

Pioneer Group Environmental Data 2019

Targets, Plans and Performance

Category	Issue	Target	Numerical Goal	FY2015	FY2016	FY2017	FY2018	FY2019	Self assessment FY2018
Targets	Prevention of Global Warming	CO2 equivalent greenhouse gas emission Japan:12% reduction fromFY2010 to FY2021(Gross emission)	974	748	758	743	740	677	◎Achieved 31% reduction
		CO2 equivalent greenhouse gas emission Japan and overseas:10% reduction fromFY2010 to FY2021(emissions per unit of sales amount)	0.271	0.211	0.196	0.221	0.220	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	2,669	2,802	2,936	3,027	2,26	◎Achieved 3% reduction
Controls	Prevention of Global Warming	Exhaust of five GHG(Five gases except CO2) Worldwide : maintaining FY2014 level	5	2.2	1.4	1.6	2.1	2.4	◎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	13.67 mega-tonne-kilometers	10.64 mega-tonne-kilometers	15.08 mega-tonne-kilometers	16.91 mega-tonne-kilometers	17.45 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:99.5%	Japan: 99.9% Overseas:99.3%	Japan: 99.8% Overseas:99.3%	Japan: 99.7% Overseas:99.0%	Japan: 99.7% Overseas:90.7%	JAPAN ◎Achieved Overseas × Failed
		Green purchasing promotion Japan:Maintaining 95% rate or higher	95.0%	98.6%	96.2%	99.1%	92.5%	97.9%	◎Achieved
		Management of the amount of the water resources used Worldwide : maintaining FY2014 level	1.836million m ³	1.730 million m ³	1.667 million m ³	1.508 million m ³	1,261 million m ³	1,100million m ³	◎Achieved keep numerical Goal 13%reduction from FY2018result
	Management of chemical substances	Management of the amount of office paper purchase Worldwide : maintaining FY2014 level	2,860 million sheet	2,350 million sheet	2,080 million sheet	1,920 million sheet	1,850 million sheet	1,380 million sheet	◎Achieved
		Management of emissions of PRTR chemical substances VOCs ^{*2} Worldwide maintaining FY2014 level	136	105	119	57※	15※	19※	-
Management of emissions of SOx,NOx, and dust Worldwide :maintaining FY2014 level		Sox 11tonnes Nox 15tonnes 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	Sox 1.0tonnes Nox 2.8tonnes Dust 0.08tonnes	◎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

	Resources	Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Procurement	Total energy	10,000 tonnes	9.5	7.3	6.6	6	4※
Planning, design, production	Water consumption	10,000 m ³	1,782	1,611	1,536	1,488	1,363
	Chemical substances handled	tonnes	173	167	151	126	110
	Office paper	10,000 sheets	144	161	58※	64※	48※
Transportation	Goods Transported	10,000 tonnes	2,350	2,090	1,920	1,850	1,382
Service	Total energy	TJ	8.2	5.9	5.5	4.9	3.2※
	Water consumption	m ³	786	876	876	876	876

※Aggregation method change

※Japan Data Only

※Aggregation method change

Output Environmental impact emitted as a result of business activities

		Unit	FY2015	FY2016	FY2017	FY2018	FY2019
Planning, design, production	Greenhouse gases discharged	10,000 tonnes CO2	10.6	9	8.6	8.5	7.6
	Waste generated	10,000 tonnes	1.3	1.2	1.1	1.1	0.8
	Amount recycled	10,000 tonnes	1.2	1.2	1.1	1.1	0.7
	Waste water	10,000 tonnes m ³	142	147	126	110	92
	Waste chemical substances	tonnes	105	134	122	14※	19※
	SOx	tonnes	3.7	0.9	1.1	1.2	1.0
	NOx	tonnes	8.3	4.1	13.1	6	2.8
Transportation	CO2(in Japan)	1,000 tonnes	2.9	2.3	3.5	3.3	3.4
Used by customer	Recycled packaging materials (in Japan)	tonnes	184	140	105	102	131
Service	Greenhouse gases discharged	tonnes CO2	393	335	394	388	455
	Waste generated	tonnes	352	182	121	103	88
	Amount recycled	tonnes	350	181	121	103	88
	Waste water	m ³	786	876	876	876	976

