

# **Contents**

Editorial Policy	1
Editorial Policy  IX Croup Mission Statement	1
JX Group Mission Statement	2
Management Message	3
JX Main Corporations	6
JX Group Overview	7
Securing Resources and Ensuring a Stable Supply	11
Responding to Diverse Energy Demands	13
Feature 3 Effective Resource Utilization	15
Feature Communication with Stakeholders	17
Environmental Report	······································
Fiscal 2015 Environmental Activity Report	19
Environmental Management	21
Initiatives to Prevent Global Warming	23
Initiatives to Prevent Air Pollution	25
Initiatives for Protecting Water Resources	26
Initiatives for Management of Chemical Substances	27
Initiatives to Reduce Waste	27
Initiatives for Biodiversity	28
Social Report	
Fiscal 2015 Social Activity Report	29
Work Practices	31
Engagement with Local Communities	39
Respect for Human Rights Initiatives	43
Quality Assurance, Product Safety, and	73
Customer Satisfaction	44
Purchasing	45
Governance Report	4.0
JX Group Management	46
Third-Party Opinion	52
Independent Practitioner's Assurance Report	53
Comparative Table with GRI Guidelines (G4)	54
Guide to JX Group Websites	59

# **Editorial Policy**

The purpose of the JX Report for a Sustainable Future 2016 is to compile the approaches taken and initiatives implemented by the JX Group in fiscal 2015 in relation to a range of CSR issues including the environment, society and governance.

Used in conjunction with the Annual Report, which is a summary of management policies, finances and business performance, the report enables even more stakeholders to understand what the JX Group is about as it aims to become one of the world's largest integrated energy, resources, and materials business groups.

The full edition of this report is available in PDF format on the JX Group website. It should be read together with CSR-related information from each Group company (see page 59).

#### **Scope of Report**

JX Holdings, Inc.

JX Nippon Oil & Energy Corporation

JX Nippon Oil & Gas Exploration Corporation

JX Nippon Mining & Metals Corporation

171 other consolidated subsidiaries and equity-method affiliates Total: 175 companies

(as of March 2016)

# **Reporting Period**

In principle, the report covers the period from April 2015 to March 2016. However, some information from April 2016 onwards is also included, as necessary.

#### **Publication Date**

December 2016

(Previous issue: December 2015; Next issue: December 2017)

#### **Guidelines Used as Reference**

The Sustainability Reporting Guidelines, Version 4, Global Reporting Initiative (GRI)

This report contains Standard Disclosures from the GRI Sustainability Reporting Guidelines.

GRI Sector Disclosures (Mining and Metals, Oil and Gas)

 The Environmental Reporting Guidelines (2012 Edition), Ministry of the Environment, Japan

#### **Enhancing Reporting Reliability**

The quantitative environmental information data on pages 19–28 has been assured by an independent body to ensure objective and reliable reporting.

# Inquiries

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General Administration Department
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Email: csr@hd.jx-group.co.jp

# System of Financial and Non-financial Disclosures



# **JX Group Mission Statement**

**JX Group Slogan** 

# The Future of Energy, Resources and Materials

**JX Group Mission Statement** 

The JX Group will contribute to the development of a sustainable economy and society through innovation in the areas of energy, resources and materials.

# **JX Group Values**

Our actions will respect the **EARTH**.

#### **Ethics**

**Advanced** ideas

**Relationship** with society

**Trustworthy** products/services

**Harmony** with the environment

#### About JX

The name "JX" symbolizes the JX Group mission statement. The letter "J" represents our position as one of Asia's largest integrated energy, resources, and materials business groups from Japan, while the letter "X" represents our willingness to pioneer new frontiers, our future growth and development potential, and our pursuit of creativity and innovation.

#### About the JX Corporate Brand Mark

The JX corporate brand mark symbolizes the continuity of the global environment and the JX Group based on the JX Group mission statement. The design, in which the "JX" logo overlaps with a sphere, represents the JX Group's commitment to a green earth—i.e., our contribution to the development of a sustainable economy and society, through innovation in the areas of energy, resources and materials.

\*The JX corporate brand mark is common to JX Holdings, Inc., JX Nippon Oil & Energy Corporation, JX Nippon Oil & Gas Exploration Corporation, and JX Nippon Mining & Metals Corporation

# JX

#### Cautionary Statement regarding Forward-Looking Statements

This notice contains certain forward-looking statements; however, actual results may differ materially from those reflected in any forward-looking statement, due to various factors, including but not limited to the following: (1) macroeconomic conditions and changes in the competitive environment in the energy, resources, and materials industries; (2) changes in laws and regulations; and (3) risks related to litigation and other legal proceedings.

# **Management Message**



# Committed to Energy, Resources, and Materials as a Corporate Group

The JX Group is a corporate group responsible for the energy, resources, and materials that are essential elements of our daily lives and economic activities. To fulfill our responsibilities, we are working to achieve day-to-day safe and stable operations and stable supplies of energy, resources, and materials, while also working to develop and update business continuity plans (BCP) and improve and strengthen earthquake-proofing of oil refineries and depots in preparation for a major disaster.

At the time of the Kumamoto Earthquake in April 2016, we were able to minimize its impact on our value chain by continuing to ship from oil depots that were confirmed safe and by dispatching extra oil tank trucks from neighboring areas after quickly making contact between head office and the disaster area.

Going forward, we will continue efforts to ensure stable supplies are maintained not only during normal times, but also during times of large-scale disaster.

# **JX Group Businesses and CSR**

We implemented a range of initiatives during fiscal 2015, the final year of our Second Medium-Term Management Plan (fiscal 2013–2015).

In our energy business, we enhanced competitiveness of the whole supply chain through initiatives such as reducing costs and improving efficiencies, while also driving business expansion in Asia, a region expecting increased demand for oil products. In addition, we committed ourselves to expanding our electricity, gas, hydrogen, and other businesses as an integrated energy company.

In our oil and gas exploration and production business, we improved our cash flows by re-evaluating our portfolio, and drastically cut costs in our existing oil and gas fields. Furthermore, we made steady progress in implementing a CO<sub>2</sub>-EOR project in the United States to increase oil production by injecting gas emissions from a coal-fired power station underground.

In our metals business, we worked to improve the technical skills of the operators and to enhance equipment maintenance systems in order to achieve stable operations at the Caserones Copper Mine in Chile. We also achieved gains in demand for our electronic materials business, and expanded our network for our recycling and environmental services business in Japan.

Since enterprises are part of society, we believe we have the corporate social responsibility to help resolve a range of social issues through our businesses in addition to targeting improved profits, so that we can develop and maintain these diverse businesses globally.

With this knowledge, the JX Group CSR Basic Policy states that "We will steadily fulfill our responsibility to society through faithful implementation of the JX Group Mission Statement by every officer and employee" as part of its basic approach, and we have conducted the following activities in fiscal 2015 in the areas of

environment, society, and governance (ESG).

For our environmental initiatives, in this final year of our Medium-Term Environmental Management Plan (fiscal 2013–2015), we worked through operation of an Environmental Management System (EMS) implementation structure to reduce environmental impact, including by reducing CO<sub>2</sub> emissions and reducing waste, while complying with environmental laws and regulations.

As one of our social initiatives, we are promoting workplace diversity. For example, we increased the percentage of females among our new graduate intake, developed an employment system in line with childcare, nursing care, and other life stages, and reviewed the way our people do their jobs with a focus on work-life balance. At the same time, we adopted a new education program aimed at developing global human resources. As part of our social contribution programs for next generation development and support, we held the 46th JX-ENEOS Children's Story Award, and issued the book compiling awarded stories, The Bouquet of Children's Stories, which we sold to collect money for charities. All sales proceeds were donated as scholarship support funds for children living in child welfare facilities.

For our governance initiatives, we worked to build and operate a framework for transparent, fair, prompt, and resolute decision-making in management based on the Basic Policy on Corporate Governance of JX Group established in November 2015. We also implemented the 3rd CSR Survey for the purpose of determining the awareness of everyone within the JX Group and found improvements in the areas of understanding and penetration of the JX Group Mission Statement, awareness of compliance, recognition of the internal whistle-blowing systems, and other areas compared to the results of the previous survey in fiscal 2013.

# Measures for the Future of Energy, Resources, and Materials

The JX Group has decided to integrate with the TonenGeneral Group, so we are currently making preparations to launch the JXTG Group in April 2017.

With a structural decline in demand for oil in Japan, the business environment is expected to become more difficult going forward. By combining the management resources of the two groups, we are hoping to achieve a level of business transformation that we could not achieve alone, which will enable us to build a resilient

business infrastructure and create further growth. Then, by actively fulfilling our corporate social responsibilities though our business activities, we will contribute to the development of a vibrant sustainable economy and society.

We look forward to the opinions and requests of all our stakeholders, and ask you for your continued understanding and support for the JX Group.

# Message from Senior Management of the JX Group's Core Operating Subsidiaries

**JX Nippon Oil & Energy Corporation** 



Tsutomu Sugimori
Representative Director,
President
JX Nippon Oil & Energy Corporation

# Working to Ensure Stable Supply of Sustainable Energy as an Integrated Energy Company

The greatest mission of the JX Nippon Oil & Energy Group is to maintain a stable supply of sustainable energy. While there are increasing calls for a low carbon society, it is predicted that oil will account for a third of Japan's domestic primary energy requirements in 2030. We therefore also have a responsibility to develop resilient systems capable of preventing disruptions to oil supply after disasters.

With the remarkable growth in Asia, even

more energy will be required. We are actively collaborating with partners and utilizing our own experience, technologies and know-how in order to ensure environmentally-friendly and efficient energy supply.

Relationships of trust form the foundations for business survival. We are focused on implementing measures for the future of energy through dialogue and by giving priority to compliance and safety.

# JX Nippon Oil & Gas Exploration Corporation



Shunsaku Miyake
Representative Director,
President and CEO
JX Nippon Oil & Gas Exploration Corporation

# Conducting Exploration Oil and Gas Upstream Business While Always Taking Account of the Environment, Safety, and Society

The JX Nippon Oil & Gas Exploration Group is conducting oil and gas exploration and production around the world. In particular, we have operator projects in Vietnam, Malaysia, and Qatar.

We are also working on businesses that require advanced cutting-edge technologies, including enhanced oil recovery by injecting captured CO<sub>2</sub> from coal-fired power plants into oil fields, and exploration and production of oil

and gas fields in deep-water areas.

In order to coexist with the community as a good corporate citizen trusted by society, putting compliance and HSE (health, safety and environment) above anything else, we are working to enhance our corporate value and contribute to the sustainable development of the economy and society through our business activities.

# **JX Nippon Mining & Metals Corporation**



Shigeru Oi
Representative Director,
President and CEO
JX Nippon Mining & Metals Corporation

# Contributing to the Sustainable Development of the Global Society through the Stable Supply and Efficient Use of Non-Ferrous Metal Resources

The JX Nippon Mining & Metals Group makes full use of the technology and knowledge, accumulated over more than a century, in the pursuit of innovation in the productivity of resources and materials. In this way, we are fulfilling our social responsibility of stably and efficiently supplying non-ferrous metal resources such as copper, which is widely used in our daily lives and is essential for the future development of society.

In carrying out our business operations, we pay all due care to minimize any negative impact on society. We endeavor to deepen communication with relevant stakeholders in order to ensure especially that we protect the environment, maintain occupational health and safety, enhance compliance, coexist and prosper along with local communities, and respect human rights.

# **JX Main Corporations**



Yasushi Kimura, Representative Director, Chairman Yukio Uchida, Representative Director, President

#### Energy

#### JX Nippon Oil & Energy Corporation

Tsutomu Sugimori Representative Director,

#### Oil and Gas Exploration, **Development, and Production**

#### JX Nippon Oil & Gas Exploration Corporation

Shunsaku Miyake Representative Director, President and CEO Note: The JX Group is planning to integrate with the TonenGeneral Group in April 2017.

#### **JX Nippon Mining & Metals** Corporation

Shigeru Oi Representative Director, President and CEO

Listed Subsidiaries: NIPPO CORPORATION TOHO TITANIUM CO., LTD.

Common Function Companies

Individual Operating Companies

# Holding Company

# JX Holdings, Inc.

Representative: Yasushi Kimura, Representative Director, Chairman Yukio Uchida, Representative Director, President Head Office Location: 1-2 Otemachi 1-chome, Chiyoda-ku, Tokyo 100-8161, Japan Established: April 1, 2010 Capital: ¥100 billion



# Core Operating Subsidiaries

# **JX Nippon Oil & Energy Corporation**

Tsutomu Sugimori, Representative Representative:

Director, President

Head Office Location: 1-2 Otemachi 1-chome, Chiyoda-ku,

Tokyo 100-8162, Japan

Capital: ¥139.4 billion (100% investment of JX Holdings, Inc.)

#### Principal Business:

Manufacture and marketing of petroleum products (gasoline, kerosene, lubricants, etc.); manufacture and marketing of petrochemical products; import and marketing of gas (LPG and LNG) and coal; electric power sales



# **JX Nippon Oil & Gas Exploration Corporation**

Representative: Shunsaku Miyake, Representative

Director, President and CEO

Head Office Location: 1-2 Otemachi 1-chome, Chiyoda-ku,

Tokyo 100-8163, Japan

Capital: ¥106.3 billion (100% investment of JX Holdings, Inc.)

#### Principal Business:

Exploration and production of petroleum, natural gas, and other mineral resources; extraction, processing, storage, purchase, sale, and transportation of petroleum, natural gas, and other mineral resources and their by-products



# **JX Nippon Mining & Metals Corporation**

Representative: Shigeru Oi, Representative Director,

President and CEO

Head Office Location: 1-2 Otemachi 1-chome, Chiyoda-ku,

Tokyo 100-8164, Japan

Capital: ¥20 billion (100% investment of JX Holdings, Inc.)

# Principal Business:

Exploration and mining of non-ferrous metal resources, smelting and refining, and marketing of non-ferrous metals (copper, gold, silver, etc.); manufacture and marketing of electronic materials; recycling of non-ferrous metal materials; treatment of industrial waste for reuse



Note: The three core business companies changed company names on January 1, 2016.

# Listed Affiliated Companies

Consolidated Subsidiaries: 2

# NIPPO CORPORATION

Representative: Hiromi Iwata, President and Representative Director Head Office Location: 2-16 Yaesu 1-chome, Chuo-ku, Tokyo, 103-0028 Japan

manufacturing and sale of asphalt mixture

Capital: ¥15.3 billion (57% investment of JX Holdings, Inc.) Principal Business: Civil engineering works such as construction of roads and paving work; building work;

Equity-Method Affiliates: 5

#### TOHO TITANIUM CO., LTD.

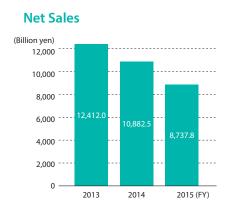
Representative: Kazuo Kagami, President and Representative Director Head Office Location: 3-5 Chigasaki 3-chome, Chigasaki City, Kanagawa Prefecture 253-8510, Japan

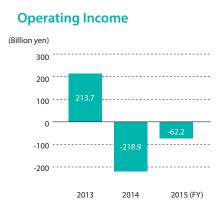
Capital: ¥12 billion (50.4% investment of JX Holdings, Inc.) Principal Business: Refining, melting and sale of titanium



# **JX Group Overview**

# **Financial Highlights**





# 

Note: For refining and marketing of petroleum products, inventory assets (crude oil and petroleum products) are high due to stockpile requirements, and inventory valuation is affected by the fluctuations in petroleum prices at the time of accounting. While a loss is reflected in the accounts, this is a loss in valuation and does not represent an actual loss.

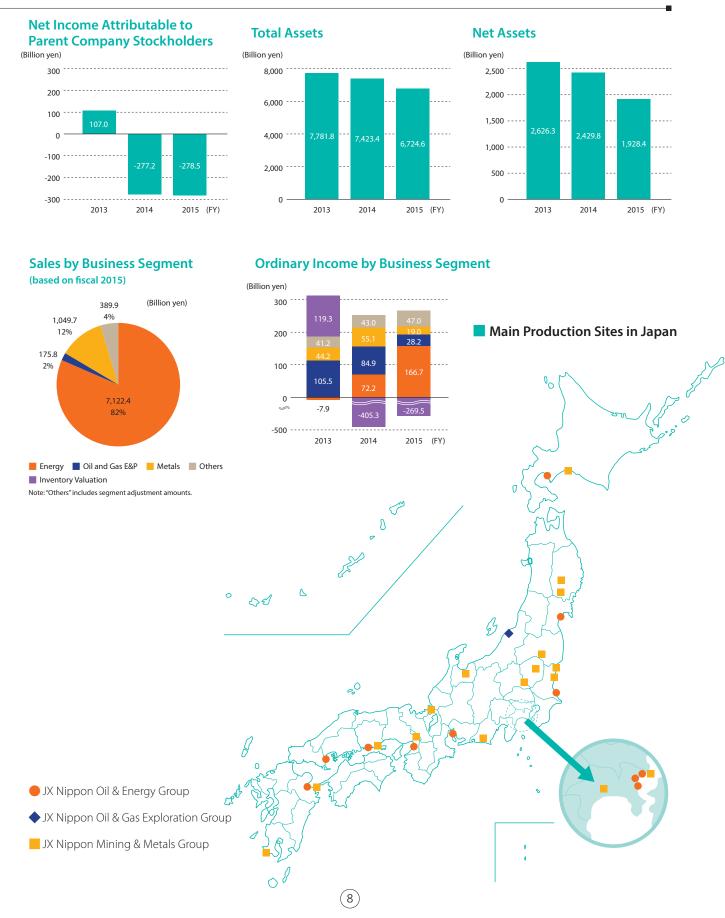
2015 (FY)

2013

-200

# **Main Sites and Areas for Core Business Company Groups** Main Overseas Sites and Areas

With many business operation sites and areas in Japan and overseas, the JX Group is a global business working to become one of Asia's largest integrated energy, resources, and materials business groups.



# **Business Activities**

The JX Group is implementing a range of CSR initiatives centered on priority areas across the broad supply chains of energy, resources, and materials.

# **JX Group Priority Areas of CSR**

- OCompliance, including Information Security and Human Rights
- Corporate Citizenship
- Environmental Safety

**Energy Business** 

and Gas Exploration and

Metals Business

Note: See page 47 for the CSR promotion systems of the JX Group.

# JX Nippon Oil & Gas Exploration Corporation

Oil and Gas Exploration and Production (E&P)

Operating in

countries globally

(as of March 31, 2016)

Oil and gas production

thousand barrels/day (crude oil equivalent)

Proved and estimated reserves

million barrels (crude oil equivalent)

# **Main CSR Activities**

- Reducing environmental impact
- Occupational safety and health
- Anti-bribery, etc.

# JX Nippon Oil & Energy Corporation



Procurement, Transportation, and Storage

# Crude oil suppliers

countries

(total number of countries supplying JX Group with oil from fiscal 2010 through fiscal 2015)

Crude oil tankers and long-term charters owned (200 thousand tons or larger)

ships

(as of March 31, 2016)

# **Main CSR Activities**

- Safe and stable transportation
- Business Continuity Plan (BCP) during disasters



**Copper Resources** Development

Equity entitled copper mine production

thousand tons/year

**Copper Smelting** and Refining

Refined copper production capacity

thousand tons/year

(as of March 31, 2016)

# **Main CSR Activities**

Relationship with local communities Occupational safety and health Using resources effectively





**Group Companies** 

(as of March 31, 2016)

**Consolidated Employees** 

26,339

Main CSR Activities |

- ●Thoroughness of compliance ●Enhancing risk management
- Respect for human rights, etc.



Refining and **Production** 



Distribution and Sales

Crude oil processing capacity



million barrels/day

(as of March 31, 2016; including export-oriented Osaka Refinery and condensate splitters at Kashima and Mizushima refineries)

**Paraxylene** (petrochemical) supply capacity



million tons/year

Fuel oil sales in Japan

Service stations in Japan



million kL/year

36% market share

32% market share

(based on fiscal 2015 oil statistics)

- Accident and disaster prevention
- Eco-friendly and safe products and services

Safe and stable supply, etc.



**Electronic Materials** 

# Best in the world for product range



Recycling and Environmental Services

Annual volume of gold recovered

tons/year (fiscal 2015)

Improving customer satisfaction
Reducing environmental impact
Developing and utilizing human resources, etc.



# Securing Resources and Ensuring a Stable Supply

The JX Group is working to build integrated supply chains in order to achieve a stable supply, from resource exploration through to production and sales, in the fields of energy, resources and materials.



Demand for oil, gas, metals, and other resources is growing year by year in Asia in particular, with competition for resources between countries and companies becoming more and more intense. Even in such circumstances, we believe it is our social mission to secure resources and maintain their stable supply.



# **Resource Exploration**

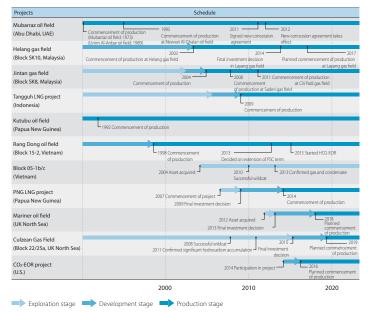
Over recent years, more oil and gas fields and copper mines have been discovered in harsh remote locations, such as deep underwater or high in the mountains. As a result, advanced technologies and considerable financial strength have become imperative for their development.

#### Oil and Gas Business

JX Nippon Oil & Gas Exploration Corporation allocates its management resources by focusing attention on regions and technologies as well as establishing its superiority through the accumulation of technologies in its experience of operator projects, taking advantage of its acquired knowledge and its good relationships with national oil companies.

During the period of the Second Mid-Term Management Plan (fiscal 2013–2015), we had a certain degree of success in exploration initiatives in Malaysia and Qatar, and started commercial production in the Papua New Guinea LNG project and the Kinnoull oil field in the UK North Sea. In 2016, we made the final investment decision to advance the development of the Tangguh LNG Expansion Project in Indonesia. We are also carrying out a project in the United States using CO<sub>2</sub>-EOR technologies, or enhanced oil recovery utilizing CO<sub>2</sub>, which not only increases oil production but also contributes to the global environment by reducing greenhouse gas (CO<sub>2</sub>) emissions.

#### Development Schedule for Principal E&P Projects



#### **Metals Business**

Because of its high level of electrical and thermal conductivity, copper is used in a wide range of applications, including wiring for indoors or outdoors, digital consumer electronics such as smartphones and tablets, and in increasingly electronic automobiles. It is an essential material in our modern lives.

