Pioneer Group Environmental Data FY2024 #2

Updated: May 1, 2025

| Period covered

The period covered by these data is FY2024 which is from April 2023 to March 2024.
There may be some discrepancies between totals and subtotals due to rounding.

| Organization covered

The data covers domestic and overseas consolidated subsidiaries in the Pioneer Group.
Please refer to the “Pioneer Group Environmental Data” website page for detailed covered sites.
Annotation is inserted in case the coverage is different.

| Environmental Data

■Progress on Our Initiatives

Greenhouse Gas (hereafter, GHG) emissions reduction : 42% by FY2031 based on FY2021
(4.2% per year in a 1.5℃ scenario)

	Item	Target	Base Year (FY2021)	Recent Year (FY2023)	Evaluation of Progress
Prevention of Global Warming	GHG emissions (Total of Scope 1 and 2)	42% reduction by FY31	– 44,953 t-CO2	17.2% reduction 37,207 t-CO2	Progress is on target (4.2%/year)

Note: Calculation methods and emissions factors based on the contents of guidance issued by the Ministry of the Environment in Japan are used.

Intensity of sales for waste and valuable : 3% reduction every year started from FY2011

	Item	Target	Base Year (FY2021)	Recent Year (FY2023)	Evaluation of Progress
Resource Conservation and Recycling	Amount of waste (Sales intensity)	3% reduction from previous year	3.871 t-CO2	0.904 t-CO2	Achieved (Target in recent year is below 2.604ton)

■GHG Emissions (Scope 1 and 2)

*We had been proceeding Scope 1 and 2 calculations since 2008, but recalculated them in 2024 after reviewing the target boundary and calculation method. As a result, data for the fiscal years ended March 31, 2022 and 2023 are not available. (To be updated after the calculation completed.)

Unit: ton-CO2

Category	FY2021 (Base Year)	FY2022	FY2023	FY2024	FY2031 (Target Year)
Scope 1	1,425.0	—	—	1,191.5	826.0
Scope 2 (Market base)	32,417.3	—	—	25,719.8	18,802.0
Total	**33,842.3**	**—**	**—**	**26,911.3**	**19,628.0**
Reduction rate against base year	**—**	**—**	**—**	**▲20.5%**	**▲42.0%**

Scope 1: Direct emissions occur from sources owned or controlled by the company.
Scope 2 : Indirect emissions from the generation of purchased energy.
GHGs cover all seven gases including carbon dioxide.

■GHG Emissions (Scope 3)

*We have been calculating Scope 3 since 2011, and as with Scope 1 and 2, we have recalculated in 2024 after reviewing the target boundary and calculation method. As a result, data for the fiscal years ended March 31, 2022 and 2023 are not available. (To be updated after the calculation completed.) In addition, since reduction targets for Scope 3 GHG emissions are set by Category 1 and 11 activities, we have not set targets for each category. No past results are available for supplier engagement in Category 1, as the target was set in 2024.

Unit: ton-CO2

Category	FY2021 (Base Year)	FY2022	FY2023	FY2024	FY2031 (Target Year)
Cat1 : Purchased goods and services	431,513.8			351,164.8	–
	Calculation Overview: Calculation are made with reference to the Ministry of the Environment's emissions DB using GLIO's emissions intensity against the amount on purchased parts and materials.				
Cat2 : Capital goods	35,247.0			21,265.8	–
	Calculation Overview: Calculation are made with reference to the Ministry of the Environment's emissions DB using GLIO's emissions intensity against the increased fixed assets.				
Cat3 : Fuel- and energy-related activities not included in Scope 1 and 2	4,663.1			3,783.1	–
	Calculation Overview: Calculations are based on Scope 1 and 2 results and refer to IDEA emissions intensity.				
Cat4 : Upstream transport and delivery	92,256.6			34,236.6	–
	Calculation Overview: The calculation is based on distance and weight information for transportation of procurement items and products transportation in which we are the shipper, referring to IDEA's emission intensity. WTW calculations are also taken into account.				

Category	FY2021 (Base Year)	FY2022	FY2023	FY2024	FY2031 (Target Year)
Cat5 : Waste generation in operations	209.9			189.6	–
	Calculation Overview: Calculation are made with reference to the Ministry of the Environment's emissions DB using IDEA emissions intensity for the waste amount by type.				
Cat6 : Business travel	1,725.8			1,184.8	–
	Calculation Overview: Calculation are made with reference to the Ministry of the Environment's emissions DB using emissions intensity from the Survey of Travel Consumption Trends (2010) published by the Japan Tourism Agency against the number of employees.				
Cat7 : Employee commuting	4,513.2			3,117.8	–
	Calculation Overview: Calculations are made with reference to the Ministry of the Environment's emissions DB against commuting data that takes into account office type, city classification, number of work days, etc.				
Cat8 : Leased assets (upstream)	Fuel used by leased vehicles at the sales office, etc. will be covered, but will be calculated under Scope 1.				
Cat9 : Downstream transportation and delivery	43,060.6			32,875.7	–
	Calculation Overview: Calculations are based on the distance and weight of transportation in which we are not the shipper, as well as emissions from sales and storage at retail outlets, using the Ministry of the Environment's emissions DB, which uses emissions intensity from the Japan Institute of Energy Economics' Summary of Energy Economics Statistics. WTW calculations are also taken into account.				
Cat10 : Processing of sold products	This category is not applicable because both products and electronic components sold are not processed.				

