

Environmental Report

Corporate activities are contingent upon a healthy global environment. Recognizing that preservation of the global environment is an important issue shared by all humankind, the JXTG Group has included environmental conservation as a standard in its Group Code of Conduct and as a priority field for CSR activities as part of its efforts to contribute to the development of a sustainable society through its business activities.

Priority Fields for CSR Activities

High Ethical Standards

Compliance

Safety and **Environment**

Human Rights

Human Resource Development

Health

Quality

Social Contribution



Environmental Management

Basic Approach

Agreement on global environmental issues has been reached in commitments such as the Paris Agreement and the United Nations Sustainable Development Goals (SDGs). The role played by companies in achieving these commitments is becoming increasingly important.

As part of its responsibilities as a corporate group involved in energy, resources, and materials, the JXTG Group maintains a proper understanding of the impact that its business activities have on climate change risks

and natural capital.

In addition, environmental conservation has been included as a standard in the JXTG Group Code of Conduct, and the environment has been identified as a priority field for the Group's CSR activities.

Specifically, the JXTG Group has formulated the JXTG Group Environmental Policy and set relevant targets. United as one, we are implementing initiatives to create a sustainable society.

JXTG Group Code of Conduct (excerpt)

3. Environmental conservation

- (1) We recognize that we are stewards of the environment and its limited resources. We strive to conserve biodiversity and natural capital, including, but not limited to, water, soil, and the atmosphere, and contribute to the development of a sustainable society.
- (2) We strive to promote renewable energy and energy conservation in order to contribute to the development of a low-carbon society.
- (3) We strive to contribute to the establishment of a circular economy by reducing, reusing and recycling, while using resources effectively and efficiently.
- (4) We strive to take actions to promote sustainable production and consumption for the benefit of society while taking the same actions throughout our value chain, including, but not limited to, resource development, procurement, production, distribution and sales.

JXTG Group Environmental Policy

The JXTG Group and its employees will follow the basic policies outlined below as part of efforts to help build a sustainable society.

1. Comply with environmental laws and regulations
We comply with laws and regulations related to the environment, with a high sense of ethics.
2. Promote environmental conservation in business activities
We strive for the conservation and protection of natural resources in all our business activities.
3. Contribute to the formation of a low-carbon society
We work to promote energy conservation and the spread of renewable energy.
4. Contribute to the formation of a resource recycling society
We promote the reuse, recycling, and reduction of resources.

Formulation of the JXTG Group Medium-Term Environmental Management Plan and Environmental Targets

The Group has formulated the Medium-Term Environmental Management Plan (fiscal 2017–2019) and established fiscal 2030 environmental targets. We will continue to promote further environmental activities

aimed at contributing to the development of a low-carbon, recycling-oriented society as stipulated in the JXTG Group Environmental Policy.

Environmental Targets in the JXTG Group’s Medium-Term Environmental Management Plan (Fiscal 2017–2019) and for Fiscal 2030

1. Reduction in CO₂ emissions along the entire supply chain (as compared with FY2009)
 - Medium-term target (FY2019): Reduction of 2.72 million tons
 - FY2030 target: Reduction of 4.08 million tons
2. Waste-to-landfill ratio
 - Maintain zero emissions (waste-to-landfill ratio of less than 1%)

Major Initiatives for Achieving the Medium-Term Environmental Management Plan

1. Reduction in CO₂ emissions (excerpt)

(1) Reduction in CO₂ emissions at Group production sites, etc.

The JXTG Group will promote reductions in CO₂ emissions through energy saving measures during the manufacturing stage (business activities with the greatest CO₂ emissions) and the operation of plants with the largest scales of CO₂ recovery in the world.

- Promotion of energy saving measures at oil refineries and smelters, etc.
- Recovery of CO₂ through a CO₂-EOR*¹ project in the United States

(2) Reduction in CO₂ emissions outside of Group production sites

The JXTG Group will strive to curb CO₂ emissions during the consumption stage such as by selling and promoting the development of environmentally friendly products.

- Lubricant products that improve fuel efficiency performance
- Increased sales and development of environmentally friendly products such as ETBE-blended gasoline
- Expansion of the hydrogen and renewable energy business

2. Waste-to-landfill ratio

(1) Thorough separation of waste, and reuse and recycling

*¹ CO₂-EOR (Enhanced Oil Recovery): Technology for the improved recovery of oil through the injection of CO₂ gas. This technology simultaneously increases production of crude oil and reduces emissions of CO₂ into the atmosphere by transporting the CO₂, captured out of the processed flue gas from a coal-fired power plant, to an oil field, and injecting and storing the CO₂ into legacy fields.

