

# Environmental Data

Note: The sum of individual environmental data may not be equal to the total due to the way figures are rounded.

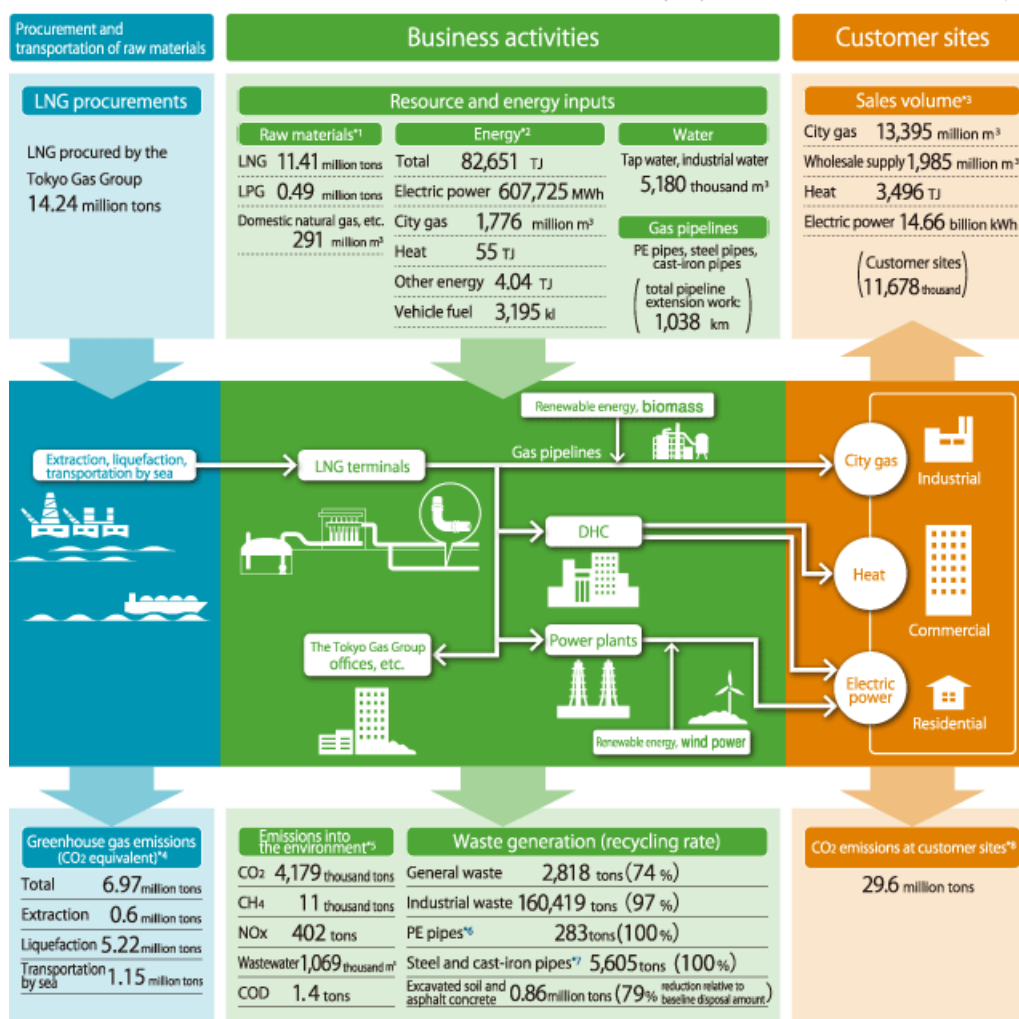
## The Tokyo Gas Group Business Activities and Material Balance

Third-party Assured

We monitor and manage impacts on the environment at every stage of our LNG value chain to reduce the impact on the environment.

The Tokyo Gas Group Business Activities and Material Balance (FY2017)

Boundary: Tokyo Gas Co., Ltd. and 46 consolidated subsidiaries in Japan



Boundary: Tokyo Gas Co., Ltd. and 46 consolidated subsidiaries in Japan (PDF: 76KB)

\*1 For city gas production by the Tokyo Gas Group.

\*2 Energy usage by the Tokyo Gas Group excluding double-counting due to intra-group supply of heat and electricity.

\*3 City gas: Volume of gas sales excluding supply to other gas utilities and sales for internal Group use.

Wholesale supply: Volume of gas supplied to other gas utilities.

Heat: Includes sales from LNG terminals as well as district heating and cooling centers and spot heat supply. Includes intra-group supply.

Electric power: Volume of sales of all electric power, including power purchased for business use from other companies and the market as well as Group power stations.

\*4 Source: "Study of Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A" (Proceedings of the annual meeting of Japan Society of Energy and Resources 35, pp. 23-26, 2016)

Production: 0.77; Liquefaction: 6.71; Transportation by sea: 1.48 g-CO<sub>2</sub>/MJ, based on gross heating value

\*5 CO<sub>2</sub>, CH<sub>4</sub>, NO<sub>x</sub>: Excludes double-counting due to intra-group supply.

Volume of wastewater: Specified wastewater and domestic sewage.

\*6, 7 PE pipes, Steel and cast-iron pipes: Tokyo Gas on a non-consolidated basis.

\*8 Gas sales volume multiplied by emission intensity.

▶ The Tokyo Gas Group Business Activities and Material Balance (FY2017) (PDF: 184KB) 

## ■ (1) Usage of Energy and Water/Emissions into the Atmosphere and Water System

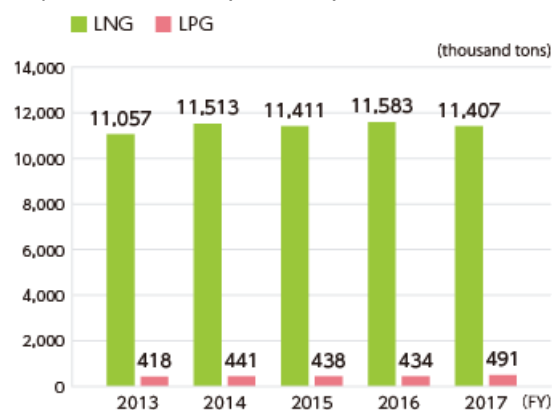
### Use of Energy and Water/Emissions into the Atmosphere and Water Systems

▶ Third-party Assured

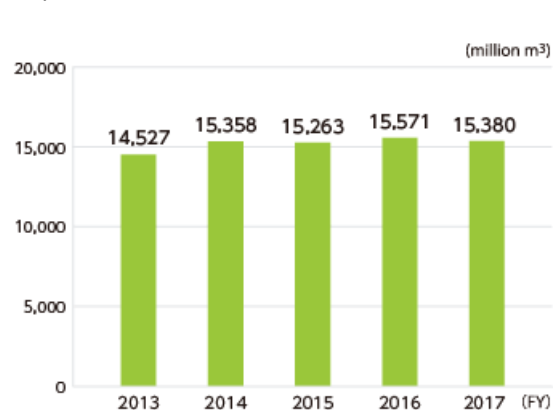
Feedstock and Sales Volume

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
City gas feedstock (Note 1)	LNG	Thousand tons	11,057	11,513	11,411	11,583	11,407
	LPG	Thousand tons	418	441	438	434	491
Sales volume	City gas (Note 2)	Million m <sup>3</sup>	14,527	15,358	15,263	15,571	15,380
	Heat (Note 3)	TJ	3,353	3,287	3,251	3,451	3,496
	Power (Note 4)	Billion kWh	9.71	10.61	10.96	12.65	14.66

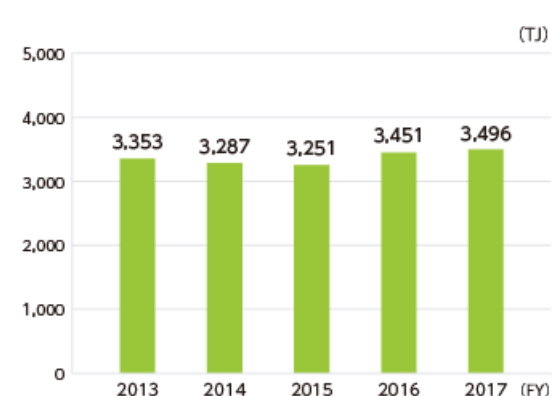
City Gas Feedstock (LNG/LPG)



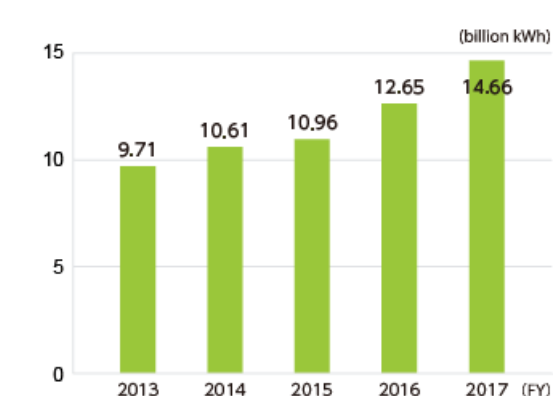
City Gas Sales



Heat Sales



Power Sales



Note 1: For city gas production by the Tokyo Gas Group.

Note 2: Volume of gas sales including supply to other gas utilities and excluding sales for internal Group use.