※Japan Data Only

Environmental Costs

(Millions of JPY)

Category	Description	Details	FY2015		FY2016		FY2017		FY2018		FY2019	
			Investment	Expense	Investment	Expense	Investment	Expense	Investment	Expense	Investment	Expense
Plants	Anti-pollution costs	Wastewater treatment and management, water quality analysis, smoke treatment, etc.	0	103	3	92	4	75	32	82	4.5	72
	Global environmental preservation	Energy saving-related costs (depreciation of solar power generation, demand control, inverter control, power measuring systems introduction, etc.)	0	65	1	53	0	62	0	56	0	32
	Resource recycling costs	Waste disposal and recycling costs	0	94	2	86	1	51	0	69	0	71
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)	0	17	0	17	3	5	1	3	0	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	218	2	334	0	306	0	181	0	118
R&D	Environmental preservation costs in R&D activities	Cost of developing technologies including environmental factors	31	573	45	547	66	499	44	514	25	491
Social activities	Environmental preservation costs in social activities	Voluntary environmental preservation activities (Cleanup activities, etc.) and donations to environmental groups	0	11	0	10	0	11	0	11	0	11
Environmental remediation	Environmental remediation cost	Cost to restore, cover degradation suits or insurance fees.	0	0	0	0	0	4	0	0	0	1
Total			31	1,081	53	1,141	74	1,013	77	916	30	799

Economic Benefits

(Millions of JPY)

Category	Details	FY2015	FY2016	FY2017	FY2018	FY2019
1. Saving due to environmental preservation (energy saving, pollution prevention, etc.)	Power reduction by purchase of energy saving equipment, upgrading, etc.	10	48	43	59	15
2. Savings due to resources recycling (resource saving, recycling, waste disposal, etc.)	Reduction of waste disposal costs, Profits from sales of valuable resources.	21	18	24	21	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		31	66	67	80	36

■ Global Warming Prevention Activities

Greenhouse gases emissions

(1000tonnes CO2e)

	Category	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Scope 1	5	5	6	6	4
	Scope 2	36	33	34	34	31
	Scope 3	1	0	0	0	0
	PFC, HFC, etc	2	1	2	2	2
	Total	44	40	42	42	37
Overseas	Scope 1	3	2	2	1	5
	Scope 2	59	47	44	42	36
	Scope 3	0	1	1	1	1
	PFC, HFC, etc	0	0	0	0	0
	Total	62	50	46	43	37

Energy consumption

(TJ)

	Category	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Electricity	659	674	642	637	604
	Fuel	44	39	53	48	28
	Gas	45	44	48	47	41
	Cold water	—	—	8	8	7
	Total	748	758	751	740	680
Overseas	Electricity	979	827	755	729	655
	Fuel	33	15	21	18	15
	Gas	19	12	16	10	10
	Total	1,031	853	792	757	680

Reduction of Non-Energy-Derived GreenhouseGases

(1000tonnes CO2e)

Japan	Reduction of Non-Energy-Derived Greenhouse	FY2015	FY2016	FY2017	FY2018	FY2019
		2.2	1.9	1.6	2.0	2.4

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

Energy Saving in Distribution (Modal shift)

Transition of CO2 emissions by domestic product

		FY2015	FY2016	FY2017	FY2018	FY2019
Japan	tonnes-CO2/billion JPY	5.26	4.35	9.16	9.03	9.7
	tonnes-CO2	2,637	2,256	3,543	3,301	3,369

CO2 reduction by modal shift

(tonnes CO2)

Japan	CO2 reduction by modal shift	FY2015	FY2016	FY2017	FY2018	FY2019
		343	203	40	73	113

