

# Our Management Philosophy and Main ESG Policies and Initiatives

The Idemitsu Group's mission is to operate in accordance with the management philosophy of respect for human beings, undertaking business with a focus on people and contributing to the sustainable development of society through its operations. The Company regards this as its social responsibility. In other words, our management philosophy is the very definition of sustainability.

Matters considered to be sustainability issues, such as environmental, society and governance issues, are promoted autonomously by each controlling division in accordance with the policies of various committees and headquarters. For detailed information on social and environmental performance data, visit Idemitsu's official website.

## Our Management Philosophy

Sazo Idemitsu's words of wisdom were recently collectively summarized as the Principles of Management, Management Policies and Action Guidelines and serve as the management philosophy of the Idemitsu Group. Remaining true to the Principles of Management, we seek to fulfill stakeholders' commitments as depicted in the Management Policies, with employees unflinchingly performing their respective roles in accordance with the Action Guidelines.

### Principles of Management

Since its establishment, Idemitsu has been practicing the concept of "respect for human beings" in the conduct of business, and has sought to meet the high expectations of society and to earn its trust. In order to realize this ideal, the Company strives to do the following:

- To play a beneficial role in society by creating an environment where people trust each other and work together to realize through business the tremendous potential of "human beings,"
- To ensure that each employee develops into a reliable person and is respected in society, while upholding our vision, high ideals and engaging in mutual improvement through amicable competition, and
- To attach great importance to our promises to customers and seek to be worthy of the trust vested in us by unflinchingly fulfilling those promises.

### Management Policies

#### ● Creation and provision of new value to customers

We provide products, technologies and services that give customers a strong feeling of assurance, greater vitality and absolute satisfaction, as we strive to create new value.

#### ● Contribution to society and the environment

We make safety the cornerstone of business and strive to preserve and improve the natural environment. We also contribute to communities, culture and society.

#### ● Assured returns to shareholders

We fulfill our corporate social responsibilities, strive for sound, sustainable growth and endeavor to generate stable returns for shareholders.

#### ● Cooperation with partners

We secure the confidence, greater vitality and absolute satisfaction of our customers through cooperation with the retail outlets of service stations and others involved in our businesses, and aim to share the results as well as the success.

#### ● Pursuit of employees' growth and self-realization

We create a work environment in which each employee can pursue his or her own growth and self-realization. We also make every effort to ensure that each employee is respected.

### Action Guidelines

#### ● Customers first

Consider how customer satisfaction can be attained and act accordingly.

#### ● Sense of ethics

Maintain high ethical principles and act sincerely and fairly.

#### ● Accepting challenges

Exercise originality and ingenuity through flexible views and ideas, and consistently meet the challenge of high-speed innovation.

#### ● Consensus and cooperation

Devote effort to thorough discussion and work as one to implement conclusions.

#### ● Autonomy

Accomplish assigned tasks with responsibility and pride.

#### ● Broad-mindedness and employee development

Strive to create a broad-minded corporate culture for mutual growth.

#### ● Harmony with communities

Contribute to the development of local communities as a good corporate citizen.

## E

(Environment)

Promoting initiatives to protect the environment and lower environmental impact  
Conserving energy  
Promoting biodiversity  
Reducing GHG emissions

### Environmental Policies

We place priority on conserving the environment across all our business domains, operations and actions and seek to promote the following:

1. Pollution prevention and environmental conservation
2. Compliance with environment-related laws, regulations, agreements, and industrial standards
3. Establishment and achievement of environmental targets
4. Development and widespread use of environmental technologies and products
5. Improvement of energy use efficiency and effective resource utilization
6. Reduction of impact on biodiversity
7. Enhancement of environmental management systems

### Reducing GHG Emissions

1. Expand the Renewable Energy Business
2. Research low-carbon uses and highly efficient uses of fossil fuels.

## S

(Society)

Maintaining relationships with stakeholders  
Managing health  
Creating lively workplace environments  
Promoting diversity management  
Promoting supply chain initiatives  
Contribute to communities and society

### Basic Policy on Maintaining Relationships with Stakeholders

Each employee fulfills their own role in line with our action guidelines to keep our promises to all our stakeholders outlined in the principles of management and our management policies.

### Health-Related Policies

At Idemitsu, each employee aims to be a respected member of society while genuinely enjoying their jobs and working freely. The Company therefore considers one of its top priorities to be a policy of health promotion that ensures employees' minds and bodies are healthy and vigorous into their 60s. We encourage all employees to proactively manage their health and work to create an active workplace.

### Society-Related Policies

1. Promote diversity management
2. Promote supply chain initiatives
3. Contribute to communities
4. Contribute to society through cultural activities

## G

(Governance)

Corporate governance  
Risk management  
Compliance  
Safety and security  
Quality assurance

### Outline of the Corporate Governance Structure

Idemitsu's Board of Directors makes important management decisions and oversees business execution. Idemitsu has adopted the structure of a company with an audit & supervisory board. As such, the Audit & Supervisory Board and its members are independent of the Board of Directors and monitor the execution of the directors' duties.

In accordance with relevant laws and regulations, the Company's Articles of Incorporation, and other Company rules, the Board of Directors makes important management decisions on such matters as business strategy and plans and provides oversight of business execution. For other matters, in order to ensure swift decision-making with regard to business execution, executive authority is delegated to the president, directors and executive officers assigned to specific areas, and general managers.

### Basic Policy on Risk Management

Idemitsu strives to identify and evaluate risks associated with the Idemitsu Group's business activities and to eliminate or minimize these risks to the greatest extent possible to ensure stable management.

### Basic Policy on Compliance

Based on its management philosophy, Idemitsu considers compliance a social responsibility and rigorously implements compliance within its organization.

### Basic Policy on Safety and Security

The Idemitsu Group considers the assurance of safety and security in all business activities, operations and actions as its highest priority and is focusing on the measures below.

1. Assure the safety of people
2. Assure the security of facilities and processes
3. Assure safety through compliance with various rules and regulations when carrying out business and establish safety and security management systems
4. Properly allocate and utilize management resources
5. Establish a culture and management that emphasize safety

### Basic Policy on Quality Assurance

We aim to create new value that provides comfort, vitality, and satisfaction to customers and contribute to society by stably and economically supplying safe, high-quality products and services matched to the demands of customers.

# Environmental Performance

Idemitsu works to reduce the environmental impact of its business activities while undertaking progressive initiatives for environmental conservation to contribute to the creation of a society in which the economy and the environment are in harmony.

## Basic Policy

We place priority on conserving the environment across all our business domains, operations and actions and seek to promote the following:

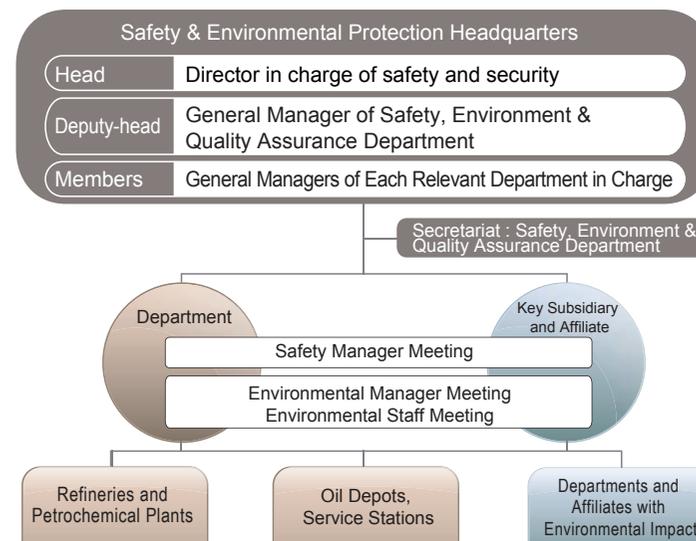
1. Pollution prevention and environmental conservation
2. Compliance with environment-related laws, regulations, agreements, and industrial standards
3. Establishment and achievement of environmental targets
4. Development and widespread use of environmental technologies and products
5. Improvement of energy use efficiency and effective resource utilization
6. Reduction of impact on biodiversity
7. Enhancement of environmental management systems

## Environmental Management

### Headquarters

The Idemitsu Group has established the Safety & Environmental Protection Headquarters, with the role of secretariat assigned to the Safety, Environment & Quality Assurance Department, aimed at strengthening the environmental conservation activities of the entire Group. As in the case of safety and security management, the head of the Safety & Environmental Protection Headquarters tours worksites to provide safety and environmental instructions and its secretariat implements safety and environment-related audits. Safety and environment-related audits are conducted once a year at petrochemical plants and once every three years at other worksites. Idemitsu also deploys environmental conservation managers and environmental staff in each department to promote autonomous environmental conservation activities.

## Safety and Security Assurance Promotion Structure



## Environmental Management Systems

The Idemitsu Group stipulates basic policies for environmental conservation in the General Principles of Global Environment. Based on these policies, the Safety & Environmental Protection Headquarters promotes ongoing environmental conservation activities. Also, the Idemitsu Group's domestic and overseas business sites where the environmental risk is significant have obtained ISO 14001\*\* certification and are building and operating environmental management systems that conform to these standards. In Japan, we comply with environment-related laws and regulations, including the Act on the Rational Use of Energy, the Act on Promotion of Global Warming Countermeasures, and the High Pressure Gas Safety Act. Our overseas business offices conduct operations in compliance with each country's laws and regulations using their own management rules and overseas store management manuals. We have mandated that they establish a system for collecting information related to laws and regulations from external sources.

### ISO 14001 Certified Worksites

Japan : Domestic Group worksites with certification: 28.0%

Worldwide : Overseas Group worksites with certification: 44.0%

\*1 ISO 14001: An environmental management system standard created by the International Organization for Standardization.

## Environmental Management at Our Refineries and Petrochemical Plants

Because refineries and petrochemical plants handle large volumes of hazardous materials, the occurrence of an explosion, fire, oil spill or other accident could negatively impact the surrounding environment. Accordingly, our refineries and petrochemical plants have established Safety & Environmental Sections within each worksite, and the Group's internal business units are working together to better ensure safety and security and protect the environment. In addition, they conduct assessments of environmental risks in operations and promote appropriate environmental management.

## Environmental Management in Offshore Oilfield Development

The Idemitsu Group is carrying out petroleum exploration and production operations off the coast of Vietnam as a sole operator. Since 2006, the Company has implemented its own Safety, Health and Environmental Management System (SHEMS), which, based on the Idemitsu Group's accumulated rules, manuals and know-how related to safety, industrial health and the environment, serves as an integrated platform for management. We require that contractors adopt SHEMS as a prerequisite for concluding contracts. We continually strive to improve the system and update it accordingly (last overhaul: 2012). In addition, we are enhancing our measures to ensure safe operations. In June 2016, we conducted a safety and environmental audit of the Ho Chi Minh City Operation Office and exploratory drilling operations, and in March 2017, we conducted a safety assessment of the basic design of the production equipment in development operations.

Resource development, oil and gas, [safety and environmental initiatives](#)

## Environmental Management at Coal Mines

Idemitsu Australia Resources (IAR), which is one of the coal business's bases and is based in Brisbane, Australia, is working to contribute to sustainable growth by solve various problems from a long-term perspective through management's commitment to the following policies.

- Environmental Management Policy
- Energy Management Policy
- Cultural Asset Policy
- Stakeholder Engagement Policy

As for specific activities, IAR is working based on an agreement with state governments and in collaboration with the local Aboriginal population to preserve cultural assets before excavation begins at mines. In addition, as part of its restoration efforts after excavation ends, IAR has thus far planted more than 340,000 endemic plants after filling back in excavated sites. In addition to the above efforts, IAR has acquired to date around 11,000 ha of land surrounding mines to protect animals and plants and preserve biodiversity.

## Environmental Management in International Waters

Idemitsu Tanker Co., Ltd., which operates oceangoing tankers, has established various regulations for safe navigation and marine pollution prevention in accordance with the ISM Code,\*2 ISO 14001 and ISO 9001\*3 management systems.

**There were zero major accidents, including collisions and fires, in fiscal 2017.**

\*2 International Safety Management (ISM) Code: An international standard incorporated into the International Convention for the Safety of Life at Sea (SOLAS), designed to augment the safety management of ships.

\*3 ISO 9001: A quality management system standard of the International Organization for Standardization.

[Idemitsu Tanker Environment / Safety measures](#)

## Environmental Education

Aiming to increase the environmental awareness of all employees, the Idemitsu Group provides environmental education through various means, including training courses for new and newly assigned employees and workshops at workplaces.

Moreover, we invite children from nearby elementary schools to visit our refineries, petrochemical plants and laboratories for environmental education and also offer classes at these schools.



An environmental education class being held at the Chiba Complex (July 5, 2017)



A class being held at an elementary school in Tomakomai, Hokkaido Prefecture (October 25, 2017)

[Tours, Workshops and School Classes](#)

## Environment-Related Awards

Idemitsu's environmental activities are praised even by external organizations. In fiscal 2016, we won the Energy Conservation Center Chairman's Award in the energy conservation division. In fiscal 2017, Idemitsu Oita Geothermal Co., Ltd.'s Takigami Binary Cycle Power Station received the Minister of the Economy, Trade and Industry Prize (the top prize) of the Fiscal 2017 New Energy Awards from the New Energy Foundation. It was also honored at ENEX 2018's 42nd Exhibition for Harmony between the Global Environment and Energy.



Award Ceremony for the Fiscal 2017 Minister of the Economy, Trade and Industry Prize



Takigami Binary Cycle Power Station

Environmental Impact (FY2017)

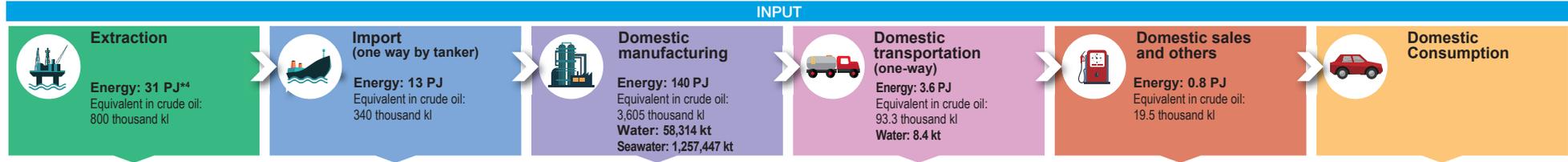
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Independent Practitioner's Assurance

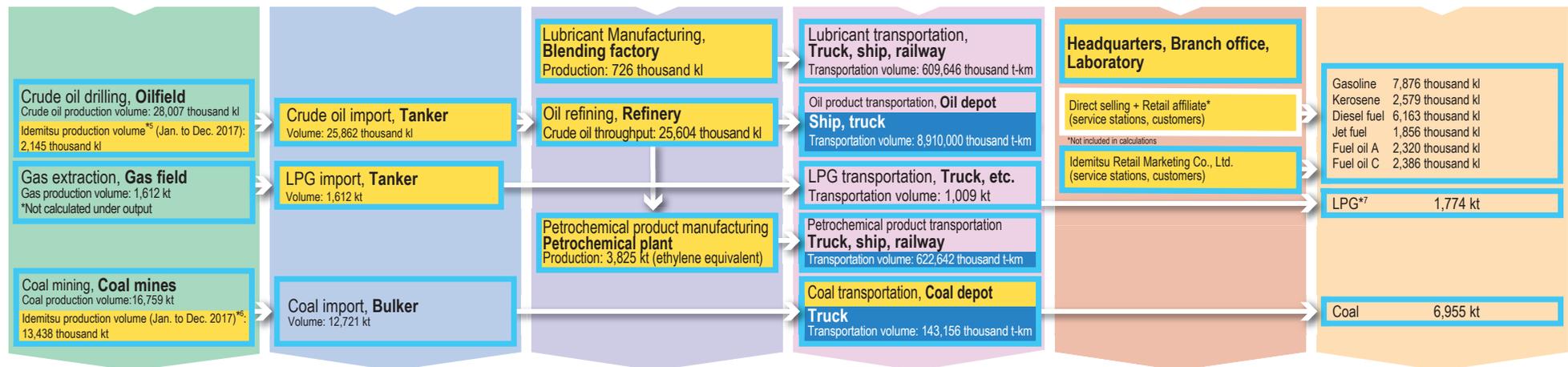
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◆ PJ is an abbreviation for peta joule (10<sup>15</sup> joule)

◆ Actual emission amount given for CO<sub>2</sub> figures (Unadjusted emission amount that does not reflect Kyoto mechanism credits or domestic certified emission reduction credits under the Act on Promotion of Global Warming Countermeasures)



Idemitsu Group's business activities



OUTPUT											
CO <sub>2</sub>	1,807 kt	CO <sub>2</sub>	943 kt	CO <sub>2</sub>	7,264 kt	CO <sub>2</sub>	255 kt	CO <sub>2</sub>	32 kt	CO <sub>2</sub>	82,224 kt
<b>Greenhouse Gas Emissions by GHG Protocol Scope</b>											
Scope 1	315 kt	Scope 1	209 kt	Scope 1	6,941 kt	Scope 1	0kt	Scope 1	0 kt	Scope 1	0 kt
Scope 2	68 kt	Scope 2	0 kt	Scope 2	324 kt	Scope 2	0kt	Scope 2	32 kt	Scope 2	0 kt
Scope 3	1,424 kt	Scope 3	733 kt	Scope 3	— kt	Scope 3	255 kt	Scope 3	— kt	Scope 3	82,224 kt
<b>Total</b>	<b>1,807 kt</b>	<b>Total</b>	<b>943 kt</b>	<b>Total</b>	<b>7,264 kt</b>	<b>Total</b>	<b>255 kt</b>	<b>Total</b>	<b>32 kt</b>	<b>Total</b>	<b>82,224 kt</b>
SO <sub>x</sub>	21,155 t	SO <sub>x</sub>	17,919 t	SO <sub>x</sub>	5,994 t	SO <sub>x</sub>	3,155 t	SO <sub>x</sub>		SO <sub>x</sub>	86,960 t
NO <sub>x</sub>	6,137 t	NO <sub>x</sub>	26,482 t	NO <sub>x</sub>	6,457 t	NO <sub>x</sub>	3,747 t	NO <sub>x</sub>			
				Soot/dust	230 t						
				Wastewater	1,313,998 kt	Wastewater	3.5 kt				
				COD	104 t						
				Total nitrogen (TN)	93 t						
				Total phosphorus (TP)	1.2 t						
				Final disposal (landfill)	1,113 t	Final disposal (landfill)	10 t				

\*4 Energy used for extraction operations: Calculated using energy consumption and environmental emissions (weighted average) data for crude oil production provided in Table 2.1-7 of a report entitled the "Preparation of Life Cycle Inventory (LCI) of Petrochemical Products Including the Transportation Stage" published by the Japan Petroleum Energy Center, a general incorporated foundation.

\*5 Idemitsu oil production volume: Total volume of crude oil produced at the North Sea and other oilfields in which Idemitsu holds working interests. Not exported to Japan.

\*6 Idemitsu coal production volume: Total volume of coal produced at mines in Australia in which Idemitsu holds working interests. Only a portion is exported to Japan.

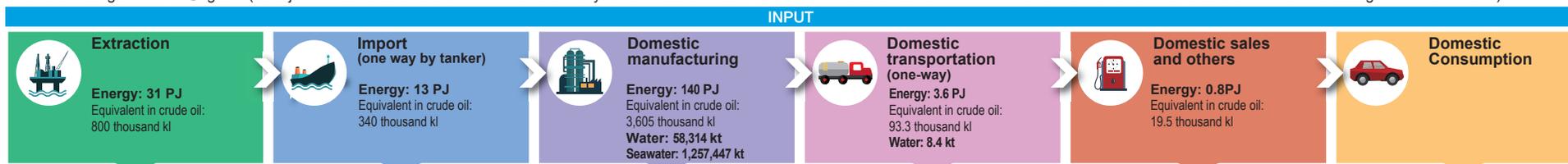
\*7 When calculating CO<sub>2</sub> emissions using the GHG Protocol, we multiply the amount of LPG by our stake (51%) in Astomos Energy Corporation.

## Environmental Impact (FY2017)

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Independent Practitioner's Assurance

- ◆ PJ is an abbreviation for peta joule (10<sup>15</sup> joule)
- ◆ Actual emission amount given for CO<sub>2</sub> figures (Unadjusted emission amount that does not reflect Kyoto mechanism credits or domestic certified emission reduction credits under the Act on Promotion of Global Warming Countermeasures)



### Idemitsu Group's business activities

OUTPUT											
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NO <sub>x</sub>	6,137 t	NO <sub>x</sub>	26,482 t	NO <sub>x</sub>	6,457 t	NO <sub>x</sub>	3,747 t				
				Soot/dust	230 t						
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				COD	104 t						
				Total nitrogen (TN)	93 t						
				Total phosphorus (TP)	1.2 t						
				Final disposal (landfill)	1,113 t	Final disposal (landfill)	10 t				

Basis for Output Calculations

The environmental impact of resource extraction (exclusive of crude oil and coal operations) at Idemitsu-owned mines is calculated based on a report entitled "Preparation of Life Cycle Inventory (LCI) of Petrochemical Products Including the Transportation Stage" ("the LCI report") published by the Japan Petroleum Energy Center. Figures for Idemitsu-owned coal mines based on fuel consumption volumes. Because there is no report to use as reference for LP gas, it is omitted from these figures.	Figures for crude oil and LP gas are calculated based on LCI data for VLCCs and VLGCs aggregated by Idemitsu Tanker Co., Ltd. Figures for coal are based on the LCI report.	Figures for gases other than CO <sub>2</sub> are those reported to government authorities and are based on measurements taken at refineries, petrochemical plants, lubricant blend factories and petrochemical subsidiaries.	Figures are calculated based on data included in regular reports on consignment operations.	Figures are those reported to government authorities by workplaces in charge of operations related to domestic sales (logistics, management and research divisions) and Idemitsu Retail Marketing Co., Ltd.	Figures are for emissions based on calculations that assume the combustion of petroleum sold by Idemitsu for use as fuel.
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Categorization under the GHG Protocol

Scope 1	Because the LCI report does not give specific coefficients for each scope, all emissions from Idemitsu-owned oil fields are calculated as Scope 1.	Figures are for emissions attributable to transportation on vessels owned and operated or regularly chartered by Idemitsu Tanker Co., Ltd.	Figures are for emissions arising from combustion and other raw materials processing at Group production sites.		
Scope 2	Figures are for emissions attributable to the production of energy supplied to the Group for the purpose of coal production at Idemitsu-owned coal mines.	No electricity or steam is supplied by external sources to vessels owned and operated or regularly chartered by Idemitsu Tanker Co., Ltd.	Figures include only those pertaining to the production of electricity and steam supplied from external sources. Other amounts are included in Scope 1 calculations.	Figures are based on electricity usage at workplaces in charge of operations related to domestic sales (logistics, management and research divisions) and Idemitsu Retail Marketing Co., Ltd.	
Scope 3	Emissions are estimates pertaining to products produced in oil fields and mines owned by other companies and subsequently imported by Idemitsu.	Emissions attributable to transportation using vessels chartered from other companies.	Figures do not include amounts resulting from the production of electricity or steam at refineries and petrochemical plants that is sold to neighboring non-Group facilities.	All domestic transportation is contracted to transport and shipping companies.	Service stations managed by retail outlets are not included. Figures are for emissions resulting from the combustion as fuel of products sold. Lubricants and petrochemicals not used as fuel are not included.



## Group Businesses' Greenhouse Gas Emissions Volume Categorized by GHG Protocol Scope (thousand tons)



	Upstream	The Idemitsu Group					Downstream	Total
	Extraction	Imports (one-way transportation by tanker)	Domestic manufacturing	Domestic transportation (one-way)	Domestic sales, and others	Subtotal	Domestic consumption	
Scope 1	315	209	6,941	0	0	7,150	0	7,465
Scope 2	68	0	324	0	32	356	0	424
Scope 3	1,424	733	—	255	—	988	82,224	84,637
Total	1,807	943	7,264	255	32	8,494	82,224	92,526

Note: Figures are rounded off and therefore may not exactly match the totals shown.

### < Basis for Output Calculations >

#### Extraction

The environmental impact of resource extraction (exclusive of crude oil and coal operations) at Idemitsu-owned mines is calculated based on a report entitled "Preparation of Life Cycle Inventory (LCI) of Petrochemical Products Including the Transportation Stage" ("the LCI report") published by the Japan Petroleum Energy Center. Figures for Idemitsu-owned coal mines based on fuel consumption volumes. Because there is no report to use as reference for LP gas, it is omitted from these figures.

#### Imports (one-way by tanker)

Figures for crude oil and LP gas are calculated based on life cycle inventory (LCI) data for very large crude oil carriers (VLCCs) and very large gas carriers (VLGCs) aggregated by Idemitsu Tanker Co., Ltd. Figures for coal are based on the LCI report.

#### Domestic manufacturing

Figures for gases other than CO<sub>2</sub> are those reported to government authorities and are based on measurements taken at refineries, petrochemical plants, lubricant blend factories and petrochemical subsidiaries.

#### Domestic transportation (one-way)

Figures are calculated based on data included in regular reports on consignment operations.

#### Domestic sales and others

Figures are those reported to government authorities by workplaces in charge of operations related to domestic sales (logistics, management and research divisions) and Idemitsu Retail Marketing Co., Ltd.

#### Domestic consumption

Figures are for emissions based on calculations that assume the combustion of petroleum sold by Idemitsu for use as fuel.

### < Categorization under the GHG Protocol >

#### Scope 1 (Direct emissions of CO<sub>2</sub> generated by emission sources owned or controlled by the Group)

##### Extraction

Because the LCI report does not give specific coefficients for each scope, all emissions from Idemitsu-owned oil fields are calculated as Scope 1.

##### Imports (one way by tanker)

Figures are for emissions attributable to transportation on vessels owned and operated or regularly chartered by Idemitsu Tanker Co., Ltd.

##### Domestic manufacturing

Figures are for emissions arising from combustion and other raw materials processing at Group production sites.

#### Scope 2 (Indirect emissions of CO<sub>2</sub> generated during the use of heat, steam, or electricity supplied by a separate operator)

##### Extraction

Figures are for emissions attributable to the production of energy supplied to the Group for the purpose of coal production at Idemitsu-owned coal mines.

##### Imports (one-way by tanker)

No electricity or steam is supplied by external sources to vessels owned and operated or regularly chartered by Idemitsu Tanker Co., Ltd.

##### Domestic manufacturing

Figures include only those pertaining to the production of electricity and steam supplied from external sources. Other amounts are included in Scope 1 calculations.

##### Domestic sales and others

Figures are based on electricity usage at workplaces in charge of operations related to domestic sales (logistics, management and research divisions) and Idemitsu Retail Marketing Co., Ltd.

#### Scope 3 (Indirect CO<sub>2</sub> emissions other than those from Scope 2)

##### Extraction

Emissions are estimates pertaining to products produced in oil fields and mines owned by other companies and subsequently imported by Idemitsu.

##### Imports (one-way by tanker)

Emissions attributable to transportation using vessels chartered from other companies

##### Domestic manufacturing

Figures do not include amounts resulting from the production of electricity or steam at refineries and petrochemical plants that is sold to neighboring non-Group facilities.

##### Domestic transportation (one-way)

All domestic transportation is contracted to transport and shipping companies.

##### Domestic sales and others

Service stations managed by retail outlets are not included.

##### Domestic consumption

Figures are for emissions resulting from the combustion as fuel of products sold. Lubricants and petrochemicals not used as fuel are not included.



## Our Response to Climate Change

To prevent global warming, which is one cause of climate change, we are advancing energy conservation in our business activities, including in production and transport and through the provision of products and services that help save energy at the consumer consumption stage. Also, we are striving to further reduce CO<sub>2</sub> emissions and develop the renewable energy production business.

### Advancement of Energy Conservation in Our Business Activities

By encouraging energy conservation in our business activities, we help reduce environmental impact through lower emissions of CO<sub>2</sub> and other greenhouse gases, sulfur oxides (SOx), and nitrogen oxides (NOx) while saving energy resources and cutting supply costs to contribute to the creation of a sustainable society.

#### Issues/Targets and Results

##### <Energy conservation in the manufacturing sector>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
•	Reduce unit energy consumption by an average of 1% between fiscal 2013 and 2017	Unit energy consumption: 8.79 l/kl (0.3% average decrease) at refineries and 0.406 kl/t (4.2% average increase) at petrochemical plants	•	Goal not achieved for petrochemical plants or refineries due mainly to unplanned suspensions	•	Reduce unit energy consumption by an average of 1% between fiscal 2014 and 2018		

##### <Energy conservation in domestic transportation>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
•	Reduce unit energy consumption by an average of 1% between fiscal 2013 and 2017	As a result of continuing with such measures from fiscal 2016 as making full use of large vessels, unit energy consumption was 8.65 kl/million t-km (1.3% average decrease).	•	Goal achieved	Reduce unit energy consumption by an average of 1% between 2014 and 2018			

### Energy Conservation in the Manufacturing Sector

Idemitsu's refineries and petrochemical plants account for a significant portion of the total energy consumption of the Idemitsu Group. Therefore, energy conservation activities undertaken at the Group's refineries and petrochemical plants contribute significantly to the reduction of greenhouse gas emissions. Because petroleum products and petrochemicals are directly connected with daily life and industrial activities, we need to stably supply said items in volumes commensurate with the level of demand. Accordingly, our approach to energy conservation is not predicated on a reduction in total energy consumption volume but on efforts to lower unit energy consumption.

Based on the Act on the Rational Use of Energy, we are targeting an average 1% annual reduction in unit energy consumption in the medium term. Fiscal 2017 unit energy consumption was 8.79 l/kl at refineries and 0.406 kl/t at the petrochemical plants. At refineries, consumption fell 0.3% on average for the year. The energy conservation attained by upgrading equipment

and improving operations is clearly having a lowering effect on unit consumption. Going forward, we will continue working to achieve our goal by promoting initiatives aimed at ensuring safe operations and energy conservation reforms. However, the annual average increased 4.2% at the petrochemical plants, but this was largely attributable to the change in the balance of services after crude oil processing at the Tokuyama Refinery had been suspended. Other negative factors included the decreased production and non-productive services rendered at the Chiba Complex (Chemicals) due to the planned suspension of two major pieces of equipment to conduct regular maintenance and upgrades.

#### ■ Commitment to a Low Carbon Society

Amid the post-Kyoto Protocol environment, Nippon Keidanren (Japan Business Federation) formulated the Commitment to a Low Carbon Society action plan, which it has been implementing since 2013. Under the Commitment, the goals outlined for the Japanese petroleum and petrochemicals industries are as shown below. To help ensure that these goals are met, Idemitsu is advancing an energy conservation agenda at its refineries and petrochemical plants.

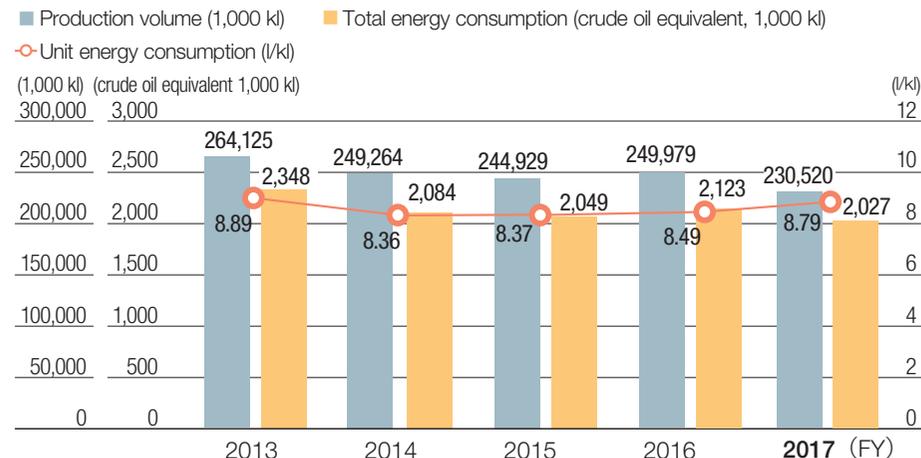
#### Industry Goals :

Petroleum Association of Japan: Cumulative energy savings equivalent to 530,000 kl of crude oil between fiscal 2010 and 2020.  
 Japan Chemical Industry Association: Reduce annual CO<sub>2</sub> emissions in 2020 by 1,500,000 t from 2010 levels (based on levels before new measures were put in place).

### Production Volumes, Total Energy Consumption (Crude Oil Equivalent) and Unit Energy Consumption at Refineries and Petrochemical



#### Refineries



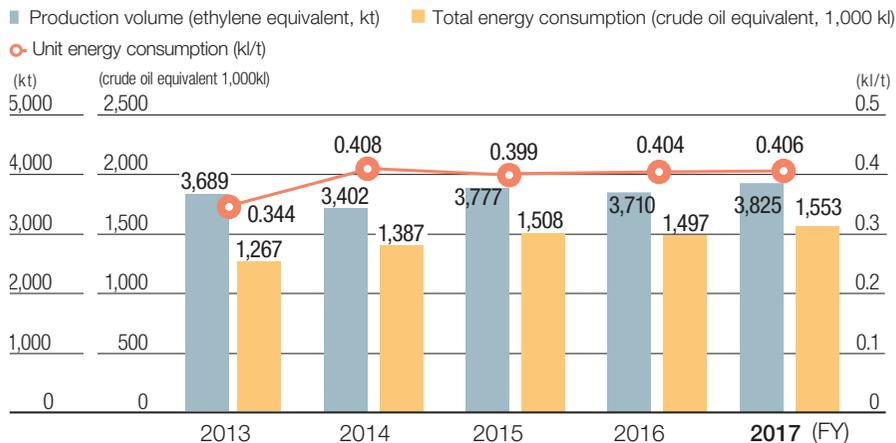
Scope of collection: Fiscal 2013: the Hokkaido, Chiba, Aichi and Tokuyama refineries. From fiscal 2014 to 2017: the Hokkaido Refinery, Chiba Complex (Chemicals) and Aichi Refinery

Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.

