Environmental Data – Headings and Indicators

Category	Theme	Data
Time-Series Data	Greenhouse Gas Emissions	CO_2 emissions (Scope 1, Scope 2, and Scope 3)
	Consumption of Renewable Energy	Renewable energy consumption (On-site self-consumption and External procurement)
	Water Usage and Discharge	Water withdrawal, water discharge
	Environmentally Considered Products	Percentage of environmentally considered products in total sales, Percentage of recycled lead in lead raw materials used for lead-acid batteries
	Environmental Incidents	Number of significant environmental incidents
	Material Flow in Business Activities Ⅰ	Consumption of major materials, water and energy, wastewater discharge, waste and CO_2 emissions, and volumes of post-use products collected and disposed
	Use of Key Raw Materials	Consumption of lead, sulfuric acid, and plastics
	Violations of Water Quality and Water Quantity Permits, Standards, and Regulations	Number of legal and regulatory violations with penalties and administrative sanctions related to water withdrawal and discharge
Single-Year Detailed Data	Greenhouse Gas Emissions and Water Use	CO_2 emissions and water usage by production sites
	Consumption of Renewable Energy	Renewable energy consumption and CO_2 emissions reduction by country of operation
	Material Flow in Business Activities Ⅱ	Consumption of major materials, water and energy, wastewater discharge, waste and CO_2 emissions, and volumes of post-use products collected and disposed
	Emissions of Hazardous Substances	Reported data under Japan's PRTR System (Pollutant Release and Transfer Register)
	Environmental Conservation Costs	Business area costs, upstream and downstream costs, management activity costs, research and development costs, social activity costs, environmental damage response costs
	Economic Effects of Environmental Conservation Initiatives	Economic effects of efficient water use, energy conservation, waste reduction, and resource recycling
	Environmental Conservation Effects	Amount of reused water, reduction in water use, amount of energy saved, amount of CO_2 emissions reduced, amount of waste reduced, recycling volume and recycling rate, reduction in wastewater discharge, and lead emissions to air and water

Scope of Environmental Performance Data

(1) The scope of coverage in this document is as follows:

Term	Scope of Coverage
The Company	GS Yuasa Corporation
The GS Yuasa Group	All consolidated subsidiaries
Domestic Group Companies	All consolidated subsidiaries in Japan (including GS Yuasa International Ltd., the core operating subsidiary of the Group)
Overseas Group Companies	All consolidated subsidiaries outside Japan
Individual Companies	When a specific company name is indicated, the scope covers that company only.

- Even when terms such as "the GS Yuasa Group," "Domestic Group Companies," or "Overseas Group Companies" are used, the scope of certain indicators may not include all consolidated subsidiaries due to differences in applicable laws and regulations, management systems, data availability, or other factors.
- For many indicators, production sites that meet certain criteria are included in the reporting scope, taking into account the significance of their environmental impact. The names, definitions, and production sites covered by these indicators are as follows. The number of sites and the list of covered sites are based on data for the latest fiscal year.

Term	Scope of Coverage	Number of Sites	Covered Sites
Domestic Group Production Sites	Refers to production sites of consolidated subsidiaries in Japan that have, or are expected to have, a significant environmental impact (such as annual greenhouse gas emissions of 1,000 t-CO_2 or more).	9	GS Yuasa International Ltd. (Kyoto, Osadano, Gunma, Ritto and Kawagoe Plants), GS Yuasa Energy Co., Ltd., GS Yuasa Ibaraki Co., Ltd., GS Yuasa Moldings Co., Ltd., GS Yuasa Azumino Co., Ltd.
Overseas Group Production Sites	Refers to production sites of consolidated subsidiaries outside Japan that have, or are expected to have, a significant environmental impact (such as annual greenhouse gas emissions of 1,000 t-CO_2 or more).	13	GS Battery Taiwan Co., Ltd., GS Battery Vietnam Co., Ltd., GS Yuasa Battery Malaysia Sdn. Bhd., PT. Trimitra Baterai Prakasa, PT. Yuasa Battery Indonesia, Siam GS Battery Co., Ltd., Yuasa Battery (Thailand) Pub. Co., Ltd., GS Yuasa Siam Industry Ltd., Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi, GS Yuasa Battery Manufacturing UK Limited, Yuasa Battery, Inc., Century Yuasa Batteries Pty Ltd., GS Yuasa Hungary Ltd.
The GS Yuasa Group Production Sites	Refers to production sites of consolidated subsidiaries in Japan and overseas that have, or are expected to have, a significant environmental impact (such as annual greenhouse gas emissions of 1,000 t-CO_2 or more).	22	All sites listed above

