY 2 0 1 6			FY 2 0 1 7		
	Investment	Cost	Economic Benefits	Investment	Cost	Economic Benefits	Investment	Cost	Economic Benefits
Pollution prevention cost	3	470	-	14	300	-	52	431	-
Global environmental conservation cost	143	6	580	63	6	1,254	42	1	499
Resource recycling cost	2	238	848	2	200	297	4	114	133
Administration cost	7	69	-	0	60	-	12	80	-
Social activity cost	0	1	-	0	1	-	0	1	-
Environmental remediation cost	0	0	-	0	0	-	0	0	-
Others	0	19	-	0	18	-	0	19	-
Total	155	803	1,428	80	585	1,552	111	646	633

* Updating to the energy-saving equipment in each site was promoted.

Investment and Cost vs. Economic Benefits (Overseas Bases)



Approaches to Environmental Communications

Approaches in “Environmental Conservation”



ROHM WAKO
Refresh Setouchi



ROHM HAMAMATSU
Welcome Clean Project



ROHM APOLLO YUKUHASHI
Cleanup Activity in Nagai b



ROHM LOGISTICS
Cleanup Campaign



ROHM SHIGA
Biwako Cleanup by citizens



REDA
Cleanup Activity at South Coastline, Kinsyi



REPI
Afforestation



RIST
Participate in Afforestation



RWEM
Cleanup at the beach

Approaches in “Environmental Education”



The ROHM Group has provided environmental education for elementary school students in Kyoto-city from FY2010. In the education program, we give the opportunities for them to experience the energy-saving effects such as comparing the energy-consumption of LED and miniature bulbs by using a human powered generator besides the lecture about global-warming’s mechanism, and energy-saving tips that can be performed at home or school. The ROHM Group will continuously develop these kinds of activities that help children understand the value of global environment.

Environmental Awards

Received "Environmental Award" by Daejeon City in 2017 (ROHM KOREA)



Received "Environmental Award"

We were selected and received an award as an organization contributes to improve, manage and maintain the nature by improving handling of environmental contamination like Air, Water quality, Waste, Noise and Odor.

Received FY2017 Green Industry level 4 as a grade calculation (RIST)



State of the award ceremony

RIST received a grade calculation in June 22, 2017 from Thailand Ministry of Industry, Department of Industry Works, and got a FY2017 Green Industry level 4.

Awarded "2016-2017 Environmental Preservation Excellent Company Award" (RSC)



Awarded "Environmental Preservation

RSC expands activities for saving resource and reducing toxic substances every month to always consider global environment preservation and contribute to the healthy life of human and permanency prosperity of the company on their production activity.

As a result of the strict inspection, on June 5, "2016-2017 Environmental Preservation Excellent Company Award" is awarded by Development Zone Management Committee.

Site Reports (Domestic and Overseas Bases)

※About PRTR substances, only the annual handling amount of over 1t is mentioned.

ROHM Co.,Ltd.

21,Saiin Mizosaki-cho,Ukyo-ku,Kyoto,Japan



■ Manufacturing Items
Electronic parts, including semiconductors

		2015	2016	2017
Power consumption	kWh	81,613,000	80,254,000	88,746,601
Fuel consumption	kl	1,465	1,016	1,316
Water consumption	km ³	651	675	688
Total waste emissions	t	464	448	458
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	3.3	3.6	3.8
Emissions into the atmosphere: SOx	t	0.0	0.0	-
Emissions into waters: BOD	t	19.1	10.6	10.6
Emissions into waters: COD	t	0.0	0.0	-

■ PRTR Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
332	arsenic and its inorganic compounds	-	1.1	1.5
374	hydrogen fluoride and its water-soluble salts	15.9	15.3	15.2

ROHM Co.,Ltd. Yokohama Technology center 2-4-8 Shin-Yokohama,Kohoku-ku,Yokohama,Japan



■ Manufacturing Items
Design/development and sales of IC's

		2015	2016	2017
Power consumption	kWh	2,757,727	2,686,155	2,485,873
Fuel consumption	kl	81	63	71
Water consumption	km ³	16	15	15
Total waste emissions	t	52	12	19
Amount of waste finally disposed of as landfill	t	0.0	0.0	0.0
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	0.1	0.1	0.1
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.0	0.0	0.0
Emissions into waters: COD	t	0.0	0.0	0.0

ROHM Hamamatsu Co.,Ltd.

