

ESG Data 2025 - Environmental Data

Updated February 2026

TEPCO HD and core operating companies (Tokyo Electric Power Company Holdings, Inc., TEPCO Fuel & Power, Inc., TEPCO Power Grid, Inc., TEPCO Energy Partner, Inc., and TEPCO Renewable Power, Inc.)						
GRI	UM	FY2021	FY2022	FY2023	FY2024	
Coverage						
	(Billion JPY)	5,310	8,112	6,918	6,810	
Operating revenues	(Billion JPY)	4,842	7,446	6,330	6,218	
Electric power operating revenues	(Billion JPY)	468	667	589	593	
Other operating revenues	(%)	91	92	91	91	
TEPCO HD and core operating companies / TEPCO HD and all of consolidated subsidiary companies						
GRI	UM	FY2021	FY2022	FY2023	FY2024	
Key figures						
Installed capacity by energy source						
Total net electrical capacity	(MW)	18,200	18,122	18,116	18,119	*1
Thermal net capacity	(MW)	58	58	58	58	
Coal	(MW)	0	0	0	0	
LNG	(MW)	0	0	0	0	
Oil	(MW)	58	58	58	58	
Nuclear net capacity	(MW)	8,212	8,212	8,212	8,212	
Renewable net capacity	(MW)	9,930	9,852	9,845	9,849	
Hydroelectric	(MW)	9,879	9,801	9,794	9,798	*2
Solar	(MW)	30	30	30	30	
Wind	(MW)	21	21	21	21	
Geothermal	(MW)	0	0	0	0	
Biomass and cogeneration	(MW)	0	0	0	0	
Net energy production by energy source						
Total net electrical production (energy consumption)	(GWh)	13,106	11,706	10,507	10,185	*1
Thermal net production (energy consumption)	(GWh)	157	156	155	159	
Coal	(GWh)	0	0	0	0	
LNG	(GWh)	0	0	0	0	
Oil	(GWh)	157	156	155	159	
Nuclear net production (energy consumption)	(GWh)	0	0	0	0	
Renewable net production (energy consumption)	(GWh)	12,948	11,550	10,353	10,026	
Hydroelectric	(GWh)	12,882	11,489	10,296	9,961	*2
Solar	(GWh)	29	24	22	33	
Wind	(GWh)	37	36	35	32	
Geothermal	(GWh)	0	0	0	0	
Biomass and cogeneration	(GWh)	0	0	0	0	
Efficiency						
Thermal power plant	(%)	-	-	-	-	
Development						
Development of renewable power generation facilities	(MW)	192	326	325	335	*3
Availability						
Nuclear power plant	(%)	0	0	0	0	
Network						
Electricity network						
Total transmission network	(km)	40,966	41,037	40,999	41,145	
- of which aerial line	(km)	28,453	28,480	28,410	28,453	
- of which underground cable	(km)	12,513	12,557	12,589	12,692	
Total distribution network	(km)	383,415	384,544	385,624	386,591	
- of which aerial line	(km)	344,208	345,095	345,883	346,620	
- of which underground cable	(km)	39,207	39,449	39,741	39,971	
Transmission and distribution loss						
Extra high voltage	(%)	1.3	1.3	1.3	1.3	*4
High voltage	(%)	3.9	3.7	3.7	3.7	*4
Low voltage	(%)	6.6	6.9	6.9	6.9	*4
Average	(%)	4.5	3.8	4.7	3.9	
Supply reliability						
System Average Interruption Duration Index (SAIDI)	(hours)	0.12	0.08	0.08	0.1	
Interruption time (min.) / year (min.)	(%)	0.001	0.001	0.001	0.001	

	Smart meter					
	Number of installations	(10,000 units)	2,840	2,840	2,840	2,840 *5
	Installation rate	(%)	100	100	100	100 *5
	Sales					
305-4	Electricity volumes	(GWh)	177,118	173,089	192,125	185,172 *6
	CO ₂ related electricity sales					
	Adjusted emissions intensity	(kg-CO ₂ /kWh)	0.451	0.376	0.408	0.421 *7
	Basic emissions intensity	(kg-CO ₂ /kWh)	-	-	-	0.421
	Unadjusted emissions intensity	(kg-CO ₂ /kWh)	0.457	0.457	0.475	0.485 *8
	Adjusted emissions	(kt-CO ₂)	79,900	65,100	78,400	78,000 *9