Unit energy consumption (in liters per kiloliters) at refineries is calculated as follows: Total energy consumption (crude oil equivalent, in liters) ÷ Production volume of atmospheric distillation units (in kiloliters)

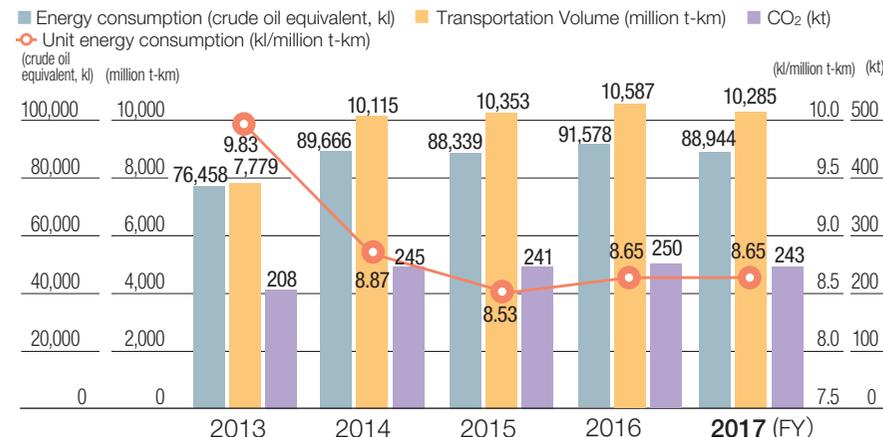


### Petrochemical Plants



Scope of collection: Fiscal 2013: the Chiba and Tokuyama petrochemical plants, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation. From fiscal 2014 to 2017: the Chiba Complex (Chemicals), Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.  
 Unit energy consumption (in kiloliters per ton) at petrochemical plants is calculated as follows: Total energy consumption (crude oil equivalent, in kiloliters) ÷ Production volume (ethylene equivalent, in tons)

### CO<sub>2</sub> Emissions as Consignor

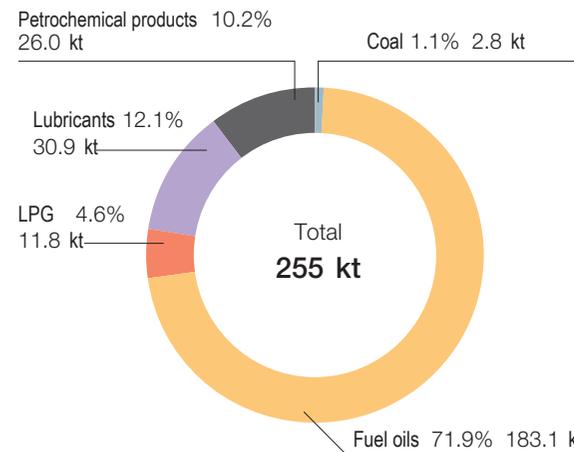


Scope of tabulation: Idemitsu Kosan Co., Ltd.;  
 LPG not included because a different method of calculation is used

### Energy Conservation in the Domestic Transport Sector

In accordance with the Act on the Rational Use of Energy, Idemitsu is working toward a target of reducing unit energy consumption by 1% annually on average over the medium to long term. To achieve this goal, we encourage energy conservation in the transport sector (as a consignor) by promoting large-sized shipping lots on inland tankers and tanker trucks as well as by eliminating operational inefficiencies resulting from nonshipment. Distance traveled and energy used for the maritime transport of fuel oil have increased since the suspension of crude oil processing at the Tokuyama Refinery (now Tokuyama Complex), but we have been advancing efforts to improve distribution efficiency through the use of larger shipping lots and optimization of shipping bases. In fiscal 2017, we continued efforts advanced in fiscal 2016 to maximize the use of larger vessels; as a result, unit energy consumption stood at 8.65 kl crude oil equivalent per million t-km and we reached our goal of a 1.0% reduction in average annual unit energy consumption.

### Breakdown of FY2017 CO<sub>2</sub> Emissions as Consignor



Scope of tabulation: Idemitsu Kosan Co., Ltd. and Astomos Energy Corporation.  
 The figures for Astomos Energy are calculated in proportion to Idemitsu's stake (51%).

## Energy Conservation in the Ocean-Going Transportation Sector

Idemitsu Tanker, which handles the Group's oceangoing transportation sector, operates 18 tankers, including both owned and long-term chartered vessels. Of that number, the company engages in the ship management\*1 of a total of seven tankers. The vessel Nissho Maru, built in fiscal 2004, minimizes energy loss through the use of contra-rotating propellers. The Idemitsu Maru, built in fiscal 2007, is equipped with additional thrusting fins fitted to each side of its helm in addition to an electronically controlled engine (flex engine) for fuel-efficient operation. The APOLLO DREAM, which was constructed in 2014, is equipped with the latest energy conservation technology, including a semicircular duct\*2 and SURF-BULB,\*3 while featuring an up-to-date electronically controlled engine and an improved hull configuration. As a result, the vessel delivers about 13% better fuel efficiency than the IDEMITSU MARU. Exhaust gas economizers, which are currently installed in all our ships under management, recover exhaust heat from the main engine system to help the boilers generate steam. This enables the steam turbine electric generator system to provide nearly all the onboard power needed while the ships are at sea. Moreover, we actively promote slower tanker speeds and, in our day-to-day transport operations, strive to reduce fuel consumption and conserve energy through efficient ship assignment, setting such targets as reducing demurrage to less than one and a half days.



Semicircular duct (source: [Japan Marine United Corporation](#))



SURF-BULB (source: [Japan Marine United Corporation](#))

\*1 Ship management: To maintain a vessel and register its ship classification, which is required to actually operate a ship at sea, and to operate said vessel, ensuring its fully seaworthy state by providing necessary crew as well as stores, lubricants and other expendables. Number of tankers is as of March 31, 2018.

\*2 Semicircular duct: A device used to improve fuel efficiency by around 3% to 8% by recovering the energy of longitudinal vortices, which are created near the stern, to produce thrust.

\*3 Swept-back Up-thrusting Rudder Fin (SURF) with BULB. A device used to improve fuel efficiency by around 3% to 5% by recovering the energy of the hub vortex, which is created behind the propeller, to produce thrust.

[Idemitsu Tanker](#)

## Energy Conservation at Service Stations

To reduce CO<sub>2</sub> emissions from service stations, Idemitsu had switched to LEDs for lighting for 1,343 sign poles at its 3,545 Idemitsu service stations (as of the end of March 2018) throughout Japan.

## The Idemitsu Group's Greenhouse Gas Emissions

Within the Idemitsu Group, business sites categorized as specified emitters as outlined in the Act on Promotion of Global Warming Countermeasures comprise the lubricant blend factories, performance chemicals factories and plastic processing factories of Idemitsu and its consolidated subsidiaries as well as a number of fuel oil sales subsidiaries. CO<sub>2</sub> from energy consumption makes up the majority of greenhouse gases emitted in Japan by the Idemitsu Group, with over 99% being emitted by manufacturing divisions.

### Breakdown of FY2017 Greenhouse Gas Emissions

Independent Practitioner's Assurance

Category	Actual Emissions (1,000 t-CO <sub>2</sub> equivalent)	Breakdown of Actual Emissions		Adjusted Emissions* <sup>4</sup> (1,000 t-CO <sub>2</sub> equivalent)
		Energy sources CO <sub>2</sub> (1,000 t-CO <sub>2</sub> )	Other GHG (1,000 t-CO <sub>2</sub> equivalent)	
Manufacturing Dept.* <sup>5</sup>	7,379	7,245	135	7,378
Logistics Dept.* <sup>6</sup>	17	17	0	19
Administration Dept.* <sup>7</sup>	4	4	0	4
Research Dept.* <sup>8</sup>	12	11	0	11
Total	7,412	7,277	135	7,413

Note: Figures are rounded off and therefore may not exactly match the totals shown.

\*4 Adjusted emissions: CO<sub>2</sub> emissions are calculated using an adjusted emission factor that reflects Kyoto mechanism credits and domestic certified emission reduction (credits) under the Act on Promotion of Global Warming Countermeasures.

\*5 The Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, Chiba Complex (Chemicals), Tokuyama Complex, Omaezaki Factory, Prime Polymer Co., Ltd.'s Anesaki Works, Cray Valley Idemitsu Corporation, Idemitsu Unitech Co., Ltd., BASF Idemitsu Co., Ltd., LION IDEMITSU COMPOSITES CO., LTD, Idemitsu Lube Techno Co., Ltd., Union Oil Industry Co., Ltd., SDS Biotech K.K. (As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.)

\*6 Oil depots, fuel oil and lubricant shipping centers and Idemitsu Retail Marketing Co., Ltd.

\*7 Head Office, retail branches, operational branches, training centers

\*8 Advanced Technology Research Laboratories, Coal & Environment Research Laboratory, Lubricants Research Laboratory, Performance Materials Laboratories



## The Idemitsu Group's FY2017 Greenhouse Gas Emissions by GHG Protocol Scope

Independent Practitioner's Assurance

Department	Greenhouse Gas Emissions by GHG Protocol Scope (1,000 t-CO <sub>2</sub> equivalent)			
	Scope 1 <sup>19</sup>	Scope 2	Scope 3	Total
Manufacturing Dept. <sup>15</sup>	7,056	324	0	7,379
Logistics Dept. <sup>16</sup>	15	2	0	17
Administration Dept. <sup>17</sup>	2	2	0	4
Research Dept. <sup>18</sup>	10	1	0	12
Total	7,083	329	0	7,412

Note: Figures are rounded off and therefore may not exactly match the totals shown.

<sup>15</sup> The Hokkaido Refinery, Chiba Complex (Petroleum, Chemical), Aichi Refinery, Tokuyama Complex, Omaezaki Factory, Prime Polymer Co., Ltd.'s Anesaki Works, Cray Valley Idemitsu Corporation, Idemitsu Unitech Co., Ltd, BASF Idemitsu Co., Ltd., LION IDEMITSU COMPOSITES CO., LTD, Idemitsu Lube Techno Co., Ltd., Union Oil Industry Co., Ltd., SDS Biotech K.K. (As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.)

<sup>16</sup> Oil depots, fuel oil and lubricant shipping centers and Idemitsu Retail Marketing Co., Ltd.

<sup>17</sup> Head Office, retail branches, operational branches, training centers

<sup>18</sup> Advanced Technology Research Laboratories, Coal & Environment Research Laboratory, Lubricants Research Laboratory, Performance Materials Laboratories

<sup>19</sup> Greenhouse gases other than CO<sub>2</sub> are calculated entirely as under Scope 1.

## Contributing to GHG Reduction at the Consumption Stage

Fuel oils account for the majority of Idemitsu's petroleum products, while around 90% of the CO<sub>2</sub> generated throughout their life cycles,\*10 from crude oil extraction to consumption, is generated when the fuel oils are consumed by customers. For this reason, we have been providing energy-saving technologies, products and services with lower CO<sub>2</sub> emissions and promoting our renewable energy business as another important mission of Idemitsu.

\*10 Life cycle: A series of stages from raw material (crude oil) extraction to consumption by users and disposal as waste

## Providing Energy-Saving Products and Services

### Issues/Targets and Results

#### Expanding eco-friendly products and services

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	Fiscal 2016 Targets Results Evaluation/ Electronic materials: Expand sales volume of OLED materials, organic photoreceptor resin and inorganic electronic materials		Increased by over 100% vs. fiscal 2016			Goal achieved		Expand sales volume of OLED materials, organic photoreceptor resin and inorganic electronic materials
	<b>Agricultural biotechnology:</b> Begin new sales: Environmental greening fields: 1 product Livestock field: 1 product		No new sales			Strengthened product development framework to conduct routine research and development		<b>Agricultural biotechnology:</b> Begin new sales: Environmental greening fields: 1 product Livestock field: 2 products

### Fuel oils

For customers with oil-fired boilers, we use "thermal diagnostics" to provide recommendations on operating conditions and operating methods that improve combustion efficiency. In addition, we offer pre-mixed combustion technologies for liquid by-products generated at various factories, including used cooking oil, to achieve greater energy savings and lower CO<sub>2</sub> emissions. In fiscal 2017, we provided 3,181 improvement proposals.

### Coal

In 1988, Idemitsu established the Coal Research Office (currently the Coal & Environment Research Laboratory). We worked to develop high-efficiency combustion technologies that reduce the environmental impact of using coal and reduce the amount of coal used. We currently offer customers using coal, including overseas customers, ways to optimize blends of coal types and operation schemes for boilers using incineration simulations and the "Idemitsu Coal Assessment System." In addition, we are working to develop technology that can burn woody biomass and coal simultaneously with high efficiency as an environment-friendly low-carbon solution. If we are able to burn between 30% and 50% woody biomass, which is a renewable energy resource, along with coal, we can reduce CO<sub>2</sub> emissions by that same amount.

## TOPICS: Promoting Energy Conservation through ULTY-V plus™, a Control Optimization System for Boilers Featuring AI and IoT Functions

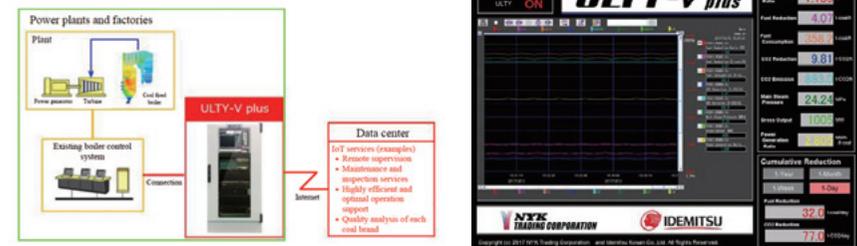
Idemitsu, along with NYK Trading Corporation and NYK Line, jointly developed ULTY-V plus™, which integrates AI and IoT technologies into a control optimization system for boilers.

It can be difficult to maintain stable control of the coal-fired boilers used at power plants and factories as temporary excesses or deficits in the fuel supply as well as a variety of other factors may impact operability. To help ensure stable plant operations via the optimizing of combustion controls, Idemitsu introduced ULTY-V plus™, a system that reduces fuel consumption.

In addition to its energy-saving technology, the system features fully automated AI functions that render it capable of independently handling more complicated series of actions such as measurement, analysis and decision making. The AI functions further improve control optimization system performance by enabling high-precision control of the boilers based on internally stored data and sensing minor changes over time in the properties of the boilers. The inclusion of IoT functions enables remote monitoring and coordinating functions through a network via on-site cameras and small data loggers.

Drawing on Idemitsu's highly efficient coal combustion and quality analysis technologies, we will continue developing various technologies and services, including operational guidance, to reduce our environmental footprint and secure further improvements to combustion and economic efficiency based on operational condition assessments of plants' control optimization systems and boiler data compiled in real time.

Image of features of the coal boiler control optimization system, ULTY-V plus™, equipped with AI and IoT





## ■ Functional materials

### < Lubricants >

Our lubricants, which are a mix of highly refined low-viscosity base oil and high-performance additives, demonstrate fuel conservation and resource saving (longer service life) performance.

### < Electronic Materials >

In the electronic materials field, we are manufacturing and selling long-lasting, low-power-consuming OLED materials for use in such devices as smartphones and OLED television displays.

[Electronic Materials](#)

### < Agricultural Biotechnology >

We possess unique technologies that utilize microbial agents and natural products and are promoting the development of practical applications of said technologies. In the livestock field, we have commercialized functional feeds that preserve the health of livestock through new materials incorporating natural products. These functional feeds act on the digestive systems of livestock and are expected to have a secondary effect of reducing emissions of the GHG methane. In the agricultural greening field, we are engaged in research related to microbial agents and natural products that support the robust growth of plants even in various stressful environments caused by climate change. By continuing these efforts, we will contribute to sustainable food production and a lower impact on the global environment.

[Agricultural Biotechnology](#)

## Developing Our Renewable Energy Business

Aiming to combat climate change and reduce our environmental impact, we operate an electric power business utilizing renewable energy (geothermal, biomass, solar, and wind).

### Issues/Targets and Results

#### Promoting our renewable energy business

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<b>Wind power business:</b> Maintain stable operations at Rokkasho-Mura Futamata Wind Farm		Maintained stable operations and achieved zero accidents requiring time off work			Goal achieved		Maintain stable operations
	<b>Solar power business:</b> • Maintain stable operations at the four power stations		Maintained stable operations at the four power stations and achieved zero accidents requiring time off work			Goal achieved		Maintain stable operations
	<b>Biomass power business:</b> Maintain stable operations at the Tosa Power Station and the Ono Power Station		<ul style="list-style-type: none"> <li>Maintained stable operations at the Tosa Power Station without any accidents that required time off work</li> <li>Began stable operations of the Ono Power Station and achieved zero accidents that required time off work</li> </ul>			Goal achieved		Maintain stable operations
	<b>Electric power retail business:</b> Expand sales of electric power from sources that include renewable energy (including FIT power)		<ul style="list-style-type: none"> <li>Sales exceeded the previous year's figures</li> </ul>			Goal achieved		Expand sales of electric power from sources that include renewable energy (including FIT power)
	<b>Overseas biofuel business:</b> Cambodia: Sum up the results of the five-year study and formulate a policy for operations going forward  Southeast Asia: Test technology through the trials in Thailand and elsewhere		<ul style="list-style-type: none"> <li>Summed up the results of the five-year study in Cambodia and formulated a policy for operations going forward</li> <li>Provided technological support, including disclosing technology to improve content ratio of biodiesel with the Thai government and local companies</li> </ul>			Goal achieved		Ethanol business: Begin feasibility study of ethanol business in Vietnam in addition to Cambodia Biodiesel business: Study commercialization feasibility in Thailand and test the superiority of Idemitsu technologies in the Thai government's trials
	<b>Geothermal energy business:</b> <ul style="list-style-type: none"> <li>Maintain stable operations at the Takigami Office, including the binary cycle facilities</li> <li>Drill two wells in the Amemasudake and Oyasu districts and confirm and discover promising geothermal reservoirs</li> </ul>		<ul style="list-style-type: none"> <li>The Takigami Office, including its binary cycle power generation facilities, achieved usage rates according to plan without incident.</li> <li>Drilled exploratory wells in reclaimed areas in Amemasudake and Oyasu regions and conducted fumarole tests</li> </ul>			<ul style="list-style-type: none"> <li>Goal achieved at the Takigami Office</li> <li>Conduct surveys in Amemasudake and Oyasu regions as planned, achieving goal</li> </ul>		<ul style="list-style-type: none"> <li>Maintain stable operations at the Takigami Office, including the binary cycle facilities.</li> <li>Drill one well in the Amemasudake district and confirm geothermal reservoirs</li> <li>Move onto practical trials in the Oyasu district, drill three exploratory wells for production/recovery, and begin drafting environmental protection plans to access the area</li> </ul>

### Power Generation Business

#### Wind Power

Idemitsu provided funding to Futamata Wind Development Co., Ltd. in April 2010, and helps operate the Futamata Wind Power Plant (51,000 kW) in Rokkasho-Mura, Kamikita-Gun, Aomori Prefecture.

[Wind Projects](#)

#### Solar Power (Mega Solar)

Idemitsu is actively engaged in the solar power business on relatively large tracts of idle Company-owned land with good sun exposure, such as the sites of closed refineries. The Company's four power stations produce a total of 15,210 kW.

Moji Power Plant I: 1,900 kW (Fukuoka Prefecture)

Moji Power Plant II: 1,990 kW (Fukuoka Prefecture)

Himeji Power Plant: 10,000 kW (Hyogo Prefecture)

Onahama Power Plant: 1,320 kW (Fukushima Prefecture)

[Solar Power \(Mega Solar\)](#)



The Moji Power Plant

#### Biomass Power

Idemitsu provided funding for Kochi Prefecture's Tosa Green Power Co., Ltd. and has operated the Tosa Power Plant (6,250 kW) since April 2015. The plant is Japan's first stand-alone wood-fueled biomass power plant, exclusively burning unused wood and handling everything onsite from chipping and drying to power generation. The station contributes to forest management by effectively using waste wood while reducing CO<sub>2</sub> emissions by using renewable energy, and to the stimulation of local economies by creating jobs and encouraging the local production and local consumption of energy. We also acquired a stake in Fukui Prefecture's Fukui Green Power Co., Ltd., and the Ono Power Plant (7,000 kW) commenced operation in April 2016.



The Ono Power Plant

#### Geothermal Power

Idemitsu has been involved in developing geothermal resources since the 1970s. In 1996, Idemitsu began supplying steam on demand to the Takigami Power Plant (25 MW, Kokonoe-machi, Oita Prefecture), which Idemitsu operates jointly with Kyushu Electric Power Co., Inc. In June 2010, the plant's power generation capacity was increased to 27.5 MW. Our efforts have contributed to the plant's high utilization rate which, averaging over 90%, is at the top of its class in Japan.

The steam is generated at the Takigami Binary-Cycle Power Station (power generation capacity: 5,050 kW), which was established in March 2017 to make effective use of previously unused hot water and commenced commercial operations on the site of the Takigami Power Station, one of the largest geothermal binary-cycle power stations in Japan. At the same time, we are working to further expand the nation's geothermal resource development by drilling survey geothermal wells in the Oyasu district of Akita and the Amemasudake district of Hokkaido Prefecture. Going forward, we will continue to contribute to the expansion of electric power supply through renewable energy sources developed in Japan.



Commercial Operation Begins at One of Japan's Largest Binary Power Plants in Takigami

[Geothermal](#)

## The Idemitsu Group's Renewable Energy Businesses

Type	Power Station Name	Output (kW)	Notes
Wind	Futamata Wind Power Development's Rokkasho-Mura Futamata Wind Power Station	51,000	
Solar	Himeji Power Station	10,000	
	Moji No. 1 Power Station	1,900	
	Moji No. 2 Power Station	1,990	
	Onahama Power Station	1,320	
Biomass	Tosa Green Power's Tosa Power Station	6,250	
	Fukui Green Power	7,340	
Geothermal	Idemitsu Oita Geothermal Co., Ltd.'s Takigami Power Plant	27,500	Steam supply
		5,050	Binary cycle power station, operations to begin March 2017

### Electric Power Retail

Idemitsu Green Power K.K. and Premium Green Power K.K. comprise the electric power business and provide power in response to customer demands related to environmental and economic concerns. Premium Green Power provides customers with electricity that, in principle, is generated from 100% renewable sources, such as wind, solar, biomass, and binary-cycle geothermal power. Looking to balance environmental and economic concerns, Idemitsu Green Power meets customer needs by drawing on a mix of resources and sources encompassing fossil fuels, recycled power and the aforementioned renewable sources.

### Biofuel Business

We are studying the feasibility of biofuel businesses in Southeast Asia. Specifically, we are considering a bioethanol business in Cambodia and Vietnam focused on the cassava plant. In addition, we provide technical support for a government-sponsored project in Thailand to produce highly concentrated blends of biodiesel and are engaged in commercialization efforts in the country.



Cassava, a raw material for bioethanol



Cassava fields in Cambodia

[Biofuels](#)

## Response to Biodiversity

### Initiatives Undertaken by Our Production Bases in Japan

Beginning with the planning of its first refinery in Shunan City, Yamaguchi Prefecture, which it completed in 1957, Idemitsu has been committed to protecting the surrounding natural environment when constructing production facilities. At present, the four production bases we have built and continue to operate in Yamaguchi, Chiba, Hokkaido and Aichi prefectures manage green spaces that account for a total of 240 hectares, or the rough equivalent of 50 Tokyo Domes.

To better care for these large swaths of land, in 2011—the centennial of its founding—Idemitsu consulted with experts on how best to manage green spaces and solicited evaluations under the Social and Environmental Green Evaluation System (SEGES) developed by the Organization for Landscape and Urban Green Infrastructure. The Hokkaido Refinery received Excellent Stage 3 certification in fiscal 2018, and the Aichi Refinery received Superlative Stage certification, the highest one, in fiscal 2016. Based on the SEGES evaluations, we have been periodically thinning out the undergrowth as needed, and, when planting new saplings, we prioritize local species. General public access to our facilities is restricted because our production bases, namely oil refineries and petrochemical plants, handle hazardous materials. This has allowed the green spaces to function as sanctuaries for birds and other animals and even, in some spots, have become ideal habitats. Making the most of the opportunities the green spaces offer, the Hokkaido Refinery, Chiba Complex, and Aichi Refinery provide environmental learning spaces for neighboring elementary school students and other people.

Since December 1996, the Hokkaido Refinery has used the Corporate Forest Program started by the Forestry Agency to promote activities that contribute to society and the environment, with corporations participating in the upkeep of national forests. We named our watershed protection forest Idemitsu Appenai Watershed Forest and manage it appropriately. In addition, the Aichi Refinery is a key active member of the Inochi wo Tsunagu Project,\* which aims to qualitatively improve biodiversity. Every time new facilities are built, Idemitsu conducts an environmental assessment. Any endangered species thus identified is then sheltered by, for example, establishing a protected area. Currently, at the Aichi Refinery we are working to conserve the endangered plant species *Salvia plebeia*, which was discovered growing on the site when new facility construction was undertaken. We have established a 70-square-meter protected area around the *Salvia plebeia*, which has been designated a near threatened species by the Ministry of the Environment.

\* Inochi wo Tsunagu Project: An organization mainly comprising Aichi municipalities, companies, university students, and experts that aims to increase greenery and create easily habitable environments for wildlife



*Salvia plebeia*

### Initiatives for Overseas Transport

#### (1) Ballast water measures

Our ocean-going tankers have undertaken various activities in accordance with the Ballast Water Management Convention, which came into effect on September 8, 2017, and the guidelines of the International Maritime Organization to prevent the

ecosystem destruction induced by foreign species. The convention mandates the installation of ballast treatment systems within a certain timeframe. In line with this rule, vessels managed by Idemitsu Tanker are steadily being installed with said systems. As of August 31, 2018, we finished installing electrolytic or filter/disinfectant treatment systems on APOLLO DREAM, ASTOMOS EARTH, and ASTOMOS VENUS. To prevent the disturbance of local ecosystems at ports of call, we use ballast water treatment systems to eliminate the harmful aquatic life and pathogens in ballast water. Or, during transit our ocean-going tankers replace the seawater they take in as ballast when leaving port with water from the open ocean, which has little impact on local ecosystems.

#### (2) Oil spill prevention measures

During transport by oceangoing tankers, we make various efforts to maintain a record of zero oil spillage. In the area of equipment, each of our very large crude carriers (VLCCs) in operation is double-hulled, thereby reducing the risk of oil spills. In terms of personnel, we provide regular training and education, including on-board emergency response drills and safety and environmental education, for all crew members.

**There were zero marine oil spills in 2017.**

[APOLLO DREAM](#)

### Initiatives in Oilfield Development

To protect marine ecosystems, effluent water containing oil generated during test drilling and development is treated using a separator. The oil is transported to land-based facilities for processing and the water is returned to the sea after being processed to meet effluent water standards. In addition, we always consult an expert to conduct an environmental impact assessment prior to test drilling and production to ensure that the impact is at an acceptable level. In the eventuality of a marine oil spillage, we deploy an oil containment boom\* to restrict its spread and recover the spilled oil in accordance with our Oil Pollution Contingency Plan.

**There were zero marine oil spills in 2017.**

\* Oil containment boom: A floating barrier temporarily placed in a body of water for the purpose of containing or removing an oil spill from refineries, oil depots and other oil storage facilities as well as from marine oilfield facilities, tankers, tanker berthing facilities, and other facilities. Always deployed when unloading crude oil from a tanker to a ground facility.

### Initiatives in Coal Mining

Idemitsu Australia Resources (IAR), which is based in Brisbane, Australia, is working to contribute to sustainable growth by solving various problems from a long-term perspective through management's commitment to the following policies.

< Idemitsu Australia Resources, Management Policies >

- Environmental Management Policy
- Energy Management Policy
- Cultural Asset Policy
- Stakeholder Engagement Policy

Specifically, based on an agreement with the state government, IAR work with the local aboriginal population to preserve cultural heritage prior to commencing extraction operations at mines. In addition, we filled back in extracted areas once operations are done to return it to its original condition and have planted over 340,000 specimens endemic to the area. In addition, to maintain biodiversity and protect wildlife, IAR has to date acquired around 11,000 ha of land surrounding its mines.



## Waste Reduction

### Reduction of Final Disposal Volume

#### Issues/Targets and Results

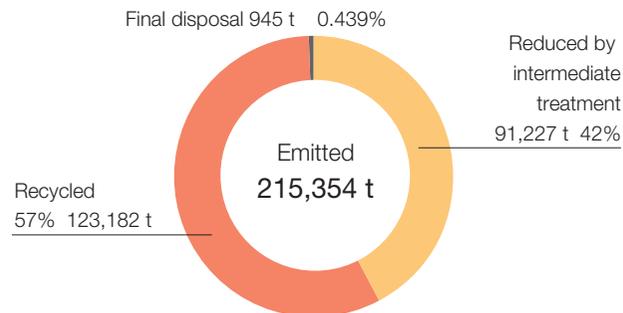
P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	Attain final disposal (landfill) volume of industrial waste at all refineries, the petrochemical plants of 0.5% or lower		Attained final disposal (landfill) volume of industrial waste at all refineries, the petrochemical plants of 0.5% or lower			Goal achieved		Attain final disposal (landfill) volume of industrial waste at all business sites of 1.0% or lower

### Waste Reduction in the Manufacturing Sector

As part of efforts led by Nippon Keidanren to create a recycling-oriented society, the petroleum industry and the petrochemical industry are each setting voluntary targets\*1 for reducing the landfill waste volume of industrial waste. Because Idemitsu has already attained these targets, we have set an even higher target and have been working to maintain the industrial waste ultimately deposited in landfills at or below 1.0% of the volume of waste generated at all refineries and petrochemical plants. In fiscal 2017, all refineries were able to achieve this target. However, the final disposal volume of our petrochemical plants was 2.0% of the waste they generated (total of Chiba Complex (Chemicals) and Tokuyama Complex) due to an increase in final disposal volume at the Tokuyama Complex. This is mainly due to the fact that we began processing material generated by the removal of facilities at the former Tokuyama Refinery (Tokuyama Complex), including its oil refining equipment, which shut down in March 2014.

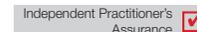
\*1 Voluntary Targets for Reducing the Final Disposal (Landfill) of Industrial Waste: (1) The petroleum industry (Petroleum Association of Japan): Reduce the final disposal (landfill) of industrial waste by more than 94% in fiscal 2010 versus fiscal 1990 level. Along with this, realize zero emissions of industrial waste as an independent industry target. Zero emissions is defined as an industrial waste landfill disposal rate of 1% or below. Final disposal (landfill) rate = Final disposal volume/volume of industrial waste generated. (2) Petrochemical Industry (Japan Chemical Industry Association: general incorporated association): Reduce outsourced final disposal (landfill) of industrial waste by 40% in fiscal 2010 versus fiscal 1990 level. Raise the amount of recycled industrial waste in fiscal 2010 by 15% versus fiscal 1990 level.

### FY2017 Breakdown of Industrial Waste Treatment



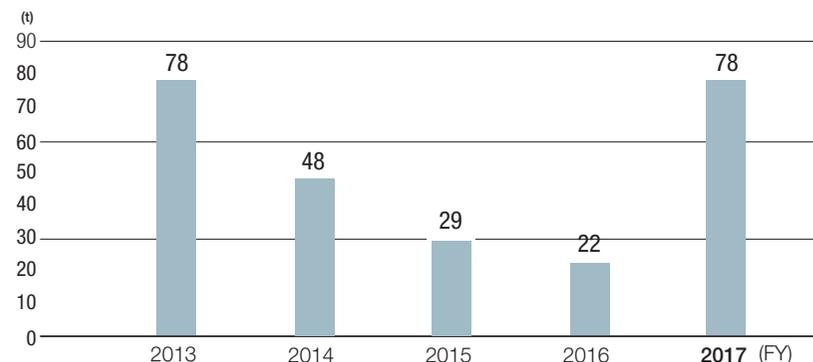
Scope of tabulation: The Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, Chiba Complex (Chemicals), the Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation (As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been reorganized into the Chiba Complex. Within this report, each facility is referred to as the Chiba Complex (Petroleum) and Chiba Complex (Chemicals).)