- The number of production sites covered for domestic group companies in each fiscal year is as follows.

Fiscal Year	Number of production sites	Breakdown	
		GS Yuasa International Ltd.	Main domestic subsidiaries
FY2021	7	5	2
FY2022	8	4	4
FY2023	9	5	4
FY2024	9	5	4
FY2025	9	5	4

(2) Information on environmental accounting (environmental conservation costs, economic benefits associated with environmental conservation measures, and environmental conservation effects) is disclosed with reference to the Environmental Accounting Guidelines (2005 Edition) issued by the Ministry of the Environment of Japan.

(3) All data are disclosed following a periodic review and the incorporation of the results of that review. Additionally, should changes arise in the Scope of Coverage, past results are also retroactively revised as necessary.

Notes on Greenhouse Gas Emissions

- Greenhouse gases other than CO_2 are excluded from the calculation because their relevance to the Group's business activities is negligible and emission volumes are extremely low.
- Scope 2 emissions are disclosed based on the market-based method, which calculates emissions by reflecting contractual agreements for purchased electricity and the procurement of renewable energy.
- The emission factors used to calculate Scope 2 emissions are based on the following published values. However, the emission factor for electricity generated from renewable energy is set to zero.

Domestic	Annual coefficient for each power company announced in accordance with the Act on Promotion of Global Warming Countermeasures
Overseas	Annual coefficients announced in "Emissions Factors," a publication of the International Energy Agency (IEA).

- The Group commenced calculations of Scope 3 emissions in FY2021.
- For Scope 3, the calculation boundaries are clearly defined for each category.
- Energy usage and CO_2 emissions data are verified by a third party.

Environmental Data – Time-Series Data

Greenhouse Gas (CO_2) Emissions			Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Scope 1	Direct emissions from fossil fuel combustion, etc.		t-CO_2	66,734	64,547	57,641	57,966	56,085	The GS Yuasa Group Production Sites
Scope 2	Indirect emissions from the use of purchased electricity		t-CO_2	280,982	245,814	268,054	256,076	245,592	
Scope 1+2	Emissions		t-CO_2	347,717	310,362	325,695	314,042	301,677	
	Reduction rate compared with FY2018		%	6.8	16.8	12.7	15.8	19.1	
Scope 3	Category 1	Purchased goods and services	t-CO_2	471,173	523,813	560,759	940,714	1,065,092	GS Yuasa International Ltd. (limited to items directly related to product manufacturing)
	Category 2	Capital goods	t-CO_2	45,615	89,778	135,092	160,843	148,797	The GS Yuasa Group
	Category 3	Fuel- and energy-related activities not included in scope 1 or scope 2	t-CO_2	61,314	59,720	59,433	60,331	56,596	The GS Yuasa Group Production Sites
	Category 4	Upstream transportation and distribution	t-CO_2	9,484	8,702	8,039	7,979	8,267	GS Yuasa International Ltd. (limited to freight transportation involving specified shippers *1)
	Category 5	Waste generated in operations	t-CO_2	1,089	1,226	1,322	1,408	1,544	Domestic Group Production Sites
	Category 6	Business travel	t-CO_2	732	785	867	881	1,000	
	Category 7	Employee commuting	t-CO_2	2,103	2,283	2,533	2,562	2,942	
	Category 12	End-of-life treatment of sold products	t-CO_2	—	18,048	17,930	18,412	19,478	GS Yuasa International Ltd. (disposal of our manufactured lead-acid batteries)
	Total	Indirect emissions other than Scope 2	t-CO_2	591,510	704,355	785,975	1,193,130	1,303,715	