There are currently no copper mines in Japan, so we rely on imported copper for all of these applications. JX Nippon Mining & Metals Corporation is actively involved in copper mine development overseas, and handles all processing of the imported raw material in Japan, from smelting and refining to processing and recycling. In this way, it is working to achieve a stable supply of copper resources and materials.



Caserones Copper Mine

# Stable Supply of Oil Products

From the perspective of energy security as well, it is extremely important to achieve a stable supply of oil products to provide an independent and distributed energy supply that is disaster resistant and highly convenient, storable and transportable. JX Nippon Oil & Energy is working to ensure the stable supply of oil products over Japan's largest supply network covering the entire country.

#### Crude Oil Procurement

While building positive relationships of mutual trust with a wide range of suppliers, including oil-producing countries, we ensure an efficient and stable oil supply from 25 countries globally.

#### Transportation and Storage

Crude oil tankers choose the optimum routes and follow meticulous operational controls to prevent disruptions to supply. With the one of the world's largest oil terminals at Kiire Terminal in Kagoshima Prefecture, we always hold at least 70 days' worth of crude oil and oil products in case of emergency.

#### **Refining and Production**

While always prioritizing safe and secure operations, we are working to achieve an efficient and stable supply through oil refineries and production sites at 11 locations around Japan. To prevent accidents and manage facilities safely, we shut down machinery when conducting large-scale inspections and repairs and

carry out daily maintenance. We also regularly conduct disaster training and fire drills. In this way, we are taking preventive measures and building foolproof systems for emergencies.

#### **Logistics and Sales**

With Japan's largest network of 10,548 service stations, and 48 oil depots (including shared facilities) located across the country, our systems maintain prompt and stable delivery of products anywhere in Japan. We are implementing a range of safety and environmental initiatives, including high-tech oil tank trucks to recover gas vapor and prevent cross-contamination of products when discharging, and regular safety controls at our service stations.



Crude oil tanker

# Kumamoto Earthquake Response based on "Recommendations for Plan for Cooperation in Oil Supply during a Disaster"

Learning lessons from the Great East Japan Earthquake, the JX Nippon Oil & Energy Group has enhanced its major disaster response capabilities by developing business continuity plans and conducting ongoing training so that we can fulfill our role as an energy supplier supporting the social infrastructure, even in times of emergency.

At the time of the Kumamoto Earthquake in April 2016, we followed our plans and training and quickly established the disaster response headquarters led by the president of JX Nippon Oil & Energy, with the result being a continuation of shipments from our oil depots in the disaster-affected region even on the day

of the earthquake. By April 17, we had eliminated any oil shortages at service stations through actions such as dispatching extra oil tank trucks from neighboring areas.

Going forward, the JX Group will continue to supply fuel into disaster-affected areas and will offer as much support as it can.



Comprehensive training in fiscal 2015

Feature 2

# Responding to Diverse Energy Demands

We at the JX Group are driving initiatives as an integrated energy company supplying a diverse range of energy needs, not limited to oil, demanded by its customers.



Energy needs are becoming more diverse as environmental awareness increases and other changes occur. The JX Group is implementing initiatives as an energy conversion company to convert primary energies, such as crude oil, natural gas, solar and wind, into the optimal energy for delivery to consumers, such as oil and petrochemical products, LP gas, city gas, electricity, and hydrogen.

# **Entry into Household-Use Electric Power Retail Business**

The Amended Electricity Business Act in Japan was established as part of a review of the country's energy policies, with full deregulation of the electricity retail business for households and other users implemented in April 2016. Based on this, JX Nippon Oil & Energy decided enter the household-use electric power retail business where it began trading as ENEOS Electricity. As we develop ENEOS Electricity, we are promoting initiatives such as building a sales scheme that

includes alliances, and in-house development of a customer information management system, and we are developing systems able to provide detailed support for the diverse needs of our customers.

We currently have power plants in 27 locations around Japan, from Hokkaido to Okinawa, with a generating capacity of about 1,630,000 kW of power. We have also commenced full-scale investigations into enlarging facilities at Kawasaki Natural Gas Power Generation Co., Ltd.,\*1 as we expand this business.

We are planning further business expansion going forward by making use of the power business know-how we have developed since launching our electricity wholesale business in 1998.

\*1. Gas-fired power station operator established in 2001 as a joint investment between JX Nippon Oil & Energy Corporation and Tokyo Gas Co., Ltd.



ENEOS Electricity exhibition booth

# **Expanding Our Natural Gas Business**

There is a wealth of natural gas reserves located around the world in comparison with crude oil. It is gaining attention as a form of clean energy that emits little CO<sub>2</sub>, SOx, or NOx, which are causes of global warming and air pollution. In addition to engaging in the exploration of gas fields overseas, the JX Group is working to secure liquefied natural gas (LNG) through long-term contracts with U.S. and European majors as well as Malaysian LNG suppliers, and is in talks with several potential suppliers, including companies producing LNG from shale gas.

We are developing and building our supply system in Japan via coastal tankers, tank trucks and pipeline from our own LNG terminals at Mizushima\*2 in Okayama Prefecture, Hachinohe in Aomori Prefecture and Kushiro in Hokkaido Prefecture.

\*2. The Mizushima LNG Terminal is a joint investment with The Chugoku Electric Power
Co. Inc.



Hachinohe LNG Satellite Terminal



Mobile hydrogen station

# Hydrogen as a New Energy

In addition to hydrogen being a clean energy that does not emit CO<sub>2</sub> during use, it is also a highly significant energy from the perspective of energy security because it can be manufactured by a number of methods from a diverse range of raw materials. Commercial sales of fuel cell vehicles began in December 2014 but the development of a supply network, including hydrogen stations, is essential for widespread use. As an energy supplier, the JX Nippon Oil & Energy Group is working to develop hydrogen supply systems for these fuel

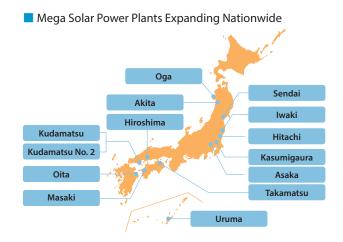
cell vehicles, and it has built up the technologies and know-how needed for widespread use. Starting with the opening in December 2014 of the Dr. Drive Self Ebina Chuo Branch, which was the first commercial self-service hydrogen station, we had opened a total of 37 hydrogen stations as of the end of fiscal 2015.

Going forward, we will use the hydrogen manufacture and supply technologies and expertise developed over the years to contribute to a hydrogen-based society.

# **Expansion of the Mega Solar Power Generation Business**

Since February 2013, JX Nippon Oil & Energy has been promoting our mega solar power generation business, which uses the JX Group's idle land, with the aim of expanding renewable energy application. During fiscal 2015, we began operation of new mega solar facilities installed at the former site of Hiroshima Depot in Hiroshima Prefecture, within Funakawa Works in Akita Prefecture, at the former site of Hitachi Depot in Ibaraki Prefecture, and at the former site of Asaka Depot in Saitama Prefecture. Now we have a total of 14 mega solar power plants across Japan with generating capacity of about 35,000 kW.

Going forward, we will continue to contribute toward achieving a low-carbon society through the expansion of our renewable energies business.



# Further Energy Savings for Households

Reducing CO<sub>2</sub> emissions by reducing energy consumption in the home is a major challenge for achieving a low-carbon society. The JX Nippon Oil & Energy Group has launched a service to provide ideas for optimizing energy consumption and ways of using energy in the home. It provides suggestions for energy-saving behavior and use of consumer electronics through about 1,000 household energy consultants around Japan using around 60 diagnostic categories and interviews.

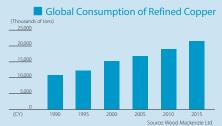
Feature 3

# **Effective Resource Utilization**

To achieve more effective use of precious resources, the JX Group is working to build a recycling-oriented society and reduce the environmental burden through its recycling and environmental services business.



Zero emission initiatives that seek to eliminate waste are important issues for creating a brighter future. The JX Group is driving initiatives to achieve a sustainable, recycling-oriented society through its recycling and environmental services business, which recovers and reuses precious and finite metal resources from end-of-life product (urban mines).



# Achieving a Recycling-Oriented Society through Our Recycling and Environmental Services Business

The JX Nippon Mining & Metals Group engages in an integrated range of businesses related to non-ferrous metals, centering on copper, which encompass resources development, smelting and refining, electronic materials, and recycling and environmental services. The recycling and environmental services business, which is the "vein" of this value chain, consists of environmental services for detoxifying industrial waste and the recycling of recycled materials containing non-ferrous metals into refined metals. The Group contributes significantly to the development of a sustainable, recycling-oriented society by utilizing the key features and strengths of this business—zero emissions, proprietary treatment processes based on smelting and refining technologies, and a global collection network.

# Key Features and Strengths of the Recycling and Environmental Services Business

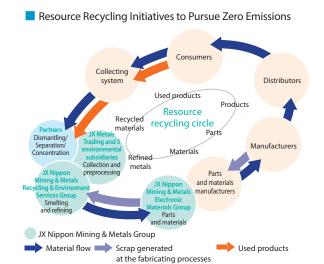
#### (1) Zero Emissions

In the processes for detoxification of industrial waste and conversion of recycled materials into reusable resources as refined metals, we are pursuing zero emissions, where no secondary waste which would require landfill disposal is produced. All iron, excluding non-ferrous metals, are recovered as slag\* and used for such purposes as cement material. By preventing the generation of secondary waste, we are reducing the environmental impact for our next generation

S Jac; A black glass-like substance (iron silicate) made of iron and silica stone that is byproduct of the

# (2) Proprietary Treatment Processes Based on Smelting and Refining Technologies

The recycling of non-ferrous metals in the business is carried out using uniquely developed efficient and reliable treatment processes which are based on the technologies



we have fostered over many years through operations at mines, smelters, and refineries. In particular, at the Saganoseki Smelter & Refinery (Oita Prefecture) of Pan Pacific Copper Co., Ltd.\*—owned by JX Nippon Mining & Metals and boasting Asia's largest treatment capacity for recycled materials—energy conservation is achieved by using the excess heat generated from copper concentrate smelting for melting recycled materials.

# (3) Global Collection Network

In Tomakomai (Hokkaido), Shirakawa (Fukushima Prefecture) Hitachi (Ibaraki Prefecture), Mikkaichi (Toyama Prefecture), Tsuruga (Fukui Prefecture), and Saganoseki (Oita Prefecture), we are recycling and detoxifying the recycled materials and industrial waste collected through the nationwide collection network we have built.

Also, with reduced generation of scrap in Japan, we are enhancing our collection operations overseas and have established a collection and pre-treatment site in Taichung (Taiwan) and an operating site in Arizona (U.S.).

\* Owned by JX Nippon Mining & Metals and Mitsui Mining & Smelting Co., Ltd. and operating as a non-ferrous metals manufacturer with integrated operations from resource exploration and development through procurement, production and sales.



Chiongpin Recycling Center, Taiwan

# **Expanding the Recycling and Environmental Services Business Overseas**

Since establishing its recycling and environmental services business in the 1970s and 1980s, the JX Nippon Mining & Metals Group has been a pioneer in this field in Japan by building a recycled material collection network and establishing and maintaining a stable business system. However with a declining population and the overseas transfer of Japan's domestic manufacturing facilities, the volumes of metal scrap being generated in Japan have dropped. To ensure a stable supply of recycled materials therefore, it has become essential to source from overseas markets.

In 2010, it established a recycled material collection facility in Taichung, Taiwan, which is a hub for electronics and related industries, and is gradually growing the volume collected. In 2014 as well, it established and began operating a Recycle Business Department as part of its Arizona subsidiary JX Nippon Mining & Metals USA, in order to target the North American market, which is expected to begin generating more recycled materials in

the future.

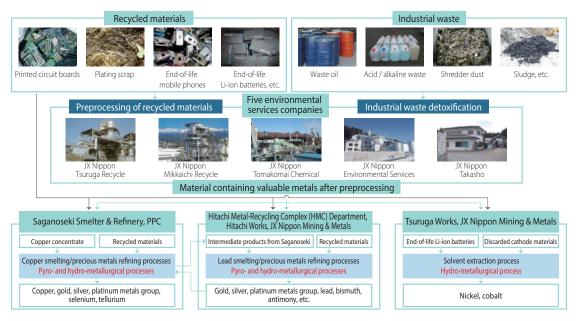
The recycled material collected from these sites is processed within the JX Nippon Mining & Metals Group, mainly at the Saganoseki Smelter & Refinery (Oita Prefecture) of Pan Pacific Copper Co., Ltd., Asia's largest facility for recycling copper and precious metals. Here, the copper, precious metals, and other rare metals are able to be efficiently recovered. Going forward, we plan

to further expand the efficient recycling system we have established, which will contribute to the creation of a global recycling-oriented society.



Converter in use in the recycling process at Saganoseki Smelter & Refinery

#### Outline of Recycling and Environmental Services Business





# Communication with Stakeholders

Through extensive communication with a range of stakeholders, the JX Group aims to become an enterprise trusted by society.



For enterprises to achieve sustainable growth into the future, it is essential that they expand their social value rather than just pursuing economic value.

With this knowledge, the JX Group ensures two-way communication with all stakeholders, together with timely and accurate corporate disclosures. It works to raise its corporate value based on the opinions and evaluations it receives.

# Gaining a Better Understanding of the JX Group

#### **Active Disclosure of Management Policies and Information**

JX Holdings is committed to the swift, proper and fair disclosure of information to shareholders and investors in accordance with its disclosure policy. In addition to publishing its Management Policies, financial and business performance, press releases, IR materials and stock information on the website, it regularly holds briefings for individual investors, and briefings for analysts and institutional investors, as part of its active disclosure activities. It also conducts Q&A sessions at the briefings where it receives a range of questions and opinions. Through the perspective of all shareholders and investors, it is able to refocus on issues of the Group and reflect that in future initiatives.

Documents and videos for analyst and institutional investor briefings are available on the website.



Analyst and institutional investor briefing



JX Holdings IR Website

# Reflecting Customer Feedback to Achieve Further Improvements

JX Nippon Oil & Energy has established and operates the ENEOS Customer Service Center for the purpose of using customer feedback to improve its management. A total of 23,597 pieces of feedback were received in fiscal 2015. The ENEOS Customer Service Center responds honestly and accurately through careful and easy-to-understand explanations, and when appropriate, it feeds back the customers' comments to the appropriate departments.



**ENEOS Customer Service Center** 

# Exchanges with Students and Young Researchers Who Will Lead the Next Generation

In 2012, JX Nippon Mining & Metals and the Institute of Industrial Science at the University of Tokyo jointly established the Endowed Research Unit for Nonferrous Metals Resource Recovery Engineering, abbreviated as the JX Metals Endowed Unit.

In fiscal 2015, it held Special Symposiums for around 450 participants on the topics of "Copper smelting: International trends and role for realizing the sustainable society" and "Frontier of Extraction and Recycling Technology for Precious Metals." It also held other events such as inspection visits of its nonferrous metals refinery facilities for students and young researchers.



Special lecture for high school students by the JX Metals Endowed Unit

# Strengthening Relationships with the Host Countries of Oil and Gas E&P Business

In fiscal 2015, JX Nippon Oil & Gas Exploration set up the JX Nippon International Scholarship for foreign students studying in Japan from countries where we run businesses. The first student on the scholarship came from Papua New Guinea, where we have been participating in oil-producing projects and a liquefied natural gas (LNG) project. In addition to attending the University of the Ryukyus in Okinawa Prefecture for one year from October 2015 to study the Japanese language, the student will also study international relations and Japanese culture and it is hoped that he will play an active role in his country and Japan in the future. Going forward, JX Nippon Oil & Gas Exploration will maintain and enhance this scholarship program and be in harmony with local communities of the countries where we have business in order to contribute to their sustainable development.



Scholarship student studying at the University of the Ryukyus

# **Maximizing the Capabilities of All Employees**

The JX Group wants to always be a trusted enterprise to its stakeholders, so it believes in the importance of every executive and employee sincerely putting the JX Group Mission Statement into practice. Based on this belief, it regularly conducts an anonymous in-house survey of opinions, called the CSR Survey, to monitor executive and employee understanding of the JX Group Mission Statement, recognition of various systems, and the level of activity of internal

communications, and so on. The Group implemented the third CSR Survey in July 2015 and received responses from 96% of relevant executives and employees, or 18,715 people.

Compared to the 2013 survey results, understanding of the JX Group Mission Statement, awareness of compliance, recognition of the internal whistle-blowing system, and workplace communication showed improvements, confirming the positive outcomes of initiatives implemented so far.

Going forward, the Group will continue to actively implement initiatives for improvement in order to enable every executive and employee to work with confidence and to maximize their capabilities.



Discussing results of CSR Survey at the CSR Promotion Manager Workshop

# Fiscal 2015 Environmental Activity Report

# **Basic Approach**

"Harmony with the environment" is one component of the JX Group Values, and "environment and safety" is a priority field for CSR. In addition to engaging in environmental preservation actions enabled by operation of an Environmental Management System (EMS), the JX Group manages progress of those actions, deliberating and reporting at the JX Group Environment & Safety Committee.

# **JX Group Environmental Policy**

The JX Group will 1. Develop the technologies, products and services that help to create a better global environment.

- 2. Work diligently to prevent global warming and be mindful of preserving biodiversity.
- 3. Constantly strive to reduce environmental impact in all business activities.
- 4. Strive for strict compliance with environmental laws and ordinances, based on the highest ethical values.

# JX Group Medium-Term Environmental Management Plan Fiscal 2015 Targets and Results

# JX Nippon Oil & Energy Group

Activities	Reduction of CO2 emissions	Soil contamination countermeasures	Waste reduction	
Targets	Reduce by 2.1 million tons compared with FY2009	Operating properties: Prevent external leakage Decommissioned properties: Conduct deliberate surveys and treatment measures	Waste-to-landfill ratio: Less than 0.5%	
Results	Reduced by 1.69 million tons compared with FY2009	Soil surveys implemented: 149 sites Treatment measures: 77 sites	0.25%	
Evaluation	Target not achieved*	Target achieved	Target achieved	

<sup>\*</sup> Due to reduced sales.

# JX Nippon Oil & Gas Exploration Group

Activities	Reduction of energy consumption	Management of final waste disposal volume and oil content in produced water disposed to the sea	Maintenance and management of environmental management systems
Targets	Reduce by 3% compared with FY2012	Monitor volumes, including at overseas sites (Vietnam, Malaysia)	Appropriately manage the HSE* Committee, and maintain the environmental management system throughout the JX Nippon Oil & Gas Exploration Group
Results	Reduced by 2.4% compared with FY2012	Target not achieved at one regional office	Held 3 HSE Committee meetings, etc.
Evaluation	Target not achieved	Target not achieved at one regional office	Target achieved

<sup>\*</sup> HSE: Health, Safety, and Environment.

#### **JX Nippon Mining & Metals Group**

	•		
Activities	Specific energy consumption reduction	Reduction of CO <sub>2</sub> emissions	Waste reduction
Targets	More than 50% of evaluated sites to achieve a 1% reduction compared with FY2014	FY2013–15: Less than 3.17 million tons cumulative	Non-application waste ratio: Less than 0.7%
Results	Of all subject sites, 52% achieved targets	FY2013–15: 2.53 million tons cumulative	Non-application waste ratio: 0.4%
Evaluation	Target achieved	Target achieved	Target achieved

# Fiscal 2016 JX Group Environmental Targets

Fiscal 2016 environmental targets were set for the JX Group's core operating subsidiaries and major subsidiaries. Although the specific targets for each subsidiary differ according to the characteristics of their respective business operations, three Group-wide targets have been set based on the JX Group Environmental Policy. The entire Group is committed to achieving these targets, while sharing information via the JX Group Environment & Safety Committee.

# Group-Wide Targets in the Fiscal 2016 JX Group Environmental Targets

- 1. Global warming prevention and biodiversity preservation measures
- 2. Environmental load mitigation
- 3. Enhancement of environment management system

# **Activities by JX Nippon Oil & Energy**

During the G7 Ise-Shima Summit held in Mie Prefecture on May 26–27, 2016, JX Nippon Oil & Energy participated in the carbon offset\* partnership run by the Japanese government, and provided Japanese carbon credits held at the time. This action was a show of positive support for the government's call for "Japan's public and private sectors to cooperate in achieving carbon offsets for the G7 Ise-Shima Summit, thereby exhibiting Japan's position on climate change measures to the international community, and fostering an atmosphere of understanding and cooperation within Japan for global warming countermeasures."

\* Carbon offset: The act of offsetting all or part of one's own greenhouse gas emissions which cannot be reduced against the absorption or reduced emission of greenhouse gases elsewhere.



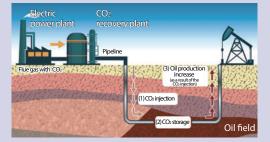
Location of the Ise-Shima Summit

# **Activities by JX Nippon Oil & Gas Exploration**

JX Nippon Oil & Gas Exploration has been implementing a  $CO_2$ -EOR project in the United States. It will increase oil production by building a plant to capture  $CO_2$  from the flue gas processed out of a coal-fired power station and then injecting the captured  $CO_2$  into an aging oil field. The largest-scale plant in the world currently has been under construction at the W.A. Parish coal-fired power plant of NRG\*1 in Texas. Injecting the captured  $CO_2$  into the West Ranch oil field\*2, also located in Texas, will not only increase oil production but also store  $CO_2$ , a cause of global warming, in underground reservoirs.

The company will work on expanding the business further with enhanced oil recovery using CO<sub>2</sub> as our core technology.

- \*1. NRG: NRG Energy, Inc., a leading power company in the United States.
- \*2. JX Nippon Oil & Gas Exploration holds a 25% interest in the West Ranch oil field through a 50:50 joint venture with NRG.



Project concept

# **Activities by JX Nippon Mining & Metals**

Renewal work on the Kakinosawa Power Plant (Iwaki City, Fukushima Prefecture) by JX Nippon Mining & Metals was completed in July 2015. The plant had originally been established in 1955 for the purpose of reducing the cost of electricity used in the electrolysis process of copper. As a result of the recent work to upgrade equipment that had deteriorated over the past 60 years, power generation efficiency was improved by about 6%, and maximum power generating capacity is now 5,120 kW. Furthermore, by replacing the hydraulic equipment used to regulate flow to the water turbines with motorized equipment this upgrade also eliminated the risk of oil being discharged into the river. Hydroelectric power generation is a way of generating



The upgraded Kakinosawa Power Plant

electricity with very little environmental impact and with no emissions of CO<sub>2</sub>. Moreover, given Japan's many mountains and rich hydropower resources, it is a renewable energy that is well suited to Japan. As the JX Group's only hydroelectric power plant, we will strive to maintain a stable supply of power from Kakinosawa.