Green Purchasing Activities

Japan	Green Purchasing Activities	FY2015	FY2016	FY2017	FY2018	FY2019
		98.6%	96.2%	99.1%	92.5%	97.9%

Transition of office paper purchases

(million sheet)

		FY2015	FY2016	FY2017	FY2018	FY2019
Japan		12.3	10.4	10.5	10.3	7.5
Overseas		11.2	10.5	8.6	8.2	6.3

■ Reduction in Waste and Valuables

Transition of generation amounts of waste and valuables

(tonnes)

	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	1,703	2,135	1,812	2,045	2,013
Overseas	11,687	10,462	9,543	9,017	5,836

Transition of recycling rate

	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	100.0%	99.9%	99.8%	99.7%	100.0%
Overseas	99.5%	99.3%	99.3%	99.0%	89.1%

Breakdown of waste and valuables

Japan	FY2015	FY2016	FY2017	FY2018	FY2019
Sludge	6.17%	3.61%	4.77%	4.12%	4.98%
Waste oil	4.59%	2.07%	3.09%	2.26%	2.21%
Waste acids	0.15%	0.04%	0.02%	0.01%	0.01%
Waste alkali	0.52%	0.27%	0.26%	0.50%	0.31%
Waste Plastics and rubber	24.04%	22.04%	26.55%	26.31%	22.95%
Waste paper	37.87%	35.72%	40.19%	37.13%	42.27%
Wood waste	2.61%	3.60%	3.08%	3.18%	2.16%
Waste textile	0.01%	0.00%	-	0.00%	0.00%
Gabage	2.90%	2.70%	2.36%	1.72%	1.69%
Waste metals	20.37%	28.99%	18.74%	23.44%	18.91%
Glass and pottery waste	0.77%	0.95%	0.94%	1.32%	0.05%

Overseas	FY2015	FY2016	FY2017	FY2018	FY2019
Waste paper	36.2%	37.6%	39.5%	42.9%	37.02%
Waste metals	27.2%	28.4%	26.9%	25.2%	26.09%
Gabage	10.0%	10.7%	11.1%	10.4%	9.33%
Waste Plastics and rubber	4.9%	3.9%	3.7%	4.4%	6.93%
Wood waste	2.3%	2.9%	2.3%	2.5%	1.54%
Sludge	0.4%	0.4%	0.4%	0.4%	0.74%
Waste acids and alkali	0.7%	0.6%	0.4%	0.3%	0.34%
Waste oil	0.2%	0.2%	0.1%	0.1%	0.17%
Glass and pottery waste	0.2%	0.3%	0.3%	0.3%	0.25%
General waste from dormitor ies	5.3%	5.3%	4.4%	4.1%	5.80%
Other	12.8%	9.8%	10.8%	9.4%	11.80%

Management of Chemical Substances

Trends in VOC emissions

	(tonnes)				
	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	19	48	36	14	18
Overseas	86	86	86	—	—

Trends in PRTR chemical substances handling and emissions

		(tonnes)				
		FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Volume handled	13	24	26	27	15
	Volume emitted	1	3.3	1	1	0.8

