



ESG Data

Environment

- For data from FY2017 to FY2018, the upper row is the Idemitsu Group and the lower row is the Showa Shell Group. (The Showa Shell Group's FY2018 results are reported for 15 months from January 2018 to March 2019.)
- FY2019 data is for the Idemitsu Group. Idemitsu and Showa Shell merged in April 2019, and the data is after the business integration.
- The scope of data for FY2019 is Idemitsu and consolidated subsidiaries. However, the reporting scope of some data points differs from the others. For details, please refer to the notes for each data point.
- Data calculation conditions have been revised in conjunction with business integration. Therefore, data for FY2019 is not consistent with the sum of the two companies' data before FY2018. (From FY2017 to FY2018, there are differences in the calculation conditions of the Idemitsu Group and Showa Shell Group.)
- The data for FY2020 indicated with (☑) has been assured by the Independent Practitioner.

GHG Emissions by Scope	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Scope 1	thousand tCO ₂	7,465	7,347	12,041	12,193	☑	
		5,137	7,015				
	tCH ₄	-	-	1,986	14,531	☑	
	tHFC	-	-	0.103	0.413	☑	
	tN ₂ O	-	-	228	392	☑	
	tSF ₆	-	-	0.004	0.002	☑	
	thousand tCO _{2e}	-	-	12,158	12,674	☑	
Scope 2	thousand tCO ₂	424	460	855	829	☑	
		530	556				
Scope 3*	thousand tCO ₂	82,224	79,318	117,691	108,187	☑	Use of products sold: Amount of fuel produced at refineries and complexes (scope of reporting: Idemitsu and consolidated subsidiaries)
		56,526	63,331				
Scope1+2	thousand tCO ₂	7,889	7,807	12,896	13,022	☑	
		5,667	7,571				
	thousand tCO _{2e}	-	-	13,014	13,503	☑	
Scope 1+2+3*	thousand tCO ₂	90,113	87,125	130,586	121,209	☑	
		62,193	70,902				
	thousand tCO _{2e}	-	-	130,704	121,690	☑	

* Scope 3 records category 11 (Only third-party warranty coverage)



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Trends in CO ₂ Emissions	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
1. Main body + consolidated companies	thousand tCO ₂	14,200	13,793	12,896	13,022		The data for fiscal 2017 and 2018 are the result of calculating and combining the data of Idemitsu group and Showa Shell Group using the current calculation method.
2. 1 + Group affiliates and subsidiaries	thousand tCO ₂	16,775	16,473	15,488	15,419		The following table shows the total emission volume of "FY2030 management targets CO ₂ reductions (Scope 1+2), including group refineries."
Trends in CO ₂ Emissions	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
3. CO ₂ emissions reduction (compared to FY2017)	thousand tCO ₂	-	407	1,304	1,178		
4. CO ₂ emissions reduction (compared to FY2017)	thousand tCO ₂	-	302	1,287	1,356		Scope: 2 (1 + Group affiliates and subsidiaries)
5. Reduction target achievement rate	%	-	8	32	34		Achievement rate against the target of 4,000 thousand tons (target: 4)
GHG emissions per unit of production	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Crude oil production	tCO ₂ e/bbl	-	-	0.007	0.006	☑	Scope of Reporting: Idemitsu Petroleum Norge AS Unit: GHG emissions / crude oil production
Coal production	tCO ₂ e/t	-	-	0.033	0.066	☑	Scope of Reporting: Ensham Resources Pty. Ltd., Muswellbrook Coal Co., Ltd., Boggabri Coal Pty. Ltd. Unit: GHG emissions / coal production
Oil refining	tCO ₂ e/bbl	-	-	0.034	0.040	☑	Scope of Reporting: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd. Unit: GHG emissions / refinery throughput
Petrochemical plants	tCO ₂ e/t	-	-	0.902	0.896	☑	Scope of Reporting: Chiba Complex (Chemicals), Tokuyama Complex Unit: GHG emissions / petrochemicals production volume (ethylene equivalent)
Energy Consumption	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Heat quantity equivalent	PJ	188	186	196	191	☑	Before FY2018, energy consumption includes both the Idemitsu Group's and other companies' business activities. In FY2019, the scope is limited to the energy consumption of only the Idemitsu Group's business activities.
		84	108				
Crude oil equivalent	thousand kL	4,858	4,811	5,070	4,916	☑	
		2,156	2,808				
Unit energy consumption (Refinery)	L/kL	8.79	8.87	8.09	8.64	☑	Scope of Reporting: Idemitsu Kosan Co., Ltd., Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd. Unit energy consumption = Crude oil equivalent (L) / Atmospheric distillation equipment converted throughput (kL)
		7.47	7.28				
Unit energy consumption (Petrochemical plant)	kL/t	0.406	0.396	0.421	0.415	☑	Scope of Reporting: Idemitsu Kosan Co., Ltd., Chiba Complex (Chemicals), Tokuyama Complex Unit Crude oil equivalent energy consumption (kL) / Ethylene equivalent production (t)
		-	-				



