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- Environmental performance coverage rate: 99.6% of sites covered by employee ratios.
The aggregation range is equivalent to 95.3% of the entire Group (percentage figures refer to our environmental management activities aggregated).
- Bold: the figures are verified by [Independent Organization](#)

Amounts of Energy Purchased

Note: Amounts are rounded and totals may therefore differ from the sum of individual items.

Category		Unit	FY2017	FY2018	FY2019
Non-renewable energy	Electricity purchased in Japan	GWh	230.147	235.376	234.844
	Electricity purchased overseas	GWh	191.898	206.664	194.063
	Total electricity purchased	GWh	422.045	442.040	428.907
Renewable energy	Electricity purchased overseas	GWh	0.000	0.228	1.309
Total electricity purchased		GWh	422.045	442.268	430.217
Fuel purchased in Japan		TJ	2,000.718	2,005.359	1,933.460
		(GWh)	555.755	557.044	537.072
Fuel purchased overseas		TJ	157.705	148.428	121.560
		(GWh)	43.807	41.230	33.767
Total Fuel purchased		TJ	2,158.423	2,153.787	2,055.020
		(GWh)	599.562	598.274	570.839
Total		GWh	1,021.607	1,040.542	1,001.056

Notes

ESG

Contribution to SDGs

ESG Material Issues

Environmental Vision

Environment

Polices, Environmental Vision 2050
 Basic Polices on Environmental Protection
 Message from the Environmental Officer
 Environmental Vision 2050
 Approach to Disclosing Climate-related Information In Accordance with TCFD Recommendations
 Environmental Management
 Environmental Management Organizational Framework
 Environmental Management Initiatives
 Environmental Achievements
 Environmental Management Targets and Achievements
 Interplay between Business Activities and Environmental Impact
 Environmental Accounting

Environmental data

Third-Party verification
 Achieve a Decarbonized Society
 Action Plan to Reduce Greenhouse Gas Emissions
 Reducing Greenhouse Gas Emissions During Production
 Reducing Society's CO₂ Emissions through Products
 Target for Reducing Greenhouse Emissions Across the Supply Chain
 Recycling-Oriented Society
 Reducing Waste in Business Activities
 Efficient Use of Water Resources
 Initiatives for Reducing Environmental Impact of Products
 Society that is in Harmony with Nature
 Managing Chemical Substances
 Preserving Biodiversity

Society

Governance

ESG Index

Comparison with ISO26000

External Evaluation

Activity Archives

Participation in initiatives

1. The scope of data collection includes all domestic and overseas bases.
2. The totals for Indian and French bases were temporarily excluded in FY2021 (about 0.3%) because the objectivity and completeness of the collected data of these bases have been determined to be problematic. The totals will be recovered to the original condition in FY2022.
3. No heat was purchased.
Volumes of fuel purchased are aggregated based on lower heating value (L) and converted at a rate of 3,600 GJ, or 3.6 TJ, to 1 GWh.
4. "Total" includes the amount of purchased electricity generated from renewable sources but excludes the amount of electricity generated in-house (both non-renewable and renewable energy).

Breakdown of Amount of Fuel Purchased in Fiscal 2021

	Unit	Japan	Overseas	Total	Unit
Gasoline	kL	93.533	53.101	146.635	GWh
Kerosene	kL	387.868	0.000	387.868	GWh
Diesel oil	kL	66.589	57.072	123.661	GWh
Fuel oil	kL	516.848	49.371	566.219	GWh
Liquified petroleum gas	t	302.602	64.885	367.486	GWh
Liquified natural gas	t	5,035.590	0.000	5,035.590	GWh
City gas (converted to calorific value*)	1,000 m ³	33,152.738	2,278.837	35,431.575	GWh
					total(GWh)

* As the calorific value per area of gas varies by supplier and pressure varies by supply pipe, amounts are converted at a rate of 1,000 m³ at a pressure of 0°C1 to 45 GJ.