Handling, transfer and emissions of PRTR chemical substances

		(tonnes)									
	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				
Japan	FY2019	Methylnaphthalen [※]	5.6	0.0	0.0	0.0	0.0	0.0	5.6	0.0	0.0
		Hydrogen Fluoride and its salt	4.5	0.0	0.0	0.0	0.0	0.0	0.0	4.5	0.0
		Toluene	2.9	0.6	0.0	0.0	2.1	0.0	0.2	0.0	0.0
		1,2,4-trimethyl benzene	0.5	0.0	0.0	0.0	0.0	0.0	0.5	0.0	0.0
		Xylene	0.4	0.0	0.0	0.0	0.0	0.0	0.4	0.0	0.0
		2-ethoxyethyl acetate [※]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Total	13.8	0.7	0.0	0.0	2.1	0.0	6.6	4.5	0.0
	FY2018	Methylnaphthalen [※]	11.4	0.1	0.0	0.0	0.0	0.0	11.4	0.0	0.0
		Hydrogen Fluoride and its salt	3.6	0.0	0.0	0.0	0.0	0.0	0.0	3.6	0.0
		Toluene	3.1	0.6	0.0	0.0	2.5	0.0	0.0	0.0	0.0
		1,2,4-trimethyl benzene	2.9	0.0	0.0	0.0	0.0	0.0	2.9	0.0	0.0
		Xylene	0.0	0.0	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	0.0	0.0
		Total	21.1	0.7	0.0	0.0	2.5	0.0	14.3	3.6	0.0
	FY2017	Methylnaphthalen [※]	12.1	0.1	0.0	0.0	0.0	0.0	12.0	0.0	0.0
		Hydrogen Fluoride and its salt	3.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Toluene	3.4	0.7	0.0	0.0	2.3	0.0	0.4	0.0	0.0
		1,2,4-trimethyl benzene	2.8	0.0	0.0	0.0	0.0	0.0	2.8	0.0	0.0
		Xylene	2.5	0.1	0.0	0.0	0.0	0.0	2.4	0.0	0.0
		2-ethoxyethyl acetate [※]	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Total	23.9	0.9	0.0	0.0	2.3	0.0	17.6	0.0	0.0
	FY2016	Methylnaphthalen [※]	14.9	0.1	0.0	0.0	0.0	0.0	14.8	0.0	0.0
		Hydrogen Fluoride and its salt	3.5	0.0	0.0	0.0	0.0	0.0	0.0	3.5	0.0
		Toluene	3.4	1.7	0.0	0.0	1.4	0.0	0.3	0.0	0.0
		1,2,4-trimethyl benzene	2.6	0.0	0.0	0.0	0.1	0.0	2.5	0.0	0.0
		Xylene	2.3	0.1	0.0	0.0	0.0	0.0	2.2	0.0	0.0
		2-ethoxyethyl acetate [※]	2.0	0.4	0.0	0.0	0.0	0.0	0.0	0.0	1.6
		Total	28.6	2.3	0.0	0.0	1.5	0.0	19.8	3.5	1.6
FY2015	Methylnaphthalen [※]	7.5	0.0	0.0	0.0	0.0	0.0	7.5	0.0	0.0	
	Hydrogen Fluoride and its salt	3.4	0.0	0.0	0.0	0.0	0.0	0.0	3.4	0.0	
	N,N-dimethylformamide	1.3	0.0	0.0	0.0	1.3	0.0	0.0	0.0	0.0	
	Toluene	1.0	1.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
		Total	13.2	1.0	0.0	0.0	1.3	0.0	7.5	3.4	0.0

※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

		(tonnes)				
Category		FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Dust	0.2	0.2	0.2	0.2	0.1
	NOX	5	4	13.0	6.0	2.8
	SOX	2	0.8	1.1	1.2	1.0
Overseas	Dust	0.1	0	0.0	0.0	0.0
	NOX	3	0.1	0.1	0.0	0.0
	SOX	2	0.1	0.1	0.0	0.0

■ Reduction of Water Usage and Discharged Water Amounts

Water usage

(1000m³)

	Category	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Industrial Water	64	66	70	71	59
	Underground water	376	423	422	400	347
	Public water supply	99	93	78	78	76
Overseas	Industrial Water	2	1	0	0	0
	Underground water	38	35	37	0	1
	Public water supply	1,151	1,050	901	712	616

Discharged water

(1000m³)