Note 3: Includes sales volume from LNG terminals, in addition to district heating and cooling centers and spot heat supply. Also includes intra-group supply.

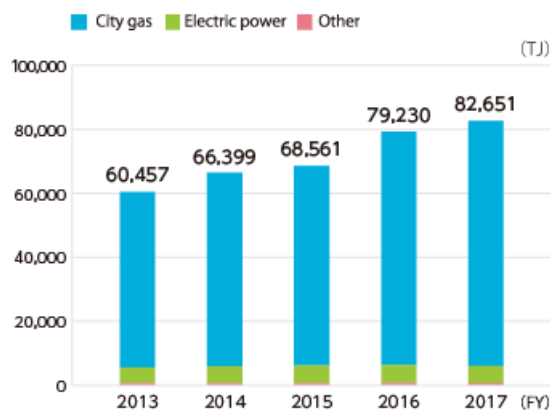
Note 4: Volume of sales of all electric power, including power purchased for business use from other companies and the market as well as Group power stations.

Energy Usage\*1, 2

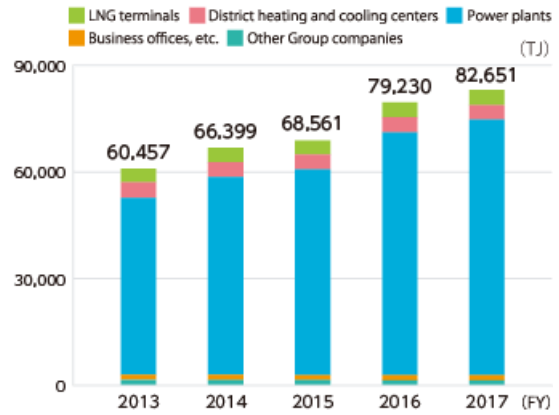
Category	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Energy usage (Note 1)	TJ	60,457	66,399	68,561	79,230	82,651
LNG terminals	TJ	3,894	4,069	3,998	4,169	4,291
District heating and cooling centers	TJ	4,361	4,167	4,167	4,316	4,037
Power plants	TJ	49,733	55,639	57,871	68,250	71,967
Tokyo Gas business offices, etc.	TJ	1,453	1,417	1,387	1,483	1,444
Other Group companies	TJ	1,541	1,490	1,460	1,362	1,368
(Tokyo Gas Co., Ltd.)	TJ	5,638	5,785	5,678	5,954	6,043
Electric power (Note 2)	MWh	545,218	593,097	615,419	626,729	607,725
LNG terminals	MWh	304,788	334,229	345,227	363,053	368,259
District heating and cooling centers	MWh	76,446	90,973	94,640	98,529	84,621
Power plants	MWh	10,732	8,774	11,407	9,775	10,700
Tokyo Gas business offices, etc.	MWh	54,499	52,350	52,372	51,526	49,786
Other Group companies	MWh	118,673	115,677	112,890	103,847	105,089
(Tokyo Gas Co., Ltd.)	MWh	364,971	391,536	402,357	419,502	422,776
City gas	Thousand m <sup>3</sup>	1,275,444	1,402,022	1,447,012	1,691,380	1,775,849
LNG terminals	Thousand m <sup>3</sup>	21,378	18,769	14,600	14,544	16,206
District heating and cooling centers	Thousand m <sup>3</sup>	82,570	74,482	73,328	75,133	72,420
Power plants	Thousand m <sup>3</sup>	1,152,267	1,289,852	1,341,099	1,582,434	1,668,543
Tokyo Gas business offices, etc.	Thousand m <sup>3</sup>	16,900	16,726	15,969	18,209	17,697
Other Group companies	Thousand m <sup>3</sup>	2,328	2,192	2,015	1,060	984
(Tokyo Gas Co., Ltd.)	Thousand m <sup>3</sup>	43,837	40,994	35,990	38,347	39,676
Heat (Note 2)	TJ	31	38	48	71	55
District heating and cooling centers	TJ	176	203	198	232	211

	Tokyo Gas business offices, etc.	TJ	89	85	88	93	95
	Other Group companies	TJ	167	158	166	195	195
	(Tokyo Gas Co., Ltd.)	TJ	99	94	96	102	104
Other fuels		TJ	5.40	5.23	5.80	4.89	4.04
	LNG terminals	TJ	0.18	0.22	0.68	0.50	0.53
	Tokyo Gas business offices, etc.	TJ	0.64	0.64	0.60	1.34	0.50
	Other Group companies	TJ	4.59	4.37	4.52	3.04	3.01
	(Tokyo Gas business offices, etc.)	TJ	0.85	0.86	1.28	1.84	1.03
Fuels for vehicles	Gasoline	kL	3,571	3,282	3,219	3,342	3,195
	(Tokyo Gas Co., Ltd.)	kL	1,461	1,425	1,444	1,420	1,335
	Diesel oil	kL	228	219	208	198	249
	(Tokyo Gas Co., Ltd.)	kL	37	35	41	47	59
	City gas	Thousand m <sup>3</sup>	218	203	175	135	133
	(Tokyo Gas Co., Ltd.)	Thousand m <sup>3</sup>	185	172	142	124	124
	LPG	kL	295	280	220	142	114
	(Tokyo Gas Co., Ltd.)	kL	-	-	-	-	-
LNG cryogenic energy		Thousand tons	2,659	2,289	2,364	2,678	2,890
	Cryogenic power generation	Thousand tons	796	460	724	785	787
	Portion sent to subsidiaries and affiliates	Thousand tons	821	853	852	820	820
	BOG treatment, etc.	Thousand tons	1,042	976	788	1,073	1,283

### Energy Usage (by Fuel Type)



### Energy Usage (by Business)



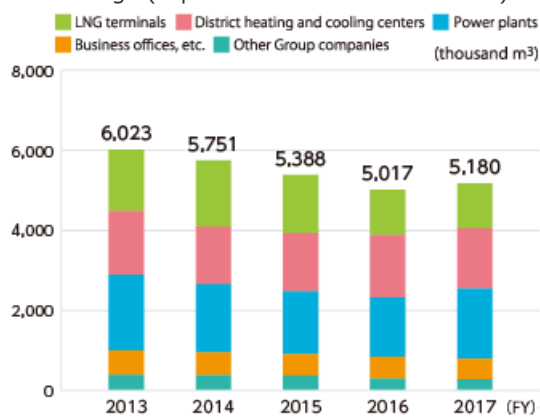
Note 1: Excludes double counting by intra-group supply of heat and electricity.

Note 2: Excludes double counting by intra-group supply.

### Water Usage

Category	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Tap water and industrial water	Thousand m <sup>3</sup>	6,023	5,751	5,388	5,017	5,180
LNG terminals	Thousand m <sup>3</sup>	1,542	1,662	1,457	1,138	1,125
District heating and cooling centers	Thousand m <sup>3</sup>	1,597	1,439	1,459	1,552	1,507
Power plant	Thousand m <sup>3</sup>	1,890	1,703	1,569	1,492	1,765
Tokyo Gas business offices, etc.	Thousand m <sup>3</sup>	607	572	537	544	506
Other Group companies	Thousand m <sup>3</sup>	387	375	366	290	276
(Tokyo Gas Co., Ltd.)	Thousand m <sup>3</sup>	2,192	2,276	2,036	1,726	1,674
Seawater	Thousand m <sup>3</sup>	795,227	784,406	773,963	781,879	784,651

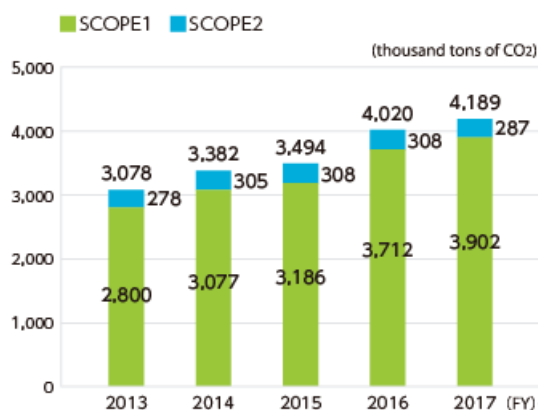
### Water Usage (Tap Water and Industrial Water)



## Emissions into the Atmosphere

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Greenhouse gases	CO <sub>2</sub> * <sup>1, 2</sup> (Note 1)	Thousand tons of CO <sub>2</sub>	3,074	3,376	3,479	4,014	4,179
	LNG terminals (Note 2)	Thousand tons of CO <sub>2</sub>	200	210	202	206	207
	District heating and cooling centers (Note 3)	Thousand tons of CO <sub>2</sub>	223	213	211	217	201
	Power plants (Note 4)	Thousand tons of CO <sub>2</sub>	2,522	2,823	2,938	3,466	3,654
	Tokyo Gas business offices, etc. (Note 5)	Thousand tons of CO <sub>2</sub>	75	73	71	74	72
	Other Group companies (Note 6)	Thousand tons of CO <sub>2</sub>	81	77	75	69	68
	(Tokyo Gas Co., Ltd.) (Note 7)	Thousand tons of CO <sub>2</sub>	290	298	288	296	294
	CH <sub>4</sub> * <sup>3</sup> (Note 8)	Thousand tons of CO <sub>2</sub> equivalent	4	6	14	5	11
NO <sub>x</sub>	Tons	272	272	302	367	402	
	LNG terminals (Note 9)	Tons	14	14	11	13	13
	District heating and cooling centers	Tons	59	53	52	51	54
	Power plants	Tons	182	187	223	282	311
	Tokyo Gas business offices, etc. (Note 9)	Tons	17	18	15	21	24
	(Tokyo Gas Co., Ltd.)	Tons	32	32	28	35	38

## Greenhouse Gas Emissions (CO<sub>2</sub> Equivalent) (SCOPE 1 + SCOPE 2)



Note 1: Excludes double counting by intra-group supply. Totalling 4,178 (based on adjusted emission factors) for the Tokyo Gas Group overall.

