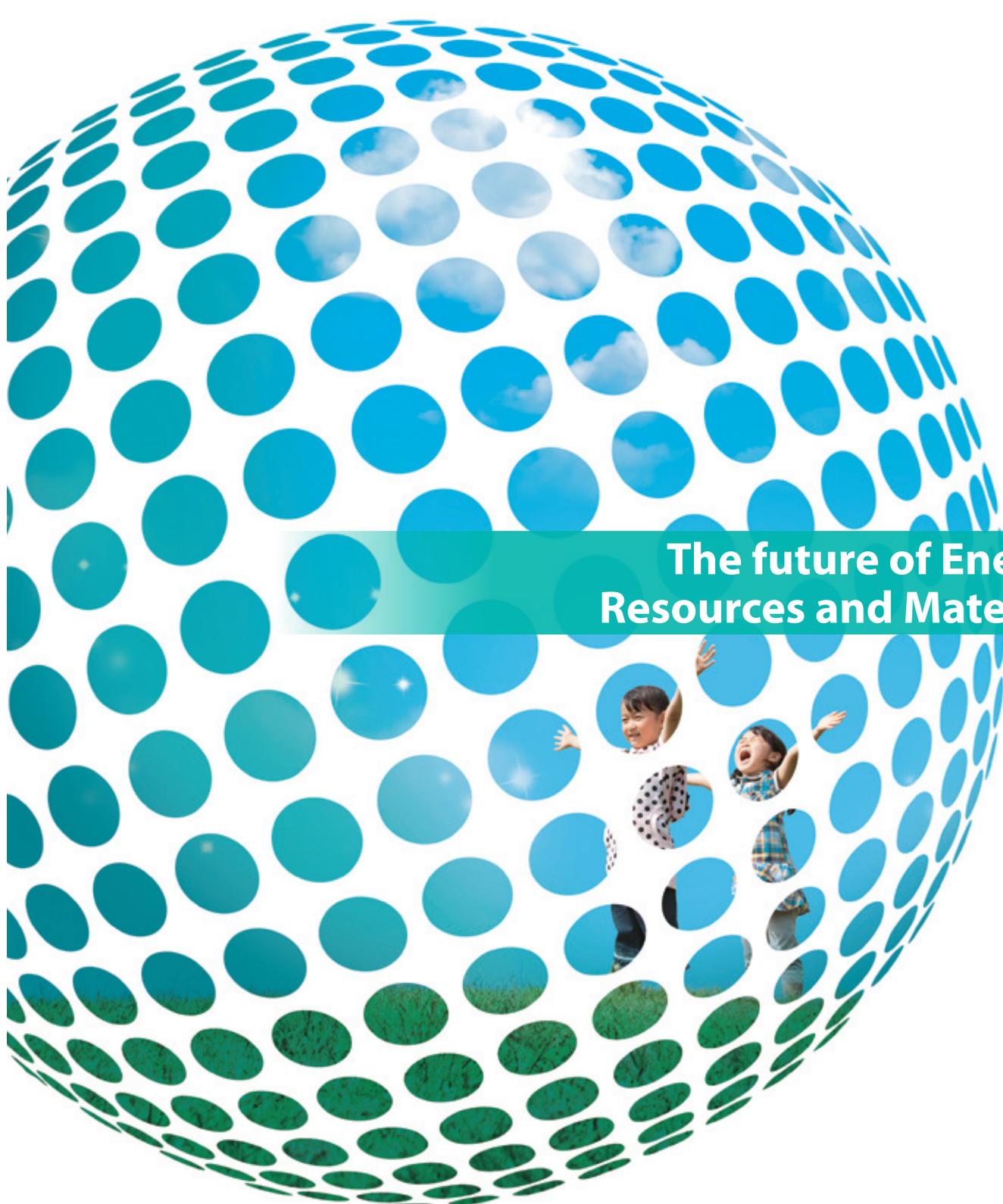


# JX Report

for a Sustainable Future 2013



The future of Energy,  
Resources and Materials

**JX Holdings, Inc.**

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## ● Editorial Policy

This report was compiled to fulfill JX Group's responsibility to explain its Corporate Social Responsibility (CSR) activities to all stakeholders—including shareholders, investors, customers, employees and local communities—and also to deepen its dialogue with and align its response to the expectations of its stakeholders.

The framework of this report is based on the JX Group Mission Statement and the JX Group Values.

The Features section introduces initiatives for the future the JX Group as a whole is undertaking to contribute to the development of a sustainable economy and society—"a stable supply of energy, resources, and materials," "the sustainable use of resources and a recycling-oriented society," and "a low-carbon society"—and also covers the Group's activities with its stakeholders.