Environmental Repo	rt Social Repo	ort	Governar	nce Report	Third-Part Practitio	y Opinion/Independent ner's Assurance Report	Comparative Table with GRI Guidelines
Environmental Management	Initiatives to Prevent Global Warming		es to Prevent Pollution	Initiatives for P Water Reso		Initiatives for Management of Chemical Substances/ Initiatives to Reduce Waste	Initiatives for Biodiversity

# **Environmental Management**

# **Environmental Management System (EMS) Promotion Structure**

The JX Group engages in environmental preservation actions while sharing information as the occasion demands. It has established an EMS promotion structure in each Group company according to the nature of its business, with the President of JX Holdings serving as the Chief Executive of the EMS promotion structure of the JX Group.



# **Compliance with Environmental Laws and Regulations**

For the JX Group, compliance with environmental laws and regulations, being a major premise for our business activities, is taken as a very important issue. We strive for thoroughness in compliance checks and environmental education. In fiscal 2015, JX Holdings and core subsidiary groups conducted compliance checks. In cases where non-compliance was found, appropriate actions for reporting, responding and preventing of future occurrence were taken

Having established the JX Nippon Oil & Energy Group Environmental Policy and constructed the JX Nippon Oil & Energy Group EMS promotion structure, the entire JX Nippon Oil & Energy Group strives in unison for strict compliance with environmental laws and regulations. Compliance is coordinated and managed by the head office Environment & Safety Department, and is reported to the JX Nippon Oil & Energy Group's Environment & Safety Committee and CSR Promotion Council. Guidelines for complying with environmental laws and regulations have also been posted on the Group intranet with the aim of providing information to each business site and ensuring strict compliance.

Through steady implementation of its HSE system, the JX Nippon Oil & Gas Exploration Group is committed to complying with relevant laws and regulations. Compliance is coordinated and managed by the head office HSE Department, and is reported to the JX Nippon Oil & Gas Exploration Group's HSE Committee and CSR Council. Furthermore, at the annual HSE meeting of attendees from the respective regional offices, we aim to enhance the compliance system by sharing information on updated laws and regulations and how the offices correspond to them.

The JX Nippon Mining & Metals Group is committed to complying with various laws and regulations through the robust implementation of its EMS at each business site and subsidiary. Compliance is coordinated and managed by the head office Environment & Safety Department, and is reported to the JX Nippon Mining & Metals Group's Safety and Environment Committee and CSR Promotion Council. Furthermore, an annual meeting of environmental coordinators aims to strengthen the compliance system by providing information on trends in laws and regulations and reporting on the progress of each business site.

Environmental Repo	t Social Report		Governa	Governance Report Third-Par		y Opinion/Independent ner's Assurance Report	Comparative Table with GRI Guidelines
▼							
Environmental Management	Initiatives to Prevent Global Warming		es to Prevent Pollution	Initiatives for P Water Reso		Initiatives for Managemen of Chemical Substances/ Initiatives to Reduce Wast	for Diadiversity

# JX Group Medium-Term Environmental Management Plan (Fiscal 2013–15)

In addition to formulating the JX Group Medium-Term Environmental Management Plan based on the JX Group Environmental Policy, the JX Group has set three Group-wide targets, and has worked together as a Group to achieve them.



Note: The exact content and targets differ according to each company's characteristics.

# **Results and Evaluation**

# JX Nippon Oil & Energy Group

Activities	Reduction of CO2 emissions	Soil contamination countermeasures	Waste reduction
Targets	Reduce by 1.1 million tons in FY2013 compared with FY2009 Reduce by 1.25 million tons in FY2014 compared with FY2009 Reduce by 2.1 million tons in FY2015 compared with FY2009	Operating properties: Prevent external leakage Decommissioned properties: Conduct deliberate surveys and treatment measures	Waste-to-landfill ratio: Less than 0.5%
FY2013 results and evaluation	Reduced by 0.78 million tons compared with FY2009 (Target not achieved)	Soil surveys implemented: 145 sites Treatment measures: 85 sites (Target achieved)	0.29% (Target achieved)
FY2014 results and evaluation	Reduced by 0.80 million tons compared with FY2009  (Target not achieved)*  Soil surveys implemented: 153 sites  Treatment measures: 80 sites  (Target achieved)		0.21% (Target achieved)
FY2015 results and evaluation	Reduced by 1.69 million tons compared with FY2009 (Target not achieved)**	Soil surveys implemented: 149 sites Treatment measures: 77 sites (Target achieved)	0.25% (Target achieved)

<sup>\*</sup> Due to lower efficiency from reduced production, etc. \*\* Due to reduced sales.

# JX Nippon Oil & Gas Exploration Group

Activities	Reduction of energy consumption	Management of final waste disposal volume and oil content in produced water disposed to the sea	Maintenance and management of environmental management systems
Targets	Reduce by 1% in FY2013 compared with FY2012 Reduce by 2% in FY2014 compared with FY2012 Reduce by 3% in FY2015 compared with FY2012	Monitor volumes, including at overseas sites (Vietnam, Malaysia)	Appropriately manage the HSE Committee, and maintain the environmental management system throughout the JX Nippon Oil & Gas Exploration Group
FY2013 results and evaluation	Reduced by 1.4% compared with FY2012 (Target achieved)	Implemented (Target achieved)	Held 3 HSE Committee meetings, etc. (Target achieved)
FY2014 results and evaluation	Reduced by 3.9% compared with FY2012 (Target achieved)	Implemented (Target achieved)	Held 3 HSE Committee meetings, etc. (Target achieved)
FY2015 results and evaluation	Reduced by 2.4% compared with FY2012 (Target not achieved)	Target not achieved at one regional office	Held 3 HSE Committee meetings, etc. (Target achieved)

# JX Nippon Mining & Metals Group

Activities	Specific energy consumption reduction	Reduction of CO <sub>2</sub> emissions	Waste reduction	
Targets	Reduce by 1% in FY2013 compared with FY2012 Reduce by 1% in FY2014 compared with FY2013 Reduce by 1% in FY2015 compared with FY2014 More than 50% of the evaluated sites to achieve the target	FY2013: Less than 1.08 million tons FY2013–14: Less than 2.14 million tons cumulative FY2013–15: Less than 3.17 million tons cumulative	Non-application waste ratio: Less than 0.7%	
FY2013 results and evaluation	Of all subject sites, 43% achieved targets 0.84 million tons (Target not achieved) (Target achieved)		Non-application waste ratio: 0.6% (Target achieved)	
FY2014 results and evaluation	Of all subject sites, 61% achieved targets (Target achieved)			
FY2015 results and evaluation	Of all subject sites, 52% achieved targets (Target achieved)	FY2013–15: 2.53 million tons cumulative (Target achieved)	Non-application waste ratio: 0.4% (Target achieved)	

Environmental Repo	rt Social Rep	ort	Governance Report		Third-Party Opinion/Independent Practitioner's Assurance Report			Comparative Table with GRI Guidelines	
Environmental Management	Initiatives to Prevent Global Warming		to Prevent Ilution	Initiatives for F Water Reso	9	Initiatives for Managem of Chemical Substance Initiatives to Reduce Wa	es/	Initiatives for Biodiversity	

The environmental performance data listed covers a total of 72 business sites at 41 companies in the JX Nippon Oil & Energy Group, the JX Nippon Oil & Gas Exploration Group, the JX Nippon Mining & Metals Group, and other business areas. JX Nippon Oil & Energy Group: 40 sites at 23 companies; JX Nippon Oil & Gas Exploration Group: 3 sites at 1 company; JX Nippon Mining & Metals Group: 25 sites at 15 companies; Other businesses: 4 sites at 2 companies.

- Environmental performance data for the JX Group to the extent described above is enclosed in green to make it more easily identifiable as Group data.
- Due to the scope of the JX Nippon Oil & Energy Group having been broadened, figures, including data from past fiscal years, have been amended.
- · Due to changes in the scope of the JX Nippon Mining & Metals Group, figures, including data from past fiscal years, have been amended.
- · Some figures from past fiscal years were revised.

# Initiatives to Prevent Global Warming

# Initiatives to Reduce Energy Consumption

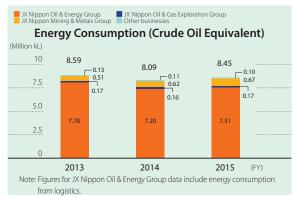
Energy consumption (crude oil equivalent) for the JX Group in fiscal 2015 was 8,450,000 kL, marking an increase of 350,000 kL from fiscal 2014.

The JX Nippon Oil & Energy Group has been working to conserve energy at its oil refineries and plants across Japan. In addition to operational energy-saving actions, such as improving production processes and reducing heat dissipation, the Group has also put effort into developing and introducing cutting-edge technologies.

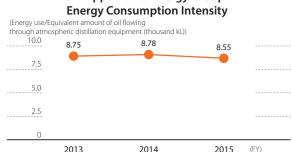
The Oita Refinery saves more than 20,000 kL/year of crude oil equivalent through its investments that seek to recovery unused waste heat and optimize energy usage. For this success, the refinery was recognized with the Chairman Prize of ECCJ (The Energy Conservation Center, Japan) at the Fiscal 2015 Energy Conservation Awards sponsored by the Ministry of Economy, Trade and Industry.

Energy consumption by the JX Nippon Oil & Gas Exploration Group during fiscal 2015 amounted to 169,000 kL of crude oil equivalent, an increase of 7,000 kL from the previous fiscal year as a result of commencing operation of new facilities, such as gas compressors and electric pumps, at some production sites in order to increase oil and gas production. The Group is working on the reduction of energy consumption, setting targets and completely controlling them at respective production sites.

Energy consumption by the JX Nippon Mining & Metals Group during fiscal 2015 amounted to 665,000 kL, compared to 622,000 kL in fiscal 2014. The increase of 43,000 kL was partly as a consequence of the Caserones Copper Mine starting full-scale operation in the second half of 2014.

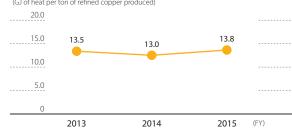


# JX Nippon Oil & Energy Group: **Energy Consumption Intensity**



Note: Covers the petroleum refining business of the JX Nippon Oil & Energy Group

# JX Nippon Mining & Metals Group: Energy Consumption Intensity (Fuel + Electricity)



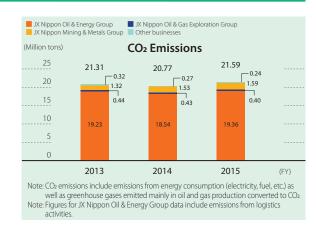
Note: Covers the smelting and refining business sites of the JX Nippon Mining & Metals Group.

Environmental Report Social Repor		rt	t Governance Report		Third-Party Opinion/Independent Practitioner's Assurance Report		Comparative Table with GRI Guidelines
▼							
Environmental Management	Initiatives to Prevent Global Warming	Initiatives to Prevent Air Pollution		Initiatives for P Water Reso		Initiatives for Manageme of Chemical Substances Initiatives to Reduce Was	5/ for Displication

# Initiatives to Reduce CO<sub>2</sub> Emissions

CO<sub>2</sub> emissions for the JX Group in fiscal 2015 were 21.59 million tons, an increase of 820,000 tons from fiscal 2014.

The JX Nippon Oil & Energy Group always takes into account its environmental impact along the entire supply chain. The Group has been working hard to prevent global warming by reducing greenhouse gas emissions. Initiatives include improving energy efficiency during the refining and production stages—which are the Group's main business activities and account for approximately 80% of its CO<sub>2</sub> emissions—as well as reducing fuel consumption during the transportation of products, and offering biogasoline and other such products. As a result, during fiscal 2015, the Group achieved a reduction of 1.69 million tons compared with fiscal 2009.



In fiscal 2015,  $CO_2$  emissions for the JX Nippon Oil & Gas Exploration Group reached 399,000 tons, a year-on-year decrease of 32,000 tons. Although emissions of energy-derived  $CO_2$  increased at some production sites following an increase in energy consumption brought about by installation of new facilities aimed to increase oil and gas production, emissions of non-energy-derived  $CO_2$  decreased by reducing the amount of flaring in production operations, resulting in a reduction in total  $CO_2$  emissions.

Energy-derived CO<sub>2</sub> emissions at domestic and overseas sites of the JX Nippon Mining & Metals Group totaled 1.59 million tons in fiscal 2015, a year-on-year increase of 70,000 tons. The increase was due to the Caserones Copper Mine being included for the full year in fiscal 2015, whereas it had only been included partway through fiscal 2014.

# Initiatives during the Logistics Stage

The JX Nippon Oil & Energy Group has formulated and implemented a mid- to long-term energy reduction plan (target: annual reduction of 1%) for its logistics operations based on Japan's amended Energy Conservation Act. Specific measures under this plan focus on efficiencies in logistics, such as optimizing transport routes, consolidating oil depots and increasing the size of tank trucks and oil tankers, as well as on reducing fuel consumption, such as switching off the engine when idling.

During fiscal 2015, the Group's emissions of CO<sub>2</sub> associated with fuel consumption in domestic transportation totaled 414,000 tons, representing a decrease of 3.0% compared with fiscal 2009.

# JX Nippon Oil & Energy Group: CO<sub>2</sub> Emissions (Logistics)



Note: The above figures are as reported by the Group as a specified consigner under Japan's amended Energy Conservation Act.

# **Initiatives for Renewable Energy**

The JX Nippon Oil & Energy Group is also actively engaged in the renewable energy business, and as of March 31, 2016, mega solar power plants were in operation at 14 locations across Japan (total power generation capacity: approximately 35,000 kW). In addition, wind power plants operating at two locations in Akita and Ohgishima have a power generation capacity of approximately 4,000 kW.

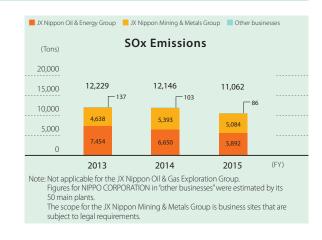
The JX Nippon Mining & Metals Group has been engaged in the hydropower generation business since 1907 during the time of its predecessor, Kuhara Mining. Currently, the Group generates power at the Kakinosawa Power Plant (Iwaki City, Fukushima Prefecture), and sells it to specified-scale electricity utilities. In order for the Kakinosawa Power Plant to make effective use of precious water resources, upgrades were made to the water turbines, power generator, receiving and transforming facilities and other equipment between October 2014 and June 2015. Power generation capacity was increased to 5,120 kW. The Group also generates solar power (240 kW) at the Kakegawa Works of JX Metals Precision Technology.

# Initiatives to Prevent Air Pollution

# Initiatives to Reduce Sulfur Oxide (SOx) Emissions

In accordance with the Air Pollution Control Act as well as related ordinances, agreements and voluntary standards, the JX Group controls gases emitted from its various facilities. In fiscal 2015, SOx emissions amounted to 11,062 tons, marking a decrease of 1,084 tons from the previous fiscal year.

The petroleum product manufacturing process consumes fuel as the necessary energy for distillation and chemical reactions. As a result, sulfur oxides and other air pollutants are released when incinerating impurities found in this fuel. JX Nippon Oil & Energy actively uses low-sulfur content gas in its furnaces. It also uses a desulfurization unit to cleanse sulfur oxides in flue gas produced from furnaces and boilers. This has enabled it to reduce its emissions significantly below legal limits.



The JX Nippon Mining & Metals Group also closely monitors gases emitted from its various facilities in accordance with the Air Pollution Control Act as well as related ordinances, agreements and voluntary standards. In fiscal 2015, SOx emissions decreased by 309 tons from the previous fiscal year, in part due to a decrease in the production of refined copper.

# Initiatives to Reduce Nitrogen Oxide (NOx) Emissions

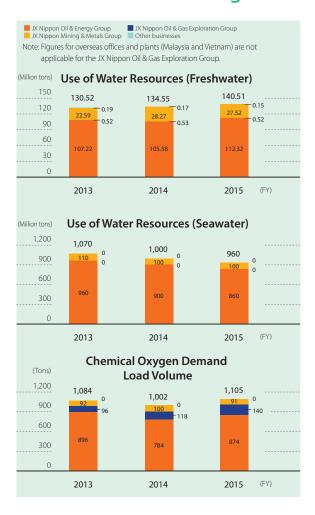
In accordance with the Air Pollution Control Act as well as related ordinances, agreements and voluntary standards, the JX Group controls gases emitted from its various facilities. In fiscal 2015, NOx emissions amounted to 10,595 tons, marking an increase of 99 tons from the previous fiscal year.

The JX Nippon Oil & Energy Group uses lownitrogen content fuel in its furnaces and boilers as well as low-NOx burners that inhibit the generation of NOx in combustion furnaces. It also uses a desulfurization unit to cleanse flue gas. This has enabled it to reduce its emissions significantly below legal limits.

NOx emissions for the JX Nippon Mining & Metals Group amounted to 737 tons in fiscal 2015, a year-on-year decrease of 68 tons. This decrease was partly due to the decrease in production of refined copper at smelting and refining facilities.



# **Initiatives for Protecting Water Resources**



# JX Nippon Oil & Energy Group: Water Used

(Million tons)

		FY2014	FY2015	
Total water usage		1,005.58	972.32	
	Service water (tap water)	1.55	1.52	
	Service water (industrial water)	104.03	110.80	
	Rainwater*	_	_	
	Seawater	900.00	860.00	

<sup>\*</sup> Rainwater is not measured

# JX Nippon Mining & Metals Group: Water Used

(Million tons

			(IVIIIIOTI LOTIS)
		FY2014	FY2015
Total water usage		128.54	123.81
	Service water (tap water)	2.05	2.01
	Service water (industrial water)*	26.14	25.44
	Rainwater	0.07	0.07
	Seawater	100.27	96.29

<sup>\*</sup> Including groundwater.

Note: Water used is the product of volume multiplied by density  $(1,024 \text{ t/m}^3 \text{ for seawater}$  and  $1,000 \text{ t/m}^3 \text{ for freshwater})$ .

Note: The sum of individual figures differs to the totals in the graph to the left due to the effects of rounding.

As one of its resource conservation measures, the JX Group firmly manages its use of water resources and monitors wastewater produced by its facilities in line with laws, ordinances, accords and voluntary standards, in an effort to reduce its environmental impact. In fiscal 2015, the JX Group used a total of 140.51 million tons of freshwater resources, an increase of 5.96 million tons from the previous fiscal year. The JX Group also used a total of 960 million tons of seawater resources, a decrease of 30 million tons from the previous fiscal year. Furthermore, the JX Group's chemical oxygen demand (COD) load volume in fiscal 2015, an indicator of water pollution levels, increased 103 tons year-on-year to 1,105 tons.

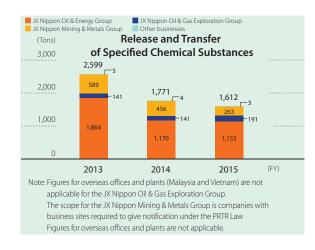
The JX Nippon Oil & Energy Group has initiated a wide range of measures for preventing water contamination. Effluent from its refineries is treated through a wastewater treatment system, and the status of effluent treatment is carefully monitored using chemical oxygen demand (COD) and other indicators that show the level of pollution.

Seawater accounted for 77% of the water used by JX Nippon Mining & Metals Group during fiscal 2015. Water usage at domestic sites in fiscal 2015 was approximately 19% below fiscal 2012 levels, in part as a result of less seawater being used following the switch from seawater to recycled water for cooling at some smelting and refining facilities in fiscal 2013. Water usage overseas has increased to approximately quadruple the amount in fiscal 2012 due mainly to the addition of the Caserones Copper Mine in fiscal 2014.

# Initiatives for Management of Chemical Substances

The JX Group conducts proper management of specified chemical substances stipulated under the Pollutant Release and Transfer Register (PRTR) Law and also strives to reduce chemical emission levels. In fiscal 2015, the JX Group's release and transfer of specified chemical substances totaled 1,612 tons, a decrease of 159 tons from the previous fiscal year.

The JX Nippon Oil & Energy Group has been collecting and aggregating data on the release and transfer of specified chemical substances pursuant to the provisions of the PRTR Law since April 2001. In fiscal 2015, this totaled 1,155 tons. The main substances released and transferred were benzene, toluene, and xylene, which are constituent parts of gasoline, and these were primarily released and transferred into the air or into water.



As well as complying with the PRTR Law, the JX Nippon Mining & Metals Group is working to reduce its environmental impact by setting reduction targets for business sites with large releases and transfers of specified chemical substances. In fiscal 2015, the Group reduced its release and transfer of specified chemical substances by 193 tons from the previous fiscal year. This decrease

was in part due to the progress made in recycling waste solvent into resources of value.

# **Initiatives to Reduce Waste**

In fiscal 2015, the JX Group's final waste disposal volume totaled 9,761 tons, an increase of 513 tons from the previous fiscal year.

The JX Nippon Oil & Energy Group engages in Zero Emission Plus\* activities that help reduce its waste-to-landfill ratio through proper waste management and recycling programs in order to fulfill its vision for a recycling-oriented society. In fiscal 2015, the Group's waste-to-landfill ratio was 0.25%, indicating that it is continuing to achieve its goal. The Group's refining division, which produces a large volume of waste, is actively working to recycle sludge, waste acid, collected particulate matter and waste catalysts into resources of value.



The JX Nippon Mining & Metals Group defines the ratio of the volume of incinerated waste and final

waste disposal to the volume of total waste as the "non-application waste ratio," and its goal is to reduce this ratio. In fiscal 2015, the non-application waste ratio was 0.4%, thereby achieving the Group's goal of less than 0.7%. To achieve further reductions in the volume of waste discharged, the Group will continue to repeatedly reuse all neutralized slag generated at its smelting and refining facilities, and will continue to expand applications for the recycling of waste materials at each of its business sites.