Note 2: 205 (based on adjusted emission factors)

Note 3: 200 (based on adjusted emission factors)

Note 4: 3,655 (based on adjusted emission factors)

Note 5: 72 (based on adjusted emission factors)

Note 6: 68 (based on adjusted emission factors)

Note 7: 293 (based on adjusted emission factors)

Note 8: About 425 tons of CH4 emissions

Note 9: Emissions from facilities that generate soot and smoke specified in the Air Pollution Control Act.

### Greenhouse Gas Emissions from Feedstock Procurement (SCOPE 3)

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
LNG procured		Million tons	12.80	13.97	13.87	14.25	14.24
Greenhouse gas (CO <sub>2</sub> equivalent) (Note)	Extraction	Million tons of CO <sub>2</sub>	0.57	0.62	0.58	0.60	0.60
	Liquefaction	Million tons of CO <sub>2</sub>	5.84	6.38	5.08	5.22	5.22
	Marine transport	Million tons of CO <sub>2</sub>	1.38	1.50	1.12	1.15	1.15

Note: Calculated based on greenhouse gas emission intensity throughout the lifecycle, from extraction of natural gas to processing and transportation, as analyzed by the LCA approach.

- FY2012–14 emission intensity

Extraction: 0.81; Liquefaction: 8.36; Transportation by sea: 1.97 g-CO<sub>2</sub>/MJ, based on gross heating value

Source: "Future Forecast for Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A" (Japan Society of Energy and Resources, presentation report 28 (2), pp. 51–56, 2007)

- Emission intensity from FY2015

Extraction: 0.77; Liquefaction: 6.71; Transportation by sea: 1.48 g-CO<sub>2</sub>/MJ, based on gross heating value

Source: "Study of Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A" (Proceedings of the annual meeting of Japan Society of Energy and Resources 35, pp. 23–26, 2016)

### CO<sub>2</sub> Emissions and Emissions Reduction at Customer Sites (SCOPE 3)

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015	FY2016	FY2017
CO <sub>2</sub>	Total amount	million tons of CO <sub>2</sub>	26.94	27.09	27.67	29.36	28.96	29.43	29.60
	Amount of reduction relative to FY2011	million tons of CO <sub>2</sub>	Baseline	0.87	1.52	3.29	3.43	3.94	4.04

### Energy Usage and CO<sub>2</sub> Emissions Associated with Cargo Transportation (Tokyo Gas Co., Ltd.) (SCOPE 3)

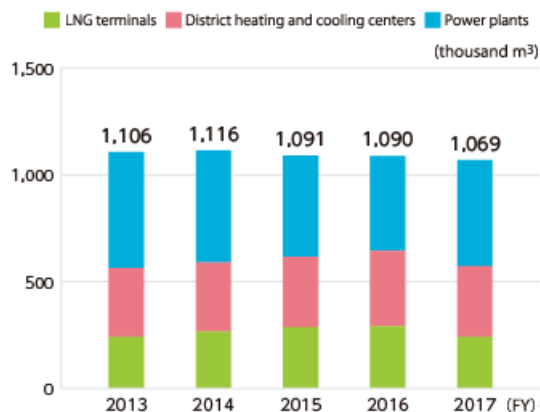
Category	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Transportation amount	million tons -km	93.12	94.59	98.42	85.70	82.72
Energy usage (crude oil equivalent)	kL	3,258	3,275	3,354	3,165	3,055
Energy usage intensity	kL/million tons-km	35.0	34.6	34.1	36.9	36.9
CO <sub>2</sub> emissions	tons-CO <sub>2</sub>	8,576	8,615	8,810	8,267	7,993

### Emissions into Water Systems

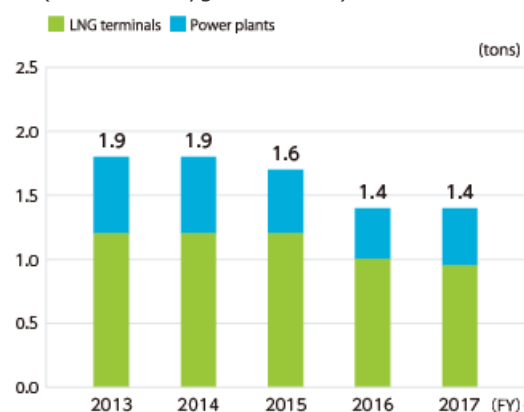
Category	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Wastewater	thousand m <sup>3</sup>	1,106	1,116	1,091	1,090	1,069
LNG terminals (Note)	thousand m <sup>3</sup>	242	265	287	291	242
District heating and cooling centers	thousand m <sup>3</sup>	321	325	330	354	330

Power plants	thousand m <sup>3</sup>	544	525	474	445	498
(Tokyo Gas Co., Ltd.)	thousand m <sup>3</sup>	249	273	296	300	258
COD	tons	1.9	1.9	1.6	1.4	1.4
LNG terminals	tons	1.2	1.2	1.2	1.0	0.9
Power plants	tons	0.6	0.6	0.5	0.4	0.4
(Tokyo Gas Co., Ltd.)	tons	1.2	1.2	1.2	1.0	0.9

#### Wastewater



#### COD (Chemical Oxygen Demand)



Note: Data are for wastewater discharges from wastewater treatment facilities and sewage discharges.

## Conversion Factor, etc.

### CO<sub>2</sub> Emission Factor

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
City gas (Tokyo Gas 13A) (Note 1)		kg-CO <sub>2</sub> /m <sup>3</sup>					2.21
Purchased electricity (average of all power sources) (Note 2)		kg-CO <sub>2</sub> /kWh	0.525 etc.	0.530 etc.	0.505 etc.	0.500 etc.	0.486 etc.
Heat (Note 3)	Steam (excluding industrial use), hot water, cold water	kg-CO <sub>2</sub> /MJ					0.057
	Industrial steam	kg-CO <sub>2</sub> /MJ					0.060
Other fuels (Note 3)	Heavy oil A	kg-CO <sub>2</sub> /L					2.71
	Diesel	kg-CO <sub>2</sub> /L					2.58
	Kerosene	kg-CO <sub>2</sub> /L					2.49
	Gasoline	kg-CO <sub>2</sub> /L					2.32
	LPG	kg-CO <sub>2</sub> /kg					3.00

Note 1: Calculated based on the typical composition of city gas (type 13A) supplied by the Tokyo Gas (15°C, gauge pressure of 2 kPa).

Note 2: Emission factors from electric power companies, released in accordance with the ministerial ordinance stipulated by the Act on Promotion of Global Warming Countermeasures.

Note 3: Calculated using the unit calorific value released in accordance with the ministerial ordinance stipulated by the Act on Promotion of Global Warming Countermeasures, and multiplying this amount by the emission factor per unit calorific value and by 44/12.

### Unit Calorific Value

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
City gas (Tokyo Gas 13A) (Note 1)		MJ/m <sup>3</sup> N					45.00
Purchased electricity	Daytime electricity	MJ/kWh					9.97
	Nighttime electricity	MJ/kWh					9.28



(Note 2)*4	Other than general electricity utilities	MJ/kWh	9.76
Heat (Note 2)	Steam (excluding industrial use), hot water, cold water	MJ/MJ	1.36
	Industrial steam	MJ/MJ	1.02
Other fuels (Note 2)	Heavy oil A	MJ/L	39.1
	Diesel	MJ/L	37.7
	Kerosene	MJ/L	36.7
	Gasoline	MJ/L	34.6
	LPG	MJ/kg	50.8
Crude oil equivalent coefficient (Note 2)		kL/GJ	0.0258

Note 1: City gas calorific value of the Tokyo Gas (0°C, 1 atmospheric pressure)

Note 2: Act on Rationalizing Energy Use (the Energy Efficiency Act)

\*1 For district heating and cooling centers that sell power using Combined Heat and Power (cogeneration), the amount of energy usage is divided between those for heat production and those for power generation using the allocation factor calculated based on the Act on Promotion of Global Warming Countermeasures. Data for energy used to produce heat is reflected in "District heating and cooling centers," and data for energy used for power generation is reflected in "Power plants." Data for the "Tokyo Gas business offices, etc." does not include energy used for LNG terminals and district heating and cooling centers. "Other Group companies" refers to data on Group companies excluding district heating and cooling centers, and power plants.

\*2 Some variance in the data listed under different categories may exist since the data has been processed to properly assess the changes in energy usage intensity for each business activity (such as by reflecting the amounts commissioned by other companies at LNG terminals).

\*3 CH4 (methane) emissions were converted to CO2 emissions by multiplying by the global warming potential of 25, as stipulated in the Act on Promotion of Global Warming Countermeasures.

