

Tokyo Gas Group

CSR Report 2016 Data

Environmental Report

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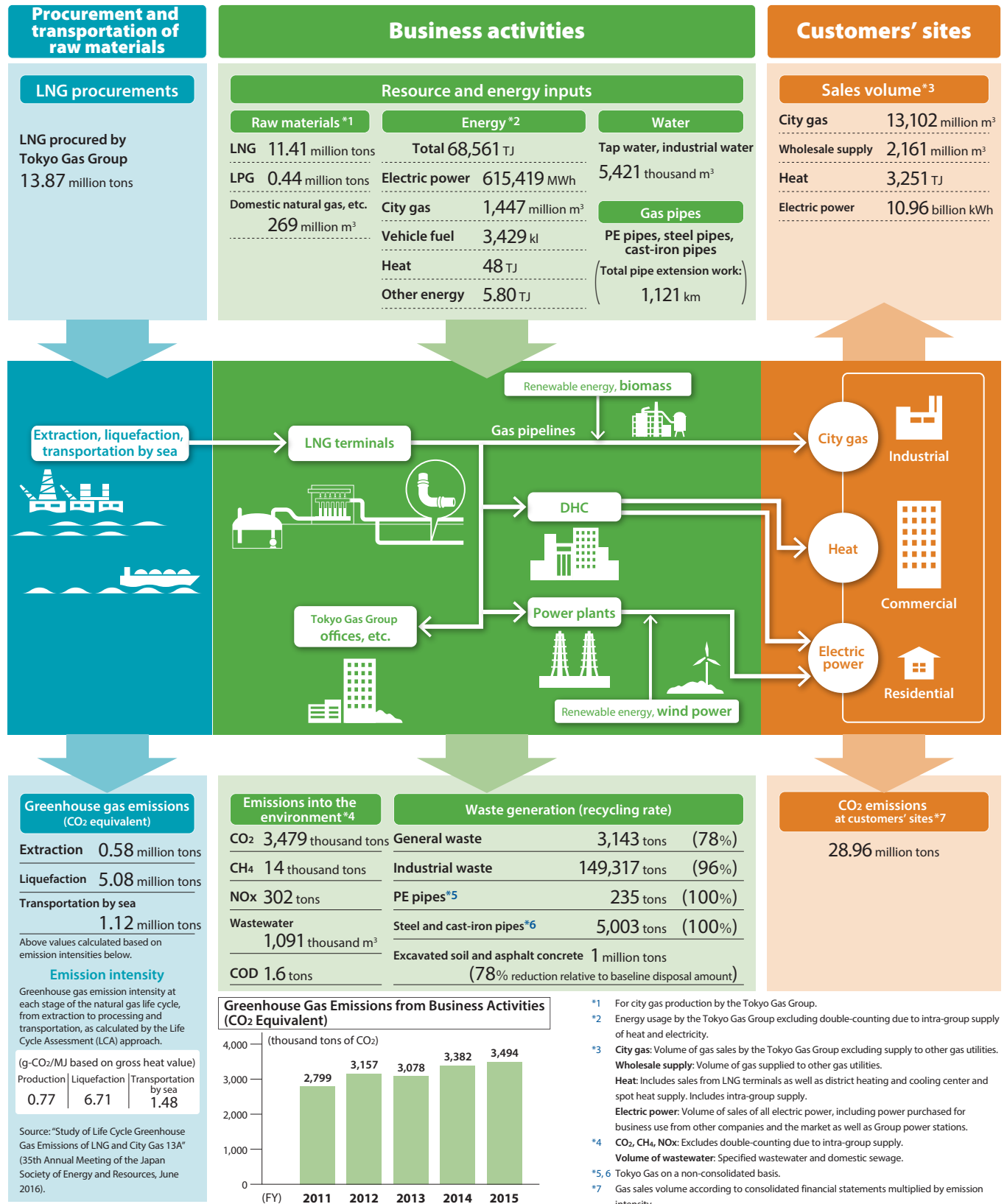
Third-party assured

* Content that has been third-party assured is indicated by the phrase "third-party assured".

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

Tokyo Gas Group Business Activities and Material Balance (FY2015)

Companies included in the data: Tokyo Gas and its 46 consolidated subsidiaries in Japan.



Procurement and transportation of raw materials

LNG procurements

LNG procured by Tokyo Gas Group
13.87 million tons

Business activities

Resource and energy inputs

Raw materials *1	Energy *2	Water
LNG 11.41 million tons	Total 68,561 TJ	Tap water, industrial water 5,421 thousand m³
LPG 0.44 million tons	Electric power 615,419 MWh	Gas pipes PE pipes, steel pipes, cast-iron pipes (Total pipe extension work: 1,121 km)
Domestic natural gas, etc. 269 million m³	City gas 1,447 million m³	
	Vehicle fuel 3,429 kl	
	Heat 48 TJ	
	Other energy 5.80 TJ	

Customers' sites

Sales volume *3

City gas	13,102 million m³
Wholesale supply	2,161 million m³
Heat	3,251 TJ
Electric power	10.96 billion kWh

Greenhouse gas emissions (CO2 equivalent)

Extraction	0.58 million tons
Liquefaction	5.08 million tons
Transportation by sea	1.12 million tons

Above values calculated based on emission intensities below.

Emission intensity

Greenhouse gas emission intensity at each stage of the natural gas life cycle, from extraction to processing and transportation, as calculated by the Life Cycle Assessment (LCA) approach.

(g-CO ₂ /MJ based on gross heat value)	Production	Liquefaction	Transportation by sea
	0.77	6.71	1.48

Source: "Study of Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A" (35th Annual Meeting of the Japan Society of Energy and Resources, June 2016).

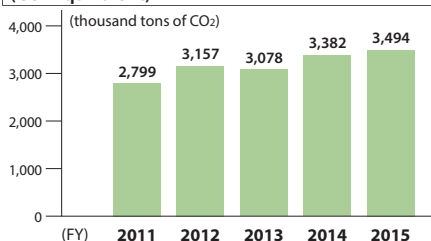
Emissions into the environment *4

CO ₂	3,479 thousand tons
CH ₄	14 thousand tons
NO _x	302 tons
Wastewater	1,091 thousand m³
COD	1.6 tons

Waste generation (recycling rate)

General waste	3,143 tons	(78%)
Industrial waste	149,317 tons	(96%)
PE pipes *5	235 tons	(100%)
Steel and cast-iron pipes *6	5,003 tons	(100%)
Excavated soil and asphalt concrete	1 million tons	(78% reduction relative to baseline disposal amount)

Greenhouse Gas Emissions from Business Activities (CO₂ Equivalent)



*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 by the Tokyo Gas Group excluding supply to other gas utilities.

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

Heat: Includes sales from LNG terminals as well as district heating and cooling center 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 CO₂, CH₄, NO_x: Excludes double-counting due to intra-group supply.

Volume of wastewater: Specified wastewater and domestic sewage.

*5, 6 Tokyo Gas on a non-consolidated basis.

*7 Gas sales volume according to consolidated financial statements multiplied by emission intensity.