10 Sanwa-cho,Minami-ku,Hamamatsu,Japan



■ Manufacturing Items
IC's, LEDs

		2015	2016	2017
Power consumption	kWh	152,138,480	156,050,000	155,772,853
Fuel consumption	kl	* 2,489	700	143
Water consumption	km ³	1,243	1,250	1,316
Total waste emissions	t	571	586	628
Amount of waste finally disposed of as landfill	t	0.13	0.12	0.13
Waste recycling rate	%	99.98	99.98	99.98
Emissions into the atmosphere: NOx	t	4.4	0.7	0.1
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	53.1	57.2	36.9
Emissions into waters: COD	t	0.0	0.0	0.0

* By having introduced the turbo freezer, the amount of the gas used became less.

■ PRTR Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
374	hydrogen fluoride and its water-soluble salts	50.9	58.5	64.5



■ Manufacturing Items
ICs, Transistors, Diodes,
Tantalum capacitors, Resistor,
Module, Silicon wafers

Head office

		2015	2016	2017
Power consumption	kWh	20,033,540	20,388,445	20,752,500
Fuel consumption	kl	329	275	244
Water consumption	km ³	134	123	129
Total waste emissions	t	80	107	133
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	0.3	0.3	0.2
Emissions into the atmosphere: SOx	t	0.4	0.3	0.2
Emissions into waters: BOD	t	0.1	0.2	0.2
Emissions into waters: COD	t	0.1	0.2	0.3

Yukuhashi factory

		2015	2016	2017
Power consumption	kWh	18,983,745	18,907,109	19,244,949
Fuel consumption	kl	484	528	505
Water consumption	km ³	181	161	147
Total waste emissions	t	137	129	162
Amount of waste finally disposed of as landfill	t	0.22	0.30	0.32
Waste recycling rate	%	100.00	99.77	99.80
Emissions into the atmosphere: NOx	t	2.6	3.5	2.8
Emissions into the atmosphere: SOx	t	2.6	2.6	3.0
Emissions into waters: BOD	t	0.0	0.1	0.1
Emissions into waters: COD	t	0.0	0.2	0.3

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
438	methylnaphthalene	5.8	6.4	6.1

Chikugo factory

		2015	2016	2017
Power consumption	kWh	112,717,953	118,519,200	120,196,519
Fuel consumption	kl	1,307	1,331	1,511
Water consumption	km ³	979	1,031	1,067
Total waste emissions	t	1,103	1,150	1,222
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	2.5	1.7	1.5
Emissions into the atmosphere: SOx	t	4.9	1.0	0.8
Emissions into waters: BOD	t	20.3	19.8	14.5
Emissions into waters: COD	t	9.5	8.5	11.7

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
53	ethylbenzene	2.8	2.7	3.0
80	xylene	2.4	2.4	2.7
341	piperazine	1.4	1.9	1.9
374	hydrogen fluoride and its water-soluble salts	29.4	27.9	29.9
438	methylnaphthalene	16.0	16.3	18.6

ROHM Wako Co.,Ltd.

100 Tomioka, Kasaoka, Okayama, Japan



■ Manufacturing Items
ICs, Diodes, LEDs, Laser diodes

		2015	2016	2017
Power consumption	kWh	88,740,306	93,304,234	94,963,626
Fuel consumption	kl	571	545	612
Water consumption	km ³	581	593	593
Total waste emissions	t	1,251	1,302	1,496
Amount of waste finally disposed of as landfill	t	0.37	0.37	0.43
Waste recycling rate	%	99.97	99.97	99.97
Emissions into the atmosphere: NOx	t	0.9	0.7	1.2
Emissions into the atmosphere: SOx	t	0.4	0.3	0.3
Emissions into waters: BOD	t	5.5	4.0	4.2
Emissions into waters: COD	t	0.0	0.0	-

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
53	ethylbenzene	5.6	6.2	7.4
58	ethylene glycol monomethyl ether	3.8	3.9	4.3
80	xylene	18.2	19.2	22.9
82	silver and its water-soluble compounds	1.8	1.8	2.2
302	naphthalene	9.3	10.5	12.1
308	nickel	-	-	1.2
343	pyrocatechol	1.0	1.1	1.4
374	hydrogen fluoride and its water-soluble salts	32.6	34.2	38.0
438	methylnaphthalene	17.6	17.5	19.6

ROHM Shiga Co.,Ltd.