\*4 For the crude oil equivalent of electricity usage under "District heating and cooling centers" and the "Tokyo Gas business offices, etc.," the amounts purchased from power utility companies were all calculated using daytime electricity factors.

## ■ (2) Waste

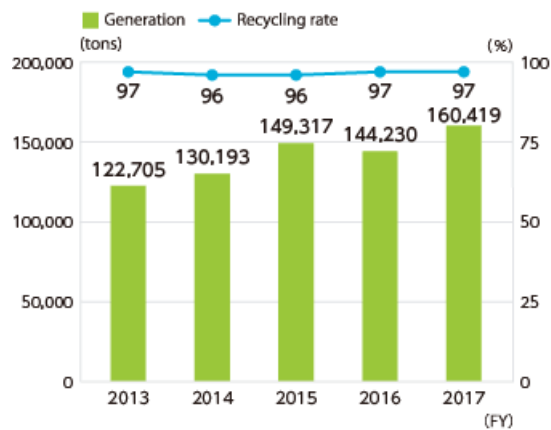
### Industrial Waste

▶ Third-party Assured

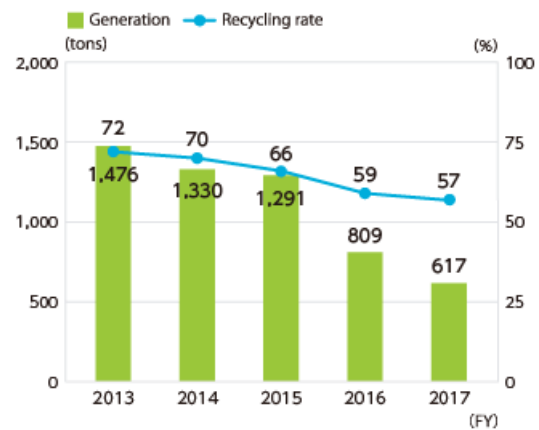
Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Industrial waste*1, 2	Generation	tons	122,705	130,193	149,317	144,230	160,419
	Amount recycled	tons	119,039	124,975	142,629	140,373	156,064
	Final disposal	tons	2,450	3,714	2,433	1,312	1,823
	Recycling rate	%	97	96	96	97	97
	Final disposal rate	%	2	3	2	1	1
Production plants*1	Generation	tons	1,476	1,330	1,291	809	617
	Amount recycled	tons	1,062	925	851	476	354
	Final disposal	tons	2	16	18	2	4
	Recycling rate	%	72	70	66	59	57
	Final disposal rate	%	0	1	1	0	1
Construction work*1, 2	Generation	tons	118,111	125,816	144,594	139,856	155,510
	Amount recycled	tons	115,303	121,455	138,851	136,807	151,997
	Final disposal	tons	2,258	3,472	2,221	1,123	1,469

	Recycling rate	%	98	97	96	98	98	
	Final disposal rate	%	2	3	2	1	1	
	Business offices, etc.*1	Generation	tons	3,118	3,046	3,431	3,565	4,292
		Amount recycled	tons	2,674	2,595	2,926	3,090	3,713
		Final disposal	tons	190	226	194	187	350
Recycling rate		%	86	85	85	87	86	
Final disposal rate		%	6	7	6	5	8	
Tokyo Gas Co., Ltd.	Generation	tons	4,137	4,430	4,462	4,449	5,950	
	Amount recycled	tons	3,647	3,719	3,629	3,701	4,638	
	Final disposal	tons	194	360	431	389	981	
	Recycling rate	%	88	84	81	83	78	
	Final disposal rate	%	5	8	10	9	16	

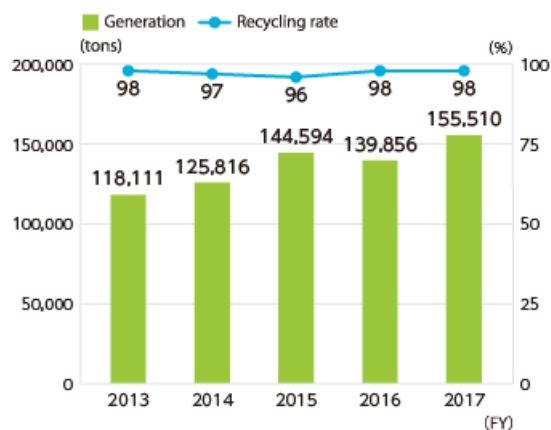
Industrial Waste (All)



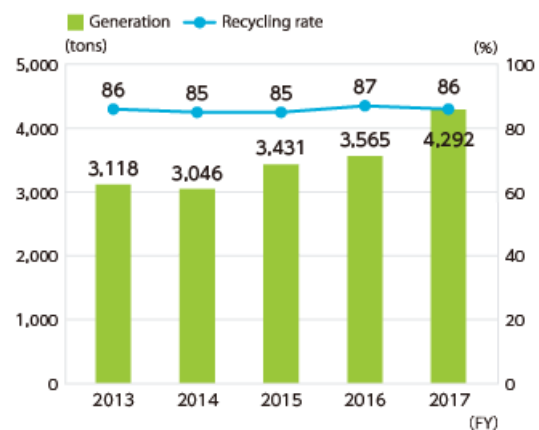
Industrial Waste (Production Plants)



Industrial Waste (Construction Work)



Industrial Waste (Business Offices, etc.)



## Results by Major Sites (FY2017)

LNG terminals (Negishi, Sodegaura, Ohgishima, Hitachi)

Category	Generation (tons)	Amount recycled (tons)	Final disposal (tons)	Recycling rate (%)	Final disposal rate (%)
Sludge	125.3	23.5	0.0	18.8	0.0
Scrap metal	10.6	10.6	0.0	99.9	0.1
Waste oil	6.3	6.0	0.0	94.9	0.1

Waste plastics	12.4	8.2	0.1	65.8	0.4
Specially controlled industrial waste	1.3	0.3	0.0	22.7	0.0
Other	0.7	0.4	0.0	56.7	0.3
Total	156.5	48.8	0.1	31.2	0.0

#### District Heating and Cooling Centers

Category	Generation (tons)	Amount recycled (tons)	Final disposal (tons)	Recycling rate (%)	Final disposal rate (%)
Sludge	17.9	7.6	2.8	42.2	15.4
Scrap metal	26.3	26.3	0.0	100.0	0.0
Waste oil	13.4	12.1	1.1	90.0	7.9
Waste plastics	8.8	8.8	0.0	100.0	0.0
Other	2.8	2.8	0.0	100.0	0.0
Total	69.3	57.5	3.8	83.1	5.5

#### Waste from Construction Work\*2

Category	Generation (tons)	Amount recycled (tons)	Final disposal (tons)	Recycling rate (%)	Final disposal rate (%)
Debris	82,346	81,175	637	98.6	0.8
Sludge	2,905	1,412	132	48.6	4.6
Scrap metal	1,932	1,924	4	99.6	0.2
Woodchips	432	397	32	91.7	7.5
Waste plastics	832	668	149	80.3	17.9
Glass, concrete, ceramic waste	59,927	59,605	320	99.5	0.5
Paper waster	195	183	12	93.7	6.1
Other	6,941	6,635	181	95.6	2.6
Total	155,510	151,997	1,469	97.7	0.9

#### Business Offices, etc.\*1

Category	Generation (tons)	Amount recycled (tons)	Final disposal (tons)	Recycling rate (%)	Final disposal rate (%)
Scrap metal	1,090	1,077	11	98.8	1.0
Waste plastics	1,389	1,163	214	83.7	15.4
Waste oil	349	346	2	99.2	0.5
Sludge	352	101	59	28.8	16.8
Glass, concrete, ceramic waste	162	126	36	77.7	22.3
Debris	76	68	8	89.1	10.1
Other	874	832	21	95.2	2.4
Total	4,292	3,713	350	86.5	8.2

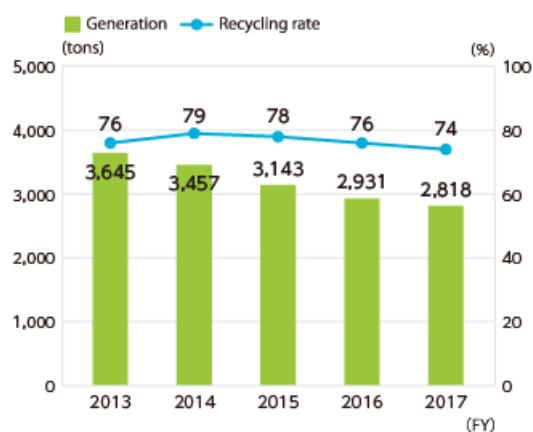
\*1 Data for "Production plants" include that from business offices that produce city gas and other products, district heating and cooling centers, and power plants. Data for "Construction work" are for construction taken on by Group companies as original contractors. Data for "Business offices, etc." include all data other than that from "Production plants" and "Construction work."

\*2 Including construction work for customers of our subsidiaries and affiliates.