Companies included in the data (Tokyo Gas and Consolidated Subsidiaries) ^(Note 1)

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Number of Customers ^(Note 2)	thousands	10,855	10,978	11,111	11,263	11,398
Number of Consolidated Subsidiaries	companies	53	51	51	49	46

(Note 1) Tokyo Gas Co., Ltd. and 46 consolidated subsidiaries

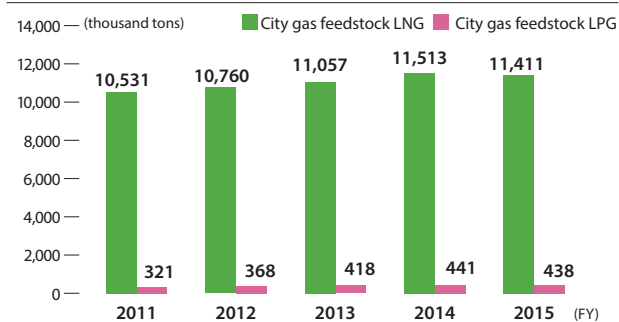
(Note 2) Number of customers of Tokyo Gas and its consolidated subsidiaries in Japan.

Usage of Energy & Water / Emissions into the Atmosphere & Water Systems

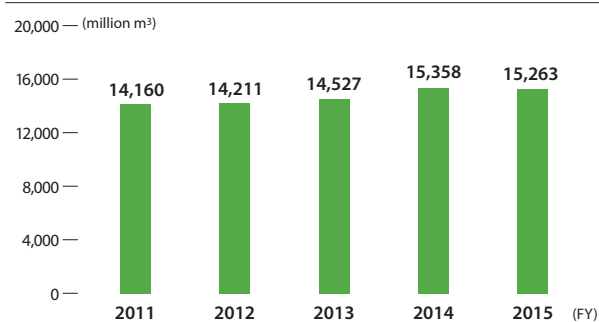
Feedstock and Production

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015	
City gas feedstock ^(Note 1)	Feedstock LNG	thousand tons	10,531	10,760	11,057	11,513	11,411
	Feedstock LPG	thousand tons	321	368	418	441	438
Production	City gas sales ^(Note 2)	million m ³	14,160	14,211	14,527	15,358	15,263
	Heat sales ^(Note 3)	TJ	3,282	3,282	3,353	3,287	3,251
	Power sales ^(Note 4)	billion kWh	8.27	9.98	9.71	10.61	10.96

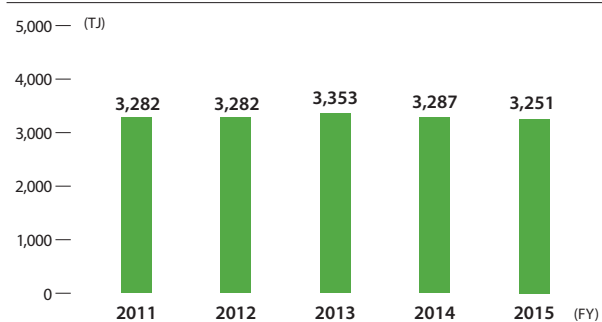
City Gas Feedstock (LNG/LPG)



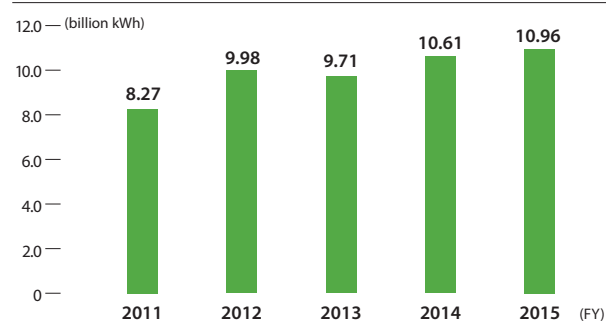
City Gas Sales



Heat Sales



Power Sales



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

Note 2: Volume of gas sales by Tokyo Gas Group including supply to other gas utilities.

Note 3: Includes sales volume from LNG terminals, in addition to district heating and cooling center 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	FY2011	FY2012	FY2013	FY2014	FY2015
Energy usage (Note 1)	TJ	56,245	62,565	60,457	66,399	68,561
LNG terminals	TJ	3,789	3,818	3,894	4,069	3,998
District heating and cooling centers	TJ	4,559	4,513	4,361	4,167	4,167
Power plants	TJ	45,289	51,745	49,733	55,639	57,871
Tokyo Gas business offices, etc.	TJ	1,494	1,469	1,453	1,417	1,387
Other group companies	TJ	1,681	1,536	1,541	1,490	1,460
(Tokyo Gas non-consolidated)	TJ	5,588	5,586	5,638	5,785	5,678
Electric power (Note 2)	MWh	543,186	542,724	545,218	593,097	615,419
LNG terminals	MWh	289,115	298,742	304,788	334,229	345,227
District heating and cooling centers	MWh	72,585	76,975	76,446	90,973	94,640
Power plants	MWh	16,055	13,263	10,732	8,774	11,407
Tokyo Gas business offices, etc.	MWh	55,405	55,022	54,499	52,350	52,372
Other group companies	MWh	131,163	118,785	118,673	115,677	112,890
(Tokyo Gas non-consolidated)	MWh	350,876	359,707	364,971	391,536	402,357
City gas	thousand m ³	1,177,796	1,324,428	1,275,444	1,402,022	1,447,012
LNG terminals	thousand m ³	22,496	20,978	21,378	18,769	14,600
District heating and cooling centers	thousand m ³	87,713	85,647	82,570	74,482	73,328
Power plants	thousand m ³	1,047,873	1,198,427	1,152,267	1,289,852	1,341,099
Tokyo Gas business offices, etc.	thousand m ³	17,699	17,149	16,900	16,726	15,969
Other group companies	thousand m ³	2,015	2,228	2,328	2,192	2,015
(Tokyo Gas non-consolidated)	thousand m ³	45,630	43,542	43,837	40,994	35,990
Heat (Note 2)	TJ	25	24	31	38	48
District heating and cooling centers	TJ	105	104	176	203	198
Tokyo Gas business offices, etc.	TJ	86	88	89	85	88
Other group companies	TJ	205	165	167	158	166
(Tokyo Gas non-consolidated)	TJ	102	102	99	94	96
Other fuels	TJ	4.89	4.62	5.40	5.23	5.80
LNG terminals	TJ	0.17	0.18	0.18	0.22	0.68
Tokyo Gas business offices, etc.	TJ	0.66	0.29	0.64	0.64	0.60
Other group companies	TJ	4.06	4.15	4.59	4.37	4.52
(Tokyo Gas non-consolidated)	TJ	0.83	0.81	0.85	0.86	1.28
Fuel for vehicles						
Gasoline	kL	3,449	3,634	3,571	3,282	3,219
Diesel oil	kL	206	243	228	219	208
City gas	thousand m ³	297	237	218	203	175
LPG	kL	273	274	295	280	220
(Tokyo Gas non-consolidated) Gasoline	kL	1,465	1,494	1,461	1,425	1,444
Diesel oil	kL	35	36	37	35	41
City gas	thousand m ³	257	201	185	172	142
LPG	kL	—	—	—	—	—

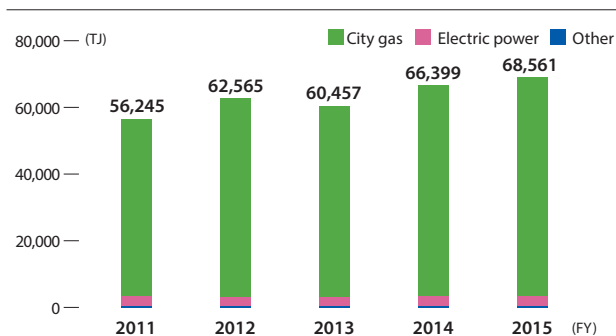
Note 1: Excludes double counting by intra-group supply of heat and electricity.

