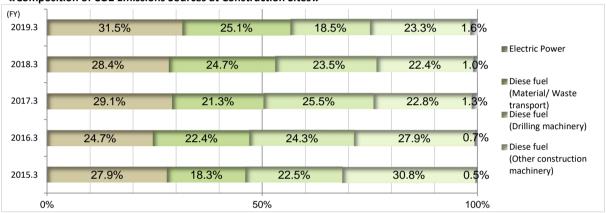
# **Activities to Realize a Low-Carbon Society**

# **Reducing CO2 Emissions**

# CO2 Emissions Reduction at Construction Sites



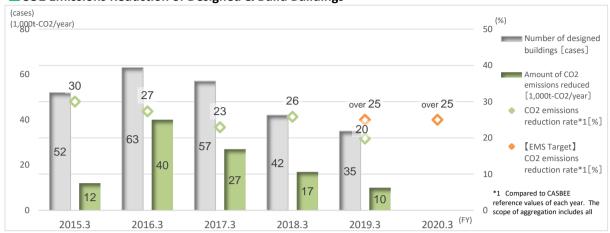
# ≪Composition of CO2 Emissions Sources at Construction Sites≫



	Unit	2015.3	2016.3	2017.3	2018.3	2019.3		
CO2 Emissions Reduction at Construction Sites								
Total amount of emissions	1,000t-CO2	220	217	190	211	186		
Amount of emissions per completed work	t-CO2/billions of yen	19	19	15	17	14		
CO2 emissions reduction rate *1	%	3.5	5.2	16.8	8.0	18.8		
Composition of CO2 Emissions Sources at Construction Sites								
Electric Power		27.9	24.7	29.1	28.4	31.5		
Diesel fuel		71.6	74.6	69.6	70.6	66.9		
Material/ Waste transport	%	18.3	22.4	21.3	24.7	25.1		
Drilling machinery	70	22.5	24.3	25.5	23.5	18.5		
Other construction machinery		30.8	27.9	22.8	22.4	23.3		
Kerosene		0.5	0.7	1.3	1.0	1.6		

<sup>\*1</sup> base year 2014.3

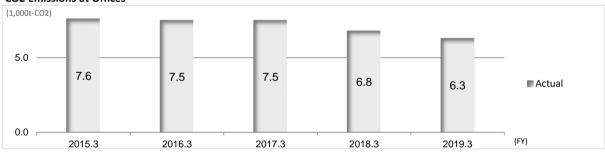
# ■ CO2 Emissions Reduction of Designed & Build Buildings



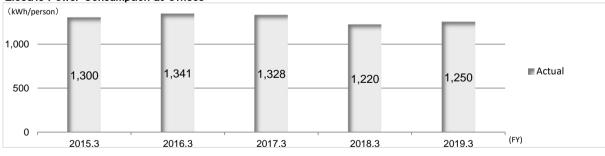
	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Number of designed buildings	cases	52	63	57	42	35
Total area of designed buildings	m2	631,555	1,769,579	1,430,612	832,529	735,082
Amount of CO2 emissions reduced	1,000t-CO2/year	12	40	27	17	10
CO2 emissions reduction rate	%	30	27	23	26	20

# Reduction at Offices (Applicable facilities: Head Office, Tokyo Main Office, Osaka Main Office and other branch offices)

# **CO2** Emissions at Offices







	Unit	2015.3	2016.3	2017.3	2018.3	2019.3			
CO2 Emissions at Offices									
	1,000t-CO2	7.6	7.5	7.5	6.8	6.3			
Electric Power Consumption at Offices									
	kWh/person	1,300	1,341	1,328	1,220	1,250			

# Renewable Energy Generated

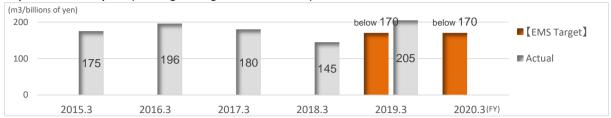
	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Renewable Energy Generated per year	MWh	69,335	89,414	97,516	161,686	201,353