	Category	FY2015	FY2016	FY2017	FY2018	FY2019
Japan	Public water	238	288	288	257	209
	Sewer	284	281	267	273	262
	Other	10	6	9	12	4
Overseas	Public water	68	73	70	139	72
	Sewer	796	823	631	417	374
	Other	25	0	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					
			FY2015	FY2016	FY2017	FY2018	FY2019	
National qualification	Pollution-related	Pollution Control Manager	4	13	12	13	13	23
	Energy	Qualified Person for Energy Management	3	7	7	6	6	6
		Energy Manager and Energy Management	4	8	11	6	11	8
	Waste	Managers of the Specially Controlled Industrial waste	11	36	38	36	40	34
	Handling of hazardous materials	Hazardous Materials Offers	12	151	147	155	188	155
		Specified High Pressure Gas Handling Supervisor	2	40	49	42	50	50
		High Pressure Gas Handling Supervisor	0	2	2	2	2	2
Work Supervisor(Organic Solvents,Lead,Specified Chemical Substance)		24	301	295	314	323	320	
Company qualification	Environmental management	Toxic Substance Handling Officer	0	9	8	2	10	9
		Internal Environmental Auditor (In Japan)	-	60	65	38	47	51
		Internal Environmental Auditor (Overseas)	-	239	156	190	188	160

Environmental Impact

Site name	District	Energy consumption (GJ)	Waste (tonnes)	Chemical substances* emissions (tonnes)	Waste use (× 10 ³ m ³)
FY2019					
Pioneer Corporation Headquarters	Tokyo	28,807	87	0.1	— ※1
Pioneer Corporation Kawagoe plant	Saitama pref.	112,355	974	6.0	48.6
Pioneer Fintech Corporation	Saitama pref.	16,430	75	9.4	2.3
Tohoku Pioneer Corporation	Yamagata pref.	196,342	179	0.0	81.6
Mogami Denki Corporation	Yamagata pref.	1,994	1	0.1	3
Tohoku Pioneer EG Corporation	Yamagata pref.	11,227	87	0.0	3.6
Towada Pioneer Corporation	Aomori pref.	26,754	406	1.7	6
Pioneer Micro Technology Corporation	Yamanashi pref.	257,959	97	1.2	332.4
Pioneer Automotive Technologies, Inc. (PAT)	USA	34,433	1,085	0	3.7
Pioneer Automotive de Mexico S.A.de C.V. (PMX)	Mexico		99	0	— ※1
Pioneer do Brasil Ltda.(PBL)	Brazil	41,302	300	0	1
Pioneer Manufacturing (Thailand) Co., Ltd. (PTM)	Thailand	204,991	617	0	141.1
Tohoku Pioneer (Thailand) Co., Ltd. (TPT)	Thailand	50,118	1,694	0	48.3
Tohoku Pioneer (Vietnam) Co., Ltd.(TPV)	Vietnam	77,215	615	0	38.3
Shanghai Pioneer Speakers Co., Ltd. (SPS)	China	16,960	137	0	18.6
Pioneer Technology (Shanghai) Co., Ltd. (PSG)	China	144,727	201	0	38.4
Pioneer Technology (Dongguan) Co., Ltd. (PTD)	China	63,900	596	0	131.8
Dongguan Monotech Electronic Co., Ltd. (MND)	China	8,451	29	0	15.3
Mogami Dongguan Electronics Co.,Ltd. (MDE)	China	6,876	122	0	179.8
FY2018					
Pioneer Corporation Headquarters	Tokyo	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 Monotech 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 Monotech 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

※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)
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
FY2015					
Pioneer Corporation Headquarters	Kanagawa pref.	57,168	209	0	26.3
Pioneer Corporation Kawagoe plant	Saitama pref.	105,435	517	1.1	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	4.1
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

* 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 FY2015(April 2014–March2015)–FY2019 (April 2018–March 2019), 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 2019.) 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 Service Network Corporation
World Parts Center / Repair Technical Center
Piotec, Inc.
Pioneer System Technologies Corporation
Pioneer Finetech Corporation
Increment P Corporation

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)
Tohoku Pioneer de Mexico S.A.de C.V. (TPMX)

ASIA & OCEANIA

SINGAPORE

Pioneer Electronics Asiacentre Pte. Ltd.(PAC)

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)