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

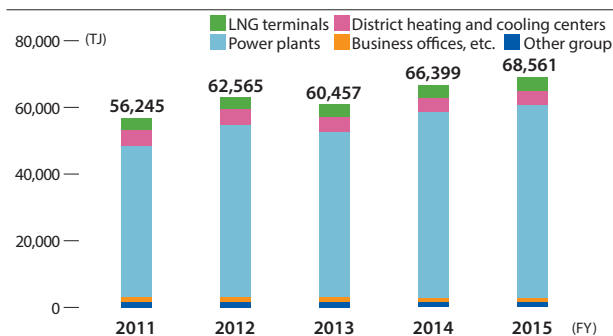
Energy Usage *1,2

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
LNG cryogenic energy	thousand tons	2,504	2,487	2,659	2,289	2,364
Cryogenic power generation	thousand tons	816	696	796	460	724
Portion sent to subsidiaries and affiliates	thousand tons	769	818	821	853	852
BOG treatment, etc.	thousand tons	918	973	1,042	976	788

Energy Usage (by Fuel Type)



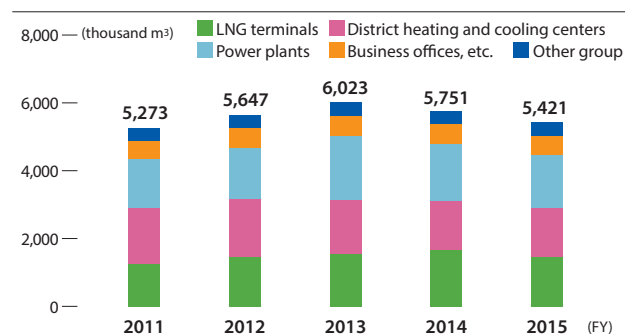
Energy Usage (by Business)



Water Usage

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Tap water and industrial water	thousand m ³	5,273	5,647	6,023	5,751	5,421
LNG terminals	thousand m ³	1,271	1,460	1,542	1,662	1,457
District heating and cooling centers	thousand m ³	1,628	1,711	1,597	1,439	1,459
Power plants	thousand m ³	1,437	1,504	1,890	1,703	1,569
Tokyo Gas business offices, etc.	thousand m ³	554	595	607	572	537
Other group companies	thousand m ³	383	376	387	375	399
(Tokyo Gas non-consolidated)	thousand m ³	1,880	2,111	2,192	2,276	2,036
Seawater	thousand m ³	765,369	791,092	795,227	784,406	773,963

Water Usage (Tap Water and Industrial Water)



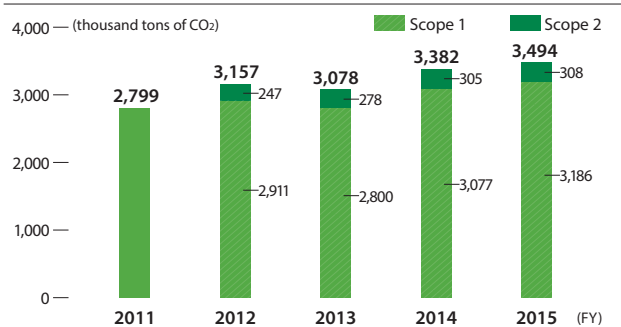
*1 For district heating and cooling centers that sell power using Combined Heat and Power (cogeneration), the amount of energy usage is divided between those for heat production and those for power generation using the allocation factor calculated based on the Act on Promotion of Global Warming Countermeasures. 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 "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).

Emissions into the Atmosphere

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Greenhouse gas	CO ₂ *1,2 (Note 1)	thousand tons of CO ₂	2,795	3,154	3,074	3,376	3,479
	LNG terminals (Note 1)	thousand tons of CO ₂	160	180	200	210	202
	District heating and cooling centers (Note 3)	thousand tons of CO ₂	231	225	223	213	211
	Power plants (Note 4)	thousand tons of CO ₂	2,297	2,627	2,522	2,823	2,938
	Tokyo Gas business offices, etc. (Note 5)	thousand tons of CO ₂	71	72	75	73	71
	Other group companies (Note 6)	thousand tons of CO ₂	75	76	81	77	75
	(Tokyo Gas non-consolidated) (Note 7)	thousand tons of CO ₂	246	268	290	298	288
CH ₄ (Note 8)	thousand tons of CO ₂ equivalent	3	3	4	6	14	
NOx		tons	290	264	272	272	302
	LNG terminals (Note 9)	tons	13	12	14	14	11
	District heating and cooling centers	tons	61	62	59	53	52
	Power plants	tons	200	175	182	187	223
	Tokyo Gas business offices, etc. (Note 9)	tons	16	16	17	18	15
	(Tokyo Gas non-consolidated)	tons	30	29	32	32	28

Greenhouse Gas Emissions (CO₂ equivalent) (Scope 1 + Scope 2)



- Note 1: Excludes double counting by intra-group supply. Totalling 3,490 thousand tons (based on adjusted emission factors) for the Tokyo Gas Group overall.
- Note 2: 200 (based on adjusted emission factors)
- Note 3: 210 (based on adjusted emission factors)
- Note 4: 2,938 (based on adjusted emission factors)
- Note 5: 71 (based on adjusted emission factors)
- Note 6: 74 (based on adjusted emission factors)
- Note 7: 286 (based on adjusted emission factors)
- Note 8: About 570 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	FY2012	FY2013	FY2014	FY2015
LNG procured		million tons	12.71	12.80	13.97	13.87
Greenhouse gas (CO ₂ equivalent) (Note)	Extraction	million tons of CO ₂	0.56	0.57	0.62	0.58
	Liquefaction	million tons of CO ₂	5.80	5.84	6.38	5.08
	Marine transport	million tons of CO ₂	1.37	1.38	1.50	1.12

- Notes: 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-CO₂/MJ, based on gross heating value
Source: "Future Forecast for Life Cycle Greenhouse Gas Emissions of LNG and City Gas Type 13A" (Energy and Resources, Volume 28, No. 2, March 2007).
- FY2015 emission intensity
Extraction: 0.77 / Liquefaction: 6.71 / Transportation by sea: 1.48 g-CO₂/MJ, based on gross heating value
Source: "Study of Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A" (35th Annual Meeting of the Japan Society of Energy and Resources, June 2016).