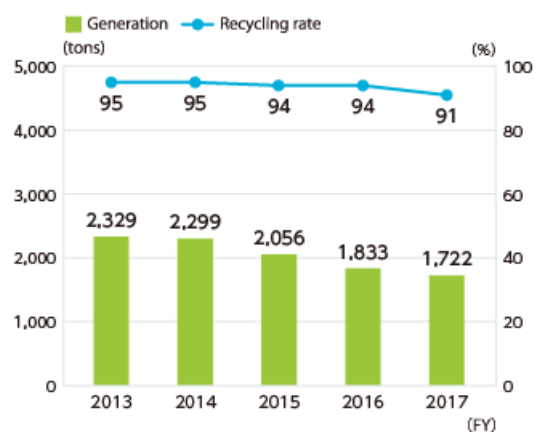
## General Waste

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017	
General Waste		Generation	tons	3,645	3,457	3,143	2,931	2,818
		Amount recycled	tons	2,755	2,725	2,441	2,224	2,090
		Recycling rate	%	76	79	78	76	74
	Tokyo Gas Co., Ltd.	Generation	tons	1,154	1,132	1,016	1,045	1,010
		Amount recycled	tons	977	967	870	850	806
		Recycling rate	%	85	85	86	81	80
Paper waste		Generation	tons	2,329	2,299	2,056	1,833	1,722
		Amount recycled	tons	2,220	2,194	1,934	1,720	1,570
		Recycling rate	%	95	95	94	94	91
	Tokyo Gas Co., Ltd.	Generation	tons	863	882	783	775	719
		Amount recycled	tons	821	830	738	721	680
		Recycling rate	%	95	94	94	93	95

General Waste (All)



General Waste (Paper)

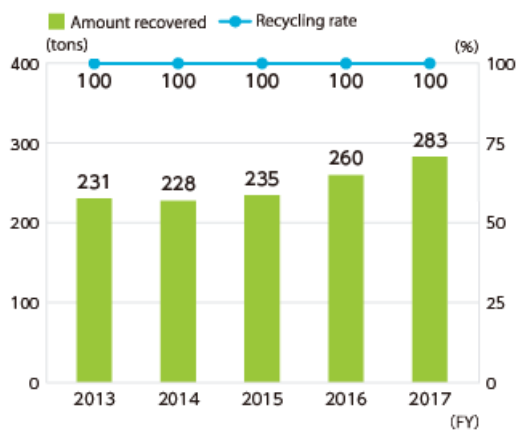


## By-Products from Gas Pipeline Construction

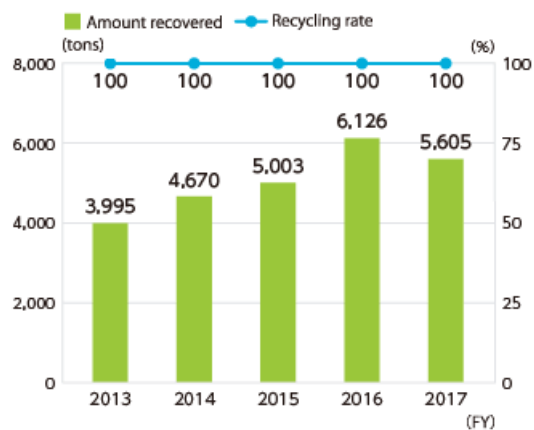
Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017	
Gas pipe (Note 1)	PE pipe	Amount recovered	tons	231	228	235	260	283
		Amount recycled	tons	231	228	235	260	283
		Recycling rate	%	100	100	100	100	100
	Steel and cast-iron pipe	Amount recovered and recycled	tons	3,995	4,670	5,003	6,126	5,605
		Recycling rate	%	100	100	100	100	100
Excavated soil (Note 2)	Pipeline extension work		km	1,160	1,170	1,121	1,026	1,038
	Estimated excavated amount		million tons	3.57	3.71	4.49	3.88	4.03
	Actual reduced amount	Reduction (by shallower laying of pipes in narrow)	million tons	1.43	1.42	1.32	1.35	1.28

	trenches and non-open-cut method)								
	Reuse (generated soil)		million tons	0.49	0.52	0.84	0.62	0.61	
	Recycle (improved soil, regeneration treatment)		million tons	1.1	1.15	1.33	1.27	1.27	
	Total reduction amount		million tons	3.02	3.09	3.49	3.24	3.16	
	Rate of reduction amount (comparison to estimated excavated amount)		%	84	83	78	83	79	
	Residual soil (actual amount)		million tons	0.55	0.62	1.0	0.64	0.86	
	Rate of residual soil (comparison to estimated excavated amount)		%	16	17	22	17	21	
	Tokyo Gas Co., Ltd. (Note 2)	Pipeline extension work		km	1,064	1,065	1,020	973	1,003
Estimated excavated amount		million tons	3.33	3.47	4.25	3.75	3.94		
Actual reduced amount		Reduction (by shallower laying of pipes in narrow trenches and non-open-cut method)		million tons	1.36	1.35	1.25	1.31	1.24
		Reuse (generated soil)		million tons	0.45	0.47	0.79	0.61	0.61
		Recycle (improved soil, regeneration treatment)		million tons	1.07	1.12	1.31	1.26	1.25
		Total reduction amount		million tons	2.89	2.94	3.35	3.18	3.10
		Rate of reduction amount (comparison to estimated excavated amount)		%	87	85	79	85	78
Residual soil (actual amount)		million tons	0.45	0.52	0.90	0.57	0.85		
Rate of residual soil (comparison to estimated excavated amount)		%	13	15	21	15	22		

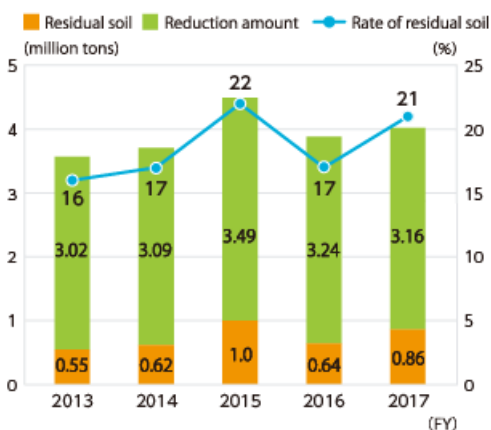
### PE Pipe



### Steel and Cast-Iron Pipe



### Residual Soil and Reduction Amount



Note 1: Tokyo Gas Co., Ltd.

Note 2: Data for excavated soil and asphalt concrete.

## Recovery of Used Gas Appliances from Customers

Category		Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Waste, etc.	Used gas appliance, etc.	tons	4,345	3,933	3,861	3,715	3,445
	Other	tons	4,343	5,057	5,075	4,581	4,695
	Total	tons	8,687	8,991	8,936	8,296	8,140

Note: Excludes waste from specified kinds of home appliances.

### Breakdown (FY2017)

Category	Amount recovered (tons)	Amount recycled (tons)	Final disposal (tons)	Recycling rate (%)	Final disposal rate (%)
Used gas appliances and scrap metal	3,444.8	3,444.8	0.0	100.0	0.0
Waste plastics	559.0	521.9	37.1	93.4	6.6
Polystyrene foam	15.1	15.1	0.0	100.0	0.0
Cardboard boxes	575.1	575.1	0.0	100.0	0.0
Debris	320.3	287.4	33.0	89.7	10.3
Concrete and tile scraps	253.5	119.1	134.4	47.0	53.0
Other	2,987.1	2,744.9	242.2	91.9	8.1

Total	8,139.7	7,693.2	446.5	94.5	5.1
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### ■ (3) Environmental Accounting

▶ Third-party Assured

Our environmental protection costs in fiscal 2017 totaled 5.7 billion yen, a decrease of 1.7 billion yen from the previous fiscal year.

Investments totaled 970 million yen, down 1.78 billion yen from the previous year due in part to our passing the peak investment phase for the Toyosu Smart Energy Center.

Expenses totaled 4.72 billion yen, an increase of 70 million yen from the previous fiscal year. The economic effect totaled 11.09 billion yen, a decrease of 1.39 billion yen from the previous fiscal year attributable mainly to decreased cost savings resulting from a reduction in excavated soil.

#### Environmental Accounting of Tokyo Gas on a Non-Consolidated Basis (FY2017 Results)

Period: April 2017 to March 2018

Boundary: Tokyo Gas Co., Ltd.

Standard of reference: Environmental Accounting Guidelines 2005 issued by Japan's Ministry of the Environment, and "Manual for the Introduction of Environmental Accounting in City Gas Business" prepared by the Japan Gas Association

#### Environmental Protection Costs

(Unit: million yen)

		Categories of Environmental Protection Costs	Investment		Expenses		Difference	
			FY 2016	FY 2017	FY 2016	FY 2017	Investment	Expenses
Company business	Pollution prevention	Capital investment, maintenance expenses, depreciation costs, personnel expenses, etc., for prevention of air pollution, water pollution, noise pollution, etc.	515	40	380	479	-475	99
	Global environmental protection	Capital investment, maintenance expenses, depreciation costs, personnel expenses, etc., for energy conservation, effective use of energy, protection of the ozone layer, etc.	1,653	381	674	608	-1,273	-66
	Resource recycling	Capital investment, maintenance expenses, depreciation costs, personnel expenses, etc., for reduction/recycling of excavated soil, waste control, etc.	8	5	454	369	-3	-86

	Environmental management	Costs for green purchasing, environmental education, development and operation of the Environmental Management System, environmental organizations, etc.	0	0	313	305	0	-8
	Other	Costs associated with greenification and soil rehabilitation in accordance with the Factory Location Act and ordinances	42	10	526	466	-32	-60
Customer sites	Environmental R&D	Costs for research and development of technologies to minimize environmental impact and high-efficiency appliances and systems	514	469	1,029	1,374	-46	345
	Recycling of used gas appliances	Costs of recovery and recycling of sold gas appliances, packaging, etc.	0	0	8	7	0	0
Social action programs		Voluntary greenification, landscape conservation, nature conservation, beautification, support of local environmental activities, environmental advertising, disclosure of environmental information	17	69	1,258	1,108	52	-150
<b>Total</b>			<b>2,750</b>	<b>973</b>	<b>4,642</b>	<b>4,716</b>	<b>-1,777</b>	<b>74</b>

**Note:** Since decimal places have been rounded off to the nearest whole number, the calculated total and amount of increase or decrease may not match.