*1 Shippers whose annual freight transportation volume exceeds 30 million ton-kilometers under the Act on the Rational Use of Energy

Consumption of Renewable Energy	Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
On-site self-consumption	MWh	2,367	3,472	7,479	12,524	13,098	The GS Yuasa Group Production Sites
External procurement	MWh	43,641	106,118	94,358	120,596	128,932	
Total	MWh	46,008	109,590	101,837	133,121	142,029	
Percentage of renewable energy in total energy consumption	%	4.5	11.0	10.6	13.6	14.6	

Water Usage and Discharge		Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Water withdrawal*2	Industrial water (third-party water)	1,000 m³	2,245	2,117	2,093	2,102	1,811	The GS Yuasa Group Production Sites
	Groundwater	1,000 m³	1,508	1,440	1,536	1,544	1,369	
	Public water supply (third-party water)	1,000 m³	832	795	791	800	755	
	Total	1,000 m³	4,585	4,352	4,420	4,446	3,935	
	Reduction rate compared with FY2018	%	12.0	16.5	15.2	14.7	24.5	
Water discharge*3	River	1,000 m³	1,839	1,738	1,800	1,904	1,730	The GS Yuasa Group Production Sites
	Sewerage	1,000 m³	1,840	1,696	1,701	1,682	1,443	
	Total	1,000 m³	3,679	3,434	3,501	3,586	3,172	

*2 There is no water intake from sources other than those listed in the table above.

*3 No wastewater is discharged from the facility to the ocean or to external treatment facilities.

Environmental Data – Time-Series Data

Environmentally Considered Products	Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Percentage of environmentally considered products in total sales	%	36.5	36.4	38.7	36.7	39.2	The GS Yuasa Group
Percentage of recycled lead in lead raw materials used for lead-acid batteries	%	63.0	56.3	65.6	72.3	75.2	The GS Yuasa Group

Environmental Incidents	Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Number of significant environmental incidents	cases	0	0	0	0	0	The GS Yuasa Group

Material Flow in Business Activities Ⅰ			Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
INPUT	Main materials	Lead, sulfuric acid, plastics, etc.	t	188,020	186,298	193,473	199,824	215,527	Domestic Group Production Sites (Only GS Yuasa International Ltd. is included in the assessment of logistics-related performance.)
	Water	Water for industrial use, Groundwater, public water supply	1,000 m³	2,348	2,257	2,381	2,418	2,327	
	Energy (crude oil equivalent)	Production	kL	98,869	99,872	100,758	91,855	94,684	
		Logistics	kL	3,598	3,302	3,040	3,014	3,124	
	Post-use products	Amount recovered	t	4,773	4,573	4,515	4,944	6,069	
OUTPUT	Waste	Amount recycled	t	12,083	12,625	13,634	15,079	15,360	
		Amount of final disposal	t	504	633	625	561	1,052	
	Water discharge	Rivers and Sewerage	1,000 m³	2,020	1,961	2,034	2,025	2,005	
	Greenhouse gases (CO_2)	Production	t-CO_2	134,505	109,634	133,325	151,135	163,248	
		Logistics	t-CO_2	9,484	8,702	8,039	7,979	8,267	
	Post-use products	Amount recycled	t	3,952	3,782	3,733	4,093	5,186	
		Amount of final disposal	t	822	791	782	851	883	