# **Activities to Realize a Recycling Oriented Society**

# **Reducing Tap Water Consumption**

# ■ Tap Water Consumption Reduction at Construction Sites

# **Tap Water Consumption (Civil Engineering Construction Sites)**



# **Tap Water Consumption (Building Construction Sites)**



# Tap Water Consumption Reduction at Offices (Applicable facilities: Head Office, Tokyo Main Office, Osaka Main Office and other branch offices) **Tap Water Consumption (Offices)**

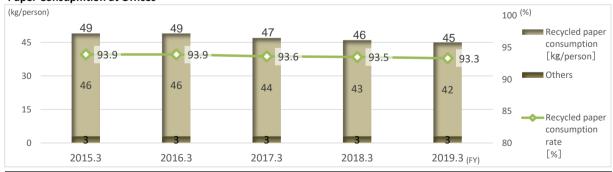


Tap Water Consupmtion	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Civil engineering construction sites	m3/billions of yen	175	196	180	145	205
Building construction sites	m3/billions of yen	87	82	79	89	59
Office	m3/person	5.0	4.8	4.2	4.3	4.3

# **Reducing Paper Consumption**

# **Paper Consupmtion at Offices**

Paper Consumption Reduction at Offices (Applicable facilities: Head Office, Tokyo Main Office, Osaka Main Office, other branch offices, machinery plants, material/equipment centers, the Obayashi Technical Research Institute)

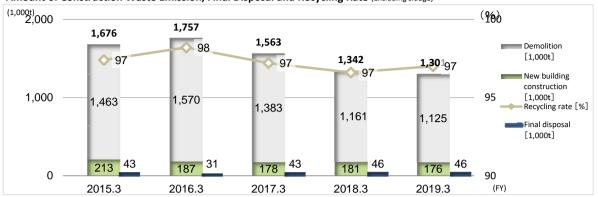


		Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Paper consumption at offices			49	49	47	46	45
	Recycled paper	kg/person	46	46	44	43	42
	Others		3	3	3	3	3
Recycle	Recycled paper consumption rate at offices		93.9	93.9	93.6	93.5	93.3

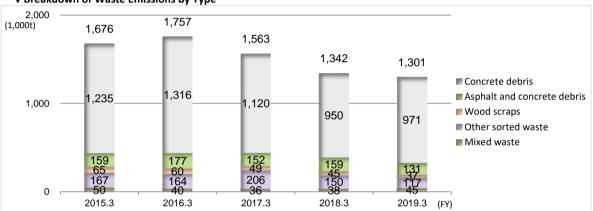
# **Reducing Waste Emissions**

#### Construction Waste Emission Reduction

Amount of Construction Waste Emission, Final Disposal and Recycling Rate (Excluding sludge)







		Unit	2015.3	2016.3	2017.3	2018.3	2019.3				
Amou	Amount of Construction Waste Emission, Final Disposal and Recycling Rate (Excluding sludge)										
Consti	ruction Waste Emissions		1,676	1,757	1,563	1,342	1,301				
	New building construction	1,000t	213	187	178	181	176				
	Demolition		1,463	1,570	1,383	1,161	1,125				
Final disposal		1,000t	43	31	43	46	46				
Recycling rate %		%	97	98	97	97	97				
▼Br	eakdown of Waste Emissions by	Туре									
Consti	ruction Waste emissions		1,676	1,757	1,563	1,342	1,301				
	Concrete debris		1,235	1,316	1,120	950	971				
	Asphalt and concrete debris	1,000t	159	177	152	159	131				
	Wood scraps	1,0000	65	60	49	45	37				
	Other sorted waste		167	164	206	150	117				
	Mixed waste		50	40	36	38	45				

