

Pioneer Group Environmental Data 2018

■ Targets, Plans and Performance

Category	Issue	Target	Numerical Goal	FY2014	FY2015	FY2016	FY2017	FY2018	Self assessment FY2018
Targets	Prevention of Global Warming	CO2 equivalent greenhouse gas emission Japan:12% reduction fromFY2010 to FY2021(Gross emission)	974	757	748	758	743	740	◎Achieved 24% reduction
		CO2 equivalent greenhouse gas emission Japan and overseas:10% reduction fromFY2010 to FY2021(emissions per unit of sales amount)	0.271	0.206	0.211	0.196	0.221	0.220	◎Achieved 18% reduction
	Conservation of Resources and Recycling	Reducing value resources/waste material Japan & Overseas:3% reduction from FY2011 level on a per unit of sales amount	3.871	2.789	2.669	2.802	2.936	3.027	◎Achieved 3% reduction
Controls	Prevention of Global Warming	Exhaust of five GHG(Five gases except CO2) Worldwide : maintaining FY2014 level	5	2.4	2.2	1.4	1.6	2.1	◎Achieved reduce700 tonne CO ₂
		Management of the energy accompanying transportation of products in Japan:Check of less than 30 mega-tonne-kilometers	30 mega-tonne-kilometers	15.15 mega-tonne-kilometers	13.67 mega-tonne-kilometers	10.64 mega-tonne-kilometers	15.08 mega-tonne-kilometers	16.91 mega-tonne-kilometers	◎Achieved
	Conservation of Resources and Recycling	Recycling rate for valuable resources /waste material Japan:Maintaining 99.5% rate or higher Overseas:Maintaining 99% rate or higher	Japan:99.5% Overseas:99%	Japan:100% Overseas:99.9%	Japan:100% Overseas:99.5%	Japan: 99.9% Overseas:99.3%	Japan: 99.8% Overseas:99.3%	Japan: 99.7% Overseas:99.0%	◎Achieved
		Green purchasing promotion Japan:Maintaining 95% rate or higher	95.0%	99.6%	98.6%	96.2%	99.1%	92.5%	× Failed
		Management of the amount of the water resources used Worldwide : maintaining FY2014 level	1.836million m ³	1.730 million m ³	1.730 million m ³	1.667 million m ³	1.508 million m ³	1,261 million m ³	◎Achieved keep numerical Goal 9.5%reduction from FY2016 result.
	Management of chemical substances	Management of the amount of office paper purchase Worldwide : maintaining FY2014 level	2,860 million sheet	2,620million sheet	2,350 million sheet	2,080 million sheet	1,920 million sheet	1,850 million sheet	◎Achieved
		Management of emissions of PRTR chemical substances VOCs ^{**2} Worldwide maintaining FY2014 level	136	105	105	119	57※	15※	-
		Management of emissions of SOx,NOx, and dust Worldwide :maintaining FY2014 level	Sox 11tonnes Nox 15tonnes Dust 0.3tonnes	Sox 4tonnes Nox 13tonnes Dust 0.3tonnes	Sox 4tonnes Nox 8tonnes Dust 0.3tonnes	Sox 0.9tonnes Nox 4.1tonnes Dust 0.2tonnes	Sox 1.1tonnes Nox 13.1tonnes Dust 0.2tonnes	Sox 1.2tonnes Nox 6.0tonnes Dust 0.2tonnes	◎Achieved

※Japan Data Only

*1: By regulation of Zero emission of waste (Pioneer's definition), it judges for every plant.*2: The target material is 20 kinds for JEITA's independence reduction activity.

