

The specific plans are posted as the Kyuden Group Environmental Action Plan on our website.

Note: t = metric ton (tonne)

Specific initiatives for each item are described in the following pages (including environmental data), but items likely to be of particular interest to stakeholders are also listed in the "Highlights" section.

	Item	Units	Results			FY2017 Target Value*2	Assessment*1	Related Pages		
			FY2015	FY2016	FY2017					
Initiatives to Address Global Environmental Issues	CO2 emission volume per electricity sales volume (post-adjustment)*3 [] are basic emission factors	kg-CO2/kWh	0.528 [0.509]	0.483 [0.462]	0.463 [0.438]	Limit as much as possible*4	-	As a result of such factors as the restarting and safe operation (except for scheduled maintenance) of the Sendai Nuclear Power Station Units 1 and 2; and the decrease in the proportion of total power generation made up by thermal power thanks to increased use of renewables, the CO2 emissions result for FY2017 were 2.4 million metric tons less than FY2016.	17 18	
	(Note) CO2 emissions (post-adjustment)*3 [] are basic emission volumes	10,000 t-CO2	4,180 [4,030]	3,750 [3,590]	3,510 [3,320]					
	Electricity sales volume	100 million kWh	792	777	758					
	CO2 emissions reductions based on the best available technology (BAT) at new thermal power plants, etc.*5	10,000 t-CO2	2.6	26.0	30.4	Reduce as much as possible*5	(B)	We have reduced CO2 emissions through such initiatives as introducing the best available technology into Shin-Oita Power Station Unit 3x4; updating the high-efficiency steam turbine at Matsuura Power Station Unit 1; and updating the gas turbines at Shin-Oita Power Station Unit 1.	29	
	Nuclear power utilization rate	%	20.7	31.9	36.7	(wait-and-see stance on target setting and announcements)*6	(B)	The utilization rate was increased to 36.7% due to the return to normal operation of Sendai Nuclear Power Station Units 1 and 2 in 2015, and the resumption of power generation at the Genkai Nuclear Power Station Unit 3 in 2018.	18	
	Amount of renewable energy facilities installation (total) *7	10,000 kW	-	180	196	400 by 2030*8	(B)	By the end of FY2017, renewable energy sources totaling 1.96 million kW had been introduced. For the future, we will do our utmost as a corporate group to develop and introduce renewable energy which can serve as a proven source of electricity.	19	
	Transmission and thermal power total heat efficiency (higher calorific value base) [] are lower calorific value base-converted values*9	%	39.6 [42.3]	40.4 [43.3]	40.4 [43.3]	(wait-and-see stance on target setting and announcements)*6	(B)	Heat efficiency was on a par with FY2016 due to factors such as the stable operation (except for scheduled maintenance) of Sendai Nuclear Power Station Units 1 and 2, resumption of power generation at Genkai Nuclear Power Station Unit 3, and a drop in the operation rate of low heat-efficiency oil-fired thermal power stations.	29	
	Transmission and distribution loss rate	%	4.58	4.81	4.24	(wait-and-see stance on target setting and announcements)*6	(B)	Due to a drop in power transmission as a result of lower electricity sales volume, factors such as a decrease in transmission and distribution power loss contributed to a decreased transmission and distribution loss rate.	29	
	Office power usage	1 million kWh	54	57	60	About 54 or less	(B)	Despite careful and consistent energy-saving measures, such as proper management of air conditioning usage, reduced lighting and elevator installation and usage; increased air conditioning usage due to elevated average summer temperatures and other factors caused targets to be missed.	-	
	Purchased copier paper	t	511	509	557	470 or less	(B)	The target was missed despite increased use of electronic documents to promote paperless operations, greater efforts to cut down on unnecessary copier usage and a concentrated push to use both sides of paper before discarding.	-	
	Water supply usage*10	m3/person	25	29	31	26 or less*11	(B)	Despite concerted efforts to reduce water use, there was a reduction in greywater supplied to the main building from the Denki Building Kyosokan, and an increase in tap water usage in the main building, due to an increase in tenants moving into the Denki Building Kyosokan. As a result, the target was missed.	-	
	Electric vehicles introduced (total)*12	vehicles	167	167	166	approx. 1,000 by end of FY2020	(B)	The total number of electric vehicles introduced by the end of FY2017 was 166. From the standpoint of medium-to-long-term global warming mitigation, we are working within our budget to introduce more electric vehicles as company vehicles.	-	
	General-purpose vehicle fuel consumption rate*13	km/ℓ	12.7	12.7	12.6	12.0 or more	(B)	Thanks to careful operation and management, such as vehicle fuel efficiency management and "eco-drive" implementation, as well as performing a planned switch to higher fuel efficiency vehicles, we were able to meet our target.	-	
	SF6 recovery rate	During machine maintenance	%	99	99	98	98 or more	(B)	Thanks to such factors as the careful use of vacuum-type SF6 recovery equipment during inspection and removal, we were able to meet our target.	50
During machine removal		%	99	99	99	99 or more	(B)			
Recovery implementation rate during machine maintenance for fluorocarbons subject to regulation		%	100	100	100	100	(B)			
Initiatives to Establish a Recycling Society	Industrial waste recycling rate	%	approx. 100	approx. 100	approx. 100	99 or more	(B)	As a result of efforts such as effectively using 100% of coal ash in cement materials and concrete mixtures that exploit its characteristics, and thorough recovery and recycling of industrial waste through company-wide joint recovery efforts, we were able to meet our targets for each recycling rate. However, there was an increase in the amount of industrial waste disposed of at external landfills, and therefore we will continue working hard to always put the 3Rs to practice.	33 34	
	Coal ash recycling rate	%	100	100	100	100	(B)			
	Non-coal ash recycling rate	%	97	99	98	98 or more	(B)			
	External landfill disposal of industrial waste	t	44	148	243	-*14	(C)	-		
	Waste paper recycling rate	%	100	100	100	100	(B)	Thanks to our ongoing efforts to ensure 100% recycling of waste paper, we were able to meet our target.	34	
	Green procurement rate*15	%	99	approx. 100	approx. 100	Procure as much as possible*16	(B)	Our efforts to perform green procurement as much as possible resulted in roughly 100% green procurement.	-	
Local Environmental Preservation	SOx emissions per quantity of thermal power generated*17	g/kWh	0.29	0.19	0.19	Limit as much as possible*18	(B)	As a result of the stable, continuous operation (except scheduled maintenance) of Sendai Nuclear Power Station throughout the year, power generation by oil-fired thermal power plants declined, resulting in SOx and NOx results approximately the same as FY2016.	35	
	NOx emissions per quantity of thermal power generated*17	g/kWh	0.24	0.17	0.18	Limit as much as possible*18	(B)			
	Dose assessment for public in nuclear power plant vicinity (per year)	millisieverts	under 0.001	under 0.001	under 0.001	under 0.001	(B)	Thanks to proper facilities operation and management of radioactive waste, we were able to meet our target.	-	
Collaborating with Communities	Energy/environmental education	Eco-mother activity frequency	times	245	253	200	200 or more*19	(B)	Thanks to events involving daycares and other groups throughout Kyushu, we were able to meet our target.	43
		On-demand course frequency	times	489	479	529	Implement proactively	(B)	By proactively seeking out primary schools, junior high schools, etc., around Kyushu, we held more courses than in FY2016.	42
		Kyuden Play Forest frequency*20	times	-	8	13	12 times or more	(B)	The target was achieved by increasing the frequency of these events, and holding them in forests throughout Kyushu.	43
		Environmental education in Kuju Kyuden Forest*20	times	-	19	24	20 times or more	(B)	The target was met due to proactive efforts led by the Kyuden Mirai Foundation.	42