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Amount of Water Resources Intake and Wastewater	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Seawater intake	thousand t	1,257,447	1,288,375	1,330,838	1,357,736	☑	
		133,554	170,600				
Industrial water intake	thousand t	58,322	60,143	81,740	82,074	☑	
		31,797	41,795				
Tap water intake	thousand t	-	-	16,500	11,711	☑	Amounts for Idemitsu before 2018 are included in industrial water.
		249	304				
Underground water intake	thousand t	-	-	18,894	15,789	☑	Amounts for Idemitsu before 2018 are included in industrial water. Groundwater also contains hot water from geothermal power generation.
		2,009	2,102				
Total water intake	thousand t	1,315,769	1,348,518	1,447,972	1,467,310	☑	
		167,609	214,801				
Wastewater destination (sea)	thousand t	-	-	1,330,838	1,357,736		
		-	-				
Wastewater destination (other)	thousand t	-	-	81,235	71,944		The destination includes reduced water (hot water) used in geothermal power generation.
		-	-				
Wastewater	thousand t	1,314,002	1,345,990	1,412,073	1,429,680	☑	
		150,515	199,813				
Water recycling rate	%	-	90	94	94	☑	The water recycling rate only applies to industrial water. (1. Industrial water intake: 82,074; 2. Industrial water use: 1,366,526; 3. Industrial water recycling: 1,284,452, Water recycling rate = 3 / 2) * 2 = 1 + 3
		97	97				
Water withdrawal rate	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Crude oil production	t/bbl	-	-	0.499	0.467	☑	Scope of Reporting: Idemitsu Petroleum Norge AS Unit: Water withdrawal volume / crude oil production volume
		-	-				
Coal production	t/t	-	-	0.713	0.486	☑	Scope of Reporting: Ensham Resources Pty. Ltd., Muswellbrook Coal Co., Ltd., Boggabri Coal Pty. Ltd. Unit: Water withdrawal volume / coal production volume
		-	-				
Oil refining	t/bbl	-	-	3.314	3.830	☑	Scope of Reporting: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd. Unit: Water withdrawal / refinery throughput
		-	-				
Petrochemical plants	t/t	-	-	155	164	☑	Scope of Reporting: Chiba Complex (Chemicals), Tokuyama Complex Unit: Water withdrawal / petrochemicals production volume (ethylene equivalent)
		-	-				
Water Pollution Effects	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
COD	t	104	97	276	336	☑	Scope of Reporting: Hokkaido Refinery, Chiba Complex, Aichi Refinery, Tokuyama Complex, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd., Solar Frontier K.K., Shell Lubricants Japan K.K., Nippon Grease Co., Ltd., Idemitsu SM (Malaysia), Petrochemicals (Malaysia)
		-	255				
Total nitrogen	t	93	104	97	146	☑	
		-	-				
Total phosphorus	t	1.2	1.5	1.8	3.2	☑	
		-	-				



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Air Pollutant Emissions	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
SOx	t	48,223	47,349	12,315	7,886	<input checked="" type="checkbox"/>	Before FY2018, air pollutants include both the Idemitsu Group's and other companies' business activities. In FY2019, the scope is limited to the air pollutants of only the Idemitsu Group's business activities.
		2,250	2,972				
NOx	t	42,823	42,029	17,286	13,980	<input checked="" type="checkbox"/>	
		1,942	2,769				
Soot/dust	t	230	231	232	223	<input checked="" type="checkbox"/>	
		72	95				
VOC	t	3,707	3,658	5,536	5,411	<input checked="" type="checkbox"/>	Scope of Reporting: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd., Shell Lubricants Japan K.K. Kobe Plant, Okinawa Idemitsu Co., Ltd.
		4,873	4,639				

Waste	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
Total waste	t	215,354	209,828	217,516	224,084	<input checked="" type="checkbox"/>	Scope of Reporting: Hokkaido Refinery, Chiba Complex, Aichi Refinery, Tokuyama Complex, TOA Oil Co., Ltd., Showa Yokkaichi Sekiyu Co., Ltd.
		37,994	40,188				
Reduced by intermediate treatment	t	91,227	107,605	110,264	96,768	<input checked="" type="checkbox"/>	
		-	26,087				
Recycled	t	123,182	100,840	106,640	124,699	<input checked="" type="checkbox"/>	
		-	14,102				
Final disposal	t	945	1,383	614	38	<input checked="" type="checkbox"/>	
		-	0				
Final disposal rate	%	0.439	0.659	0.282	0.017	<input checked="" type="checkbox"/>	
		-	0				

CFC leakage	Unit	FY2017	FY2018	FY2019	FY2020	Independent Practitioner's Assurance	Note
	t	-	-	-	1	<input checked="" type="checkbox"/>	Scope of Reporting: Hokkaido Refinery, Chiba Complex, Aichi Refinery, Tokuyama Complex, performance materials laboratories, Lubricants Research Laboratory, Advanced Technology Research Laboratories, Technology & Engineering Center (Anesaki) Figures based on CFC method reporting
	CO ₂ e	-	-	-	1,852		

Number of Environmental Disorders	FY2020
	3 cases

Acquisition Status of ISO 14001 (Environmental Management Systems) <small>*As of June 30, 2021</small>	
Domestic business sites	21 sites
Overseas business sites	13 sites

*More than 95% of the Idemitsu Group's GHG emissions are from sites that have acquired ISO 14001 certificates.