Structure

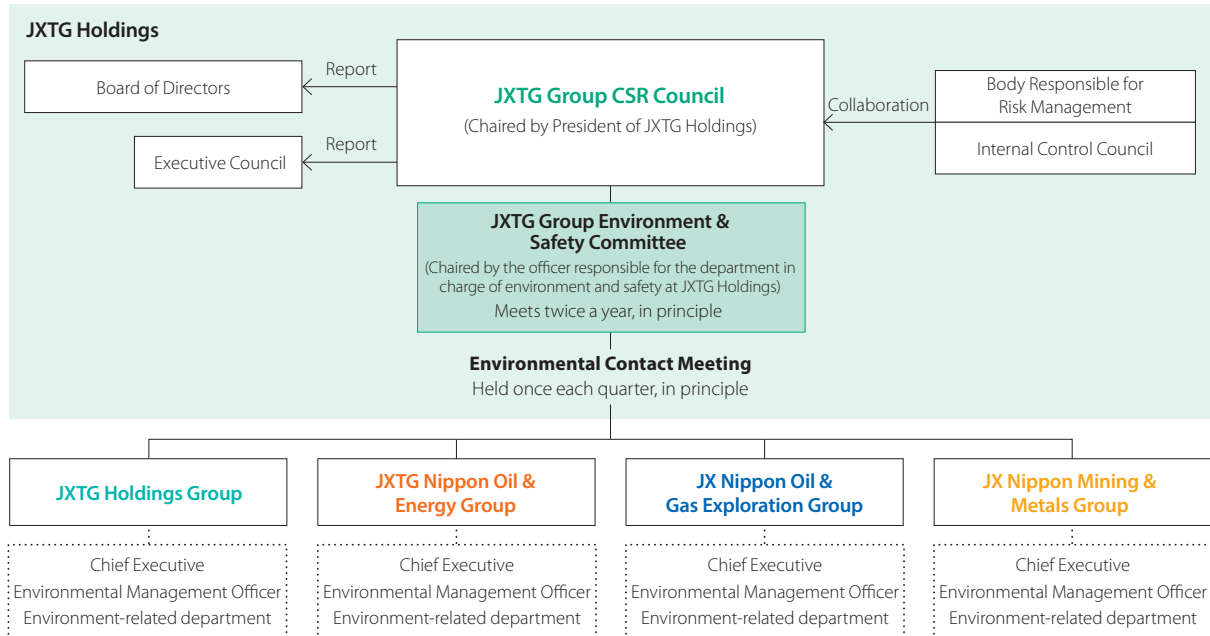
The JXTG Group Environment & Safety Committee is chaired by the officer responsible for the department in charge of the environment and safety at JXTG Holdings, and has been established under the JXTG Group CSR Council, which is chaired by the President of JXTG Holdings.

The Environment & Safety Committee deliberates matters related to the environment and confirms operation of the Environmental Management System (EMS) across the entire Group.

In addition, Chief Executives and Environmental Management Officers have been appointed at each Group company, and environment-related departments have been established.

The Group is also promoting ISO 14001 certification at its business sites where the EMS has been adopted (72 business sites in total). Fifty-six business sites have obtained certification, representing a certification rate of 78%.

JXTG Group Environmental Management Promotion Structure



Note: See CSR Management on pp. 10–16 for an overview of the Group’s CSR implementation structure.

Results of Major Initiatives

Environmental Education

With the aim of raising environmental awareness even further, the Group holds e-learning sessions for employees and provides regular rank-based education, training and drills, for the purpose of instilling the Group’s basic environmental policies, business plans and various laws and regulations.

Environmental Audits

All business sites that have obtained ISO 14001 certification are subject to internal audits once a year. They also undergo periodic reviews by a third-party certification body to maintain their certification.

Environmental Accidents

In fiscal 2016, the following two environmental accidents occurred. In each case, necessary measures were taken to address these accidents and prevent their recurrence.

Date	Place	Description
August 2016	Tamano Smelter, Hibi Kyodo Smelting	• Soot and dust concentration at the outlet of flue gas desulfurization unit exceeded limits set in the Air Pollution Control Act.
November 2016	Hitachi Works, JX Nippon Mining & Metals	• Corrosion caused deterioration and damage to drainpipes in the Daioin district. Wastewater leaked into the river, and effluent exceeded limits for lead, etc.

Overview of the JXTG Group's Environmental Impact

Input-Output of the JXTG Group (results from fiscal 2016)

(The graphic illustrates both the CO₂ emissions associated with business activities and the CO₂ emissions attributable to the consumption of products)