The JX Group Values section reports on several representative activities we are conducting in accordance with the Group's five EARTH values. It also includes remarks from employees who carry out daily operations in line with the EARTH values.

The JX Group companies, including JX Holdings and the three core operating subsidiaries, disclose information on various CSR activities on their respective websites. Please take time to visit these websites. (See page 40)

### ● Scope of Report

- JX Holdings, Inc. and its 11 main Group companies.
- JX Nippon Oil & Energy Corporation and its 23 main Group companies.
- JX Nippon Oil & Gas Exploration Corporation and its 30 main Group companies.
- JX Nippon Mining & Metals Corporation and its 56 main Group companies.

The scope of quantitative information is defined in notes on each page.

### ● Reporting Period

In principle, the report covers the period from April 2012 to March 2013. However, some information from April 2013 onwards is also included, as necessary.

### ● Publication

February 2014  
(Previous issue December 2012. Next issue December 2014.)

### ● Guidelines Used as Reference

- The GRI (Global Reporting Initiative) Sustainability Reporting Guidelines, Version 3.1
- The Environmental Reporting Guidelines (2012 Edition), Ministry of the Environment, Japan.
- The GRI Mining and Metals Sector Supplement

### ● Enhancing Reporting Reliability

The environmental performance information data on pages 33–36 has been reviewed by an independent body to ensure objective and reliable reporting.

### 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.

# 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” is a brand that symbolizes the JX Group’s existence and presence. The letter “J” represents our position as one of the world’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’s 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.



# Management Message



**Yasushi Kimura**  
Representative Director, Chairman

**Isao Matsushita**  
Representative Director, President

## We Find Ourselves in the Middle of Global Structural Changes

Japan has seen structural declines in demand for petroleum products in recent years owing to its declining birthrate and aging society, declining population, changes in industrial structure, and promotion of energy efficiency. Since the Great East Japan Earthquake, Japan has also been reviewing its energy mix and is taking steps to address its many social challenges, including by diversifying its energy sources, making further progress in becoming a society based on independent, distributed energy systems, and promoting energy system reform to meet these goals.

Internationally, demand for energy resources, such as oil and natural gas, and non-ferrous metal resources, such as copper and rare metals, is growing on the back of infrastructure development and improving living standards in fast growing emerging countries.

As a result, the world will see continuing competition for resources moving forward. In addition, energy policy shifts are being debated around the world with the emergence of shale gas, while demand is rising for a low-carbon, recycling-oriented society as a means to solving environmental issues. Both of these have become important factors affecting the direction of the JX Group's businesses.

## The JX Group's Social Mission is to Contribute to the Development of a Sustainable Economy and Society

Given this business environment, in March 2013 we drew up the 2nd Medium-Term Management Plan, marking the start of growth, after completing the 1st Medium-Term Management Plan, which helped build the foundation for this growth. At the same time, we formulated a new Long-Term Vision for the JX Group in 2020.

This Long-Term Vision defines the JX Group in 2020 as a highly competitive corporate group fully compliant with international standards. Specifically, through the energy business we are aiming to become an energy conversion company that converts and supplies energy stably and efficiently; through the oil and natural gas development business we are aiming to become an upstream company that achieves sustainable growth with a focus on operatorship; and through the metals business we are aiming to become a global resources and materials company centered on copper.

The JX Group Mission Statement calls for contributions to the development of a sustainable economy and society through innovation in the areas of energy, resources and materials. Under this commitment and through our 2nd Medium-Term Management Plan and Long-Term Vision, we are moving forward with initiatives to become the world's leading integrated energy, resources, and materials corporate group.

## The JX Group is Collectively Focusing on CSR Activities

The JX Group is committed to pursuing both its business activities and CSR activities in a collective fashion that incorporates corporate citizenship and environmental protection.

Our business activities are defined by the slogan "The Future of Energy, Resources and Materials." Under this, we are pursuing the stable supply of energy, resources and materials, achieving a recycling-oriented society and the sustainable use of resources, and realizing a low-carbon society, through each of our business segments.

In fiscal 2012, we decided to move into the development phase at the Mariner oil field off the coast of the United Kingdom in the North Sea to create a facility that greatly contributes to our goal of achieving a stable energy supply. Meanwhile, the Caserones copper mine development project in Chile has commenced production of electrolytic copper and plans call for the production of copper concentrate to begin before the end of fiscal 2013. In addition, we have established plans to open 100 earthquake-ready service stations across Japan by fiscal 2015 that allow fuel to be pumped even after a power outage in locations where large-scale natural disasters are likely to occur.

As part of our efforts to build a recycling-oriented society, we completed construction of a new facility in Tsuruga City, Fukui Prefecture to finalize the commercialization plan for recovering rare metals from used lithium ion batteries.