## Final Disposal (Landfill) of Industrial Waste



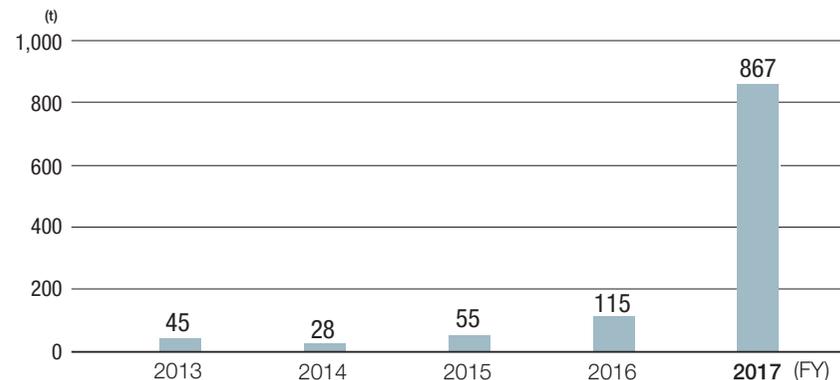
(Includes general business waste and valuable material in some cases)

### Refineries



Scope of tabulation: Fiscal 2013: the Hokkaido, Chiba, Aichi and Tokuyama refineries  
 From fiscal 2014 to 2016: the Hokkaido, Chiba and Aichi refineries  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex.  
 Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.  
 Fiscal 2017: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery

### Petrochemical Plants



Scope of tabulation: Fiscal 2013: The Chiba and Tokuyama petrochemical plants, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 From fiscal 2014 to 2016: the Chiba Petrochemical Plant, the Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex.  
 Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.  
 Fiscal 2017: Chiba Complex (Chemicals), Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation



## Recycling of Catalysts\*2

Our refineries use approximately 2,000 tons of catalysts annually in the process that removes sulfur from heavy oil. Used catalysts with reduced desulfurization activity are regenerated by an outside contractor and used again at our refineries. Utilizing regenerated catalysts allows us to reduce the use of new catalysts by about 20%.

Moreover, these catalysts that can no longer be used for desulfurization sometimes contain rare metals like molybdenum and vanadium, which can be sold as valuable resources. Idemitsu properly processes them in line with external recycling demand.

\*2 Catalyst: A substance that accelerates a specific chemical reaction without being modified (consumed) in the process. Catalysts play an important role in the production process of petroleum products and petrochemical products.

## Recycling of Petrochemical Products

Departments handling plastic processed products are promoting the development of easily recycled products made from single-plastic resins and from recycled materials. We have also established a recycling system for used plastic containers. These containers are used as ink containers and for other purposes.

## Reducing Waste at Service Stations

We distribute our Service Station Industrial Waste Management Manual to Idemitsu service stations to ensure compliance with relevant laws and regulations. Among the waste generated at service stations, we instruct service stations that used tires be collected for recycling by tire sales companies and industrial waste hauling companies, while used batteries be collected for recycling by the Lead Acid Storage Battery Recycle Association.



## Management and Reduction of Chemical Substances

### Storing and Processing Waste

#### Management of PRTR-Designated Chemical Substances

Our refineries, petrochemical plants, oil depots and other facilities handle chemical substances subject to the Pollutant Release and Transfer Register (PRTR) Law.\*1 Among the PRTR-designated chemical substances found in petroleum and petroleum products are volatile organic compounds (VOCs), such as benzene, toluene xylene and normal hexane. Whenever oil is transferred into or removed from storage tanks as well as when it is loaded onto tanker trucks and ships, there will be some evaporation of the VOCs it contains and the resulting gas will attempt to escape into the atmosphere. To minimize such VOC emissions, Idemitsu has installed internal floating roofs in storage tanks that reduce evaporation and carries out measures aimed ensuring VOC recovery during transport.

Furthermore, following the suspension of certain equipment, since 2016 we have eliminated emissions of dichloromethane, a chemical used in petrochemical manufacturing processes. The portion transferred to locations outside Idemitsu business sites is disposed of in compliance with the Waste Management Law.

\*1 PRTR Law: The "Act on Confirmation, etc. of Release Amounts of Specific Chemical Substances in the Environment and Promotion of Improvements to the Management Thereof."

#### PRTR-Designated Chemical Substances Discharged and Transferred in FY2017 (tons)



CAS No.	Name	Discharged into atmosphere	Discharged into water	Discharged into soil	Transferred to locations outside business sites	Total
141-43-5	2-aminoethanol	0.0	0.0	0.0	63.0	63.0
1332-21-4	asbestos	0.0	0.0	0.0	58.1	58.1
80-05-7	4,4'-Isopropylidenediphenol (commonly known as bisphenol A)	0.0	0.0	0.0	3.8	3.8
100-41-4	ethylbenzene	6.5	0.0	0.0	1.4	7.9
1330-20-7	xylene	15.2	0.0	0.0	40.0	55.2
75-45-6	chlorodifluoromethane ; HCFC-22	0.3	0.0	0.0	0.0	0.3
75-09-2	dichloromethane ; methylene dichloride	0.5	0.0	0.0	11.9	12.4
77-73-6	dicyclopentadiene	0.3	0.0	0.0	0.0	0.3

68-12-2	N,N-dimethylformamide	0.0	0.0	0.0	7.2	7.2
100-42-5	styrene	28.6	0.0	0.0	0.4	29.0
127-18-4	tetrachloroethylene	0.0	0.0	0.0	1.4	1.4
95-63-6	1,2,4-trimethylbenzene	1.3	0.0	0.0	0.0	1.3
108-88-3	toluene	19.5	0.0	0.0	83.0	102.5
-	nickel compounds	0.0	0.0	0.0	1.8	1.8
-	vanadium compounds	0.0	0.0	0.0	5.2	5.2
108-95-2	phenol	0.2	0.0	0.0	4.2	4.4
112-02-7	hexadecyltrimethylammonium chloride	0.0	10.0	0.0	0.0	10.0
110-54-3	n-hexane	43.6	0.0	0.0	2.5	46.1
71-43-2	benzene	6.4	0.0	0.0	0.0	6.4
1336-36-3	polychlorinated biphenyls ; PCBs	0.0	0.0	0.0	5.9	5.9
-	manganese and its compounds	0.0	0.0	0.0	3.6	3.6
-	molybdenum and its compounds	0.0	0.0	0.0	1.1	1.1
Total		122.3	10.0	0.0	294.5	426.8

\* Scope of tabulation: the Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, the Chiba Complex (Chemicals), the Tokuyama Complex, the Omaezaki Factory, the Advanced Technology Research Laboratories, the Technology & Engineering Center, Prime Polymer Co., Ltd.'s Anesaki Works, Cray Valley Idemitsu Corporation, and BASF Idemitsu Co., Ltd.

Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.

\*\* Chemicals are not listed if the discharged and transferred amounts are less than 0.1 ton per year. Figures presented above may not be consistent with the totals since they are rounded off to the nearest whole number.



## Controlling PCBs\*2

In accordance with the Law concerning Special Measures for Promotion of Proper Treatment of PCB Wastes,\*3 at refineries and petrochemical plants, the Idemitsu Group appropriately stores and manages oil containing polychlorinated biphenyls (PCBs) as well as transformers or other equipment that contain these substances. Under the same law and the Basic Plan for PCB Waste Treatment, final deadlines\*4 have been set for the completion of the treatment of all PCB waste and, accordingly, the Group is steadily carrying out the processing of such waste. For electrical equipment containing low concentrations of PCBs, we have selected processing methods that include the energized natural circulation washing method\*5 specified by the Ministry of Economy, Trade and Industry, and are working to reduce the amount of waste. The results of our processing of waste with high concentrations of PCB are shown below.

\*2 Polychlorinated biphenyls  
 \*3 The Basic Plan for PCB Waste Treatment: A plan setting out the steps needed to comprehensively and strategically promote the effective and proper treatment of PCB waste.  
 \*4 The period for setting aside PCB waste:  
 • High concentrations of PCBs: processing completion deadlines spanning March 2019 through March 2024, and such waste must be set aside at least one year before the relevant deadline (dates differ by item and region).  
 • Low concentrations of PCBs: by the end of March 2027  
 \*5 A processing method that can be selected only for equipment that meets particular structural and PCB concentration requirements. The equipment in question is drained of contaminated insulating oil and filled with new oil. The equipment is then run normally for at least 90 days to ensure that the new oil has flushed out any lingering PCBs. This method allows us to dispose of PCBs without decommissioning equipment.

## High-Concentration PCB Waste Processing Results Independent Practitioner's Assurance

Beginning storage volume (March 31, 2008): 871 tons  
 Volume reduced through treating and sorting in fiscal 2017: 86 tons  
 Storage volume as of March 2018: 41 tons  
 Note: The period for setting aside PCB waste is as described in note \*\* above.

## Managing CFCs

In accordance with the Act for Rationalized Use and Proper Management of Fluorocarbons, which came into effect on April 1, 2015, the Idemitsu Group has been implementing steps to prevent the leakage of fluorocarbons. The Safety, Environment & Quality Assurance Department undertakes annual inspections on the progress of changeover to non-fluorocarbon coolants at Idemitsu facilities. Although our oil refineries and petrochemical plants house a significant portion of the Group's large-scale processing equipment containing CFCs and HCFCs, which damage the ozone layer, this equipment can be upgraded only during the performance of major shutdown maintenance. With this in mind, we put priority on replacing all the more harmful ozone-damaging CFCs with alternative coolants, completing this task by fiscal 2016. In addition, we plan to systematically replace all large equipment using HCFCs with those using non-fluorocarbon coolants by fiscal 2025.

## Amount of CFCs and HCFCs Used by Large-Scale Processing Equipment at the Idemitsu Group's Two Refineries and Two Complexes (tons) Independent Practitioner's Assurance

	August 2002 <small>Note</small>	March 2018	March 2019 (Planned)	March 2026 (Planned)
CFC (t)	79.8	0.0	0.0	0.0
HCFC (t)	58.8	42.9	42.9	0.0

Note: At August 2002, there were six refineries and two petrochemical plants (As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been reorganized into the Chiba Complex.)

Idemitsu's estimated CFC leakage for fiscal 2017, calculated based on the Act for Rationalized Use and Proper Management of Fluorocarbons, is as shown below. Until this equipment is changed over to non-CFC coolants, we will take such preventive measures as setting up a temporary vacuum pump to capture CFCs before opening the processor and opening it less frequently.

## Estimated Fiscal 2017 CFC Leakage\*6 Independent Practitioner's Assurance

Equipment	Estimated leakage (t-CO <sub>2</sub> equivalent)
Large processors	277.8
Air conditioners	422.2
Others	6.1
Total	706.1

Scope of tabulation: Hokkaido and Aichi refineries, Chiba and Tokuyama complexes, Prime Polymer Co., Ltd.'s Anesaki Works, Cray Valley Idemitsu Corporation, BASF Idemitsu Co., Ltd., Idemitsu Unitech Co., Ltd., Advanced Technology Research Laboratories, and Performance Materials Laboratories  
 (As of October 2017, the Chiba Refinery & Petrochemical Plant has been reorganized into the Chiba Complex.)  
 \*6 Leakage amount (t-CO<sub>2</sub> equivalent) = Σ[Each refrigerant number group for {(Amount filled (kg) – Amount recovered during maintenance (kg)) × global warming factor}] ÷ 1,000

## Pollution Prevention

### Atmospheric Pollution Measures

Air pollutants discharged from Group facilities include sulfur oxides (SOx), nitrogen oxides (NOx) and soot and dust emitted from boilers and furnaces as well as volatile organic compounds (VOCs) from crude oil or petroleum product storage tanks and tanker truck loading facilities. Our refineries and petrochemical plants carry out operational management to ensure compliance with emission standards under laws and regulations as well as with emission limits prescribed by regional pollution prevention agreements.\*1

\*1 Regional pollution prevention agreements: Agreements concluded between companies and local governments or local communities for promoting pollution prevention. Also called environmental conservation agreements in some regions.

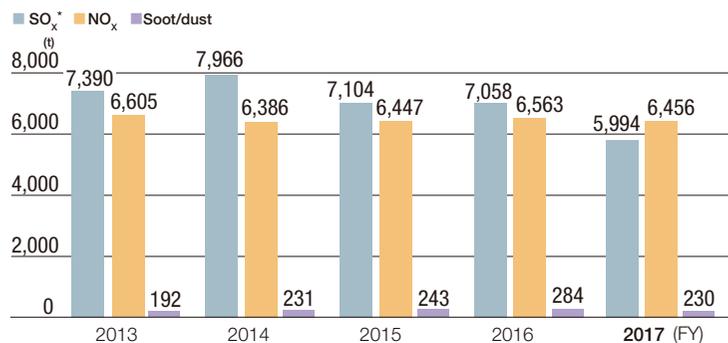
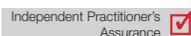
### Measures to Reduce SOx, NOx, Soot and Dust Emissions

To reduce SOx emissions, sulfur is removed from byproduct gases generated by various types of equipment and the sulfur-free gas is then used as fuel for other refinery processes, while emissions are scrubbed of SOx using exhaust gas desulfurizers. NOx emissions are reduced through the use of low-NOx burners and two-stage combustion to reduce NOx generation as well as exhaust gas denitrifiers to help eliminate the NOx that is generated, while soot and dust are captured by dust collectors. With regard to SOx discharged into the atmosphere, we pay a pollution load levy\*\*2 calculated using the emissions-based levy rate defined in each region in accordance with the Pollution-Related Health Damage Compensation System.

\*\*2 Pollution load levy: A levy imposed on operators of facilities that discharge SOx, requiring them to bear as an expense the amount necessary to swiftly and fairly provide compensation to ensure appropriate support for victims if pollution-related health damage should occur. The total amount paid by operators every year consists of a levy based on the volume of past emissions during the calculation basis period (from 1982 to 1986) and a levy on the volume of current emissions (for the previous year). The ratio between the two is stipulated under law to be 6:4.

[The Pollution-related Health Damage Compensation System \(Environmental Restoration and Conservation Agency's Website\)](#)

### Output of Air Pollutants



\* The tabulation period for SOx is January–December.

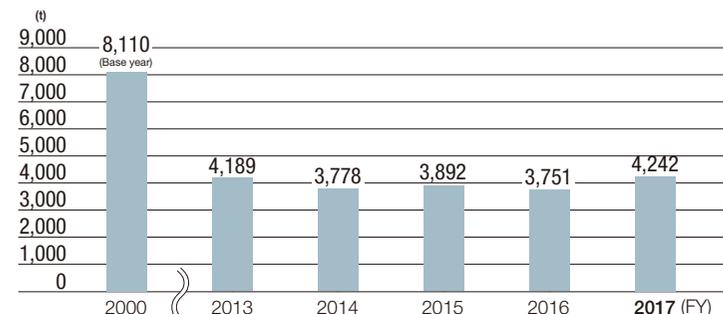
Scope of tabulation: Fiscal 2013: the Hokkaido, Chiba, Aichi and Tokuyama refineries, the Chiba and Tokuyama petrochemical plants, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Fiscal 2014–2017: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, Chiba Complex (Chemicals), Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.

### Measures to Reduce VOC Emissions



VOCs are substances thought to be the source of atmospheric photochemical oxidants. To reduce VOC emissions, Idemitsu is promoting such measures as shifting to the use of petroleum product tanks that have internal floating roofs and installing VOC recovery equipment in loading facilities. Through such measures, by fiscal 2007 Idemitsu achieved its target of reducing VOC emissions from refineries, petrochemical plants (two at that time) and oil depots by over 41% from 8,109 tons in fiscal 2000 to 4,792 tons. Since then, maintaining this level has been a management goal. In fiscal 2017, VOC emissions from refineries, petrochemical plants and oil depots amounted to 4,242 tons.

### VOC Emissions



Scope of tabulation: Fiscal 2013: the Hokkaido, Chiba and Aichi refineries, the Chiba petrochemical plants, Tokuyama Complex, Oil depots (Kushiro, Hakodate, Hachinohe, Akita, Shiogama, Hitachi, Oigawa, Tokyo, Niigata, Hachioji, Fushiki, Kishiwada, Takamatsu, Fukuoka, Kagoshima, Osaka, Hiroshima, Kochi, Nagasaki), Idemitsu Okinawa  
 Fiscal 2014: the Hokkaido, Chiba and Aichi refineries, the Chiba petrochemical plants, Tokuyama Complex, Oil depots (Kushiro, Hakodate, Hachinohe, Akita, Shiogama, Hitachi, Oigawa, Tokyo, Niigata, Hachioji, Fushiki, Kishiwada, Takamatsu, Fukuoka, Kagoshima, Hiroshima, Kochi, Nagasaki), Idemitsu Okinawa  
 Fiscal 2015: the Hokkaido, Chiba and Aichi refineries, the Chiba petrochemical plants, Tokuyama Complex, Oil depots (Kushiro, Hakodate, Hachinohe, Akita, Shiogama, Hitachi, Oigawa, Tokyo, Niigata, Hachioji, Fushiki, Kishiwada, Takamatsu, Fukuoka, Kagoshima, Hiroshima, Kochi, Nagasaki), Idemitsu Okinawa  
 Fiscal 2016: the Hokkaido, Chiba and Aichi refineries, the Chiba petrochemical plants, Tokuyama Complex, Oil depots (Kushiro, Hakodate, Hachinohe, Akita, Shiogama, Hitachi, Oigawa, Tokyo, Niigata, Hachioji, Fushiki, Kishiwada, Takamatsu, Fukuoka, Kagoshima, Hiroshima, Kochi, Nagasaki), Idemitsu Okinawa  
 Fiscal 2017: the Hokkaido and Aichi refineries, Chiba and Tokuyama Complex, Oil depots (Kushiro, Hakodate, Hachinohe, Akita, Shiogama, Hitachi, Oigawa, Tokyo, Niigata, Hachioji, Fushiki, Kishiwada, Takamatsu, Fukuoka, Kagoshima, Hiroshima, Kochi, Nagasaki), Idemitsu Okinawa  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex.

### Initiatives for areas other than refineries, petrochemical plants and oil depots

From January 2011, Idemitsu began to gradually switch from organic-based paints to water-soluble paints, which have little environmental impact, for painting its Idemitsu service stations. As a result, Idemitsu will be able to reduce VOC emissions. We estimate that by the end of fiscal 2017, we will have emitted 221 fewer tons in the course of repainting 4,834 service stations.

In addition, Idemitsu Engineering Co., Ltd. sells various types of VOC recovery equipment and proposes systems for use at the plants of corporate customers.



Exterior of IDESORB-B VOC processing equipment

## Using Water Resources

We use ocean water and industrial water in the cooling towers and boilers used in various processes, including oil refining. Ocean water for cooling accounts for around 95% of total water used. After being treated, almost all of the used industrial water, other than the portion lost through evaporation, is discharged. To reduce the use of water resources, we are working with neighboring industrial complexes to integrate facilities such as, for example, those producing chilled water.

## Water Resource Use Independent Practitioner's Assurance

		FY2013	FY2014	FY2015	FY2016	FY2017
Industrial water	kt	62,745	59,921	60,526	58,113	58,055
Ocean water	kt	1,281,823	1,199,226	1,205,868	1,231,103	1,257,447
Total used	kt	1,344,568	1,259,147	1,266,394	1,289,215	1,315,502

Scope of tabulation: Fiscal 2013: the Hokkaido, Chiba, Aichi and Tokuyama refineries, the Chiba and Tokuyama petrochemical plants, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Fiscal 2014–2017: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, Chiba Complex (Chemicals), Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.

## Measures to Prevent Water Contamination

The Water Pollution Control Law and other regulations, as well as regional agreements on pollution prevention, stipulate emission standards for pH\*3 as well as standards for chemical oxygen demand (COD) and suspended substances in effluent wastewater and for nitrogen and phosphorus emissions discharged into closed water bodies. Idemitsu's refineries and petrochemical plants deploy integrated wastewater treatment systems equipped with activated sludge processors and activated carbon absorption units and carry out strict monitoring to ensure that these emissions standard levels are not exceeded. Wastewater discharge volume and emissions of COD and total nitrogen and total phosphorus for the past five years are shown in the chart below.



Activated sludge processor

\*3 pH: A measure of hydrogen ion activity. Shows the degree of acidity or alkalinity of a solution.

## Wastewater Discharge and Water Pollution Indices Independent Practitioner's Assurance

		FY2013	FY2014	FY2015	FY2016	FY2017
Discharge	kt	1,342,697	1,257,192	1,264,511	1,287,195	1,313,741
COD	t	105	86	94	96	104
Nitrogen	t	105	100	81	91	93
Phosphorus	t	1.4	1.6	1.1	1.1	1.2

Scope of tabulation: Fiscal 2013: the Hokkaido, Chiba, Aichi and Tokuyama refineries, the Chiba and Tokuyama petrochemical plants, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Fiscal 2014–2017: Hokkaido Refinery, Chiba Complex (Petroleum), Aichi Refinery, Chiba Complex (Chemicals), Tokuyama Complex, Prime Polymer Co., Ltd.'s Anesaki Works, and Cray Valley Idemitsu Corporation  
 Note: As of October 2017, the Chiba Refinery and Chiba Petrochemical Plant have been integrated into the Chiba Complex. Within this report, "Chiba Complex" refers to the combined total of the previous Chiba Refinery and Chiba Petrochemical Plant; "Chiba Complex (Petroleum)" refers to the previous Chiba Refinery only; and "Chiba Complex (Chemicals)" refers to the previous Chiba Petrochemical Plant only.

## Ground and Groundwater Pollution Prevention

Since fiscal 2002, the Idemitsu Group has been implementing autonomous surveys of ground and groundwater pollution and undertaking purification measures. By fiscal 2009, the Group completed on-schedule surveys at about 1,300 sites, including refineries, petrochemical plants, oil depots, Idemitsu-owned service stations and idle land. At those locations where we discover contamination, we place priority on preventing the impact of this contamination from spreading beyond the business site and make ongoing efforts for the remediation of contaminated soil or groundwater.

When construction or other operations cause changes in the character of the land, the Group implements proper management to prevent pollution in compliance with the Soil Contamination Countermeasures Law

**In fiscal 2017, there were no oil spills.**

## Preventing Marine Pollution

In petroleum development operations, effluent water containing oil generated during test drilling and development is treated using a separator. The oil is transported to land-based facilities for processing and the water is returned to the sea after being processed to meet effluent water standards. In addition, we always consult an expert to conduct an environmental impact assessment prior to test drilling and production to ensure that the impact is at an acceptable level. In the eventuality of a marine oil spillage, we deploy an oil containment boom\*4 to restrict its spread and recover the spilled oil in accordance with our Oil Pollution Contingency Plan. During transport by ocean-going tankers, we make various efforts to maintain a record of zero oil spillage. In the area of equipment, each of our very large crude carriers (VLCC) in operation is double-hulled, thereby reducing the risk of oil spills. In terms of personnel, we provide regular training and education, including on-board emergency response drills and safety and environmental education, for all crew members.

**In fiscal 2017, there were no oil spills involving oceangoing tankers or marine oil field development.**

\*4 Oil containment boom: A floating barrier temporarily placed in a body of water for the purpose of containing or removing an oil spill from refineries, oil depots and other oil storage facilities as well as from marine oilfield facilities, tankers, tanker berthing facilities, and other facilities. Always installed when unloading crude oil from a tanker to a ground facility.

## Site Data

### Refineries

On the following pages, we provide environmental performance data for refineries.

#### Hokkaido Refinery

25-1 Masago-cho, Tomakomai-city, Hokkaido 059-1392



Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Crude oil throughput		thousand kiloliters	6,856	7,305	8,183	7,450	8,235
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	536	530	572	544	608
	Unit energy consumption	liters of crude oil equivalent/kiloliter	8.22	8.08	7.90	8.21	8.46
	CO <sub>2</sub>	thousand tonnes	921	888	959	891	990
Air pollution	SO <sub>x</sub>	tonnes	3,417	3,735	3,312	2,809	2,086
	NO <sub>x</sub>	tonnes	1,194	1,203	1,338	1,202	1,231
	Soot/dust	tonnes	14.8	8.7	6.1	2.0	5.3
	Benzene	tonnes	1.5	1.4	1.6	1.5	1.5
Water source	Service water	thousand tonnes	10,140	10,033	10,872	10,234	11,114
	Seawater	thousand tonnes	144,415	121,982	116,731	116,515	138,293
Water pollution	Wastewater	thousand tonnes	154,555	132,015	127,603	126,749	149,407
	COD	tonnes	35.0	27.3	33.2	29.8	36.3
	Total Nitrogen	tonnes					
	Total Phosphorus	tonnes					
Waste	Emitted	tonnes	13,072	11,969	9,612	12,372	12,003
	Reduced by intermediate treatment	tonnes	699	1,419	900	1,526	1,026
	Recycled	tonnes	12,366	10,536	8,709	10,842	10,973
	Final disposal	tonnes	7	14	3	4	4

Notes : 1. Total energy consumption is stated in crude oil equivalent.  
2. The tabulation period for SOX is January – December.

PRTR-listed chemical substances discharged and transferred in FY2017

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside	Total
100-41-4	ethylbenzene	0.3	0.0	0.0	0.0	0.3
1330-20-7	xylene	1.2	0.0	0.0	0.0	1.2
127-18-4	tetrachloroethylene	0.0	0.0	0.0	1.4	1.4
95-63-6	1,2,4-trimethylbenzene	0.1	0.0	0.0	0.0	0.1
108-88-3	toluene	4.3	0.0	0.0	0.0	4.3
-	nickel compounds	0.0	0.0	0.0	1.8	1.8
-	vanadium compounds	0.0	0.0	0.0	5.2	5.2
110-54-3	n-hexane	20.0	0.0	0.0	0.0	20.0
71-43-2	benzene	1.5	0.0	0.0	0.0	1.5
-	Manganese and its compounds	0.0	0.0	0.0	3.6	3.6
-	molybdenum and its compounds	0.0	0.0	0.0	1.1	1.1
	Total PRTR-listed chemical substances	27.4	0.0	0.0	13.1	40.5

Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.  
Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

## Chiba Complex

\* The Chiba Refinery and Chiba Petrochemical Plant were integrated and commenced operations as the Chiba Complex effective October 1, 2017. The following data is for the former Chiba Refinery.

2-1 Anesakikaigan, Ichihara-city, Chiba 299-0192



Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Crude oil throughput		thousand kiloliters	9,168	10,936	9,678	113,10	10,321
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	794	873	791	904	833
	Unit energy consumption	liters of crude oil equivalent/kiloliter	9.00	8.64	8.79	8.53	8.65
	CO <sub>2</sub>	thousand tonnes	1,809	1,825	1,687	1,833	1,727
Air pollution	SO <sub>x</sub>	tonnes	1,932	2,151	1,975	2,460	2,205
	NO <sub>x</sub>	tonnes	1,309	1,480	1,158	1,634	1,440
	Soot/dust	tonnes	95.5	154.7	149.3	205.7	150.1
	Benzene	tonnes	0.7	0.8	0.8	0.8	0.9
Water source	Service water	thousand tonnes	18,689	19,034	18,494	18,311	18,131
	Seawater	thousand tonnes	307,927	327,124	297,475	355,018	349,977
Water pollution	Wastewater	thousand tonnes	326,616	346,158	315,969	373,329	368,108
	COD	tonnes	29.6	27.1	27.8	31.7	29.6
	Total Nitrogen	tonnes	66.4	70.7	53.8	59.9	56.5
	Total Phosphorus	tonnes	0.2	0.3	0.2	0.3	0.4
Waste	Emitted	tonnes	84,296	89,546	94,070	83,154	78,060
	Reduced by intermediate treatment	tonnes	28,140	25,937	22,986	19,112	20,123
	Recycled	tonnes	56,147	63,597	71,076	64,037	57,915
	Final disposal	tonnes	9	12	8	5	22

Notes : 1. Total energy consumption is stated in crude oil equivalent.  
2. The tabulation period for SO<sub>x</sub> is January – December.

PRTR-listed chemical substances discharged and transferred in FY2017

unit: tonnes

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside	Total
141-43-5	2-aminoethanol	0.0	0.0	0.0	20.0	20.0
1332-21-4	asbestos	0.0	0.0	0.0	1.5	1.5
80-05-7	4,4'-Isopropylidenediphenol (commonly known as bisphenol A)	0.0	0.0	0.0	1.9	1.9
100-41-4	ethylbenzene	2.0	0.0	0.0	0.7	2.7
1330-20-7	xylene	1.3	0.0	0.0	0.0	1.3
75-09-2	styrene	8.3	0.0	0.0	0.2	8.5
95-63-6	1,2,4-trimethylbenzene	0.4	0.0	0.0	0.0	0.4
108-88-3	toluene	6.1	0.0	0.0	0.0	6.1
108-95-2	phenol	0.1	0.0	0.0	2.1	2.2
112-02-7	hexadecyltrimethylammonium chloride	0.0	10.0	0.0	0.0	10.0
110-54-3	n-hexane	10.0	0.0	0.0	0.0	10.0
71-43-2	benzene	1.8	0.0	0.0	0.0	1.8
	Total PRTR-listed chemical substances	30.0	10.0	0.0	26.4	66.4

Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.  
Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.  
Figures from October 1, 2017, onward are the combined total with Chiba Complex (Chemicals).



## Aichi Refinery

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Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Crude oil throughput		thousand kiloliters	6,978	8,825	8,899	8,435	7,049
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	613	681	685	675	586
	Unit energy consumption	liters of crude oil equivalent/kiloliter	8.75	8.24	8.31	8.70	9.40
	CO <sub>2</sub>	thousand tonnes	1,221	1,301	1,299	1,291	1,146
Air pollution	SO <sub>x</sub>	tonnes	792	955	867	845	851
	NO <sub>x</sub>	tonnes	1,179	1,302	1,308	1,257	1,270
	Soot/dust	tonnes	40.6	47.7	53.9	52.9	51.8
	Benzene	tonnes	0.9	1.5	1.5	1.5	1.3
Water source	Service water	thousand tonnes	12,495	12,474	12,339	12,379	12,438
	Seawater	thousand tonnes	213,855	233,581	228,914	233,974	207,469
Water pollution	Wastewater	thousand tonnes	226,350	246,055	241,253	246,353	219,907
	COD	tonnes	8.5	8.7	7.6	7.7	6.4
	Total Nitrogen	tonnes	5.5	6.9	5.7	5.6	5.6
	Total Phosphorus	tonnes	0.5	0.7	0.5	0.3	0.3
Waste	Emitted	tonnes	90,320	93,486	95,850	80,904	81,988
	Reduced by intermediate treatment	tonnes	49,544	52,365	53,997	46,398	47,787
	Recycled	tonnes	40,729	41,099	41,835	34,493	34,149
	Final disposal	tonnes	47	22	18	13	52

Notes : 1. Total energy consumption is stated in crude oil equivalent.  
2. The tabulation period for SO<sub>x</sub> is January – December.

PRTR-listed chemical substances discharged and transferred in FY2017

unit: tonnes

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside	Total
1332-21-4	asbestos	0.0	0.0	0.0	0.6	0.6
100-41-4	ethylbenzene	0.2	0.0	0.0	0.0	0.2
1330-20-7	xylene	0.9	0.0	0.0	0.0	0.9
95-63-6	1,2,4-trimethylbenzene	0.1	0.0	0.0	0.0	0.1
108-88-3	toluene	2.4	0.0	0.0	0.0	2.4
110-54-3	n-hexane	9.7	0.0	0.0	0.0	9.7
71-43-2	benzene	1.3	0.0	0.0	0.0	1.3
	Total PRTR-listed chemical substances	14.5	0.0	0.0	0.6	15.2

Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.  
Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

## Petrochemical Plant

On the following pages, we provide environmental performance data for the petrochemical plant.

### Chiba Complex (Prime Polymer Co., Ltd.'s Anesaki Works is included.)

\* The Chiba Petrochemical Plant and Chiba Refinery were integrated and commenced operations as the Chiba Complex effective October 1, 2017. The following data is for the former Chiba Petrochemical Plant.

2-1 Anesakikaigan, Ichihara-city, Chiba 299-0192



Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Production of ethylene equivalent		thousand tonnes	2,061	1,938	1,876	2,054	1,838
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	637	628	598	662	681
	Unit energy consumption	kiloliters of crude oil equivalent/tonnes	0.309	0.324	0.319	0.322	0.332
	CO <sub>2</sub>	thousand tonnes	1,328	1,317	1,252	1,379	1,274
Air pollution	SO <sub>x</sub>	tonnes	17.2	16.4	14.3	16.5	16.3
	NO <sub>x</sub>	tonnes	1,019	955	843	913	804
	Soot/dust	tonnes	13.4	7.7	17.5	5.7	7.6
Water source	Service water	thousand tonnes	3,631	3,462	3,300	3,448	3,303
	Seawater	thousand tonnes	117,173	127,202	113,898	127,806	109,444
Water pollution	Wastewater	thousand tonnes	118,933	128,709	115,315	129,233	110,987
	COD	tonnes	8.0	8.1	8.0	8.2	9.0
	Total Nitrogen	tonnes	13.0	10.2	10.7	10.7	12.1
	Total Phosphorus	tonnes	0.2	0.1	0.1	0.1	0.1
Waste	Emitted	tonnes	10,528	11,679	13,518	8,842	8,730
	Reduced by intermediate treatment	tonnes	937	716	770	2,219	3,200
	Recycled	tonnes	9,582	10,960	12,726	6,613	5,524
	Final disposal	tonnes	9	3	22	10	6

Notes : 1. Total energy consumption is stated in crude oil equivalent.  
2. The tabulation period for SO<sub>x</sub> is January – December.

PRTR-listed chemical substances discharged and transferred in FY2017 (Apr. – Sep.)

unit: tonnes

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside	Total
141-43-5	2-aminoethanol	0.0	0.0	0.0	19.0	19.0
80-05-7	4,4'-Isopropylidenediphenol	0.0	0.0	0.0	1.9	1.9
80-05-7	ethylbenzene	1.9	0.0	0.0	0.7	2.6
1330-20-7	xylene	0.8	0.0	0.0	0.0	0.8
75-09-2	styrene	8.3	0.0	0.0	0.2	8.5
95-63-6	1,2,4-trimethylbenzene	0.3	0.0	0.0	0.0	0.3
108-67-8	1,3,5-trimethylbenzene	0.1	0.0	0.0	0.0	0.1
108-88-3	toluene	0.2	0.0	0.0	0.0	0.2
108-95-2	phenol	0.1	0.0	0.0	2.1	2.2
71-43-2	benzene	1.0	0.0	0.0	0.1	1.1
Total PRTR-listed chemical substances		12.6	0.0	0.0	24.0	36.6

Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.  
Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.  
For results following the integration on October 1, 2017, these figures were combined with the results of the former Chiba Refinery and listed on page 67.