Use of Key Raw Materials	Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Lead	t	139,669	134,251	139,087	143,162	158,127	Domestic Group Production Sites
Sulfuric acid	t	30,899	29,286	29,193	30,698	31,257	
Plastic	t	13,351	13,493	14,591	13,193	13,259	

Violations of Water Quality and Water Quantity Permits, Standards, and Regulations		Unit	FY2021	FY2022	FY2023	FY2024	FY2025	Scope of Coverage
Number of legal and regulatory violations with penalties	Water withdrawal	cases	0	0	0	0	0	Domestic Group Production Sites
	Water discharge	cases	0	0	0	0	0	
Number of administrative sanctions	Water withdrawal	cases	0	0	0	0	0	
	Water discharge	cases	0	0	0	0	0	

Greenhouse Gas Emissions and Water Usage at the GS Yuasa Group Production Sites (FY2025)

CO_2 Emissions and Water Withdrawal by Production Sites		CO_2 emissions (t-CO_2)		Water Withdrawal (1,000 m³)	
Country of location	Site				
Japan	GS Yuasa International Ltd. (Kyoto, Osadano, Gunma, Ritto and Kawagoe Plants)	127,270	163,248	1,301	2,327
	GS Yuasa Energy Co., Ltd.	26,674		782	
	GS Yuasa Ibaraki Co., Ltd.	4,626		161	
	GS Yuasa Moldings Co., Ltd.	2,827		38	
	GS Yuasa Azumino Co., Ltd.	1,851		45	
Taiwan	GS Battery Taiwan Co., Ltd.	14,726	14,726	86	86
Vietnam	GS Battery Vietnam Co., Ltd.	3,322	3,322	169	169
Malaysia	GS Yuasa Battery Malaysia Sdn. Bhd.	2,250	2,250	18	18
Indonesia	PT. Trimitra Baterai Prakasa	22,415	49,825	111	241
	PT. Yuasa Battery Indonesia	27,410		130	
Thailand	Siam GS Battery Co., Ltd.	6,101	16,217	322	474
	Yuasa Battery (Thailand) Pub. Co., Ltd.	6,354		119	
	GS Yuasa Siam Industry Ltd.	3,761		33	
Turkey	Inci GS Yuasa Aku Sanayi ve Ticaret Anonim Sirketi	29,571	29,571	450	450
United Kingdom	GS Yuasa Battery Manufacturing UK Limited	4,334	4,334	70	70
United States	Yuasa Battery, Inc.	7,630	7,630	45	45
Australia	Century Yuasa Batteries Pty. Limited	10,431	10,431	52	52
Hungary	GS Yuasa Hungary Ltd.	122	122	1	1

Renewable Energy Consumption at The GS Yuasa Group Production Sites (FY2025)

Renewable Energy Consumption by Country of Operation	Classification	Electricity consumption (MWh)	Reduction effects (t-CO_2)
Japan	On-site self-consumption	5,239	2,182
	External procurement	36,512	15,374
United States	On-site self-consumption	255	84
United Kingdom	External procurement	2,156	377
Hungary	External procurement	264	54
Thailand	On-site self-consumption	7,324	3,164
	External procurement	52,000	22,464
Vietnam	On-site self-consumption	142	79
	External procurement	38,000	21,204
Indonesia	On-site self-consumption	137	103

Environmental Data – Single-Year Detailed Data

Material Flow in Domestic Group Production Sites (FY2025)