CO₂ Emissions and Emissions Reduction at Customers' Sites (Scope 3)

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Total amount of CO ₂ emissions		million tons of CO ₂	26.94	27.09	27.67	29.36	28.96
Amount of CO ₂ emissions reduction relative to FY2011		million tons of CO ₂	Base	0.87	1.52	3.29	3.43

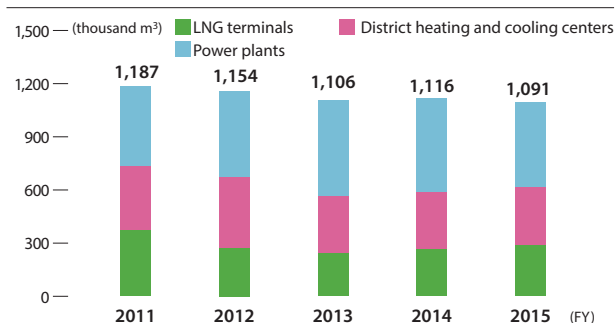
Energy Usage and CO₂ Emissions Associated with Cargo Transportation (for Tokyo Gas on a Non-Consolidated Basis) (Scope 3)

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Transportation amount	million tons-km	82.91	81.32	93.12	94.59	98.42
Energy usage (crude oil equivalent)	kL	3,172	3,109	3,258	3,275	3,354
Energy usage intensity	kL/million tons-km	38.3	38.2	35.0	34.6	34.1
CO ₂ emissions	tons-CO ₂	8,368	8,181	8,576	8,615	8,810

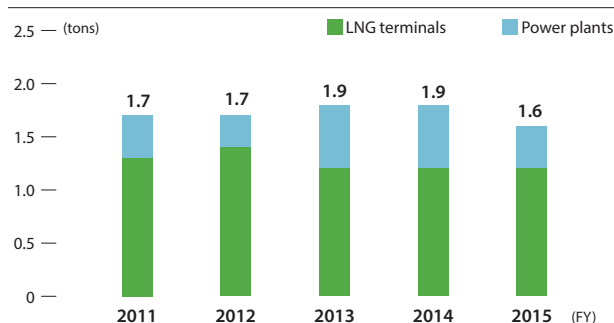
Emissions into Water Systems

Category	Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Wastewater	thousand m ³	1,187	1,154	1,106	1,116	1,091
LNG terminals (Note)	thousand m ³	372	274	242	265	287
District heating and cooling centers	thousand m ³	361	398	321	325	330
Power plants	thousand m ³	454	483	544	525	474
(Tokyo Gas non-consolidated)	thousand m ³	381	284	249	273	296
COD (Chemical Oxygen Demand)	tons	1.7	1.7	1.9	1.9	1.6
LNG terminals	tons	1.3	1.4	1.2	1.2	1.2
Power plants	tons	0.3	0.3	0.6	0.6	0.5
(Tokyo Gas non-consolidated)	tons	1.3	1.4	1.2	1.2	1.2

Wastewater



COD (Chemical Oxygen Demand)



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

*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 "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 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.

Conversion Factor, etc.

CO₂ Emission Factor

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015
City gas (Tokyo Gas 13A) (Note 1)		kg-CO ₂ /m ³	2.21				
Purchased electricity (average of all power sources) (Note 2)		kg-CO ₂ /kWh	0.384 etc.	0.464 etc.	0.525 etc.	0.530 etc.	0.505 etc.
Heat (Note 3)	Steam (excluding industrial use), hot water, cold water	kg-CO ₂ /MJ	0.057				
	Industrial steam	kg-CO ₂ /MJ	0.060				
Other fuels (Note 3)	Heavy oil A	kg-CO ₂ /L	2.71				
	Diesel	kg-CO ₂ /L	2.58				
	Kerosene	kg-CO ₂ /L	2.49				
	Gasoline	kg-CO ₂ /L	2.32				
	LPG	kg-CO ₂ /kg	3.00				

Note 1: Calculated based on the typical composition of city gas (type 13A) supplied by 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	FY2011	FY2012	FY2013	FY2014	FY2015
City gas (Tokyo Gas 13A) (Note 1)		MJ/m ³ N	45.00				
Purchased electricity (Note 2) *1	Daytime electricity	MJ/kWh	9.97				
	Nighttime electricity	MJ/kWh	9.28				
	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 oil	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 Tokyo Gas (0°C, 1 atmospheric pressure)

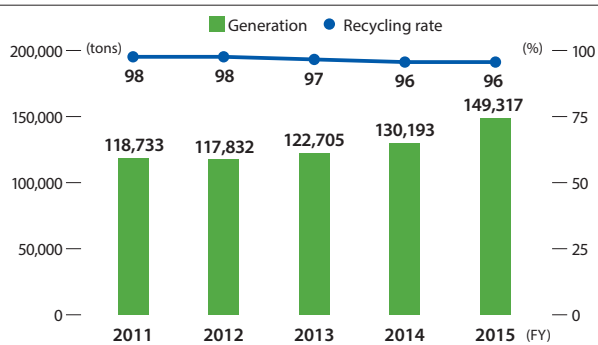
Note 2: Act Concerning the Rational Use of Energy (the Energy Efficiency Act)

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

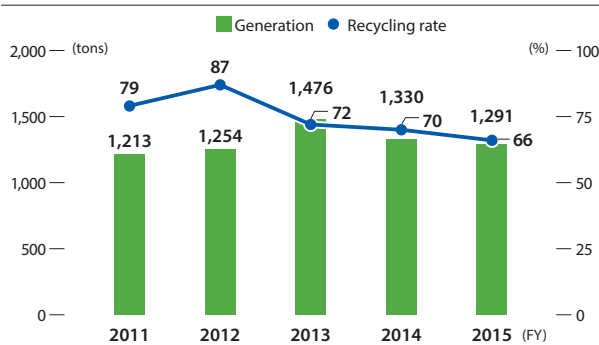
Industrial Waste *1

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015
Industrial waste *2	Generation	tons	118,733	117,832	122,705	130,193	149,317
	Amount recycled (recycling rate)	tons (%)	116,478 (98)	114,994 (98)	119,039 (97)	124,975 (96)	142,629 (96)
	Final disposal (final disposal rate)	tons (%)	1,167 (1)	1,956 (2)	2,450 (2)	3,714 (3)	2,433 (2)
Production plants	Generation	tons	1,213	1,254	1,476	1,330	1,291
	Amount recycled (recycling rate)	tons (%)	958 (79)	1,089 (87)	1,062 (72)	925 (70)	851 (66)
	Final disposal (final disposal rate)	tons (%)	1 (0)	0 (0)	2 (0)	16 (1)	18 (1)
Construction work *2	Generation	tons	114,060	113,451	118,111	125,816	144,594
	Amount recycled (recycling rate)	tons (%)	112,543 (99)	111,160 (98)	115,303 (98)	121,455 (97)	138,851 (96)
	Final disposal (final disposal rate)	tons (%)	1,016 (1)	1,820 (2)	2,258 (2)	3,472 (3)	2,221 (2)
Business offices, etc.	Generation	tons	3,460	3,128	3,118	3,046	3,431
	Amount recycled (recycling rate)	tons (%)	2,976 (86)	2,746 (88)	2,674 (86)	2,595 (85)	2,926 (85)
	Final disposal (final disposal rate)	tons (%)	149 (4)	136 (4)	190 (6)	226 (7)	194 (6)
Tokyo Gas non-consolidated	Generation	tons	4,413	3,903	4,137	4,430	4,462
	Amount recycled (recycling rate)	tons (%)	4,074 (92)	3,531 (90)	3,647 (88)	3,719 (84)	3,629 (81)
	Final disposal (final disposal rate)	tons (%)	102 (2)	117 (3)	194 (5)	360 (8)	431 (10)