(Note) Self-evaluation standards (broad estimates) Significantly exceeds the target: 110% or more/ Achieved the target: 100% to less than 110%/ Fell slightly short of the target: 95% to less than 100%/ Failed to meet the target: less than 95%

■ Input and output

Input Amount of resources required for business activities

Procurement	Resources	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
		10,000 tonnes	9.7	9.5	7.3	6.6	6
Planning, design, production	Total energy	TJ	1,786	1,782	1,611	1,536	1,488
	Water consumption	10,000 m ³	174	173	167	151	126
	Chemical substances handled	tonnes	123	144	161	58※	64※
	Office paper	10,000 sheets	2,620	2,350	2,090	1,920	1,850
Transportation	Goods Transported	10,000 tonnes	8.3	8.2	5.9	5.5	4.9
	Total energy	TJ	7	7.7	6.5	8.1	8
Service	Water consumption	m ³	711	786	876	876	876

※Japan Data Only

Output Environmental impact emitted as a result of business activities

		Unit	FY2014	FY2015	FY2016	FY2017	FY2018
Planning, design, production	Greenhouse gases discharged	10,000 tonnes CO2	10.3	10.6	9	8.6	8.5
	Waste generated	10,000 tonnes	1.4	1.3	1.2	1.1	1.1
	Amount recycled	10,000 tonnes	1.3	1.2	1.2	1.1	1.1
	Waste water	10,000 tonnes m ³	141	142	147	126	110
	Waste chemical substances	tonnes	99	105	134	122	14※
	SOx	tonnes	4.2	3.7	0.9	1.1	1.2
	NOx	tonnes	12.8	8.3	4.1	13.1	6
Transportation	CO2(in Japan)	1,000 tonnes	3	2.9	2.3	3.5	3.3
Used by customer	Recycled packaging materials (in Japan)	tonnes	188	184	140	105	102
Service	Greenhouse gases discharged	tonnes CO2	266	393	335	394	388
	Waste generated	tonnes	168	352	182	121	103
	Amount recycled	tonnes	167	350	181	121	103
	Waste water	m ³	711	786	876	876	876

※Japan Data Only

Environmental Costs

(Millions of JPY)

Category	Description	Details	FY2014		FY2015		FY2016		FY2017		FY2018	
			Investment	Expense	Investment	Expense	Investment	Expense	Investment	Expense	Investment	Expense
Plants	Anti-pollution costs	Wastewater treatment and management, water quality analysis, smoke treatment, etc.	3	98	0	103	3	92	4	75	32	82
	Global environmental preservation	Energy saving-related costs (depreciation of solar power generation, demand control, inverter control, power measuring systems introduction, etc.)	9	12	0	65	1	53	0	62	0	56
	Resource recycling costs	Waste disposal and recycling costs	0	62	0	94	2	86	1	51	0	69
Upstream and downstream costs	Cost of reducing environmental impacts generated upstream or downstream in production and servicing activities	Diffrence from environmental-friendly products (elimination of styrene foam, energy saving component by introduction of EDX equipment, green purchasing)	4	17	0	17	0	17	3	5	1	3
Management activities	Cost of acquiring and maintaining ISO14001 certification, education and training costs, PR costs	Cost of acquiring and maintaining ISO certification, environmental organization personnel expenses, Education and training cost, PR activities, cleanup activities	0	173	0	218	2	334	0	306	0	181
R&D	Environmental preservation costs in R&D activities	Cost of developing technologies including environmental factors	54	540	31	573	45	547	66	499	44	514
Social activities	Environmental preservation costs in social activities	Voluntary environmental preservation activities (Cleanup activities, etc.) and donations to environmental groups	0	8	0	11	0	10	0	11	0	11
Environmental remediation	Environmental remediation cost	Cost to restore, cover degradation suits or insurance fees.	0	0	0	0	0	0	0	4	0	0
Total			70	909	31	1,081	53	1,141	74	1,013	77	916

Economic Benefits

(Millions of JPY)

Category	Details	FY2014	FY2015	FY2016	FY2017	FY2018
1. Saving due to environmental preservation (energy saving, pollution prevention, etc.)	Power reduction by purchase of energy saving equipment, upgrading, etc.	16	10	48	43	59
2. Savings due to resources recycling (resource saving, recycling, waste disposal, etc.)	Reduction of waste disposal costs, Profits from sales of valuable resources.	37	21	18	24	21
3. Upstream and downstream savings (in procurement, production, distribution, green purchasing)	Reduction in component unit price, reduction in distribution costs, green purchasing effect.	0	0	0	0	0
Total		54	31	66	67	80