2-8-1 Seiran, Otsu, Shiga, Japan



■ Manufacturing Items
Discrete semiconductors

		2015	2016	2017
Power consumption	kWh	-	-	41,899,039
Fuel consumption	kl	-	-	342
Water consumption	km ³	-	-	608
Total waste emissions	t	-	-	1,039
Amount of waste finally disposed of as landfill	t	-	-	1.20
Waste recycling rate	%	-	-	99.88
Emissions into the atmosphere: NOx	t	-	-	0.0
Emissions into the atmosphere: SOx	t	-	-	-
Emissions into waters: BOD	t	-	-	0.2
Emissions into waters: COD	t	-	-	1.0

* FY2017 is not eligible for aggregation.

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
374	hydrogen fluoride and its water-soluble salts	-	-	35.0

ROHM Mechatech Co.,Ltd.

3-6-1 Tsutta,Oi-cho,Kameoka-shi,Kyoto,Japan



■ Manufacturing Items
Dies, Lead Frames

		2015	2016	2017
Power consumption	kWh	2,547,017	2,668,000	2,788,000
Fuel consumption	kl	0	0	0
Water consumption	km ³	4	4	3
Total waste emissions	t	15	14	16
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.0	0.0	0.0
Emissions into waters: COD	t	0.0	0.0	0.0

LAPIS Semiconductor Co.,Ltd.

2-4-8 Shin-Yokohama,Kohoku-ku,Yokohama,Japan



■ Work content
Design / Development and sales
of LSI's

		2015	2016	2017
Power consumption	kWh	3,447,789	3,485,113	3,564,398
Fuel consumption	kl	68	68	63
Water consumption	km ³	17	19	19
Total waste emissions	t	7	6	4
Amount of waste finally disposed of as landfill	t	0.10	0.00	0.00
Waste recycling rate	%	98.59	100.00	100.00
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.0	0.0	0.0
Emissions into waters: COD	t	0.0	0.0	0.0

LAPIS Semiconductor Miyagi Co.,Ltd.

1 Okinodaira,Ohira-Mura,Kurokawa-



■ Manufacturing Items
ICs

		2015	2016	2017
Power consumption	kWh	128,432,400	131,889,200	132,047,800
Fuel consumption	kl	3,361	3,730	3,760
Water consumption	km ³	1,256	1,252	1,234
Total waste emissions	t	1,482	1,721	2,070
Amount of waste finally disposed of as landfill	t	0.38	0.30	0.42
Waste recycling rate	%	99.97	99.98	99.98
Emissions into the atmosphere: NOx	t	11.6	11.5	10.8
Emissions into the atmosphere: SOx	t	4.1	4.3	5.9
Emissions into waters: BOD	t	1.4	4.4	5.0
Emissions into waters: COD	t	18.4	14.4	13.4

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
278	triethylenetetramine	2.2	2.2	2.2
343	pyrocatechol	1.1	1.1	1.1
374	hydrogen fluoride and its water-soluble salts	48.8	48.0	49.7
438	methylnaphthalene	37.7	42.0	42.3

LAPIS Semiconductor Miyazaki Co.,Ltd. 727 Kihara,Kiyotake-cho,Miyazaki-shi,Miyazaki,Japan



■ Manufacturing Items
ICs,SiC

		2015	2016	2017
Power consumption	k Wh	175,775,081	177,753,875	176,839,644
Fuel consumption	kl	3,199	3,254	3,450
Water consumption	km ³	921	970	975
Total waste emissions	t	1,559	1,801	2,058
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	36.0	29.0	31.5
Emissions into the atmosphere: SOx	t	22.0	54.3	47.6
Emissions into waters: BOD	t	2.0	2.6	2.1
Emissions into waters: COD	t	2.2	1.8	1.9

■ PRTR

Unit:tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
20	2-aminoethanol	7.0	8.5	10.7
58	ethylene glycol monomethyl ether	1.2	2.4	1.8
343	pyrocatechol	-	-	1.1
374	hydrogen fluoride and its water-soluble salts	24.2	31.0	29.9
438	methylnaphthalene	37.6	38.6	40.7

ROHM Logistec Co.,Ltd.

