Business Operations and Environmental Load Status (FY2016)

Resource Input

Power Generation-Related

Fuel for thermal power generation (including internal combustion power generation)	Coal	6.26 million tons	[5.69 million tons]
	Heavy oil	500,000 kℓ	[1.15 million kℓ]
	Crude oil	140,000 kℓ	[400,000 kℓ]
	LNG	4.05 million tons	[3.81 million tons]
	Diesel	17,000 kℓ	[19,000 kℓ]
	Biomass <woody>	5,000 tons	[5,000 tons]
	Biomass <sewage sludge>	763 tons	[768 tons]
Fuel for nuclear power generation*1	Nuclear fuel	29 tons <uranium, plutonium weight>	[19 tons]
Water for power generation*2		5.73 million tons	[6.05 million tons]
Materials	Ammonia	9,000 tons	[8,000 tons]
	Limestone	135,000 tons	[125,000 tons]

*1: Uranium and plutonium allowance <converted from calorific value>.

*2: Does not include seawater used as cooling water

Other (Office, etc.) Activities

Fuel for vehicles	Gasoline and diesel	2,000 kℓ	[2,000 kℓ]
Expendable supplies, etc.	Copier paper	509 tons	[511 tons]
	Water consumption	357,000 tons	[316,000 tons]

(Note) Figures within [ ] are actual values for FY2015.

Operations

Production (Power)*3

Nuclear Power Generation	Thermal Power Generation <including internal combustion power generation>	Hydroelectric Generation
		
13.1 billion kWh [8.6 billion kWh]	47.3 billion kWh [47.5 billion kWh]	4.8 billion kWh [4.8 billion kWh]
	Amount generated from biomass 9 million kWh [9 million kWh]	

Power generation plant power consumption -2.5 billion kWh [-2.4 billion kWh]

Consumption <No. of employees: 13,053> [13,132]

Vehicular travel 22 million km [22 million km]

*3: Amount of power generated by the company's own facilities. Please see the Kyushu Electric Power website for information about the retail power business guideline-based power supply structure for electricity sales volume.

(Note) Figures within [ ] are actual values for FY2015. Power amounts may not match up with total values, as they have been rounded to the nearest whole number.

[Calculation of Expected Reductions]

CO_2 Reduction Amount

- Reduction due to power generation and purchasing: Calculated using CO_2 emissions (post-adjustment) per electricity sales volume for Kyushu Electric Power in FY2016 and compared against a baseline which assumes all power is produced via renewable energy (excluding pumping for hydroelectric).
- Facilities efficiency improvement: Calculated using thermal efficiency and power transmission/distribution loss rate for FY2013 as a baseline
- From FY2016, the calculation coefficient for CO_2 emission reduction volume due to nuclear power generation is changed from the thermal power CO_2 emissions coefficient (excluding internal combustion power) to the total power supply average CO_2 emissions coefficient (changed to the calculation approach used by the Federation of Electric Power Companies of Japan)

SF_6 Recovery Amount

Calculated using baseline which assumes SF_6 is not recovered from machinery into which it is injected during inspection and removal.

CO_2 Emissions Reduction from Introduction of Low Pollutant Company Vehicles

Calculated using a baseline which assumes electric vehicles (including plug-in hybrid cars), hybrid vehicles and fuel-efficient vehicles are not introduced.

SOx Reduction Amount

Calculated using a baseline which assumes no desulfurization is performed and no low sulfur fuels are used at power plants.

NOx Reduction Amount

Calculated using a baseline which assumes no denitrification is performed at power plants.

*5: For corporate operations, a baseline is used which assumes an environmental load level resulting from the use of no environmental load mitigation measures, and the numerical difference between this and the actual environmental load level is calculated.

*6: Calculated using "CO_2 emissions (post-adjustment) per electricity sales volume for Kyushu Electric Power in FY2016."

*7: The reduction in volume achieved by incinerating, compressing or otherwise disposing of the low-level radioactive waste generated is converted into an equivalent number of 200 ℓ drums.