Environmental Conservation Benefit

Category	Details	Unit	FY2014	FY2015	FY2016	FY2017	FY2018
1. Global warming	Reduction in greenhouse gases	10 ³ tonnes CO2	103	106	90	88	85
2. Resource recycling	Reduction in waste discharge amount	10 ³ tonnes	14	13	13	1.1	11
	Reduction in usage of water	10 ³ m ³	1,730	1,730	1,667	1,508	1,261

■ Global Warming Prevention Activities

Greenhouse gases emissions

(1000tonnes CO2e)

	Category	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	Scope 1	6	5	5	6	6
	Scope 2	32	36	33	34	34
	Scope 3	0	1	0	0	0
	PFC, HFC, etc	2	2	1	2	2
	Total	40	44	40	42	42
Overseas	Scope 1	4	3	2	2	1
	Scope 2	58	59	47	44	42
	Scope 3	1	0	1	1	1
	PFC, HFC, etc	0	0	0	0	0
	Total	63	62	50	46	43

Energy consumption

(TJ)

	Category	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	Electricity	664	659	674	642	637
	Fuel	49	44	39	53	48
	Gas	44	45	44	48	47
	Cold water	—	—	—	8	8
	Total	757	748	758	751	740
Overseas	Electricity	970	979	827	755	729
	Fuel	39	33	15	21	18
	Gas	37	19	12	16	10
	Total	1,046	1,031	853	792	757

Reduction of Non-Energy-Derived Greenhouse Gases

(1000tonnes CO2e)

Japan	Reduction of Non-Energy-Derived Greenhouse	FY2014	FY2015	FY2016	FY2017	FY2018
		2.4	2.2	1.9	1.6	2.0

* This data includes CO2, CHCO4, HFC, PFC, N2O, SF6, HFE, NF3

Energy Saving in Distribution (Modal shift)

Transition of CO2 emissions by domestic product

		FY2014	FY2015	FY2016	FY2017	FY2018
Japan	tonnes-CO2/billion JPY	60.4	5.26	4.35	9.16	9.03
	tonnes-CO2	3,009	2,637	2,256	3,543	3,301

CO2 reduction by modal shift

(tonnes CO2)

Japan	CO2 reduction by modal shift	FY2014	FY2015	FY2016	FY2017	FY2018
		316	343	203	40	73

Green Purchasing Activities

Japan	Green Purchasing Activities	FY2014	FY2015	FY2016	FY2017	FY2018
		99.6%	98.6%	96.2%	99.1%	92.5%

Transition of office paper purchases

(million sheet)

		FY2014	FY2015	FY2016	FY2017	FY2018
Japan		11.4	12.3	10.4	10.5	10.3
Overseas		14.8	11.2	10.5	8.6	8.2

■ Reduction in Waste and Valuables

Transition of generation amounts of waste and valuables

(tonnes)

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	1,734	1,703	2,135	1,812	2,045
Overseas	12,155	11,687	10,462	9,543	9,017

Transition of recycling rate

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	100.0%	100.0%	99.9%	99.8%	99.7%
Overseas	99.9%	99.5%	99.3%	99.3%	99.0%

Breakdown of waste and valuables

Japan	FY2014	FY2015	FY2016	FY2017	FY2018
Sludge	3.70%	6.17%	3.61%	4.77%	4.12%
Waste oil	2.40%	4.59%	2.07%	3.09%	2.26%
Waste acids	0.02%	0.15%	0.04%	0.02%	0.01%
Waste alkali	0.10%	0.52%	0.27%	0.26%	0.50%
Waste Plastics and rubber	22.80%	24.04%	22.04%	26.55%	26.31%
Waste paper	39.70%	37.87%	35.72%	40.19%	37.13%
Wood waste	2.20%	2.61%	3.60%	3.08%	3.18%
Waste textile	0.02%	0.01%	0.00%	-	0.00%
Gabage	4.80%	2.90%	2.70%	2.36%	1.72%
Waste metals	23.20%	20.37%	28.99%	18.74%	23.44%
Glass and pottery waste	1.20%	0.77%	0.95%	0.94%	1.32%