Category	FY2021 (Base Year)	FY2022	FY2023	FY2024	FY2031 (Target Year)
Cat11 : Use of sold products	1,512,052.3			968,792.8	–
	Calculation Overview: Calculations are made by utilizing internal LCA calculated on power consumption and weight of products sold, as well as fuel consumption of automobiles.				
Cat12 : End-of-life treatment of sold products	2,318.2			2,035.5	–
	Calculation Overview: Calculations are made using IDEA emissions intensity for the waste amounts by type with reference to the Ministry of the Environment's emissions DB.				
Cat13 : Downstream Leased Assets	This category is not applicable since no assets leased from our company.				
Cat14 : Franchises	This category is not applicable as we do not have any franchises.				
Cat15 : Investments	This category is not applicable since we do not engage in the business of investment.				
Total in Scope 3	**2,127,560.5**			**1,418,646.5**	**1,233,985.0**
Total of Cat1 and Cat11	**1,943,566.0**			**1,319,957.6**	**1,127,268.0**
Reduction rate against base year	**–**			**▲32.1%**	**▲42.0%**

Classification	FY2025 (Target Setting Year)	FY2030 (Target Year)
Cat 1: Ratio of Supplier Engagement Activity	–	10% (April 2029 ~ March 2030)

Scope 3: Indirect emissions other than Scope 1 and 2 (emissions by other companies related to the activities of the business)

■Energy Consumption

Category	Unit	FY2021	FY2022	FY2023	FY2024
Electricity	MWh	90,149.9	76,860.2	66,447.0	65,159.4
Heavy Oil	k L	430.6	465.1	1,120.9	546.3
Diesel		101.9	110.5	56.0	7.5
Gasoline		221.6	78.6	79.1	201.6
Kerosene		17.9	21.1	8.5	7.0
LPG	ton	104.1	83.3	61.3	57.6
LNG		0.0	0.0	38.0	5.5
City Gas	m 3	338.6	153.0	66.4	67.4
Cold Water	J	4,677.9	2,642.4	1,419.0	1,495.5
Hot Water		0.0	0.0	0.0	474.9
Conversion to Tera Joule					
Total	Tera J	**948.5**	**803.3**	**721.6**	**600.1**

Items	Unit	FY2021	FY2022	FY2023	FY2024
Renewable Energy Electricity	MWh	280.9	242.5	2,816.9	3,198.0
Ratio of the Renewable Energy	%	0.3	0.3	4.2	4.9

*Covering domestic and international sites where relevant data can be obtained.

*The renewable energy ratio is calculated as the one of the renewable energy purchased/generated amounts to the electricity used amounts.

■Water resources

Category		Unit	FY2021	FY2022	FY2023	FY2024
Usage	Industrial water	1000m3	167.5	14.7	54.0	49.7
	Underground water		50.5	54.3	11.9	6.9
	Water supply		425.5	413.5	402.9	283.6
	Total		**643.5**	**482.5**	**468.8**	**340.2**
Discharge	Public water		157.6	4.1	42.5	18.2
	Sewerage systems		358.6	353.2	307.9	239.5
	Others		0.0	0.0	0.0	0.7
	Total		**516.2**	**357.3**	**350.4**	**258.4**

*Covering domestic and international sites where relevant data can be obtained.

■Waste/Valuables and Recycling Ratio

Calculated for items defined by a law as industrial waste under Waste Disposal and Public Cleaning Law in Japan.

Category	Unit	FY2021	FY2022	FY2023	FY2024
Cinder	ton	0.9	0.8	1.5	0.0
Sludge		56.3	58.7	59.4	52.7
Waste oil		20.4	18.9	16.3	15.8
Waste acid/alkali		9.7	8.2	13.1	1.4
Waste plastics		649.7	642.6	439.8	402.8
Waste rubber		0.0	0.0	0.0	0.0
Waste metal		1,055.6	309.8	257.0	229.0
Waste glass, concrete and ceramic		19.5	16.7	13.2	4.8
Waste casting sand and slag		0.0	0.0	0.0	0.0
Bricks		0.0	0.0	0.0	0.0
Dust		0.0	0.0	0.0	0.0
Waste paper		2,774.1	2,543.3	1,038.3	959.2
Waste wood		120.2	147.8	123.8	64.1
Waste textile		0.6	0.1	0.7	0.0
Unwanted animal solid matter		0.0	0.0	0.0	0.0
Animal and plant residues		242.9	111.1	86.8	19.3
Others		725.4	458.5	238.7	434.3
Total		**5,675.2**	**4,316.5**	**2,288.9**	**2,183.4**
Items eligible for recycling		5,647.9	4,275.4	2,278.4	2,172.0
Recycling rate	%	**99.52**	**99.05**	**99.54**	**99.48**

*Covering domestic and international sites where relevant data can be obtained.