75 Masusaka,Kamogata-cho,Asakuchi-shi,Okayama,Japan



■ Business Line
Logistecs management pf the
ROHM Group's products

		2015	2016	2017
Power consumption	k Wh	1,200,246	1,252,956	1,271,058
Fuel consumption	kl	1	0	0
Water consumption	km ³	2	2	2
Total waste emissions	t	14	14	14
Amount of waste finally disposed of as landfill	t	0.03	0.02	0.03
Waste recycling rate	%	99.82	99.88	99.80
Emissions into the atmosphere: NOx	t	-	-	-
Emissions into the atmosphere: SOx	t	-	-	-
Emissions into waters: BOD	t	0.0	0.0	0.0
Emissions into waters: COD	t	-	-	-

ROHM Korea Corporation

40, MUNPYEONGSEO-RO 17 BEONAN-GIL, DAEDEOK-GU, DAEJEON, KOREA



■ Manufacturing Items
ICs, Transistors, Diodes,
LED Displays

		2015	2016	2017
Power consumption	kWh	37,421,227	38,426,344	39,956,251
Fuel consumption	kl	47	48	-
Water consumption	km ³	105	105	116
Total waste emissions	t	407	430	431
Amount of waste finally disposed of as landfill	t	0.42	0.11	0.00
Waste recycling rate	%	99.90	99.97	100.00
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.2	0.1	0.2
Emissions into waters: COD	t	0.6	0.7	0.9

■ PRTR Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
31	antimony and its compounds	5.1	5.9	5.2
304	lead	-	1.6	2.1

ROHM Electronics Philippines, Inc. People's Technology Complex Special Economic Zone, Carmona, Cavite 4116



■ Manufacturing Items
Monolithic ICs, Diodes

		2015	2016	2017
Power consumption	kWh	* 193,461,238	200,066,988	210,690,235
Fuel consumption	kl	* 1,448	224	187
Water consumption	km ³	1,240	1,306	1,360
Total waste emissions	t	1,081	1,081	1,193
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	* 62.8	3.4	0.2
Emissions into the atmosphere: SOx	t	* 66.2	0.1	0.0
Emissions into waters: BOD	t	1.3	0.7	1.1
Emissions into waters: COD	t	2.8	2.0	4.4

* Increased by using heavy oil for restarting private power generation for BCP.

■ PRTR Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
31	antimony and its compounds	5.5	5.9	6.3
82	silver and its water-soluble compounds	6.8	8.7	9.0
308	nickel	15.2	16.5	16.2
309	nickel compounds	4.1	4.6	4.7

ROHM Integrated Systems (Thailand)

101 / 94 . 102 Navanakorn Industrial Zone. Moo 20. Phaholyothin Road. Tambol Khlong-Nueng. Amphur Khlong-Lueng. Pathumthani 12120



■ Manufacturing Items
Monolithic ICs, Transistors,
Diodes, Resistor, Capacitors

		2015	2016	2017
Power consumption	kWh	168,199,417	176,457,161	184,842,687
Fuel consumption	kl	197	265	284
Water consumption	km ³	1,095	1,250	1,295
Total waste emissions	t	1,015	981	1,139
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	5.4	6.0	8.0
Emissions into waters: COD	t	17.0	28.4	28.7

■ PRTR Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
31	antimony and its compounds	5.6	5.4	5.3
82	silver and its water-soluble compounds	4.0	4.5	4.5
304	lead	1.3	1.5	1.6
308	nickel	11.2	13.2	14.5
309	nickel compounds	3.1	3.9	3.3

ROHM Semiconductor (China) Co.,Ltd.

No.7 Weisan Road, Micro-electronics Industrial park,
Jingang Highway Xicing District, Tianjin 300385 China



■ Manufacturing Items
Diodes, LEDs, Laser Diodes
LED Displays, Sensors

		2015	2016	2017
Power consumption	kWh	67,381,000	68,967,460	70,398,081
Fuel consumption	kl	1	1	1
Water consumption	km ³	259	297	312
Total waste emissions	t	1,108	959	1,112
Amount of waste finally disposed of as landfill	t	403.00	428.50	509.45
Waste recycling rate	%	63.62	55.30	54.18
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	4.0	5.3	4.7
Emissions into waters: COD	t	10.6	11.9	12.7

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
31	antimony and its compounds	1.1	1.2	1.3
37	4,4'-isopropylidenediphenol	10.4	-	-
71	ferric chloride	3.8	-	-
82	silver and its water-soluble compounds	1.2	1.3	1.3
265	tetrahydromethylphthalic anhydride	-	1.9	5.1
291	1,3,5-tris(2,3-epoxypropyl)	10.9	10.9	12.1
305	lead compounds	4.2	4.9	5.2
392	n-hexane	2.7	3.2	3.5

* Regards to Ferric Chloride, it reduced because of substitution.

ROHM Electronics Dalian Co.,Ltd.