<<Construction Waste Disposal/ Recycling Ratio by Type>>

ecconstruction waste Disposal/ Recycling Ratio by Type>>								
		Unit	2015.3	2016.3	2017.3	2018.3	2019.3	
	Final disposal		0.0	0.0	0.1	0.5	0.1	
Concrete debris	Reduction	%	0.0	0.1	0.0	0.1	0.0	
	Recycle and reuse		100.0	99.9	99.9	99.4	99.9	
Asphalt and	Final disposal		0.0	0.0	0.1	0.1	0.2	
•	Reduction	%	0.7	0.1	0.0	0.0	0.0	
concrete debris	Recycle and reuse		99.3	99.9	99.9	99.9	99.8	
	Final disposal	%	0.2	0.4	0.3	0.5	0.6	
Wood scraps	Reduction		3.3	3.8	1.9	1.8	1.6	
	Recycle and reuse		96.5	95.8	97.8	97.7	97.8	
	Final disposal	%	19.0	13.6	16.1	21.0	23.1	
Other sorted waste	Reduction		1.6	1.2	0.8	1.4	2.7	
	Recycle and reuse		79.4	85.2	83.1	77.6	74.2	
	Final disposal		22.7	21.5	24.6	25.0	39.0	
Mixed waste	Reduction	%	5.6	6.1	5.4	6.3	4.2	
	Recycle and reuse		71.7	72.4	70.0	68.7	56.8	
	Final disposal	%	7.8	6.7	6.6	1.7	2.5	
sludge	Reduction		27.8	33.4	27.8	25.5	25.8	
o .	Recycle and reuse		64.4	59.9	65.6	72.8	71.7	

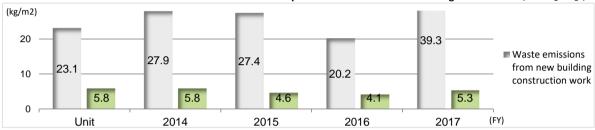
# Construction Waste Emission Reduction of New Building Construction

Amount of Construction Waste Emission Reduction of New Building Construction per Completed Work (excluding sludge)



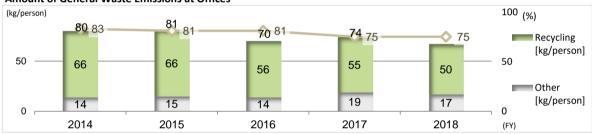
#### Construction Waste and Mixed Waste Emission of New Building Construction

Amount of Construction Waste and Mixed Waste Emission per Floor Area from New Building Construction (Excluding sludge)



# ■ General Waste Emissions Reduction at Offices

#### **Amount of General Waste Emissions at Offices**



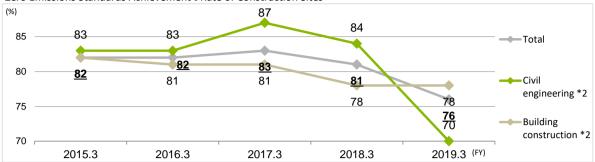
	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Waste emission per completed work (New Building Construction)	t/billions of yen	18.0	16.3	14.2	14.7	13.1
Waste emissions from new building construction work	kg/m2	23.1	27.9	27.4	20.2	39.3
Mixed waste Emission from new building construction	Kg/IIIZ	5.8	5.8	4.6	4.1	5.3
Amount of general waste emissions at office *1		80	81	70	74	67
Recycling	kg/person	66	66	56	55	50
Other		14	15	14	19	17
Recycling rate	%	83	81	81	75	75

<sup>\*1</sup> Applicable facilities: Head Office, Tokyo Main Office, Osaka Main Office, branch offices, machinery plants, material/equipment centers, the Obayashi Technical Research Institute

# **Emissions Reducing Management**

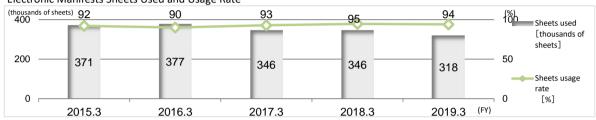
# Zero Emissions

Zero Emissions Standards Achievement\*1 Rate of Construction Sites



#### **■ Electronic Manifests Sheets**

Electronic Manifests Sheets Used and Usage Rate



		Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Total			82	82	83	81	76
	Building construction *2	%	82	81	81	78	78
	Civil engineering *2		83	83	87	84	70
Electri	c manifests sheets used	thousands of sheets	371	377	346	346	318
Electri	c manifests sheets usage rate	%	92	90	93	95	94
Confirma	tion of facility for processing implementation rate	%	47	74	75	75	84

<sup>\*1</sup> Final disposal rate of construction Waste (excluding sludge) is below 5%. That amount of new building construction is below 5 kg/m².