"Expenses" include depreciation costs of 721 million yen in fiscal 2016 and 652 million yen in fiscal 2017. Since the costs for environmental R&D are extracted from those for environmental protection, they may differ from the figures stated in the financial report. Capital investment by Tokyo Gas Co., Ltd. (non-consolidated basis) was 165.4 billion yen, while the sales volume was 1,598.9 billion yen.

Main differences from the previous fiscal year:

- Pollution prevention  
The decrease in investment was due mainly to decreased investment by the production department.
- Global environmental protection  
The decrease in investment was due mainly in part to our passing the peak investment phase for the Toyosu Smart Energy Center.



## Level of Environmental Burden

	Level of Environmental Burden			
	Category		FY2016	FY2017
Company business	Pollution prevention	NOx (Plants) mg/m <sup>3</sup>	0.5	0.5
		NOx (district heating and cooling centers) g/GJ	7.1	6.6
		COD (Plants) mg/m <sup>3</sup>	0.0	0.0
	Global environmental protection	Energy usage intensity (plants) GJ/million m <sup>3</sup>	206	209
		Heat sales intensity (district heating and cooling centers) GJ/GJ	2.0	2.0
		Energy usage (business offices) TJ	938	902
	Resource recycling	Excavated soil (thousand tons)	573	846
		Industrial waste (tons)	4,449	5,950
		General waste (tons)	1,045	1,010
Customer sites	Environmental R&D	(Reference figures) CO <sub>2</sub> emissions reduction (million tons-CO <sub>2</sub> )	394	404
	Recycling of used gas appliances	(Reference figures) Recovery of used gas appliances and scrap metal by SRIMS (tons)	3,715	3,445

Note: The level of environmental burden is based on environmental performance data.

## Economic Effect

(Unit: million yen)

Economic effect	FY2016	FY2017	Difference
Cost reduction from the operation of energy-saving equipment	482	532	50
Cost reduction from a reduction in the amount of excavated soil	11,664	10,222	-1,442
Sale of valuables	277	309	32
Other (cost reduction from water conservation)	57	29	-28
<b>Total</b>	<b>12,480</b>	<b>11,092</b>	<b>-1,388</b>

Note: The total and difference figures may not be equal to actual calculation results because the numbers are rounded off to the nearest integer.

Main differences from the previous fiscal year:

- Economic effect  
The economic effect decreased from the previous fiscal year due mainly to lower cost savings resulting from reductions in excavated soil.

## Compliance with Local Government Ordinances on the Environment and Energy

Tokyo Gas prepares and publishes the following plans and reports in accordance with the ordinances of local authorities.

Tokyo	<b>Global Warming Action Plan (Large Establishments)</b> <ul style="list-style-type: none"> <li>FY2018 Hamamatsucho (Head Office) Building</li> <li>FY2018 Senju Techno Station</li> </ul>
	<ul style="list-style-type: none"> <li>Global Warming Action Report (Small/Medium-Sized Establishments)</li> </ul>
	<b>Environmental Energy Reporting Program</b> <ul style="list-style-type: none"> <li>Energy Status Reports</li> <li>Environmental Energy Plans</li> </ul>
Saitama Pref.	FY2018 Global Warming Action Plan Report
Kanagawa Pref.	FY2018 Report on Results of Action against Global Warming in Business
Yokohama City	FY2018 Report on State of Action against Global Warming

## ■ City Gas CO<sub>2</sub> Emission Factors

CO<sub>2</sub> is emitted when city gas is used. There are two ways of calculating CO<sub>2</sub> emissions: calculating them directly from the amount of city gas used (in m<sup>3</sup>), and calculating them from the calorific value (MJ).

### Calculation from usage (m<sup>3</sup>)

CO<sub>2</sub> emission factor for city gas in terms of usage of kg-CO<sub>2</sub> per m<sup>3</sup>N of gas

CO<sub>2</sub> emission factor

Service area (pref.)	Type of gas	CO <sub>2</sub> emission factor per 1 m <sup>3</sup> N (kg-CO <sub>2</sub> /m <sup>3</sup> N)
Tokyo, Kanagawa, Chiba, Ibaraki, Tochigi, Saitama	13A	<ul style="list-style-type: none"> <li>Emission factor for residential and other low-pressure gas users 2.21 kg-CO<sub>2</sub>/m<sup>3</sup>*<sup>1</sup></li> <li>Emission factor for factory, commercial building, and other medium-pressure gas users 2.19 kg-CO<sub>2</sub>/m<sup>3</sup>*<sup>2</sup></li> <li>Emission factor at standard temperature and pressure 2.29 kg-CO<sub>2</sub>/m<sup>3</sup>N*<sup>3</sup></li> </ul>
Gunma* <sup>4</sup>	13A	<ul style="list-style-type: none"> <li>Emission factor for residential and other low-pressure gas users 2.11 kg-CO<sub>2</sub>/m<sup>3</sup>*<sup>1</sup></li> <li>Factory, commercial building, and other medium-pressure gas users 2.09 kg-CO<sub>2</sub>/m<sup>3</sup>*<sup>2</sup></li> <li>Emission factor at standard temperature and pressure 2.18 kg-CO<sub>2</sub>/m<sup>3</sup>N*<sup>3</sup></li> </ul>
Limited areas in Yotsukaido City, Chiba	12A	<ul style="list-style-type: none"> <li>Emission factor for residential and other low-pressure gas users 1.90 g-CO<sub>2</sub>/m<sup>3</sup>*<sup>1</sup></li> <li>Factory, commercial building, and other medium-pressure gas users 1.88 kg-CO<sub>2</sub>/m<sup>3</sup>*<sup>2</sup></li> <li>Emission factor at standard temperature and pressure 1.96 kg-CO<sub>2</sub>/m<sup>3</sup>N*<sup>3</sup></li> </ul>

\*<sup>1</sup> At 15°C and gauge pressure of 2 kPa

\*<sup>2</sup> At 15°C and gauge pressure of 0.981 kPa

\*<sup>3</sup> 0°C and 101.325 kPa (1 atm)

\*<sup>4</sup> Same as the above service areas since October 14, 2016.

## Calculation from calorific value (MJ)

CO<sub>2</sub> emission factor for city gas in terms of kg-CO<sub>2</sub> per MJ of gas

Or CO<sub>2</sub> emission factor for city gas in terms of kg-C per MJ of gas

Unit calorific values and CO<sub>2</sub> emission factors

Service area (pref.)	Type of gas	Calorific value per 1 m <sup>3</sup> N MJ/m <sup>3</sup> N (kcal/m <sup>3</sup> N)	CO <sub>2</sub> emission factor per 1 MJ of calorific value (kg-CO <sub>2</sub> /MJ)	C emission factor per 1 MJ of calorific value (kg-C/MJ)
Tokyo, Kanagawa, Chiba, Ibaraki, Tochigi, Saitama	13A	45 (10,750)	0.0509	0.0139
Gunma*	13A	43.14 (10,306)	0.0506	0.0138
Limited areas in Yotsukaido City, Chiba	12A	38.52 (9,200)	0.0509	0.0139

\*Same as the above service areas since October 14, 2016.

For more details

- ▶ [Calculation of CO<sub>2</sub> emission factors from proportional composition of city gas \(PDF: 356KB\)](#) 

## Assessment of CO<sub>2</sub> Emissions Reduction due to Reductions in Purchased Electricity

### Amount of Thermal Power Generation Varies According to Electricity Usage

In Japan, the electricity supplied by electric utilities is generated primarily by thermal power, nuclear power and hydroelectric power plants. Nuclear power plants operate at full capacity except when undergoing a routine inspection, while the annual power output of hydroelectric power plants is determined by the amount of rainfall. The electricity supply is adjusted by operations at thermal power plants. Therefore, in terms of total annual output, it is most likely to be thermal power generation that is cut when electricity use is reduced through energy-saving measures.