■Chemical Substance Management

Category	Unit	FY2021	FY2022	FY2023	FY2024
VOC emissions	ton	12.8	10.7	11.0	9.7
PRTR handling amount		8.5	9.4	15.0	7.9
PRTR emissions		0.6	0.6	0.3	0.1

* Subject to sites in Japan only

PRTR	Unit	Substances	Handling amount	Emissions to		Transferred to		Transferred in the products	Volume removed or disposed	Volume recycled
				Atmosphere	Public water/soil	Waste	Sewers			
FY2024	ton	Methylnaphthalene	6.9	0.0	0.0	0.0	0.0	6.9	0.0	0.0
		Hydrogen Fluoride and its salt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Toluene	0.1	0.0	0.0	0.1	0.0	0.0	0.0	0.0
		Trimethyl benzene	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		Xylene	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		2-ethoxyethyl acetate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY2023		Methylnaphthalene	14.2	0.1	0.0	0.0	0.0	14.2	0.0	0.0
		Hydrogen Fluoride and its salt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Toluene	0.2	0.1	0.0	0.0	0.0	0.1	0.0	0.0
		Trimethyl benzene	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		Xylene	0.1	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		2-ethoxyethyl acetate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

PRTR	Unit	Substances	Handling amount	Emissions to		Transferred to		Transferred in the products	Volume removed or disposed	Volume recycled
				Atmosphere	Public water/soil	Waste	Sewers			
FY2022	ton	Methylnaphthalene	6.0	0.0	0.0	0.0	0.0	5.9	0.0	0.0
		Hydrogen Fluoride and its salt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Toluene	2.3	0.5	0.0	1.7	0.0	0.1	0.0	0.0
		Trimethyl benzene	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
		Xylene	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
		2-ethoxyethyl acetate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
FY2021		Methylnaphthalene	5.4	0.0	0.0	0.0	0.0	5.4	0.0	0.0
		Hydrogen Fluoride and its salt	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
		Toluene	2.5	0.5	0.0	2.0	0.0	0.1	0.0	0.0
		Trimethyl benzene	0.2	0.0	0.0	0.0	0.0	0.2	0.0	0.0
		Xylene	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0
		2-ethoxyethyl acetate	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

* Subject to sites in Japan only
* Data of 0.1 tons or less are listed as zero.
* Methylnaphthalene is included in the distilled fuel for power generation.
  Amount of one substance handled per business site exceeding 1 ton is counted.

■Air Pollutant Emissions

Category	Unit	FY2021	FY2022	FY2023	FY2024
Dust	ton	0.1	0.1	0.1	0.1
NOx		2.1	3.4	23.2	5.3
SOx		1.1	1.0	1.4	0.9

* Subject to sites in Japan only

■ISO14001 Certification Status

Category		Unit	FY2021	FY2022	FY2023	FY2024
Sites	Domestic	Number	16	16	15	15
	Overseas		13	11	10	8
Employee Coverage	Global	%	95.1	95.1	93.5	93.6

* Employee coverage calculated as the ratio of the number of employees at ISO 14001 certified sites divided by the total number of employees.