<sup>\*2</sup> Construction waste emissions (excluding sludge) below 1,000t of renewal construction and waste emissions (excluding sludge) below 10t of Civil Engineering Work is

# Activities to Realize a Society that Respect for the Natural World

Based on Biodiversity Policy within our Environment Policy, we aim to realize a society that respects the natural world.

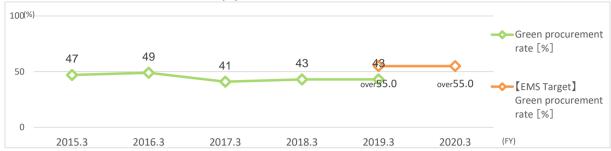
	Obayashi Biodiversity Policy						
1	Contribute in making a recycling oriented society which conserves biodiversity.						
2	Develop and make full use of new technologies to conserve biodiversity.						
3	Promote sustainable society which reduces the impact on ecosystems.						
4	Conserve biodiversity through self-owned facilities.						
5	Communicate with the society to create a society in harmony with nature.						
6	Educate and Promote biodiversity.						

#### Other Activities

# **Construction Equipment Procurement**

# ■ Green Procurement of Construction Equipment

# **Green Procurement Rate of Construction Equipment**



	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Green procurement rate	%	47	49	41	43	43

Calculation formula:

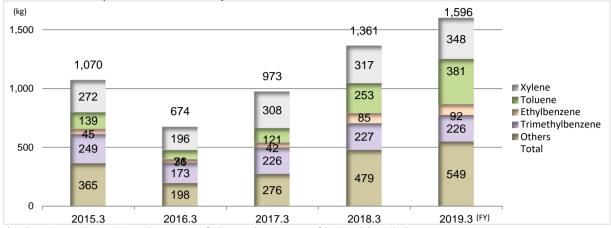
Green procurement: Green procurement cost divided by total cost of construction equipments

Grenn procurement include (treated soil, construction waste soil, recycled concrete aggregate, recycled asphalt and concrete, blast furnace cement concrete, blast furnace raw concret, steel scrap, polycarbonate (Precast concrete)

# **Chemical Substances Management**

# Substances Subject to the PRTR Law

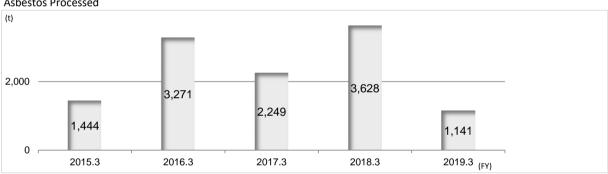
Amount of Consumption of Substances Subject to the PRTR Law \*1



<sup>\*1</sup> A law to improve the monitoring and management of releases to the environmnet of designated chemical substances.

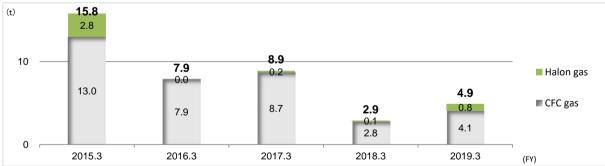
#### Asbestos

# Asbestos Processed



# ■ CFC and Halon Gases

CFC and Halon Gases Collected and Processed



	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Xylene		272	196	308	317	348
Toluene		139	76	121	253	381
Ethylbenzene	kg	45	31	42	85	92
Trimethylbenzene	۸g	249	173	226	227	226
Others		365	198	276	479	549
Total		1,070	674	973	1,361	1,596
Tokyo Machinery Plant		443	344	448	964	1,242
Xylene		159	134	172	241	288
Toluene		14	31	42	172	318
Ethylbenzene	kg	16	12	16	39	75
Trimethylbenzene		118	88	129	167	146
Others		136	79	89	345	415
Osaka Machinery Plant		627	330	525	397	354
Xylene		113	62	136	76	60
Toluene		125	45	79	81	63
Ethylbenzene	kg	29	19	26	46	17
Trimethylbenzene		131	85	97	60	80
Others		229	119	187	134	134
Asbestos Processed						
Amount processed	t	1,444	3,271	2,249	3,628	1,141
CFC and Halon Gases Collected and Pro-	cessed*1					
CFC and Halon Gases Collected and Processed		15.8	7.9	8.9	2.9	4.9
CFC gas	t	13.0	7.9	8.7	2.8	4.1
Halon gas		2.8	0.0	0.2	0.1	0.8

<sup>\*1</sup> Amount of recycled CFO gas and Halon gas was 0.9t and the amount of disposed CFO gas and Halon gas was 2.0t in FY2018.3.

