

Natural Capital

Environmental Policy

The Idemitsu Group works to reduce the environmental impact of its business activities through more efficient energy use and other measures in order to contribute to the creation of a sustainable society with harmonious coexistence between the economy and environment. We aim to protect the global environment by appropriately allocating and utilizing our resources and actively promoting advanced initiatives to solve such environmental problems as global warming. To achieve this aim, we have established a policy regarding environmental conservation (Idemitsu Sustainability Report 2020, P.16) that positions global and regional environmental conservation as an important value in all our business activities.

Natural Capital Policy

We are committed to creating new value while maintaining harmony with the environment and society. To realize a sustainable society, we will improve our business value while considering various aspects of natural capital (air, water, land, etc.). As a company that handles fossil fuels, as outlined under our materiality, we are particularly focused on climate change, setting CO₂ reduction targets, and working to reduce environmental impact.

Environmental Management System

We have positioned “Safety, Health and the Environment” as a management foundation and have established the Safety & Environmental Protection Headquarters to promote initiatives to secure and preserve this foundation. The executive in charge of safety and environment (Director) is appointed by the President and Representative Director to serve as the General Manager of the Safety & Environmental Protection Headquarters, overseeing the headquarters as the individual bearing the highest responsibility regarding safety, health, and the environment.

The role of the headquarters is (1) to determine the medium-term management plan, the annual basic policies, and priority issues associated with health, safety, security and the environment (HSSE) (2) to assess and evaluate performance through audits, (3) to main-

tain, review, and improve the Safety Management System and the Environmental Management System (Idemitsu Sustainability Report 2020, P. 17), and (4) to instruct all departments and major affiliated companies on how to secure the management resources necessary to establish, implement, maintain, and continually improve these Management Systems in order to manage risks. As a general rule, the Safety & Environmental Protection Headquarters Meeting is held once a year in December to decide on our group’s annual basic policies for the next fiscal year.

When establishing and reviewing the medium-term management plan, the annual basic policies, and priority issues regarding HSSE, the secretariat of the headquarters creates a draft proposal in a way that reflects on outcomes of HSSE activities undertaken in the preceding fiscal year and takes into consideration the social environment surrounding HSSE issues. The draft is approved at the Headquarters Meeting, then ruled on by the General Manager of the headquarters, and, finally, reported on to the Management Committee by the secretariat. If the Management Committee has instructions or opinions that should be reflected in the draft, the General Manager of the headquarters once again reviews and approves the final version.

The Board of Directors receives reports from the business executives and provides oversight on environmental issues, including climate change.

Climate Change Risks and Opportunities

We signed on to the recommendations of the Task Force on Climate-Related Financial Disclosures (TCFD) in February 2020. In line with these recommendations, we are sorting out the risks and opportunities associated with climate change. We aim to transform its business portfolio to ensure a resilient corporate structure by strengthening business initiatives that address such risks and to seize the opportunities. Regarding investment related to new projects, we have established internal carbon pricing and decided to try out investment studies that reference the economic impact of carbon dioxide emissions.



Classification	Matters to be evaluated	Responses and initiatives
Transition risks	Decline in demand for petroleum products due to the spread of EVs and changes in consumer awareness	Market monitoring and the establishment of optimal production, supply and sales systems Departure from the business portfolio depending on fossil fuel
	Decline in energy prices due to technological advances	Strengthening of the competitiveness of the entire supply chain
	Possibility of divestment of the coal business	Development of black pellets and biomass co-firing technology
	Decline in the reputation of the oil and coal businesses	Strengthening of external engagement
Physical risks	Introduction of carbon pricing	Internal discussions of carbon pricing
	Suspension of equipment operation and production sites damage due to abnormal rainfall and others	Reinforcement of equipment maintenance and strengthening of the supply chain
	Impact of sea-level rise on manufacturing and distribution bases	Measures such as reinforced seawall and relocation of control rooms
	Expanding demand for renewable energy	Development of renewable energy sources in Japan and overseas
	Strengthening of IMO (International Maritime Organization) regulations	Efficiency improvement and reinforcement of refinery facilities
Opportunities	Increasing demand for environmentally friendly products with low environmental impact	R&D and overseas expansion of lubricants for electric vehicle units, advanced greases, and biological pesticides
	Increasing demand for energy-saving materials	Development of applications for next-generation materials and commercialization of all solid state lithium-ion battery materials
	Development of distributed energy resource systems	Development of and entry into VPP (virtual power plant) control services
	Development of the circular economy	Development of recycling technologies for waste plastics, solar panels, carbon, etc.
	Advent of the MaaS (Mobility as a Service) society	Development leveraging the existing refueling network and entry into ultra-compact EVs
	Development of natural gas resources	Shifting focus from oil to gas