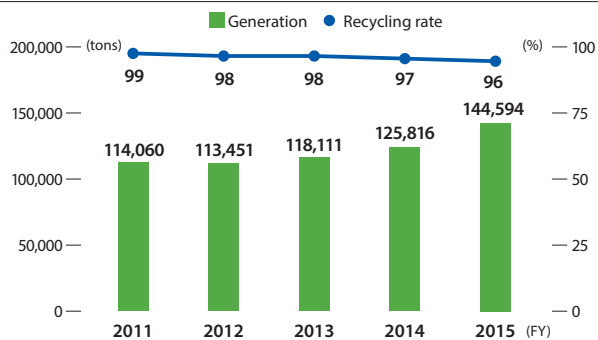
Industrial Waste (All)



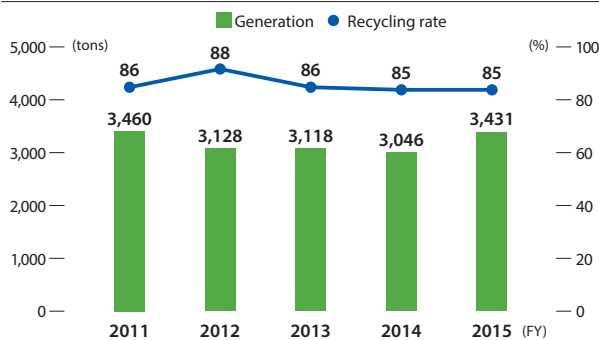
Industrial Waste (Production Plants)



Industrial Waste (Construction Work)



Industrial Waste (Business Offices, etc.)



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

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

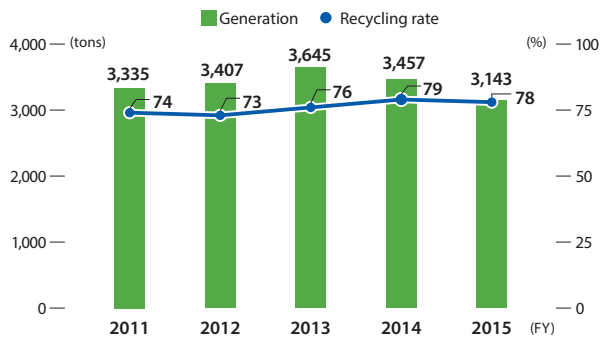
Results by Major Sites (FY2015)

Site	Category	Generation	Amount recycled (Recycling rate)		Final disposal (Final disposal rate)	
		tons	tons	%	tons	%
Major LNG terminals (Negishi, Sodegaura, Ohgishima)	Total	146.5	27.3	(18.7)	0.3	(0.2)
	Sludge	117.3	2.2	(1.9)	0.2	(0.2)
	Scrap metal	11.1	11.1	(100.0)	0.0	(0.0)
	Waste oil	4.0	3.8	(95.9)	0.0	(0.1)
	Waste plastics	8.6	8.1	(93.8)	0.0	(0.5)
	Specially-controlled industrial waste	4.0	2.1	(53.3)	0.0	(0.0)
	Other	1.5	0.0	(1.3)	0.0	(0.9)
Gastar Co., Ltd. (gas appliance manufacturer)	Total	651.2	651.2	(100.0)	0.0	(0.0)
	Scrap metal	563.1	563.1	(100.0)	0.0	(0.0)
	Sludge	28.3	28.3	(100.0)	0.0	(0.0)
	Waste plastics	29.8	29.8	(100.0)	0.0	(0.0)
	Waste oil	29.9	29.9	(100.0)	0.0	(0.0)
District Heating and Cooling Centers	Total	69.9	67.2	(96.1)	0.1	(0.2)
	Sludge	8.0	5.7	(72.0)	0.0	(0.1)
	Scrap metal	40.3	40.3	(100.0)	0.0	(0.0)
	Waste oil	4.1	3.7	(90.4)	0.1	(2.3)
	Waste plastics	10.3	10.3	(99.7)	0.0	(0.3)
	Other	7.2	7.2	(99.5)	0.0	(0.0)
Waste from Construction Work	Total	144,594	138,851	(96.0)	2,221	(1.5)
	Debris	127,437	126,777	(99.5)	660	(0.5)
	Sludge	9,399	5,717	(60.8)	588	(6.3)
	Scrap metal	2,008	1,956	(97.4)	42	(2.1)
	Wood chips	1,626	1,510	(92.9)	101	(6.2)
	Waste plastics	1,544	1,102	(71.4)	279	(18.1)
	Glass, concrete, ceramic waste	1,269	842	(66.3)	423	(33.3)
	Paper waste	274	232	(84.9)	13	(4.6)
	Other	1,037	715	(69.0)	115	(11.1)
Business Offices, etc.	Total	3,431	2,926	(85.3)	194	(5.6)
	Scrap metal	895	880	(98.3)	12	(1.3)
	Waste plastics	852	772	(90.6)	72	(8.4)
	Waste oil	266	263	(98.8)	1	(0.4)
	Sludge	417	119	(28.7)	49	(11.8)
	Glass, concrete, ceramic waste	203	174	(85.9)	29	(14.0)
	Debris	288	284	(98.5)	4	(1.5)
	Other	510	433	(84.9)	27	(5.3)

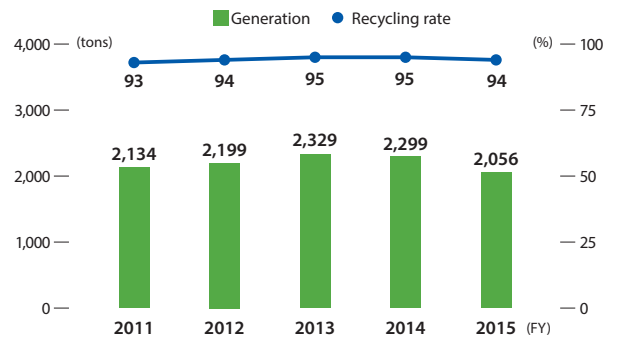
General Waste

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015
General Waste	Generation	tons	3,335	3,407	3,645	3,457	3,143
	Amount recycled (recycling rate)	tons (%)	2,473 (74)	2,489 (73)	2,755 (76)	2,725 (79)	2,441 (78)
Paper waste	Generation	tons	2,134	2,199	2,329	2,299	2,056
	Amount recycled (recycling rate)	tons (%)	1,974 (93)	2,060 (94)	2,220 (95)	2,194 (95)	1,934 (94)
Tokyo Gas non-consolidated	Generation	tons	1,147	1,213	1,154	1,132	1,016
	Amount recycled (recycling rate)	tons (%)	943 (82)	1,020 (84)	977 (85)	967 (85)	870 (86)
Paper waste	Generation	tons	856	920	863	882	783
	Amount recycled (recycling rate)	tons (%)	801 (94)	876 (95)	821 (95)	830 (94)	738 (94)

General Waste (All)



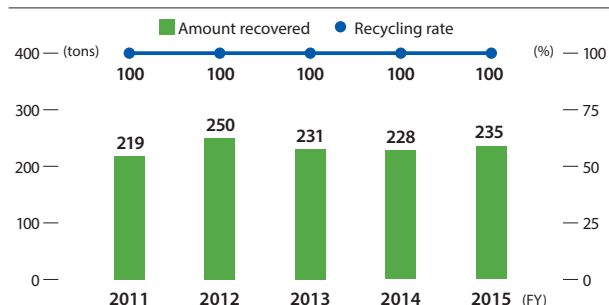
General Waste (Paper)