We are also making great strides with our measures for realizing a low-carbon society. We

began developing the infrastructure for supplying hydrogen fuel at our service station network to help promote the spread of fuel cell vehicles. In addition, we commenced operations at mega solar facilities in Tagajo City, Miyagi Prefecture and Kudamatsu City, Yamaguchi Prefecture and have worked on expanding the "Dr. Ouchi-no Energy" household energy consulting service.

Each of our group companies are implementing their own social contribution activities tailored to their unique operations, such as ENEOS Forests. The entire JX Group is striving to coexist in harmony with society as a good corporate citizen, which includes promoting culture through the JX-ENEOS Children's Story Award, supporting the next generation with the JX-ENEOS Children's Story Fund, and assisting the disaster recovery effort through ongoing JX Group volunteer activities supporting restoration and recovery at the disaster areas affected by the Great East Japan Earthquake.

As for our environmental initiatives, we formulated the JX Group Medium-Term Environmental Management Plan (running from fiscal 2013 to fiscal 2015) in May 2013 based on deliberations within the group on environmental management aspects of the 2nd Medium-Term Management Plan. Under this plan, we have established shared group-wide targets under the three underlying themes of promoting measures to prevent global warming and conserve biodiversity, reducing environmental impacts, and enhancing the environmental management system. We are currently making efforts collectively to achieve each of these targets.

In 2012, compliance deficiencies were found at multiple refineries with regard to safety tests stipulated by the High Pressure Gas Safety Act. Of these, Mizushima Refinery B-Plant had its license terminated by the Ministry of Economy, Trade and Industry on December 25, 2012 in accordance with the provisions of this Act. The JX Group recognizes the seriousness of this incident and as such is taking steps collectively as a group to prevent future reoccurrences, raise awareness toward the critical nature of compliance within our business activities, and regain the trust of stakeholders as quickly as possible.

The JX Group is committed to listening carefully to the opinions and needs of its shareholders and investors as well as the many stakeholders directly involved in its business operations, and reflecting these in the management process in order to ensure the soundness and transparency of its management practices.

We ask for your understanding and support of the JX Group as we move forward.

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

## JX Nippon Oil & Energy Corporation



**Seiichi Isshiki**

Representative Director, President  
JX Nippon Oil & Energy Corporation

### Satisfying Society's Diverse Needs as an Energy Conversion Company

The JX Nippon Oil & Energy Group maintains the social mission of converting various resources into the form of energy required by its customers, whether it is gasoline, kerosene, or electricity. To achieve this mission, we have established stable supply systems for various forms of energy across the value chain, from resource procurement to production, logistics and sales. We are also taking steps to reinforce our service station distribution network and establish energy infrastructure that can withstand disasters and other emergencies.

Environmentally speaking, we are making our refineries and other business sites more energy efficient, while at the same time also developing and selling eco-friendly

products like residential-use fuel cells and more fuel efficient oils. Through these efforts, we are striving to reduce the environmental impacts of customers when they consume energy. In addition, we are also working with homebuilders and other companies to deliver homes that are more energy efficient with the goal of realizing a low-carbon society and helping to contribute to a sustainable economy and society.

We are committed to compliance and safety, and are seeking to become a corporate group that considers the safety and comfort of people as well as the happiness of all stakeholders through energy conversion.

## JX Nippon Oil & Gas Exploration Corporation



**Shigeo Hirai**

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

### Pursuing Environmentally-friendly and Safety-conscious Oil and Gas Exploration and Development Business

JX Nippon Oil & Gas Exploration Group is engaged in the environmentally-friendly and safety-conscious business of oil and gas exploration and development in 14 countries around the world. In particular, we are operating an oil production project in Vietnam and a gas production project in Malaysia.

As international competition to acquire resources intensifies, we have to explore and develop more challenging oil and gas fields, including in deep sea and high-temperature/high-pressure conditions. In such a business climate, we will: increase reserves and production volume mainly through exploration; accumulate expertise mainly through operatorship and taking a proactive

business approach; and establish competitive advantages by focusing on core business areas and technologies. With this as our basic strategy, we will aim to maximize our corporate value with the target of producing 200,000 barrels per day in 2020.

At the same time, as a prerequisite to these, we will fulfill our social responsibilities by establishing and enriching a CSR promotion system based on the three pillars of compliance, social contribution and HSE (health, safety and environment). We are also contributing to sustainable development, through our regular business activities, in countries and regions where we are running our business.