Tokuyama Complex (Cray Valley Idemitsu Corporation is included.)

\* At the end of fiscal 2013, Idemitsu terminated the crude oil refining function of the Tokuyama Refinery and renamed the facility the Tokuyama Complex.

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Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Production of ethylene equivalent		thousand tonnes	1,629	1,464	1,901	1,656	1,986
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	630	759	909	835	958
	Unit energy consumption	kiloliters of crude oil equivalent/tonnes	0.382	0.518	0.478	0.504	0.474
	CO <sub>2</sub>	thousand tonnes	1,416	1,680	1,981	1,816	2,051
Air pollution	SO <sub>x</sub>	tonnes	1,025	1,109	936	927	835
	NO <sub>x</sub>	tonnes	1,337	1,446	1,800	1,557	1,712
	Soot/dust	tonnes	9.2	12.4	16.0	17.2	15.0
Water source	Service water	thousand tonnes	13,159	14,918	15,521	13,741	13,069
	Seawater	thousand tonnes	289,706	389,337	448,850	397,790	452,264
Water pollution	Wastewater	thousand tonnes	302,865	404,255	464,371	411,531	465,332
	COD	tonnes	10.2	14.6	16.9	18.7	23.0
	Total Nitrogen	tonnes	11.2	12.0	11.2	14.8	18.5
	Total Phosphorus	tonnes	0.2	0.4	0.3	0.4	0.4
Waste	Emitted	tonnes	25,985	27,181	30,791	28,278	34,573
	Reduced by intermediate treatment	tonnes	12,388	14,586	19,666	17,743	19,091
	Recycled	tonnes	13,561	12,570	11,092	10,430	14,621
	Final disposal	tonnes	36	25	33	105	861

Notes : 1. Environmental performance data in fiscal 2013 and before represents data from the former Tokuyama Petrochemical Plant.  
 2. Total energy consumption is stated in crude oil equivalent.  
 3. The tabulation period for SO<sub>x</sub> is January – December.

PRTR-listed chemical substances discharged and transferred in FY2017

unit: tonnes

CAS No.	Substance name	Discharged into air	Discharged into water	Discharged into soil	Transferred to locations outside	Total
141-43-5	2-aminoethanol	0.0	0.0	0.0	24.0	24.0
1332-21-4	asbestos	0.0	0.0	0.0	56.0	56.0
100-41-4	ethylbenzene	2.1	0.0	0.0	0.0	2.1
1330-20-7	xylene	11.0	0.0	0.0	0.0	11.0
75-45-6	HCFC-22	0.3	0.0	0.0	0.0	0.3
77-73-6	dicyclopentadiene	0.3	0.0	0.0	0.0	0.3
68-12-02	N,N-dimethylformamide	7.2	0.0	0.0	0.0	7.2
100-42-5	styrene	12.0	0.0	0.0	0.0	12.0
95-63-6	1,2,4-trimethylbenzene	0.4	0.0	0.0	0.0	0.4
108-67-8	1,3,5-trimethylbenzene	0.1	0.0	0.0	0.0	0.1
108-88-3	toluene	5.6	0.0	0.0	0.0	5.6
91-20-3	naphthalene	0.1	0.0	0.0	0.0	0.1
106-99-0	1,3-butadiene	0.1	0.0	0.0	0.0	0.1
110-54-3	n-hexane	3.9	0.0	0.0	0.0	3.9
71-43-2	benzene	0.8	0.0	0.0	0.0	0.8
1336-36-3	polychlorinated biphenyls; PCBs	0.0	0.0	0.0	5.9	5.9
1321-94-4	methylnaphthalene	0.0	0.0	0.0	0.0	0.0
	Total PRTR-listed chemical substances	43.8	0.0	0.0	85.9	129.7

Note : Chemicals are not listed if the discharged and transferred amounts are less than 0.1 tons.  
 Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

## Former Tokuyama Refinery

\* At the end of fiscal 2013, Idemitsu terminated the crude oil refining function of the Tokuyama Refinery and renamed the facility the Tokuyama Complex. Accordingly, the facility's environmental performance data in fiscal 2014 is presented as part of data for the Tokuyama Complex.

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The former Tokuyama Refinery after the removal of the atmospheric distillation units

Section	Indicator	Unit	FY2013	FY2014	FY2015	FY2016	FY2017
Crude oil throughput		thousand kiloliters	5,537	-	-	-	-
Prevention of global warming	Total energy consumption	thousand kiloliters of crude oil equivalent	405	-	-	-	-
	Unit energy consumption	liters of crude oil equivalent/kiloliter	9.97	-	-	-	-
	CO <sub>2</sub>	thousand tonnes	712	-	-	-	-
Air pollution	SO <sub>x</sub>	tonnes	207	-	-	-	-
	NO <sub>x</sub>	tonnes	567	-	-	-	-
	Soot/dust	tonnes	18.3	-	-	-	-
	Benzene	tonnes	0.4	-	-	-	-
Water source	Service water	thousand tonnes	4,631	-	-	-	-
	Seawater	thousand tonnes	208,747	-	-	-	-
Water pollution	Wastewater	thousand tonnes	213,378	-	-	-	-
	COD	tonnes	13.8	-	-	-	-
	Total Nitrogen	tonnes	8.9	-	-	-	-
	Total Phosphorus	tonnes	0.3	-	-	-	-
Waste	Emitted	tonnes	3,491	-	-	-	-
	Reduced by intermediate treatment	tonnes	812	-	-	-	-
	Recycled	tonnes	2,664	-	-	-	-
	Final disposal	tonnes	15	-	-	-	-

Notes : 1. Total energy consumption is stated in crude oil equivalent.  
 2. The tabulation period for SO<sub>x</sub> is January – December.



# Social Commitment

## Creating Rewarding Workplace Environments

### Basic Policy

Idemitsu strives to fulfill its management philosophy by developing personnel with an inherent code of conduct and the capability to make judgments and take action of their own accord, and by creating workplace environments in which employees are able to work with a sense of assurance and satisfaction.

## Employment and Support for Employee Growth

### Issues/Targets and Results

#### <Employment>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Hire 120 graduates in April 2018</li> <li>Lift fiscal 2017 hiring freeze on mid-career professionals and hire them as needed</li> </ul>		<ul style="list-style-type: none"> <li>Hired 112 new graduates in April 2018</li> <li>Hired 19 mid-career professionals in fiscal 2017</li> </ul>			<ul style="list-style-type: none"> <li>Our hiring of new graduates secured personnel who will lead the next generation. Hired four new graduates of foreign nationality.</li> <li>Hiring of mid-career professionals resumed, and we secured personnel who can hit the ground running, especially in the manufacturing sector.</li> </ul>		<ul style="list-style-type: none"> <li>Hire 140 graduates in April 2019</li> <li>Plan to hire 60 mid-career professionals</li> </ul>

#### <Skills development and education and training system>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>All 10 DVDs are scheduled to be completed by September 2017. Once completed, they are planned to be exhibited at meetings for HR managers and other events.</li> <li>Continue to implement the cross-industry training programs in fiscal 2017</li> <li>Provide only the minimum amount of support necessary for affiliate companies to conduct their own training programs</li> </ul>		<ul style="list-style-type: none"> <li>Completed all 10 DVDs for self-evaluation meetings and released them</li> <li>Continued to implement the cross-industry training programs (Future Workshop)</li> <li>Provided only the minimum amount of support necessary for affiliate companies to conduct their own training programs, including those for improving operations and training management-level employees, by providing tools and advice.</li> </ul>			<ul style="list-style-type: none"> <li>Participants in the cross-industry training programs were positively inspired by employees of other companies, which was a meaningful outcome. We will continue the programs in the next fiscal year and onward.</li> <li>A growing number of affiliates can implement their own training programs.</li> </ul>		<ul style="list-style-type: none"> <li>Assess training programs tested in fiscal 2017</li> <li>Measure the effectiveness of implemented training programs (verify the effect quantitatively)</li> </ul>

Note: In light of the business integration with Showa Shell, we aim to revise our targets as appropriate.

## Employment

### Status of Employment

Idemitsu employees at the end of March 2018 stood at 8,955 for the Group as a whole,\*1 and 3,926 for Idemitsu on a non-consolidated basis. Recruitment is conducted based on personnel recruitment plans that were formulated in light of our business development plans and the age distribution of our workforce. In fiscal 2017, we hired new graduates, bringing on board 114 as of April 2018.

\*1 The number of regular employees of Idemitsu and consolidated subsidiaries (including equity-method affiliates)

### Philosophy on Welfare

With the aim of enabling employees to concentrate their efforts on their work with assurance and ensuring that employees and their families have a sense of security throughout their lives, Idemitsu has in place a range of welfare systems that are designed to complement national social security programs and are suited to each life stage, from the start of one's career to after retirement. In order to help provide employees and their families with a sense of security in their lives, we carry out health promotion activities in coordination with Idemitsu's health insurance association. Utilizing the Group's intranet, Idemitsu Insurance Service Co., Ltd. periodically sends out information that employees need when selecting insurance and conducts seminars targeting individual age groups while providing insurance consultations to explain the various insurance products available to them.

## Support for Employee Growth

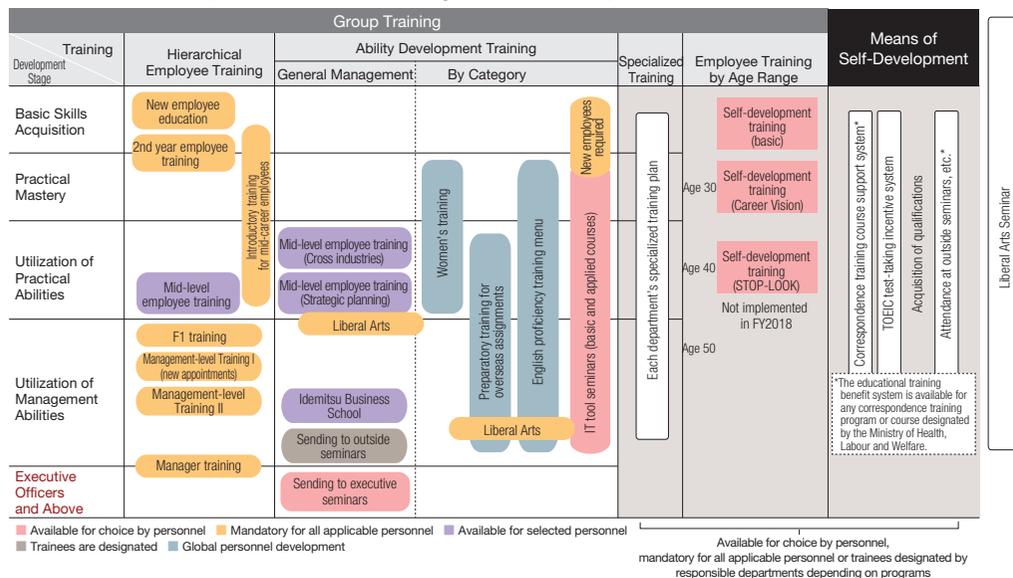
### Skills Development and Education and Training System

The foundation of the Idemitsu Group's philosophy of employee development, as outlined in the Principles of Management, is "to ensure that each employee develops into a reliable person and is respected in society, while... engaging in mutual improvement through amicable competition." Accordingly, on-the-job development (OJD)\*2 forms the core of employees' skills development. Off-the-job development (OFF-JD),\*3 which complements OJD, is composed of specialized training suited to each job category and a Company-wide support program, which are outlined in the graph at right. The distinguishing feature of our program is that the skills development items offered to all employees cover not only knowledge and techniques, judgment and decision-making capabilities, planning and development capabilities, negotiation and coordination capabilities and other skills needed to perform occupational duties, but also independence, drive, reliability and other working attitudes as well as education and leadership that can also be considered indispensable skills.

\*2 On-the-job development (OJD): Mentoring staff at their workplace in a collaborative manner while encouraging their independence

\*3 Off-the-job development (OFF-JD): Conducting skills development training necessary for future growth in areas separate from staff's regular business activities

■ The Idemitsu Group's Education and Training System (FY2018)



Helping Employees Gain Business Skills (non-consolidated basis)

Idemitsu held a number of seminars on strategic planning for mid-level trainees who have met the necessary qualifications, with the aim of helping them acquire necessary business skills. The participants learn about the meaning and importance of strategic thinking and study the basic process of proposing a business strategy while formulating scenarios that will facilitate the achievement of business goals, with an emphasis on reviewing case studies. After finishing with training, the participants use their newly acquired skills to address actual strategic issues at the Company. We plan to continue offering this training program as part of mid-level management instruction

Fair Compensation

The basic approach to evaluation at Idemitsu involves the use of step-specific growth objectives, which constitute a common, Company-wide evaluative yardstick, to identify an employee's comprehensive competence. At the same time, a growth support system called Management by Objectives is used to check whether an employee is working to a standard and demonstrating capabilities appropriate to each growth step. Growth objectives, capability enhancement, set targets and the degree of achievement are confirmed in an interview with the employee's superior using an Action Plan Table. The evaluation results are used to determine the next objectives for growth and reflected in compensation (pay and allowances) as well as personnel assignments and transfers.

Basic Approach to Evaluation and Compensation

As a basic policy, we seek to uphold fair compensation based on the idea of guaranteeing a basic level of living for each employee. Our employee compensation structure focuses on respecting each employee's lifestyle, values and quality of family life. The structure thus plays the dual roles of serving as a steady source of income and providing compensation that reflects the scores of growth step evaluations (the degree of achievement of objectives) as previously noted.

Personnel Assignments and Transfers to Match the Right Person to the Right Place

Idemitsu does more than simply assign personnel to appropriate positions in line with changes in its business structure. We also consider changes in job description, job category and work location to be opportunities for employees to achieve new growth. Every autumn, Idemitsu employees have individual interviews with their superiors to talk about personal matters and desired transfers using Record of Activity Objectives sheets.\*4 Their superiors then give them feedback and advice. These records are also submitted to the Human Resources Department and used to share information about the direction of each individual employee's development between superiors and the Human Resources Department and make transfer or assignment decisions.

\*4 Record of Activity Objectives: An interview sheet used to discuss personal matters and career aspirations, including desired transfers, with one's superior. Designed to facilitate the sharing of thoughts and, in turn, create a better work environment for each employee. Also used as a tool to promote communication between employees and the Human Resources Department.

Education and Training Results (FY2017)

Expenses

Total expenses ¥254,798,000/year  
Per employee ¥64,900/year

Time

Total time 157,433 hours/year  
Per employee 40.1 hours/year

Note: Excludes transportation, lodging, and other various costs associated with participating in the training programs

Educational Training for Developing Leadership (non-consolidated basis)



A workshop from the first cross-industry training program in 2018 at the Idemitsu Training Center

With the aim of training personnel to demonstrate leadership rooted in their own convictions, we have begun cross-industry training programs in conjunction with other companies, including those in such industries as household products and insurance. We have run the official program since fiscal 2016. In fiscal 2017, employees in their early 30s (24 individuals from three companies) participated in four training workshops to define their ideals as next-generation leaders and ultimately elucidate their own goals. The participants revealed that the workshops gave them excellent motivation and eagerness to continue training with the other participants. They consider these interactions as presenting great opportunities to encounter diverse values and ideas and to gain good people skills and creative vision. We plan to continue offering similar training going forward.

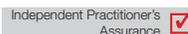
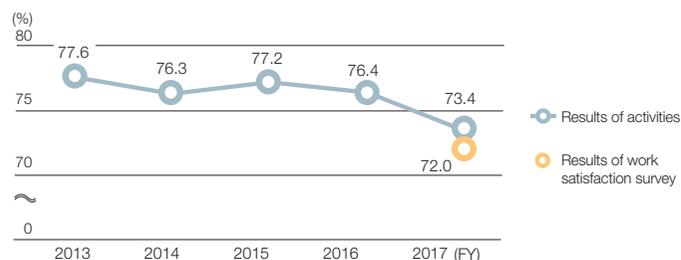


## Employee Job Satisfaction

Idemitsu measures the level of employee job satisfaction by using the ratio of employees who have stated in their respective Records of Activity Objectives (submitted every year to the Human Resources Department) that their jobs are "rewarding" and the rate of attrition of new hires who quit within three years of joining the Company. In fiscal 2017, 73.4% of Idemitsu employees felt their jobs were rewarding, and the rate of attrition of new hires who joined in fiscal 2015 and have less than three years of service was 10.6%.

In addition, since fiscal 2017, we have used a third party, Engagement Survey Services, to conduct a survey of our employees. The results show that 72% of employees feel their jobs are rewarding, which was a good result compared to other Japanese companies using the same service (+8% above the standard). Moreover, we have analyzed the factors that contributed to or diminished rewarding feelings and have started efforts to improve Company-wide operations with the aim of boosting rewarding feelings. We intend to continue implementing these initiatives going forward.

### Idemitsu Employees Who Feel Their Jobs Are Rewarding

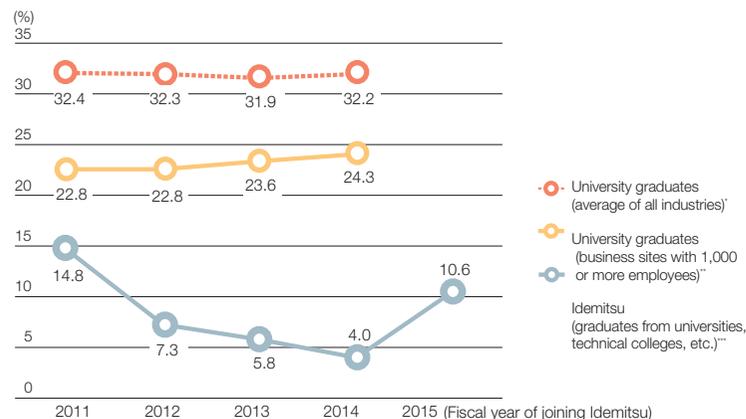


Note: The results of a survey targeting all Idemitsu employees besides management-level employees defined under Paragraph 2, Article 41 of the Labor Standards Act in each job group, including employees temporarily transferred to non-consolidated subsidiaries and non-equity-method affiliates.

### Voluntary attrition rate of full-time employees (FY2017)

1.83%

### Rate of Attrition of New Graduates Less Three Years After Hiring



Notes:  
\* The average rate of attrition of new university graduates within three years of hiring (for all industries surveyed by the Ministry of Health, Labour and Welfare)

\*\* The average rate of attrition of new graduates three years after hiring for business sites with 1,000 or more employees (for all industries surveyed by the Ministry of Health, Labour and Welfare)

\*\*\* The ratio of employees who were hired as new graduates in the corresponding fiscal year and left the Company within three years. The calculation method is retroactively aligned with the surveys conducted by the Ministry of Health, Labour and Welfare. The calculation includes all Idemitsu employees, including those temporarily transferred to non-consolidated subsidiaries and non-equity-method affiliates.

## Self-Management and Self-Reporting of Work Hours\*5

As a general rule, Idemitsu employees manage their own work hours and report the hours they have actually worked to their superiors. In fiscal 2009, we introduced a new Work Management System as a web tool to support employees' self-management and self-reporting of work hours. We utilize this system to comprehend the actual work conditions of employees and promote work-life balance<sup>6</sup> by reviewing and trying to improve work efficiency, working with individual employees or their superiors, and within the overall workplace. In fiscal 2017, Idemitsu employees<sup>7</sup> worked an average of 12.3 hours per month outside of official work times (weekday overtime and holidays) and took 11.7 out of 18.5 possible annual paid vacation days, or 63.2%. Although the monthly average of overtime and time worked during weekends and holiday is increasing, one factor is that since October 2017 the required working time was reduced from 8 hours to 7.5 hours.

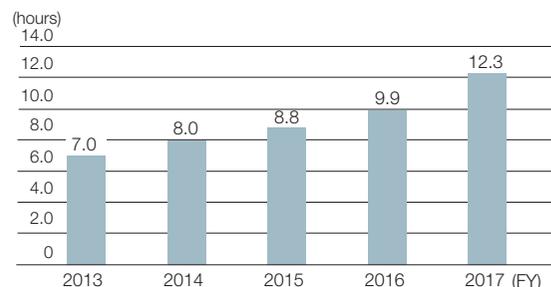
To help employees achieve an appropriate work-life balance, we will strive to improve work efficiency and increase mutual support within the workplace. At the same time, we will appropriately manage employees' working hours while increasing the number of days of annual paid leave taken per person.

\*5 Self-management and self-reporting of work hours: The Idemitsu Group uses the Work Management System posted on the Company intranet to collect data on the actual work hours reported by employees in accordance with the Standards for Measures to be Undertaken by Employers to Collect Accurate Information on Work Hours, a guideline issued by the Ministry of Health, Labour and Welfare.

\*6 Work-life balance: A balance between work and personal life. According to an example definition provided by the Cabinet Office, it is an enriched lifestyle in which "working people can maintain their health and have enough time to spend with their families or friends as well as for personal development or for participating local community activities."

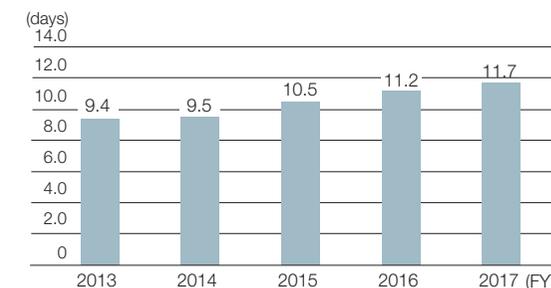
\*7 All Idemitsu employees besides management-level employees as defined under Paragraph 2, Article 41 of the Labor Standards Act

### Average overtime hours



Note: All Idemitsu employees besides management-level employees as defined under Paragraph 2, Article 41 of the Labor Standards Act

### Days of annual paid leave taken





## Diversity and Equal Opportunities

### Issues/Targets and Results

#### <Promoting a dynamic female workforce>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Continually communicate information, including that related to employee activities and messages from management, using internal reports and the internal intranet</li> <li>Hold training sessions on promoting human resource diversification for managers of regional bases</li> <li>To promote understanding of childcare among male employees, systematize paid vacation for spouses during childbirth and encourage employees to take said vacation</li> </ul>		<ul style="list-style-type: none"> <li>Published the monthly in-house magazine entitled <i>RebornTimes</i>, which is related to promoting human resource diversification, using the internal intranet</li> <li>In light of the results for the fiscal 2017 job satisfaction survey, took measures to stimulate communication among young employees</li> <li>Established paid vacation for spouses during childbirth (special paid leave) and encouraged employees to take said vacation in the aforementioned in-house magazine</li> </ul>			<ul style="list-style-type: none"> <li>By continually disseminating information, traffic to the intranet has increased and employees' interest has been piqued.</li> <li>Confirm the effectiveness of measures through the fiscal 2018 job satisfaction survey</li> <li>Employees generally take annual paid leave to take time off when their spouse is giving birth, but the exact situation was unclear. Establishing new paid leave to be used for specific purposes helped foster a good work culture.</li> </ul>		<ul style="list-style-type: none"> <li>Strengthened the planning, implementation, and dispatch to outside research institutions with regard to cross-industry training programs with the aim of motivating women to advance their careers.</li> </ul>

#### <Maternity and childcare leave support for balancing work and personal life>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Introduce the flex-time system from October 2017 (some workplaces with different work arrangements will consider introducing the system)</li> <li>Begin another trial of the work-from-home system (for childcare and nursing care) with eased stipulations from April 2017</li> <li>Provide opportunities for employees to use the work-from-home system for any reason to promote use because employees will be able to experience the benefits of the system firsthand</li> </ul>		<ul style="list-style-type: none"> <li>Introduced the flex-time system from October 2017</li> <li>Began another trial of the work-from-home system (for childcare and nursing care) with eased stipulations (no need to specify reason or place) from April 2017</li> </ul>			<ul style="list-style-type: none"> <li>We confirmed the effectiveness of the work-from-home system for childbirth and childcare as well as other reasons.</li> </ul>		<ul style="list-style-type: none"> <li>Aim to systematize working from home for childcare and nursing care</li> <li>Study the feasibility of introducing the system for reasons besides childcare and nursing care in order to support employees' diverse working styles</li> </ul>

#### <Employment of persons with disabilities>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Execute concrete measures to steadily raise the employment rate ahead of the scheduled increase in the legally prescribed level</li> </ul>		<ul style="list-style-type: none"> <li>Employment rate of people with disabilities: 2.24%</li> </ul>			<ul style="list-style-type: none"> <li>Helped create new employment by working with departments to set aside some tasks.</li> </ul>		<ul style="list-style-type: none"> <li>Comply with the legally prescribed level of 2.2%</li> </ul>

Note: In light of the business integration with Showa Shell, we aim to revise our targets as appropriate.

## Promoting Initiatives Aimed at Human Resources Diversification

To ensure its ability to respond swiftly to changes in the business environment, Idemitsu has positioned the maintenance of a diverse workforce and an equal-opportunity work environment as a management priority. In fiscal 2016, we internally launched the Reborn Project to foster a more personal connection to our efforts to promote human resource diversification and equal opportunities. These activities do not target any particular group. Rather, we want every employee to understand that he or she is the principal focus of these activities.

The Reborn Project incorporates two main ideas. The first centers on a rather literal interpretation of reborn entailing both employees and the Company as a whole evolving and moving forward to create an environment where everybody can thrive.

The second idea, reflecting the pronunciation of reborn in Japanese, centers more abstractly on the word and idea of a ribbon. This is the ribbon connecting the Company and the individual, the individual and the future, and the employees to each other. Moreover, we want every employee to promote this project filled with the feeling of excited anticipation that accompanies opening a ribbon-tied present

In fiscal 2017, we implemented the four measures listed below.

- Conducting training for managers with the aim of improving workplace culture and supporting female employees' career development
  - Providing training for 68 general managers (13 new general managers joined the training in fiscal 2018)
- Dispatching female employees to external training programs (promoting a dynamic female workforce)
  - 13 female employees participated in cross-industry training and career colleges (including Showa Women's University and Ochanomizu University)
- Instituting medium-term career development programs (CDPs) based on individual traits and identifying tasks needed to foster employee development
- Enhancing systems to accommodate variable time and location restrictions
  - Conducted trials of the work-from-home system (for childcare and nursing care) and introduced the flex-time system

Our main issue going forward will be fostering a work environment aimed at promoting human resource diversification, and we will focus on the following three points.

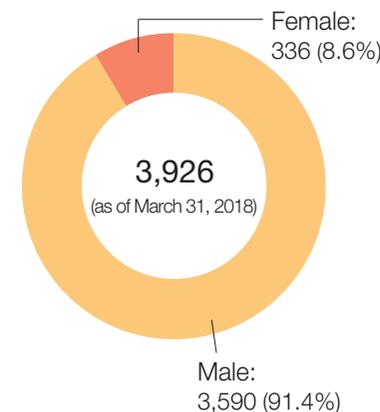
- Enhancing the dissemination of information related to the promotion of human resource diversification
- Rolling out initiatives to promote human resource diversification across regional bases
- Fostering understanding in the workplace for work-life balance support systems

## Promoting a Dynamic Female Workforce

The Company had 3,926 total employees as of March 31, 2018, 336 (8.6%) of which were women. Our overall percentage of women employees remains relatively low. This is influenced by a business structure centered on a type of manufacturing that entails a large heavy labor force as well as personnel with expertise in specific traditionally male fields.

In fact, in our sales, logistics, corporate and other departments the percentage of women surpasses 20%.

■ FY2017 Percentage of Male and Female Employees



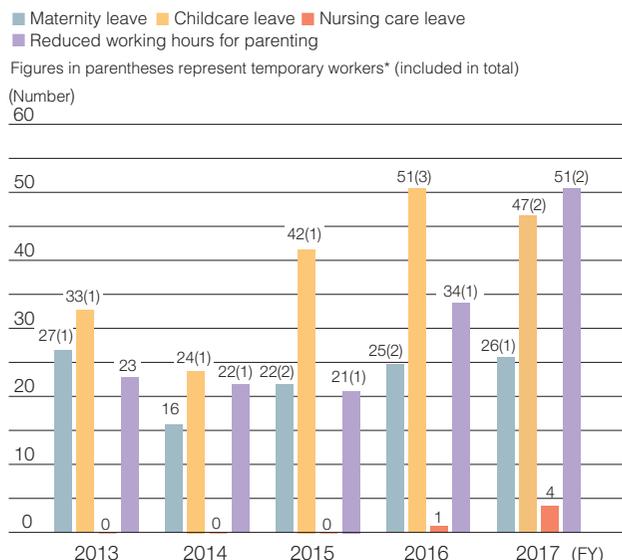
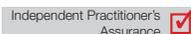
We help employees balance work with childbearing and childcare needs by offering systems of maternity leave, childcare leave and reduced working hours for parenting, all of which are necessary to promote a dynamic female workforce. And because spousal support is also necessary in this regard, we actively encourage both our male and female employees to use these systems. The percentage of male employees using these systems is increasing. In fiscal 2017, 2 men took childcare leave, 4 men took nursing care leave, and 1 man opted for reduced working hours.

In addition, it is very important that we put in place a system that ensures employees returning to work maintain a fulfilling career and personal life. We are listening to female employees' opinions as we proceed to consider how to best offer support for a smooth transition back to work and flexible measures suited to individual childcare situations. We are following an action plan based on the Act on Promotion of Women's Participation and Advancement in the Workplace and the accreditation mark (generally known as "Kurumin"<sup>\*8</sup>) under the Act on Advancement of Measures to Support Raising Next-Generation Children.<sup>\*9</sup> We conducted trials of the work-from-home system (for childcare and nursing care) and introduced the flex-time system. We will accordingly continue to create work environments that facilitate long-term employment regardless of gender and ensure a greater sense of fulfillment for both employees who use the systems and those who do not.

<sup>\*8</sup> Kurumin: The nickname of the accreditation mark that is granted to employers who have developed an action plan to provide childcare support to employees and have attained a certain outcome that satisfies conditions set forth in the Act on Advancement of Measures to Support Raising Next-Generation Children  
<sup>\*9</sup> Act on Advancement of Measures to Support Raising Next-Generation Children: A law that defines the basic philosophy concerning measures to support the development of children, stipulates duties and responsibilities of the national government and other parties concerned, and requires employers to formulate and implement appropriate action plans



■ Number of Employees Taking Maternity, Childcare and Nursing Care Leave and Reduced Working Hours for Parenting (Cumulative Total Number of Persons)



<sup>\*</sup> Temporary workers: Limited-term employees directly hired by the Idemitsu Group does not include workers dispatched from other firms.

Employment of Persons with Disabilities

Idemitsu believes that work allows people to achieve personal growth and gain the respect of others. Accordingly, under our philosophy of respect for human beings, we welcome all people to our workplaces, including those with disabilities, with the aim of helping create a society that allows everyone, regardless of their limitations, to provide mutual support and live harmoniously. As of June 1, 2018, the employment ratio of people with disabilities was 2.14% following the departure of two people, bringing the ratio slightly below the legally prescribed ratio of 2.2%.

In 2011, we launched a cleanliness team at the Training Center<sup>\*10</sup> in Ichihara City, Chiba Prefecture, to take care of the accommodations there, promoting the employment of persons with disabilities. We have since been considering ways to expand the team's workload and diversify its responsibilities. Using the greenhouse facilities on the grounds of the Advanced Technology Research Laboratories in Sodegaura, Chiba Prefecture, we established a greenery department (Idemitsu Yume Noen) to cultivate flowering plants. The gardening team comprises four persons with disabilities and two supervisors. Together they grow ornamentals and visit the Group's neighboring business sites to attend to flower beds and planters.

In April 2018, Idemitsu Yume Noen sold around 1,200 pots of flowering plants it had cultivated at the local Anegasaki Industry Fair, receiving positive feedback from the public. Also, the back-office support department handles work that we had been outsourcing, including packing items to be shipped for Group companies and printing out and filing training materials. In addition to providing employment for persons with disabilities, this office has yielded cost reductions within the Idemitsu Group and improved overall productivity. In addition, the department began printing business cards. These activities have boosted all staff members' sense of pride and fulfillment in their work, helping them move a step closer toward self-reliance.

We will continue working to foster workplaces where persons with disabilities can enjoy and take pride in their work.

<sup>\*10</sup> A training facility with accommodation for group education and training located adjacent to the Chiba Refinery and Chiba Petrochemical Plant and Lubricants Research Laboratory in Ichihara City, Chiba Prefecture

■ Employment Rate of People with Disabilities



Note: Employment status as of June 1 of each year.



## Proactive Health Management

Each Idemitsu employee aims to be a person worthy of respect while aspiring toward fulfilling employment in the field of their choice. Therefore, a policy of health promotion that ensures employees' minds and bodies are healthy and vigorous is considered one of management's top priorities. We encourage all employees to proactively manage their health and work to create an active workplace.

To support employees' proactive health management, we are promoting the following three key policies.