<sup>\*</sup>Zero Emission Plus: Volume of final waste disposal/Total waste produced < 0.5%

Environmental Report Social Report Governance Report Third-Party Opinion/Independent Practitioner's Assurance Report with GRI Guidelines

Environmental Initiatives to Prevent Management Global Warming Air Pollution Water Resources Initiatives to Reduce Waste for Biodiversity

# **Initiatives for Biodiversity**

# **Approach to Biodiversity**

The JX Group has listed "biodiversity preservation measures" as one of three Group-wide targets laid out in the JX Group Medium-Term Environmental Management Plan, and is promoting efforts to this end at each Group company.

# **Report on Company Activities for Biodiversity**

As part of its efforts to preserve biodiversity through green space management, JX Nippon Oil & Energy's Chita Plant is a member of both the Ecological Network Formation and Leadership Development Program for Corporate Green Spaces in the Coastal Area of Chita Peninsula and the Project Linking Life with One Another. These initiatives seek to use corporate greenbelts and other areas to provide a safe and secure habitat for flora and fauna in partnership with Aichi Prefecture, Chita City, NPOs, students, and companies located along the coastal area. Specifically, a biotope







A butterfly skimmer visiting the biotope

has been set up on unused land (marshland) on the premises of the Chita Plant, providing an opportunity for fieldwork. The plant also hosts nature observation tours organized by the city of Chita. Going forward, the Chita Plant will continue to improve this greenbelt and enhance the biotope in order to help improve local biodiversity.

Based on the JX Group Value "Harmony with the environment," JX Nippon Oil & Gas Exploration is engaged in oil

and gas development works with utmost concern for the environment, conducting environmental impact assessments beforehand. During the seismic exploration survey (fiscal 2011) implemented in the Kushiro Shitsugen Wetlands, which is the habitat of the endangered Japanese *tancho* crane, an environmental impact assessment was carried out before the survey work. The post-survey assessment confirmed that there was no impact on the surrounding environment. Also, in the exploratory drilling survey which we undertook from the Japanese government off the coast of Joetsu



Japanese cranes in the Kushiro Shitsugen Wetland



Earthquake simulation vehicles during the seismic exploration survey

City in Niigata Prefecture (fiscal 2013), we conducted an environmental impact assessment for the surrounding area on the assumption that crude oil could leak in the sea as a result of an accident. Furthermore, in order to minimize the impact on the marine environment, all drilling mud and cuttings discharged during the drilling operation were collected. This waste was transported to the mainland and disposed of appropriately as industrial waste.

At Hitachi Mine, the birthplace of the JX Nippon Mining & Metals Group, the Group has actively undertaken measures against smoke pollution and afforestation programs in order to leave the rich greenery of the surrounding mountains to posterity. Given that a crucial characteristic of mining and smelting is their potential significant impact on the surrounding environment, the Group believes that conservation of biodiversity is an

important topic that cannot be overlooked for the sake of sustainable business activities. Of the 385 km² (38,500 ha) of land owned by Minera Lumina Copper Chile (MLCC), operator of the Caserones Copper Mine, MLCC has designated 0.87 km² (87 ha) as an area protected from the impact of the construction of facilities and other mining activities, and has taken steps to preserve biodiversity by protecting the flora and fauna that inhabit this area.



Transplanted vega plants take root



Panorama of Caserones Copper Mine

# **Fiscal 2015 Social Activity Report**

# **Basic Approach**

The JX Group has established a set of Group Values that includes ethics, relationship with society, and trustworthy products/services. The Group is also implementing a range of initiatives in the three priority areas of compliance—including information security and human rights—corporate citizenship, and environmental safety.

# Main Measures and Activities of JX Holdings and its Core Operating Subsidiaries During Fiscal 2015

	Personnel Systems	<ul> <li>Developed a system of ongoing career support for employees engaged in childcare and nursing</li> <li>Developed a system of evaluation and training for locally hired staff at overseas business sites</li> </ul>				
	Educational Programs	<ul> <li>Implemented ongoing training aimed at developing global human resources and young engineers</li> </ul>				
Work Practices	Diversity Promotion Initiatives	<ul> <li>Established the Action Plan to Support Women in the Workplace</li> <li>Reviewed working styles</li> <li>Promoted a system of reemploying employees aged 60 or over</li> <li>Maintained over 2% employment of people with disabilities, and supported people with disabilities in the workplace</li> </ul>				
	Occupational Safety and Health Initiatives	<ul> <li>Conducted accident prevention training at the JX Group Safety Education Center</li> <li>Promoted safety activities, including at partner firms</li> </ul>				
	Promotion of Sports	<ul> <li>Conducted youth baseball classes with the JX-ENEOS         Baseball Team         Conducted basketball clinics with the JX-ENEOS Sunflowers     </li> </ul>				
Engagement with Local Communities	Promotion of Culture/ Next Generation Development and Support  Outpublished The Bouquet of Children's Stories  All sales proceeds of The Bouquet of Children's Stories donated as scholarship support funds for children living child welfare facilities.  Implemented volunteer activities for "Passing on Hope the Future"  Supported construction of educational facilities in the neighborhood of overseas business sites					
	Environmental Conservation	<ul><li>Conducted forest stewardship activities</li><li>Donated to environment stewardship groups</li></ul>				
Respect for Human Rights Initiatives	<ul> <li>Conducted regular training on human rights</li> <li>Conducted activities for Human Rights Week, including inviting ideas for human rislogans</li> </ul>					
Quality Assurance, Product Safety, and Customer Satisfaction	<ul><li>Established customer inc</li><li>Maintained ISO 9001 (Qu</li><li>Met overseas regulatory</li></ul>	uality Management System)				
Purchasing	<ul><li>Conducted business par</li><li>Promoted green procure</li></ul>	tner surveys ement among business partners				

# JX Nippon Oil & Energy Initiatives

To transform itself into an organization with more diverse and flexible ways of thinking able to meet a wide variety of customer needs, JX Nippon Oil & Energy is working to promote diversity and, as part of that, is helping female employees play more active roles.

As one initiative to support women in the workplace, the company has adopted a system for reemploying employees who resign in order to accompany a spouse who has been transferred overseas. This system allows employees who resign due to a spouse's overseas transfer to register at the time of resignation so that they can be reemployed within five years



Employee discussion on supporting women in the workplace

if they request it. This provides people with the opportunity to work for the company again after returning to Japan, which helps them continue with their career. This system can be used regardless of gender.

# JX Nippon Oil & Gas Exploration Initiatives

For many years, JX Nippon Oil & Gas Exploration has been involved in a range of social contribution activities in its business areas in Japan and overseas, such as sponsoring construction of school buildings and efforts for conservation of the natural environment. It has built and maintained relationships of trust with stakeholders, and supported sustainable development of local communities.

In Japan, the company's Nakajo Field Office in Niigata Prefecture has been diligently working on preservation of pine groves since 1998. As part of such efforts, the office made an agreement with the local community and government to regenerate pine trees five years ago.



Children at a ceremony to mark completion of the new preschool buildings in Vietnam

It was succeeded by a new agreement in 2016 following its expiry of five-year term. In Vietnam, the company donated funds for nine cases of construction of school buildings and rehabilitation facilities providing vocational training for victims of Agent Orange defoliant through to 2014. In 2015, it donated preschool buildings to a mountain village with poor educational infrastructure. In addition, the company carried out a training program for engineers of Kumul Petroleum, a national oil company of Papua New Guinea, upon request. Through various activities such as those mentioned above, we engage ourselves to support the host countries of our oil and gas business as well as to enhance our relationships with them.

# JX Nippon Mining & Metals Initiatives

To help ensure occupational safety and health, JX Nippon Mining & Metals is conducting comprehensive education at its JX Group Safety Education Center. It is also enhancing its Experiential Risk Training at each of its workplaces with information targeted to the specific requirements of each workplace.

At its Kurami Works, it has established a new safety education classroom with two full-time teachers. Because of the large number of rotating machines situated at the Kurami Works, the curriculum includes ten separate units on these dangers,



Safety education at Kurami Works

including the risks of high-speed rotation entanglement, roll entanglement, and drill entanglement. Using experience and many examples in the workplace, it is able to tailor the education more precisely to the actual workplace.

Over 700 people have participated in the safety education program, including employees of Kurami Works, its affiliated companies, and cooperating companies, with each program running for one-and-a-half years. As a result, it has maintained and improved awareness of workplace dangers.

Environmental Report Social Report		Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines	
Work Practices	Engagement with Local Communities	Respect for Human Rights Initiatives	Quality Assurance, Product Safety, and Customer Satisfaction	Purchasing	

# **Work Practices**

# **Basic Approach**

The JX Group actively hires and deploys people in a fair manner regardless of sex, age, nationality, or disabilities in an effort to promote diversity in the workforce. Furthermore, in addition to a good workplace, it is important for employees to lead fulfilling lives outside the workplace, including at home, and in leisure and other activities, if they are to demonstrate their respective abilities to the fullest and work energetically. Accordingly, JX Group companies have developed a range of employee support programs and also conduct awareness-raising activities designed to encourage employees to take advantage of these programs.

# Employee Data (as of March 31, 2016)

#### JX Holdings

Number of Employees (by employment status and contract)

		()								
	Full-time			Other than full-time			Total		Temporary	Total
	Non-fixed term	Fixed-term	Subtotal	Non-fixed term	Fixed-term	Subtotal		Foreign nationals	personnel	workforce
Male	80	0	80	0	0	0	80	0	1	81
Female	26	0	26	0	0	0	26	0	3	29
Total	106	0	106	0	0	0	106	0	4	110

Number of Employees (by employee category), Average Age and Average Years of Service

	Male	Female	Up to 29 yrs old	30-49 yrs old	Over 50 yrs old	Total	Average age	Average years of service
Managerial staff	61	2	0	36	27	63	48.2 yrs old	23.9 years
General staff	19	24	4	33	6	43	38.5 yrs old	14.3 years
Subtotal	80	26	4	69	33	106	44.2 yrs old	20.0 years

Number of New Recruits (incl. mid-career recruits)

Trainiber of tr	CVVIICC	11 (11	ici. IIIIa	carcci	i c c i a i c	'/
	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
Headcount	0	0	0	0	0	0
Proportion of full- time employees as of March 2016	0%	0%	0%	0%	0%	0%

# Number of Employees Resigning\*

	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
Headcount	0	1	0	1	0	1
Proportion of full- time employees as of March 2016	0%	3.8%	0%	1.4%	0%	0.9%

<sup>\*</sup> Excluding retirees

# JX Nippon Oil & Energy

Number of Employees (by employment status and contract)

		Full-time			Other than full-time			tal	Temporary	Total
	Non-fixed term*	Fixed-term	Subtotal	Non-fixed term*	Fixed-term	Subtotal		Foreign nationals	personnel	workforce
Male	5,475	0	5,475	0	24	24	5,499	12	104	5,603
Femal	e 637	0	637	0	8	8	645	7	57	702
Total	6,112	0	6,112	0	32	32	6,144	19	161	6,305

<sup>\*</sup> Managerial staff, general staff, full-time temporary staff, reemployed contract staff, seconded staff

Number of Employees (by employee category), Average Age and Average Years of Service\*

	Male	Female	Up to 29 yrs old	30-49 yrs old	Over 50 yrs old	Total	Average age	Average years of service
Managerial staff	1,472	14	0	890	596	1,486	49.2 yrs old	25.1 years
General staff	3,571	559	1,201	1,985	944	4,130	39.3 yrs old	18.3 years
Subtotal	5,043	573	1,201	2,875	1,540	5,616	41.9 yrs old	20.1 years

<sup>\*</sup> Excluding full-time temporary staff, reemployed contract staff, and seconded staff

#### Number of New Recruits (incl. mid-career recruits)

	ranser of free field (men find earlier rectains)								
	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total			
Headcount	203	25	203	21	4	228			
Proportion of full- time employees as of March 2016	3.7%	3.9%	3.3%	0.3%	0.1%	3.7%			

# Number of Employees Resigning\*

	Male employees	1 Ciliare	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total		
Headcount	85	13	10	14	74	98		
Proportion of full- time employees as of March 2016	1.6%	2.0%	0.2%	0.2%	1.2%	1.6%		

<sup>\*</sup> Managerial staff, general staff, full-time temporary staff, reemployed contract staff; excluding retirees.

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
Work Practices	Engagement with Local Communities	Respect for Human Rights Initiatives	Quality Assurance, Product Safety, and Customer Satisfaction	Purchasing

# JX Nippon Oil & Gas Exploration

Number of Employees (by employment status and contract)

		. , , ,	/		,					
	Full-time			Other than full-time			То	tal	Temporary	Total
	Non-fixed term	Fixed-term	Subtotal	Non-fixed term	Fixed-term	Subtotal		Foreign nationals	personnel	workforce
Male	304	14	318	0	1	1	319	6	1	320
Female	47	2	49	2	2	4	53	3	4	57
Total	351	16	367	2	3	5	372	9	5	377

Number of Employees (by employee category), Average Age and Average Years of Service\*

	Male	Female	Up to 29 yrs old	30-49 yrs old	Over 50 yrs old	Total	Average age	Average years of service
Managerial staff	145	2	0	62	85	147	50.6 yrs old	24.3 years
General staff	156	47	59	133	11	203	34.2 yrs old	8.6 years
Subtotal	301	49	59	195	96	350	41.1 yrs old	15.2 years

<sup>\*</sup> Excluding reemployed and other contract staff, some seconded staff, and part-time staff

# Number of New Recruits (incl. mid-career recruits)

		Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
	Headcount	10	0	6	3	1	10
tin	roportion of full- ne employees as of March 2016	3.0%	0%	2.0%	0.9%	0.3%	3.0%

# Number of Employees Resigning\*

	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
Headcount	3	0	0	2	1	3
Proportion of full- time employees as of March 2016	0.85%	0%	0%	0.50%	0.28%	0.85%

<sup>\*</sup> Excluding retirees

# **JX Nippon Mining & Metals**

Number of Employees (by employment status and contract)

	Full-time			Other than full-time			То	tal	Temporary	Total
	Non-fixed term	Fixed-term	Subtotal	Non-fixed term	Fixed-term	Subtotal		Foreign nationals	personnel	workforce
Male	1,254	86	1,340	4	12	16	1,356	3	52	1,408
Female	118	5	123	8	9	17	140	3	28	168
Total	1,372	91	1,463	12	21	33	1,496	6	80	1,576

#### Number of Employees (by employee category), Average Age and Average Years of Service

Nambero	Limpioye	23 (by chip	ioyee eateg	101 y ), / W C I C	ige / ige ai ii	a / werage	· Cu	13 01 301 110	C
	Male	Female	Up to 29 yrs old	30-49 yrs old	Over 50 yrs old	Total		Average age	Average years of service
Managerial staff	291	3	0	126	168	294		51.2 yrs old	21.3 years
General staff	1,065	137	250	658	294	1,202		40.5 yrs old	14.1 years
Subtotal	1,356	140	250	784	462	1,496		42.6 vrs old	15.5 years

# Number of New Recruits (incl. mid-career recruits)

	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
Headcount	119	17	60	44	32	136
Proportion of full- time employees as of March 2016	8.8%	12.1%	24.0%	5.6%	6.9%	9.1%

# Number of Employees Resigning\*

	Male	Female	Up to 29 yrs old	30–49 yrs old	Over 50 yrs old	Total
Headcount	73	8	9	22	50	81
Proportion of full- time employees as of March 2016	5.4%	5.7%	3.6%	2.8%	10.8%	5.4%

<sup>\*</sup> Excluding retirees

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
Work Practices	Engagement with Local Communities	Respect for Human Rights Initiatives	Quality Assurance, Product Safety, and Customer Satisfaction	Purchasing

# **Personnel Systems**

In its salary and evaluation system, JX Nippon Oil & Energy believes it is important to appropriately reflect recent performance (present value) and appropriately feedback the results of evaluations in order to improve transparency, fairness, and understanding. The system it has built enables the work preferences of each and every employee to be reflected as much as possible during personnel transfers. It ensures recruitment information is made broadly available, including online, and makes sure the selection process is fair and focuses on the aspirations and motivations of job seekers.

JX Nippon Oil & Gas Exploration seeks talent who can contribute to sustainable growth of the company in all of the following aspects: high level of knowledge and expertise as their strong point in our business; sensitivity and judgment to opportunities and risks; and a strong spirit of challenge and creativity. The company has designed its personnel system with this in mind. Specifically, the system includes a human resource development scheme that focuses on learning basic knowledge and expertise with a mid-to-long-term perspective. It also includes transparent, fair, and reasonable employee evaluations on their performance, displayed capabilities, and behavior, in order to effectively stimulate their job satisfaction and willingness to take on new challenges.

In order to improve CSR outcomes through its business activities, JX Nippon Mining & Metals believes it is essential to properly train and make the most of its employees in their daily work. By developing a personnel system that respects the diversity of its many employees in Japan and overseas, and enhancing its educational programs, the company is building an infrastructure that will maximize the skills of its employees.

# **Human Resource Development**

The JX Group operates many businesses in Japan and overseas and believes in the importance of securing the services of talented individuals able to play roles in each business field. Each of the Group's core operating subsidiaries is promoting the development and utilization of the people needed in each area of business. They are particularly enhancing development of individuals able to play a global role in the Group's overseas business expansion.

#### **Issues Facing the JX Group**

- 1. Development of human resources with the technical knowledge, energy and mental strength necessary for overseas business expansion
- 2. Technical transfer from experienced employees to young employees in the divisions of its offices and plants
- 3. Development of a diverse workforce that includes support for women in the workplace

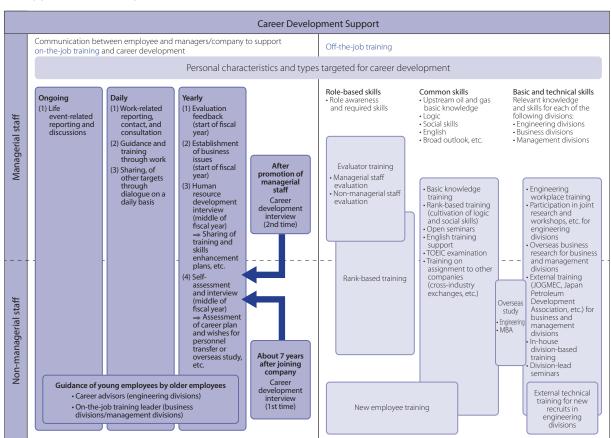
Environmental Report		Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
	Work Practices	Engagement with Local	Respect for Human Rights	Quality Assurance, Product	Purchasing
	WOIK Flactices	Communities	Initiatives	Safety, and Customer Satisfaction	Fulcilasing

# **Educational Programs**

# JX Nippon Oil & Energy

	Rank-based training	Key employee development courses	Career development courses	Study in Japan and overseas	Language training	Voluntary training
Managerial staff	Newly appointed managerial staff training	Management training	Life planning  Seminar  Seminar  - Overseas study for rese Overseas study for rese Overseas study of international law - Assignment to overse companies		• TOEIC • English and Chinese (in-house & external schools)	Managerial staff selection training
General staff	Promoted staff training	Business leader development training		Overseas worksite training     Overseas short-term legal seminar     Short-term overseas language study     Global business skills training     Etc.	Other languages     Japanese language training (for foreign-national employees)	Open seminars
New recruits	Residential training (at start of employment, approx. 1 month) Practical training (service stations and manufacturing sites) Follow-up training					

# JX Nippon Oil & Gas Exploration



Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
Work Practices	Engagement with Local Communities	Respect for Human Rights Initiatives	Quality Assurance, Product Safety, and Customer Satisfaction	Purchasing

# JX Nippon Mining & Metals

	Management Skills Development	Globalization Skills Development	Self-Awa	reness	Technical Skills Development		Other Skills and Awareness Development
Managerial staff	Program for general managers (intermediate level)  Program for newly promoted managers  Program for newly promoted managers  Program for newly promoted managers  Overseas study (B)*		co		Speci		Complia
Coordinators	Program for mid-level employees	Short-term overseas language training and second foreign language	Correspondence courses and open seminars	Self-development support system	Job rotation	Overseas study (A)*	nce, safety, environm
Supervisors	Program for young employees  Program for new employees  Program for newly promoted supervisors	training In-company TOEIC test Overseas language training	s and open seminars	support system	Job rotation		Compliance, safety, environment and CSR education
Operators					ă		

<sup>:</sup> New or renewed in fiscal 2016
\* (A): Technical credits at an overseas graduate school; (B): MBA acquisition

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
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#### **Diversity Promotion Initiatives**

#### Basic Approach

The JX Group is implementing initiatives to promote diversity in order to enable its employees, with a range of backgrounds and values, to fully demonstrate their skills and play active roles.

## Employment Rate of People with a Disabilities, Number of Employees Re-Hired after Retirement, Usage Rate of Annual Paid Leave, and Number of Employees Taking Leave (fiscal 2015)

	JX Holdings	JX Nippon Oil & Energy	JX Nippon Oil & Gas Exploration	JX Nippon Mining & Metals
Employment rate of people with disabilities	*1	2.14%	2.20%	2.12%
Number of employees re-hired after retirement	<u></u> *1	163	16	25
Number of annual paid leave days granted	20.0	19.5	19.7	20.8
Number of annual paid leave days taken	12.1	15.1	12.4	15.8
Usage rate of annual paid leave	60.8%	77.2%	63.0%	75.9%
Number of employees taking nursing care leave	0	5	0	0
Number of employees taking childcare leave	3	83	8	5
(of which male)	0	58	0	2
Number of employees returning to work after giving birth or taking childcare leave	100%	100%	100%	100%
Percentage still employed 12 months after returning to work*2	100%	94.1%	(No returnees in FY2014)	100%

<sup>\*1</sup> Employees are seconded from operating companies and are accounted for at their companies of origin

#### Company Initiatives

JX Nippon Oil & Energy is promoting diversity as part of its plans to create a more diverse and flexible organization. Specifically, the company will implement various measures including increasing the percentage of females among its new graduate intake, and reviewing the way its people do their jobs. For example, not working past 8 p.m. as a rule. In addition to clarifying career paths and human resource development issues for overseas local employees, it is developing common grades and evaluation systems for overseas plants and offices so that they can manage the sites in the future. It is also conducting group training aimed at local managerial staff and team leaders. The company is also actively employing people with disabilities. Instead of treating all disabilities the same, it is promoting more active roles by assigning each of them to a job suited to their own individuality and aptitude.