## JX Nippon Mining & Metals Corporation



**Yoshimasa Adachi**

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

### Contributing to Worldwide Sustainable Development by Stably Supplying and Effectively Utilizing Metal Resources

The JX Nippon Mining & Metals Group is an integrated non-ferrous metals manufacturer, and has been active in businesses covering resources development, smelting and refining, electronic materials, and recycling and environmental services, with copper at its core.

In the resources development business, the Group is going ahead with the Caserones Copper and Molybdenum Deposit Development Project in Chile, which is the first copper mining development project carried out solely by Japanese companies. We have already begun producing copper cathodes, and plan to start copper concentrates production by the end of fiscal 2013. In other business areas, fulfilling our role as Japan's largest copper smelter and

refinery, we are advancing such new strategies as making forays into functional materials used for automobiles and overseas procurement of recycled materials. At the same time, we are expanding our businesses by differentiating our products and services and streamlining our business operations.

We believe that our CSR activities are nothing more or less than our business activities, and are carrying out our social mission of providing a stable supply of resources and materials. By instilling the spirits of safety first and compliance throughout the entire Group and developing global human resources, the Group is engaged in its world-class CSR activities.

## JX Group Overview

### Holding Company Overview

#### JX Holdings, Inc.

Representatives: Yasushi Kimura, Representative Director, Chairman  
Isao Matsushita, Representative Director, President  
Head Office Location: 6-3 Otemachi 2-chome, Chiyoda-ku, Tokyo  
100-8161, Japan

Established: April 1, 2010

Capital: ¥100 billion

Principal Group Businesses: Energy Business, Oil and Natural Gas E&P Business, and Metals Business



### Overview of Core Operating Subsidiaries

#### JX Nippon Oil & Energy Corporation

Representative: Seiichi Isshiki, Representative Director, President  
Head Office Location: 6-3 Otemachi 2-chome, Chiyoda-ku, Tokyo  
100-8162, Japan

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

Principal Business: Refining and marketing of petroleum products (gasoline, kerosene, lubricants, etc.), manufacturing and marketing of petrochemical products, import and marketing of gas (LPG and LNG), import and marketing of coal, supplying electric power, and developing, manufacturing and marketing residential-use fuel cells, photovoltaic cells, power storage batteries and other products



#### JX Nippon Oil & Gas Exploration Corporation

Representative: Shigeo Hirai, Representative Director, President and CEO  
Head Office Location: 6-3 Otemachi 2-chome, Chiyoda-ku, Tokyo  
100-8163, Japan

Capital: ¥9.8 billion (100% investment of JX Holdings, Inc.)

Principal Business: Exploration for and development of oil, natural gas, and other mineral resources; extraction, processing, storage, sale, and shipment of petroleum, natural gas, and other mineral resources and their secondary products



#### JX Nippon Mining & Metals Corporation

Representative: Yoshimasa Adachi, Representative Director, President and CEO  
Head Office Location: 6-3 Otemachi 2-chome, Chiyoda-ku, Tokyo  
100-8164, Japan

Capital: ¥40 billion (100% investment of JX Holdings, Inc.)

Principal Business: Development and mining of non-ferrous metal resources, smelting and refining and marketing of non-ferrous metals (copper, gold, silver, etc.), manufacturing and marketing of electronic materials, recycling of non-ferrous metal materials, and treatment of industrial waste for reuse



### Overview of Listed Subsidiaries

#### Consolidated Subsidiaries: 2

##### NIPPO CORPORATION

Representative: Kazunori Mizushima, Representative Director, President  
Head Office Location: 19-11 Kyobashi 1-chome, Chuo-ku, Tokyo 104-8380, Japan  
Capital: ¥15.3 billion (57.2% investment of JX Holdings, Inc.)

Principal Business: Civil engineering works such as construction of roads and paving work, building work, and the manufacturing and sale of asphalt mixture

##### Toho Titanium Co., Ltd.

Representative: Kiyonobu Sugiuchi, Representative Director, President  
Head Office Location: 3-5 Chigasaki 3-chome, Chigasaki City, Kanagawa 253-8510, Japan

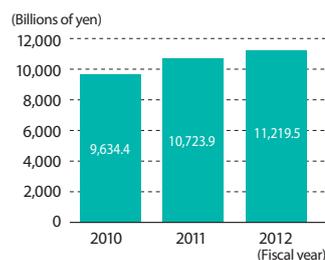
Capital: ¥12 billion (50.4% investment of JX Holdings, Inc.)