Overseas	FY2014	FY2015	FY2016	FY2017	FY2018
Waste paper	34.2%	36.2%	37.6%	39.5%	42.9%
Waste metals	31.8%	27.2%	28.4%	26.9%	25.2%
Gabage	10.0%	10.0%	10.7%	11.1%	10.4%
Waste Plastics and rubber	4.2%	4.9%	3.9%	3.7%	4.4%
Wood waste	1.6%	2.3%	2.9%	2.3%	2.5%
Sludge	0.9%	0.4%	0.4%	0.4%	0.4%
Waste acids and alkali	0.7%	0.7%	0.6%	0.4%	0.3%
Waste oil	0.2%	0.2%	0.2%	0.1%	0.1%
Glass and pottery waste	0.1%	0.2%	0.3%	0.3%	0.3%
General waste from dormitories	5.2%	5.3%	5.3%	4.4%	4.1%
Other	10.9%	12.8%	9.8%	10.8%	9.4%

Management of Chemical Substances

Trends in VOC emissions

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	13	19	48	36	14
Overseas	86	86	86	86	—

Trends in PRTR chemical substances handling and emissions

	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	6	13	24	26	27
	0.02	1	3.3	1	1

Handling, transfer and emissions of PRTR chemical substances

	Substance	Volume handled	Emissions			Transferred		Transferred in the products	Volume removed or disposed	Volume recycled	
			Volume emitted into atmosphere	Volume emitted into water	Volume emitted to soil	Volume transferred as waste	Volume transferred to sewers				
											(tonnes)
Japan	FY2018	Methylnaphthalen [※]	11.4	0.1	0	0	0.0	0	11.4	0.0	0
		Hydrogen Fluoride and its salt	3.6	0.0	0	0	0.0	0	0.0	3.6	0
		Toluene	3.1	0.6	0	0	2.5	0	0.0	0.0	0
		1,2,4-trimethyl benzene	2.9	0.0	0	0	0.0	0	2.9	0.0	0
		Xylene	0.0	0.0	0	0	0.0	0	0.0	0.0	0
		2-ethoxyethyl acetate [※]	0.0	0.0	0	0	0.0	0	0.0	0.0	0
		Total	21.1	0.7	0	0	2.5	0	14.3	3.6	0
	FY2017	Methylnaphthalen [※]	12.1	0.1	0	0	0	0	12	0	0
		Hydrogen Fluoride and its salt	3.1	0	0	0	0	0	0	0	0
		Toluene	3.4	0.7	0	0	2.3	0	0.4	0	0
		1,2,4-trimethyl benzene	2.8	0.01	0	0	0	0	2.8	0	0
		Xylene	2.5	0.06	0	0	0	0	2.4	0	0
		2-ethoxyethyl acetate [※]	0	0	0	0	0	0	0	0	0
		Total	23.9	0.87	0	0	2.3	0	17.6	0	0
	FY2016	Methylnaphthalen [※]	14.9	0.1	0	0	0	0	14.8	0	0
		Hydrogen Fluoride and its salt	3.5	0	0	0	0	0	0	3.5	0
		Toluene	3.4	1.7	0	0	1.4	0	0.3	0	0
		1,2,4-trimethyl benzene	2.6	0	0	0	0.1	0	2.5	0	0
		Xylene	2.3	0.1	0	0	0	0	2.2	0	0
		2-ethoxyethyl acetate [※]	2.0	0.4	0	0	0	0	0	0	1.6
		Total	28.6	2.3	0	0	1.5	0	19.8	3.5	1.6
	FY2015	Methylnaphthalen [※]	7.5	0.04	0	0	0	0	7.5	0	0
		Hydrogen Fluoride and its salt	3.4	0	0	0	0	0	0	3.4	0
		N,N-dimethylformamide	1.3	0	0	0	1.3	0	0	0	0
		Toluene	1	1	0	0	0	0	0	0	0
		Total	13.2	1	0	0	1.3	0	7.5	3.4	0
	FY2014	Methylnaphthalen [※]	4.1	0.02	0	0	0	0	0	4.1	0
		Hydrogen Fluoride and its salt	2.1	0	0	0	0	0	0	2.1	0
Total		6.2	0.02	0	0	0	0	0	6.2	0	

※Methylnaphthalen is included in the distilled fuel for power generation.

This table is the result of the aggregate quantity that one substance handled by one plant exceeds one tonne in Japan.