CO₂ Reduction Targets and Monitoring Indicators

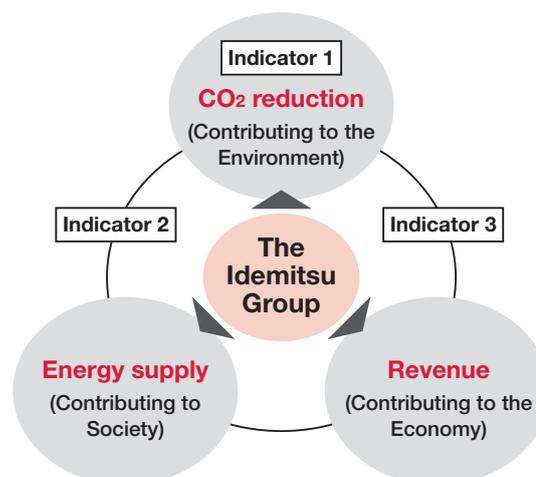
We recognize that an environmental contribution consisting only of a reduction in our CO₂ emissions is not enough to secure corporate sustainability. Along with these reduction efforts, we need to contribute to society by providing low-carbon energy with a view to transitioning to a low-carbon society in the future. Moreover, we also aim to contribute economically by generating constantly robust profits even as we shift our business portfolio. We consider all of these endeavors to be matters of equal importance.

In addition to our fossil fuel business, we conduct business related to the development of renewable energy and environmentally friendly products, as well as research aimed at solving social issues. These activities contribute to the reduction of CO₂ emissions on a global scale throughout our value chain. We recognize that this concept will become even more important in the future along with the reduction of CO₂ emissions by the Group.

Based on this recognition, in 2019 the Group established three indices to accelerate its efforts to reduce CO₂ emissions.

To achieve our targets, we will work to develop renewable energy using abiotic services derived from natural capital, such as solar, geothermal, and wind power.

In light of the Japanese government's declaration of achieving carbon neutrality by 2050, we aim to contribute to the reduction of CO₂ emissions through the supply of low-carbon energy.



■ Specific areas of action

- Promoting Energy Conservation and Zero-Emission Electric Power
- Provision of environmentally friendly products and services
- Expansion of renewable energy power generation
- Expansion of Biomass Fuel Supply
- Development and social implementation of innovative technologies

Target value

Indicator 1 Reduction of the Group's Scope 1 + 2 emissions
(An indicator of the extent to which "Scope 1 + 2 emissions" have been reduced through the promotion of energy conservation activities at refineries, complexes, and plants, etc.)

2030 Target: Cut levels by 2 million ton-CO₂ (compared to 2017 levels)

$$\text{Calculation formula} = \text{CO}_2 \text{ emissions in target year (Scope 1 + 2)} - \text{CO}_2 \text{ emissions in base year (Scope 1 + 2)}$$

FY2019 Results: down 1.3 million ton-CO₂ (reduction activities: down 0.19 million tons; other: down 1.11 million tons)

In FY2019, the progress of energy conservation activities at refineries and plants was ahead of schedule, and our CO₂ reduction activities are steadily contributing to progress toward the target. It should be noted that, due to a long-term unplanned suspension caused by malfunctioning equipment at a refinery, the lower CO₂ emissions from the reduced operations dovetailed nicely with our deliberate efforts to cut emissions, resulting in a larger than expected reduction.

Monitoring indicator

Indicator 2 Low carbon level of supplied energy
(Indicator of the extent to which an energy company can reduce the "CO₂ emissions per unit of energy" supplied to society)

2050 Indicator Level: down 30% (compared to 2017 levels)

$$\text{Calculation formula} = \frac{\text{CO}_2 \text{ emissions (Scope 1 + 2 + 3)} - \text{CO}_2 \text{ avoided emission}}{\text{Amount of energy supplied to society}}$$

FY2019 results: down 0.8%

(We intend to revise this target from time to time in light of social trends)

Indicator 3 Degree of carbon exit from corporate earnings
(Indicator of how the "Revenue level per unit of CO₂" emitted by the Company as a whole is being raised)

$$\text{Calculation formula} = \frac{\text{Revenue}}{\text{CO}_2 \text{ emissions (Scope 1 + 2 + 3)} - \text{CO}_2 \text{ avoided emissions}^*}$$

*We have not currently established a target for this indicator and use it for internal purposes only.

*CO₂ reduction contribution throughout the entire value chain