■Environmental Data of Major Sites

FY2024	Region	Energy Consumption (Unit : Giga joule)	Waste and Valuables (Unit : ton)	Chemical Substances Emissions(Unit : ton)	Water Usage (Unit : 1000m3)
Pioneer Corporation Headquarter	Tokyo	4,698	13.2	0.0	— ※1
Pioneer Corporation Kawagoe Plant	Saitama pref.	81,071	621.6	3.7	18.1
Pioneer Finetech Corporation	Saitama pref.	11,833	39.4	6.0	1.5
Tohoku Pioneer Corporation	Yamagata pref.	30,126	54.6	0.0	8.6
Mogami Denki Corporation	Yamagata pref.	— ※2	— ※2	— ※2	— ※2
Soar Corporation	Yamagata pref.	102,694	48.7	0.0	55.9
Pioneer Automotive Technologies, Inc.	USA	— ※2	— ※2	— ※2	— ※1
Pioneer do Brasil Ltda.	Brazil	19,964	207.8	— ※2	— ※2
Pioneer Manufacturing (Thailand) Co., Ltd.	Thailand	143,271	— ※2	— ※2	85.4
Tohoku Pioneer (Vietnam) Co., Ltd.	Vietnam	133,312	548.6	— ※2	65.9
Pioneer Technology (Dongguan) Co., Ltd.	China	28,643	118.9	— ※2	36.8
Mogami Dongguan Electronics Co.,Ltd.	China	23,538	76.6	— ※2	66.5
FY2023	**Region**	**Energy Consumption (Unit : Giga joule)**	**Waste and Valuables (Unit : ton)**	**Chemical Substances Emissions(Unit : ton)**	**Water Usage (Unit : 1000m3)**
Pioneer Corporation Headquarter	Tokyo	9,039	6.0	0.0	— ※1
Pioneer Corporation Kawagoe Plant	Saitama pref.	88,594	665.0	4.5	15.9
Pioneer Finetech Corporation	Saitama pref.	12,621	46.0	6.5	1.4
Tohoku Pioneer Corporation	Yamagata pref.	32,615	84.0	0.0	9.6

Mogami Denki Corporation	Yamagata pref.	1,069	3.0	0.2	1.4
Soar Corporation	Yamagata pref.	119,280	108.0	0.1	62.6
Pioneer Automotive Technologies, Inc.	USA	14,377	― ※2	― ※2	― ※1
Pioneer do Brasil Ltda.	Brazil	36,173	108.0	― ※2	0.0
Pioneer Manufacturing (Thailand) Co., Ltd.	Thailand	163,645	500.0	― ※2	88.6
Tohoku Pioneer (Vietnam) Co., Ltd.	Vietnam	76,127	86.0	― ※2	122.0
Pioneer Technology (Dongguan) Co., Ltd.	China	34,077	143.0	― ※2	52.3
Mogami Dongguan Electronics Co.,Ltd.	China	5,449	100.0	― ※2	113.7

FY2022	**Region**	**Energy Consumption (Unit : Giga joule)**	**Waste and Valuables (Unit : ton)**	**Chemical Substances Emissions(Unit : ton)**	**Water Usage (Unit : 1000m3)**
Pioneer Corporation Headquarter	Tokyo	12,409	49.0	0.0	― ※1
Pioneer Corporation Kawagoe Plant	Saitama pref.	84,706	950.0	3.4	25.2
Pioneer Finetech Corporation	Saitama pref.	16,190	77.0	7.7	1.7
Tohoku Pioneer Corporation	Yamagata pref.	140,927	78.0	0.0	73.5
Mogami Denki Corporation	Yamagata pref.	1,357	1.0	0.1	1.8
Pioneer Automotive Technologies, Inc.	USA	26,255	1,416.0	― ※2	4.3
Pioneer do Brasil Ltda.	Brazil	36,271	135.0	― ※2	0.0
Pioneer Manufacturing (Thailand) Co., Ltd.	Thailand	186,897	602.0	― ※2	104.6
Tohoku Pioneer (Vietnam) Co., Ltd.	Vietnam	93,782	62.0	― ※2	38.5
Pioneer Technology (Dongguan) Co., Ltd.	China	49,813	347.0	― ※2	88.5
Mogami Dongguan Electronics Co.,Ltd.	China	5,404	78.0	― ※2	139.7

FY2021	Region	Energy Consumption (Unit : Giga joule)	Waste and Valuables (Unit : ton)	Chemical Substances Emissions(Unit : ton)	Water Usage (Unit : 1000m3)
Pioneer Corporation Headquarter	Tokyo	17,217	3.0	0.0	― ※1
Pioneer Corporation Kawagoe Plant	Saitama pref.	87,195	892.0	2.0	25.6
Pioneer Finetech Corporation	Saitama pref.	15,917	65.0	10.6	2.0
Tohoku Pioneer Corporation	Yamagata pref.	146,182	93.0	0.0	70.0
Mogami Denki Corporation	Yamagata pref.	1,419	2.0	0.1	2.3
Pioneer Automotive Technologies, Inc.	USA	27,176	1,498.0	― ※2	4.9
Pioneer do Brasil Ltda.	Brazil	48,160	227.0	― ※2	0.0
Pioneer Manufacturing (Thailand) Co., Ltd.	Thailand	182,216	613.0	― ※2	88.9
Tohoku Pioneer (Thailand) Co., Ltd.	Thailand	36,685	813.0	― ※2	24.7
Tohoku Pioneer (Vietnam) Co., Ltd.	Vietnam	82,295	566.0	― ※2	36.3
Pioneer Technology (Dongguan) Co., Ltd.	China	55,690	501.0	― ※2	95.6
Mogami Dongguan Electronics Co.,Ltd.	China	4,517	107.0	― ※2	136.8

1. Data for our exclusively-owned area is not obtained due to the office building.
2. No data available.