Material Flow in Business Activities Ⅱ		Items	Unit	Content	Actual Values	Remarks
INPUT	Production	Amount of main materials consumed	t	Virgin materials	105,885	Lead, sulfuric acid, plastics, etc.
				Recycled materials	109,642	
		Amount of water withdrawal	1,000m³	Water for industrial use	1,069	Third-party water
				Groundwater	975	
				Public water supply	283	Third-party water
		Amount of energy consumption (crude oil equivalent)	kL	Electricity	80,768	
				City gas	10,752	
				Liquefied Petroleum Gas (LPG)	2,992	
				Kerosene, gasoline, diesel	172	
	Logistics	Amount of energy consumption (crude oil equivalent)	kL	Gasoline, diesel	3,124	Energy consumption based on volume of cargo transportation
	Waste	Amount of used products recovered	t	Industrial Batteries, Power Supplies	6,069	
OUTPUT	Production	Amount of waste generated	t	Waste plates, batteries, and lead paste	5,051	
				Metal scraps	440	
				Lithium-ion batteries	4,902	
				Waste paper and garbage	1,106	
				Sludge	1,755	
				Waste acids, alkaline substances	869	
				Waste plastic	1,069	Emissions at GS Yuasa International Ltd.: 478t
				Wood scraps	658	
				Other	561	
		Amount of waste recycled	t	Waste plates, batteries, and lead paste	5,051	
				Metal scraps	440	
				Lithium-ion batteries	4,902	
				Waste paper and garbage	995	
				Sludge	1,124	
				Waste acids, alkaline substances	802	
				Waste plastic	947	
				Wood scraps	563	
				Other	535	
		Amount of final disposal	t	Waste plates, batteries, and lead paste	0	
				Metal scraps	0	
				Lithium-ion batteries	0	
				Waste paper and garbage	112	
				Sludge	631	
				Waste acids, alkaline substances	67	
				Waste plastic	122	
				Wood scraps	95	
				Other	25	
		Amount of water discharged	1,000m³	Public water body	1,235	River
				Sewerage	771	
		Amount of CO_2 emissions	t-CO_2	Electricity	134,214	Scope 2 emissions
				City gas	21,647	Scope 1 emissions
				Liquefied Petroleum Gas (LPG)	6,929	
				Kerosene, gasoline, diesel	457	
	Logistics	Amount of CO_2 emissions	t-CO_2		8,267	Scope 3 emissions (category 4)
	Waste	Amount of used products recycled	t		5,186	
		Amount of used products sent for final disposal	t		883	

Hazardous Substance Emissions in Domestic Group Production Sites (FY2025)

Emissions of Hazardous Substances	Sites	Unit	Release to air	Release to public water bodies	Transfer to sewerage systems	Transfer outside the site	Total
Lead and its compounds	Kyoto	kg	120.0	0.0	4.3	15,000.0	15,124.3
	Osadano	kg	31.0	0.0	6.0	1,500.0	1,537.0
	Gunma	kg	18.0	3.3	0.0	71.0	92.3
	GS YUASA ENERGY	kg	9.0	13.0	0.0	3,100.0	3,122.0
	GS YUASA IBARAKI	kg	1.0	1.4	0.0	30.0	32.4
	GS Yuasa Azumino	kg	6.7	0.0	0.0	11.0	17.7
Arsenic and its inorganic compounds	Kyoto	kg	2.6	0.0	0.4	4.2	7.2
	Gunma	kg	0.0	0.5	0.0	0.0	0.5
	GS YUASA ENERGY	kg	0.0	0.0	0.0	0.6	0.6
Antimony and its compounds	Kyoto	kg	9.3	0.0	0.4	1.9	11.6
	Osadano	kg	0.0	0.0	4.1	0.0	4.1
	Gunma	kg	0.0	1.8	0.0	0.0	1.8
	GS YUASA ENERGY	kg	0.0	0.0	0.0	0.1	0.1
Manganese and its compounds	Kyoto	kg	0.0	0.0	0.0	1,500.0	1,500.0
	Osadano	kg	10.0	0.0	0.0	0.3	10.3
	Ritto	kg	0.0	0.0	0.0	1,100.0	1,100.0
Nickel compounds	Kyoto	kg	0.0	0.0	0.0	3,100.0	3,100.0
	Osadano	kg	3.4	0.0	0.0	0.5	3.9
	Ritto	kg	0.0	0.0	0.0	2,300	2,300
Cobalt and its compounds	Kyoto	kg	0.0	0.0	0.0	960.4	960.4
	Osadano	kg	0.3	0.0	0.0	0.3	0.6
	Ritto	kg	0.0	0.0	0.0	840.0	840.0
Dichloromethane	GS YUASA IBARAKI	kg	1,900.0	0.0	0.0	48.0	1,948.0
N,N-dimethylformamide	GS YUASA MOLDING	kg	3.0	0.0	480.0	1,800.0	2,283.0
Boron compounds	Osadano	kg	2.5	0.0	0.0	2.5	5.0
N-Methyl-2-pyrrolidone	Kyoto	kg	15,000.0	0.0	0.0	5,848.0	20,848.0
	Osadano	kg	0.0	0.0	0.0	0.0	0.0
	Ritto	kg	0.0	0.0	0.0	0.0	0.0
Diethanolamine	Osadano	kg	0.0	0.0	0.0	0.0	0.0
Acrylic acid and water-soluble salts thereof	GS YUASA MOLDING	kg	42.0	0.0	0.0	200.0	242.0
Tetrahydrofuran	GS YUASA MOLDING	kg	20,000.0	0.0	0.0	1,600.0	21,600.0