1. Thorough proactive health management: We ensure thorough health checkups and follow ups on results while providing guidance and support to enable employees to proactively manage their health.
2. Mental health measures: To maintain the sound mental health of employees, we have enhanced the preventive healthcare measures we offer employees, who are encouraged to pursue needed care on an individual basis, as well as the level of care overseen by line managers.
3. Health Improvement Plans: We implement innovative and effective health promotion plans for employees' proactive health promotion.

## Health Management

### Issues/Targets and Results

#### <Lifestyle-related diseases>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Ensure all employees undergo periodic health checkups and receive follow-up examinations. To help employees proactively manage their health, ensure all employees assessed to be in poor health receive consultations.</li> <li>Fully start the HSS.</li> <li>Implement health improvement plans and increase the ratio of employees with healthy BMI and HbA1c by 3%.</li> </ul>		<ul style="list-style-type: none"> <li>Periodic health checkup rate: 99.9% (Head Office). Follow-up examination rate: 93.7% (Head Office)</li> <li>Rate of people with poor health receiving healthcare guidance: 73.7% (Company-wide)</li> <li>Started HSS in November 2017</li> <li>Implemented health improvement plans. Healthy BMI employees: up 2%. Healthy HbA1c employees: down 1%.</li> </ul>			<ul style="list-style-type: none"> <li>In the head office area, which had problems with the checkup rate, problems persisted with follow-up examinations. Change the regular health check-up period or devise ways to encourage employees to get follow-up examinations.</li> <li>Raise the rate of employees receiving health guidance by providing assistance to employees working in remote locations</li> <li>Although HSS has started, it is mainly being used only at the Head Office. Encourage its use in other locations.</li> <li>Thanks to the effects from the health improvement plans, there was some improvement.</li> </ul>		<ul style="list-style-type: none"> <li>Ensure all employees undergo periodic health checkups and receive follow-up examinations. To help employees proactively manage their health, ensure all employees assessed to be in poor health receive consultations.</li> <li>Fully utilize HSS at all locations (roll out with regular health checkups)</li> <li>Implement health improvement plans. Increase the number of employees evaluated as healthy within the BMI and LDL cholesterol groups, which have many evaluated as at risk or in poor health.</li> </ul>

#### <Mental health>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Ensure fewer people take off from work for mental health reasons. Reduce the percentage needing time off work to 0.5% or lower and the percentage of people who take another leave of absence to 33% or lower.</li> <li>Roll out training for preventive healthcare measures overseen by line managers to other areas</li> <li>Revise training program for preventive healthcare measures that employees can implement on their own</li> </ul>		<ul style="list-style-type: none"> <li>Percentage of people needing time off work: 1.2%</li> <li>Percentage of people who take another leave of absence: 39.4%</li> <li>Disseminated information about preventive healthcare measures overseen by line managers using a web portal</li> <li>Revised the orientation content for workers dispatched overseas and enhanced the section on mental health issues</li> </ul>			<ul style="list-style-type: none"> <li>The percentages worsened year on year for both people needing time off and those taking another leave of absence</li> <li>Because not many preventive healthcare measures are overseen by line managers, step up efforts to roll out training for these measures to other locations.</li> <li>Provide e-learning programs for preventive healthcare measures that employees can implement on their own</li> </ul>		<ul style="list-style-type: none"> <li>Reduce the number of people taking time off and the amount of time off taken</li> <li>Number of e-learning students: Running total of 4,800</li> </ul>

Note: In light of the business integration with Showa Shell, we aim to revise our targets as appropriate.

## 「健康に関する方針」

出光は、従業員一人ひとりが尊重される人間を目指し、真に「自由に働いて、仕事を楽しむ」ことを目標としています。

このため、我が社では、60歳代まで心身ともに健康で生き生きと働くための健康づくりを「経営上の課題」と位置付け、従業員一人ひとりが「自律的な健康管理」ができるよう促すとともに、「活力ある職場づくり」に取り組んでいきます。

### 健康重点方針

1. 健康管理の徹底：健康診断受診と結果のフォローアップを徹底し、従業員が自律的に健康管理できるように指導しサポートいたします。
  - ・定期及び特殊健康診断実施とフォローアップの徹底
  - ・従業員の年代に応じた保健指導の実施
2. メンタルヘルス対策：「セルフケア」と「ラインケア」を充実させ、従業員の健全なメンタルヘルス維持に努めます。
  - ・ストレスチェックの実施とフォローアップ
  - ・メンタルヘルス不調予防と支援
3. 健康増進企画：従業員の自律的健康管理のため、魅力的、効果的な健康増進企画を実施いたします。
  - ・生活習慣や健康状況のモニタリングによる自己管理習慣付け
  - ・体力作りと食育、リラクゼーション企画

出光で働く従業員に上記方針を周知するとともに、社外にも開示し、従業員と共に健康課題に取り組んでいきます。

2017年10月1日

出光興産株式会社  
 上席執行役員 人事部長

原田和久

Note: This is the original Japanese document for Idemitsu's health policies signed by senior executive officer Kazuhisa Harada.

## Thorough Proactive Health Management

We at Idemitsu believe that for every employee, the promotion of health begins with sound daily habits. To create a workplace that encourages such habits, since fiscal 2014, we have added healthcare initiative items to the Record of Activity Objectives sheets and provided opportunities for superiors and their subordinates to improve their health consciousness.

In addition, we have placed industrial health staff at each business site to actively provide guidance on improving habits and getting treatment at medical facilities. And, based on the health status of individuals, a site's health staff may advise the workplace to take necessary steps to improve employee welfare.

Idemitsu conducts health checks that include screening that goes beyond the level that is legally required\*<sup>11</sup> using screening items similar to those covered by a complete medical checkup, including cancer screenings.

In fiscal 2016, we newly defined health management categories. We are planning health guidance and health promotion activities to ensure that employees classified as being in the "poor" group receive thorough treatment and employees in the "at risk" group receive preventive medical guidance.



Results for Each Health Management Category over Three Years

[Health Management Category]

1. Healthy: There are no limits on work.
2. At risk: There may be a limit on movement and business trips depending on health status.
3. Poor: There are limits on work, such as no working at night or working overtime.

\*<sup>11</sup> Legal requirement: Article 44 of the Ordinance on Industrial Safety and Health provides for 11 items that must be covered by the mandatory health checkup provided by an employer, including blood pressure and thoracic X-ray examinations.

## Health Management of Employees Stationed Overseas

Because at any given time, around 400 of Idemitsu's employees are stationed overseas, we have built a health management support framework and system for dealing with work environments that are different from that in Japan.

In fiscal 2016, we launched a system that ensures employees' mental and physical health as well as their management of medications and other medical care is checked once per year. Based on the results, an occupational health staff member provides support.

In particular, we have established a system that enables prompt action to help maintain the mental and physical health of the approximately 160 employees deployed to rural Vietnam to work on the construction of the Nghi Son Refinery. We have also dispatched two full-time onsite occupational health staff from Japan and work with local Japanese doctors.

## Mental Health

Idemitsu began educating employees on mental health self-assessments in fiscal 2013, before stress assessments became mandatory. The stress checks conducted in fiscal 2016 were the first since they became mandatory, and the percentage of Group employees receiving the checks stood at 90.3% in fiscal 2017. Those who were classified as being under high stress was 9.9%.

In addition, we offer face-to-face counseling with industrial physicians to those who overwork, to new hires working at the Company between one and three years (367 received counseling in fiscal 2017), and to those who find themselves in need of the advice of healthcare professionals based on regular health checks. To raise awareness about mental health, we conducted 31 training seminars on preventative healthcare measures that employees can implement on their own as orientation for employees preparing for an overseas assignment and for new hires in groups (96 people). We also conducted training seminars on preventative healthcare measures overseen by line managers for new management-level employees and human resource managers.

## Health Improvement Plans

In fiscal 2017, we carried out projects to help employees form self-management habits, exercise, eat healthfully, and relax as well as charming and effective projects for promoting health and enabling employees to manage their health on their own.

### (1) Forming self-management habits

Measurements of employees' abdominal fat were taken at the Head Office three times, and a record high 247 people participated. We also raised awareness among employees about improving their daily habits. In addition, we invited an outside speaker to hold a seminar about forming healthy habits. Afterward, 43 people worked to improve their daily habits over a three-month period, and around half were able to stick with their healthier habits. Furthermore, we tested using a program to improve people's vitals using a wearable device and a smart phone application. 80% of participants reported noticeable effects, including better daily habits and weight loss.

### (2) Exercising

The Company and the Idemitsu Kosan Health Insurance Union have collaborated on a campaign called KENPOS to promote walking in the spring and autumn. We got people excited for the campaign in part by promoting short lunch-time walks and holding inter-department competitions. Moreover, we held health-related stretching events to help people prevent falling, improve flexibility, and strengthen ligaments. The running total of participants was over 100 people.

### (3) Eating healthfully

We held a healthy eating event called "I love soybeans!" There were 89 participants. They learned that soybeans are an excellent food, being high in protein and low in calories.

### (4) Relaxing

Employees were allowed to take naps in meeting rooms during their lunch break, and participants reported feeling more productive in the afternoon.

In recognition of the results from these health promotion efforts, the Company was selected in the Certified Health & Productivity Management Organization Recognition Program (the White 500) in fiscal 2017 for the second consecutive year. In the comprehensive evaluation of the health & productivity management survey, Idemitsu remained in the top 20% for the second year in a row and was the top in its industry for three individual evaluation categories.



The Certified Health & Productivity Management Organization Recognition Program (the White 500) certificate

## Recording activities



An extreme stretch



Healthy eating event, "I love soybeans!"



Walking participants took a commemorative photograph in front of the statue of Kusunoki Masashige

## Developing a Globally Competitive Human Resource Base

### <Globalized personnel training>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Methodically train globally active personnel in line with the overseas expansion of each business department</li> <li>Hire foreign national staff in accordance with the needs of each business department and the globalization of human resources.</li> <li>Revise contents of global portal site after conducting an interview of the site's visitors</li> <li>To contribute to the stable operation of overseas businesses, support personnel at overseas locations and entrench the global personnel system</li> </ul>		<ul style="list-style-type: none"> <li>Defined the requirements for globally active personnel and formulated a plan for the necessary personnel</li> <li>Hired four foreign national staff members</li> <li>We created English versions of Idemitsu philosophy training materials and began providing them via the global portal site</li> <li>Held hierarchical training in Japan and overseas for overseas Group company employees (80 participants)</li> </ul>			<ul style="list-style-type: none"> <li>To secure the necessary number of globally active personnel, we drafted and took measures to improve English proficiency</li> <li>We provided materials for learning about the management philosophy via the global portal site and effectively linked them with the content of hierarchical training programs</li> </ul>		<ul style="list-style-type: none"> <li>Increase the number of employees who meet the requirements for globally active personnel by 70</li> <li>Revise management training for managers at overseas Group companies to reinforce the connection between corporate management, personnel programs, and the management philosophy.</li> </ul>

Note: In light of the business integration with Showa Shell, we aim to revise our targets as appropriate.

As it expands its operations globally, Idemitsu aims to provide every Group employee around the world with opportunities to achieve growth through their duties and to help enhance their trust in the Company. In line with this aim, we are recruiting human resources in Japan and overseas, designing personnel systems as well as education and training programs and sharing management philosophy, thereby developing a human resource base.

Specifically, to ensure that any Group employee who is ambitious and competitive can achieve success beyond local borders and grow as a businessperson, Idemitsu's initiatives include recruiting foreign nationals and providing education and training programs aimed at enhancing employees' English proficiency. On a Group basis, we are working to develop the unified global personnel system with overseas subsidiaries, support the education of local staff and provide support for smooth labor management.

### Recruitment of Foreign Nationals (non-consolidated basis)

To support the global expansion of its businesses, Idemitsu has been working to hire foreign professionals with the aim of securing competitive human resources that can play an active role on the global stage. We maintain an ongoing program of recruiting foreign students studying abroad at universities in Japan who want to stay and work in Japan after graduation. As of March 31, 2018, we employ 19 foreign nationals in Japan.

### Strengthening Employees' English Communication Skills (non-consolidated basis)

As an initiative for our globally capable workforce, Idemitsu is constantly striving to enhance each employee's English communication skills, since such skills are considered essential to overseas business transactions. Regarding TOEIC, the Company has paid for one examination per year for all employees since fiscal 2018 and has required employees under the age of 35 to take the examination. Moreover, since fiscal 2018, we have begun a test run of an English app that allows employees to learn

on their smart phones in their free time at their own pace. We plan to study its effectiveness in the near future. In addition, we have continued to hold regular English training programs that make use of outside training institutes.

Moreover, since fiscal 2016 we have implemented English-language business skills training for those who frequently use English in their duties as well as for those who are likely to be sent on an overseas assignment within a year. This short-term, intense training program is open to only a limited number of employees. It centers on meetings and presentations aimed at facilitating smooth communication between staff either situated in Japan or assigned overseas and local staff and joint researchers as well as customers of overseas business partners.

These training programs have been well received by the participants. After completing the training, employees on overseas assignments have said that they are glad they had the training and that what they learned has proven useful.

At each business site, we use our unique criteria to select candidates for English proficiency education and global personnel training, which may include setting up group lessons at business sites with visiting lecturers, sending individuals off to one-on-one English conversation classes and establishing correspondence training programs

### Assisting in the Development and Implementation of Overseas Subsidiaries' Personnel Systems (the Idemitsu Group)

The Idemitsu Group has introduced a system for Groupwide global human resource management (the global personnel system). This system supports overseas Group companies around the world in their business expansion efforts from a human resources perspective. It helps set fair grades, assessments, and remuneration for local staff and motivating everyone to pursue individual growth.

In addition, we are conducting assessor training organized by the Human Resources Department for managers of locations that have adopted the system to ingrain application methods and deepen the understanding of local staff.



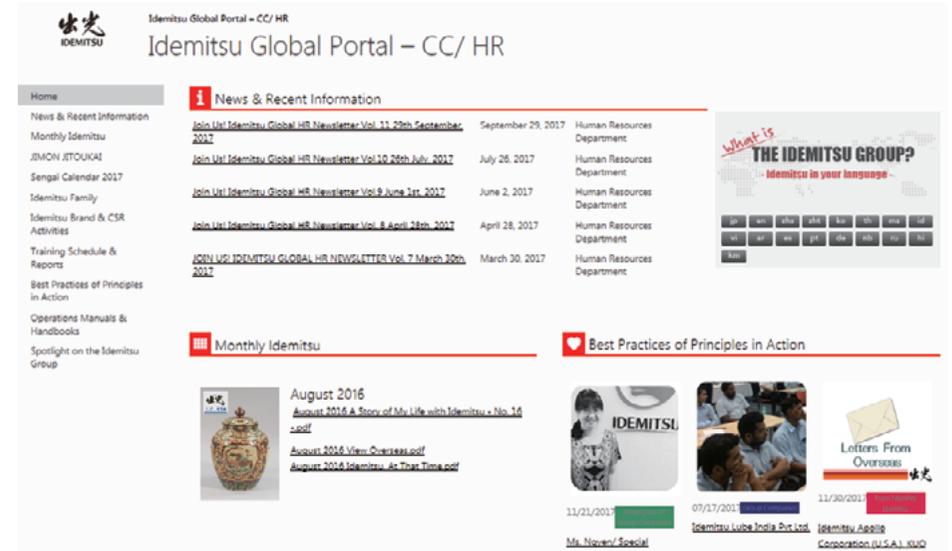
Fiscal 2017 assessor training

## Educational Support for Local Staff (the Idemitsu Group)

As for personnel training for local staff, we provide group training at the Head Office and at local subsidiaries to improve their work skills and deepen their understanding of the corporate philosophy. Staff from the Human Resources Department visit local subsidiaries to provide independent study workshops focused on our corporate philosophy. In fiscal 2017, we provided DVDs we created for use in independent study workshops for local staff. In addition, the HR Department staff conducted hierarchical skill training programs aimed at better integrating local staff and unleashing their potential while enhancing the organization's overall strength. As for group training at the Head Office, we hold Idemitsu Global Management Training sessions with the aim of creating a greater sense of unity and improving management capabilities. Efforts in this regard center on the Company's management philosophy and include providing opportunities to visit locations related to the founding of the Company and learn about the significance of its history and businesses. The Idemitsu Global Management Training session in fiscal 2017 was held with 31 local staff located in 13 countries. Feedback from participants has been positive as they were able to forge business connections beyond their individual locations, which helped foster a feeling of oneness as a member of the Idemitsu Group. We plan to continue holding the training in fiscal 2018 and beyond.

We launched the Idemitsu Global Portal to enable local staff to access a wealth of internal information, including the Company's history and philosophy, stories and case studies from employees around the world and educational and training materials.

Thanks to this educational support, we are increasing the specialized knowledge of local staff, raising awareness of the Idemitsu Group's business expansion, and sharing our management philosophy. In these ways, we are working to train local staff to enhance the competitiveness of each of the Idemitsu Group's local companies.



Fiscal 2017 Idemitsu Global Management Training session, Idemitsu, Human Resources Department

## Relations with Stakeholders

### Basic Policy

Employees of the Idemitsu Group perform their respective roles in accordance with the Action Guidelines in seeking to ensure the Company fulfills its commitments to stakeholders as depicted in the Principles of Management and Management Policies.

## Communication with Customers

### Communication with General Customers

The major points of contact between the Idemitsu Group and individual customers are its service stations, website, and advertising and publicity media.

The Customer Relations Center established within the Public Relations Office handles customer comments and inquiries, which come via telephone, regular mail, the customer opinion postcards provided at service stations and our web-based customer service inquiry form. The Customer Relations Center promptly responds to customer inquiries and claims in close collaboration with other departments within the Group.

### Efforts to Improve Customer Satisfaction

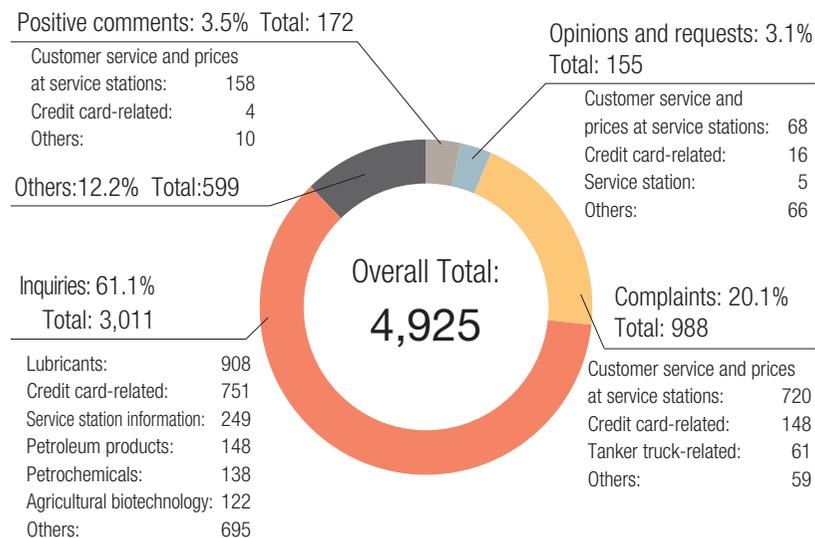
The Petroleum & Coal Marketing Department has been developing monitoring activities to improve customer satisfaction at service stations. Under this program, investigators recruited from the general public visit service stations, draw up reports based on their evaluations of said stations, and notify the service stations being investigated of the results. Based on these results, service stations work to improve their operations. In addition, the service stations solicit comments and requests directly from customers every day through customer opinion postcards. By combining these two programs, we aim to realize even greater customer satisfaction at service stations.

The Customer Relations Center promptly responds to customer inquiries. For inquiries of a technical nature, including those related to fuel oil, lubricants and other products, or complaints about customer service at service stations, the quality of gasoline, the driving manners of tanker truck drivers and other matters, the center works in cooperation with the responsible departments to respond appropriately and ensure that necessary improvements are made.

The Customer Relations Center rose to 4,925 comments and inquiries in fiscal 2017. Because we changed the display of the inquiry phone number listed on our website, there has been a year-on-year increase in the number of inquiries made by phone and contacts for sales pitches. In addition, the campaigns held at service stations in summer and autumn were very well received, increasing the number of inquiries. On the other hand, although the number of complaints declined, there were many comments regarding the service provided by service station staff as well as missed opportunities due to the staff's lack of knowledge regarding credit cards and campaigns. As always, each time a complaint is received, we provide guidance through the responsible retail branch to the particular service station or retail outlet operating the service station to promote improvement.

Going forward, in its aim to improve customer satisfaction, the entire Idemitsu Group will continue working to sincerely listen to its customers and respond in ways that make them feel grateful for speaking up.

■ Breakdown of Customer Feedback Received by Customer Relations Center in Fiscal 2017



\* Figures indicated in graphs and tables within this report are rounded off and therefore may not exactly match the totals shown.

## Communication through Our Website

Idemitsu appropriately manages the freshness of its information with the aim of quickly providing customers with the Company's latest information. In fiscal 2017, we established the Idemitsu Channel, which makes it easy for people to view and enjoy various promotional materials, including TV commercials, radio ads, and web videos. We've leveraged our corporate attitude to create an attractive design, such as making special web pages for full-length videos. In addition, we have established inquiry desks for each business area and set up a system for reflecting customer's opinions and ideas into products and services.

[Idemitsu Channel](#)  
[Idemitsu Kosan Co., Ltd. Official YouTube Channel](#)

### Idemitsu Channel categories:

- TV commercials
- Radio commercials
- Video releases
- Idemitsu concerts
- Road race world championships
- Idemitsu Ihatove Trial
- Official Facebook page, "Idemitsu Excursion Club"
- Introduction movies for refineries and complexes
- Videos introducing our services

### Idemitsu Channel, TV commercials



TV commercial:  
 "The History of IDEMITSU 1911- 1945"



TV commercial:  
 "The History of IDEMITSU 1945- 2017"



TV commercial:  
 "Where does petroleum come from?"

## Communication via Advertising and Publicity

Idemitsu's advertising and publicity campaigns are designed to help a broad range of stakeholders gain a better understanding of its management philosophy and business operations. On television and radio, especially on programs we sponsor, we run commercials focusing on our businesses, events we are hosting or sponsoring, and our activities aimed at giving back to the community. We work hard so that viewers can learn about Idemitsu's activities in a fun way, using leading-edge methods of expression, such as stop motion animation and virtual reality video.

### Idemitsu Channel Spotlight



Vietnam's first service station business with Japanese funding



Idemitsu Excursion Club, "Sakaiminato"



TV commercial:  
 Racer Nakagami,  
 the 2017 British Grand Prix winner



TV commercial: Idemitsu Ihatove Trial



TV commercial:  
 Idemitsu Concert,  
 by "Sing! The Hometown Girls"



Idemitsu Concert, by  
 "Sing! The Hometown Girls"



Idemitsu Channel, Idemitsu Excursion Department, "Kusatsu"



Paper stop motion movie,  
 "The History of IDEMITSU"



Clay Art

## Communication with Corporate Clients

Idemitsu sales staff pay direct visits to corporate clients. In this way, the Idemitsu Group maintains close communication with corporate clients and promotes the development of products and solutions suited to their needs. Idemitsu Branch Offices throughout Japan hold seminars for corporate clients to deliver information on the latest technical trends in the energy-saving and environment-related fields as well as on regulatory conditions and other topics directly useful to their operations.

### Major Seminars for Corporate Clients Held in Fiscal 2017

Organizing Department	Seminar Title	Location	No. of Times	No. of Organizations Participated	No. of Participants
Coal Business Department Petroleum Marketing Department	The 14th Apollo Energy Meeting	Tokyo	1	149	317
Petroleum Marketing Department	Seminar on the Environment and Energy Saving	Nationwide in Japan	35	502	939
Lubricants Department 1, Lubricants Department 2	Cutting Oil Workshop	Tokyo, Osaka	2	103	155
	Thermal Treatment Workshop	Tokyo, Osaka	2	178	291
	Practical Seminar on Lubricant Engineering	Chiba	1	15	17
	Seminar on Lubricant Basics	Chiba	1	12	18



The 14th Apollo Energy Meeting (December 8, 2017)



Cutting Oil Workshop (November 17, 2017)



## Cooperation with Partners

### Communication with Retail Outlets

Under the brand banner of “Hotto, Motto, Kitto: Idemitsu” (Assurance, Greater Vitality, and Absolute Satisfaction: The Idemitsu Promise), we constitute an integrated, simple and powerful supply chain with 783 retail outlets and 3,545 service stations located throughout Japan (as of March 31, 2018). Our Branch Offices serve as consultation desks to offer support for retail outlets by working closely with management and the operators of service stations.

With the aim of fostering communication and promoting dialogue between Idemitsu management and retail outlet owners, we hold the Joint Meeting every year.

We also make integrated efforts with the Idemitsu-kai, a retail outlet organization, to support community activities as well as regional vitalization and other social contribution initiatives.

### Communication with Partners

Idemitsu's refineries and petrochemical plants consign plant maintenance work and logistics-related operations (land transportation from and marine transportation to and from refineries and the petrochemical plants) to cooperating partners.

The number of such cooperating partners is about 50 for a smaller business site and over 200 for a larger business site.

At every business site, our partners in various fields comprise members of the Cooperative Association for Sea Transport, Cooperative Association for Land Transport and Cooperatives Association for Building and Maintenance. Idemitsu joins with these three associations in working to ensure safe and stable operations at business sites and to promote environmental conservation.

### Communication with Transport and Shipping Companies

We consign the transportation of petroleum products to transport and shipping companies. These contracted transport and shipping companies organize safety councils to promote transportation safety and strengthen collaboration among their respective companies. Idemitsu participates in activities as a special member of these councils.

Our 19 partner land transport companies have formed the Koun-kai,\* a council of transportation companies that conducts safety promotion campaigns and training seminars on truck operation management in addition to acknowledging accident- and traffic violation-free performance by awarding driving excellence. Our partner shipping companies have organized the Asahi Tanker Environment and Safety Council with the aim of forming high-quality, competitive fleets and a reliable shipping structure. The council visits oil tankers berthed at refineries, petrochemical plants, oil depots and other facilities and engages in dialogue with captains and crew members to promote the council's action policies and share case studies. Idemitsu provides various alert and warning information concerning safety, the environment and quality to the council.

\* Koun-kai: A council of transportation companies to which Idemitsu consigns the transportation of petroleum products. Comprises 19 transport companies operating tanker trucks with the Apollo logo.

## Communication with Shareholders and Investors

The Group communicates with shareholders and investors based on the following Disclosure Policy.

### 1. Disclosure Criteria

The Company discloses information in accordance with the Securities and Exchange Law, the Company Law, and rules related to the up-to-date disclosure of corporate information of the issuer of marketable securities stipulated by the Securities Exchange (referred to below as timely disclosure rules). In addition, the basic stance of the Company is to strive for the fair, up-to-date and proper disclosure of information as requested by shareholders and investors regardless of whether such requested information is covered by the timely disclosure rules or not.

### 2. Disclosure Method

The information covered by timely disclosure rules is made available through TD-NET (Timely Disclosure Network) provided by the Tokyo Stock Exchange in accordance with the same rules, and the same information is provided as quickly as possible on the Company's website after the release over TD-NET. In addition, consideration is given to providing information that is not covered by the timely disclosure rules to shareholders and investors in a fair, up-to-date, and proper manner based on the concept of timely disclosure.

### 3. Quiet Period

The Company has established a “quiet period” immediately before the announcement of earnings and refrains from providing comments and responses to inquiries related to earnings in order to prevent the leak of information that could affect the share price during the time the earnings report is being prepared. However, in the case that during the quiet period the possibility arises that there will be substantial difference from previously announced earnings forecasts, this information will be appropriately released.

### 4. Future projections

Items, such as plans, forecasts, and business targets that are posted on the Company's website and that are not historical facts, are based on decisions and assumptions made by the Company, taking into consideration information available at that time. Actual results may differ substantially from these items as a result of various factors. Factors that could affect earnings include economic conditions, the price of oil, the market for and supply and demand trend of petroleum products, and exchange rates, but are not limited to these factors.

### 5. Investment decisions

Information posted on this page has been provided in order to increase viewer's understanding of the company not to solicit investments. Investment related decisions should be based on one's own judgment.

[Investor relations](#)

## Interaction and Communication with Oil-Producing Countries

Idemitsu seeks to build ever stronger relations of trust with oil-producing countries, particularly in the Middle East. To achieve this goal, we have established local offices within the region from which we promote direct dialogue and exchanges with the countries concerned. Moreover, we have recently been working to strengthen our trusted relationships with oil-producing countries by conducting joint business development with capital participation. In addition, we have been providing personnel development support and technical assistance to oil-producing countries by dispatching our expert staff to these countries with the help of the Japan Cooperation Center, Petroleum (JCCP), a general incorporated foundation, and accepting executive candidates and technicians for training in Japan. We have also been participating in joint projects implemented by JCCP to develop industrial infrastructures in oil-producing countries.

### Fiscal 2017 Results

We accepted 44 trainees from the United Arab Emirates, Qatar, Oman, Vietnam and other oil-producing countries.



Executive candidates from Qatar Petroleum (QP)



Sales and logistics executives from Myanmar Petroleum Products Enterprise (MPPE)  
Technicians from Myanmar Petrochemical Enterprise (MPE)



Petróleos Mexicanos (PEMEX), which accepted its first technician exchanges

### TOPICS: Calling for revolutionary strategies to build a robust supply network at the Middle East Petroleum & Gas Conference

The 26th Annual Middle East Petroleum & Gas Conference was held in Abu Dhabi, UAE on April 23 and 24, 2018. At the conference, Idemitsu director Kiyoshi Homma gave a speech about the challenges facing the oil industry in an environmentally friendly world.



Kiyoshi Homma (director of Idemitsu) giving a speech at the Middle East Petroleum and Gas Conference

There were 550 attendees from around the world, including those from Middle East oil-producing countries, major oil companies, and executives of financial institutions. The conference featured speeches by experts in various fields talking about petroleum and gas trends and future predictions, leading to lively debates.

In his speech, director Homma explained that people's awareness of environmental problems is greatly changing and society is placing more emphasis on future sustainability, including that of economic growth. He then explained that the petroleum industry is being pressured to simultaneously achieve economic value (profit) and social value (social contributions). Furthermore, he called for both oil-producing countries and consuming countries to draft revolutionary strategies not beholden to existing ideas to build a robust supply chain for petroleum and petrochemicals. Director Homma's speech seriously tackled the future of the oil industry in Asia and the rest of the world. It was an opportunity to show oil-producing countries and other potential partners that Idemitsu is continuing to come up with solutions.

## Relations with Local Communities

The Idemitsu Group regards prospering with local communities as a key priority and aims to interact closely with the people of all regions.

### Initiatives Undertaken by the Sales Department in Japan

#### Initiatives Jointly Undertaken with the Idemitsu-kai

Idemitsu Sales Offices in each region undertake Activities for Community and Regional Vitalization\* in collaboration with the Idemitsu-kai, an organization comprising owners of Idemitsu service station retail outlets throughout Japan. Together, they promote a wide range of activities that have deepened the trust from local communities and strengthened bonds with customers. These activities focus on personal safety, children (future generations), environmental protection, and fundraising.

One such activity is the Hokkaido Idemitsu Children's Art Contest held by the Hokkaido Idemitsu-kai, which marked its ninth anniversary and has become a fixture in Hokkaido. The contest has received acclaim from both visitors to the exhibitions of the winning works and the participating educational institutions, including schools and childcare centers. In its first year, 1,451 entries were received. By fiscal 2017, this number had grown to 7,910 entries.

After the works have been judged, a poster is made featuring the top selections and displayed at Idemitsu service stations within Hokkaido and an exhibition tour is held. In fiscal 2017, we simultaneously held an exhibition of the 86 winning works and special exhibitions displaying between 100 and 259 works that did not win the contest in six Hokkaido locations, starting in Hakodate then going on to Kitami, Muroran, Obihiro, Sapporo, and Asahikawa. In fiscal 2018, the 10th year of the contest, we will add a stop in Kushiro and strive to foster greater interaction with local communities

\* Activities for community and regional vitalization: Initiatives planned and proposed by Idemitsu branch offices to be carried out in cooperation with the Idemitsu-kai and each retail outlet to contribute to the vitalization of local communities and society.



The exhibition at the newly added site in Kitami



The owner of a retail outlet presenting an award certificate at a school



The winner holds an award certificate granted jointly by the Idemitsu-kai and Idemitsu alongside a badge featuring the winning work and the poster displayed at service stations



Judges assessing the works



Retail outlet workers eagerly preparing for the exhibition

### Initiatives Undertaken to Show Support for Regional Communities in Japan

Nippon Kirari is a shopping website launched in January 2012 after the Great East Japan Earthquake under the concept of showing support for regional communities in Japan.

Catering to discerning customers who appreciate craftsmanship, the website showcases the products/capabilities of regional communities across Japan, offering a lineup of carefully chosen artisanal goods that represent the best each locale has to offer.



**TOPICS: Establishing the Idemitsu Excursion Department on Facebook**



We established the department's official Facebook page in April 2017. We go on research trips to locales perfect for an excursion by car or motorcycle from the point of view of travelers and interact with residents in the area. We don't just cover the most notable features of the region; we also show the various sights, food, and people we encounter along the way. For our collaboration with Nippon Kirari, we visit the people producing Nippon Kirari products and regularly post about our travels where we learn about the manufacturing experience. We aim to create a place where people can rediscover the charm of diverse regions across Japan through our stylish videos and photos. (The Facebook page is updated four times a month.)

### Initiatives Undertaken by the Logistics Department in Japan

#### Initiatives Undertaken by the Koun-kai

The Koun-kai council of transportation companies promotes activities that are rooted in local communities, including traffic safety lessons using tanker trucks held at elementary schools, internships at oil depots, group blood drives, cleanup activities, and the purchase of goods from welfare workshops.