#### PCB

Removal\*2 of PCB waste materials\*3

	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Capacitors	Units	2	133	140	0	0
Transformers	UIIILS	0	0	0	0	0

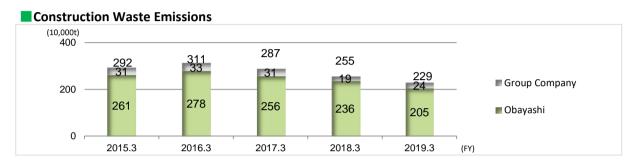
<sup>\*2</sup> Methods for the storage and disposal are regulated by law because these materials contain polychlorinated biphenyl (PCB), which is a toxic substance.

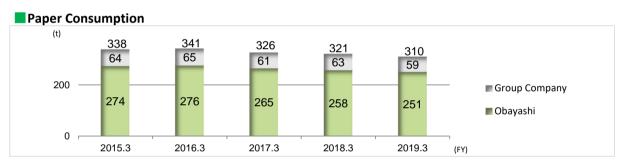
<sup>\*3</sup> PCB waste materials must be transported to Japan Environmental Safety Corporation, the company designated by the government of Japan.

#### **Obayashi Group Activities**

#### **CO2** Emissions Reduction

#### CO2 Emissions (1,000t-CO2/year) 400 316 300 344 334 289 116 110 98 102 96 ■ Group Company 200 228 ■ Obayashi 224 218 198 193 0 2019.3 <sub>(FY)</sub> 2015.3 2016.3 2017.3 2018.3





		Unit	2015.3	2016.3	2017.3	2018.3	2019.3
CO2 E	missions		344	334	300	316	289
	Group Company	1,000t-CO2	116	110	102	98	96
	Obayashi		228	224	198	218	193
		Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Consti	ruction Waste Emissions		292	311	287	255	229
	Group Company	10,000t	31	33	31	19	24
	Obayashi		261	278	256	236	205
		Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Paper	Consumption		338	341	326	321	310
	Group Company	t	64	65	61	63	59
	Obayashi		274	276	265	258	251

Scope of Group companies (Exclude companies for which separate data does not need to be collected, such as companies that operate within Obayashi offices)

[Construction Business] Obayashi Road Corporation, Naigai Technos Corporation, Obayashi Facilities Corporation, Oak Setsubi Corporation,

Tokken Corporation, Soma Environmental Service Corporation, ATELIER G&B Co., Obayashi Design Partners

[Real Estate Business] Obayashi-Shinseiwa Real Estate Corporation

[Other Businesses] <Information > Oak Information System Corporation

<Golf course> Ibaraki Green Co., Ltd.

<Restaurant> Le Pont de Ciel Co., Ltd.

<Renewable energy generation> Obayashi Clean Energy Corporation

Environmental policy includes support for Group companies in order to lower the environmental impact of the entire Obayashi Group. In line with this policy, the Group Company Environmental Activity Liaison Conference was formed to deal with issues for the entire Group. In addition, individual companies use their business activities for developing recyclable materials and increasing their use, combating the heat island effect, conserving energy for building operations, and other purposes.

#### Environmental Accounting

We have embraced environmental accounting since 1999, as a quantitative means of monitoring and disclosing information for all of our environmental activities.

Calculation standards for this environmental accounting are based on the 2002 Environmental Accounting Guidelines for the Construction Industry (by the current Japan Federation of Construction Contractors), and the 2005 Environmental Accounting Guidelines (by the Ministry of the Environment) as a reference.