In-House Power Generation

Category		FY2017	FY2018	FY2019	FY2020	FY2021
Non-renewable energy	Electricity generated in Japan	140.751	141.579	140.512	133.232	125.000
	Electricity generated overseas	0.402	0.050	0.289	0.113	0.000
	Total electricity generated	141.153	141.629	140.802	133.345	125.000
Renewable energy	Electricity generated in Japan	0.487	0.487	0.539	0.592	0.000
	Electricity generated overseas	0.638	0.672	2.113	1.575	1.000

Category		FY2017	FY2018	FY2019	FY2020	FY2021
	Total electricity generated	1.125	1.158	2.652	2.167	2.167



Greenhouse Gas Emissions

(k)

Category	FY2017	FY2018	FY2019 (New base year)	FY2020	FY2021
CO ₂ in Japan	221.2	219.3	207.2	203.7	210.0
Non-CO ₂ greenhouse gases in Japan	69.1	74.6	59.7	53.6	55.0
Total greenhouse gas emissions in Japan	290.3	293.9	266.9	257.2	265.0
CO ₂ in overseas	134.5	138.0	128.8	131.7	99.0
Non-CO ₂ greenhouse gases overseas	59.2	88.9	55.8	48.0	33.0
Total greenhouse gas emissions overseas	193.7	226.9	184.6	179.7	99.0
Total CO ₂ emissions	355.7	357.3	336.0	335.4	309.0
Total emissions of non-CO ₂ greenhouse gases	128.3	163.5	115.5	101.6	55.0
Total greenhouse gas emissions	484.0	520.8	451.5	437.0	364.0
(per unit of net sales [t-CO ₂ e/¥100 million])	54.17	56.9	50.13	49.89	39.0



Greenhouse gas emissions reclassified based on Scope 1 (direct CO₂ from fuel use and non-CO₂ greenhouse gas emissions) and Scope 2 (indirect CO₂ emissions from electricity use)

Category	FY2017	FY2018	FY2019 (New base year)	FY2020	FY2021
Scope 1 (direct) emissions in Japan	171.5	177.2	158.1	147.5	140.0
Scope 2 (indirect) emissions in Japan	118.8	116.7	108.7	109.8	120.0
Scope 1 (direct) emissions overseas	67.5	96.6	62.2	54.7	80.0
Scope 2 (indirect) emissions overseas	126.2	130.3	122.4	125.0	80.0
Total Scope 1 emissions	239.0	273.8	220.3	202.2	155.0
Total Scope 2 emissions	245.0	247.0	231.1	234.8	200.0

Category	FY2017	FY2018	FY2019 (New base year)	FY2020	FY2021
Total emissions (Same as total greenhouse gas emissions above)	484.0	520.8	451.5	437.0	360.0



Notes

- The scope of data collection includes figures from factories, offices, etc. of Fuji Electric and all consolidated subsidiaries in Japan and from overseas consolidated production subsidiaries of the Company.
- The totals for Indian and French bases were temporarily excluded in FY2021 (about 0.3%) because the objectivity and completeness of the collected data of these bases have been determined to be problematic. The totals will be recovered to the original condition in FY2022.
- Power coefficients are used to calculate the indirect CO₂ emissions from power plants for each kWh of electricity purchased.
For Japan, the average power coefficients (post credit redemption) for Japan used in Keirenden's Action Plan for Commitment to a Low-Carbon Society (0.439kg-CO₂e/kWh for fiscal 2021) are utilized.
- For overseas, the average power coefficients for the respective countries described in IEA-Emission Factors (2021 edition) are utilized. Coefficients for [fiscal] 2019 are used for fiscal 2021.



Breakdown of Scope 1 Emissions

	Gas type	FY2017	FY2018	FY2019	FY2020	FY2021
Scope 1 emissions in Japan	CO ₂	102.4	102.5	98.5	93.9	91.7
	HFCs	3.1	2.8	3.5	1.4	1.5
	PFCs	43.7	45.5	33.7	31.4	33.4
	SF ₆	21.7	25.8	22.1	20.1	18.6
	NF ₃	0.6	0.6	0.4	0.7	0.6
	total		171.5	177.2	158.1	147.5
Scope 1 emissions overseas	CO ₂	8.3	7.7	6.3	6.7	5.7
	HFCs	50.0	58.6	42.5	46.6	1.4
	PFCs	0.9	1.0	0.9	1.0	1.2
	SF ₆	8.3	29.2	12.4	0.5	0.4
	total		67.5	96.6	62.2	54.7
Total Scope 1 emissions	CO ₂	110.7	110.2	104.8	100.6	97.4

	Gas type	FY2017	FY2018	FY2019	FY2020	FY202
	HFCs	53.1	61.4	46.0	47.9	2.9
	PFCs	44.6	46.5	34.6	32.4	34.6
	SF6	30.1	55.0	34.5	20.5	19.0
	NF3	0.6	0.6	0.4	0.7	0.6
	total	239.0	273.8	220.3	202.2	154.5



Breakdown of Scope 1 and 2 Emissions by Country in Fiscal 2021

(kt-CO₂e) (Power coefficient kg-CO₂e/kWh)