Koun-kai members cleaning up an area

### Initiatives Undertaken by Our Manufacturing Bases in Japan

Idemitsu's refineries and petrochemical plants in Japan work to maintain close ties with local communities as their operations greatly affect local economies and environments. Each Idemitsu refinery and petrochemical plant holds a community briefing session\* at least once a year to report and explain the Group's security and safety efforts as well as environmental protection initiatives to local community members. In addition, we participate in traditional local events and undertake activities that are firmly linked to local communities. Examples include opening Company facilities to the public, offering tours of refineries to elementary and junior high school students, conducting classes at schools, holding classes on the environment, offering internships and hosting career development events, making goodwill visits to welfare facilities, conducting cleanup activities in neighboring areas and cooperating to ensure traffic safety. Along with participation in these activities, employees of cooperating partners of Idemitsu's refineries and petrochemical plants join in our efforts to keep nearby roadsides clean and improve road safety.

\*Community briefing sessions: We hold meetings to which we invite local community representatives, such as heads of neighborhood associations, to explain our safety- and environment-related efforts and hear the opinions of community members.



A class being held at the Tokuyama Complex



A meeting on petroleum between the city of Tomakomai and Idemitsu held by the Hokkaido Refinery

### Initiatives Undertaken by Bases Overseas

#### Resource Development Department

In Norway, which is one base for our Petroleum Development business, Idemitsu Petroleum Norge (based in Oslo) has been a sponsor of the Munch Museum, which is owned and run by the municipality of Oslo. The support efforts began in 1991 with a donation to help fund the expansion of the museum. In 2000, the company supported restoration work being carried out on the famous artworks "The Scream" and "Madonna," which were stolen and then recovered with damage.



The central garden of the Munch Museum featuring a cherry tree donated by Idemitsu

The works of Edvard Munch are among Norway's national treasures, and Idemitsu's support for the Munch Art Museum is well-known as being among the longest-standing corporate sponsorships of the arts in the country.

- Environmental Management Policy
- Energy Management Policy
- Cultural Asset Policy
- Stakeholder Engagement Policy

### 2017 Initiatives

- Girls Academy  
To lower the high drop-out rate among Aboriginal girls and help realize quality of life improvements for the community over the long-term, IAR sponsors a youth training program that offers guidance to local female students through the medium of cultural exchange.
- Investments in the West Pack Rescue Helicopter and Community Hospitals  
IAR helps support improvements in emergency medical care in rural areas as well as better community hospitals.
- Hands-on Agricultural Learning Program  
To support local high schools, IAR has opened a portion of its landholdings scheduled for future development for use in hands-on agricultural programs that teach livestock grazing, growing crops, and land management (such as maintaining fences). Through this initiative, IAR is striving to promote better communication with the community. Over the long term going forward, IAR will continue to support initiatives to give back to the community by maintaining local population levels and creating richer communities.

### Lubricants Department

The Idemitsu Group is the eighth largest lubricant producer in the world, selling over 1 million kl of lubricants globally. Around the world, the Group operates 29 bases in 23 countries producing eco-friendly, fuel-efficient, CO<sub>2</sub> emissions-lowering motor oil and high-performance industrial lubricants as well as 38 sales bases in 23 countries.

In 2004, Idemitsu Lube Techno Indonesia Co., Ltd. was founded to produce and market lubricants in Indonesia. On the island of Sumatra, the company is working with a local NGO (Orangutan Information Centre) to rejuvenate forests that are at risk of destruction. We have allotted a portion of profit from the sale of fuel-efficient 0W-20 motor oil for gasoline engines to provide funding for this initiative. Through this initiative, the company contributes to reducing the environmental impact at the consumption stage in Indonesia while supporting activities that directly protect the natural environment of the planet.

< Initiative Overview >

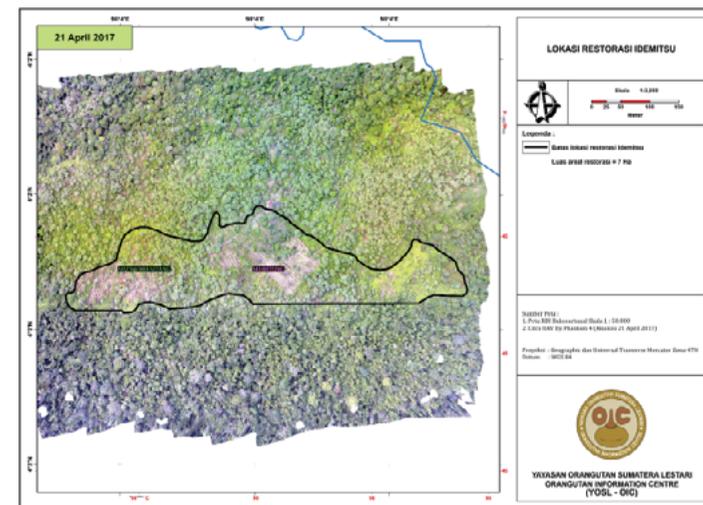
- 1.Purpose: Supporting the protection of the environment, the long-term growth of automobile and motorcycle culture, and the industries of Indonesia by providing high-quality lubricants

### 2. Community Overview:

- (1) Location: The Leuser Ecosystem, which is a world heritage site centered on Leuser, North Sumatra Province
  - (2) Characteristics: One of Southeast Asia's most precious forests, spanning over 2.6 million ha and providing a habitat for tigers, Sumatran rhinos, elephants, and other wildlife.
  - (3) Issues: Due to its rich mineral reserves, the forest is in danger of forest destruction from roadworks, large-scale mining operations, palm oil plantations, and other development.
3. Schedule: The tree planting area is 7 ha. We will return the area to its original forested state over about five years from April 2017. The tree planting area will steadily expand in line with sales of the fuel-efficient motor oil for gasoline engines 0W-20.



The tree planting kick-off meeting in May 2017



The area targeted for tree planting

## Making Cultural Contributions to Society and Local Communities

### The Mission of the Idemitsu Museum of Arts

The Idemitsu Museum of Arts was established in 1966 to house the collection of founder Sazo Idemitsu (1885–1981). The founding philosophy of the art museum is outlined in Sazo Idemitsu's own words: "The most important duties of museums of art are to be constantly diligent in selecting excellent art pieces, to use these pieces to educate the current generation, to carefully preserve the artworks for future generations, and to raise awareness of these splendors." The founder's desire to share this extensive, highly valuable private collection of works—seen as national cultural assets—with the public was bolstered by expert opinions contending that he had a social responsibility to do so. This formed the impetus for the founding of the Idemitsu Museum of Arts.

The museum's collection has grown to an outstanding size in Japan with over 10,000 works of art. The collection includes many fine works of art from a broad range of styles representative of art history in Japan and other regions of the Far East. One such piece is the Scrolls of Illustrated Stories on the Courtier Ban Dainagon, a national treasure and masterpiece of Japanese painting created during the Heian period. The collection is put on exhibit six times a year. Special exhibits are also open to the public at large. Through the universal medium of art, the museum strives to establish a commonality with the hundreds of thousands of annual visitors.



A special exhibit room at the Idemitsu Museum of Arts

[Idemitsu Museum of Arts](#)

### Words of Founder Sazo Idemitsu—Making Business an Art

True art and true business, with respect to beauty, creativity, and effort, are in total alignment and, with respect to dignity and strength, neither one yields. We who endeavor to create beauty believe in making business an art, and championing this cause is a foregone conclusion. Idemitsu's business must be beautiful to everyone who sees it. It must not simply exist for the ugly purpose of making a profit.



### Contributing to Music Culture

We have been the sole sponsor of the music television program "Daimei no Nai Ongaku-kai," or "Untitled Concert," for over 50 years. The program features live performances of orchestras with the aim of delivering quality music straight to people's living rooms, with its principal focus on classical music. On March 5th, 2017, the program celebrated its 2,500 broadcast since first airing in 1964. In April 2017, Kanji Ishimaru, who is active on television and stage, became the sixth host of the show, helping the audience appreciate the appeal of the music from a new viewpoint and contributing to the history of the program.



"Daimei no Nai Ongaku-kai"

In 1990, we established the Idemitsu Music Awards to commemorate the 25th anniversary of "Daimei no Nai Ongaku-kai." The awards support the activities of up-and-coming musicians as a way to help elevate music culture in Japan. Over the course of the 28 awards ceremonies held thus far (as of fiscal 2017), 100 individuals and groups have been honored. Every honoree continues to shine in their respective field. Among the many talented musicians, the selection criteria seek for something beyond mere mastery, rather, with an eye to nurturing new talent, they focus on drive, intrinsic ability, and future potential. To qualify, a candidate must be a musician no older than 30 and living and working mainly in Japan. Each award recipient is given ¥3 million in prize money to encourage them to continue perfecting their craft. Every year, a concert is held commemorating the awards, and the musicians display their sharp skills in front of a large audience. The concert is broadcast on "Daimei no Nai Ongaku-kai" and garners a wide swath of viewers.

In fiscal 2016, the recipients were Kohei Ueno (saxophonist), Yuya Okamoto (cellist), Ayana Tsuji (violinist).

## Local Community Contribution through Cultural Activities

We have held concerts over the last 10 years since 2006, mainly in regions where we have established refineries and complexes. In fiscal 2017, the concert program was reimagined as the Idemitsu Kosan Concert—Portraying the Future in Music, with the aim of supporting musical experiences for young future leaders in part by providing opportunities for young musicians to showcase their talents and for local students to perform with professional musicians. We also hold music workshops at local elementary and middle schools around the time of the concerts.

Through such activities, we continue to contribute to the creation of opportunities to interact with music culture and to the development of future generations.



People trying musical instruments at a music workshop at a school



Joint concert with children and professional musicians

## KidZania

At KidZania, an inspiring, interactive indoor theme park located in Toyosu, Tokyo and Koshi-en, Hyogo Prefecture where children experience various occupations and social activities, we have been operating a service station pavilion (called the “gas station” at KidZania) since 2006, allowing children to learn how society works in a fun way.



The Idemitsu service station pavilion at KidZania

## Idemitsu Ihatove Trial

We also contribute to local community development through the promotion of motorsports by serving as the main sponsor of the Idemitsu Ihatove Trial, a motorcycle trial held in the northern part of Iwate Prefecture, for 30 years.

The theme since the 2017 Trial has been “giving the trial spirit to future generations.” We have been striving to nurture genuine trial riders and to support children to broaden the horizons for riders. A major characteristic of the event is that it coexists with nature through such efforts as carbon offsets. We aim to further develop the event by demonstrating the allure of motorcycle trials to future generations.



A Sport Class division motorcyclist participating in the Idemitsu Ihatove Trial



A motorcyclist attempting a bumpy slope

# Governance

## Corporate Governance

Since its founding, Idemitsu has consistently maintained the utmost respect for people and has worked diligently to be a socially respected and highly trusted company. With this aim in mind, the Company recognizes the importance of building positive relationships with all stakeholders, including customers, shareholders, business partners, local communities, and employees, by fulfilling its social responsibility as a good corporate citizen, improving management transparency, and promoting sound and sustainable growth. Japan's Corporate Governance Code is intended to promote corporate growth and increase corporate value over the medium and long terms through dialogue with shareholders. Reflecting its aim to be a socially respected and highly trusted company, Idemitsu believes that the Corporate Governance Code should basically be adhered to.

To enhance governance, in 2003 the Company established the Management Advisory Committee and Safety & Security Advisory Committee, both comprising external experts, as advisory bodies to the Board of Directors. The Company utilizes the expert insight provided by these committees in management. Since then, Idemitsu has continued to make improvements, appointing independent outside Audit & Supervisory Board members and then, from 2014 onward, appointing multiple independent outside directors. The outside directors and Audit & Supervisory Board members offer diverse backgrounds and insights. By candidly discussing the state of Idemitsu's businesses and the surrounding environment with these outside members and earnestly acting on their frank opinions, Idemitsu aims to ensure transparent and fair management.

### Outline of the Corporate Governance Structure

Idemitsu's Board of Directors makes important management decisions and oversees business execution. Idemitsu has adopted the structure of a company with an audit & supervisory board. As such, the Audit & Supervisory Board and its members are independent of the Board of Directors and monitor the execution of the directors' duties.

In accordance with relevant laws and regulations, the Company's Articles of Incorporation, and other Company rules, the Board of Directors makes important management decisions on such matters as business strategy and plans and provides oversight of business execution. For other matters, in order to ensure swift decision-making with regard to business execution, executive authority is delegated to the president, directors and executive officers assigned to specific areas, and general managers.

At the May 15, 2018 Board of Directors meeting, the board confirmed the operational status of the internal control system in fiscal 2017 and, to further enhance the system's efficacy, adopted a basic policy on the internal control system for fiscal 2018. In line with this basic policy and to reinforce risk management, in July 2018 the Company revised its system, establishing a new Enterprise Risk Management Committee, chaired by the president, and merged the existing Risk Management Committee and Compliance Committee to create the Operational Risk and Compliance Committee.

[Management Policy](#) [Corporate Governance](#)

### Status of the Corporate Governance Structure

Idemitsu has 11 directors. In 2017, the number of outside directors was increased by two. As a result, outside directors now account for more than one third of the board's membership and comprise individuals with diverse backgrounds, including a woman and a non-Japanese national. Each director's term lasts one year, and elections are held every year at the General Meeting of Shareholders. In fiscal 2017, the Board of Directors met 16 times.

Of the four Audit & Supervisory Board members, two are outside members, and there is a system in place to allow them to carry out their function of external oversight of management. At its meetings, the Audit & Supervisory Board strives to share issues and information among the Audit & Supervisory Board members and requests information from the directors and operating divisions as necessary in order to improve the level of oversight. In fiscal 2017, the Audit & Supervisory Board met 18 times.

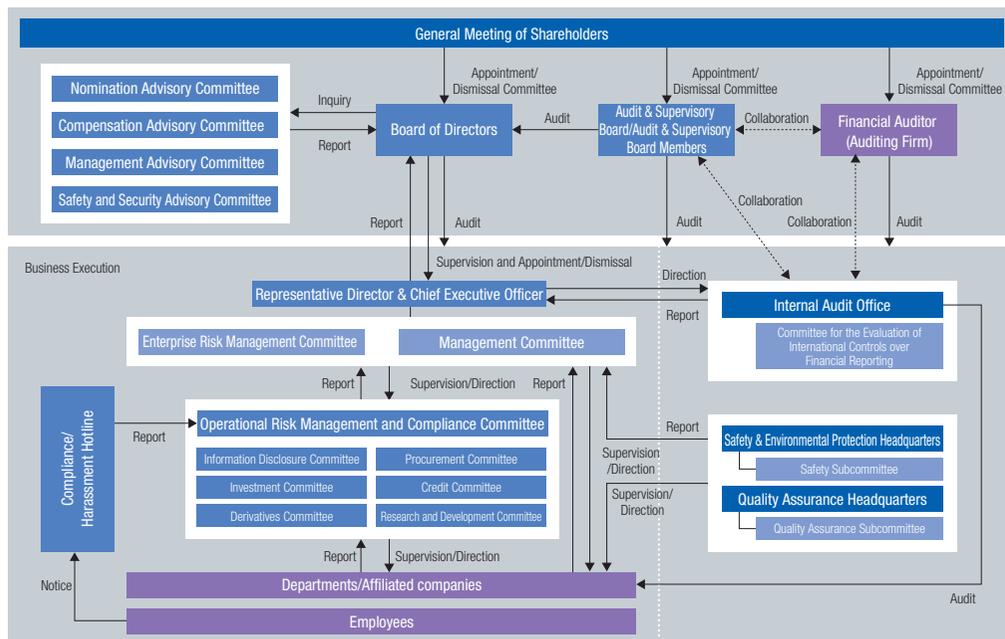
Type of governance structure:	Company with an Audit & Supervisory Board
Number of directors set in the Company's Articles of Incorporation	20, at most
Term of a director set in the Company's Articles of Incorporation	1 year
Head of Board of Directors	Representative Director & CEO
Number of directors	11
Outside directors appointed or not	Appointed
Number of outside directors	4
Number of independent directors among the outside directors	4
Audit & Supervisory Board established or not	Established
Number of Audit & Supervisory Board members set in the Company's Articles of Incorporation	6, at most
Number of Audit & Supervisory Board members	4
Outside Audit & Supervisory Board members appointed or not	Appointed
Number of outside Audit & Supervisory Board members	2
Number of independent members among the outside Audit & Supervisory Board members	2

[Management](#)



## Corporate Governance Structure

### Corporate Governance Structure



[Corporate Governance Code \(Japan Exchange Group website\)](#)

## Evaluating the Effectiveness of the Board of Directors

At least once a year, all of Idemitsu's directors and Audit & Supervisory Board members together evaluate the effectiveness of the Board of Directors as a whole and disclose a summary of the results.

For the fiscal 2017 evaluation, the results of a 26-item survey given to all Directors and Audit & Supervisory Board members were used as the basis for deliberation at a meeting of the Board of Directors. The drafting of the questions included in the survey and the analysis of the results were done in consultation with a specialized outside organization.

In fiscal 2017, with the number of independent outside directors increased by two, the combined membership of the Board of Directors and Audit & Supervisory Board was balanced with regard to the ratio of internal to outside members (nine internal to six external members) and diversity (members include a woman and a non-Japanese national). The Board of Directors shared important information and held deep and multifaceted discussions. The survey and following deliberation determined that the roles and responsibilities of the Board were fulfilled and effectiveness had been secured.

Regarding enhancing pre-meeting explanations for outside directors, which was identified as an issue in the previous fiscal year's evaluation, the Company worked to deepen the outside directors' understanding of its business content and management strategies, knowledge of which underpins discussions at board meetings. To this end, Idemitsu employed opportunities outside regular board activities, including having outside directors visit facilities in and outside Japan (including in Australia and the United States) and having them attend presentations by technological and research divisions. The Company also strove to enhance understanding of its businesses through free debate at outside officer meetings, which are held once every three months by outside directors and outside Audit & Supervisory Board members. As part of pre-meeting explanations for the Board of Directors, the Company provided not only explanations of proposals, but of its businesses.

Also identified in the previous year's evaluation was the issue of further deepening discussions at the Board of Directors on such matters as corporate strategy, medium-term plans, and annual plans. During the formulation of the Fifth Consolidated Medium-Term Management Plan, pre-meeting explanations for outside directors included information about the status of plan discussions so that the Board of Directors could effectively exchange opinions on related matters. Points that were brought up about future business environment assumptions and other matters as a result were reflected in the plan.

Another issue identified was the sharing of information on the Nomination and Compensation Advisory Committee's role, responsibilities, and deliberative agenda with the Board of Directors. With regard to this issue, the committee conducted multifaceted evaluations of the new candidate for president as well as director and Audit & Supervisory Board member candidates for proposal at the General Meeting of Shareholders and reported on these activities to the Board of Directors. The committee also reported on director compensation based on objective data, including industry standard compensation levels. In this way, the committee worked to make its processes more transparent.

In fiscal 2018, Idemitsu will continue to ensure the thorough sharing of information on matters discussed at the meetings of the Management Committee, which are held prior to meetings of the Board of Directors, so that the independent outside directors can further deepen their understanding of proposals before heading into Board of Directors meetings. In addition, the Board of Directors will monitor the progress of the Medium-Term Management Plan.

The Nomination and Compensation Advisory Committee will be reorganized into a Nomination Advisory Committee and a Compensation Advisory Committee. The members of the two committees will be the six independent outside directors and Audit & Supervisory Board members. The committees will select their own chairs, who will represent them and report the results of their discussions to the Board of Directors.

Idemitsu is also advancing initiatives, including structural changes, to address other issues identified through evaluations, namely sustainability, promoting the success of women, the risk management system, and reinforcing the functions of the Board of Directors.

## Officer Remuneration

The Compensation Advisory Committee comprises two outside directors and one outside Audit & Supervisory Board member. Cash remuneration for directors was set at no more than ¥1.2 billion annually at the 91st Ordinary General Meeting of Shareholders on June 27, 2006. The Board of Directors sets individual amounts in consideration of the report submitted by the Compensation Advisory Committee. Remuneration for fiscal 2017 amounted to ¥680 million for 15 individuals, including outside directors. Outside of basic remuneration, the Company provides no stock options, bonuses, employee salaries, retirement allowances, or other forms of remuneration.

By resolution of the 103rd Ordinary General Meeting of Shareholders on June 28, 2018, Idemitsu has adopted a performance-linked stock compensation plan for its Directors (excluding outside directors and those who are non-residents of Japan) and executive officers (excluding those who are non-residents of Japan) (hereinafter collectively referred to as the "directors, etc."). This highly transparent and objective officer compensation plan is closely linked to the Company's operating results and was adopted to better motivate the directors, etc., to contribute to enhancing the Company's medium- and long-term operating results and expanding its enterprise value. The plan takes the form of a Board Incentive Plan (BIP) trust, a stock compensation plan in which a trust acquires shares of the Company using funds contributed by the Company for the compensation of directors, etc., and carries out the delivery and grant of the Company's shares and cash equivalent to the converted value of such shares to Directors, etc.

Based on the Company's operating performance in each fiscal year over a period of three consecutive fiscal years, the trust will deliver and grant the Company's shares and cash as officer remuneration after the retirement of the directors, etc. The maximum total that may be contributed by the Company to the trust is ¥980 million, and the maximum number of the Company's shares that may be acquired by the trust is 381,000 (both these figures are per three-year period).

## Management Supervision Mechanisms

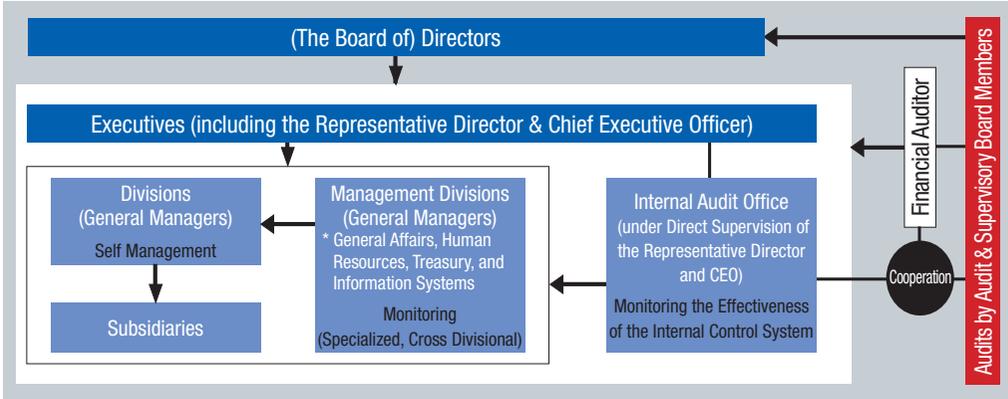
The mechanism to monitor management encompasses supervision by the Board of Directors, auditing by Audit & Supervisory Board members, and audits by accounting auditors. Under the direction of executives from the Representative Director and CEO on down, each of these three lines of defense has a role to fulfill in carrying out internal control.

First, each division undertakes self management in their daily operations, conducts thorough risk management, and ensures the legality of business operations. Then the divisions that manage general affairs, human resources, treasury, information systems, and safety & environment provide support to the divisions and monitor self management in each specialized field.

We established the Internal Audit Office under the direct supervision of the Representative Director and CEO. The office's dedicated staff conducts internal audits and evaluations of internal controls over financial reporting (J-SOX) in an independent and objective manner. Specifically, the office conducts internal audits of offices and subsidiaries in and outside Japan. In fiscal 2017, the office conducted internal audits of 12 divisions in Japan and seven overseas, for a total of 19 (including 15 affiliates and subsidiaries). In this way, the effectiveness of each division's internal controls is evaluated, and the results are reported to the Representative Director and CEO, relevant officers, Audit & Supervisory Board members, and general managers. Any division that receives advice or recommendations in the course of an internal audit works to systematically remedy the situation. The Internal Audit Office then conducts follow-up audits as needed.

## Auditing by Audit & Supervisory Board Members

All of the Company's four Audit & Supervisory Board members attend board meetings and conduct audits of the business reports, non-consolidated financial statements, and consolidated financial statements presented at the General Meeting of Shareholders and of the day-to-day execution of the duties of the directors. Standing Audit & Supervisory Board members attend important internal meetings, including meetings of the Management Committee, and execute their auditing duties by interviewing general managers, overseas business office managers, and the representative directors and CEOs of subsidiaries. Meetings are held between Audit & Supervisory Board members and representative directors on a quarterly basis in principle. These meetings serve as a forum for raising and deliberating on pertinent issues.





## Committees

### Advisory Committees

In order to maintain the transparency and soundness of management, the Company has established the following two committees consisting of external experts as advisory organs to the Board of Directors. The Company listens closely to the frank opinions provided by third parties through these committees and uses what it learns to improve management.

The Management Advisory Committee serves as an advisory organ on issues related to innovating all aspects of management. The committee meets once every half-year period in principle and engages two external advisers who provide advice.

The Safety & Security Advisory Committee provides guidance on strengthening safety and security, especially with regard to matters of a technical nature, to prevent large-scale disasters at Idemitsu's refineries and business sites. Due to recent changes in the business environment, assuring safety and security with regard to business expansion, new businesses, overseas expansion, and other matters is becoming even more important. To this end, Idemitsu has established a working group on the issue within the Safety & Environmental Protection Headquarters to select themes useful for business development and solicit advice from experts as needed.

The Nomination Advisory Committee and Compensation Advisory Committee comprise independent outside directors and independent outside Audit & Supervisory Board members. The Nomination Advisory Committee reports on matters related to the appointment of director candidates proposed by the President and submitted to the General Meeting of Shareholders for approval. The Compensation Advisory Committee reports on matters related to director compensation at the request of the Board of Directors.

### The Management Committee, Enterprise Risk Management Committee, and Other Committees

The role of the Management Committee is to make decisions related to business execution, and the role of the Enterprise Risk Management Committee is to determine risk management policy and carry out monitoring. Beneath these committees, Idemitsu has established the Operational Risk and Compliance Committee to assist with risk management as well as other committees to meet various needs.

The Company has also established the Committee for the Evaluation of Internal Controls over Financial Reporting, which considers and deliberates on items concerning annual preparations, operating policies, and evaluation plans, as well as decisions on the scope of evaluations.

With the exception of the Management Committee and the Enterprise Risk Management Committee, the chair of each committee is in principle a director or executive officer other than the Representative Director & Chief Executive Officer and plays a cross-divisional role as part of Company-wide internal control in order to operate the committees effectively.

An overview of the committees is provided in the following table.

Committee Name	Chair	Members	Meeting Frequency	Roles
Management Committee	President	Committee members appointed by chair	In principle, twice a month	To discuss and consider management strategies and issues for the Group as a whole and for each division. To decide on the execution of business.
Enterprise Risk Management Committee	President	Committee members appointed by chair	In principle, four times a year	To discuss and consider management strategies and issues for the Group as a whole and for each division. To decide on and monitor risk management policies.
Operational Risk and Compliance Committee	Director or executive officer	General managers of relevant departments	In principle, four times a year	To draft and deliberate on key policies for ensuring strict compliance and promoting operational risk management. To promote compliance activities.
Committee for the Evaluation of Internal Controls over Financial Reporting	Director, executive officer, or general manager of Internal Audit Office	General managers of relevant departments	In principle, twice a year	To assess and consider matters related to internal controls regarding financial reporting.
Disclosure Committee	Director or executive officer	Chair of the Operational Risk and Compliance Committee and general managers of relevant departments	As needed	To decide on disclosure of information.
Investment Committee	General manager of Corporate Planning Department	Committee members appointed by chair and general manager of Treasury Department	As needed	To deliberate and report on investment-related matters and to establish investment standards.
Derivative Committee	Director or executive officer	Committee members appointed by chair	In principle, four times a year	To perform derivative audits and to confirm and report on the status of risk management for the entire Group.
Procurement Committee	General manager of Corporate Planning Department	General managers of relevant departments	In principle, once a month	To deliberate on and consider matters regarding the placement of orders for services, raw materials, and other items.
Credit Committee	General manager of Treasury Department	General managers of relevant departments	In principle, once a month	To formulate basic policies related to debt management and measures for collecting non-performing loans.
Research and Development Committee	Director or executive officer	General managers of relevant departments	In principle, four times a year	To consider matters related to the direction, strategies, and issues pertaining to Company-wide research and development.



## Directors and Audit & Supervisory Board Members (June 28, 2018)

### Directors

	<p><b>Takashi Tsukioka</b> Chairman and Representative Director May 15, 1951 Number of shares held: 43,595</p>	<p><b>Biography:</b>  <b>April 1975</b> Joined the Company  <b>June 2007</b> Executive Officer and General Manager of Supply &amp; Logistics Department  <b>June 2008</b> Managing Executive Officer and General Manager of Supply &amp; Logistics Department  <b>June 2009</b> Director and General Manager of Supply &amp; Logistics Department  <b>June 2010</b> Managing Director and Managing Executive Officer and General Manager of Corporate Planning Department  <b>April 2011</b> Managing Director  <b>June 2012</b> Executive Vice President and Director  <b>June 2013</b> Representative Director &amp; Chief Executive Officer  <b>April 2018</b> Chairman and Representative Director (to date)</p>	<p>Mr. Takashi Tsukioka, who has been responsible for the management as the Representative Director &amp; Chief Executive Officer of the Company since 2013, and as the Chairman and Representative Director of the Company since April 2018, has promoted the strengthening of its domestic main business and the expansion of its overseas business, has contributed to energy security of Japan and the realization of a society in harmony with the environment, and has delivered solid results. Thus, management has judged that he will be able to execute business of the Company properly, fairly and effectively.</p>
	<p><b>Shunichi Kito</b> Representative Director and Chief Executive Officer April 6, 1956 Number of shares held: 15,858</p>	<p><b>Biography:</b>  <b>April 1980</b> Joined the Company  <b>June 2011</b> Executive Officer and General Manager of Treasury Department  <b>June 2013</b> Director, Managing Executive Officer and General Manager of Treasury Department  <b>June 2014</b> Managing Director  <b>June 2017</b> Executive Vice President and Director  <b>April 2018</b> Representative Director &amp; Chief Executive Officer (to date)</p>	<p>Mr. Shunichi Kito has worked as the top manager in the accounting division, has been responsible for the overall management as the Executive Vice President, and has assumed the position of Chief Executive Officer as of April 2018. He has delivered solid results concerning issues that the Company faces, and is promoting the Fifth Medium-term Management Plan, which commenced in fiscal year 2018, i.e., the development of Next Idemitsu.</p>
	<p><b>Takashi Matsushita</b> Executive Vice President and Representative Director July 9, 1956 Number of shares held: 15,697</p>	<p><b>Biography:</b>  <b>April 1979</b> Joined the Company  <b>April 2010</b> Executive Officer and General Manager of Tokuyama Refinery and General Manager of Tokuyama Plant  <b>April 2013</b> Executive Officer and General Manager of Manufacturing &amp; Technology Department  <b>June 2013</b> Director, Managing Executive Officer and General Manager of Manufacturing &amp; Technology Department  <b>June 2014</b> Managing Director  <b>June 2017</b> Executive Vice President and Director (to date)</p>	<p><b>Current duties:</b>                      Concurrently serves as Assistant to Representative Director &amp; Chief Executive Officer (in charge of petrochemicals, functional materials, intellectual property/tech, and the Vietnam project)                      Mr. Takashi Matsushita has worked as the top manager in the manufacturing division and technology division. He has accumulated wide experience, knowledge, and expertise. He has been responsible for the overall management as the Executive Vice President, promoted restructuring in the fields of manufacturing and technology both inside and outside Japan and delivered solid results. Thus, management has judged that he will be able to execute business of the Company properly, fairly and effectively.</p>