Principal Business: Refining, melting and sale of titanium metals

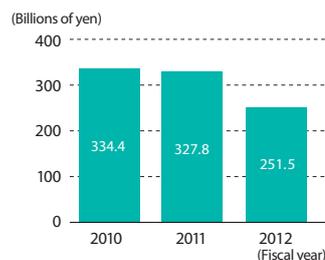
#### Equity-method Affiliates: 5

## Financial Highlights

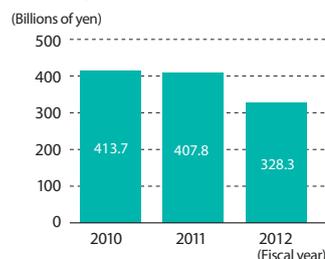
### Net Sales



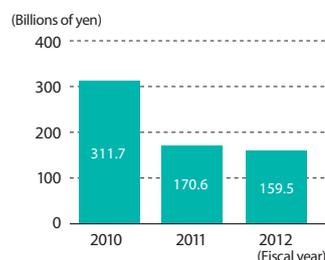
### Operating Income



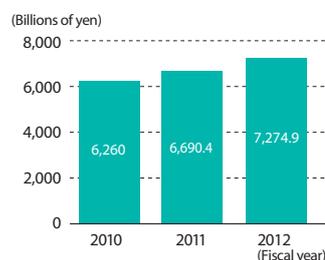
### Ordinary Income



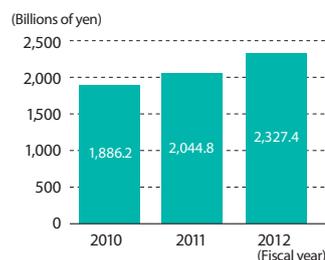
### Net Income



### Total Assets



### Net Assets



# 2nd Medium-Term Management Plan and Long-Term Vision

In March 2013, the JX Group drew up the 2nd Medium-Term Management Plan, which defines strategies and targets for the subsequent three years from fiscal 2013, and the Long-Term Vision, which offers a glimpse of the JX Group in fiscal 2020.

## 2nd Medium-Term Management Plan

We have drawn up the 2nd Medium-Term Management Plan after looking back on the results of the 1st Medium-Term Management Plan and based on changes that have taken place in society and the business climate surrounding the JX Group. Through this plan, our goal is to become one of the world's leading integrated energy, resources and materials corporate groups by fully implementing key strategies and achieving quantitative targets.

### Basic Policy



### Basic Strategies by Business

We have drawn up basic business strategies for each core business of the JX Group in line with the business environment and based on the basic policy noted above.

#### ◆ Energy business

##### Petroleum Refining and Marketing

###### Business Environment

- Continued structural decline in domestic demand for fuel oils and ongoing competition with imports

###### Basic strategy

- Strengthening profitability in petroleum refining and marketing, the core business of JX Nippon Oil & Energy

##### Energy conversion operations

###### Business Environment

- Government's re-examination of national energy policy taking shape

###### Basic strategy

- Enhancing business as an Energy Conversion Company

##### Basic chemical products & lubricants

###### Business Environment

- Continued growth in energy and materials markets, centered on Asia

###### Basic strategy

- Establishing a presence in overseas markets

##### Specialty & performance chemical products

###### Business Environment

- Growth in demand for high-value-added products in emerging countries

###### Basic strategy

- Capturing demand for high-value-added products based on original technologies that are based on proprietary technologies

#### ◆ Oil and Gas Exploration and Production Business

##### Business Environment

- Steady increase in demand for crude oil and natural gas, mainly in emerging economies, and high-and-volatile price levels for resources and energy
- Intense competition to acquire resources and growing requirement for sophisticated technologies for exploration and development

##### Basic strategy

- Increasing reserves and production volume mainly through exploration activities
- Establishing advantage by focusing on core business area and technology
- Restructuring business portfolio responding to business environmental change

#### ◆ Metals business

##### Resources development

###### Business Environment

- The demand for copper, centering around Asia, will uphold high level of copper price
- Advancement of technologies and increase in funds required for resources development will lead to capital intensification and oligopolies in the resources development industries

##### Basic strategy

- Establishing a business model to generate high profit by increasing concessions of copper mines
- Acquiring concessions of copper mines by utilizing our uniquely developed technologies

##### Copper smelting & refining

###### Business Environment

- Ongoing mine development projects will not enable us to have much hope for significant improvement in TR/RC

##### Basic strategy

- Establishing a copper smelting and refining business structure to achieve the world top-class cost-competitiveness

## Electronic materials

### Business Environment

- Demand for electronic materials and components used in business fields of advanced IT, automobiles, medicine, and other industries will further increase

### Basic strategy

- Securing top shares of our electronic materials in the world market

## Recycling and environmental services

### Business Environment

- Requirement to establish eco-conscious society will result in expanding demand for products manufactured from recycled materials

### Basic strategy

- Building a recycling-oriented business model to globally develop our environment-friendly zero emission system