	Basic emissions	(kt-CO ₂)	-	-	-	78,000
	Unadjusted emissions	(kt-CO ₂)	80,900	79,100	91,300	89,800 *10
	Gas volumes	(thousand m ³)	1,230,253	1,378,263	1,284,810	1,350,041 *11
	Adjusted emissions intensity	(kg-CO ₂ /m ³)	-	-	2.05	2.05 *12
	Basic emissions intensity	(kg-CO ₂ /m ³)	-	-	2.05	2.05
	Adjusted emissions	(kt-CO ₂)	-	-	2,634	2,768 *12
	Basic emissions	(kt-CO ₂)	-	-	2,634	2,768
	Leakege rate (Transportation)	(%)	0	0	0	0
	Leakege rate (Distribution)	(%)	0	0	0	0
	Leakege rate (Strage)	(%)	0	0	0	0
2-27	Environmental compliance					
	Total monetary value of significant fines	(Million JPY)	0	0	0	0
	Total number of non-monetary sanctions	(cases)	0	0	0	0
	Significant spill					
	Total number of significant spill	(cases)	0	0	0	0
GRI		UM	FY2021	FY2022	FY2023	FY2024 注
	Emissions					
305-1	Direct greenhouse gas emissions (Scope 1)					
	Total direct emissions (Scope 1)	(kt-CO ₂ eq)	192	193	194	200 *13
	CO ₂ emissions from electricity production and other activities	(kt-CO ₂)	118	119	121	121 *14
	CO ₂ emissions from vehicles (gasoline and diesel)	(kt-CO ₂)	7	6	6	6
	Total other CO ₂ eq emissions	(kt-CO ₂ eq)	67	68	67	73
	N ₂ O	(kt-CO ₂ eq)	1	1	1	1
	HFCs	(kt-CO ₂ eq)	3	6	3	8 *15
	SF ₆	(kt-CO ₂ eq)	63	61	63	64 *15
	Other emissions volume					
	N ₂ O	(t)	3	3	4	4
	SF ₆	(t)	2.8	2.7	2.7	2.7 *15
	SF ₆ recovery rate					
	In equipment inspections	(%)	99	>99.5	>99.5	99
	In equipment removal	(%)	99	99	>99.5	>99.5
	Fluorocarbon emissions					
	Leaked volumes based on the act on rational use and proper management of fluorocarbon	(kt-CO ₂ eq)	6	9	5	13
305-2	Indirect greenhouse gas emissions (Scope 2)					
	Total of Scope2,market based	(kt-CO ₂ eq)	5,753	4,917	5,918	4,941 *16
	Total of Scope2,location based	(kt-CO ₂ eq)	5,744	4,896	5,961	4,934 *18
	Civil uses, hydroelectric and thermal electric plants					
	Related to energy purchased from the grid (Scope 2, market based)	(kt-CO ₂ eq)	465	490	427	480 *17
	Related to energy purchased from the grid (Scope 2, location based)	(kt-CO ₂ eq)	456	469	470	472 *18
	Related to technical losses from distribution and transmission network	(kt-CO ₂ eq)	5,288	4,427	5,491	4,462 *19

GRI		UM	FY2021	FY2022	FY2023	FY2024	注
	Water						
303-3	Water withdrawal in "water stressed" areas						
	Total	(thousand m ³)	0	0	0	0	
303-3	Water withdrawal by source						
	Total withdrawal from scarce sources	(thousand m ³)	49,463,282	47,263,796	37,129,334	37,665,148	
	Surface water (wetlands, lakes, rivers)	(thousand m ³)	49,462,537	47,263,067	37,128,590	37,664,373	
	Ground water (from wells)	(thousand m ³)	27	24	31	34	
	Water from municipal water supplies	(thousand m ³)	719	705	714	741	
	Water withdrawal by uses						
	Total	(thousand m ³)	49,463,282	47,263,796	37,129,334	37,665,148	
	River water for hydroelectric plants	(thousand m ³)	49,462,389	47,262,577	37,128,052	37,663,915	
	Industrial water	(thousand m ³)	73	384	422	344	
	Municipal water	(thousand m ³)	794	811	831	855	
	Groundwater	(thousand m ³)	27	24	31	34	
	Water intensity for electricity generation activities						
	Total	(m ³ /kWh)	5.7	5.5	5.2	5.3	
303-4	Water discharge by destination						
	Total	(thousand m ³)	49,463,282	47,263,796	37,129,331	37,665,148	