Since more than half of its employees around the world are foreign nationals, JX Nippon Oil & Gas Exploration is working to mitigate "work difficulties" that are attributable to such things as sex, age, body and health, family situation, language, nationality, or religion, by developing and improving the work environment so that each employee can fulfill their potential. In Japan, the company is developing a working environment for employees to achieve a balance between their work and families/homes. For example, to avoid a situation where an employee must retire due to relocation with a transferred spouse or for nursing care, the company has adopted a Career Continuity Support Leave System and Reemployment System after Retiring for Long-Term Care of Family in July 2015. Through these initiatives, the company is developing and improving its personnel system and the workplace environment to enable its employees to continue working and with confidence participating in their life events, and to maximize their performance.

In August 2015, JX Nippon Mining & Metals established its Human Resources Council, comprising the president and other members of management, in order to discuss measures for encouraging active involvement of people and organizations. One of its main pillars is the development of an environment where diverse members of staff can find job satisfaction. Particular initiatives being implemented to achieve this are promoting improved awareness, taking the time to live a healthy and full life, and developing a system to enable diverse ways of working.

<sup>\*2</sup> Percentage of employees returning to work in fiscal 2014 who are still employed in fiscal 2015

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
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#### **Occupational Safety and Health Initiatives**

#### Basic Approach

One of the JX Group's priority areas in CSR is environmental safety. As it prioritizes safety in each of its business activities, it is working to enhance its various safety activities and safety education programs.

#### Safety Initiatives

In 2013, JX Holdings established its JX Group Safety Education Center in Hitachi City, Ibaraki Prefecture. The center is a hands-on safety education facility that aims to prevent accidents before they happen by increasing danger awareness among its employees and managers through a program of simulated hidden dangers in daily work activities. The center provides comprehensive safety education to small classes following its own safety education curriculum.

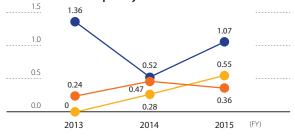
JX Nippon Oil & Energy has established its own Group Safety Philosophy, which define its top priorities as safety and compliance in all of its business activities. It aims to enhance its various safety activities and safety education programs conducted together with employees of its partner companies, and to eliminate all industrial and other accidents. In particular, it implements a range of initiatives to prevent industrial accidents at its oil refineries and production sites, including safety meetings, hazard prediction activities and near miss prevention activities. It also reports across the company on environment- and safety-related topics, and holds its Environment and Safety Forum once a year to help achieve higher quality environment and safety management.

The JX Nippon Oil & Gas Exploration Group faces the risk of health hazards, accidents or impacts on the global environment in each stage of its business activities—exploration, development, production, and abandonment. Giving top priority to management of risks related to health, safety and the environment (HSE) in carrying out its business activities, JX Nippon Oil & Gas Exploration has established its HSE Management System in accordance with ISO 14001, OHSAS 18001, and other international standards and operates the system across the entire organization. In conducting its operations, HSE risks are identified in the planning stage, risk evaluations are provided from multi angles, and risk mitigation measures are determined. Through HSE training, HSE committees, and pre-work meetings, they are announced to all workers for their understanding of the risks and their safety operations.

JX Nippon Mining & Metals has prioritized building a safety culture\* and conducting thorough issue-specific accident prevention activities in its 2015 Basic Policy on Health and Safety. Rather than being driven by head office, each business site or plant implements their own initiatives to create a safety culture and eliminate accidents at their own worksites. Considering "safety first" in its Basic Policy on Health and Safety, the company has defined its safety culture, clarified issues after discussions at each business site, and is continuing to conduct activities that ensure safety is maintained. Since 2015 in particular, the company has focused on removing the roots of danger in the workplace, and on improving safety and danger awareness. Specific safety activities it is focusing on are identification of major risks and implementation of safety measures to prevent serious accidents, prevention of similar accidents recurring, and enhancing safety and danger awareness.

<sup>\*</sup>The International Atomic Energy Agency (IAEA) defines a safety culture as being the assembly of characteristics and attitudes in organizations and individuals which establishes that, as an overriding priority, safety issues in the organization receive the attention warranted by their significance (safety first), which enables the organizations and individuals to think about and regularly and naturally take action in relation to the issues.





<sup>\*</sup>The number of deaths and injuries due to industrial accidents per million actual working hours Note: Excluding accidents at JX Nippon Oil & Energy not resulting in lost work days. Figures for JX Nippon Mining & Metals from past fiscal years have been corrected.

#### ◆ JX Nippon Oil & Energy ◆ JX Nippon Oil & Gas Exploration ◆ JX Nippon Mining & Metals **Trend for Accident Severity Rate\*** 0.06 0.05 0.04 0.02 0.01 0.01 0.01 0.00 2013 2014 2015

#### JX Nippon Oil & Energy: Incidence of Industrial Accidents

	FY2013	FY2014	FY2015
Absences	2	4	3
Deaths	0	0	0
Total	2	4	3

#### JX Nippon Oil & Gas Exploration: **Incidence of Industrial Accidents**

	FY2013	FY2014	FY2015
Absences	1	0	0
Deaths	0	0	0
Total	1	0	0

#### JX Nippon Mining & Metals: Incidence of Industrial Accidents

	FY2013	FY2014	FY2015
Absences	11	8	12
Deaths	1	1	0
Total	12	9	12

**JX Group Safety Education Center Lecture Participants** 

,	JX Holdings	JX Nippon Oil	JX Nippon Oil & Gas	JX Nippon Mining &	Others*	Total
	3X Holdings	& Energy	Exploration	Metals	Others	iotai
From January 23, 2013, to March 31, 2014	4	103	4	1,537	11	1,659
FY2014	0	153	8	1,637	16	1,814
FY2015	3	110	6	1,663	11	1,793
Total	7	366	18	4,837	38	5,266

<sup>\*</sup> Such as Group affiliated companies and cooperating companies

<sup>\*</sup>The number of lost work days per thousand actual working hours Note: Figures for JX Nippon Mining & Metals from past fiscal years have been corrected

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
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### **Engagement with Local Communities**

#### **Basic Approach**

One of the JX Group's priority areas in CSR is social contribution, for which the Group conducts a range of activities. The JX Group Corporate Citizenship Committee deliberates and reports on the Group's social contribution efforts, while sharing related information with Group companies. Under its Basic Policy for JX Group Social Contribution Activities, the Group is focusing on the three priority fields of (1) advancement of sports and culture, (2) next generation development and support, and (3) environmental protection.

#### **Advancement of Sports**

The JX Group manages the JX-ENEOS Baseball Team and the JX-ENEOS Sunflowers women's basketball team. During the off-season, active players on each team participate in youth baseball classes and basketball clinics for elementary and junior high school students. Former Sunflowers players also hold 60 to 70 basketball clinics around Japan each year.

The Group also supports various sporting events, including being an official sponsor of the Japan Dream Baseball League for players with physical disabilities, an official sponsor of the Women's Baseball Federation of Japan, a special sponsor of the JX-ENEOS Winter Cup (basketball) and an official sponsor of the Japan women's national basketball team.





Baseball class

Basketball clinic

#### Advancement of Culture/Next Generation Development and Support

The JX Group holds the JX-ENEOS Children's Story Award ceremony every year. It has been collecting works based on the theme "heart-to-heart contact" from the general public since 1970. The JX-ENEOS Children's Story Award is presented to the authors of outstanding works from three categories: elementary school and younger, junior high school, and others. The awarded works are collected into a booklet called The Bouquet of Children's Stories, which is donated to educational institutions, child welfare facilities, foster homes and other institutions across Japan. In fiscal 2016, the 47th time that the program was conducted, 11,047 heart-warming stories were received from Japan and overseas.

The Bouquet of Children's Stories is also sold to executives and employees of the JX Group and to members of affiliated dealerships to collect money for charities. All sales proceeds are donated to the JX-ENEOS Scholarship Program, established by the Japan National Council of Social Welfare (JNCSW), to be used as scholarship support funds when children living in child welfare facilities or foster homes enter university or other



The Bouquet of Children's Stories (volume 46)

higher education institutions. In fiscal 2015, scholarships were granted to 480 students. The Bouquet of Children's Stories also helps to increase the absorption of carbon dioxide by forests in Japan. The paper of this booklet is made from raw materials derived from wood produced as a by-product of forest thinning in areas where the JX

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The 46th JX-ENEOS Children's Story Award ceremony

Group is working on forestation. Through The Bouquet of Children's Stories, the JX Group is providing support to the Kizukai Undo (Tree-Use Movement) promoted by Japan's Forestry Agency to help preserve the country's forests.









Environmental Report Social Report		Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
	▼			
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#### **Environmental Conservation**

JX Nippon Oil & Energy is involved in forest stewardship activities at eight ENEOS Forests across Japan in partnership with local governments and the National Land Afforestation Promotion Organization (NLAPO). In fiscal 2015, a total of about 1,620 employees and their family members took part in tree planting, thinning and bush clearing. ENEOS service stations also donated 0.01% of all personal credit card transactions using the ENEOS Card to the NLAPO. The actual amount donated in fiscal 2015 was about 43 million yen. In addition, as part of conservation efforts of the western lowland gorilla, represented by the ENEOS Card mascot ENEGORI-KUN, the JX Group donated about 3 million yen through the Click Donation Program in fiscal 2015 to the Japan Wildlife Conservation Society. These donations support the conservation of African forests in which the gorillas live.

Since 1998, JX Nippon Oil & Gas Exploration has worked to preserve the pine forest located on and around the site of its Nakajo Field Office in Niigata Prefecture. In 2015, a total of 63 executives, employees, and their family members, including foreign-national employees working in Japan, spent two days planting approximately 2,000 young black pine trees in the "JX Nakajo Forest."

JX Nippon Mining & Metals participated in reforestation activities at four sites of closed mines in Japan to promote the conservation of the natural environment in fiscal 2015. The company also joined Mt. Kurakake Cherry Tree Development activities in Hitachi City, Ibaraki Prefecture.



Tree planting in Miyagi ENEOS Forest



Afforestation in JX Nakajo Forest



Tree planting in Nikko Ryuju Forest in Nanyo City, Yamagata Prefecture

#### JX Group's Volunteer Activities for Passing on Hope for the Future

Since fiscal 2011, the JX Group has been recruiting participants broadly from within the Group to take part in volunteer activities to support recovery efforts in areas affected by the Great East Japan Earthquake. In fiscal 2014, the name was changed to "JX Group Volunteer Activities for Passing on Hope for the Future" and the geographic scope has been broadened beyond the earthquake affected areas to bring hope and energy to more children.

In fiscal 2015, it worked in collaboration with the ARTS for HOPE volunteer NPO in an art renovation project, brightly painting the outer walls of a temporary preschool building in litate Village, Fukushima Prefecture, where many children still live in shelters. From July 2011 to the end of March 2016, a total of 35 rounds of volunteer activities were conducted with the participation of about 1,200 executives and employees. Going forward, the Group will continue to conduct activities to pass on hope for the future.



Further details concerning volunteer activities can be found on the following website: http://www.hd.jx-group.co.jp/english/csr/volunteer/



Volunteer participants



Art renovation project

Environmental Report	Social Report	Governance Report	Third-Party Opinion/Independent Practitioner's Assurance Report	Comparative Table with GRI Guidelines
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#### **Communication with the Global Community**

#### Participating in the UN Global Compact

JX Holdings and its three core operating subsidiaries are participants in the United Nations Global Compact, implementing and promoting the Compact's Ten Principles in the four areas of human rights, labor, the environment, and anti-corruption.

#### ■ Membership of the International Council on Mining & Metals (ICMM)

As a member company of the International Council on Mining & Metals, JX Nippon Mining & Metals has established a Code of Conduct based on the ICMM Principles. It is working to resolve a range of issues related to such areas as the environment, safety and health, management of chemical substances, human rights and local communities, including the various elements of ICMM's position statements.

#### ■ Cooperation with and Support for the Extractive Industries Transparency Initiative

The Extractive Industries Transparency Initiative (EITI) is an international framework that seeks to prevent corruption and conflicts, provide the foundations for sustainable economic growth, and encourage resource development that leads to reductions in poverty by increasing the transparency of the flows of funds from extractive industries (industries involved in the development of resources such as oil, natural gas, and minerals) to the governments of resource possessing countries. JX Nippon Mining & Metals is in agreement with the principles of EITI and is actively supporting its activities.

#### **Communication with Industry Associations**

	Association Name	Position Held by Group Executive,Etc.	Association Outline and Initiatives	
JX Holdings	Keidanren (Japan Federation of Economic Organizations)	Vice chair, director, permanent secretary	Keidanren membership is made up of typical Japanese companies, the main industry associations, regional economic groups and others. It gathers opinions from the business community, about major internal and external issues it is facing, and approaches government and authorities on their behalf for the purpose of contributing to the self-development of Japan's economy and the improvement of people's lives in Japan. Within the JX Group, JX Holdings holds the position of permanent secretary and the Group's three core operating subsidiaries hold the positions of secretary, with JX Holdings chairman Yasushi Kimura acting as vice chair and director, chair of the Committee on Environment and Safety, and chair of the Committee on the Middle East and North Africa.	
gy	Petroleum Association of Japan	President	Petroleum Association of Japan membership is made up of companies involved in the import and refining of crude oil and the nationwide sales of oil products. It is working on initiatives for the purpose of maintaining oil supply stability in harmony with society, including publishing opinions on new energy policies, energy-saving measures at oil refineries, and other measures against global warming, enhancement of disaster prevention measures, and improvement of oil product quality. Since the association was established, JX Nippon Oil & Energy has been involved in running the association as a member, with JX Holdings chairman Yasushi Kimura acting as president from FY2012.	
JX Nippon Oil & Energy	Japan Petrochemical Industry Association	Director	The Japan Petrochemical Industry Association was established for the purpose of contributing to healthy development of the petrochemical industry and growth of the national economy, which it does by disseminating information about the petrochemical industry, through outreach, advertising, and publishing opinions. JX Nippon Oil & Energy has been involved in running the association through participation in various committees in the position of director and member.	
	Japan Chemical Industry Association	Policy Coordinating Committee member	The Japan Chemical Industry Association was established for the purpose of contributing to the prosperity of the Japanese economy and the improvement of people's lives in Japan by means of encouraging the healthy development of the chemical industry. It does this through surveys and research on chemical industry production, distribution, and consumption, surveys and research on a range of issues related to chemical industry engineering, labor, environment and safety, and planning and the promotion of measures related to the above. JX Nippon Oil & Energy participates in various committees in positions such as Policy Coordinating Committee member.	

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JX Nippon Oil & Gas Exploration	Japan Petroleum Development Association	Vice chairman, auditor	Members of the Japan Petroleum Development Association are companies involved in the exploration and production of oil and natural gas all over the world. The social mission of these companies is to realize a stable energy supply through the exploration and production of oil and natural gas domestically and internationally.  To achieve this aim, the Japan Petroleum Development Association is supporting business activities of its member companies and the discovery of excellent projects. In order to win amidst intense competition for resource assets, it is also conducting activities to solicit a range of support from the Japanese government and related institutions, and to encourage the cooperation of university research institutions, in areas such as conducting resource diplomacy and providing risk money where the private sector does not reach. At the same time, the association is communicating the importance of energy resource exploration to society.  JX Nippon Oil & Gas Exploration president Shunsaku Miyake has held the position of vice chairman of the association since FY2014.
oddiN Xľ	Japan Natural Gas Association	Director	The Japan Natural Gas Association was established for the purpose of contributing to the healthy development of Japan's natural gas producing industry, and cultivating mutual friendship and harmony between members. It is mainly made up of gas producing companies. These companies produce gas in Niigata, Hokkaido, Chiba, and other prefectures to supply local city gas reserves to enable local consumption of local production, but they also play a part in lifelines supplying to Tohoku and Kanto regions by pipeline. They also produce iodine, which is associated with natural gas dissolved in water, for use in pharmaceuticals and other purposes.  JX Nippon Oil & Gas Exploration holds the position of director of the association.
	Japan Mining Industry Association (JMIA)	Chairman, director	JMIA represents companies engaged in the resource development and/or smelting and refining of nonferrous metals. With a view to the sound growth of the industry, it conducts surveys and other research on improving technologies, disseminates and publicizes knowledge, and proposes policies to government agencies with respect to resource development, smelting and refining, and recycling. JX Nippon Mining & Metals is a governing member, serves on various committees, and participates in running the association.  Company president Shigeru Oi was appointed chairman in FY2015.
tals	The Sulphuric Acid Association of Japan	Director	The association works toward the growth of the sulfuric acid industry and promotes friendly relations and mutual benefits for sulfuric acid manufacturers. The Company serves on the Operations Committee and the General Affairs Committee, is involved in surveys and reports on sulfuric acid supply and demand conditions, and takes part in governance of the association.
Nippon Mining & Metals	Japan Copper and Brass Association (JCBA)	Vice chairman	JCBA is an industry association of companies manufacturing copper alloy products, namely plates, strips, pipes, and wires made by melting and rolling copper and copper alloys. By encouraging contacts and cooperation among members, it promotes the progress and growth of the industry as a whole. The Company serves on the Road Map Committee, is involved in developing new demand and improving quality, and as a member of the Statistics Subcommittee, is involved in surveys and reports on market size.
JIN XI	Japan Society of Newer Metals	Director	The society focuses on new metals that are supporting the advance of high-tech industries. By conducting surveys and research, collecting and providing information, and promoting fellowship and cooperation among relevant organizations in Japan and overseas, it aims for the sound growth of the new metals industry and related industries. As a member of the Compound Semiconductors Subcommittee and the Target Subcommittee, the Company is involved mainly in market size surveys and reports, improving health and safety, and making proposals to government agencies.
	Japan Catalyst Recovering Association	Chairman	The association is made up of companies engaged in the reuse of catalysts and aims to promote the recycling of precious metals, rare metals, and other metal resources through the proper treatment of spent catalysts, etc. It conducts surveys and compiles statistics on recycling, and holds regular training sessions to improve technologies and promote friendship among members. A company representative is the chairman of the association and serves on the Public Relations Committee, and is involved in the issuance of survey reports and the organization of general meetings.

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### Respect for Human Rights Initiatives

#### **Basic Approach**

The JX Group is working to educate its executives and employees by respecting international rules such as the Universal Declaration of Human Rights and the ILO Conventions. The individual policies and specific measures are decided based on Group company business characteristics and scale.

#### **Company Initiatives**

The JX Group regularly conducts various types of training in order to raise the awareness of each employee concerning human rights issues.

JX Nippon Oil & Energy has adopted the basic policy of eliminating all forms of discrimination by respecting human rights. To enable this to happen, the company believes it is important for every person to make business decisions, speak and act with a sense of fair and equitable human rights, and so it has established the Human Rights Awareness Promotion Contact Meeting, comprising 18 companies of the JX Nippon Oil & Energy Group, and is educating people about human rights. As one example, it invites ideas for human rights slogans from its employees and their families, and works to raise awareness of human rights, during the Human Rights Week held in December every year. In addition, it holds regular e-learning sessions offering human rights education to all employees, including those in affiliated companies, it holds training for new employees and personnel rank-based training for newly appointed personnel, and it conducts training for sites and affiliated companies, which for example were held 36 times in fiscal 2015.

At JX Nippon Oil & Gas Exploration, human rights training for employees is positioned as an element of human resource development, and the company is promoting such initiatives. In January 2016, JX Nippon Oil & Gas Exploration held a training workshop on human rights lectured by an outside expert. A total of 114 people attended two workshops conducted on the theme "Introduction to Anger Management—Control 'Anger' and Build a Healthier Workplace." Participants learned methods for controlling anger, which can be a root cause of issues such as abuses of power and can also be a barrier to good interpersonal relationships.

JX Nippon Mining & Metals is committed to ensuring respect for human rights within the Group, and has established the JX Nippon Mining & Metals Group Compliance Regulations to document its policies on forbidding unfair discrimination, preventing harassment, eliminating child labor and forced labor, and so on. In addition to holding a lecture in June 2015 on the theme of "Business Activities and Human Rights," targeted at those responsible for promoting CSR, it is holding e-learning sessions on human rights as it works to raise awareness among a wide range of employees. Once a year, every Group company also confirms that no child labor or forced labor is being used. It also surveys its business partners to gain written confirmation that these forms of labor are not being used.

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### Quality Assurance, Product Safety, and Customer Satisfaction

#### **Basic Approach**

The JX Group is actively implementing initiatives for quality. These include each of its Group companies managing their own quality, and each company and business site obtaining ISO 9001 certification, the internationally recognized standard for quality management systems.

JX Holdings has extensive knowledge of the quality control and product safety policies and annual targets of each of its Group companies. If a product-related accident does arise, JX Holdings works together with the relevant Group company to minimize damages and formulate steps to prevent recurrence, in line with crisis management rules.

#### **Company Initiatives**

JX Nippon Oil & Energy's fundamental approach and philosophy on quality assurance in the provision of products and services to its customers is outlined below.

#### JX Nippon Oil & Energy Group Quality Policy

We of the JX Group will practice the following in order to ensure our products and services are reliable and satisfy customers.

- 1. Always act from the standpoint of the customer
- 2. Continually strive to enhance and maintain quality
- 3. Strive to ensure products and services are safe and reliable

Under its policy on quality, the company's Quality Assurance Department and other divisions are actively implementing quality management initiatives for each product category. They are also voluntarily establishing chemical substance management standards for products and otherwise meeting the requirements of the EU REACH Regulation\*1 and the GHS.\*2

JX Nippon Mining & Metals aims to improve quality across the board, including operations and management on top of products and services.

It has established a quality assurance system in line with the characteristics of each division's business which covers sales, manufacturing, production management, engineering, and product development based on ISO 9001 and other quality management systems, and on TPM and other improvement activities. Following the PDCA cycle, the company is trying to achieve the goals of reducing the product defect rate and reducing customer complaints. Many of its worksites in Japan and overseas have also acquired ISO 9001 accreditation. JX Nippon Mining & Metals holds two meetings each year for staff in charge of quality. The meetings for worksites under direct control and for Group companies are held by the head of the engineering department for the purpose of sharing worksite information related to quality. Persons in charge of quality report on quality loss, the status of complaints, and topics such as activities related to quality improvement, through which they are working to share information across the Group. The two meetings in fiscal 2015 were held in June 2015 (12th meeting) and December 2015 (13th meeting).

A system of education about quality management has been developed for the following three purposes.

- To establish a uniform level of quality control across the whole company, and to then raise that level
- To logically understand the causes of problems, and to then improve problem-solving skills to enable people to solve their own problems
- To achieve transfer of management technologies, and to entrench that transfer in the business To achieve these objectives, all employees are required to complete two courses; Quality Management: Elementary and Five Whys Analysis.