No.20 Four Street East & North, Dalian Economic & Technical Development Zone,



■ Manufacturing Items
Power modules, Thermal print heads, Contact image sensor heads, Photolink modules, Optical sensors

		2015	2016	2017
Power consumption	kWh	56,715,092	58,164,846	56,222,737
Fuel consumption	kl	2,170	2,068	1,957
Water consumption	km ³	266	265	277
Total waste emissions	t	194	177	188
Amount of waste finally disposed of as landfill	t	19.96	16.79	19.46
Waste recycling rate	%	89.70	90.51	89.65
Emissions into the atmosphere: NOx	t	0.0	0.0	0.0
Emissions into the atmosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.7	0.6	1.8
Emissions into waters: COD	t	12.9	7.3	9.0

■ PRTR

Unit: tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
82	silver and its water-soluble compounds	1.5	1.2	1.2

ROHM-Wako Electronics (Malaysia) Sdn.

Lo1 1320 Kawasan Penndustrian, Peogkalan Chepa II, Padang Tmenbak, 16100 Kota Bharu, Kelantan, Malaysia



■ Manufacturing Items
Diodes, LEDs

		2015	2016	2017
Power consumption	k Wh	60,849,477	60,686,683	* 80,291,750
Fuel consumption	kl	28	43	* 68
Water consumption	km ³	446	465	* 631
Total waste emissions	t	1,123	1,080	1,187
Amount of waste finally disposed of as landfill	t	76.28	83.06	85.84
Waste recycling rate	%	93.21	92.31	92.77
Emissions into the atomosphere: NOx	t	0.0	0.0	0.0
Emissions into the atomosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	1.2	1.1	2.9
Emissions into waters: COD	t	4.5	4.5	12.9

* Due to an establishment of a new building and an operation of clean rooms in FY2017.

■ PRTR

Unit:tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
20	2-aminoethanol	23.2	20.2	21.0
31	antimony and its compounds	38.8	45.5	56.9
82	silver and its water-soluble compounds	18.1	17.8	26.3
291	1,3,5-tris(2,3-epoxypropyl)	2.2	2.3	3.2
297	1,3,5-trimethylbenzene	6.5	10.1	12.2
305	lead compounds	7.9	8.4	5.9

ROHM Mechatech Philippines, Inc.

People's Technology Complex Special Economic Zone, Carmona, Cavite 4116 Philippines



■ Manufacturing Items
Lead Frames,
Precision tooling and related parts

		2015	2016	2017
Power consumption	k Wh	9,260,368	9,487,175	9,817,465
Fuel consumption	kl	43	58	94
Water consumption	km ³	24	31	37
Total waste emissions	t	725	787	743
Amount of waste finally disposed of as landfill	t	0.00	0.00	0.00
Waste recycling rate	%	100.00	100.00	100.00
Emissions into the atomosphere: NOx	t	0.0	0.0	0.0
Emissions into the atomosphere: SOx	t	0.0	0.0	0.0
Emissions into waters: BOD	t	0.1	0.0	0.0
Emissions into waters: COD	t	0.0	0.0	0.0

■ PRTR

Unit:tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
82	silver and its water-soluble compounds	1.0	1.2	-
144	inorganic cyanide compounds (except complex salts and cyanates)	-	1.0	1.3

ROHM Mechatech (Thailand) Co., Ltd.

188 Moo7, Hemaraj Saraburi Industrial Land, Nongplamor.

* Subdistrict, Nongkhae District, Saraburi Province 18140 Thailand



■ Manufacturing Items
Lead Frames,
Modification and repair of Mould sets as their parts,
Laser diodes

* Eligible for aggregation from FY2017.

		2015	2016	2017
Power consumption	k Wh	-	-	9,224,160
Fuel consumption	kl	-	-	184
Water consumption	km ³	-	-	54
Total waste emissions	t	-	-	51
Amount of waste finally disposed of as landfill	t	-	-	0.07
Waste recycling rate	%	-	-	99.87
Emissions into the atomosphere: NOx	t	-	-	0.0
Emissions into the atomosphere: SOx	t	-	-	0.0
Emissions into waters: BOD	t	-	-	2.7
Emissions into waters: COD	t	-	-	7.6

■ PRTR

Unit:tons

PRTR Ordinance number	Substances covered	2015	2016	2017
		Amount handled	Amount handled	Amount handled
144	inorganic cyanide compounds (except complex salts and cyanates)	-	-	3.9