# Cost of Environmental Protection

	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Cost within business area		24,467	23,080	24,679	33,121	23,845
Preventing pollution		6,558	3,627	8,443	13,729	5,939
Protecting the global environment		159	1185	466	629	453
Recycling resources		17,750	18,268	15,770	18,763	17,453
Upstream and downstream cost   Environmental design elements		1,592	1,627	1,591	1,711	1,729
Cost of management activities		643	960	954	1,695	925
Operating EMS		69	102	135	131	152
Information disclosure /environmental advertisements		73	72	98	76	91
Supervision and measurements	Millions of you	64	244	253	680	258
Environmental education	willions of yell	4	16	10	7	10
Improving surrounding appearance of construction site		54	151	84	410	68
Departments associated with environmental activities		379	375	374	391	346
R&D costs (Environmental R&D activities)		3,612	3,573	3,722	3,594	4,339
Social activities costs (Contributions and assistance for environmental organizations)		1	3	5	7	6
Cost of correcting environmer	Millions of yen –	0.5	643	136	55	266
Nature restoration activities		0.3	579	104	19	260
to the environment		0.2	64	32	36	6
Total		30,316	29,887	31,087	40,183	31,110

# **■** Environmental Performance Indicators

	Unit	2015.3	2016.3	2017.3	2018.3	2019.3
CO2 Emissions	Millions of yen/t-CO2	5.25	5.26	6.46	5.95	7.18
Construction Waste Emissions	Millions of yen/t	5.42	6.12	6.89	6.90	7.60

Calculation formula: CO2 emissions: Total sales from a project divided by CO2 emissions during construction

Construction waste emissions: Total sales from a project divided by volume of construction waste emissions (excluding sludge) produced when constructing a new

# Impact on Environmental Protection

# ≪Impact on Environmental Protection ≫

			Unit	2015.3	2016.3	2017.3	2018.3	2019.3
		Construction sites	TJ *1	3,427	3,374	3,031	3,375	3,061
	Energy Consumption	of which, electricity purchased	GWh	111	99	106	118	121
	Ellergy Collsumption	Offices, etc. *2	TJ	137	140	144	132	130
		of which, electricity purchased	GWh	13	13	13	13	12
Input	Water Consumption	Construction sites	1,000m3	1,197	1,235	1,225	1,267	1,171
input	water consumption	Offices, etc. *2	1,000m3	59	57	59	60	60
		Construction material		56,677	64,708	54,630	63,300	56,089
	Green Procurement Amount	Recycled paper *2	Millions of ven	49	47	47	47	42
	Green rocarement / unount	Office supplies *3	IVIIIIOIIS OF YELL	107	98	98	110	104
		Sitewear	1,000m3 rial (*2 5*3 Millions of yen tes  1,000 t-CO2	105	114	133	173	191
		Construction sites		220	217	190	211	186
		Of which, Scope 1+4	1,000 t-CO2	159	163	135	151	127
	CO2	Of which, Scope 2+4		61	54	55	60	59
	emissions	Offices, etc. *2		7.6	7.5	7.5	6.8	6.3
		Of which, Scope 1+4		0.5	0.6	0.7	0.5	0.4
		Of which, Scope 2+4		7.1	6.9	6.8	6.3	5.9
	SOX	Construction sites	t-SOX	196	197	169	189	166
Output	emissions	Offices, etc. *2	t sox	5	5	5	4	4
	NOX	Construction sites	t-NOX	1,154	1,173	981	1,099	937
	emissions	Offices, etc. *2	tivox	11	12	12	11	11
	Construction waste (including sludge)		1,000 t	2,610	2,776	2,554	2,357	2,046
	Construction waste reuse (on site)	(including sludge)	%	0.0	0.0	0.1	0.0	0.0
	Construction waste recycling (includi	ng sludge)	%	85.0	83.8	84.8	85.7	86.9
	Construction waste final disposal (	including sludge)	1,000 t	129	108	116	75	72
	Construction waste final disposal (	Construction waste final disposal (excluding sludge)		2.6	1.8	2.7	3.4	3.5
Products and services	CO2 emission reduction due to use environmental design *5 *6	e of	1,000 t-CO2	429	1,390	957	586	355