※2-ethoxyethyl acetate as like Ethylene glycol monoethyl ether acetate

Trends in SOx, NOx and Smoke Dust emissions

	Category	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	Dust	0.2	0.2	0.2	0.2	0.2
	NOX	10	5	4	13.0	6.0
	SOX	2	2	0.8	1.1	1.2
Overseas	Dust	0.1	0.1	0	0.0	0.0
	NOX	3	3	0.1	0.1	0.0
	SOX	2	2	0.1	0.1	0.0

■ Reduction of Water Usage and Discharged Water Amounts

Water usage

(1000m³)

	Category	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	Industrial Water	64	64	66	70	71
	Underground water	357	376	423	422	400
	Public water supply	107	99	93	78	78
Overseas	Industrial Water	3	2	1	0	0
	Underground water	35	38	35	37	0
	Public water supply	1,164	1,151	1,050	901	712

Discharged water

(1000m³)

	Category	FY2014	FY2015	FY2016	FY2017	FY2018
Japan	Public water	212	238	288	288	257
	Sewer	291	284	281	267	273
	Other	8	10	6	9	12
Overseas	Public water	81	68	73	70	139
	Sewer	800	796	823	631	417
	Other	28	25	0	0	0

■ Number of Environment-related Qualification

The Pioneer Group has secured staff numbers exceeding the legally required number of qualified persons in Japan.

	Qualification	Legally required number	Number of Holders					
			FY2014	FY2015	FY2016	FY2017	FY2018	
National qualification	Pollution-related	Pollution Control Manager	4	12	13	12	13	13
	Energy	Qualified Person for Energy Management	3	8	7	7	6	6
		Energy Manager and Energy Management	4	10	8	11	6	11
	Waste	Managers of the Specially Controlled Industrial waste	11	41	36	38	36	40
		Handling of hazardous materials	Hazardous Materials Offers	12	174	151	147	155
	Specified High Pressure Gas Handling Supervisor		2	53	40	49	42	50
	High Pressure Gas Handling Supervisor		0	2	2	2	2	2
Work Supervisor(Organic Solvents,Lead,Specified Chemical Substance)	24		345	301	295	314	323	
	Toxic Substance Handling Officer	0	8	9	8	2	10	
Company qualification	Environmental management	Internal Environmental Auditor(In Japan)	-	79	60	65	38	47
		Internal Environmental Auditor(Overseas)	-	251	239	156	190	188