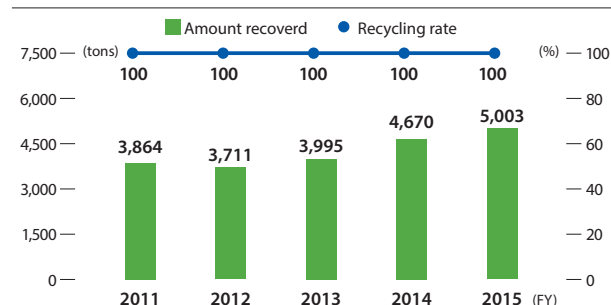
By-Products from Gas Pipe Construction Work

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015		
Gas pipe (Note 1)	PE pipe	Amount recovered	tons	219	250	231	228	235	
		Amount recycled (recycling rate)	tons (%)	219 (100)	250 (100)	231 (100)	228 (100)	235 (100)	
	Steel and cast-iron pipe	Amount recovered and recycled (recycling rate)	tons (%)	3,864 (100)	3,711 (100)	3,995 (100)	4,670 (100)	5,003 (100)	
Excavated soil (Note 2)	Pipe extension work		km	1,027	1,183	1,160	1,170	1,121	
	Estimated excavated amount		million tons	3.33	3.59	3.57	3.71	4.49	
	Actual reduced amount	Total reduction amount (rate of reduction amount) (Note 3)		million tons (%)	2.83 (85)	2.98 (83)	3.02 (84)	3.09 (83)	3.49 (78)
		Reduction (by shallower-laying of pipes in narrow trenches and non-open-cut method)		million tons	1.36	1.40	1.43	1.42	1.32
		Reuse (generated soil)		million tons	0.43	0.47	0.49	0.52	0.84
		Recycle (improved soil, regeneration treatment)		million tons	1.04	1.10	1.10	1.15	1.33
	Residual soil (Rate of residual soil) (Note 3,4)		million tons (%)	0.50 (15)	0.61 (17)	0.55 (16)	0.62 (17)	1.00 (22)	
Tokyo Gas non-consolidated (Note 2)	Pipe extension work		km	931	1,064	1,064	1,065	1,020	
	Estimated excavated amount		million tons	3.11	3.32	3.33	3.47	4.25	
	Actual reduced amount	Total reduction amount (rate of reduction amount) (Note 3)		million tons (%)	2.69 (87)	2.83 (85)	2.89 (87)	2.94 (85)	3.35 (79)
		Reduction (by shallower-laying of pipes in narrow trenches and non-open-cut method)		million tons	1.28	1.34	1.36	1.35	1.25
		Reuse (generated soil)		million tons	0.39	0.41	0.45	0.47	0.79
		Recycle (improved soil, regeneration treatment)		million tons	1.02	1.08	1.07	1.12	1.31
	Residual soil (rate of residual soil) (Note 3,4)		million tons (%)	0.41 (13)	0.49 (15)	0.45 (13)	0.52 (15)	0.90 (21)	

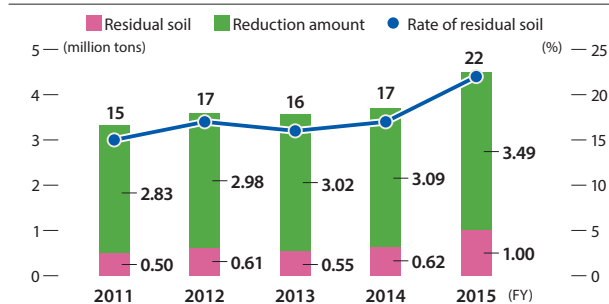
PE Pipe



Steel and Cast-Iron Pipe



Residual Soil and Reduction Amount



Note 1: Tokyo Gas non-consolidated

Note 2: Data for excavated soil and asphalt concrete.

Note 3: Comparison to estimated excavated amount

Note 4: Actual amount

Recovery from Our Customers

Waste, etc.

Category		Unit	FY2011	FY2012	FY2013	FY2014	FY2015	
Subject to Home Appliance Recycling Law	Home air-conditioning units	Units recovered	units	21,594	20,045	22,009	15,901	14,863
		Units sent to processing plants	units	21,611	20,041	21,892	16,061	14,862
		Units disposed of by remerchandising, etc.	units	22,471	19,764	19,962	17,882	14,824
		Weight disposed of by remerchandising, etc.	tons	959	829	836	748	615
		Remerchandised weight (remerchandising rate)	tons (%)	827 (86)	732 (88)	740 (88)	670 (89)	559 (90)
	Fluorocarbons	Recovered weight	kg	13,180	12,718	13,036	10,837	9,646
	Clothes dryers	Units recovered	units	5,591	5,604	6,873	6,193	6,710
		Units sent to processing plants	units	5,579	5,607	6,820	6,259	6,707
		Units disposed of by remerchandising, etc.	units	5,569	5,390	6,671	6,573	6,649
		Weight disposed of by remerchandising, etc.	tons	198	193	247	249	258
		Remerchandised weight (remerchandising rate)	tons (%)	164 (82)	158 (81)	209 (84)	211 (85)	228 (88)
	SRIMS recovery amount ^(Note)	Total	tons	7,535	8,227	8,687	8,991	8,936
		Used gas appliances, etc.	tons	4,136	4,423	4,345	3,933	3,861
		Other	tons	3,399	3,804	4,343	5,057	5,075

Note: Excludes waste from specified kinds of home appliances.

SRIMS Recovery Results (FY2015)

Category	Recovery	Amount recycled (Recycling rate)		Final disposal (Final disposal rate)		
	tons	tons	(%)	tons	(%)	
Recovery results	Total	8,935.9	8,366.8	(93.6)	569.1	(6.4)
	Used gas appliances and scrap metal	3,860.9	3,860.9	(100.0)	0.0	(0.0)
	Waste plastics	585.2	565.0	(96.6)	20.2	(3.4)
	Polystyrene foam	12.5	12.5	(100.0)	0.0	(0.0)
	Cardboard boxes	696.6	696.6	(100.0)	0.0	(0.0)
	Debris	763.2	655.9	(85.9)	107.3	(14.1)
	Concrete and tile scraps	248.0	179.7	(72.5)	68.3	(27.5)
	Other	2,782.1	2,408.7	(86.6)	373.4	(13.4)

Our environmental protection costs in fiscal 2015 totaled 5.78 billion yen, a decrease of 0.2 billion yen from the previous fiscal year. Investments totaled 0.87 billion yen, down 0.34 billion yen from the previous year due mainly to decreased investment by the production division. Expenses totaled 4.92 billion yen, an increase of 0.13 billion yen from the previous fiscal year. The economic effect totaled 13.12 billion yen, an increase of 1.39 billion yen from the previous fiscal year attributable mainly to increased cost savings resulting from a reduction in excavated soil and the use of energy-saving equipment.