	Surface water (wetlands, lakes, rivers)	(thousand m ³)	49,462,389	47,262,577	37,128,057	37,663,921	
	Groundwater	(thousand m ³)	0	0	0	0	
	Sea (in industrial treatment plants)	(thousand m ³)	335	668	715	638	
	Third party water (municipal treatment plants)	(thousand m ³)	558	551	559	589	
303-5	Freshwater consumption						
	Total	(thousand m ³)	<1	<1	3	<1	
	Water treatment						
	Volume of waste water treatment in power plants	(thousand m ³)	-	-	-	-	
	COD emissions from power plants	(t)	-	-	-	-	
	Annual accumulated ALPS treated water discharge volume	(thousand m ³)	-	-	31	55	
	Business Impacts of Water Related Incidents	(Million JPY)	-	-	0	0	
GRI		UM	FY2021	FY2022	FY2023	FY2024	注
	Waste						
	Industrial waste by disposal method						
306-3	Total generated	(kt)	148	140	156	158	
306-4	Recycled volume	(kt)	148	140	156	158	
306-5	Landfill treatment volume	(kt)	0.486	0.055	0.093	0.078	
	Recycling rate	(%)	99.6	99.9	99.9	99.8	
	Hazardous waste						
	Waste volume containing PCB	(kt)	27	18	21	23	
	Insulating oil (inadvertently contaminated)	(ML)	4	4	6	5	
	Ash management						
	Total generated	(kt)	0	0	0	0	
	Recycled volume	(kt)	0	0	0	0	
	Landfill treatment volume	(kt)	0	0	0	0	
	Recycling rate	(%)	-	-	-	-	
GRI		UM	FY2021	FY2022	FY2023	FY2024	注
	Other						
	Electric vehicle						
	Number of EV or PHEV	(vehicles)	656	720	915	1,350	
	Rate of EV or PHEV fleets	(%)	18	21	27	40	
	Green procurement						
	Green procurement rate in office supplies (monetary value based)	(%)	99.9	99.9	>99.9	>99.9	
	Paper bought for printers/ photocopiers						
	Number of sheets (equivalent A4 sheets)	(Million A4eq)	170	171	171	160	
	Weight	(t)	678	681	684	638	

TEPCO HD and all of consolidated subsidiary companies							
GRI	KPI	UM	FY2021	FY2022	FY2023	FY2024	注
	Key figures						
	Installed capacity by energy source						
	Total net electrical capacity	(MW)	18,354	18,269	18,310	18,321	
	Thermal net capacity	(MW)	58	58	58	58	
	Coal	(MW)	0	0	0	0	
	LNG	(MW)	0	0	0	0	
	Oil	(MW)	58	58	58	58	
	Nuclear net capacity	(MW)	8,212	8,212	8,212	8,212	
	Renewable net capacity	(MW)	10,084	9,998	10,039	10,051	
	Hydroelectric	(MW)	10,021	9,945	9,985	9,989	*2
	Solar	(MW)	39	30	30	31	
	Wind	(MW)	21	21	21	21	
	Geothermal	(MW)	0	0	0	0	
	Biomass and cogeneration	(MW)	3	3	3	9	
	Net energy production by energy source						
	Total net electrical production	(GWh)	13,698	12,248	11,225	10,893	
	Thermal net production	(GWh)	157	156	155	159	
	Coal	(GWh)	0	0	0	0	
	LNG	(GWh)	0	0	0	0	
	Oil	(GWh)	157	156	155	159	
	Nuclear net production	(GWh)	0	0	0	0	
	Renewable net production	(GWh)	13,541	12,092	11,070	10,734	
	Hydroelectric	(GWh)	13,458	12,016	10,992	10,638	*2
	Solar	(GWh)	31	25	22	33	
	Wind	(GWh)	37	36	35	32	
	Geothermal	(GWh)	0	0	0	0	
	Biomass and cogeneration	(GWh)	16	16	21	30	
	Sales						
	Electricity volumes	(GWh)	233,812	242,784	228,745	228,621	
2-27	Environmental compliance						
	Total monetary value of significant fines	(Million JPY)	0	0	0	0	
	Total number of non-monetary sanctions	(cases)	0	0	0	0	
	Significant spill						
	Total number of significant spill	(cases)	0	0	0	0	
	ISO 14001						
	Certificated offices	(offices)	19	20	21	22	
GRI		UM	FY2021	FY2022	FY2023	FY2024	注
	Emissions						
305-1	Direct greenhouse gas emissions (Scope 1)						