Environmental Impact

Site name	District	Energy consumption (GJ)	Waste (tonnes)	Chemical substances* emissions (tonnes)	Waste use (× 10 ³ m ³)
FY2018					
Pioneer Corporation Headquarters	Kanagawa pref.	37,060	1,707	0.1	— ※1
Pioneer Corporation Kawagoe plant	Saitama pref.	117,477	707,139	7.1	48.4
Pioneer FA corporation	Saitama pref.	4,541	10.2	0.0	1
Pioneer Fintech Corporation	Saitama pref.	17,003	90,512	4.1	1.9
Tohoku Pioneer Corporation	Yamagata pref.	211,826	152,156	0.1	100
Mogami Denki Corporation	Yamagata pref.	2,220	1.6	0.0	3
Tohoku Pioneer EG Corporation	Yamagata pref.	27,148	434,116	0.0	6.2
Towada Pioneer Corporation	Aomori pref.	27,557	407,163	1.8	6.5
Pioneer Micro Technology Corporation	Yamanashi pref.	278,440	133,238	1.2	380.7
Pioneer Automotive Technologies, Inc. (PAT)	USA	32,524	1,421	0	4
Pioneer Automotive de Mexico S.A.de C.V. (PMX)	Mexico	11,240	96	0	—
Pioneer do Brasil Ltda.(PBL)	Brazil	32,018	1043,253	0	1
Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)	Malaysia	70,028	27,273	0	35.4
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	199,932	705.1	0	151
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	58,440	2,185	0	50.3
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	64,806	838,107	0	35.8
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	28,492	548	0	25.8
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	170,433	228.96	0	40.3
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	68,985	629,689	0	151.6
Dongguan Monetech Electronic Co., Ltd. (MND)	China	5,135	39,109	0	26.9
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	7,456	149.7	0	187.6
FY2017					
Pioneer Corporation Headquarters	Kanagawa pref.	30,905	2	0.0	— ※1
Pioneer Corporation Kawagoe plant	Saitama pref.	117,442	686	8.9	47.8
Pioneer FA corporation	Saitama pref.	4,542	9	0.0	1.2
Pioneer Fintech Corporation	Saitama pref.	16,732	75	6.0	1.8
Tohoku Pioneer Corporation	Yamagata pref.	219,697	170	0.6	96.1
Mogami Denki Corporation	Yamagata pref.	2,470	1	0.0	2.7
Tohoku Pioneer EG Corporation	Yamagata pref.	26,411	197	0.0	4.8
Towada Pioneer Corporation	Aomori pref.	27,822	390	2.1	7
Pioneer Micro Technology Corporation	Yamanashi pref.	280,349	116	0.5	407.3
Pioneer Automotive Technologies, Inc. (PAT)	USA	32,546	1,436	0	3.5
Pioneer do Brasil Ltda.(PBL)	Brazil	32,018	773	0	37.2
Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)	Malaysia	77,708	28	0	43.6
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	197,357	731	0	148.8
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	62,640	2,583	0	52.2
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	51,705	813	0	30.3
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	32,380	716	0	26
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	176,783	292	39	55.4
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	71,744	660	0	239.8
Dongguan Monetech Electronic Co., Ltd. (MND)	China	12,331	86	0	38.4
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	8,562	150	0.6	258.2
FY2016					
Pioneer Corporation Headquarters	Kanagawa pref.	58,774	381	0.0	20.3
Pioneer Corporation Kawagoe plant	Saitama pref.	104,790	656	9.1	43.3
Pioneer FA corporation	Saitama pref.	4,254	11	0.0	1.2
Pioneer Fintech Corporation	Saitama pref.	13,190	76	5.6	1.6
Tohoku Pioneer Corporation	Yamagata pref.	215,856	339	1.6	87.4
Mogami Denki Corporation	Yamagata pref.	2,045	1	0.1	3
Tohoku Pioneer EG Corporation	Yamagata pref.	24,174	173	0.0	5.1
Towada Pioneer Corporation	Aomori pref.	23,263	176	2.4	5.7
Pioneer Micro Technology Corporation	Yamanashi pref.	272,729	110	2.4	412.6
Pioneer Automotive Technologies, Inc. (PAT)	USA	32,630	1,844	0	3.5
Pioneer do Brasil Ltda.(PBL)	Brazil	32,708	786	0	34.2
Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)	Malaysia	198,874	21	0	43.3
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	77,598	750	0	149.8
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	66,364	2,837	0	52.6
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	45,524	782	0	26.1
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	51,530	918	0	69.8
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	171,835	346	39	59.3
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	87,957	726	0	308.8
Dongguan Monetech Electronic Co., Ltd. (MND)	China	21,861	262	0	49.6
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	8,798	155	0.6	273.8

※1 Pioneer headquarters relocated to an office building. There is no use of water at the exclusive possession part.

* PRTR substances and VOC (20 substances of VOC electrical and electronic industry-defined)