## Target

	2nd Medium-Term Management Plan	(Reference) 1st Medium-Term Management Plan
Ordinary Income	Over ¥400 billion (FY2015)	Over ¥300 billion (FY2012)
ROE	Over 10% (FY2015)	Over 10% (FY2012)
Net D/E Ratio	Under 0.9 times (FY2015)	Under 1.0 times (FY2012)
CAPEX (plan)	Over ¥1,300 + $\alpha^*$ billion (FY2013-2015 3-year total)	¥960 billion (FY2010-2012 3-year total)

Assumptions (FY2015)

Exchange Rate ¥90 / US \$

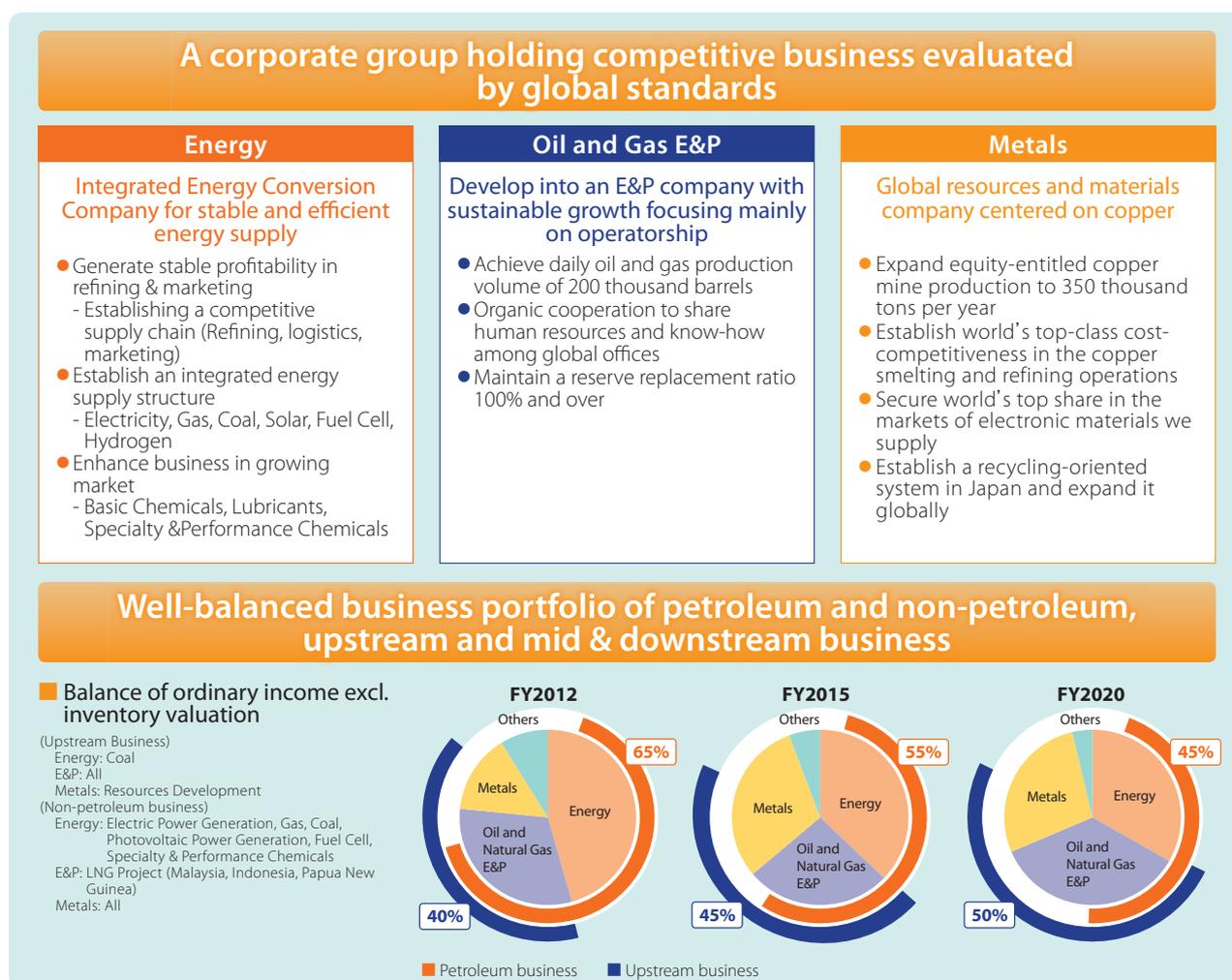
Crude Price (Dubai spot) US\$110 / bbl.

Copper Price (LME) 360 € / lb.