	Total direct emissions (Scope 1)	(kt-CO ₂ eq)	203	205	215	221	
	CO ₂ emissions from electricity production and other activities	(kt-CO ₂)	123	125	132	136	
	CO ₂ emissions from vehicles (gasoline and diesel)	(kt-CO ₂)	11	10	13	11	
	Total other CO ₂ eq emissions	(kt-CO ₂ eq)	69	69	69	74	
305-2	Indirect greenhouse gas emissions (Scope 2)						
	Total of Scope2,market based	(kt-CO ₂ eq)	5,777	4,934	5,937	4,960	
	Total of Scope2,location based	(kt-CO ₂ eq)	5,773	4,913	5,981	4,953	
	Civil uses, hydroelectric and thermal electric plants						
	Related to energy purchased from the grid (Scope 2, market based)	(kt-CO ₂ eq)	489	507	446	498	
	Related to energy purchased from the grid (Scope 2, location based)	(kt-CO ₂ eq)	485	485	490	491	
	Related to technical losses from distribution and transmission network	(kt-CO ₂ eq)	5,288	4,427	5,491	4,462	
	Scope 1 and 2						
	Market based	(kt-CO ₂ eq)	5,980	5,139	6,152	5,181	
	Location based	(kt-CO ₂ eq)	5,976	5,118	6,196	5,174	

302-2 305-3		Other indirect greenhouse gas emissions (Scope 3, per GHG protocol)						
Total of Scope 3		(kt-CO ₂ eq)	-	106,401	115,464	116,663	*24	
Upstream	Category 1 Purchased goods and services	(kt-CO ₂ eq)	-	-	3,895	4,786		
	Category 2 Capital goods	(kt-CO ₂ eq)	-	-	2,533	2,874		
	Category 3 Fuel- and energy-related activities (not included in Scope 1 or Scope 2)	(kt-CO ₂ eq)	-	-	102,046	102,138		
	Category 4 Upstream transportation and distribution	(kt-CO ₂ eq)	-	-	26	23		
	Category 5 Waste generated in operations	(kt-CO ₂ eq)	-	-	6	10		
	Category 6 Business travel	(kt-CO ₂ eq)	-	-	5	5		
	Category 7 Employee commuting	(kt-CO ₂ eq)	-	-	13	13		
	Category 8 Upstream leased assets	(kt-CO ₂ eq)	-	-	1	2		
	Other (upstream)	(kt-CO ₂ eq)	-	-	0	0		
	Downstream	Category 9 Downstream transportation and distribution	(kt-CO ₂ eq)	-	-	0	0.4	
		Category 10 Processing of sold products	(kt-CO ₂ eq)	-	-	0	0	
		Category 11 Use of sold products	(kt-CO ₂ eq)	-	-	6,934	6,807	
		Category 12 End-of-life treatment of sold products	(kt-CO ₂ eq)	-	-	0	0	
		Category 13 Downstream leased assets	(kt-CO ₂ eq)	-	-	5	4	
		Category 14 Franchises	(kt-CO ₂ eq)	-	-	0	0	
Category 15 Investments		(kt-CO ₂ eq)	-	-	0	0		
Other (downstream)	(kt-CO ₂ eq)	-	-	0	0			
GRI		UM	FY2021	FY2022	FY2023	FY2024		
Energy								
302-1 302-4		Energy consumption						
Total		(GJ)	13,122,744	13,135,128	11,746,400	12,214,629		
Electricity production and other activities		(GJ)	1,787,910	1,823,146	1,919,719	2,002,320		
Vehicles (gasoline and diesel)		(GJ)	155,338	158,534	142,014	161,084		
Electricity, heat and steam (civil uses, hydroelectric and thermal electric plants)		(GJ)	11,179,495	11,153,448	9,684,667	10,051,225		
GRI		UM	FY2021	FY2022	FY2023	FY2024		
Water								
303-3		Water withdrawal by uses						
Total		(thousand m ³)	52,787,101	50,621,370	41,352,728	41,543,159		
River water for hydroelectric plants		(thousand m ³)	52,786,057	50,619,971	41,351,172	41,541,566		
Industrial water for thermal electric plants		(thousand m ³)	73	384	422	408		
Municipal water		(thousand m ³)	944	991	1,104	1,151		
Groundwater		(thousand m ³)	27	25	31	34		
GRI		UM	FY2021	FY2022	FY2023	FY2024		
KPI								
Waste								