<sup>\*1</sup> REACH stands for registration, evaluation, authorization and restriction of chemicals. They are regulations for chemical substances put into effect in EU in June 2007.

<sup>\*2</sup> GHS stands for the Globally Harmonized System of Classification and Labeling of Chemical Substances. It is a system for global standardization of classification and labeling rules for chemical hazards.

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### **Purchasing**

#### **Basic Approach**

Procurement sources are growing increasingly diverse in step with economic globalization. The practice of compliance and consideration for the environment and human rights on the supplier side are required aspects of responsible supply chain management and are important aspects of establishing trust in our products and services.

JX Nippon Procurement Corporation plays a central role in procurement for the JX Group, strives to conduct in transparent and fair transactions, and conducts purchasing with consideration for the environment. We seek to achieve mutually beneficial development by enhancing communications with suppliers and building partnerships based on mutual trust.

#### **Basic Policy on Procurement**

The JX Group implements procurement operations in accordance with the JX Group Values.

#### **Ethics**

- We will abide by relevant laws and social norms as well as respect and operate in accordance to the spirit of both.
- The selection of suppliers will be performed based on a fair assessment of their compliance with laws and social norms, consideration for the environment, quality, price, delivery and performance.
- We will maintain an appropriate and highly ethical relationship with suppliers.

#### **Advanced ideas**

We will always create and innovate using new ideas and strive to employ new products and services.

#### Relationship with society

• We will pursue stronger communication with suppliers and strive to meet our customers' expectations based on a relationship of mutual trust.

#### Trustworthy products/services

• Each JX Group company will provide products and services that fulfill our customers' trust through activities that are highly accurate, prompt, and transparent.

#### Harmony with the environment

• We will strive to create a sustainable society by encouraging the procurement of materials, equipment and services that have lower environmental impacts.



JX Nippon Procurement Corporation is in charge of procurement operations for materials.

http://www.pr.jx-group.co.jp/ (Japanese only)

#### **Implementation of Surveys of Business Partners**

JX Nippon Oil & Energy conduct supplier surveys that include questions on green purchasing.\* As a result of vigorous efforts targeting suppliers since fiscal 2011, the percentage of suppliers adopting green practices (percentage of suppliers meeting the company's green standards) in fiscal 2015 reached 83%.

JX Nippon Mining & Metals has drawn up the Green Purchasing Policy together with the Green Purchasing Guideline based on this policy. It also conducts regular green purchasing surveys of its suppliers with regard to matters such as their use of banned substances in the manufacturing process, the inclusion of banned substances in supplied products, and procurement from companies with human rights problems. In fiscal 2015 (January through December 2015), 600 suppliers, accounting for 95% of the value of items purchased by JX Nippon Mining & Metals, JX Nippon Environmental Services Co., Ltd. and Pan Pacific Copper Co., Ltd. were targeted and responses were received from 515 suppliers for a response rate of 86%. Where necessary, the results are reflected in the reconsideration of suppliers.

 $<sup>{}^*\ \</sup> lnitiative to prioritize the purchase of products and services with a low environmental impact when purchasing products and services$ 

# JX Group Management

### **Corporate Governance**

In November 2015, in order to achieve sustainable growth and increase its corporate value over the medium to long term, the JX Group established the Basic Policy on Corporate Governance with the objective of establishing and operating a corporate governance framework for transparent, fair, timely, and decisive decision-making in the Group's business operations.

In response to formulation of Japan's Corporate Governance Code by the Tokyo Stock Exchange, this Basic Policy systematically and comprehensively sets out the JX Group's basic approach to corporate governance as well as matters pertaining to its establishment and operation.

The Basic Policy has also been disclosed on the JX Holding's website and other channels as a sign of Group's commitment to all of its stakeholders, including shareholders of JX Holdings, as well as JX Group customers, business partners, employees, and local communities.



Further details can be found on the following website:

http://www.hd.jx-group.co.jp/english/company/system/governance.html

#### Basic Policy on Corporate Governance of JX Group

Chapter I General Provisions

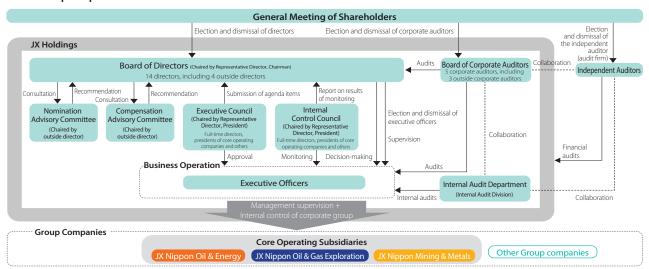
- 1. The purpose of establishing the Basic Policy on Corporate Governance of JX Group
- 2. Realization of "JX Group Mission Statement"
- 3. Implementation of "JX Group Values"
- 4. Formulation and implementation of a mid-term management plan
- 5. Promotion of diversification of personnel
- Chapter II Basic Concept for Corporate Governance of JX Group
- 1. Policy on establishment and operation of Corporate Governance
- 2. Policy on dealing with the Corporate Governance Code
- Chapter III Establishment and Operation of Corporate Governance
- Decision on execution of operations, delegation to the President of the Company and each Core Operating Company, by the Board of Directors
- 2. Establishment and operation of internal control system
- 3. Operation of the Board of Directors
- 4. Evaluation of effectiveness of the Board of Directors of the Company
- 5. Functions of the Board of Corporate Auditors
- 6. Establishment of audit environment for accounting auditor
- 7. Outside officer meeting and support to the outside officers
- 8. Directors and Corporate Auditors concurrently serving as other company's officers
- 9. Restrictions on conflicting interest transactions
- Chapter IV Appointment of the Officers and Provision of Training
- 1. Policy on nomination of director candidates and corporate auditor candidates
- 2. Policy on appointment of the senior management members
- Policy on appointment of directors and corporate auditors of the Core Operating Companies

- 4. Policy on appointment of the senior management members of the Core Operating Companies
- 5. Establishment and operation of the advisory committee for nominations
- 6. Disclosure of reasons for appointment of officers
- 7. Provision of training for directors and corporate auditors
- Chapter V Determination of Remunerations for Officers
- Policies regarding the determination of the calculation method for the remunerations for directors and executive officers of the Company and the Core Operating Companies
- 2. Policy on determination of the calculation method for the remunerations for corporate auditors of the Company and the Core Operating Companies
- 3. Establishment and operation of the advisory committee for remunerations

Chapter VI Relationship with Shareholders

- 1. Respect of shareholders rights
- 2. Holding and operation of the General Meeting of Shareholders
- 3. Promotion of dialogue with shareholders
- 4. Concept for anti-takeover measures
- 5. Policy on authority to decide year-end dividend
- Policy on shareholding in listed companies and exercising of voting rights thereof

#### JX Group Corporate Governance Framework



### **CSR Management**

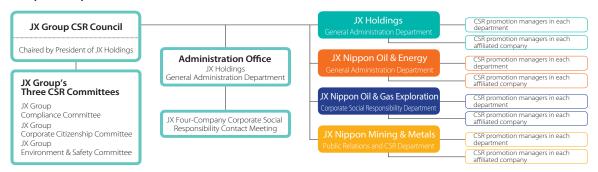
#### **Basic Approach**

As a group of companies involved in the energy, resources and materials fields, which are vital for people's lives and economic activity, we believe that the embodiment of CSR is to ensure a stable and efficient supply of energy, resources and materials, as well as the implementation of the Mission Statement by every employee throughout the course of executing business operations. This is the JX Group's social responsibility. Based on this belief, we aim to establish a corporate group worthy of the trust of stakeholders, including shareholders and other investors, customers and employees.

#### **Implementation Structure**

The JX Group established the JX Group CSR Council, chaired by the president of JX Holdings, to formulate and carry out the basic policy on CSR and oversee and coordinate CSR measures throughout the Group. We designated three priority fields for CSR: (1) compliance (including information security and human rights), (2) social contribution, and (3) environment and safety. Group CSR committees have been established for each field, and the committees act as advisory bodies to the chairman of the JX Group CSR Council. Each committee deliberates and makes reports on working-level business operations and shares information. Furthermore, Group CSR promotion managers are assigned to each workplace and cooperate with the department responsible for CSR in each company, working at the front line of CSR promotion to manage CSR in the workplace.

#### JX Group CSR Implementation Structure



#### **Priority Fields and Results of Activities**

JX Group companies worked on the steady implementation of the priority fields designated by the JX Group's three CSR committees for fiscal 2015. Activities undertaken for priority fields for each fiscal year are reported to the JX Group CSR Council, while the content of reports on priority fields for the following fiscal year are determined by individual committees, and the entire JX Group employs the PDCA cycle to carry out these CSR measures.

#### Priority Fields and Results of Activities

		FY2015	FY2016
	Priority Fields	Results of Main Activities	Priority Fields
JX Group Compliance Committee	Implement compliance status checks steadily (focusing on: internal regulations; information security; systems to prevent corruption and ensure compliance with competition law)     Enhance compliance training     Establish the internal whistle-blowing system at offices and plants in Japan and overseas, and make the system known to all.	<ul> <li>Confirmed that the updating of Group company rules to reflect amendments to laws and regulations as well as necessary amendments and announcements, such as changing the trade names of each Group company, had, for the most part, been carried out properly</li> <li>Conducted training at each Group company on a number of themes, including general compliance, information security and the "My Number" system</li> <li>Held information sessions on the internal whistle-blowing system; and at overseas offices and plants, promoted establishment of systems taking into account the characteristics of the country/location</li> </ul>	Steadily implement compliance checks (focusing on: general business operations; operational status of guidelines on compliance with competition laws and prevention of bribery and corruption; compliance with information security rules and regulations)     Check operation of global internal whistleblowing system     Check implementation of measures to prevent the recurrence of corporate scandals
JX Group Corporate Citizenship Committee	Provide support for children who are our future	Implemented JX Group volunteer activities for "Connect to the Future" targeted at children  Donated copies of the collection of children's stories The Bouquet of Children's Stories published by the JX Group to institutions nationwide such as welfare facilities (extending distribution across the Group)  Organized activities targeted at elementary school children, such as Summer Holiday Science Bus Tours (8 refineries) and basketball clinics (79 times), at various locations nationwide  Provided support in Vietnam, Malaysia, and other places (including construction of educational facilities and visits to children's wards); established the JX Nippon International Scholarship  Provided tours of facilities and plants, and school visits targeted at elementary, Junior high and high school students; taking in of internship students (JX Nippon Mining & Metals)  Collected and donated spoiled postcards and unused stamps collected by employees	Provide support for children who are our future
JX Group Environment & Safety Committee	Operate JX Group EMS     Follow-up on the FY2013–2015 JX Group Medium-Term Environmental Management Plan     Promote safety-related activities     Formulate the FY2016–2018 JX Group Medium- Term Environmental Management Plan	Continuously monitored EMS operation status Followed up on attainments of the FY2013–2015 JX Group Medium-Term Environmental Management Plan Carried out activities designed to curb occupational accidents by employees Formulated Group targets for the FY2016 JX Group Environmental Target	Operate EMS properly at JX Group companies required to have an EMS Achieve the FY2016 JX Group Environmental Target (follow-up) Promote safety-related activities Formulate the JX Group Medium-Term Environmental Management Plan for FY2017 and beyond

**Social Report** 

Governance Report

Third-Party Opinion/In

#### Development of Internal Control System

Based on the JX Group Mission Statement and the JX Group Values, JX Holdings has established and implements its internal control system to ensure appropriate execution of operation in line with the following Basic Policy.

#### Basic Policy for the Establishment and Operation of Internal Control System

#### 1. System to Ensure that Execution of the Duties by the Directors and the Employees Complies with Laws and Regulations, and the Articles of Incorporation

- (1) The Company shall comply with laws and regulations, its articles of incorporation, and its rules, etc., in its entire operational spectrum by developing and enforcing rules aimed at fully ensuring compliance, so that the Company may carry out its corporate activities fairly and improve society's trust in the JX Group, whether in or outside of Japan.

  (2) The Company shall develop and operate organizational systems, such as committees, aimed at fully ensuring compliance, as well as regularly conduct inspection activities regarding the
- JX Group's status of compliance, and shall take appropriate measures that correspond to the
- inspection results.

  (3) The Company shall pursue early detection and early correction of the breaching of laws and regulations, as well as develop and operate a whistleblowing system that cooperates with attorneys-at-law in order to appropriately protect the whistleblower complaining of a breach of
- (4) In order to achieve appropriate operation of the Board of Directors' meetings, the Company shall establish "Rules for the Board of Directors." Based on these rules, it shall hold Board of Directors' meetings once every month in principle, and decide on the execution of important business activities after thorough deliberations, as well as receive reports from directors in an appropriate manner on the status of execution of their duties.
- (5) By having outside directors and outside corporate auditors attend the Board of Directors' meetings and participate in deliberations thereof, the Company shall aim to ensure objectivity and further improve the adequacy of decisions on the execution of business activities.

  (6) The Company shall establish the Internal Audit Department, which will be in charge of internal auditing and which will implement audits independently from other divisions.

  (7) The Company shall develop and operate an internal control system aimed at ensuring trust in its
- financial reporting, as well as evaluate the effectiveness of the reporting every year, and make any necessary corrections.

  (8) To prevent a relationship between the Company and anti-social forces, the Company shall set the
- basic policy for the entire JX Group, and each company under the JX Group shall develop and enforce the rules, etc. that correspond to each of their actual business activities, and fully ensure

#### 2. System for the Storage and Management of Information related to Execution of Duties by the Directors and the Employees

- (1) The execution of duties by the directors and the employees shall in principle be conducted in writing, and the rules, etc. on document preparation, management, or the like shall be
- established and enforced.

  (2) The Company shall properly prepare minutes of the Board of Directors' meetings based on laws and regulations, and shall develop and enforce rules, etc. on the preparation, approval process, storage, or the like of approval documents for each person in a management position.
- (3) The Company shall develop and enforce rules, etc. aimed at preventing wrongful use, disclosure, and divulgence of company information, and at appropriately handling confidential information and personal information. In addition, the Company shall, through providing opportunities such as internal training, ensure that the employees fully comply with the rules, etc.

  (4) The Company shall appropriately prepare its business reports, financial statements, annual
- securities reports, and the like and disclose company information in a timely and appropriate manner based on the Japanese Companies Act, the Japanese Financial Instruments and Exchange Act, and the stock exchanges Timely Disclosure Rules.

#### 3. Rules and Other Systems for the Management of Risk of Loss

- (1) In submitting an important matter, such as regarding a substantial amount of investment, to the Board of Directors' meeting or the Executive Council's meeting, policies on treatment of risks pertaining to the matter shall be defined after sorting out the anticipated risk. In addition, the Company shall, as necessary, appoint outside legal, accounting, tax and other advisors, and seek
- (2) The Company shall appropriately identify and analyze various risks that may impair the JX Group's corporate value, such as radical changes in the economy and financial conditions; drastic fluctuation in crude oil, copper metal, or other resource prices, or in currency exchange rates; and the occurrence of a large earthquake; and shall develop and enforce systems and rules, etc. aimed at dealing with these risks
- (3) To prepare for an event where a crisis or emergency significantly affects the JX Group's management, the Company shall appropriately transmit and manage information regarding the crisis or the emergency, and shall develop and enforce systems and rules, etc. aimed at preventing the occurrence and expansion of damage

#### 4. System to Ensure Efficient Execution of Duties by Directors and Employees

- (1) The Company shall set forth in its "Rules on Organization and Authority" the organizational structure, management positions and business activity allocations in the Company, as well as matters for approval and the approval authority that correspond to each skill and management position, and have the duties executed in an efficient manner.

  (2) The matters to be resolved by the Board of Directors shall in principle be approved by the
- President in advance. In addition, on the granting of the President's approval, the Executive Council shall be established as a body that discusses the President's approval of the matter, and appropriate and efficient decision-making shall be conducted after the management of the Company and the core operating companies (each of JX Nippon Oil & Energy Corporation, JX Nippon Oil & Gas Exploration Corporation, and JX Mining and Metals Corporation) have conducted examination and deliberation as a group.
- (3) The Company shall draw up a management plan for the next three (3) years in the Medium-Term Management Plan, and shall develop and operate management control systems such as the budget system and the objectives management system

#### 5. System to Ensure Appropriate Business Operation within the Corporate Group

- (1) Regarding the "JX Group Mission Statement" and the "JX Group Values," the Company shall define
- (1) Regarding the "JX Group Mission Statement" and the "JX Group Values," the Company shall defir them as the management philosophies common to each company under the JX Group, and shall aim to disseminate them among and have them fully understood by each company.
  (2) The Company shall appropriately formulate the management plan as a group at the Board of Directors' meetings and the Executive Council's meetings. In addition, the Company shall have the officers and employees of the core operating companies attend the Executive Council's meetings as necessary, in addition to appointing as the Company's part-time directors the Presidents of all core operating companies, so that decision-making on matters concerning execution of the core operating companies' business activities is appropriately conducted.

  (3) The Company shall set forth in its "Rules for the Board of Directors" and the "Rules on Organization
- and Authority" the matters to be resolved at, approved by, or reported to the Company's Board of Directors' meetings and the Executive Council's meetings from among the matters regarding execution of the business activities of the core operating companies and other group companies, and shall enforce those rules in an appropriate manner.
- (4) The Company shall set forth in its "Rules on Operation of the JX Group" the basic matters regarding the operation of the group, such as the mission, purposes, basic role, structure of authority for decision-making in the Company, the core operating companies, and other group companies, as well as develop and enforce the rules, etc. that should be applied to the entire JX Group, and shall aim to have each company under the group share and comply with the rules, etc.

  (5) Regarding systems related to compliance (such as providing training and ensuring employees)
- awareness of laws, regulations and rules, etc., monitoring legal compliance, and whistleblowing). the Company shall develop and operate them as systems that include the core operating companies and other group companies, taking into account the business characteristics of the group companies.
- (6) The Company shall appropriately develop and operate a compliance system, risk management system, system to execute business efficiently, and other internal control system of the core operating companies and other group companies by monitoring the development and operation of the internal control system as a group and discussing measures to cope with defects (as necessary) at JX Group internal control meetings and meetings of the JX Group internal control committee.

#### 6. System to Ensure Effective Auditing by the Corporate Auditors

- (1) The Company shall respect the audit standards and the audit plans set forth by the Board of Corporate Auditors, and shall cooperate in the smooth performance of audits and the development of conditions for an audit.
- (2) The Company shall take the measures necessary so that the corporate auditors are able to attend important meetings, such as the Executive Council's meetings, and understand the process of making important decisions and the status of execution of business activities. In addition, the Company shall develop and operate systems for the Company, the core operating companies, and other group companies to appropriately report on the matters which the corporate auditors
- (3) The Company shall develop and operate systems for the corporate auditors to receive reports on any fact that may be identified concerning the Company, or any core operating companies or other group companies, such as material breaches of laws and regulations or the articles of incorporation, fraudulent acts, or facts that could cause considerable damage to the Company and the entire JX Group, immediately when such a fact is identified.
- (4) The Company shall develop and operate systems required to ensure that any person who reports any incident to the Company by reporting to a corporate auditor, by using a whistleblowing system, or by any other appropriate method, is not treated unfavorably on the grounds of making such a
- report (including by expressly prohibiting such treatment in the relevant rules, among others).

  (5) The Representative Director and other management shall hold meetings with the corporate auditors from time to time, and exchange opinions on matters such as the JX Group's management issues
- (6) The Internal Audit Department, which is in charge of internal audits, shall make efforts to
- maintain close cooperation with the corporate auditors.

  (7) The Company shall establish the Auditors Affairs Office as an organization independent from the business execution sections, and the employees appointed exclusively to the office shall assist in the corporate auditors' duties. Treatment of personnel, such as evaluation and transfer of such employees, shall be determined after prior discussions with the full-time corporate auditors, in order to ensure the effectiveness of instructions that corporate auditors give to such employees.
- (8) The Company shall, upon a corporate auditor's request, appropriately bear any expenses or debt associated with the execution of duties of the corporate auditor, pursuant to Article 388 of the Companies Act.



Social Report

**Governance Report** 

Third-Party Opinion/Independen
Practitioner's Assurance Report

Comparative Table

#### Risk Management

In the JX Group, each company has prepared risk management systems appropriate for its respective lines of business and implements measures in accordance with such individual risk related to compliance and occupational safety, environment, and other.

#### Crisis Management

When crises or emergency situations arise that may significantly affect the management of the JX Group, JX Holdings exercises overall control and has prepared its Crisis and Emergency Response Regulations, which specifies measures to be taken to minimize the damage that may occur.

The General Administration Department of JX Holdings functions as the standing organizational unit in charge of crisis and emergency response and management, and the general manager of this department acts as head of this crisis response unit, and, when such situations arise, operating procedures require that the situation and measures taken be reported immediately to the head of the crisis response unit.

Also, depending on the magnitude of the crisis or emergency, at its discretion, JX Holdings may form a Emergency Headquarters or a Joint Emergency Headquarters with JX Group companies to respond quickly and appropriately to the crisis.

#### ■ Information Security Management

Based on its Framework Regulation on Information Security, the JX Group works to prevent the improper usage or disclosure, and leakage, of company information, which is a corporate asset. The JX Group also makes it possible for authorized users of corporate information to have constant access to such information as necessary by making efforts to maintain the accuracy and reliability of its corporate information and to prevent falsification or erroneous handling.

#### Information Disclosure

#### ■ Disclosure Policy

JX Holdings is fully aware that the timely and proper disclosure of corporate information is a core issue of healthy capital markets and, to promote transparency in management, works to provide prompt, appropriate, and fair disclosure of information to shareholders and investors.

Systems have been prepared to obtain, manage, and disclose information on JX Holdings as well as information on JX Group companies quickly and accurately. Information that is subject to Timely Disclosure Rules is made public through the timely disclosure information browsing service (TDnet) provided by the Tokyo Stock Exchange and others, and the same information is made available on JX Holdings' website.

#### Compliance

#### ■ Basic Approaches

The JX Group regards "compliance" as one of the Group's priority fields for CSR. The Group has established internal rules to ensure thorough compliance, and has adopted a policy to observe laws, the Articles of Incorporation and internal rules in every aspect of work performance. In accordance with this policy, the JX Group has established the JX Group Compliance Committee to review the results of compliance measures throughout the Group, set the direction of future measures based on the review, and consider issues that need to be addressed by the Group as a whole. The Group also has an internal whistle-blowing system in place for identification of a conduct that is or may be in violation of laws or regulations and remediation of such conduct at an early stage.