Country	Scope 1	Scope 2	Total	Power coefficient
Japan	145.786	121.987	267.774	0.4390
Malaysia	3.047	41.426	44.473	0.6621
China	5.084	32.625	37.709	0.6224
Philippines	0.022	10.023	10.044	0.6720
Thailand	0.572	3.159	3.731	0.3852
Singapore	0.000	0.270	0.270	0.3876

Scope3 Emissions

Category	Details	Scope3 Emission			
		FY2017	FY2018	FY2019	
Upstream	1 Products and services purchased	166.3	248.0	1,977.9	
	2 Capital goods	76.1	124.3	138.3	
	3 Fuel and energy purchases (outside Scope 1/2)	30.7	30.8	52.9	
	4 Transport and delivery (upstream)	13.6	14.0	15.9	
	5 Waste discharged from business operations	5.1	5.4	6.5	

Category	Details	Scope3 Emission			
		FY2017	FY2018	FY2019	
	6	Business travel	1.9	1.9	3.6
	7	Commuting	8.2	8.2	13.8
	8	Use of lease assets (upstream)	0	0	5.8
		Subtotal	301.9	432.6	2,214.9
Down	9	Transport/delivery (downstream)	x	x	x
	10	Processing of sold products	x	x	x
	11	Use of products sold	3,008.1	4,111.1	122,065.5
	12	Waste processing of products sold	x	x	x
	13	Use of lease assets (downstream)	0	0	0
	14	Franchise	0	0	0
	15	Investment	0	0	0
		Total	3,310.0	4,543.7	124,281.3



- In Category 8 (Upstream leased assets), the emissions from our company's office spaces are excluded from SC1 and 2 amounts because these spaces are rental properties as tenants or leased assets.

- Calculation methods of Category 11 (Use of Sold products) have been revised as follows: Calculation ranges are our company's seven product families, which account for 80% or more of the entire emissions when all of our products are in use. The calculation methods of emissions from our products during entire product lifetime as follows

Finished products: The number of delivered products × Total annual power consumption (fuel consumption) × Lifetime × CO2 coefficient

Intermediate products: The number of delivered products × Total annual power loss (energy loss of components) × Lifetime × CO2 coefficient

Finished products include thermal power generation as prime contracts, industrial electric heating, showcases and others, which end users use as finished products.

Intermediate products include turbines/generators as subcontracts, power semiconductors, motors, transformers and others, which are incorporated in our clients' products which end users use.

- *2 Third party evaluation will be performed for Category 1 to 8 and 11 but emission evaluation is expected to be performed around February of the next fiscal year.

Greenhouse Gas Emissions in Fuji Electric's Overall Supply Chain

	FY2017	FY2018	FY2019	FY2020	FY2021
Scope3(upstream)	302	433	2,215	1,993	2,190
Scope1(Direct emissions)	239	274	220	202	155
Scope2 (Indirect emissions)	245	247	231	235	209
Subtotal	786	953	2,666	2,436	2,554
Scope3(Down stream)	3,008	4,111	122,066	54,453	177,383
Total	3,794	5,065	124,733	56,884	179,936

Notes : The scope of calculations for categories 3 through 8 of Scope 3 were expanded Company-wide in fiscal 2019

Emissions Transactions

Location (Period)	Emissions credit acquisition	Emissions credit purchase	Emissions credit redemption	Outstanding credit
Tokyo (Tokyo Factory) (FY2015–2020)	0 (765)	0 (0)	407 (0)	3,820 (4,230)
Saitama prefecture (Fukiage Factory) (FY2011–2020)	3,615 (4,059)	0 (0)	0 (0)	35,010 (31,390)
Shenzhen (FY2013–2021)	0 (0)	0 (0)	4,304 (9,707)	5,400 (9,700)

Notes : Figures in parentheses are from the report for the previous fiscal year.

Emissions Transaction System

Location	Second reduction period	Reduction target (Result from first reduction period)
Tokyo (Tokyo Factory)	FY2020–2024	25% reduction in emissions from base year(15% reduction)
Saitama prefecture (Fukiage Factory)	FY2020–2024	20% reduction in emissions from base year(13% reduction)

Location	Second reduction period	Reduction target (Result from first reduction period)
Shenzhen	FY2021-2025	Annual reduction in emissions of 1. (6.39% reduction)

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Renewable Energy Use

Category	FY2017	FY2018	FY2019	FY2020	FY2021
Renewable energy certificates purchased	-	-	-	-	-
Solar power generated in Japan	487	487	539	592	600
Solar power generated overseas	638	672	2,113	1,575	1,600
Solar power purchased overseas	-	228	1,309	1,730	3,000
Total	1,125	1,386	3,962	3,897	5,200

Notes : Solar power is only purchased overseas.