#### ≪Economic Impact≫

			Unit	2015.3	2016.3	2017.3	2018.3	2019.3
Cost reductions due to resource and energy conservation measures at construction sites		Electricity used*7 (vs. previous year)		-1,091	-322	195	302	84
	Light oil used*7 (vs. previous year)		636	157	-1,200	731	-1,097	
	Kerosene used*7 (vs. previous year)	Millions of	-12	8	33	-11	27	
		Materials purchased*8 (actual amount)	yen	0.2	2.0	6.8	0	0
I()utnut	Benefits from sorting construction site waste	Gain from sales of waste materials		254	186	177	447	500

<sup>\*1</sup> Unit for energy: 1 terajoule = 1 × 1,012 joules

Scope 1: Direct emissions (caused by business activities)

Scope 2: Indirect emissions (caused by energy used (electricity, heat, etc.) for business activities

- \*5 Comparison with CASBEE reference figures. Data cover all applications
- \*6 Figures assume a useful building life of 35 years
- \*7 Conversions for reductions in volume used from the previous fiscal year are as follows:

Electricity (27yen/kWh) (Source: Price Guidelines for New Electricity Rates by the Home Electric Appliances Fair Trade Conference)

Diesel fuel (116,000yen/kl), Kerosene (86,000yen/kl) (Source:2019.3 issue of Sekisan Shiryo magazine, published by the Economic Research Association)

\*8 Waste materials reused at construction sites have been converted to construction material equivalents as follows:

Construction sludge → Backfilling soil (3,600yen/m3)

Concrete debris - Recycled crushed stone (1,125yen/m3) (Source: 2019.3 issue of Sekisan Shirvo magazine, published by the Economic Research Association)

# ☐ Basic Unit for Calculating Environmental Protection Benefits (FY2019.3)

	Electric Power	Electric Power Diesel fuel		Gas
Primary energy*1	9.97MJ∕kWh	9.97MJ/kWh 37.7MJ/L		44.9MJ/m3
CO2*2	By electric utility company*4	2.58kg-CO2/L	2.49kg-CO2/L	2.23kg-CO2/Nm3
SOX*3	0.335	0.069	0.007	0
3UX*3	g-SOX/kWh		g-SOX/MJ	
NOV*2	0.778	0.463 0.069		0.058
NOX*3	g-NOX/kWh		g-NOX/MJ	•

<sup>\*1</sup> Electricity: Ordinance for Enforcement of the Act on the Rational Use of Energy

All others except electricity: Calculation Methods and Emission Coefficients for Calculation, Report and Announcement Systems (after 2014.3 revisions)

<sup>\*4</sup> Emission coefficients for individual electric utilities

Power companies	Effective emission factor	Power companies	Effective emission factor
Power companies	(kg-CO2 ∕kWh)	Power companies	(kg-CO2 ∕kWh)
Hokkaido Electric Power Co., Inc.	0.666	The Chugoku Electric Power Co., Inc.	0.669
Tohoku Electric Power Co., Inc.	0.521	Shikoku Electric Power Co., Inc.	0.514
Tokyo Electric Power Co., Inc.	0.475	Kyushu Electric Power Co., Inc.	0.438
Chubu Electric Power Co., Inc.	0.476	The Okinawa Electric Power Co., Inc.	0.786
Hokuriku Electric Power Company	0.593	Alternative	0.512
The Kansai Electric Power Co., Inc.	0.435	CO2 emission coefficients for individua	al electric utilities (Announced on 201

<sup>•</sup> For the cost of pollution prevention and protecting the global environment, the portion of these costs accounted for by construction sites is estimated by using figures from sample sites, construction sales during the fiscal year and other data.

<sup>\*2</sup> Applicable facilities: Head office, Tokyo Main Office, Osaka Main Office, other branch offices, machinery plants, material/equipment centers, and Technical Research Institute

<sup>\*3</sup> Calculated using the Biznet procurement system for office supplies, etc.

<sup>\*4</sup> The greenhouse gas emission categories prescribed in the Greenhouse Gas Protocol developed as the international standard for calculating and reporting the volume of greenhouse gas emissions

<sup>\*2</sup> Calculation Methods and Emission Coefficients for Calculation, Report and Announcement Systems (after 2014.3 revisions)

<sup>\*3</sup> Building Life Cycle Assessment Guidelines, Architectural Institute of Japan (after 2013.2 revisions)

<sup>•</sup>The portion of resource recycling costs accounted for by the processing and disposal of construction waste materials from construction sites is the actual amount according to the manifest multiplied by an average processing unit price for each item at individual branches (cost includes construction sites of Obayashi alone and all costs at joint construction projects where Obayashi is the main contractor).