\*The designation " $\alpha$ " is used to denote additional strategic investment projects implemented based on changes in the business environment

## Long-Term Vision – The JX Group in Fiscal 2020

The Long-Term Vision defines the ideal vision for the JX Group's business portfolio structure in the year 2020, so that JX can become one of the world's leading integrated energy, resources, and materials corporate groups. This vision is being shared and followed across the entire JX Group.



The Long-Term Vision leverages the strengths of each business to establish competitive advantages internationally and to achieve a well-balanced business portfolio between petroleum and non-petroleum, and upstream and mid & downstream businesses.

To achieve this, we will need to promote creativity and reform, while also stabilizing and strengthening the base of our existing businesses. The Long-Term Vision will also be achieved by fully implementing the fundamental strategies laid out for each business in the 2nd Medium-Term Management Plan.

# For the Future of Society

## Ensuring a Stable Supply of Energy, Resources and Materials in the Future

### Recognition of Current Conditions

Demand for natural resources, such as oil, gas and metals, is increasing annually, mainly in emerging economies. Countries and companies are consequently competing more intensely for these resources. Given this trend, our stakeholders have been expecting stable supply of energy, resources and materials, which are indispensable to industries, economies and people's everyday lives.

### Basic Approaches

**The JX Group will leverage our comprehensive competencies to ensure a stable supply of energy, resources and materials.**

- Expand the exploration and development of overseas oil and gas fields to attain our goal of securing stable production of 200,000 barrels per day
- Ensure safe operation in oil and gas development and enhance business opportunities through the application of new technologies
- Enhance business as an Energy Conversion Company
- Fortify the oil and gas sales network and build a disaster-resistant stable supply system
- Strengthen the petrochemical and lubricant supply system, primarily in Asia
- Promote exploration and development activities to expand equity-entitled copper mine production to 350,000 tons per year
- Achieve full-fledged safe and stable copper smelting and refining operations and establish world's top-class cost-competitiveness
- Secure world's top share in the markets of electronic materials we supply

## Aiming for the Sustainable Recycling-Oriented Society

### Recognition of Current

In modern society, non-ferrous for leading wealthy and cultural society to future generations, enable us to effectively reuse limited

### Basic Approaches

**The JX Group will capability that we have create society where effectively recycled and**

- Maximize synergy between business which properly treats and our recycling business metals from recycled raw
- Properly treat recycled the burden that affects aspects
- Establish a global resource
- Utilize next-generation resources development recover value-bearing metals





## Use of Resources and a in the Future

### Conditions

metals are an invaluable resource lives. In order to pass sustainable establishment of systems that resources is encouraged.

**leverage technological long cultivated to help metal resources are reused.**

our environmental services and detoxify industrial waste, which recovers pure valuable materials

raw materials to minimize environmental and social

recycling network

smelting technologies in business field to effectively from low-grade ore

## Realizing a Low-Carbon Society in the Future

### Recognition of Current Conditions

Reducing CO<sub>2</sub> emissions on a worldwide scale has become an urgent issue. As a result, various actions are desired at all levels, including changes in energy policy, greater innovation in the business world, and consumers making changes to their life-styles.

### Basic Approaches

**The JX Group is committed to creating systems for supplying energy and to developing the materials of tomorrow that will lead to a low-carbon society.**

- Promote initiatives that focus on the use of renewable energy and advanced use of fossil energy
- Provide distributed power devices and services that make homes more energy efficient and reduce environmental impacts, such as fuel cells, solar power generation systems and storage batteries
- Propose energy management systems that help reduce environmental impacts
- Develop hydrogen supply infrastructure using service stations in order to further promote the spread of fuel cell vehicles
- Supply high performance electronic materials to growth sectors that contribute to a low-carbon society, such as electric vehicles, etc.



## Ensuring a Stable Supply of Energy, Resources and Materials in the Future

As a corporate group that supports people's lives and plays an integral role in economic infrastructure, the JX Group is focusing its strengths on the development of a stable supply system that encompasses resource development, production and sales in the respective fields of energy, resources and materials. We aim to contribute to economic and social development through these businesses.