	<p><b>Eri Yokota</b> Outside director, independent officer Attendance in FY2017: 16/16 meetings Member of the Nomination Advisory Committee August 25, 1960 Appointed in June 2014 Number of shares held: 670</p>	<p><b>Biography:</b>  <b>April 1995</b> Full-time Lecturer, Faculty of Economics of Musashi University  <b>April 2001</b> Professor of Musashi University after serving as Assistant Professor (to date)  <b>April 2005</b> Professor, Faculty of Business and Commerce of Keio University (to date)  <b>June 2014</b> Director, TOLI Corporation (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Ms. Eri Yokota be elected as Outside Director to reflect her long experience and wide knowledge as a university professor. She has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that she will be able to perform her duties as an Outside Director properly as she satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate accounting as a university professor and has full knowledge about corporate management.</p>
	<p><b>Ryoosuke Ito</b> Outside director, independent officer Attendance in FY2017: 16/16 meetings Member of the Compensation Advisory Committee January 26, 1955 Appointed in June 2014 Number of shares held: 0</p>	<p><b>Biography:</b>  <b>April 1983</b> Registered as attorney at law  <b>Dec. 1991</b> Joined TMI Associates as partner (to date)  <b>June 2001</b> Part-time Lecturer, Doshisha University, Graduate School (to date)  <b>Oct. 2005</b> Part-time Lecturer, Hitotsubashi University, Law School (to date)  <b>June 2014</b> Director (to date)  <b>April 2016</b> Director, Japan Baseball Marketing K.K. (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Ryoosuke Ito be elected as Outside Director to reflect his long experience and wide knowledge as an attorney at law. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Director properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate legal affairs as an attorney at law and has full knowledge about corporate management.</p>
	<p><b>Takeo Kikkawa</b> Outside director, independent officer Member of the Nomination Advisory Committee Attendance in FY2017: 12/12 meetings August 24, 1951 Appointed in June 2017 Number of shares held: 0</p>	<p><b>Biography:</b>  <b>April 1987</b> Assistant Professor, Aoyama Gakuin University School of Business  <b>April 1996</b> Professor, Institute of Social Science, University of Tokyo  <b>April 2007</b> Professor, Hitotsubashi University Graduate School of Commerce and Management  <b>Jan. 2013</b> President, Business History Society of Japan  <b>June 2015</b> Director, Mitsubishi Chemical Holdings Corporation (to date)  <b>April 2015</b> Professor, Graduate School of Innovation Studies, Tokyo University of Science (currently, Graduate School of Management, Tokyo University of Science) (to date)  <b>June 2017</b> Director (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Takeo Kikkawa be elected as Outside Director to reflect his long experience and wide knowledge as a university professor. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Director properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate management as a university professor in business administration studies and especially as an expert in energy industry theory.</p>
	<p><b>Mackenzie Clugston</b> Outside director, independent officer Attendance in FY2017: 11/12 meetings Member of the Compensation Advisory Committee June 19, 1950 Appointed in June 2017 Number of shares held: 0</p>	<p><b>Biography:</b>  <b>June 1982</b> Joined Department of Foreign Affairs and International Trade of the Canadian Government  <b>Nov. 2012</b> Ambassador of Canada to Japan  <b>June 2016</b> Director, Kameda Seika Co., Ltd. (to date)  <b>Sept. 2016</b> Advisor, Sapporo Holdings Limited  <b>Professor, Kwansei Gakuin University (to date)</b>  <b>June 2017</b> Director (to date)  <b>March 2018</b> Director, Sapporo Holdings Limited (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Mackenzie Clugston be elected as Outside Director to reflect his long and global experience and wide knowledge as a diplomat and a university professor. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Director properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with business, administration, and international affairs as a former diplomat and a university professor and has full knowledge about corporate management.</p>

### Audit & Supervisory Board Members

	<p><b>Susumu Nibuya</b> Managing Director November 22, 1959 Number of shares held: 11,295</p>	<p><b>Biography:</b>  <b>April 1982</b> Joined the Company  <b>April 2013</b> Executive Officer and General Manager of Corporate Planning Department  <b>June 2015</b> Director and General Manager of Corporate Planning Department  <b>June 2017</b> Managing Director (to date)</p>	<p><b>Current duties:</b>                      In charge of corporate planning, public relations, and corporate sustainability (Corporate Planning Department, Public Relations Office, Corporate Sustainability Department), and responsible for the resources division</p>
	<p><b>Kazuo Maruyama</b> Director September 29, 1957 Number of shares held: 7,734</p>	<p><b>Biography:</b>  <b>April 1981</b> Joined the Company  <b>June 2011</b> Executive Officer and General Manager of Basic Chemicals Department  <b>July 2014</b> Managing Executive Officer and General Manager of Petrochemical Business Department  <b>July 2015</b> Senior Executive Officer and General Manager of Petrochemical Business Department  <b>June 2017</b> Director (to date)</p>	<p><b>Current duties:</b>                      In charge of supervising chemicals business (Basic Chemicals Department, Advanced Materials &amp; Performance Chemicals Department, Idemitsu Unifect, and Prime Polymer)</p>
	<p><b>Toshiaki Sagishima</b> Director January 31, 1960 Number of shares held: 4,466</p>	<p><b>Biography:</b>  <b>April 1982</b> Joined the Company  <b>June 2014</b> Executive Officer and General Manager of Treasury Department  <b>June 2017</b> Director (to date)</p>	<p><b>Current duties:</b>                      In charge of accounting, general affairs, information systems (Treasury Department, General Affairs Department, Information System Department, and Idemitsu Insurance Service), and concurrently serves as Chairman of Compliance &amp; Risk Management Committee</p>
	<p><b>Kiyoshi Honma</b> Director February 17, 1961 Number of shares held: 11,958</p>	<p><b>Biography:</b>  <b>April 1984</b> Joined the Company  <b>July 2013</b> Executive Officer and General Manager of Supply &amp; Logistics Department  <b>June 2014</b> Executive Officer and General Manager of Integrated Supply &amp; Gas Department  <b>June 2017</b> Director and General Manager of Overseas Petroleum &amp; Gas Department  <b>June 2018</b> Director (to date)</p>	<p><b>Current duties:</b>                      In charge of supervising overseas/supply and demand integrated Supply &amp; Trading Department, Overseas Petroleum &amp; Gas Department, Idemitsu Tanker, Idemitsu International (Asia), Tomotoh Oil Storage, and Hokkaido Joint Oil Stockpiling)</p>

	<p><b>Sakae Hirano</b> Full-time auditor May 28, 1957 Number of shares held: 10588</p>	<p><b>Biography:</b>  <b>April 1980</b> Joined the Company  <b>June 2011</b> General Manager of IR &amp; Public Relations Department of the Company  <b>April 2012</b> General Manager of Public Relations and CSR Department of the Company  <b>June 2015</b> Full-time Auditor (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Sakae Hirano be elected as Outside Statutory Auditor to reflect his long experience and wide knowledge as a certified public accountant and university professor on audits of the Company. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Statutory Auditor properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate accounting and has full knowledge about corporate management.</p>
	<p><b>Toshiyuki Tanida</b> Full-time auditor September 7, 1961 Number of shares held: 4,824</p>	<p><b>Biography:</b>  <b>April 1984</b> Joined the Company  <b>July 2013</b> Executive Officer and General Manager of Logistics Department  <b>June 2018</b> Full-time Auditor (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Toshiyuki Tanida be elected as Outside Statutory Auditor to reflect his long experience and wide knowledge as a certified public accountant and university professor on audits of the Company. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Statutory Auditor properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate accounting and has full knowledge about corporate management.</p>
	<p><b>Taigi Ito</b> Outside auditor, independent officer Attendance in FY2017: 18/18 Board of Directors: 16/16 Member of the Compensation Advisory Committee October 13, 1946 Number of shares held: 4,089</p>	<p><b>Biography:</b>  <b>May 1973</b> Registered as Certified Public Accountant (Registration No. 5095)  <b>July 2004</b> Deputy Chairman, The Japanese Institute of Certified Public Accountants  <b>Jan. 2012</b> Chairman of the Disciplinary Committee, The Japanese Institute of Certified Public Accountants (to date)  <b>June 2012</b> Statutory Auditor (to date) Statutory Auditor, IT Holdings Corporation (to date)  <b>June 2014</b> Corporate Auditor, Mitsubishi Chemical Holdings Corporation Corporate Auditor, Mitsubishi Chemical Corporation (to date)  <b>June 2015</b> Director, Mitsubishi Chemical Holdings Corporation (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Taigi Ito be elected as outside Statutory Auditor to reflect his broad experience and wide knowledge as a certified public accountant and university professor on audits of the Company. He has not engaged in corporate management in any manner other than serving as an outside officer. However, management has judged that he will be able to perform his duties as an Outside Statutory Auditor properly as he satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate accounting and has full knowledge about corporate management.</p>
	<p><b>Shoichiro Niwayama</b> Outside auditor, independent officer Attendance in FY2017: 18/18 Board of Directors: 16/16 Member of the Nomination Advisory Committee January 11, 1946 Number of shares held: 1,740</p>	<p><b>Biography:</b>  <b>April 1971</b> Registered as attorney at law  <b>April 1999</b> Director, Yamato Seivicer, Co., Ltd.  <b>April 2008</b> Vice President, Japan Federation of Bar Associations President, Daii Tokyo Bar Association  <b>Oct. 2010</b> Executive Director, Japan Law Foundation  <b>June 2014</b> Auditor (to date)</p>	<p><b>Reason for nomination as candidate for Director:</b>                      It is hereby proposed that Mr. Shoichiro Niwayama be elected as Outside Statutory Auditor to reflect his long experience and wide knowledge as an attorney at law. In addition to his experience in corporate management, he also satisfies the "Requirements for Independence of Outside Officers" of the Company, is familiar with corporate legal affairs as an attorney at law, and has full knowledge about corporate legal affairs; thus management has judged that he will be able to perform his duties as an Outside Statutory Auditor properly.</p>



## CSR Promotion Structure

The Idemitsu Group's mission is to operate in accordance with the management philosophy of respect for human beings, undertaking business with a focus on people and contributing to the sustainable development of society through its operations. The Company regards this as its social responsibility. In other words, our management philosophy is the very definition of corporate social responsibility.

Matters considered to be CSR issues, such as environmental, society and governance issues, are promoted autonomously by each controlling division in accordance with the policies of various committees and headquarters. The controlling divisions, which serve as secretariats for committees and headquarters, provide support for CSR promotion undertaken by business sites and perform auditing while providing guidance for improvement when necessary.

The Sustainability Strategy Office oversees CSR activities and responses in accordance with changes in the environment underpinned by knowledge of CSR trends within Japan and abroad and stakeholder demands. At the same time, it also provides both financial and non-financial information to stakeholders on the current state of the Company's management through the Idemitsu Report in collaboration with the controlling divisions.

[Management Philosophy](#)

### Risk Management Committee

Item	Committees, etc	Controlling Department
Overall advancement of CSR	Management Committee	Corporate Sustainability Department
Risk management	Operational Risk and Compliance Committee	Corporate Planning Department General Affairs Department
Legal compliance		
Security and occupational safety	Safety & Environmental Protection Headquarters	Safety, Environment & Quality Assurance Department
Environmental conservation		
Quality assurance and product safety		
Employment and labor practices	—	Human Resources Department
Protection of and respect for regional cultures	—	General Affairs Department/three refineries, two petrochemical plants
Disclosure/public communication	Disclosure Committee	Public Relations Office/ Treasury Department
Information management (including protection of personal information)	—	General Affairs Department/Information Systems Department/Intellectual Property Department

[Compliance](#)

[Risk Management](#)

[Safety and Security](#)

[Environmental Management](#)

[Quality Assurance and Product Responsibility](#)

[Creating Rewarding Workplace Environments](#)

[Relations with Local Communities](#)

## Operational Risk and Compliance Committee

Chair	Director or executive officer
Members	General managers of the Public Relations Office; Corporate Planning Department; Safety, Environment & Quality Assurance Department; General Affairs Department; Human Resources Department; Treasury Department; Manufacturing & Technology Department; and Information Systems Department
Secretariat	General Affairs Department's Risk Management Group
Basic policy	Consider compliance a social responsibility and rigorously enforce compliance within organizations in line with Idemitsu's management policy
Activities	<ul style="list-style-type: none"> <li>• Matters associated with the identification of important risks and countermeasures against such risks</li> <li>• Detection of signs of critical risk being materialized and the emergence of new risks and the implementation of countermeasures</li> <li>• Other matters associated with the promotion of operational risk management</li> </ul>

## Safety & Environmental Protection Headquarters

Head	A director appointed by the Board of Directors (called the director in charge of safety and security)
Deputy head	General manager of the Safety, Environment & Quality Assurance Department
Members	General managers of each relevant department in charge
Secretariat	The Safety & Environmental Management Section of the Safety, Environment & Quality Assurance Department
Basic Policy	<p>The assurance of security and safety is the result of management efforts. We are aware that realizing zero accidents and disasters must be the foremost goal of management and we place the highest priority on assuring the safety of people and the security of facilities and processes.</p> <p>Strive to reduce environmental burdens attributable to business activities while engaging in cutting-edge environmental preservation initiatives, thereby contributing to the creation of a society in which economic and environmental concerns are harmoniously addressed</p>
Activities	<p>Each fiscal year, the Safety &amp; Environmental Protection Headquarters outlines basic policies and important items related to safety and the environment for the Group. The business divisions in charge each implement PDCA cycles in accordance with these policies. The Safety &amp; Environmental Protection Council is convened annually in principle to review the Group's progress and determine policies for the upcoming fiscal year.</p> <ul style="list-style-type: none"> <li>• Each business site appoints a deputy safety manager and deputy environmental conservation manager.</li> <li>• Once a year, the head of the Safety &amp; Environmental Protection Headquarters tours the work sites of refineries and petrochemical plants to provide safety and environmental instruction and the headquarters' secretariat implements safety and environment-related audits. Other business sites implement safety and environment-related audits once every three years</li> </ul>



### Quality Assurance Headquarters

Head	A director appointed by the Board of Directors
Deputy head	General manager of the Safety, Environment & Quality Assurance Department
Members	General managers of business divisions related to product quality
Secretariat	The Quality Assurance Section of the Safety, Environment & Quality Assurance Department
Basic Policy	To ensure safe, high-quality products and services matched to the demands of customers, Idemitsu smoothly undertakes quality assurance activities and thorough assurance of product safety.
Activities	<ul style="list-style-type: none"> <li>The Quality Assurance Headquarters outlines basic policies and important items related to quality assurance for the Group each fiscal year. Each relevant business division in charge implements PDCA cycles in accordance with these policies. The Quality Assurance Council is convened annually in principle and reviews the Group's progress.</li> <li>Idemitsu established the Quality Assurance Subcommittee organized by the quality assurance deputy manager of each business division related to product quality under the Quality Assurance Headquarters. The Quality Assurance Subcommittee works to maintain and continuously improve the level of quality assurance.</li> </ul>

### Information Disclosure Committee

Chairman	Director of the Public Relations Department or the director or executive officer in charge
Members	Chairman of the Operational Risk and Compliance Committee and general managers of the General Affairs Department; Treasury Department; IR Office within the Treasury Department; Corporate Planning Department; and Public Relations Office
Secretariat	Public Relations Office
Basic Policy	<ul style="list-style-type: none"> <li>To practice accurate, fair, timely and impartial disclosure</li> <li>To ensure thorough information disclosure in accordance with laws, regulations and standards</li> <li>To strive to disclose information that deepens understanding of the Group</li> </ul>
Activities	<ul style="list-style-type: none"> <li>The committee will establish a basic policy concerning information disclosure.</li> <li>The committee decides on the information to be disclosed and, taking into consideration the impact on the market, determines the appropriate content, method and timing of the disclosure.</li> <li>The committee approves the publication of the IR Newsletter, Annual Report, and IDEMITSU Report.</li> </ul>

### Fiscal 2017 (as of July 31, 2017)

Committee name	Chairman or head	Title	Name
Compliance Committee Risk Management Committee	Chairman	Director	Toshiaki Sagishima
Safety & Environmental Protection Headquarters	Head	Vice President (Director in charge of safety and security)	Takashi Matsushita
Quality Assurance Headquarters	Head	Vice President	Takashi Matsushita
Disclosure Committee	Chairman	Managing Director	Susumu Nibuya

### Fiscal 2018 (as of July 31, 2018)

Committee name	Chairman or head	Title	Name
Operational Risk and Compliance Committee	Chairman	Senior Executive Officer	Kazuhisa Harada
Safety & Environmental Protection Headquarters	Head	(Director in charge of safety and security)	Toshiaki Sagishima
Quality Assurance Headquarters	Head	Executive Officer	Toshiaki Sagishima
Disclosure Committee	Chairman	Managing Director	Michiyo Terakami



## Risk Management

### Basic Policy

Idemitsu strives to identify and evaluate risks associated with the Idemitsu Group's business activities and to eliminate or minimize these risks to the greatest extent possible to ensure stable management.

## Serious Risk Prevention

### Issues/Targets and Results

P	Fiscal 2017 Targets	D	Results	C A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
A	<b>BCP for Securing Resilience against Major Earthquakes</b> Conduct comprehensive disaster drills that assume the occurrence of a major earthquake in the Nankai Trough and considerable damage resulting from it, with the aim of verifying our capability to transcend departmental boundaries and act in collaboration.		Practiced the confirmation of the safety of all employees (including those at Group affiliates); conducted a disaster drill to establish and operate the emergency response headquarters, assuming the occurrence of a major earthquake in the Nankai Trough (participants: employees at Head Office and others from relevant domestic business sites)		Succeeded in raising the effectiveness of our emergency response practices and in ensuring that all participants understand how considerable the resulting damage would be if a major earthquake occurred in the Nankai Trough. All the teams were able to collaborate in implementing the targeted emergency practice exercises while confirming their policies.		Conduct comprehensive disaster drills assuming a major earthquake with an epicenter in the Tokyo metropolitan area; verify a BCP timeline targeting the resumption of 50% of inland product shipments within 24 hours of the event, thereby confirming the effectiveness of the revised BCP.
A	<b>BCP for Securing Resilience against the Outbreak of New Influenza</b> Step up systematic efforts for ensuring all employees are vaccinated via, for example, a collaborative effort with other industry constituents.		Asked other industry constituents via the Petroleum Association of Japan to disclose their registration status for specific vaccinations and to cooperate with Idemitsu's initiatives		Although there remain some respondents who have yet commit to cooperating in our initiatives, they are likely to disclose their registration information in fiscal 2018.		Maintain collaboration with the Petroleum Association of Japan to continue our systematic initiatives to ensure that all employees are vaccinated.

## Risk Management Promotional Framework

The Idemitsu Group classifies risks associated with its business activities into the two categories of business strategy risk<sup>\*1</sup> and operational risk<sup>\*2</sup> and promotes risk countermeasures. Within these risk categories, the Risk Management Committee is responsible for operational risk countermeasures and responding to crises. Business strategy risk is handled directly by the Management Committee.

\*1 Business strategy risk: A risk that an alliance or new business will adversely affect interests or cause a loss

\*2 Operational risk: A risk that hinders the execution of business or that leads only to damage and is attributable to a factor such as an accident, a disaster or a compliance violation

## Managing Operational Risks

### Operational Risk and Compliance Committee

In fiscal 2004, the Idemitsu Group established the Risk Management Committee, now renamed the Operational Risk and Compliance Committee, as a lateral organization under the Management Committee. With a director of Idemitsu serving as committee chairperson, the Risk Management Committee has a membership consisting of the director in charge of General Affairs and the general managers of the Public Relations Office; Corporate Planning Office; Safety, Environment & Quality Assurance Department; General Affairs Department; Human Resources Department; Treasury Department; Manufacturing & Technology Department; and Information Systems Department. The committee identifies serious risks common to the Group and conducts quarterly management reviews of progress on countermeasures for those risks. The committee also reviews serious risk themes periodically or when necessary and, in fiscal 2017, it designated 10 risk aspects.

### Further Reinforcing Crisis Management

In fiscal 2004, the Idemitsu Group formulated Guidelines for Addressing Crises as the topmost of its regulations concerning crisis readiness and undertook a sweeping review of its crisis-level definitions, the system for liaison and instruction, and methods for establishing emergency task forces. At the same time, we implemented a systematic review of various types of regulations concerning crises. Based on these regulations, the Group's risk-related information is collected by the Risk Management Group and shared with Risk Management Committee members as appropriate. In addition to cooperating with other corporate departments as needed, the Risk Management Group also supports and guides the responses of relevant departments to minimize any potential social impact or damage.

In fiscal 2006, we formulated a BCP<sup>\*3</sup> for the eventuality of an earthquake with an epicenter in the Tokyo metropolitan area and in fiscal 2009 formulated a BCP for the eventuality of an outbreak of avian influenza. In fiscal 2012, we formulated a BCP for a Nankai megathrust earthquake.

In fiscal 2015, after the Cabinet Office deemed Idemitsu a designated public institution, we created a disaster prevention plan. We hold annual comprehensive disaster drills based on various BCPs at the corporate head office and confirm topics of interest and coordination with each business site as part of our efforts to strengthen our practical response capabilities. At our refineries, petrochemical plants, and other business sites, we implement periodic crisis drills covering the entirety of each business site based on applicable crisis response regulations.

\*3 BCP: Business Continuity Plan

## Managing Business Strategy Risks

As for business strategy risk, the Investment Committee, which is under the oversight of the Management Committee, conducts comprehensive risk assessments when deliberating on investment opportunities, including new businesses, and works to manage any uncovered risks. The general manager of the Corporate Planning Department is the chairman of the Investment Committee, and its members comprise the general manager of the Treasury Department along with staff from the Corporate Planning and Treasury departments and the Legal Division. In addition, the committee strengthens risk management by monitoring the progress of its risk management and identifying new risks when it periodically evaluates the performance of investments. The committee strives to enhance the management of business strategy risk by reporting its deliberations and evaluations to the Board of Directors based on its authority and that of the Management Committee.

## Strengthening Our Risk Management Structure

In July 2018, Idemitsu decided to assign the handling of operational risks and crisis responses to the Operational Risk and Compliance Committee while establishing a new Enterprise Risk Management Committee to handle managerial risks. This move was intended to strengthen our risk management structure in light of changes in the external environment.

## Compliance

### Basic Policy

Based on its management policy, Idemitsu considers compliance a social responsibility and rigorously enforces compliance within its organization.

## Compliance Promotion Structure Development

### Issues/Targets and Results

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/Improvements	P	Fiscal 2018 Targets (Plan)
	Implement educational activities aimed at raising compliance awareness by distribution of mail magazines		Initiated the monthly distribution of compliance-themed mail magazines (April); hosted compliance training sessions in February and March 2018 for staff operating in regions supervised by the Head Office as well as similar sessions at each department and branch			Compliance-related incidents within and outside Idemitsu were shared among employees via mail magazines, successfully raising their awareness with regard to the latest compliance issues.		Conduct compliance awareness surveys to help each workplace raise staff awareness in addition to maintaining fiscal 2017 accomplishments.
	Redevelop global compliance-related rules. Then establish guidelines in line with each country's laws, regulations and requests.		The Compliance Committee (now the Operational Risk and Compliance Committee) approved the concepts for the operation of a compliance hotline system slated to be in place for overseas employees. Enhanced the content of guidelines for preventing bribes involving foreign public officials while fully securing responsiveness to EU- GDPR.			Made progress in efforts to enhance the content of in-house rules aimed at securing global compliance.		Put in place the Idemitsu Global Hotline, a compliance hotline for overseas employees. Update and redevelop compliance-related rules in place at overseas business sites

## Compliance Promotion Structure

### Operational Risk and Compliance Committee

In October 2003, the Idemitsu Group has established the Compliance Committee under the Management Committee and has been engaged in thoroughgoing efforts concerning compliance policies and compliance items. In July 2018, the Group established a new Risk Management Committee to reinforce risk management and then merged the existing Risk Management Committee and Compliance Committee to create the Operational Risk and Compliance Committee. With an Idemitsu director or executive officer serving as committee chairperson, the members of the Compliance Committee consist of general managers of the Public Relations Office; Safety, Environment & Quality Assurance Department; Corporate Planning Department; General Affairs Department; Human Resources Department; Treasury Department; Manufacturing & Technology Department; and Information Systems Department. The Compliance Committee convenes on a quarterly basis. Additionally, we have assigned compliance promotion general managers (general managers for each department, refinery, petrochemical plant, etc.) and compliance promotion managers (managers for each department, refinery, petrochemical plant, etc.) to each business site. The General Affairs Department's Risk Management Group, which serves as committee secretariat, provides support to ensure that self-directed compliance activities carried out at each business site become firmly established.

### Establishment of the Compliance Consultation Desk

Idemitsu has established the Compliance Consultation Desk as a contact point for consultation and internal communications regarding compliance. In December 2016 we established the Harassment Consultation Desk by adding capabilities for consultation regard-

ing workplace issues stemming from pregnancy, childbirth, raising children, and nursing care leave to the Sexual Harassment and Workplace Bullying Consultation Desk, which was set up for sexual harassment and workplace bullying issues, and changing the name. These two consultation desks have been set up on the internal information portal site's Company-wide bulletin board so everyone will be aware of their existence. Consultations can be conducted via email, over the telephone, or through the post. In addition to these two consultation desks, we established an external consultation desk as an external law firm to create a framework for easier consultations. In addition, all of the aforementioned consultation desks employ only specified personnel enjoined to safeguard the confidentiality of those who seek consultations. It is clearly stated in the compliance handbook that people not receive disadvantageous treatment based on the matters discussed in a consultation, and we are working hard to realize this.

### Fiscal 2017 Results

Number of Inquiries Fielded by the Compliance Consultation Desk: 6  
 Number of Inquiries Fielded by the Harassment Consultation Desk: 7

## Promotion Activities

### Compliance Action Plans

Each department formulates and promotes its action plan in accordance with the fiscal year policies decided by the Operational Risk and Compliance Committee. Moreover, with regard to laws and regulations affecting business operations, each department incorporates into the self-check list those items requiring particular attention and undertakes periodic checks internally. At the same time, compliance audits are implemented through periodic business operation audits by the Internal Audit Office.

### Education for Raising Employee Awareness

Idemitsu has created the Compliance Handbook, which sets out Compliance Action Guidelines and specific matters for compliance, and distributes this publication to all Group employees. Every year, Idemitsu also creates Compliance Case Studies, a compilation of past internal and external case studies concerning compliance, and makes these cases known throughout the Group. Compliance workshops using this case study compilation are held at the head office area to increase employee awareness. Business sites also refer to the compilation as they work to further improve the effectiveness of their own compliance workshops by focusing on case studies of that touch on issues pertaining to their specific tasks.

### <<The Compliance Action Guidelines from the Compliance Handbook>>

- We will earnestly act as a good corporate citizen, observing all laws, both foreign and domestic, social morality, internal regulations, and contracts.
- We will take positive action to preserve the global environment and be unstinting in our efforts to prevent accidents and crises.
- We will ensure the transparency and soundness of management and disclose all appropriate information to the public.
- We, as members of the same office, will respect one another and strive to create a comfortable workplace.
- We will conduct trade based on free and fair competition.



Compliance Handbook (Japanese)

**Compliance Items**

**Act Earnestly**

- Comply with all business laws.
- Follow proper export procedures and help bolster safety assurance.
- Reject all bribes or excessive hospitality/gifts.
- Eschew illegal donations or political contributions.
- Sever any relationships with antisocial powers.

**Conduct Trade Based on Free and Fair Competition**

- Comply with antimonopoly laws and any related laws and regulations.
- Refrain from participation in insider trading.
- Respect the intellectual property rights, trade secrets, and trademarks of other parties.

**Ensure Management Transparency and Soundness**

- Maintain appropriate information disclosure.
- Ensure proper accounting treatment and tax payment.
- Create and save proper documentation.
- Manage corporate assets.
- Give and receive only proper subsidies and benefits.

**Ensure Product Safety, Prevent Accidents and Crises, and Preserve the Global Environment**

- Ensure product safety.
- Ensure safety and security and prevent accidents.
- Preserve the environment.

**Create Comfortable Workplaces**

- Respect human rights and prohibit unfair discrimination, sexual harassment, and bullying.
- Comply with labor-related laws and regulations, rules of employment and other regulations.
- Ensure workplace safety and hygiene.
- Keep public and private matters separate.
- Protect personal information.
- Manage confidential information appropriately.
- Use information systems appropriately.

Compliance at Service Stations

We carry out safe and secure operations at Idemitsu service stations and have established Service Station Safety Standards that we distribute among employees while ensuring their familiarity with the content, with the aim of promoting thoroughgoing compliance in the operation of service stations and in the interest of society. Additionally, to ensure the comprehensive prevention of leakages in three categories (fuel oils, industrial waste materials and personal information), we have prepared the Service Station Safety Standards and Service Station Industrial Waste Management Manual, which we employ in conjunction with the Service Station Facilities Safety Check Logbook prepared by the Petroleum Association of Japan.



Global Compliance

The Idemitsu Group is working to enhance its global compliance promotion structure, which encompasses overseas business sites, in preparation for overseas business development, which is expected to accelerate in the future. In fiscal 2017, the Compliance Committee (now the Operational Risk and Compliance Committee) approved the concepts for the operation of a compliance hotline system slated to be in place for overseas employees, and relevant staffing is completed to run the hotline from the beginning of fiscal 2018. We have also enhanced the content of guidelines for preventing bribes involving foreign public officials while fully securing responsiveness to EU- GDPR. We have also steadily strengthened measures aimed at preventing the bribery of foreign government officials by, for example, crafting manuals as needed, in the pursuit of compliance activities appropriate for the situation in each country.

**Fiscal 2017 Results**

There were no major compliance violations\* and no fines arising from legal or regulatory violations.

\* An accident deemed to be at the highest danger level as stipulated by Idemitsu's internal regulations

Information Management

Information Management System

In line with the Information Security Basic Policies, the Idemitsu Group is endeavoring to ensure the secrecy of its information assets and secure the availability and security of information systems and networks. Utilizing information technologies, Idemitsu is thus striving to maintain and enhance the level of customer services. To ensure the proper handling of customer information, Idemitsu also established the Standards for the Management of Customer Information. Based on these standards, this information is appropriately collected and used, and is stored safely and at the latest status. These standards also mandate the proper disposal of such information. When information leakage occurs, the incident is handled in accordance with Guidelines on How to Deal with a Crisis, Information Control Guidelines and Guidelines on How to Deal with the Leakage of Information through the Use of Information Systems. In light of changes in the external environment, in fiscal 2017 the Idemitsu Group has positioned presidents of affiliate partners as general directors in charge of information management, with information control supervisors being placed directly under these individuals. This move was intended to further enhance the Group's overall information management structure.

In addition, we require that each department, refinery, and petrochemical plant as well as the Technology & Engineering Center and every laboratory carry out annual self-checks of their information management practices. We also implement periodic staff education and other training in accordance with the Security Rules for the Use of Information Systems as part of our thoroughgoing information management measures. At the same time, data security audits are implemented through periodic business operation audits by the Internal Audit Office.

Information Security Basic Policies

1. The Idemitsu Group shall endeavor to ensure the secrecy of its information assets, secure the availability and security of its information systems and networks, and enhance the level of customer services employing information technologies.
2. The Idemitsu Group shall put in place appropriate protective measures to prevent the leakage, falsification or destruction of customer information.
3. The Idemitsu Group shall strive to secure the availability and security of its information systems and networks and protect their secrecy, in an effort to prevent information-related incidents that may cause troubles to customers, business partners and other stakeholders.
4. The Idemitsu Group shall ensure that all employees, temporarily staff and vendors are aware of the importance of information security and properly educated about the use of information and information systems by providing them with training and otherwise raising their awareness.
5. The Idemitsu Group shall conduct periodic audits aimed at inspecting and evaluating the status of security policy compliance, thereby ensuring robust information security.

**Fiscal 2017 Results**

The e-learning enrollment rate was 100%.



## Safety and Security

The assurance of security and safety is the result of management efforts. We are aware that realizing zero accidents and disasters is the foremost achievement of these efforts and we place the highest priority on assuring the safety of people and the security of facilities and processes.

### Basic Policy

The Idemitsu Group considers the assurance of safety and security in all business activities, operations and actions as its highest priority and is focusing on the measures below.