Environmental Accounting of Tokyo Gas Co., Ltd. on a Non-Consolidated Basis (FY2015 Results)

Period: April 2015 to March 2016

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)

Category	Major items (examples)	Investment		Expenses		Difference	
		FY2014	FY2015	FY2014	FY2015	Investment	Expenses
Company business	Pollution prevention	281	166	305	308	-115	3
	Global environmental protection	409	197	784	515	-212	-269
	Resource recycling	11	11	395	787	0	392
	Environmental management	0	6	317	322	6	5
	Other	52	21	506	511	-31	5
Customer sites	Environmental R&D	422	422	1,170	1,158	0	-12
	Recycling of used gas appliances	0	0	8	9	0	1
Social action programs	Voluntary greenification, landscape conservation, nature conservation, beautification, support of local environmental activities, environmental advertising, disclosure of environmental information	27	44	1,298	1,305	17	7
Total		1,203	866	4,783	4,916	-337	133

Notes: • 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" includes depreciation costs of 593 million yen in fiscal 2014 and 545 million yen in fiscal 2015.
 • 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 182.8 billion yen, while the sales volume was 1,677,345 million 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 to a decrease in capital investment by the production department.
The decrease in expenses was due mainly to the decreased cost of repairs by the production department.
- Resource recycling: The increase in expenses was due mainly to the increased cost of waste disposal and transport.

Level of Environmental Burden

Category		Unit	FY2014	FY2015	
Company business	Pollution prevention	NOx (plants)	mg/m ³	0.5	0.4
		NOx (district heating and cooling centers)	g/GJ	6.6	6.6
		COD (plants)	mg/m ³	0.0	0.0
	Global environmental protection	Energy usage intensity (plants)	GJ/million m ³	203	201
		Heat sales intensity (district heating and cooling centers)	GJ/GJ	2.0	2.0
		Energy usage (business offices)	TJ	896	887
	Resource recycling	Excavated soil	thousand tons	551	902
		Industrial waste	tons	4,430	4,462
		General Waste	tons	1,132	1,016
Customer sites	Environmental R&D	(Reference figures) CO ₂ emissions reduction	million tons-CO ₂	3.29	3.40
	Recycling of used gas appliances	(Reference figures) Recovery of used gas appliances and scrap metal by SRIMS	tons	3,933	3,861

Notes: • Level of environmental burden is based on environmental performance data.
• Figures are rounded to the nearest whole number.

Economic Effect

Category	Unit	FY2014	FY2015	Difference
Cost reduction from the operation of energy-saving equipment	million yen	428	528	100
Cost reduction from a reduction in the amount of excavated soil	million yen	10,854	12,161	1,307
Sale of valuables	million yen	448	374	-74
Other (cost reduction from water conservation)	million yen	9	61	52
Total	million yen	11,739	13,124	1,385

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>

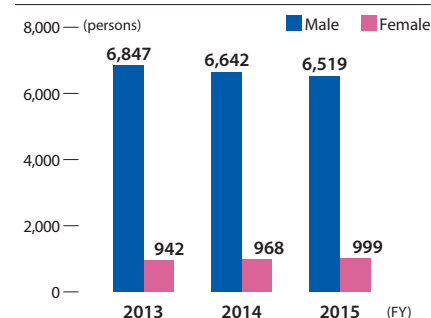
- Economic effect: The economic effect increased from the previous fiscal year due mainly to higher cost savings resulting from reductions in excavated soil and use of energy-saving equipment.

Workforce

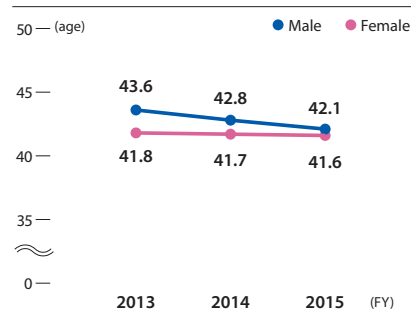
Number of Full-time Employees / Average Age / Average Length of Employment

Category	Breakdown	Unit	FY2013	FY2014	FY2015
Number of full-time employees *1		Persons	7,789	7,610	7,518
	Male (percentage)	Persons (%)	6,847 (87.9)	6,642 (87.3)	6,519 (86.7)
	Female (percentage)	Persons (%)	942 (12.1)	968 (12.7)	999 (13.3)
Average age	Male	Age	43.6	42.8	42.1
	Female	Age	41.8	41.7	41.6
Average length of employment	Male	Years	22.8	21.9	21.1
	Female	Years	20.1	20.0	19.9

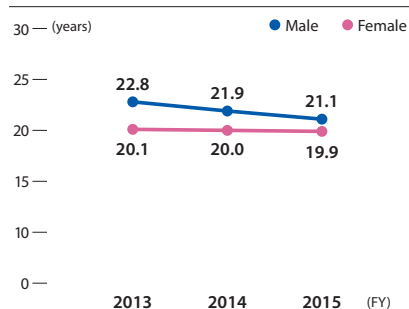
Number of Full-time Employees by Gender



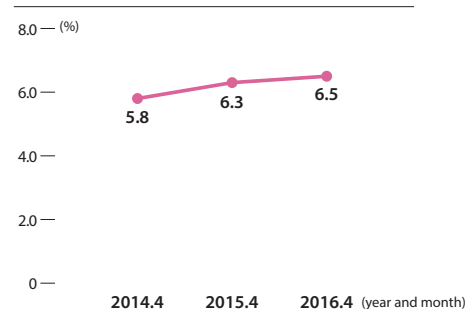
Average Age by Gender



Average Length of Employment by Gender



Ratio of Women in Management *3



*1 The above figures include employees loaned by Tokyo Gas to other organizations but exclude those loaned to Tokyo Gas from other organizations.

*2 Employees in positions with subordinates or employees of equivalent status.

Fresh graduate hires*1

Category	Breakdown	Unit	FY2014	FY2015	FY2016
Graduate school/university *2	Male	Persons	136	144	156
	Female	Persons	40	46	51
High school	Male	Persons	122	106	74
	Female	Persons	8	2	10
Total	Male	Persons	258	250	230
	Female	Persons	48	48	61

*1 Hiring situation as of April 1 in each fiscal year.

*2 Including technical college graduates.

Number of Contract and Temporary Employees *1 / Percentages*2

Category	Breakdown	Unit	FY2014	FY2015	FY2016
Number of contract employees		Persons (%)	1,422 (14.0)	1,515 (15.1)	1,608 (16.0)
	Male	Persons (%)	873 (8.6)	966 (9.6)	1,067 (10.6)
	Female	Persons (%)	549 (5.4)	549 (5.5)	541 (5.4)
Number of temporary employees		Persons (%)	665 (6.5)	637 (6.3)	652 (6.5)
Total number of contract and temporary employees		Persons (%)	2,087 (20.5)	2,152 (21.4)	2,260 (22.5)
Grand total (Total of full-time employees + above)		Persons	10,162	10,044	10,048

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

*2 Percentages are of the overall total (total number of employees of Tokyo Gas as of April 1 of each fiscal year).

Number of People with Disabilities Employed ^(*1,2) ▶ Third-party assured

Category	Unit	April 2014	March 2015	March 2016
Employed (percentage of all employees)	Persons (%)	147(2.06)	138(2.02)	137(2.00)

*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.