#### Environmental Management System (EMS)

# Results of External Assessment of EMS

		2018.3
Certification body		Japan Testing Center for Construction Materials
Implementation period		From June 24 to August 1, 2018
Assessed items		Head Office, Tokyo Main Office, Nagoya Branch, Shikoku Branch, Hokuriku Branch, Technical Research Institute,
Assessed items		Tokyo Machinery Works
	Serious deficiencies	0 case
Number of deficiencies	Minor deficiencies	0 case
Number of items	under observation	0 case

#### Results of Internal Audit of EMS

Results of internal Addit of E		
		2019.3
Audited items		All branches and departments
Number of audits		253cases / 250cases (101%)
Permanent divisions	Planned/ Implemented	53cases / 53cases (100%)
Construction offices	(Implementation rate)	191cases/188cases(101%)
Secretariats		9cases/9cases(100%)
Number of internal auditors (active)		482people
Number of deficiencies		4cases
Number of items under observation	1	149cases

■ Environmental Targets and Results

Environmental Targets and F	resuits		2045.2	2046.2	2047.2	2040.2		2019.3		2020.2
Environmental Targets	Unit		2015.3	2016.3	2017.3	2018.3				2020.3
-				Act	tual		EMS Target	Actual	Evaluation	Target
Reducing CO2 Emissions										
CO2 emissions reduction rate from construction sites (base year 2014.3)			3.5	5.2	16.8	8.0	over 8.0	18.8	0	over 15.0
CO2 emissions reduction rate of designes & build buildings*1	%	Low-Carbon	30	27	23	26	over 25	20	×	over 25
Fuel efficiency driving training rate at construction sites			23	63	55	63	over 70	71	0	over 70
Reducing Resource Consumption										
Water consumption at construction	m3/billions	Recycling-	Civil: 175	Civil: 196	Civil: 180	Civil: 145	Civil: below 170	Civil: 205	Δ	Civil: below 170
sites	of yen	Oriented	Building: 87	Building: 82	Building: 79	Building: 89	Building: below 85	Building: 59		Building: below 85
Reducing Waste Emissions										
Amount of construction waste emissions (excluding sludge) per completed work from new building construction work	t/billions of yen	Recycling- Oriented	18.0	16.3	14.2	14.7	below 14.0	13.1	0	below 14.0
Confirmation rate of facilities for processing	%	Offerited	47	74	75	75	over 80	84.0	0	over 85.0
Implementing Green Procurement	•									
Green procurement ratio for construction materials and supplies *2	%	Others	47	49	41	43	over 55	43.0	×	over 55

#### Legend and Notes

O: Targets achieved

 $\Delta$ : Targets have yet to be achieved, but results have improved from the previous fiscal year

× : Targets have yet to be achieved

\*1 Figure represent comparisons with the CASBEE reference values, with the scope of aggregation including all building uses.

\*2 The ratio of the green procurement value to the total procurement value of all monitored items for the green procurement ratio.

# Deficiencies and Complaints

- Bendendes and complaints							
Items	Unit	2015.3	2016.3	2017.3	2018.3	2019.3	
Deficiencies	cases	6	0	1	6	2	
Claims	cases	828	891	1,056	1,229	624	

Obayashi designates items as deficient and requiring management in the following cases:

Note that we strive to prevent conflicts for reoccurring by aptly responding to the complaints we receive and caring for the environment surrounding our sites.

When administrative guidance has been received

When a civil fine must be paid

• When a written apology must be submitted

When there is a penalty involving more than a small fine

• When there is compensation payment

• When a government agency has submitted a recommendation to take corrective actions

 ${\it 2\ deficiencies\ of\ 2018\ were\ used\ industrial\ was te\ disposal\ carrier\ with\ expired\ permission.}$ 

We have submitted a remedial report for updating the permission, and placed the outline of the contract in the construction site so that all employee can check the expiration date.