#### Priority Compliance Action Items

In order to reduce the legal risks that may occur with the expansion of overseas business by the JX Group companies, in October 2013, the JX Group adopted the JX Group Compliance Activity Basic Policies, a systematic statement of compliance measures in accordance with global standards, and began implementing those regulations. In April 2014, the Group established internal rules setting forth a group-wide basic policy concerning the prevention of corruption and conduct on restraint of competition, areas in which regulation is becoming stricter around the world, and took measures to further strengthen its compliance systems.

In addition, the Group specified improvement in the quality of compliance status checks as a group-wide priority action item and took further measures for the appropriate identification of problems, early correction, and follow-up.



Third-Party Opinion/Independen
Practitioner's Assurance Report

Comparative Table

Individual Group companies also implemented a variety of measures including confirmation of compliance systems and the status of measures at overseas offices and plants.

#### ■ Implementation of Compliance Training

To raise awareness of compliance, the JX Group conducted compliance training for all JX Group executives and employees.

JX Nippon Oil & Energy conducts compliance training regularly to enhance employees' legal knowledge. During fiscal 2015, training was offered to all employees on such topics as security trade control, the Subcontract Act and documentation (attended by around 800 employees in total).

In addition to conducting a training workshop four times to enhance general knowledge on agreements relating to oil and gas development, the JX Nippon Oil & Gas Exploration Group held a training workshop eight times in Japan and overseas on the prevention of bribery and corruption. The Group has also strived to ensure compliance such as by holding training workshops on internal regulations, the Companies Act in practice, and copyrights.

In fiscal 2015, the JX Nippon Mining & Metals Group conducted a total of 88 training sessions on laws and legal affairs, for different business sites and for different job levels (attended by a total of around 3,300 employees) to enhance compliance knowledge and awareness. The Group also established internal rules for compliance with competition laws, and held a total of 17 training sessions in Japan and overseas (attended by around 300 employees) to help them understand these rules.

#### ■ Internal Whistle-Blowing System

Considering that it may be difficult for individual worksites to independently resolve issues regarding conduct that is or may be in violation of laws and regulations, the JX Group established the "Compliance Hotline," an internal whistle-blowing system. Use of the system is available to all personnel who work within the JX Group including temporary employees and employees of contractors, who are guaranteed that they will not be subject to any detrimental treatment as a result of making reports.

The JX Group Internal Reporting System Basic Policies were adopted in January 2013 to make it possible for whistleblowers to remain anonymous and to introduce a group reporting system that allows reports of legal violations by a Group company to be reported to any company, enhancing the system. In addition, we allowed overseas offices and plants to develop and implement internal whistle-blowing systems that take into account local and regional laws, customs and culture. We also established a common reporting window that can be used at the JX Group's overseas offices and plants.



Further details concerning the Governance Report can be found on the following website:

OAnnual Report

http://www.hd.jx-group.co.jp/english/ir/library/annual/past\_list.html

OCorporate Governance Report

http://www.hd.jx-group.co.jp/company/system/governance.html (Japanese only)

#### Relationship with Stakeholders

#### ■ Basic Approach

The JX Group conducts business activities while maintaining relationships with a variety of stakeholders, among them shareholders, investors, customers, business partners and employees. By accurately assessing the demands of these many stakeholders, and sincerely responding to them, we seek to earn society's trust.

In addition, through activities such as advancement of sports and culture, next generation development and support, and environmental protection, we aim to deepen our interaction with the local community and live in unity with society as a corporate citizen.

# Shareholders and Investors

JX Holdings is committed to the swift, proper, and fair disclosure of information to shareholders and investors in accordance with its disclosure policy.

#### Main means of communications

- General meetings of shareholders, presentation meetings on financial results, individual investors meetings
- Disclosure of information in annual reports, shareholder reports, and on websites

#### **Customers**

The JX Group is committed to developing and delivering products and services that fulfill customer needs, expectations, trust and satisfaction.

► For more information, please refer to page 44.

#### Main means of communications

- Communications through marketing activities
- Provision of safe, secure, and valuable products and services
- Disclosure of information on websites
- Inquiry channels through phone and websites

▶ Please also refer to pages 17–18.

# Business Partners

JX Nippon Procurement
Corporation handles
purchasing operations for JX
Group companies. JX Nippon
Procurement makes purchasing
information available to business
partners on its website, actively
provides business opportunities
to them, and strives to ensure
fair trading opportunities.

For more information, please refer to page 45.

#### Main means of communications

- Communications through procurement activities
- Use of websitesSupplier Survey



#### NPO/NGO

The JX Group builds cooperative relationships with NPOs and NGOs, and actively undertakes environmental preservation and social contribution activities.

#### Main means of communications

- Collaboration through biodiversity conservation activities
- Collection and donation of spoiled postcards and unused stamps by employees
- Collaboration through activities supporting development of the next generation

### Local Communities/ Global Society

We strive to engage in responsible corporate activities by responding to the needs and expectations of communities in the areas where we conduct business as well as international society and engaging in active communications.

#### Main means of communications

- Information sessions for local residents
   Participation in and support for local events
- Volunteer programs
- Establishment of various support programs for oil-producing, gasproducing and copper-producing countries

#### **Employees**

The JX Group positions employees as critical stakeholders in its operations and has established various systems to ensure that each employee can work with peace of mind and exhibit his or her full capabilities.

#### Main means of communications

- Periodic communications between labor unions and management
- Publication of Group newsletters, information dissemination through intranet
- Periodic CSR surveys

**Social Report** 

**Governance Report** 

hird-Party Opinion/Independent Practitioner's Assurance Report Comparative Table

#### **Third-Party Opinion**



#### Masaatsu Doi

Professor Social Services, Graduate School of Social Well-Being Studies Hosei University

Professor Doi earned his undergraduate degree from the Hitotsubashi University Faculty of Economics and completed his doctoral degree at the Hitosubashi University Graduate School of Commerce and Management. He became an associate professor in the Faculty of Regional Policy of Takasaki City University of Economics in 2009. In 2014, he became an associate professor at the Hosei University Graduate School of Social Well-being Studies, Faculty of Social Services. He became a professor of the same faculty in 2016. He holds a Doctorate of Commercial Science. He is the co-author of CSR Management: Corporate Social Responsibility and Stakeholders, and The Creation and Diffusion of Social Innovation, published by CHUOKEIZA-HA, Inc. and NITT Publishing Co., Ltd., respectively.

#### Changes to this Year's Report and Positive Points

This year, the JX Group CSR Report changed from an activity report based on the Group's five EARTH values of the JX Group Mission Statement, which the Group has focused on since fiscal 2010, to one based on the environment, society and governance (ESG). This has enabled the Group to better arrange the perspectives and data needed globally, which were difficult to show in the report until last year, and has made the report comparatively easier to read, especially when compared to those of other companies.

When I wrote the third-party opinion for last year's report, I proposed expanding the Performance Report as an area for attention in the future. This year, the report was produced as a Digest Edition (printed) and a Full Edition (PDF file), providing a greater volume of disclosures in the Full Edition. In particular, the Full Edition carries employee and other data on page 31 in a clearer format than last year. Within this data, a large increase in the number of employees taking childcare leave (page 36) is proof that JX Nippon Oil & Energy is implementing measures to review ways of working (48 more people year-on-year, with 47 more men in particular). Another area for attention I proposed last year was undertaking CSR procurement, and this year's report does include audits of procurement by each Group company on page 45. If analysis of these audit results and use of the PDCA process are also disclosed externally going forward, third parties will also be able to verify the JX Group's self-assessments, which will further enhance reliability.

#### Expectations and Areas for Improvement for Next Year

On the other hand, at the start of this year, it appears that JX Group consolidated subsidiary NIPPO CORPORATION was involved in a bid-rigging scandal when it bid on highway reconstruction work after the Great East Japan Earthquake. This was a very unfortunate incident for a Group talking about commitment to compliance, especially with the work being of such a public nature. It appears that the JX Group CSR Council is selective in its discussions as well, so in the future I would like to see active disclosures of negative information related to Group business operations in this report as well. This is because honest explanations of appraisals and background on incidents in the CSR Report would be positively received by stakeholders, and would be an important factor in protecting the Group from reputation risk.

The special feature on communications with stakeholders (pages 17 and 18) includes a range of information, including the results of employee surveys and the fact that over 20,000 inquiries were received from customers, but another issue is that it does not include any specific feedback from stakeholders and the response to that feedback. What is important is not the implementation report itself but what is included in it, and in fact stakeholder communication without negative feedback might even be a little risky. Going forward, I would like to see enhanced qualitative reporting of non-financial information like this, together with quantitative reporting of goal setting and performance management.

JX Group has decided to integrate from April 2017 with the TonenGeneral Group in a new effort to become a more robust corporate group. I really hope that this integration enables the Group to drive through a drastic business transformation that it was not able to achieve alone, and that it helps them start to identify materiality of a CSR nature that they missed this year. And finally, I hope that they are able to further evolve their CSR management and sustainability management in the new structure as well.

### **Response to Third-Party Opinion**

We are very grateful for Professor Doi's valuable opinions concerning the JX Group's CSR activities, and proposals on how we can be improved.

The JX Group is implementing a range of CSR initiatives across broad supply chains in the businesses of energy, resources and materials. We changed the structure of the report this year, taking a different perspective focused on the environment, society and governance (ESG), to enable us to better communicate initiatives such as these, and to further enhance our disclosures. We are very proud that this change has received praise here.

The JX Group is planning to integrate with the TonenGeneral Group in April 2017. We will do our best to make improvements where indicated by Professor Doi, while remaining committed to further promotion and evolution of our CSR activities to meet the expectations of all stakeholders in this new Group.

#### Ichiro Yamamoto

Senior Vice President and General Manager General Administration Department JX Holdings, Inc.



Social Report

Governance Report

Third-Party Opinion/Independent
Practitioner's Assurance Report

Comparative Table

#### **Independent Practitioner's Assurance Report**

# Deloitte.

(TRANSLATION)

#### Independent Practitioner's Assurance Report

October 7, 2016

Mr. Yukio Uchida, Representative Director, President, JX Holdings, Inc.

> Hiroshi Inanaga Chief Executive Officer

Deloitte Tohmatsu Evaluation and Certification Organization Co., Ltd. 3-3-1, Marunouchi, Chiyoda-ku, Tokyo

We have undertaken a limited assurance engagement of the quantitative environmental information (the "quantitative environmental information") for the year ended March 31, 2016 included in pages 19, 22-27 of the "JX Report for a Sustainable Future 2016" (the "Report") of JX Holdings, Inc. (the "Company").

The Company's Responsibility

The Company is responsible for the preparation of the quantitative environmental information in accordance with the calculation and reporting standard adopted by the Company (the Report pages 1, 23-27). Greenhouse gas quantification is subject to inherent uncertainty for reasons such as incomplete scientific knowledge used to determine emissions factors and numerical data needed to combine emissions of different gases.

Our Independence and Quality Control

We have complied with the independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants, which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior. We apply International Standard on Quality Control 1, Quality Control for Firms that Perform Audits and Reviews of Financial Statements, and Other Assurance and Related Services Engagements, and accordingly maintain a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

Our Responsibility

Our responsibility is to express a limited assurance conclusion on the quantitative environmental information based on the procedures we have performed and the evidence we have obtained. We conducted our limited assurance engagement in accordance with the International Standard on Assurance Engagements ("ISAE") 3000, Assurance Engagements Other than Audits or Reviews of Historical Financial Information, issued by the International Auditing and Assurance Standards Board ("IAASB"), ISAE 3410, Assurance Engagements on Greenhouse Gas Statements, issued by the IAASB and the Practical Guideline for the Assurance of Sustainability Information, issued by the Japanese Association of Assurance Organizations for Sustainability Information.

The procedures we performed were based on our professional judgment and included inquiries, observation of processes performed, inspection of documents, analytical procedures, evaluating the appropriateness of quantification methods and reporting policies, and agreeing or reconciling with underlying records. These procedures also included the following:

- Evaluating whether the Company's methods for estimates are appropriate and had been consistently applied. However, our procedures did not include testing the data on which the estimates are based or reperforming the estimates.
- estimates.
  •Undertaking site visits to assess the completeness of the data, data collection methods, source data and relevant assumptions applicable to the sites.

The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

#### Limited Assurance Conclusion

Based on the procedures we have performed and the evidence we have obtained, nothing has come to our attention that causes us to believe that the Company's quantitative environmental information is not prepared, in all material respects, in accordance with the calculation and reporting standard adopted by the Company.

The above represents a translation, for convenience only, of the original Independent Practitioner's Assurance report issued in the Japanese language.

Member of Deloitte Touche Tohmatsu Limited

Social Report

Governance Report

Third-Party Opinion/Independent
Practitioner's Assurance Report

### Comparative Table with GRI Guidelines (G4)

	*Ac	dash indicates that this information was n	ot disclosed.
Item	Indicators	Where to find	Page number
GENERAL S	TANDARD DISCLOSURES		
Strategy an	d Analysis		
G4-1	Statement from the most senior decision-maker of the organization (such as CEO, chair, or equivalent senior position) about the relevance of sustainability to the organization and the organization's strategy for addressing sustainability	Management Message     Message from Senior Management of the JX Group's Core Operating Subsidiaries	3–5
G4-2	Description of key impacts, risks, and opportunities	Management Message     Message from Senior Management of the JX Group's Core Operating Subsidiaries     Risk Management	3–5 49
Organizatio	nal Profile		
G4-3	Name of the organization	JX Main Corporations	6
G4-4	Primary brands, products, and services	JX Main Corporations	6
G4-5	Location of the organization's headquarters	JX Main Corporations	6
G4-6	Number of countries where the organization operates, and names of countries where either the organization has significant operations or that are specifically relevant to the sustainability topics covered in the report	JX Group Overview	7–10
G4-7	Nature of ownership and legal form	JX Main Corporations	6
G4-8	Markets served (including geographic breakdown, sectors served, and types of customers and beneficiaries)	JX Group Overview	7–10
G4-9	Scale of the organization	JX Main Corporations JX Group Overview	6–10
G4-10	Total number of employees by employment contract and gender Total number of permanent employees by employment type and gender Total workforce by employees and supervised workers and by gender Total workforce by region and gender Whether a substantial portion of the organization's work is performed by workers who are legally recognized as self-employed, or by individuals other than employees or supervised workers, including employees and supervised employees of contractors  Any significant variations in employment numbers	Employee Data	31–32
G4-11	Percentage of total employees covered by collective bargaining agreements	-	
G4-12	Organization's supply chain	Business Activities	9–10
G4-13	Reporting of any significant changes during the reporting period regarding the organization's size, structure, ownership, or its supply chain	-	
Commitme	nts to External Initiatives		
G4-14	Reporting of whether and how the precautionary approach or principle is addressed by the organization	Risk Management Compliance	49
G4-15	List of externally developed economic, environmental and social charters, principles, or other initiatives to which the organization subscribes or which it endorses	Communication with the Global Community	41
G4-16	List of memberships of associations and national or international advocacy organizations	Communication with the Global Community Communication with Industry Associations	41–42
Identified M	laterial Aspects and Boundaries		
G4-17	List of all entities included in the organization's consolidated financial statements or equivalent documents     Reporting of whether any entity included in the organization's consolidated financial statements or equivalent documents is not covered by the report	Editorial Policy	1
G4-18	Process for defining the report content and the Aspect Boundaries How the organization has implemented the Reporting Principles for Defining Report Content	-	
G4-19	List of all material Aspects identified in the process for defining report content	-	
G4-20	For each material Aspect, reporting of the Aspect Boundary within the organization	-	
G4-21	For each material Aspect, reporting of the Aspect Boundary outside the organization	-	
G4-22	Reporting of the effect of any restatements of information provided in previous reports, and the reasons for such restatements	Environmental Report	19–28
G4-23	Significant changes from previous reporting periods in the Scope and Aspect Boundaries	Environmental Report	19–28
Stakeholde	Engagement		
G4-24	List of stakeholder groups engaged by the organization	Relationship with Stakeholders	51
G4-25	Basis for identification and selection of stakeholders with whom to engage	Relationship with Stakeholders	51
G4-26	Organization's approach to stakeholder engagement, including frequency of engagement by type and by stakeholder group, and an indication of whether any of the engagement was undertaken specifically as part of the report preparation process	Relationship with Stakeholders     Feature 4: Communication with     Stakeholders	17,18 51
G4-27	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting	Feature 4: Communication with Stakeholders	17,18
Report Prof	ile		
G4-28	Reporting period for information provided	Editorial Policy	1
G4-29	Date of most recent previous report	Editorial Policy	1
G4-30	Reporting cycle	Editorial Policy	1
G4-31	Contact point for questions regarding the report or its contents	Editorial Policy	1

Social Report

Item	Indicators	Where to find	Page number
GRI Content Inc	dex		annoci
	• "In accordance" option the organization has chosen	Comparative Table with GRI Guidelines	
G4-32	GRI Content Index for the chosen option     Reference to the External Assurance Report, if the report has been externally assured	(G4)	54–58
Assurance	reference to the External / Solitable reports in report has been externally assured		
	Organization's policy and current practice with regard to seeking external assurance for the report		
	• If not included in the assurance report accompanying the sustainability report, report the scope and basis of any external assurance provided	Independent Practitioner's Assurance	
G4-33	Relationship between the organization and the assurance providers	Report	53
	<ul> <li>Whether the highest governance body or senior executives are involved in seeking assurance for the organization's sustainability report</li> </ul>		
Governance			
Governance S	tructure and Composition		
G4-34	Governance structure of the organization, including committees of the highest governance body	Corporate Governance	46
G4-35	Process for delegating authority for economic, environmental and social topics from the highest governance body to senior executives and other employees	CSR Management	47
G4-36	Whether the organization has appointed an executive-level position or positions with responsibility for economic, environmental and social topics, and whether post holders report directly to the highest governance body	CSR Management	47
G4-37	Processes for consultation between stakeholders and the highest governance body on economic, environmental and social topics	=	
G4-38	Composition of the highest governance body and its committees	Corporate Governance	46
G4-39	Whether the Chair of the highest governance body is also an executive officer	Corporate Governance	46
G4-40	Nomination and selection processes for the highest governance body and its committees	Corporate Governance Report	
G4-41	Processes for the highest governance body to ensure conflicts of interest are avoided and managed. Report whether conflicts of interest are disclosed to stakeholders	Corporate Governance Report	
Highest Gove	rnance Body's Role in Setting Purpose, Values, and Strategy		
G4-42	Highest governance body's and senior executives' roles in the development, approval, and updating of the organization's purpose, value or mission statements, strategies, policies, and goals related to economic, environmental and social impacts	CSR Management	47
Highest Gove	rnance Body's Competencies and Performance Evaluation		
G4-43	Measures taken to develop and enhance the highest governance body's collective knowledge of economic,	-	
	environmental and social topics  • Processes for evaluation of the highest governance body's performance with respect to governance of economic,		
G4-44	environmental and social topics     Actions taken in response to evaluation of the highest governance body's performance with respect to governance of economic, environmental and social topics	-	
Highest Gove	rnance Body's Role in Risk Management	1	
G4-45	Highest governance body's role in the identification and management of economic, environmental and social impacts, risks, and opportunities	-	
G4-46	Highest governance body's role in reviewing the effectiveness of the organization's risk management processes for economic, environmental and social topics	-	
G4-47	Frequency of the highest governance body's review of economic, environmental and social impacts, risks, and opportunities	CSR Management	47
Highest Gove	rnance Body's Role in Sustainability Reporting		
G4-48	Highest committee or position that formally reviews and approves the organization's sustainability report and ensures that all material Aspects are covered	-	
Highest Gove	rnance Body's Role in Evaluating Economic, Environmental and Social Performance		
G4-49	Process for communicating critical concerns to the highest governance body	Compliance	49
G4-50	Nature and total number of critical concerns that were communicated to the highest governance body and the mechanism(s) used to address and resolve them	-	
Remuneration	and Incentives	l	
G4-51	Remuneration policies for the highest governance body and senior executives	Corporate Governance Report	
G4-52	Process for determining remuneration	Corporate Governance Report	
G4-53	How stakeholders' views are sought and taken into account regarding remuneration	-	
G4-54	Ratio of the annual total compensation for the organization's highest-paid individual in each country of significant operations to the median annual total compensation for all employees (excluding the highest-paid individual) in the same country	-	
G4-55	Ratio of percentage increase in annual total compensation for the organization's highest-paid individual in each country of significant operations to the median percentage increase in annual total compensation for all employees (excluding the highest-paid individual) in the same country	-	
Ethics and Int			
G4-56	Organization's values, principles, standards and norms of behavior such as codes of conduct and codes of ethics	JX Group Mission Statement	2
G4-57	Internal and external mechanisms for seeking advice on ethical and lawful behavior, and matters related to organizational integrity, such as helplines or advice lines	Compliance	49
G4-58	Internal and external mechanisms for reporting concerns about unethical or unlawful behavior, and matters related to organizational integrity, such as escalation through line management, whistleblowing mechanisms or hotlines	Compliance	49
SPECIFIC STAI	IDARD DISCLOSURES		
Disclosures or	Management Approach		
G4-DMA	Management approach	-	