For more details

- ▶ [GHG Protocol Guidelines](#) 

# Social Data

## Overview of Employees

Number of Full-time Employees by Gender <sup>\*1, 2, 3</sup>

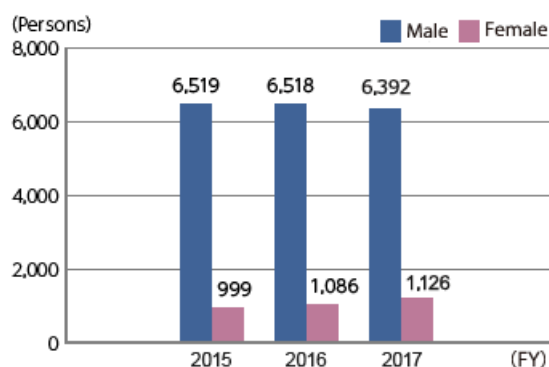
▶ Third-party Assured

		Unit	FY2015	FY2016	FY2017
Male	Non-consolidated	Persons (%)	6,519 (86.7)	6,518 (85.7)	6,392 (85.0)
	Consolidated		-	11,745 (84.2)	11,442 (83.4)
Female	Non-consolidated		999 (13.3)	1,086 (14.3)	1,126 (15.0)
	Consolidated		-	2,212 (15.8)	2,284 (16.6)
Total	Non-consolidated		7,518	7,604	7,518
	Consolidated		-	13,957	13,726

\*1 Data are as of the end of March of each fiscal year.

\*2 Non-consolidated data exclude personnel on loan to Tokyo Gas from other organizations and include personnel on loan from Tokyo Gas to other organizations (registered personnel).

\*3 Consolidated data exclude personnel on loan to Tokyo Gas and its subsidiaries from other organizations and include personnel on loan from Tokyo Gas and its subsidiaries to other organizations.



Note: Number of Tokyo Gas employees (registered personnel) as of the end of March of each fiscal year.

Breakdown of Employees by Age and Gender <sup>\*1, 2, 3</sup>

Age		Unit	Male	Female	Total
Under 30	Non-consolidated	Persons (%)	1,783 (27.9)	281 (25.0)	2,064 (27.5)
	Consolidated		2,622 (22.9)	552 (24.2)	3,174 (23.1)
From 30 to 39	Non-consolidated		848 (13.3)	149 (13.3)	997 (13.3)
	Consolidated		2,005 (17.5)	425 (18.6)	2,430 (17.7)
From 40 to 49	Non-consolidated		1,767 (27.6)	452 (40.1)	2,219 (29.5)
	Consolidated		3,552 (31.0)	848 (37.1)	4,400 (32.1)

From 50 to 59	Non-consolidated	1,925 (30.1)	241 (21.4)	2,166 (28.8)
	Consolidated	3,143 (27.5)	452 (19.8)	3,595 (26.2)
60 and over	Non-consolidated	69 (1.1)	3 (0.2)	72 (1.0)
	Consolidated	120 (1.0)	7 (0.3)	127 (0.9)
Total	Non-consolidated	6,392	1,126	7,518
	Consolidated	11,442	2,284	13,726

\*1 Data are as of the end of March 2018.

\*2 Non-consolidated data are for Tokyo Gas employees (registered personnel).

\*3 Consolidated data exclude personnel on loan to Tokyo Gas and its subsidiaries from other organizations and include personnel on loan from Tokyo Gas and its subsidiaries to other organizations.

#### Average Age by Gender \*1, 2, 3

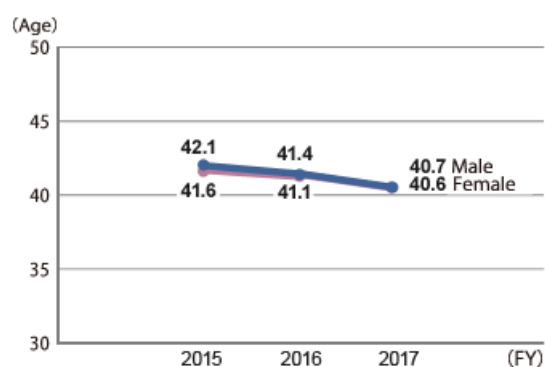
▶ Third-party Assured

		Unit	FY2015	FY2016	FY2017
Male	Non-consolidated	Age	42.1	41.4	40.7
	Consolidated		-	41.8	41.2
Female	Non-consolidated		41.6	41.1	40.6
	Consolidated		-	39.9	40.0

\*1 Data are as of the end of March of each fiscal year.

\*2 Non-consolidated data are for Tokyo Gas employees (registered personnel).

\*3 Consolidated data exclude personnel on loan to Tokyo Gas and its subsidiaries from other organizations and include personnel on loan from Tokyo Gas and its subsidiaries to other organizations.



\*Number of Tokyo Gas employees (registered personnel) are as of the end of March of each fiscal year.

#### Average Length of Employment by Gender \*1, 2, 3

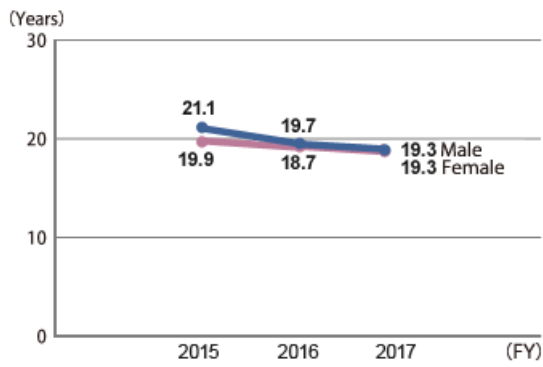
▶ Third-party Assured

		Unit	FY2015	FY2016	FY2017
Male	Non-consolidated	Age	21.1	19.7	19.3
	Consolidated		-	17.1	16.7
Female	Non-consolidated		19.9	18.7	19.3
	Consolidated		-	14.4	14.7

\*1 Data are as of the end of March of each fiscal year.

\*2 Non-consolidated data are for Tokyo Gas employees (registered personnel).

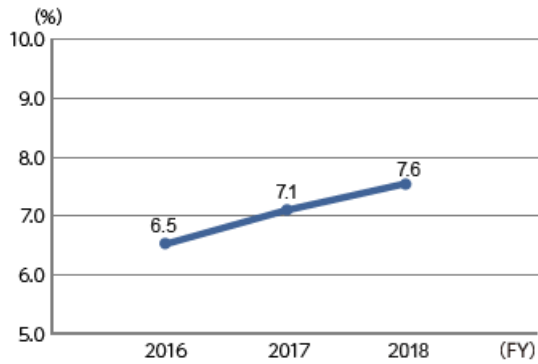
\*3 Consolidated data exclude personnel on loan to Tokyo Gas and its subsidiaries from other organizations and include personnel on loan from Tokyo Gas and its subsidiaries to other organizations.



\*Number of Tokyo Gas employees (registered personnel) are as of the end of March of each fiscal year.

#### Ratio of Women in Management\*1, 2

▶ Third-party Assured



\*1 Number of Tokyo Gas employees (registered personnel) are as of April 1 of each fiscal year.

\*2 Employees in supervisory positions, or employees of equivalent status.

#### Hiring of New Graduates \*1, 2

▶ Third-party Assured

		Unit	Breakdown of FY2016 Hires		Breakdown of FY2017 Hires		Breakdown of FY2018 Hires	
			Male	Female	Male	Female	Male	Female
Undergraduate and Graduate*3	Non-consolidated	Persons	156	51	167	53	126	60
	Consolidated		-	-	-	-	218	126
High School	Non-consolidated		74	10	27	4	18	2
	Consolidated		-	-	-	-	62	11
Total	Non-consolidated		230	61	194	57	144	62
	Consolidated		-	-	-	-	280	137

\*1 Data are as of April 1 of each fiscal year.

\*2 Non-consolidated data are for Tokyo Gas employees (registered personnel).

\*3 Including technical college graduates.

#### Hiring of Mid-Career Personnel\*1, 2

		Unit	May 2015 to April 2016	May 2016 to April 2017	May 2017 to April 2018
Male	Non-consolidated	Persons	5	12	12
	Consolidated		-	-	231
Female	Non-consolidated		0	2	1
	Consolidated		-	-	73

Total	Non-consolidated		5	14	13
	Consolidated		-	-	304

\*1 Data includes contract employees who became regular employees.

\*2 Non-consolidated data are for Tokyo Gas employees (registered personnel).

#### Hiring of People with Disabilities \*1, 2, 3

▶ Third-party Assured

	Unit	March 2016	March 2017	March 2018
Number of persons hired (percentage of total employees)	Persons (%)	137 (2.00)	153 (2.10)	150 (2.10)

\*1 Data are for regular and contract employees at Tokyo Gas.

\*2 Figures are as of the first day of the month shown for each fiscal year.

\*3 Figure has risen to 167 people, or 2.35% of the workforce, as of June 2018.

#### State of Reemployment after Mandatory Retirement

▶ Third-party Assured

	Unit	FY2015	FY2016	FY2017
Total number of retired employees*1	Persons	319	348	273
Number of reemployed*2	Tokyo Gas*3	241 (75.5)	251 (72.1)	203 (74.4)
	Subsidiaries	26 (8.2)	42 (12.1)	46 (16.8)
	Total	267 (83.7)	293	249 (91.2)

\*1 Number of employees who left the company at the mandatory retirement age of 60.

\*2 Number of people hired as "career employees" (contract employees rehired after reaching mandatory retirement age).

\*3 Data are for Tokyo Gas on a non-consolidated basis.