Note: This table summarizes emissions and transfers of substances subject to Japan’s Pollutant Release and Transfer Register (PRTR) system.

Status of Environmental Accounting in Domestic Group Production Sites (FY2025)

Environmental Conservation Costs		Key initiatives	Amount (Thousands of yen)	Remarks
Business area costs	Pollution prevention costs	Efforts to prevent air pollution	791,530	Environmental conservation equipment costs (excluding on-site affiliated companies) , etc.
		Efforts to prevent water pollution	1,800,311	
	Global environmental conservation costs	Efforts to reduce greenhouse gas emissions	204,188	
	Resource recycling costs	Efforts to ensure suitable disposal of waste	357,896	
	Total		3,153,925	
Upstream and downstream costs		Additional efforts to reduce environmental burden	14	Consulting fees; recycling operation contract fees under the Act on the Promotion of Sorted Collection and Recycling of Containers and Packaging; and other related fees.
Management activity costs		Employee training and maintenance and management of ISO 14001	2,240	
Research and development costs		Research and development efforts in consideration of the environment	9,935,000	
Social activity costs		Environmental volunteer efforts	5,135	
Environmental damage response costs		Efforts related to soil pollution measures	5,697	
Total			13,102,011	

Economic Effects of Environmental Conservation Initiatives	Key item	Amount (Thousands of yen)	Remarks
Economic effects of more efficient water use	Water supply/discharge cost reduction	-10,032	Cost reduction compared with the previous year (negative values indicate an increase in costs)
Energy conservation effects	Cost reductions for electricity, heavy oil and gas (city gas, LNG, LPG)	-61,419	
Waste reduction effects	Cost reduction for industrial waste treatment	4,642	
Resource recycling effects	Economic benefits from recycling and reusing waste	815,320	

Environmental Conservation Effects	Key item	Unit	Amount	Remarks
Effects related to resources used in business activities	Amount of recycled water used	1,000m³	981	
	Reduction in water use	1,000m³	91	Reduction in environmental impact compared with the previous year (negative values indicate an increase in impact)
	Amount of energy saved (crude oil equivalent)	kL	-2,829	
Effects related to environmental burden and waste from business activities	Amount of CO_2 emissions reduced	t-CO_2	-12,113	Reduction in environmental impact compared with the previous year (negative values indicate an increase in impact)
	Reduction in waste sent for final disposal	t	-491	
	Amount of water discharge reduced	1,000m³	20	
	Amount of waste recycled	t	15,360	
	Recycling rate	%	94	Recycling rate = (amount recycled / amount of waste) x 100
	[Water quality] Amount of lead discharged	kg	28	
	[Air] Amount of lead emitted	kg	186	