306-3		Industrial waste by disposal method						
Total generated		(kt)	212	152	171	192		
306-4		Recycled volume						
		(kt)	212	152	171	190		
306-5		Landfill treatment volume						
		(kt)	<1	<1	<1	2		
		(%)	99.6	99.7	99.7	99.1		
GRI		UM	FY2021	FY2022	FY2023	FY2024		
KPI								
Other								
306-3		Electric vehicle						
		(vehicles)	690	754	938	1,386		
306-4		Green procurement						
		(%)	95.3	94.8	85.9	99.1		
306-5		Paper bought for printers/ photocopiers						
		(Million A4eq)	247	249	246	232		
		(t)	985	993	982	928		

- Figures which are marked with ★ have been externally assured by KPMG AZSA Sustainability Co.,Ltd.
- Totals may not be match due to significant digits or rounding.
- The values are for the fiscal year (from 1 April to 31 March) or as of the end of the fiscal year (31 March) unless otherwise specified.
- GHG emissions quantification is subject to uncertainty when measuring activity data, determining emission factors, and considering scientific uncertainty inherent in the Global Warming Potentials.
- *1 Source: "Surveys and Statistics of Electricity (the Agency for Natural Resources and Energy)"
- *2 Including pumped-storage power generation
- *3 Excluding facilities under development
- *4 The transmission and distribution loss rate by voltage is the transmission and distribution loss rate by voltage stated in the General Provisions for Wheeling Service announced at the beginning of the fiscal year.
- *5 The installation was completed in all households by FY2020 except for some places where installation works are technically difficult.

- * 6 Excluding wholesale electricity
- * 7 Adjusted emissions intensity refers to the CO2 emission intensity after reflecting adjustments related to the allocation of surplus non-fossil value of the feed-in tariff scheme for renewable energy and the purchase of non-fossil certificates, based on the "Act on Promotion of Global Warming Countermeasures."
- * 8 Unadjusted emission factors are added starting from FY2024 results. These correspond to the basic emission factors used until FY2023, and the factors previously disclosed as basic emission factors are now disclosed as unadjusted emission factors.
- * 9 Adjusted emissions refer to the CO2 emission after reflecting adjustments related to the allocation of surplus non-fossil value of the feed-in tariff scheme for renewable energy and the purchase of non-fossil certificates, based on the "Act on Promotion of Global Warming Countermeasures."
- * 10 Unadjusted emissions are added starting from FY2024 actual results. These correspond to the baseline emissions until FY2023, and emissions previously disclosed as baseline emissions are now disclosed as unadjusted emissions.
- * 11 Excluding wholesale gas
- * 12 CO2 emissions intensity and CO2 emissions are calculated and published from FY2023 results in accordance with the revision of the Act on Promotion of Global Warming Countermeasures and other related laws and regulations. Adjusted emissions intensity and adjusted emissions refer to the values after reflecting adjustments of domestic and overseas certified emission reductions based on the Act on Promotion of Global Warming Countermeasures.