#### Major Programs and Number of Users \*1

▶ Third-party Assured

Programs	Outline	Item	Unit	FY2015		FY2016		FY2017	
				Male	Female	Male	Female	Male	Female
Parental leave	Until the end of April immediately following the child's 3rd birthday	Number of users	Persons	2	83	2	65	5	45
		Percentage returning to work*2	%	100	100	100	100	100	92
Shorter hours for parents of small children	Flexitime program available during pregnancy and until the child completes the 6th grade	Number of users	Persons	213		3	224	3	214
Nursing care leave	Up to 3 years to provide care for a relative within the second degree of kinship	Number of users	Persons	3		0	4	0	1
Nursing care work	Flexitime program available up to 3 years to provide care for a relative within the second degree of kinship	Number of users	Persons	0		0	3	0	2
Leave to accompany partner	For employees accompanying a spouse posted	Number of users	Persons	4		4		3	

	overseas					
Community service leave	Special paid leave for up to 5 days within 1 year	Cumulative number of users	Persons	88	48	58
Sabbatical system	Commemorative gift and paid leave for employees who reach the ages of 30, 35, 40 and 50	Number of users	Persons	594	514	673

\*1 Data are for Tokyo Gas on a non-consolidated basis.

\*2 Percentage of employees taking parental leaves each fiscal year who returned to work at the company

#### Number of Employees Leaving the Company <sup>\*1, 2</sup>

▶ Third-party Assured

		Unit	FY2015	FY2016	FY2017
Male (Percentage of employees leaving the company)	Non-consolidated	Persons (%) <sup>*3</sup>	36 (0.52)	58 (0.86)	29 (0.43)
	Consolidated		- (-)	- (-)	206 (-)
Female (Percentage of employees leaving the company)	Non-consolidated		9 (0.89)	9 (0.85)	9 (0.79)
	Consolidated		- (-)	- (-)	112 (-)
Total (Percentage of employees leaving the company)	Non-consolidated		45 (0.57)	67 (0.86)	38 (0.49)
	Consolidated		- (-)	- (-)	318 (-)

\*1 Non-consolidated data are for Tokyo Gas employees (registered personnel).

\*2 Consolidated data exclude personnel on loan to Tokyo Gas and its subsidiaries from other organizations and include personnel on loan from Tokyo Gas and its subsidiaries to other organizations.

\*3 The percentage of people leaving the company is calculated as follows: number of regular employees leaving for personal reasons (as of March 31 of each fiscal year)/number of regular employees (as of April 1 of each fiscal year).

#### Number of Temporary and Contract Employees <sup>\*1, 2</sup>

▶ Third-party Assured

		Unit	FY2016	FY2017	FY2018
Contract employees	Male	Persons (%)	1,608 (16.0)	1,728	1,670
	Female		1,067 (10.6)	1,153	1,131
	Temporary employees		541 (5.4)	575	539
Total	652 (6.5)		642	558	
Grand total (regular employees + sum of above)			2,260 (22.5)	2,370	2,228
			10,048	10,195	9,746

\*1 Data are as of April 1 of each fiscal year.

\*2 Percentage figures show the ratio to grand total (total number of employees of Tokyo Gas as of April 1 of each fiscal year).

#### Average Annual Salary<sup>\*</sup>

▶ Third-party Assured

	Unit	FY2015	FY2016	FY2017
Average annual salary	10,000 yen	649	640	636

\*Figures exclude the salary of personnel in management positions.

#### Average Overtime Hours

▶ Third-party Assured

	Unit	FY2015	FY2016	FY2017
Average monthly overtime hours	Hours/person	16.1	16.6	15.9

#### Days of Paid Leave Taken per Year

▶ Third-party Assured

	Unit	FY2015	FY2016	FY2017
Days of paid leave taken per year	Days/person	15.2	15.5	15.1



Number of Employees with Right to Collective Bargaining (Employees Excluding Management)\*

	Unit	FY2015	FY2016	FY2017
Number of employees	Persons	7,313	7,199	6,937

\*Data are as of April 1 of each fiscal year.

Average Annual Training Hours\*

	Unit	FY2015	FY2016	FY2017
Average annual training hours	Hours/person	15.8	18.2	13.5

\*Data on training provided by the Personnel Department (excludes training provided independently by other departments).

## ■ Implementation of Occupational Safety and Health Education Programs

Implementation of Occupational Safety and Health Education Programs

Details		Unit	FY2015	FY2016	FY2017
Level-specific training on safety and health and on safety planning	New employee training	Persons	298	291	252
	Safety and health training for new managers		165	306	243
Risk management seminar on safety and health (general manager level)			360	390	476
Statutory foreman training			172	156	151
Statutory training for safety administrators at the time of appointment			51	41	36
Hygiene supervisor training			85	75	74
Traffic safety and driving training (for new drivers, persons involved in accidents and others)			904	898	789
Safe driving with attendant instructors utilizing drive recorders			599	795	798
Seminars on promoting health			3,347	2,510	2,731

## ■ Overview of Accidents and Injuries

Change in Number of Work-related Injuries, Number of Traffic Accidents, Rate of Lost Work-time Injuries, and Severity Rate\*1

	Unit	FY2015	FY2016	FY2017
Work-related injuries*2	Cases	28	23	38
Traffic accidents		110	141	134
Rate of lost work-time injuries*3, 5	-	0.49	0.41	0.36
Severity rate*4, 5, 6		0.007	0.003	0.002

\*1 Data are for regular and semi-regular employees of Tokyo Gas.

\*2 Includes accidents not resulting in lost worktime.

\*3 Rate of people taking work leave per 1 million total actual working hours.

\*4 Number of workdays lost as a result of accidents/injuries per 1,000 total actual working hours.

\*5 Includes injuries due to traffic accidents caused by others.

\*6 Lost workdays are counted based on standards placed by the Japanese Ministry of Health, Labour and Welfare.

## Governance Data

### ■ Membership of the Board of Directors, Advisory Committee, Audit & Supervisory Board, and Corporate Executive Meeting

			Unit	As of the end of June 2016	As of the end of June 2017	As of the end of June 2018
Board of Directors	External	Directors	Persons	3	3 (1)	3 (1)
		Audit & Supervisory Board members		3 (1)	3 (1)	3 (1)
	Internal	Directors		8	8	5 (0)
		Audit & Supervisory Board members		2	2	2 (0)
Advisory Committee	Representatives appointed from among outside directors and outside Audit & Supervisory Board members			3	3	3
	Director, Chairman of the Board			1	1	1
	Representative Director, President and CEO			1	1	1
Audit & Supervisory Board	External	Audit & Supervisory Board members		3 (1)	3 (1)	3 (1)
	Internal	Audit & Supervisory Board members	2	2	2 (0)	
Corporate Executive Meeting	Representative Director* <sup>1</sup>		1	1	1	
	Executive Vice Presidents* <sup>2</sup>		2	2	2	
	Senior Managing Executive Officer		-	-	2	
	Managing Executive Officer		10	11	6	

Notes: Data shown are for Tokyo Gas Co., Ltd.

The numbers in parentheses indicate the numbers of female members

\*1, \*2 Post is held concurrently by three representative directors.

### ■ Training and Consultation on Human Rights and Compliance

Participants in Training on Human Rights

	Outline	Unit	FY2015	FY2016	FY2017
Level-specific training	Training upon entering the company, during the third year, and during qualification promotions (two levels)	Persons	1,534	1,531	1,527

Workplace workshops	Practical training on topics selected by each workplace		7,983	11,699	15,543
Training programs and follow-up for human rights promotion leaders	First-time leader training (1 year) and follow-up training		280	225	353
Planning-type training	Human rights study sessions		359	380	350
Loaned instructor-led training	Training led by instructors provided upon request by companies, local authorities and other organizations (including the Industrial Federation for Human Rights, Tokyo)		135	132	20

Note: Data shown are for the Tokyo Gas Group.

#### Participants in Training on Compliance

	Outline	Unit	FY2015	FY2016	FY2017
Level-specific training	Training upon entering the company, during the third year, and during qualification promotions (two levels)	Persons	1,534	1,531	1,527
Customized training	Training customized to meet the needs of individual companies and departments	Number of persons (number of sessions)	2,634 (73)	2,818 (84)	1,016 (24)
Workplace workshops	Training at the individual workplace level led by compliance promoters	Persons	23,745	25,136	28,726

Note: Data shown are for the Tokyo Gas Group.

#### Number of Cases Handled by Consultation Desks

Consultation Topics	Unit	FY2015	FY2016	FY2017
Interpersonal relations and employment matters	Cases	16	17	35
Laws and regulations		5	11	4
Internal regulations		21	7	7
Communication and other issues		66	71	58
Total		108	106	104

Note: Data shown are for the Tokyo Gas Group.

# Third-Party Independent Assurance Report

## Third-Party Independent Assurance Report

The social and environmental performance indicators (data on human resources and the environment)\* provided in the Tokyo Gas Group CSR Report on this website have been third-party assured by KPMG AZSA Sustainability Co., Ltd. (a member of the KPMG Japan group) to enhance their credibility.

We will work to further raise the standard of our CSR activities in the future, taking account of the issues pointed out in the course of the third-party assurance process and the reader feedback received via our website and other channels.

\*Third-party assured content is indicated by a box next to the subject title.

### Independent Assurance Report on the Tokyo Gas Group CSR Report


#### Social Data



#### Environmental Data



#### Links

- ▶ [Independent Assurance Report on the Tokyo Gas Group CSR Report \(Social Data\)](#)  
(PDF : 395KB) 
- ▶ [Independent Assurance Report on the Tokyo Gas Group CSR Report \(Environmental Data\)](#)  
(PDF : 1,863KB) 