*1 The degree to which FY2017 targets were met is rated on a three-tier scale: (B): achieved, (B): mostly achieved (80% or more achieved), (C): unachieved (under 80% achieved). * Items for which there is no FY2017 target value are delineated with a () to show that they are a comparison with the actual values from FY2016.

*2 Underlined items are revised targets.

*3 Adjusted in line with CO2 emissions credits and feed-in tariffs (FIT).

*4 Amongst other activities, we strive to ensure that safety is our chief consideration for nuclear power, that we utilize renewable energy, that we improve the already high efficiency of our thermal power plants, that we undertake appropriate maintenance and management and that we provide energy-saving and reduced-CO2 services which contribute to a low-carbon society, all for the purpose of achieving the targets which have been set for the electric power industry as a whole (emissions factor of approximately 0.37 kg of CO2 per kWh (usage end) by FY2030).

*5 Among other things, we incorporate the best available technology (BAT) that is economically feasible into our new thermal power plants in order to reduce our environmental load and fully pursue the targets set for the electric power industry as a whole (maximum reduction potential of approximately 7 million metric tons of CO2 by 2020 and approximately 11 million metric tons of CO2 by 2030).

(Note) CO2 emissions per electricity sales volume for FY2016, CO2 emissions volume and electricity sales volume show only results for retail electricity providers; results are not included for isolated islands overseen by general transmission power providers (excluding the Goto Islands, which are handled as part of mainland Nagasaki Prefecture).

*6 The outlook for nuclear power is unclear within supply planning, and a wait-and-see stance has been adopted on target setting and announcements.

*7 Amount of facilities introduced by Kyushu Electric Power and its group companies (target results are omitted for FY2015, as this is a new target item established in FY2016).

*8 The Kyuden Group aims to develop 4 million kW of renewable energy (current 1.96 million kW + an additional 2.04 million kW) domestically and overseas by 2030, focusing primarily on geothermal and hydroelectric.

*9 Converted using the Comprehensive Energy Statistics calorific conversion factor, etc.

*10 Value obtained by dividing water use company-wide by the total number of employees (as of the end of the fiscal year in question).

*11 Revised due to increase in water use stemming from restarting of Sendai Nuclear Power Station.

*12 Includes plug-in hybrids.

*13 Excludes electric vehicles.

*14 No target set due to major fluctuations resulting from size, frequency, etc., of repair work.

*15 From among general-use products (office products, miscellaneous goods, etc.), the purchasing ratio of products conforming to socially-recognized standards is included as a reference value.

*16 Qualitative target which is set in light of the fact that this activity is essentially a permanent practice.

*17 Total value of emissions for each thermal power plant (excluding internal combustion power).

*18 Qualitative target due to major fluctuations resulting from utilization rate of oil-fired thermal power plants.

*19 Target revised in light of action plan for FY2017.

*20 Set new targets for initiatives relating to energy and environmental education for the next generation.