Site name	District	Energy consumption (GJ)	Waste (tonnes)	Chemical substances* emissions (tonnes)	Waste use (× 10 ³ m ³)
FY2015					
Pioneer Corporation Headquarters	Kanagawa pref.	57,168	209	0	26.3
Pioneer Corporation Kawagoe plant	Saitama pref.	105,435	517	11	40.7
Pioneer FA corporation	Saitama pref.	4,633	8	0	1.2
Pioneer Fintech Corporation	Saitama pref.	12,012	56	6.2	1.6
Tohoku Pioneer Corporation	Yamagata pref.	214,345	200	0.7	93.2
Mogami Denki Corporation	Yamagata pref.	2,483	1	0.1	5.4
Tohoku Pioneer EG Corporation	Yamagata pref.	21,701	163	0	4.6
Towada Pioneer Corporation	Aomori pref.	24,876	75	0.5	6.8
Pioneer Micro Technology Corporation	Yamanashi pref.	283,100	119	0.3	358
Pioneer Automotive Technologies, Inc. (PAT)	USA	32,545	2,033	0	3.3
Pioneer do Brasil Ltda.(PBL)	Brazil	32,820	797	0	34.3
Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)	Malaysia	74,572	44	0	41
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	181,053	756	0	153.4
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	60,041	2,710	0	53.8
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	53,174	940	0	30.8
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	113,340	1,292	0	75.8
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	151,729	266	39	67.5
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	111,302	898	0	334.1
Dongguan Monetech Electronic Co., Ltd. (MND)	China	21,999	262	0	49.6
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	19,552	469	0.6	303.6
FY2014					
Pioneer Corporation Headquarters	Kanagawa pref.	61,499	256	0	27.4
Pioneer Corporation Kawagoe plant	Saitama pref.	111,198	549	8.5	43.4
Pioneer FA corporation	Saitama pref.	4,507	7	0	1.3
Pioneer Fintech Corporation	Saitama pref.	12,279	42	2.4	1.7
Tohoku Pioneer Corporation	Yamagata pref.	214,244	302	0.8	92.6
Mogami Denki Corporation	Yamagata pref.	2,527	2	0.2	5.4
Tohoku Pioneer EG Corporation	Yamagata pref.	21,419	121	0	5.2
Towada Pioneer Corporation	Aomori pref.	26,331	107	0.6	8.4
Pioneer Micro Technology Corporation	Yamanashi pref.	263,575	103	0.1	340.3
Pioneer Automotive Technologies, Inc. (PAT)	USA	45,906	61	0	3.3
Pioneer do Brasil Ltda.(PBL)	Brazil	33,026	534	0	35
Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)	Malaysia	100,591	2	0	51.7
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	163,331	798	0	152.8
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	52,948	2,952	0	45.4
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	57,954	975	0	35.1
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	87,220	1,794	0	98
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	145,131	247	39	65.9
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	112,795	945	0	320.2
Dongguan Monetech Electronic Co., Ltd. (MND)	China	21,198	324	0	56.5
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	16,492	564	0.6	344.6

* PRTR substances and VOC (20 substances of VOC electrical and electronic industry-defined)

Scope of Data

Period covered

The period covered by the data is FY2013(April 2013–March2014)–FY2018 (April 2017–March 2018), but whenever possible, the latest events have been included even if outside this period. Expansion of the range of the data and scrutiny of the figures has caused some changes from the figures released last year. There may be some discrepancies between subtotals and totals due to rounding off.

Organization covered

The scope of this data is as follows. (Site name is as of March in 2018.) Activities other than the following are also reported.

Japan

Pioneer Corporation
Headquarters
Kawagoe Plant
Tohoku Pioneer Corporation
Headquarters
Yonezawa Plant
Mogami Denki Corporation
Tohoku Pioneer EG Corporation
Pioneer Micro Technology Corporation

Towada Pioneer Corporation
Pioneer FA Corporation
Pioneer Service Network Corporation
World Parts Center / Repair Technical Center
Piotec, Inc.
Pioneer System Technologies Corporation
Pioneer Finetech Corporation
Increment P Corporation
Headquarters
Tohoku Design Center

THE AMERICAS

U.S.A.

Pioneer North America, Inc. (PNA)
Pioneer Automotive Technologies, Inc. (PAT)

BRAZIL

Pioneer do Brasil Ltda.(PBL)

MEXICO

Pioneer Automotive de Mexico S.A.de C.V. (PMX)

ASIA & OCEANIA

SINGAPORE

Pioneer Electronics Asiacentre Pte. Ltd.(PAC)

MALAYSIA

Pioneer Technology (Malaysia) Sdn. Bhd.(MPT)

THAILAND

Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)

VIETNAM

Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)

AUSTRALIA

Pioneer Electronics Australia Pty. Ltd.(PTY)

CHINA

Pioneer China Holding Co., Ltd. (PCH)
Pioneer Technology (Dongguan) Co., Ltd.(PTD)
Pioneer Technology (Shanghai) Co., Ltd.(PSG)
Pioneer (HK) Ltd.(PHK)
Dongguan Monetech Electronic Co., Ltd.(MND)
Shanghai Pioneer Speakers Co., Ltd.(SPS)
Mogami Dongguan Electronics Co.,Ltd.(MDE)