1. Assure the safety of people
2. Assure the security of facilities and processes
3. Assure safety through compliance with various rules and regulations when carrying out business and establish safety and security management systems
4. Properly allocate and utilize management resources
5. Establish a culture and management that emphasize safety

## Assurance of Security

### Issues/Targets and Results

P	Fiscal 2017 Targets	D	Results	C A	Evaluation/Improvements	P	Fiscal 2018 Targets (Plan)
	Aiming for zero accidents: (January to December 2017) (1) Organize knowledge and skill requirements for process safety managers. (2) Implement training of accident and facility failure analysis. (3) Strengthen seismic resistance in accordance with the plan and take measures to protect against wind- and water-related damage		<ul style="list-style-type: none"> <li>• No major accidents (January to December 2017)</li> <li>(1) Organize knowledge and skill requirements for process safety managers.</li> <li>(2) Implement training of accident and facility failure analysis.</li> <li>(3) Strengthen seismic resistance in accordance with the plan and take measures to protect against wind- and water-related damage.</li> </ul>		<ul style="list-style-type: none"> <li>• Goal achieved.</li> <li>• Goal achieved.</li> <li>Continued to implement training of accident and facility failure analysis, strengthened seismic resistance in accordance with the plan and engaged in ongoing efforts to introduce measures to protect against wind- and water-related damage</li> </ul>		<ul style="list-style-type: none"> <li>• Continue to have no major accidents (January to December 2018)</li> <li>(1) Review our system in place for centrally managing high-risk factors.</li> <li>(2) Regularly hold study sessions on methods of investigating root causes within case studies.</li> <li>(3) Strengthen seismic resistance in accordance with the plan and take measures to protect against wind- and water-related damage.</li> </ul>
	<ul style="list-style-type: none"> <li>• Continue to have no accidents resulting in loss of life.</li> <li>• Continue to have no accidents resulting in time off work (January to December 2017)</li> <li>Identify risk factors and steadily implement countermeasures based on risk assessment results.</li> </ul>		<ul style="list-style-type: none"> <li>• Accidents resulting in loss of life: 1 (at an affiliate partner)</li> <li>• Accidents resulting in time off work: 19 (of which, nine accidents at affiliate partners) (January to December 2017)</li> </ul>		<ul style="list-style-type: none"> <li>• Goal not achieved</li> <li>• Goal not achieved. Although we specified and addressed various issues under the slogan "taking on the challenge of achieving zero-accident status," our efforts have not yet to yield concrete results.</li> <li>Shortfalls: (1) Operational rules are not fully observed. This resulted in poor safety management practices. (2) We have not yet to conduct thoroughgoing risk identification encompassing all aspects of operations.</li> </ul>		The number of occupational accidents: Decreased 15% compared with 2017 (January to December 2018) (1) Established and utilized a system for ensuring that all workers, including those from affiliate partners, strictly comply with rules aimed at protecting their lives (2) Determined work practice standards based on tolerable risk levels while identifying and addressing potential risks arising from work practices that deviate from such standards (fiscal 2018: emphasis placed on preventing falls and accidents in which a worker is pinned down by machinery or caught by it)
	Autonomously implement PDCA cycles: Each department: <ul style="list-style-type: none"> <li>• Improve the effectiveness of the system and, for each department, increase the goals set for one or more aspects of business by at least four.</li> <li>• Finish establishing an internal audit system for departments.</li> </ul> Head office: <ul style="list-style-type: none"> <li>• Conduct self evaluations and uncover and improve weaknesses.</li> </ul>		Each department: <ul style="list-style-type: none"> <li>• Made progress at each department in their efforts to achieve improvement in areas of weakness (on which they have been granted less than four points)</li> <li>• Finished establishing an internal audit system for 80% of all departments.</li> </ul> Head office: <ul style="list-style-type: none"> <li>• Confirmed the results of self evaluations undertaken by each department and conducted re-evaluations.</li> </ul>		Each department: <ul style="list-style-type: none"> <li>• Goal not achieved at some departments. These departments need to achieve their goals by the end of fiscal 2018</li> </ul> Head office: <ul style="list-style-type: none"> <li>• Departments that underwent re-evaluation and failed to earn three points or more in all items need to receive assistance to make improvement</li> </ul>		<ul style="list-style-type: none"> <li>• All departments earned four points or more for five or more items out of a total of 10 items.</li> <li>• No department received two or lesser points.</li> </ul>
	Each department: <ul style="list-style-type: none"> <li>• Finish establishing a training system for managers in charge of safety at all departments and utilize such system.</li> </ul>		Each department: <ul style="list-style-type: none"> <li>• Finished establishing a system to help managers in charge of safety acquire required skills at 80% of all departments.</li> </ul> Head office: <ul style="list-style-type: none"> <li>• Implement training for managers in charge of safety.</li> </ul>		Each department: <ul style="list-style-type: none"> <li>• Goal not achieved at some departments.</li> </ul> Head office: <ul style="list-style-type: none"> <li>• Assisted managers in charge of safety in their efforts to acquire required skills (via ongoing training)</li> <li>• A training system must be established to nurture staff in charge of safety into key personnel supporting safety assurance</li> </ul>		<ul style="list-style-type: none"> <li>• Finish establishing a system to help managers in charge of safety acquire required skills and begin utilizing it.</li> <li>• Organize voluntary targets identified by staff in charge of safety in connection with their self-directed studies</li> </ul>
	New and overseas business expansion: Each department: <ul style="list-style-type: none"> <li>• Continue to engage in the preliminary identification and evaluation of safety and environmental risks.</li> <li>• Continue to build and operate systems for managing safety and the environment prior to a full-fledged expansion into new market regions</li> </ul>		Each department: No relevant projects		Each department: <ul style="list-style-type: none"> <li>• Both goals achieved</li> </ul>		

## The Importance of Safety and Security

The Idemitsu Group handles a large volume of combustible materials such as oil, and there is a possibility that a fire, explosion, leakage of a large amount of oil or other incident could have a negative impact on local communities and the environment. Therefore, we have made safety and security assurance as well as environmental protection—the fundamentals of management—our highest priorities.

## Fourth Consolidated Medium-Term Management Plan for Safety and Environmental Protection

Under the slogan "taking on the challenge of achieving zero-accident status, the Idemitsu Group strove to bring the number of serious accidents to zero. In particular, the Group focused on the following four priority items in the course of its pursuit of security assurance and environmental protection initiatives.

1. Encourage autonomous PDCA cycle implementation for safety assurance and environmental protection and foster a culture that emphasizes safety
2. Improve human resource development and enhance specialized technical skills related to safety and environmental protection
3. Assure safety and environmental protection when developing new or overseas businesses
4. Enhance our environmental management system while reducing environmental burdens and risks attributable to our business activities

In fiscal 2017, the Idemitsu Group formulated the Fifth Consolidated Medium-Term Management Plan (FY2018 – 2022) based on its reflection on initiatives it has undertaken so far and its projection on the future business environment. This plan includes the following vision set for the year 2022.

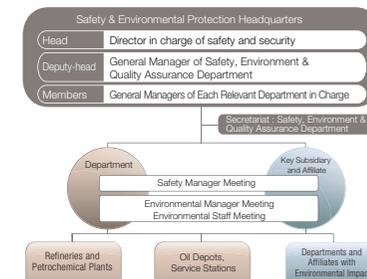
### <2022 Vision>

With employees equipped with superior skills in occupational safety and hygiene serving as key personnel, each department autonomously operates a PDCA cycle. While the Group maintains the record of zero-serious accidents, the overall number of accidents halved in comparison with fiscal 2017 safety record. All of our business sites designated as high-pressure gas operators finished acquiring certification granted only to those named "Super Gas Operations" (or are at least fully ready to apply for certification). The Group is thus capable of practicing "smart" facility security.

## Safety and Security Assurance Promotion Structure

### Safety & Environmental Protection Headquarters

From the perspective of strengthening corporate governance, the Idemitsu Group established the Safety & Environmental Protection Headquarters to undertake initiatives for assuring safety and security and protecting the environment across the entire Idemitsu Group. A director appointed by the Board of Directors (called the director in charge of safety and security) serves as head of the Safety & Environmental Protection Headquarters and members consist of the general managers of each department while the Safety, Environment & Quality Assurance Department functions as its secretariat. Also, each relevant department in charge appoints deputy safety managers and thereby controls and promotes its initiatives in tandem with business sites under its supervision. The Safety & Environmental Protection Headquarters is in charge of formulating policies and promoting other important issues, including maintaining, reviewing and improving security management systems. Every fiscal year, the headquarters outlines annual basic policies and important items related to safety and the environment for the Group. Each relevant department in charge implements its own PDCA cycles in accordance with these policies. The Safety & Environmental Protection Council is convened annually in principle and reviews the Group's progress. Moreover, to improve the activities of each relevant department in charge, the head of the Safety & Environmental Protection Headquarters patrols worksites to provide safety and environmental instructions and its secretariat implements safety and environment-related audits. Idemitsu's refineries and petrochemical plants in particular receive such worksite patrols and safety and environmental instructions by the head of the Safety & Environmental Protection Headquarters twice a year while undergoing audits by the secretariat once a year. Other business sites implement safety and environment-related audits once every three years in principle.





The Safety & Environmental Protection Headquarters is in charge of formulating policies and promoting other important issues as well as maintaining, reviewing and improving security management systems.\*1 Every fiscal year, the headquarters outlines basic policies and important items related to safety and the environment for the Group. Each relevant department in charge implements PDCA cycles in accordance with these policies. The Safety & Environmental Protection Council is convened annually in principle and reviews the Group's progress.

Moreover, to improve the activities of each relevant department in charge, the head of the Safety & Environmental Protection Headquarters tours worksites to provide safety and environmental instructions and its secretariat implements safety and environment-related audits. Idemitsu's refineries and petrochemical plants in particular receive such instructions and audits once a year. Other business sites implement safety and environment-related audits once every three years in principle.

\*1 Security management system: A system for prescribing safety and security management policies and safety and security management objectives and targets to promote safety and security management activities and for formulating, implementing, evaluating and continuously improving safety and security management plans to attain these objectives and targets.

### Safety Subcommittee

The Safety Subcommittee has been set up as a subordinate organization to the Safety & Environmental Protection Headquarters and acts as a venue for the consideration and deliberation of important issues concerning security assurance and occupational health and safety from an expert viewpoint.

### Security Management System

Idemitsu formulates basic policies for security management within its General Principles of Safety. In accordance with these policies, the Safety & Environmental Protection Headquarters formulates basic policies for safety and the environment each fiscal year based on the status of the occurrence of accidents and the results of safety audits in the previous fiscal year and deploys these policies throughout the entire Group. The secretariat of the Safety & Environmental Protection Headquarters confirms whether security management systems are functioning properly by undertaking regular safety and environmental audits at refineries and petrochemical plants.

### Reinforcing the Seismic Durability of Existing Facilities

Idemitsu tirelessly works to strengthen its response measures in preparation for natural disasters. As for earthquakes, we constantly assess and improve the seismic durability of our equipment based on earthquake magnitudes designated by the Company, which go beyond the standards required by law. As a result of our efforts, the Great East Japan Earthquake on March 11, 2011, caused no damage to and had no major impact on any of our refineries or petrochemical plants. On the other hand, in light of the fact that the earthquake did cause damage to and explosions of high-pressure gas equipment at other companies, we toughened our seismic durability standards for newly installed high-pressure gas equipment. And, to further improve the seismic durability of our existing high-pressure gas equipment, we have initiated detailed examinations at our refineries, petrochemical plants, including the Anesaki Works of Prime Polymer Co., Ltd., and other business sites in Japan. In addition, efforts are now underway to confirm that all equipment that may have a significant impact on surrounding areas in the event of an accident is compliant with the newly toughened seismic durability standards. We are also promoting and systematically implementing corrective measures to improve the seismic durability of any equipment that needs it.

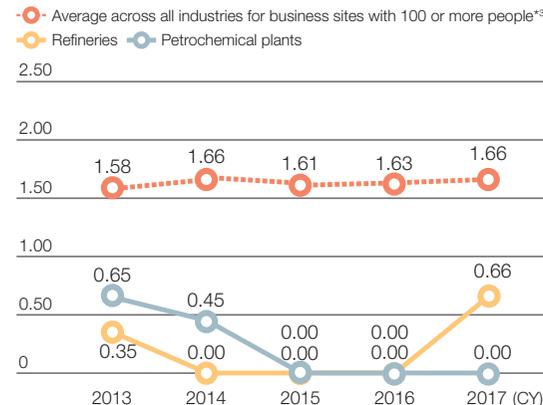
### Security Activities at Our Refineries and Petrochemical Plants

Idemitsu's refineries and petrochemical plants have established Safety & Environmental Management Sections at each business site. In collaboration with departments at all these business sites, these sections promote safety and security assurance and environmental conservation. Moreover, in collaboration with partners, we conduct thorough daily safety inspections and take all possible measures to prevent accidents, while forming self-protecting disaster prevention teams in the event of an accident and carrying out periodic disaster prevention training. Also, in addition to receiving safety and environment-related audits undertaken by the Safety & Environmental Protection Headquarters, we promote audits within our refineries and petrochemical plants as well as mutual audits among these facilities to raise the level of monitoring.

[Initiatives for safety and environment](#)

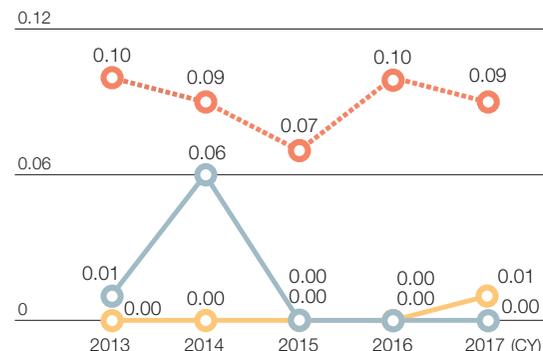
### Industrial Accident Rates

Frequency rate (Frequency rate of accidents)\*2



Independent Practitioner's Assurance

Severity rate (Degree of severity of accidents)\*2



Independent Practitioner's Assurance

Scope of collection: For 2013, refineries comprise the Hokkaido, Chiba, Aichi and Tokuyama refineries. For 2014 to 2016, they comprise the Hokkaido, Chiba and Aichi refineries. For 2017, they comprise the Hokkaido and Aichi refineries, the Chiba Complex, and the Anesaki Works of Prime Polymer Co., Ltd. For 2013, petrochemical plants comprise the Chiba and Tokuyama petrochemical plants and the Anesaki Works of Prime Polymer Co., Ltd. For 2014 to 2016, they comprise the Chiba Petrochemical Plant, Tokuyama Complex and the Anesaki Works of Prime Polymer Co., Ltd. For 2017, petrochemical plants include only the Tokuyama Complex.

Note: As of October 2017, the Chiba Refinery & Petrochemical Plant has been reorganized into the Chiba Complex. In this report, figures ascribed to the "Chiba Complex" represent the sum of the former Chiba Refinery and Chiba Petrochemical Plant. Figures ascribed to the "Chiba Complex (oil)" and the "Chiba Complex (chemical)" represent figures attributable to the former Chiba Refinery and the former Chiba Petrochemical Plant, respectively.

Accounting period: January to December

\*2 Frequency rates and severity rates: Frequency rates and severity rates are indicators used by the Ministry of Health, Labour and Welfare and others when assessing the incidence of workplace accidents.

Frequency rate = (Number of casualties from workplace accidents ÷ Cumulative total of labor hours worked) × 1,000,000

Severity rate = (Number of work days lost ÷ Cumulative total of labor hours worked) × 1,000

\*3 Based on the Outline of the Ministry of Health, Labour and Welfare's 2017 survey on industrial accidents (survey on establishments (with 100 or more employees) and general construction survey).

#### Fiscal 2017 Results

There were no occurrences of major accidents\*4 at our refineries and petrochemical plants.

\*4 Major accident: An accident deemed to pose the highest danger level as stipulated by Idemitsu's internal regulations



## Quality Assurance and Product Responsibility

To ensure safe, high-quality products and services matched to the demands of customers, Idemitsu smoothly undertakes quality assurance activities and the thorough assurance of product safety.

### Basic Policy

Idemitsu works to create new value that provides customers with a sense of assurance, vitality and satisfaction and contributes to society by ensuring the stable and feasible supply of safe, high-quality products suited to customers' needs.

## Quality Assurance, Product Safety, and Preemptively Mitigating Quality-Related Claims and Problems

### Issues/Targets and Results

#### <Quality assurance>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Improve systems by designating and evaluating risks posed by environmental changes</li> </ul>		<ul style="list-style-type: none"> <li>Evaluated risks associated with the acceleration of global expansion and growth in the scope of outsourced operations and utilized findings of this evaluation to update quality management systems in place at each department</li> </ul>			<ul style="list-style-type: none"> <li>Continued to utilize and strengthen quality management systems</li> </ul>		<ul style="list-style-type: none"> <li>Each department analyzes areas of its strength and weakness in terms of quality assurance activities and make improvement in the latter</li> <li>Enhance the content of internal quality audits to improve the level of quality assurance activities</li> </ul>

#### <Product safety>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Continually respond as a Group to tightening chemical compound regulations in a systematic manner</li> </ul>		<ul style="list-style-type: none"> <li>Successfully secured responsiveness to chemical compound regulations by introducing a new tool for the management of chemical substance information and expanding the scope of departments subject to chemical information management</li> </ul>			<ul style="list-style-type: none"> <li>Expand the scope of departments subject to tool-assisted chemical information management while striving to ensure the systematic implementation of product safety assurance activities</li> </ul>		<ul style="list-style-type: none"> <li>Steadily operate the PDCA cycle for product safety assurance by incorporating relevant activities into quality management systems</li> <li>Step up the management of information on hazardous properties of chemical substances used in our products (with the aim of securing compliance with various regulations, including those applied to food, cosmetics and other finished products)</li> </ul>
	<ul style="list-style-type: none"> <li>Respond to the upcoming food-related regulations</li> <li>Make improvement in and focus greater resources on our response to regulations on cosmetics ingredients</li> </ul>		<ul style="list-style-type: none"> <li>Took measures to respond to the revised Food Sanitation Act, which is slated to come into force in fiscal 2018</li> <li>Stepped up efforts to respond to regulations associated with the manufacture of cosmetics ingredients and packaging</li> </ul>			<ul style="list-style-type: none"> <li>Step up efforts to respond to the enactment of the revised Food Sanitation Act</li> <li>Take more robust measures to secure compliance with regulations associated with the purchase and sale of food- and cosmetics-related products</li> </ul>		

#### <Reducing quality-related claims and incidents>

P	Fiscal 2017 Targets	D	Results	C	A	Evaluation/ Improvements	P	Fiscal 2018 Targets (Plan)
	<ul style="list-style-type: none"> <li>Strengthen preventive activities by actively using external case studies</li> </ul>		<ul style="list-style-type: none"> <li>Analyzed case studies of problems occurred at external corporations, utilizing findings to design our fiscal 2018 activities while encouraging each department to draw lessons from these case studies</li> </ul>			<ul style="list-style-type: none"> <li>Identified the need to enhance the content of internal quality audits; this has been identified as one of quality assurance issues to be addressed in fiscal 2018</li> </ul>		<ul style="list-style-type: none"> <li>Continue to engage in preemptive initiatives to mitigate problems via the utilization of case studies of problems occurred within and outside the Group</li> </ul>

## Strengthening the Group's Quality Assurance Structure

The Idemitsu Group has established the General Principles of Quality Assurance to ensure superior product quality throughout the Group. Based on these General Principles, each business division (including affiliates and subsidiaries) formulates related regulations tailored to the characteristics of their operations, thereby pursuing ongoing quality assurance and product safety initiatives. In addition, from the perspective of ensuring solid governance, we have formulated basic policies and important items related to quality assurance in line with the aforementioned General Principles while establishing the Quality Assurance

Headquarters to promote these activities. The Quality Assurance Section of the Safety, Environmental & Quality Assurance Department serves as the secretariat for the entire Group.

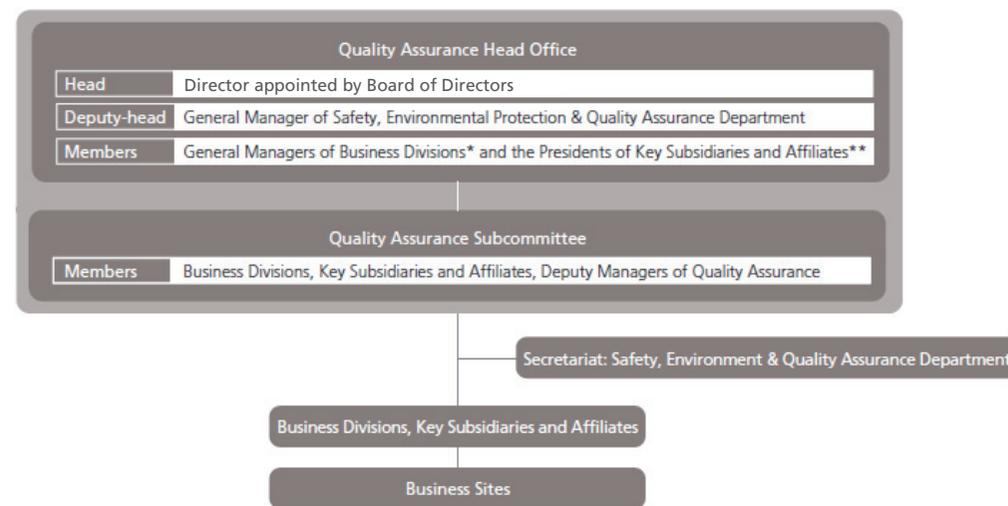
## Quality Assurance Headquarters

The Quality Assurance Headquarters is led by a director of Idemitsu who was appointed by the Board of Directors to spearhead quality assurance activities. This body consists of general managers of operating departments of business divisions related to product quality, with the Safety, Environment & Quality Assurance Department acting as its secretariat. The headquarters performs important functions, such as formulating policies and maintaining, reviewing, and improving quality assurance management systems. Every fiscal year, the headquarters outlines basic policies and important items related to quality assurance for the Group. Each relevant department in charge implements its own PDCA cycle in accordance with these policies. The Quality Assurance Council is convened annually in principle to review the Group's progress. Moreover, the headquarters engages in quality assurance audits on an as necessary basis, with the aim of helping each department make improvement in their activities.

## Quality Assurance Subcommittee

Idemitsu established the Quality Assurance Subcommittee organized by the deputy managers of departments handling quality assurance for each business division (including subsidiaries and affiliates) related to product quality under the Quality Assurance Headquarters. The Quality Assurance Subcommittee works to maintain and continuously improve the level of quality assurance for the Idemitsu Group's continuously diversifying products and services. In fiscal 2017, the subcommittee evaluated various risks arising from such changes as the acceleration of global expansion and growth in the scope of outsourced operations by taking a risk assessment approach defined by ISO9001: 2015. Findings from this risk evaluation were utilized by each department to upgrade their own quality assurance management systems. In terms of product safety, the subcommittee spearheaded efforts to secure responsiveness to a variety of relevant regulations, including those that have yet to come into force, while departments across the Group shared the latest regulatory information in their effort to secure proper compliance.

## Promotion System for Quality Assurance Activities (as of July 1, 2018)



\* Business divisions: The 16 departments and offices outlined in the General Principles of Quality Assurance that conduct operations related to the manufacture and sale of products.

\*\* Key subsidiaries and affiliates: The six subsidiaries and affiliates outlined in the General Principles of Quality Assurance that conduct operations related to the manufacture and sale of products.



## Acquisition of ISO 9001\*<sup>1</sup> Certification

In fiscal 2007, our main domestic and overseas business departments completed the acquisition of ISO 9001 certification. When new business sites are opened we consider the need for certification and quickly acquire such accreditation if necessary. In fiscal 2017, two overseas business sites for the lubricant business (in Thailand and Singapore) and one plant run by a key affiliate (in Thailand)\*<sup>2</sup>, acquired the certification.

In addition, ISO 9001:2015 was issued in September 2015, containing extensive revisions from ISO 9001:2008. In response, since fiscal 2016 efforts are underway at Idemitsu to promote a switchover to the 2015 version. Plans call for finishing the switchover at all applicable business sites by the end of September 2018, the time limit for transition. We considered switching to the new certification following the regulatory revisions and decided to begin updating our certifications in fiscal 2016.

The ISO 9001 acquisition rate\*<sup>3</sup> is 88%.

## Initiatives to Ensure Product Safety

Based on the Product Safety Action Guidelines formulated in fiscal 2007, we conduct checks of product safety at each product life stage, from research and development through sales. The regulations of various countries concerning chemical substances change significantly over time, and it is essential to respond swiftly and decisively to these changes. In fiscal 2017, we finished introducing a new tool aimed at better managing information on hazardous properties of chemical substances used in our products. Having expanded the scope of departments subject to chemical information management, we successfully responded to domestic and overseas regulations, which are evolving frequently.

## Response to Product Defects and Quality Incidents

In the unlikely event of serious product safety or quality issues, we follow our Guidelines for Addressing Crises formulated in fiscal 2004 to minimize damage and any impact on society at large. The Customer Relations Center receives quality related complaints and inquiries and, based on the content, works with the relevant departments to provide a swift response.

### Fiscal 2017 Results

We had no major product or quality incidents\*<sup>4</sup> during fiscal 2017

## Providing Appropriate Product Disclosure and Labeling

The Idemitsu Group issues safety data sheets (SDS)\*<sup>5</sup> for the products it manufactures as stipulated under the relevant laws. Each SDS indicates the hazardous properties and safety-related details of products according to chemical classification that complies with GHS.\*<sup>6</sup> The Company's website also provides a system for searching for products by name or usage and to request the corresponding SDSs.

In fiscal 2017, we continued to work to secure responsiveness to the June 2018 major revision\*<sup>7</sup> to the Food Sanitation Act.

\*1 ISO 9001: An international standard for quality management systems that can be utilized to respond to the needs of an organization's customers and markets through product and service quality assurance

\*2 Jointly certified with the Head Office of Idemitsu Unitech Co., Ltd (due to site expansion)

\*3 Based on the number of manufacturing bases (including nonconsolidated and non-equity method affiliates that are owned 50% or more by Idemitsu as of March 31, 2018)

\*4 An accident deemed to pose the highest danger level as stipulated by Idemitsu's internal regulations

\*5 SDS: Safety Data Sheet

\*6 GHS: Globally Harmonized System of Classification and Labeling of Chemicals

\*7 The Act on Partial Revision of the Food Sanitation Act, etc. (announced on June 13, 2018): The revision was intended to establish sanitation-related regulations in the field of food-handling equipment and food containers and packaging in a way that secures international harmonization with similar regulations enforced abroad. In particular, the revision included the mandatory introduction of a "positive list" system that allows manufacturers to use only substances that have undergone proper safety assessments.

[ISO 9000 - Quality management](#)

## Protecting Intellectual Property

Through the strategic protection and use of intellectual property, the Company increases the value of its products and brand.

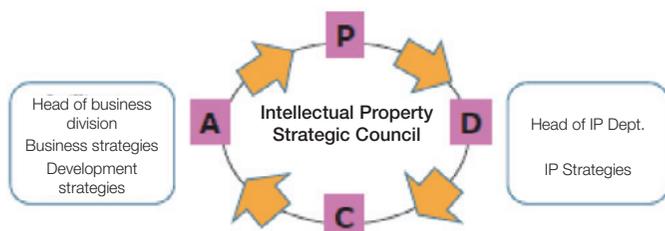
### Intellectual Property Department

The Idemitsu Group has established the intellectual property department as the relevant department in charge of overseeing intellectual property. To enhance the value of Idemitsu Group products and brands, the intellectual property department cooperates with business departments and R&D departments in using, maintaining, managing, applying for, and securing rights to intellectual property, including patents and trademarks.

### Promoting Initiatives to Protect Intellectual Properties in Accordance with the Plan

Idemitsu is equipped with a unique organizational structure supported by the "unit" system encompassing a broad range of business fields encompassing fuel oil from functional materials. Thanks to this system, Idemitsu's organizations can be flexibly realigned in line with the characteristics of businesses they handle and other strategic purposes. By doing so, Idemitsu aims to efficiently address and resolve business issues. More specifically, each "unit" and business division are acting in close collaboration in such initiatives as conducting research into and the analysis of patent information, applying for and securing rights to patents and negotiating with external parties, along with other activities, such as planning and administration. Furthermore, the Intellectual Property Strategic Council, chaired by the head of each business division, is spearheading the operation of the PDCA cycle aimed at formulating relevant action plans and addressing priority issues, with representatives from business divisions, laboratories and the Intellectual Property Department working as one. In the field of fuel oil, Idemitsu seeks to reduce business costs and strengthen its competitiveness via the signing of cross-licensing agreements that allow both signatories to utilize patents held by their counterparts. In the lubricant field, Idemitsu boasts distinctive strengths in refrigerant oil, commanding considerable shares in markets worldwide thanks to its robust patent network encompassing countries around the globe. In the OLED business, the main field of the electronic material business, Idemitsu takes a proactive stance to forming alliance partnerships, which allow the mutual utilization of patents, with domestic and overseas corporations, in an effort to seize opportunities arising from expected market growth. Having secured alliance agreements with certain OLED material makers holding promising patents, Idemitsu is now positioned to benefit from the mutual use of patents with these partners and poised to engage in development activities in an even broader range of fields. In these ways, Idemitsu is creating new businesses while achieving growth.

The Intellectual Property Strategic Council held by each business division spearheads efforts to address priority issues



The PDCA cycle centered around the Intellectual Property Strategic Council

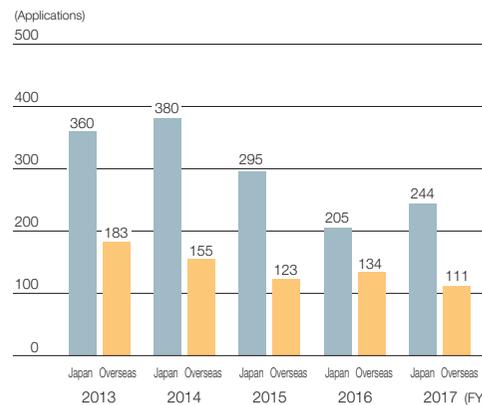
## Exercising Intellectual Property Rights

Intellectual property rights are being exercised with increasing frequency in response to the diversification of business activities, from licensing to the pursuit of alliances and mergers and acquisitions. Idemitsu established a specialized negotiations team within the intellectual property department to support its various business segments by handling the negotiation and signing of technology contracts with partners as well as performing due diligence.

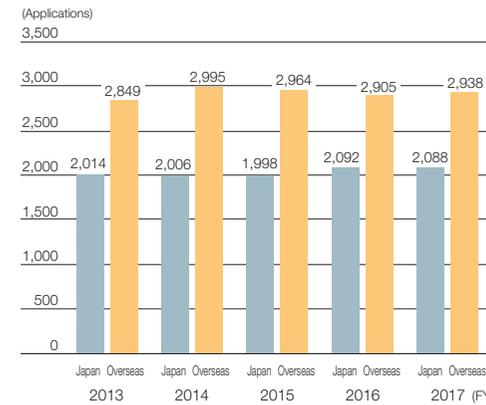
## Status of Patent Applications and Authorizations

In Japan and overseas, the Idemitsu Group applies for a total of approximately 300 patents every year. In fiscal 2017, we applied for 244 patent disclosures in Japan and 111 patent disclosures overseas. At the end of fiscal 2017, the number of Idemitsu's registered domestic and overseas patents reached 5,026.

Total number of patent disclosures in Japan and overseas



Total number of registered patents held in Japan and overseas



## Working with Patent Firms and Governmental Agencies

Through cooperative efforts with patent firms in Japan and major overseas countries, we are focusing our energy on securing the intellectual property rights necessary for business development. We are strengthening cooperation with overseas patent firms through direct communication with patent attorneys and the dispatch of trainees. We are working to secure patent rights everywhere we do business through direct interviews, negotiations, and technology presentations with each country's examiners. In addition, with the support of the Japan External Trade Organization (JETRO), we address pressing issues besetting emerging nations, such as counterfeit products, while lobbying governmental organizations. In these ways, we remain apprised of the latest patent-related problems and implement robust countermeasures.

JETRO

## Responding to the Patent Laws of Each Country

Patent laws are set independently by each country, and the application for as well as the receipt and maintenance of patents requires adherence to said laws. With a rising number of corporations pursuing global expansion, there has recently been a global trend toward patent law revision aimed at facilitating swift patent acquisition and the international alignment of standards, including by ironing out differences between laws, rules, and examination processes. Because of that, in the countries in which they operate or their products are sold, businesses have to pay close attention to every law revision and new piece of legislation. The intellectual property department stays informed of changes in relevant laws and examination processes used by individual countries and regions, from the United States to Europe, China, South Korea, Taiwan, and others, and takes these changes into account during daily intellectual property activities.

## Providing Staff Education

Idemitsu is striving to help its employees to be mindful of intellectual property by, for example, providing staff education. This means we strive to ensure employees' awareness of fair competition and respect for the intellectual property rights of other companies while promoting business development by leveraging competitive advantages afforded by acquiring and exercising our own intellectual property rights.

Responding to global business development, we are also working to analyze patent data, formulate and execute trademark strategies, and cooperate with domestic and overseas patent firms and governmental agencies

### Fiscal 2017 Results

Name	Participants	Content	Number of participants
Corporate IP	All new hires	Basic knowledge	114
Basic patent training	Employees who have practical mastery of IP	Overview of IP-related bills, practical training in searching for patent information, etc.	40 from 10 offices
Practical patent training		Real-world training in acquiring and using patent rights, etc.	121 from 13 offices

## Data Analysis

To beat global competition, it is imperative that the Idemitsu Group understand the strengths and weaknesses of its intellectual properties within the industry while comparing and analyzing the competitiveness of rival companies. Because it is important to examine and analyze large numbers of patent abstracts around the world to create our own strategies leveraging our unique competitive advantages, we have established a specialized patent information group.

## External Recognitions

### Award from the Commissioner of the Japan Patent Office under the Intellectual Property Achievement Awards program (April 11, 2018)



Idemitsu was chosen to receive an Award from the Commissioner of the Japan Patent Office, as one of recipients of Awards for Excellent Corporation Utilizing the Intellectual Property Rights System under the FY2018 Intellectual Property Achievement Awards program.

The Intellectual Property Achievement Awards program, sponsored jointly by the Ministry of Economy, Trade and Industry and the Japan Patent office, is intended to commend individuals and corporations that contributed to the development of the country's intellectual property rights system. Idemitsu was highly commended for its track record in promoting its plans associated with intellectual property rights.

### Japan Institute of Invention and Innovation's Excellent Invention Award (May 17, 2018)



Idemitsu was selected as a winner of both an Excellent Invention Award and an Award for Outstanding Practice of Innovation by the Japan Institute of Invention and Innovation under its Fiscal 2018 National Commendation for Invention program. This selection was attributable to an OLED element and an organic light emitting medium both developed by Idemitsu (patent No. 4221050).

The Japan Institute of Invention and Innovation has been sponsoring this award program to commend Japan's leading researchers and scientists who contributed to the enhancement of the country's scientific technologies and the development of its industrial sector. This award program is widely recognized as the most prestigious among intellectual property-related award programs in Japan.

Idemitsu was highly evaluated by the institute for the development of the aforementioned products, whose performance is robust and ready to be commercialized. These accomplishments were attributable to Idemitsu's applied research that employs novel concepts it has discovered to create a blue-color organic light emitting element with long product life, high light-emitting efficiency and superior color purity in the course of the pursuit of the popularization of OLED full color displays.

### Named as one of the World's Top 100 Global Innovators by Thomson Reuters (December 18, 2015)



In fiscal 2015, Idemitsu was chosen by Thomson Reuters (now Clarivate Analytics) as one of the world's Top 100 Global Innovators—a list of 100 companies that excel at intellectual property strategies. Thomson Reuters is a major international information firm based in the United States. The list was established in 2011 as a way for it to recognize leading companies and organizations around the world that protect their unique, innovative ideas with patents and have succeeded in commercialization. Canon, Toyota Motors and 40 other Japanese companies are among those that have been selected, but this is the first time for a Japanese petroleum company to receive recognition. The Company was praised for its long track record of continually creating innovative technology that impacts global markets in the functional materials business and securing patent rights through intellectual property use.