Power Supply Capacity from Renewable Energy Projects (Feed-In Tariff Scheme Electricity Sales)

Category	FY2017	FY2018	FY2019	FY2020	FY2021
Wind power	2,628	2,628	2,628	2,628	2,628
Solar power	4,205	4,205	4,205	4,205	4,205
Total	6,833	6,833	6,833	6,833	6,833

Renewable Energy Power Supply Shipment Amounts

Category	FY2017	FY2018	FY2019	FY2020	FY2021
Total	249	590	488	422	180

Notes : Figures above represent total shipment amounts of geothermal power generation systems, hydro power generation systems, biomass power generation systems, and solar power generation systems (including power conditioning sub-systems).

CO₂ Emissions Reductions from Provision of Renewable Energy Power Supplies

(k)

Category	FY2017	FY2018	FY2019	FY2020	FY2021
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Category	FY2017	FY2018	FY2019	FY2020	FY2021
Total	7.379	9.243	11.072	12.818	13.3

of operation of products shipped for each fiscal year after fiscal 2009 and converting that amount into an amount of CO₂ corresponding with the emissions that would have occurred should that amount of power have been generated through thermal power.

Total Waste / Waste Sent to Landfills

Region	Total / Landfill	Category	FY2017	FY2018	FY2019	FY2020
Japan	Total waste	Sludge	1,253	1,268	1,667	1,7
		Waste oil	1,132	1,198	1,309	1,1
		Acid / alkali waste	1,662	1,672	1,523	1,3
		Waste plastic	1,870	2,051	1,951	1,6
		Paper / wood scraps	4,062	4,364	4,157	3,5
		Metal scraps	12,443	12,039	12,097	9,9
		Others	230	226	275	28
		Total	22,652	22,819	22,979	19,7
	Sent to landfills		37	145	115	12
		Ratio of waste sent to landfills	0.2%	0.6%	0.5%	0.6
Overseas	Total waste	Sludge	1,743	1,719	1,976	2,0
		Waste oil	249	287	250	32
		Acid / alkali waste	3,578	3,720	2,689	1,3
		Waste plastic	291	317	272	33
		Paper / wood scraps	256	270	255	32
		Metal scraps	3,678	4,235	3,716	3,2
		Others	200	211	250	19
		Total	9,995	10,759	9,408	7,8
	Sent to landfills		724	399	229	36
		Ratio of waste sent to landfills	7.2%	3.7%	2.4%	4.7
Total	Total waste	Sludge	2,995	2,987	3,643	3,8
		Waste oil	1,381	1,485	1,559	1,4

Region	Total / Landfill	Category	FY2017	FY2018	FY2019	FY2020
		Acid / alkali waste	5,240	5,392	4,212	2,600
		Waste plastic	2,161	2,368	2,224	2,000
		Paper / wood scraps	4,318	4,634	4,412	3,800
		Metal scraps	16,122	16,274	15,813	13,000
		Others	430	437	525	400
		Total	32,648	33,578	32,387	27,100
			762	543	345	400
	Sent to landfills	Ratio of waste sent to landfills	2.3%	1.6%	1.1%	1.8%

* Total waste is the amount of unnecessary articles created during production activities (industrial waste, general waste, and valuable waste).

* Ratio of waste sent to landfills is calculated as follows: Waste sent to landfills ÷ Total waste

Hazardous waste / non-hazardous waste

Type	Indicator	FY2017	FY2018	FY2019	FY2020	FY2021
Hazardous waste	Total waste	9,617	9,864	9,415	7,957	6,000
	Amount of waste recycled	7,767	8,370	8,707	6,774	5,000
	Recycling rate	81%	85%	92%	85%	70%
	Sent to landfills	511	175	83	288	500
	Ratio of waste sent to landfills	5.3%	1.8%	0.9%	3.6%	8.3%
Non-hazardous waste	Total waste	23,031	23,714	22,972	19,627	23,000
	Amount of waste recycled	22,221	22,854	21,993	18,988	22,000
	Recycling rate	96%	96%	96%	97%	96%
	Sent to landfills	251	368	262	201	1,000
	Ratio of waste sent to landfills	1.1%	1.6%	1.1%	1.0%	0.4%
Total	Total waste	32,648	33,578	32,387	27,584	30,000
	Amount of waste recycled	29,988	31,224	30,700	25,762	28,000

Type	Indicator	FY2017	FY2018	FY2019	FY2020	FY2021
	Recycling rate	92%	93%	95%	93%	94%
	Sent to landfills	762	543	345	489	600
	Ratio of waste sent to landfills	2.3%	1.6%	1.1%	1.8%	2.1%

* Hazardous waste: Under Japan's Waste Management and Public Cleansing Act, businesses are responsible for all of the industrial waste they generate (including the issuing of manifests and final disposal). This law does not distinguish between hazardous waste and non-hazardous waste. We consider hazardous waste to be harmful waste materials and we therefore retallied our figures according to the following types of waste: waste oil, waste acid and waste alkali, organic and inorganic sludge, and used activated carbon.