- * 13 Scope 1 emissions refer to GHG emissions released directly into the atmosphere from emission sources within organizational boundaries. In principle, these emissions are calculated using the emission intensity listed in the Ministry of the Environment's Calculation Methods and Emission Coefficients in the Calculation, Reporting, and Disclosure System. This is based on Japanese laws: the Act on the Rational Use of Energy and the Act on Promotion of Global Warming Countermeasures. In addition, CO2 emissions from vehicles are also included in Scope 1 emissions.
- * 14 Scope 1 emissions do not include the amount of fluorocarbon leakage based on the Fluorocarbon Emissions Control Act.
- * 15 The value for calendar year (from January 1 to December 31)
- * 16 Scope 2 emissions refer to emissions due to the use of electricity, heat and steam supplied by others.
- * 17 "Market based" emissions are emissions which are calculated based on the emissions intensity of each retail company. Calculated by using the adjusted emissions intensity for each retail company
- * 18 "Location based" emissions reflect the average emissions intensity of grids.
- * 19 The emissions are calculated by multiplying the transmission and distribution (T&D) loss electricity by the TSO's emission intensity. The T&D loss electricity is calculated by multiplying the amount of electricity TEPCO Power Grid transmitted at the transmission end by the T&D loss rate. The TSO's emission intensity is converted to the value at the transmission end.
- * 20 Scope 3 emissions refer to indirect emissions (not included in scope 2)
 Approach to calculation: calculated according to the guidelines below.
 "Corporate Value Chain (Scope 3) Accounting and Reporting Standard (GHG protocol)"
 "Basic Guidelines for Calculating Greenhouse Gas Emissions through Supply Chains (Ministry of Economy, Trade and Industry, Ministry of the Environment)"
 Calculation method for each of the categories
 Category 1: A hybrid of the following two
 A. Calculated by multiplying the procurement amount for each product/service purchased by the emissions intensity
 B. If the supplier publishes corporate emissions and sales on their websites, etc., calculate using the published values and our procurement amount.
 Category 2: Calculated by multiplying the amount of annual capital investment in financial report by the emission intensity
 Category 3: The sum of the following two values;
 A. Upstream emissions of purchased fuels and electricity, and T&D loss
 calculated by multiplying the amount of fuel and electricity, and T&D loss purchased by each emission intensity.
 B. Emissions associated with electricity sold
 These emissions are calculated by multiplying the amount of electricity sold by the emissions intensity (not adjusted) such as that of TEPCO Energy Partner, while excluding any overlap with Scope 1 and Scope 2 emissions.
 Category 4: Calculated by multiplying transportation volume or transportation charges by the emission intensity from FY2023 results
 Category 5: Calculated by multiplying the volume of industrial waste by the emission intensity for each type of waste treatment method
 Category 6: Calculated by multiplying the number of employees by the emission intensity
 Category 7: Calculated by multiplying the number of employees by the number of business days and the emission intensity for each location type of office
 Category 8: No applicable emissions due to our type of business
 Category 9: Calculated by multiplying transportation volume or transportation charges by the emission intensity from FY2024 results
 Category 10: No applicable emissions due to our type of business
 Category 11: Emissions associated with the use of city gas we sell: Calculated by multiplying the city gas sold by the emissions intensity specified in the GHG Emissions Accounting, Reporting, and Disclosure System administered by Ministry of the Environment or basic emissions intensity of TEPCO Energy Partner.
 Category 12: No applicable emissions due to our type of business
 Category 13: No applicable emissions due to our type of business
 Category 14: No applicable emissions due to our type of business
 Category 15: No applicable emissions due to our type of business
- * 21 From FY2022 results, the scope of aggregation has been expanded to include all purchased products and services.
- * 22 VOC emissions based on the emission standards of the Air Pollution Control Act, which is a regulatory law of Japan, are zero.
- * 23 Until FY2022 results, calculated using 9.97 (GJ/MWh) as the primary energy equivalent of electricity. From FY2023 results, calculated using 8.64 (GJ/MWh) as the primary energy equivalent of electricity.
- * 24 From FY2022 results, the scope of aggregation is expanded to include all consolidated subsidiaries, and from FY2023 results is published by category.