State of Reemployment after Mandatory Retirement ▶ Third-party assured

Category	Breakdown	Unit	FY2013	FY2014	FY2015
Number reemployed (rate of reemployment)		Persons (%)	276 (81.2)	316 (81.7)	267 (83.7)
	Tokyo Gas *	Persons (%)	239 (70.3)	282 (72.9)	241 (75.5)
	Subsidiaries and affiliates, etc.	Persons (%)	37 (10.9)	34 (8.8)	26 (8.2)
Total number mandatorily retired		Persons	340	387	319

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

Number of Employees Leaving the Company (Percentage of People Leaving the Company) * ▶ Third-party assured

Breakdown	Unit	FY2013	FY2014	FY2015
Male	Persons (%)	47 (0.65)	44 (0.62)	36 (0.52)
Female	Persons (%)	14 (1.46)	9 (0.92)	9 (0.89)
Total	Persons (%)	61 (0.74)	53 (0.66)	45 (0.57)

*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)

Main Systems and Numbers of Users ▶ Third-party assured

System	Details	Breakdown	Unit	FY2013	FY2014	FY2015
Parental leave (rate of return to work) *1	Until end of April immediately following child's 3rd birthday	Male	Persons (%)	1 (100)	0 (-)	2 (100)
		Female	Persons (%)	79 (100)	80 (99)	83 (100)
Shorter hours for parents of small children	During pregnancy and until child completes 6th grade Flex-time system for childcare is available	Male	Persons	226	221	1
		Female	Persons			212
Nursing care leave	Up to 3 years for one relative within the second degree of kinship requiring nursing care.	Male	Persons	1	2	1
		Female	Persons			2
Nursing care work	Up to 2 years for one relative within the second degree of kinship requiring nursing care. Flex-time system for nursing care is available.	Male	Persons	1	0	0
		Female	Persons			0
Community service leave *2	Special leave (paid leave) for up to 5 days within 1 year	Male	Persons	77	42	82
		Female	Persons			6
Sabbatical system	For employees who reach the age of 30, 35, 40, and 50 Provided with commemorative gifts and special leave (paid leave)	Male	Persons	631	668	516
		Female	Persons			78
Early retirement scheme *3			Persons	21	13	19

*1 Percentage of employees taking parental leave each fiscal year who returned to work at the company.

*2 Total number of users (including repeat users)

*3 Scheme introduced as part of the "second life" support program.

Working Condition ▶ Third-party assured

Category	Unit	2013	2014	2015
Average annual salary *	¥10,000	681	664	649
Average overtime hours	Hours/person • month	15.5	15.3	16.1
Days of paid leave taken per year	Days/person	15.2	15.1	15.2

* Calculated excluding personnel in management positions.

Number with Right to Collective Bargaining (Employees excluding Management) * ▶ Third-party assured

Category	Unit	2014	2015	2016
Number of employees	Persons	7,652	7,505	7,313

*Number as of April 1 of each fiscal year.

Annual Average Training Hours *

Category	Unit	2013	2014	2015
Annual average training hours	Hours/person	14.8	15.4	15.8

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

Scope of data: Unless otherwise indicated, accidents are those involving regular employees of Tokyo Gas (including employees on loan).
Period covered: Unless otherwise indicated, the number of accidents is as of March 31 of each fiscal year.

Implementation of Occupational Safety and Health Education Programs

Details		Unit	FY2013	FY2014	FY2015
Level-specific training on safety & health and on safety planning	New employee training	Persons	265	306	298
	Safety and health training for new managers	Persons	228	258	165
Risk management seminar on safety and health (General Manager level)		Persons	353	380	360
Foreman training (by law)		Persons	153	145	172
Training for safety administrators at the time of appointment (by law)		Persons	48	43	51
Hygiene supervisor training		Persons	80	85	85
Traffic safety and driving training (new drivers, people involved in accidents, etc.)		Persons	880	869	904
Safe driving with attendant instructors utilizing drive recorders		Persons	619	635	599
Seminars on promoting health		Persons	1,376	2,801	3,347

Overview of accidents and injuries

Tokyo Gas *1

▶ Third-party assured

Category	Unit	FY2013	FY2014	FY2015
Work-related injuries *2	Cases	21	29	28
Traffic accidents	Cases	131	139	110
Rate of lost work-time injuries *3,5	—	0.60	0.48	0.49
Severity rate *4,5	—	0.005	0.006	0.007

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

*2 Includes accidents not resulting in lost worktime.

*3 Rate of lost work-time injuries: Rate of people taking work leave per 1 million total actual working hours

*4 Severity rate: 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.

Subsidiaries and Affiliates

Category	Unit	FY2013	FY2014	FY2015
Number of accidents	Cases	212	270	207

Scope of data: Unless otherwise indicated, accidents are those involving regular employees of Tokyo Gas (including employees on loan).
Period covered: Unless otherwise indicated, the number of accidents is as of March 31 of each fiscal year.

Corporate Governance System*1

Corporate Governance System

		Unit	FY2013	FY2014	FY2015
Board of Directors	Outside directors	Persons	3	3	3
	Internal directors	Persons	8	8	8
	Outside audit & supervisory board members	Persons (of which women)	3	3(1)	3(1)
	Internal audit & supervisory board members	Persons	2	2	2
Advisory Committee	Representatives appointed from among outside directors and outside audit & supervisory board members	Persons	3	3	3
	Chairman	Persons	1	1	1
	President	Persons	1	1	1
Audit & Supervisory Board	Outside audit & supervisory board members	Persons (of which women)	3	3(1)	3(1)
	Internal audit & supervisory board members	Persons	2	2	2
Corporate Executive Meeting	President *2	Persons	1	1	1
	Executive Vice Presidents *3	Persons	2	2	2
	Senior Executive Officers	Persons	11	11	10

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

*2,3 Three are also concurrently representative directors.

Training and Consultation on Human Rights and Compliance *1

Participants in Training on Human Rights

Training / classification		Unit	FY2013	FY2014	FY2015
Level-specific training	Training upon entering the company, during the third year, and during qualification promotions (two levels)	Persons	1,531	1,558	1,534
Training programs and follow-up for human rights promotion leaders	First-time leader training (1 year) and follow-up training	Persons	255	288	280
Planning-type training	Human rights study sessions	Persons	390	317	350
Training assistance for affiliates and subsidiaries	Training provided upon direct request to the secretariat	Persons	538	744	695
Instructors provided for outside events	Training upon request by companies, local authorities, and other organizations (including the Industrial Federation for Human Rights, Tokyo)	Persons	295	844	135
Human rights training at branch offices (by workplace)	Theme-specific training by workplace	Persons	7,187	9,935	7,983

Participants in Training on Compliance

Training / classification	Unit	FY2013	FY2014	FY2015
Level-specific training Training upon entering the company, during the third year, and during qualification promotions (two levels)	Persons	1,531	1,558	1,534
Made-to-order training Training tailored to individual companies' and departments' circumstances	Persons (occasions)	3,117(82)	2,956(74)	2,634(73)
Workplace workshops Training at the individual workplace level led by compliance promoters	Persons	20,314	25,115	23,745

*1 Data are for Tokyo Gas Group.

Number of Cases Handled

Advisory service desks / breakdown	Unit	2013	2014	2015
Compliance Advisory Service Desks	Cases	56	49	52
Interpersonal relations on the job	Cases	22	13	16
Laws and regulations	Cases	7	4	5
Internal rules	Cases	20	21	21
Other	Cases	7	11	10
Communication Support Section Advisory Service Desk	Cases	44	30	56