Environmental Load Reduction

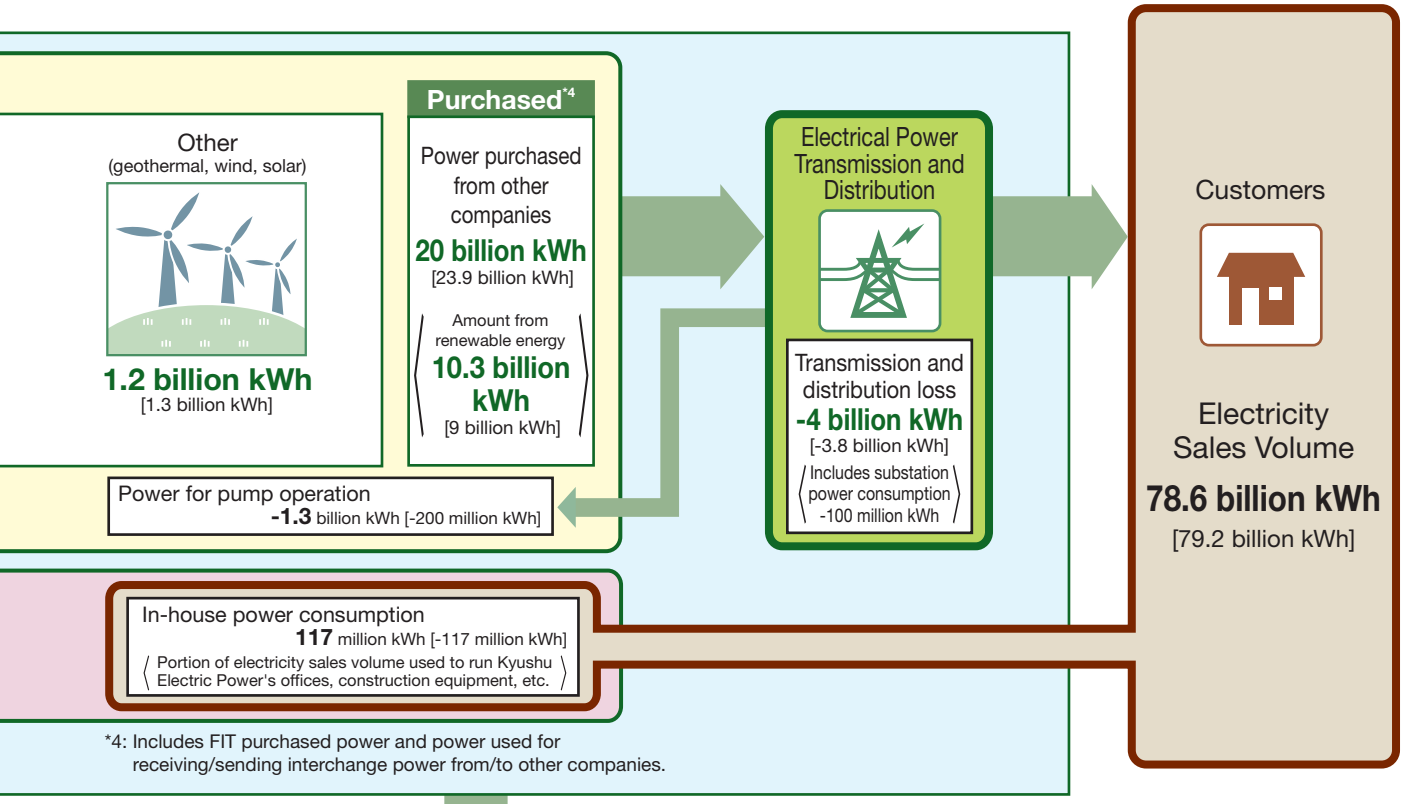
Assumed Reduction Amount*5

CO_2 emissions reduction	14.4 million tons - CO_2	[13.5 million tons - CO_2]
[For ref.] FY2015 CO_2 emissions reductions calculated using the total power supply average CO_2 emissions coefficient (due to nuclear power generation, renewable energy use, thermal power plant heat efficiency improvement, etc.)		[12.6 million tons - CO_2]
SF_6 recovery amount	240,000 tons - CO_2	[280,000 tons - CO_2]
CO_2 emissions reduction from introduction of low pollutant company vehicles	671 tons - CO_2*6	[500 tons - CO_2]
SOx reduction amount	57,000 tons	[61,000 tons]
NOx reduction amount	24,000 tons	[24,000 tons]

Actual Reduction Amount

Recycled industrial waste	938,000 tons (Recycling rate approx. 100%)	[847,000 tons] [Recycling rate approx. 100%]
Low-level radioactive waste reduction*7 (200 ℓ drum equivalent)	5,115 drums	[3,447 drums]
Recycled paper (in addition to copier paper, includes newspapers, magazines, cardboard, confidential documents, etc.)	1,104 tons (Recylcing rate of 100%)	[1,136 tons] [recycling rate approx. 100%]
Recycled water/rainwater utilization	40,000 tons	[39,000 tons]

(Note) Figures within [ ] are actual values for FY2015.



*4: Includes FIT purchased power and power used for receiving/sending interchange power from/to other companies.

Environmental Load

Power Generation-Related

Greenhouse gas reductions	CO_2	**37.5** million tons - CO_2	[41.8 million tons - CO_2]
	(• includes 57,000 tons*6 from in-house power consumption • includes portion due to purchasing power from other companies)		
	SF_6	**47,000** tons - CO_2	[35,000 tons - CO_2]
	N_2O	**60,000** tons - CO_2	[53,000 tons - CO_2]
	HFC	**1,100** tons - CO_2	[1,800 tons - CO_2]
Ozone-depleting substance emissions*8		**0.06** ODP tons	[0.06 ODP tons]
Air pollutant emissions*9	SOx	**16,000** tons	[20,000 tons]
	NOx	**24,000** tons	[27,000 tons]
Discharged water load*10		**92** tons	[127 tons]
COD emissions*11		**6** tons	[6 tons]
Industrial waste landfill disposal (excluding coal ash for effective utilization)		**2,000** tons	[4,000 tons]
Low-level radioactive waste generation*12 (200 ℓ drum equivalent)		**1,621** drums	[1,968 drums]

Other (Office, etc.) Activities

Vehicular CO_2 emissions	**5,000** tons - CO_2	[5,000 tons - CO_2]
Waste paper disposal	**0** tons	[0 tons]
Water supply usage	**317,000** tons	[278,000 tons]

(Note) Figures within [ ] are actual values for FY2015.

*8: The individual fluorocarbon ozone depletion coefficients were used to convert into the equivalent CFC-11 weight.
*9: "Total exhaust gas × concentration in exhaust gas" for each thermal power plant (including internal combustion power) was converted into a weight value and combined for the total value.
*10: Concentrations and discharged water volumes were used to calculate the load for each water pollutant contained in the discharged water treated by the discharged water treatment equipment at thermal (including geothermal) and nuclear power generation plants, and these loads were multiplied by Kyushu Electric Power's own weighting coefficients, converted into COD (chemical oxygen demand) weight equivalents and totaled.
*11: Total for COD (chemical oxygen demand) contained in discharged water treated by the discharged water treatment equipment at thermal (including geothermal) and nuclear power generation plants.
*12: This is the 200 ℓ drum equivalent for the net amount found by subtracting the reduction amount (*7) from the actual amount produced.