Water Resources

Water Intake

Category		FY2017	FY2018	FY2019	FY2020	FY2021
Japan	Potable water purchased	465	591	925	1,100	925
	Industrial water purchased	2,564	2,836	2,749	2,766	2,766
	Total water purchased	3,029	3,427	3,674	3,866	3,691
	Groundwater intake	4,206	4,077	3,962	3,894	3,962
	Total water intake in Japan	7,235	7,503	7,636	7,760	7,653
Overseas	Industrial water purchased	5,288	5,974	5,762	5,575	2,766
	Groundwater intake	0	0	0	1	0
	Industrial water purchased	5,288	5,974	5,762	5,576	2,766
Total	Total water intake	12,523	13,478	13,398	13,336	9,611

Notes:

1. "Potable water" refers to drinkable tap water. "Industrial water" refers to water for industrial purposes that is not drinkable.
2. Total water intake in Japan is the sum of potable water purchased, industrial water purchased, and groundwater intake.
3. Volume of groundwater does not include groundwater used for soil cleanup, for agricultural purposes, or for melting snow.
4. The scope of data collection includes all domestic and overseas bases.

5. The totals for Indian and French bases were temporarily excluded in FY2021 because the objectivity and completeness of the collected data of these bases have been determined to be problematic. The totals will be recovered to the original condition in FY2022.

Water Recycled

Category		FY2017	FY2018	FY2019	FY2020	FY2021
Japan	Amount of water recycled	982	1,055	1,940	2,087	2,087
	Recycling rate	11.9%	12.3%	20.3%	21.2%	23.1%
Overseas	Amount of water recycled	227	822	725	917	2,087
	Recycling rate	4.1%	12.1%	11.2%	14.1%	10.0%
Total	Amount of water recycled	1,209	1,877	2,665	3,004	2,087
	Recycling rate	8.8%	12.2%	16.6%	18.4%	20.0%

Notes : Recycling rate is calculated as follows: Amount of water recycled ÷ Amount used (Intake amount + Amount recycled)

Wastewater

Category		FY2017	FY2018	FY2019	FY2020	FY2021
Japan	Volume of wastewater to the sewer	1,082	1,233	1,170	1,166	1,166
	Volume of wastewater to the river	6,154	6,270	6,466	6,593	6,593
	Subtotal	7,235	7,503	7,636	7,760	7,760
Overseas	Volume of wastewater to the sewer	558	568	520	510	510
	Volume of wastewater to the river	4,730	5,406	5,242	5,066	1,166
	Subtotal	5,288	5,974	5,762	5,576	2,087
Total	Volume of wastewater to the sewer	1,639	1,801	1,690	1,676	1,676
	Volume of wastewater to the river	10,884	11,676	11,708	11,660	7,760
	Total	12,523	13,478	13,398	13,336	9,436

PRTR-VOC

Volume of PRTR Law Regulated Substances Handled / Emitted

		FY2017	FY2018	FY2019	FY2020	FY2021
Japan	Handled	568.5	824.2	782.1	723.6	68
	Emitted	154.7	152.9	143.6	169.7	18
Overseas	Handled	1,882.0	1,912.7	1,516.5	939.4	52
	Emitted	1,034.1	936.4	755.3	478.6	30
Total	Handled	2,450.4	2,737.0	2,298.6	1,663.0	1,21
	Emitted	1,188.8	1,089.3	898.9	648.3	49

Volume of VOCs Handled / Emitted

		FY2017	FY2018	FY2019	FY2020	FY2021
Japan	Handled	600.6	617.4	565.4	597.5	69
	Emitted	232.0	233.5	257.0	260.8	26
Overseas	Handled	1,264.8	1,205.3	922.1	650.1	49
	Emitted	1,139.6	1,023.2	826.0	557.8	34
Total	Handled	1,865.4	1,822.7	1,487.5	1,247.6	1,19
	Emitted	1,371.6	1,256.7	1,083.0	818.6	61