Social Report

Item	Indicators	Where to find	Page number
CATEGORY: ECC	DNOMIC		
Aspect: Econom	nic Performance		
G4-EC1	Direct economic value generated and distributed	=	
G4-EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	=	
G4-EC3	Coverage of the organization's defined benefit plan obligations	-	
G4-EC4	Financial assistance received from government	-	
Aspect: Market	Presence		
G4-EC5	Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation	-	
G4-EC6	Proportion of senior management hired from the local community at significant locations of operation	-	
Aspect: Indirect	Economic Impacts		,
G4-EC7	Development and impact of infrastructure investments and services supported	-	
G4-EC8	Significant indirect economic impacts, including the extent of impacts	-	
Aspect: Procure	ment Practices		,
G4-EC9	Proportion of spending on local suppliers at significant locations of operation	-	
CATEGORY: ENV	/ironmental		<u>'</u>
Aspect: Materia	ls		
G4-EN1	Materials used by weight or volume	-	
G4-EN2	Percentage of materials used that are recycled input materials	-	
Aspect: Energy			
G4-EN3	Energy consumption within the organization	Initiatives to Reduce Energy	23
G4-EN4	Energy consumption outside of the organization	Consumption	
		Initiatives to Reduce Energy	
G4-EN5	Energy intensity ratio	Consumption	23
G4-EN6	Reduction of energy consumption	Initiatives to Reduce Energy Consumption	23
G4-EN7	Reductions in energy requirements of products and services	-	
Aspect: Water			
G4-EN8	Total water withdrawal by source	Initiatives for Protecting Water Resources	26
G4-EN9	Water sources significantly affected by withdrawal of water	-	
G4-EN10	Percentage and total volume of water recycled and reused	-	
Aspect: Biodive	·		
G4-EN11	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	Initiatives for Biodiversity	28
G4-EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas	Initiatives for Biodiversity	28
G4-EN13	Habitats protected or restored	Initiatives for Biodiversity	28
G4-EN14	Total number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk	-	
Aspect: Emissio	ns		
G4-EN15	Direct greenhouse gas (GHG) emissions (Scope 1)	Initiatives to Reduce CO <sub>2</sub> Emissions	24
G4-EN16	Energy indirect greenhouse gas (GHG) emissions (Scope 2)	-	
G4-EN17	Other indirect greenhouse gas (GHG) emissions (Scope 3)	-	
G4-EN18	Greenhouse gas (GHG) emissions intensity	-	
G4-EN19	Reduction of greenhouse gas (GHG) emissions	Initiatives to Reduce CO <sub>2</sub> Emissions	24
G4-EN20	Emissions of ozone-depleting substances (ODS)	-	
G4-EN21	NOx, SOx, and other significant air emissions	Initiatives to Prevent Air Pollution	25
Aspect: Effluent	s and Waste		
G4-EN22	Total water discharge by quality and destination	-	
G4-EN23	Total weight of waste by type and disposal method	Initiatives to Reduce Waste	27
G4-EN24	Total number and volume of significant spills	-	
G4-EN25	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally	-	
G4-EN26	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the organization's discharges of water and runoff	-	
Aspect: Product	ts and Services		
G4-EN27	Extent of impact mitigation of environmental impacts of products and services	Feature 2: Responding to Diverse Energy Demands     Feature 3: Effective Resource Utilization	13–16
G4-EN28	Percentage of products sold and their packaging materials that are reclaimed by category	Feature 3: Effective Resource Utilization	15–16
Aspect: Complia	ance		
G4-EN29	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	Compliance with Environmental Laws and Regulations	21

Social Report

Aspect. Transport  Fig. 1977 Set at environmental impacts of transporting products and other goods and marked seed for the organization.  Fig. 1977 Set at environmental products of set and products and impact of set and products and impact of set and products.  Fig. 1977 Set at environmental products of set and impact of set and products and impact of set and products.  Fig. 1977 Set at environmental products are great distance and impact of set and products.  Fig. 1977 Set at environmental products are products and impact of set and products are products and and products are products.  Fig. 1977 Set at environmental products are products are products and products are products and accordate to the organization of set and products.  Fig. 1977 Set at environmental products are products and products and accordate and accordate and products.  Fig. 1977 Set at environmental products are products and products and products are products and products.  Fig. 1977 Set at environmental products are products are products to set appropriate and accordate and products.  Fig. 1977 Set at environmental products are products to set appropriate and products and products are products to set and products are products to set and products.  Fig. 1977 Set at environmental products are products to set and products are products and products are products are products to set and products are products are products and produ	Item	Indicators	Where to find	Page
Supplication rendermoneal impacts of the appointing products and ordinary ordinary districts of the registration of the (applications)   24	Aspect: Transp			number
Agrect Overall  Get Rists   Test invalencement protection representative and invariancement by type   -				24
Appect Supplier Privance to all season and control to example that seek as the property of t			initiatives during the Logistics Stage	24
Aspect Deposition of the Committee of th				
DEFINITION DESCRIPTION PROTECTION OF THE PROPERTY OF THE PROPE			-	
Appendix   Synthesis   Security   Appendix		T		T
Appect Environmental Grievance Mechanisms  GENDAL  Alterior of givenance data environmental repairs filed, addressed, and resolved through formal givenance  GENDAL  Appect Environmental Delivenance data device more reported in parts filed, addressed, and resolved through formal givenance  GENDAL  Appect Environmental  Gendal Total number and otes of new envologee hites and engloyee turnover by age group, gendor, and region  GENDAL  Better to work and search on seas after parental leave, by gender  GENDAL  GENDAL  Appect Environmental  GENDA			_	
Ad-Picks All Protect of presences about environmental impaces fleet, addressed, and esolved through formal greance				
Liston Practices and Decent Work		Number of grievances about environmental impacts filed, addressed, and resolved through formal grievance	-	
Aspect Employment  GLAI  Total number and lates of new employee hits and employee harvour by age group gender, and region  Employee Data 31-32  GALAI  Read number and lates of new employees that are not provided to temporary or part-time employees, by significant control of operation of operation of operations of operation	CATEGORY: SO			
GGLAZ  Gold AZ  Gold AZ  Gold AZ  Gold AZ  Gold AZ  Gold AZ  Return to work and electric in fair-time employees that are not provided to temporary or part-time employees, by significant  Gold AZ  Agrect Labor/Management Relations  GGLAZ  Minimum notice periods regarding operational changes, including whether these are specified in collective  gold Agrect Coccupational Health and Safety  Gold AZ  Gold AZ  Gold AZ  Gold AZ  Agrect Coccupational Health and Safety  Gold AZ  Health and safety copic consered in formal gipter managements worker health and safety copic consered in formal agreements with trade unnotes  Gold AZ  Health and safety copic consered in formal agreements with trade unnotes  Gold AZ  Health and safety copic consered in formal agreements with trade unnotes  Gold AZ  Health and safety copic consered in formal agreements with trade unnotes  Gold AZ  Health and safety copic consered in formal agreements with trade unnotes  Gold AZ  Health and safety copic copic or high ink of diseases related to their occupations  Gold AZ  Health and safety copic copic or high ink of diseases related to their occupations  Gold AZ  Health and safety copic copic or high ink of diseases related to their occupations  Gold AZ  Health and safety copic copic or high ink of diseases related to their occupations  Gold AZ  Health and safety copic copic or high ink of diseases related to their occupations  Gold AZ  Health and safety copic copic or high ink of diseases related to their occu	Labor Practices	and Decent Work		
Set   Proceedings provided to fall-time employees that are not provided to temporary or part-time employees by significant control of positions of depositions.	Aspect: Emplo	yment		
Secretary   Secr	G4-LA1	Total number and rates of new employee hires and employee turnover by age group, gender, and region	Employee Data	31–32
Aspect: Labout Management Relations  GH-LA  Minimum notice periods regarding operational changes, including whether these are specified in collective  Aspect: Occupational Health and Safety  GH-LAS  Represenge of fout windsforce represented in formal joint management worker health and safety committees that help monitor and advice on occupational health and safety programs  GH-LAG  Fire finity and retained in finity occupational disease, load days, and absenteering, and total number of work-related fistallities by region and gender of finity occupational disease, load days, and absenteering, and total number of work-related fistallities by region and gender of finity occupational disease, load days, and absenteering, and total number of work-related fistallities by region and gender of finity occupational disease, load days, and absenteering, and total number of work-related fistallities by region and gender of finity occupational disease, load days, and absenteering, and total number of work-related fistallities by region and gender of the programs of safety such picks covered in formal agreements with trade-unitors.  GH-LAD  Region States with high included greater gending and support the continued employability of employees and safety and the advices of the continued employability of employees and support safety and the safety and the continued employability of employees and safety and safety safety and the safety and the continued employability of employees and safety and safety safety and safety safety safety and safety safet	G4-LA2		-	
Aspect: Occupational Health and Safety  February of total workforce represented in formal joint management-worker health and safety committees that here in the provided of the provided of total workforce represented in formal joint management-worker health and safety committees that here in the provided of the provid	G4-LA3	Return to work and retention rates after parental leave, by gender	Diversity Promotion Initiatives	36
Septed. Sequences of total workforce represented in formal joint management worker health and safety committees that help monitor and advise on occupational betailst and safety programs of the promotion and advise on occupational betailst and safety programs of the promotion and advise on occupational betailst and safety programs of the programs of pro	Aspect: Labor/	Management Relations		
Feechage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advice on occupational health and safety programs.  GR-LAB Type of injury and rates of injury, accupational health and safety programs.  GR-LAB Health and safety topics covered in formal agreements with toole unions.  GR-LAB Health and safety topics covered in formal agreements with toole unions.  GR-LAB Health and safety topics covered in formal agreements with toole unions.  GR-LAB Health and safety topics covered in formal agreements with toole unions.  GR-LAB Average hours of training per year per employee by gender, and by employee category.  GR-LAD Average hours of training per year per employee by gender, and by employee category.  GR-LAD Programs for salls management and lifelong learning that support the continued employability of employees and extension of the sall than in managing career endings.  GR-LAD Programs for salls management and lifelong learning that support the continued employability of employees and extension of employees receiving regular performance and career development reviews, by gender and by employees category exceedings to gender, age to exceed the formal by employees category exceedings to gender, age to employee category exceedings to gender, age to employee category exceedings to gender, age to employee the employees to employee category exceedings to gender, age to employee the employee to employee extension of genders age to employee the employee that to employee extension of development reviews, by gender and by employee the employee to employee extension of genders age to prove the employee to employee extension of genders age to employee the employee to employee the employee to	G4-LA4		-	
help monitor and advice on occupational health and aftery programs  G4-LA6 Tippe of injury and cause of injury, occupational diseases, lost days, and absenteeism, and total number of work-related fatallities by region and gender  G4-LA7 Workers with high incidence or high risk of diseases related to their occupation  4-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-1-	Aspect: Occup	ational Health and Safety		
Initiatives   Section	G4-LA5		-	
Aspect Final Processing of Percentage of Processing and Education   Aspect Final Processing of Statisting per year per employee by gender, and by employee category	G4-LA6			38
Aspect: Training and Education  G4-L9  Average hours of training per year per employee by gender, and by employee category  G4-L10  Programs for skills management and lifelong learning that support the continued employability of employees and sist them in managing career endings  G4-L11  Programs for skills management and lifelong learning that support the continued employability of employees and sist them in managing career endings  G4-L11  Precentage of employees receiving regular performance and career development reviews, by gender and by endougher and supplement reviews and Equal Opportunity  G4-L12  Composition of governance bodies and breakdown of employees per employee category according to gender, age - Employee Data - 10-Versity Promotion Initiatives - 36-20 - 2000, minority group membership, and other indicators of diversity - 2000, minority group membership, and other indicators of diversity - 2000, minority group membership, and other indicators of diversity - 2000, minority group membership, and other indicators of diversity - 2000, specification for Women and Men  G4-L13  Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation  Aspect: Supplier Assessment for Labor Practices  G4-L141  Precentage of new supplies that were screened using labor practices riteria  G4-L15  Significant actual and potential negative impacts for labor practices in the supply chain and actions taken  G4-L16  Number of grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms  G4-L16  Number of grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms  G4-L17  G4-L18  Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening of the proceedures concerning aspects of human rights clauses or that underwent human rights policies or procedures concerning aspects of human ri	G4-LA7	Workers with high incidence or high risk of diseases related to their occupation	-	
Average hours of training per year per employee by gender, and by employee category  G4-LA10  Average hours of training per year per employee by gender, and by employee category  G4-LA10  Programs for skills management and lifelong learning that support the continued employability of employees and sixt them in managing career endings  G4-LA11  Precentage of employees receiving regular performance and career development reviews, by gender and by employee category  Aspect: Diversity and Equal Opportunity  G4-LA12  Composition of governance bodies and breakdown of employees per employee category according to gender, age  group, minority group membership, and other indicators of diversity  G4-LA12  Composition of governance bodies and breakdown of employees per employee category according to gender, age  group, minority group membership, and other indicators of diversity  Aspect: Equal Remuneration for Women and Men  G4-LA12  Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation  Aspect: Supplier Assessment for Labor Practices  G4-LA14  Recreatage of new suppliers shat were screened using labor practices riferia  G4-LA15  Significant actual and potential negative impacts for labor practices in the supply chain and actions taken  Aspect: Labor Practices Grievance Mechanisms  G4-LA16  Number of grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms  G4-LA16  Total number and percentage of significant investment agreements and contracts that include human rights clauses  or that underwenthuman rights screening  G4-HB1  Total number and percentage of significant investment agreements and contracts that include human rights that are relevant to operations, including the percentage of employees trained  Aspect: Non-Discretification  G4-HB2  Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant relevant of percentage of employees trained  G4-HB2  T	G4-LA8	Health and safety topics covered in formal agreements with trade unions	-	
Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings	Aspect: Trainin	g and Education		
Selection assist them in managing career endings	G4-LA9	Average hours of training per year per employee by gender, and by employee category	=	
Aspect. Diversity and Equal Opportunity  G4-LA12 Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.  G4-LA12 Ratio of basic salary and remuneration for Women and Men  G4-LA13 Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation    G4-LA14 Percentage of new suppliers that were screened using labor practices criteria    G4-LA15 Significant actual and potential negative impacts for labor practices in the supply chain and actions taken    G4-LA16 Number off grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms    G4-LA16 Number off grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms    G4-LA16 Number off grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms    G4-LA16 Total number and percentage of significant investment agreements and contracts that include human rights clauses    G4-LR18 Total hours of employee training on human rights screening    G4-LR18 Total hours of employee training on human rights solicies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained    Aspect: Non-Distrimination  G4-LR18 Total number of incidents of discrimination and corrective actions taken    Aspect: Aspect for Human Rights Initiatives    G4-LR19 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to support these rights    G4-LR19 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor    G4-LR19 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor    G4-LR19 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor    G4-	G4-LA10			33–35
Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity   31–32, 260   200	G4-LA11		-	
Single-Equal Remuneration for Women and Men	Aspect: Diversi	ty and Equal Opportunity		
G4-LA13 Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation - Aspect: Supplier Assessment for Labor Practices G4-LA14 Percentage of new suppliers that were screened using labor practices criteria - G4-LA15 Significant actual and potential negative impacts for labor practices in the supply chain and actions taken - Separations and suppliers death of practices friewance Mechanisms G4-LA16 Number of grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms - Separative Muman Rights  Aspect: Investment G4-LA16 Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening G4-HR2 Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained  Aspect: Non-Discrimination G4-HR3 Total number of incidents of discrimination and corrective actions taken Aspect: Aspect: Aspect and Separation and Collective Bargaining G4-HR4 Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights  Aspect: Forced and Compulsory Labor  G4-HR6 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor  Aspect: Forced Total Compulsory Labor  G4-HR7 Practices  G4-HR8 Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant  Aspect: Forcetage of security personnel trained in the organization's human rights policies or procedures that are relevant	G4-LA12			
Aspect: Supplier Assessment for Labor Practices  G4-LA14 Percentage of new suppliers that were screened using labor practices criteria	Aspect: Equal F	Remuneration for Women and Men		
G4-LA14 Percentage of new suppliers that were screened using labor practices riteria - G4-LA15 Significant actual and potential negative impacts for labor practices in the supply chain and actions taken - Spect: Labor Practices Grievance Mechanisms G4-LA16 Number of grievances about Labor practices filed, addressed, and resolved through formal grievance mechanisms - Imman Rights  Aspect: Investment  G4-HR1 Total number and percentage of significant investment agreements and contracts that include human rights clauses or that underwent human rights screening  G4-HR2 Total hours of employee training on human rights policies or procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained  Aspect: Non-Discrimination  G4-HR3 Total number of incidents of discrimination and corrective actions taken - Total number of incidents of discrimination and corrective actions taken - Aspect: Freedom of Association and Collective Bargaining may be violated or at significant risk, and measures taken to support these rights  Aspect: Child Labor  G4-HR3 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to Contribute to the effective abolition of child labor  Aspect: Forced and Compulsory Labor  G4-HR6 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the effective abolition of all forms of forced or compulsory labor, and measures to contribute to the effective abolition of all forms of forced or compulsory labor, and measures to contribute to the effective abolition of all forms of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor, and measures that are relevant - Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant - Percentage of security personnel trained in the organization's human rights	G4-LA13	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation	-	
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G4-HR3 Total number of incidents of discrimination and corrective actions taken - Aspect: Freedom of Association and Collective Bargaining G4-HR4 Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and measures taken to support these rights  Aspect: Child Labor  G4-HR5 Operations and suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor  Aspect: Forced and Compulsory Labor  G4-HR6 Operations and suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor  Aspect: Security Practices  G4-HR7 Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant	Aspect: Non-D			
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measures to contribute to the elimination of all forms of forced or compulsory labor  Aspect: Security Practices  G4-H87  Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant	Aspect: Forced	and Compulsory Labor		
G4-HR7 Percentage of security personnel trained in the organization's human rights policies or procedures that are relevant	G4-HR6		Respect for Human Rights Initiatives	43
	Aspect: Securit	y Practices		
	G4-HR7		-	

Social Report

Item	Indicators	Where to find	Page number
Aspect: Indige	nous Rights		Hambel
G4-HR8	Total number of incidents of violations involving rights of indigenous people and actions taken	-	
Aspect: Assess	ment	l .	
G4-HR9	Total number and percentage of operations that have been subject to human rights reviews or impact assessments	-	
Aspect: Suppli	er Human Rights Assessment	<u> </u>	
G4-HR10	Percentage of new suppliers that were screened using human rights criteria	-	
G4-HR11	Significant actual and potential negative human rights impacts in the supply chain and actions taken	-	
Aspect: Huma	n Rights Grievance Mechanisms		
G4-HR12	Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms	-	
Society			
Aspect: Local (	Communities		
G4-SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs	Feature 4: Communication with Stakeholders	17–18
G4-SO2	Operations with significant actual and potential negative impacts on local communities	-	
Aspect: Anti-C	orruption		
G4-SO3	Total number and percentage of operations assessed for risks related to corruption and the significant risks identified	-	
G4-SO4	Communication and training on anti-corruption policies and procedures	Compliance	49
G4-SO5	Confirmed incidents of corruption and actions taken	-	
Aspect: Public	Policy		
G4-SO6	Total value of political contributions by country and recipient/beneficiary	=	
Aspect: Anti-C	ompetitive Behavior		
G4-SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes	-	
Aspect: Comp	liance		
G4-SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations	-	
Aspect: Suppli	er Assessment for Impacts on Society		
G4-SO9	Percentage of new suppliers that were screened using criteria for impacts on society	-	
G4-SO10	Significant actual and potential negative impacts on society in the supply chain and actions taken	-	
Aspect: Grieva	nce Mechanisms for Impacts on Society		
G4-SO11	Number of grievances about impacts on society filed, addressed, and resolved through formal grievance mechanisms	-	
Product Respo	onsibility		
Aspect: Custor	mer Health and Safety		
G4-PR1	Percentage of significant product and service categories for which health and safety impacts are assessed for improvement	-	
G4-PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning the health and safety impacts of products and services during their life cycle, by type of outcomes	-	
Aspect: Produc	ct and Service Labeling		
G4-PR3	Type of product and service information required by the organization's procedures for product and service information and labeling, and percentage of significant product and service categories subject to such information requirements	-	
G4-PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes	-	
G4-PR5	Results of surveys measuring customer satisfaction	-	
Aspect: Marke	ting Communications		
G4-PR6	Sale of banned or disputed products	-	
G4-PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotions, and sponsorship, by type of outcomes	-	
Aspect: Custor	mer Privacy		
G4-PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	-	
Aspect: Comp	liance		
G4-PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services	-	

# **Guide to JX Group Websites**

JX Group companies, including JX Holdings, Inc. and the three core operating subsidiaries, disclose a variety of CSR-related information on our websites. Please feel free to have a look at the information on these websites.

#### **JX Holdings**

JX Holdings Corporate Social Responsibility http://www.hd.jx-group.co.jp/english/csr/index.html



- ► Top Message
- JX-ENEOS Children's Story Award
- JX Group Volunteer Activities for Passing on Hope for the Future
- JX Group CSR Reports

#### Other Related Information about JX Holdings

- > Corporate Profile
- JX Group Mission
   Statement
- Management Message
- Management Strategy
- Corporate Data
- Executives
- Organization
- Corporate HistoryGroup Companies
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- Management PoliciesFinancial Highlights

- IR Library
- Shareholder & Stock Information
- Shareholder & Stock Information
- > About JX the Group
- JX Group Mission Statement
- Establishment of the JX Group
- Objectives and Basic Concept
- Business Integration
   Disclosure Materials

#### JX Nippon Oil & Energy

http://www.noe.jx-group.co.jp/english/index.html



- Corporate Profile
- CSR Report
- Products

#### **JX Nippon Oil & Gas Exploration**

JX Nippon Oil & Gas Exploration CSR (Safety, Environment, Social Contribution and Compliance)

http://www.nex.jx-group.co.jp/english/environment/index.html



- ▶ President's Message
- ► HSE Policy
- ► HSE Management System
- Operations Safety
- ▶ Environment
- Social Contribution
- Compliance and Human Rights
  Awareness
- Our Measures to Support Raising Children of The Next-Generation

#### **JX Nippon Mining & Metals**

JX Nippon Mining & Metals Corporate Social Responsibility http://www.nmm.jx-group.co.jp/english/sustainability/index.html



- ▶ Message from the President
- ► The Roots of CSR in the JX Nippon Mining & Metals Group
- CSR Promotion System
- Material Issues of the JX Nippon Mining & Metals Group
- Sustainability Report Download
- ▶ Environment
- Society
- Employees

#### NIPPO CORPORATION

NIPPO

▶ About NIPPO ▶ CSR

http://www.nippo-c.co.jp/english/aboutnippo/csr.html

#### TOHO TITANIUM CO., LTD.

Corporate Profile

http://www.toho-titanium.co.jp/en/company/index.html

Environment & CSR



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General Administration Department Inquiries (e-mail): csr@hd.jx-group.co.jp

After you have read the JX Report for a Sustainable Future 2016, feel free to submit any opinions or comments you may have via email.





The Morningstar Socially Responsible Investment Index, in which JX Holdings is included (as of July 27, 2016), comprises 150 noteworthy socially responsible companies selected from Morningstar Japan K.K. from among publicly-traded companies in Japan to create an index from their share prices. This is Japan's first socially responsible investment index.