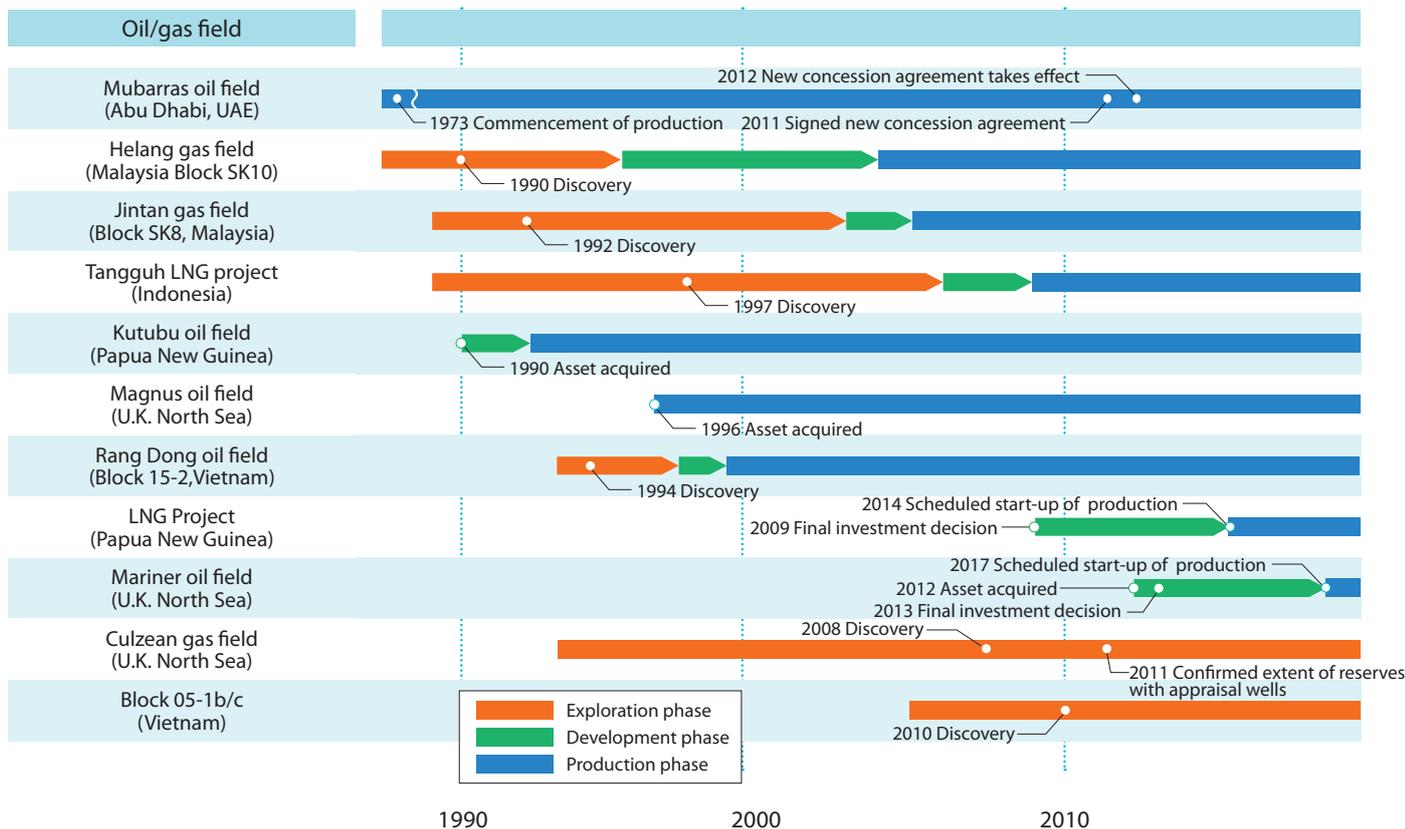


### Expand Oil and Gas Exploration and Production

Competition for resource interests has been intensifying due to the global expansion in demand for oil and natural gas. Moreover, in recent years, with the increasing percentage of oil and gas discoveries in severe conditions of natural environment, such as remote area or deep water, sophisticated technologies and considerable financial strength are imperative. Amid this harsh business climate,

JX Nippon Oil & Gas Exploration is engaging in measures to expand reserves and production, mainly through exploration activities, to attain its daily production goal for 2020 of 200,000 barrels. Specifically, we will capitalize on the knowledge we have obtained thus far and on our favorable relationships with state-owned oil companies as well as oil-producing countries and regions, while prioritizing the allocation of management resources by focusing on core regions and technologies, and establish advantage by accumulating technologies, primarily through our activities as an operator.

#### Exploration and Development Schedule for Principal Oil and Gas Fields





Rang Dong oil field in Vietnam



Caserones copper mine in Chile

We drive forward the following projects to achieve our production goal of 200,000 barrels per day in 2020.

- (1) Projects under development
  - Papua New Guinea LNG
  - Mariner oil field in the UK North Sea
- (2) Projects before final investment decision
  - Culzean gas field in the UK North Sea
  - 3rd train of the Tangguh LNG project in Indonesia
- (3) Promoting large exploration operation project
  - Block SK-333 and Deep Water Block R offshore Sabah in Malaysia
  - Block A in Qatar

## Expand Copper Mine Concessions

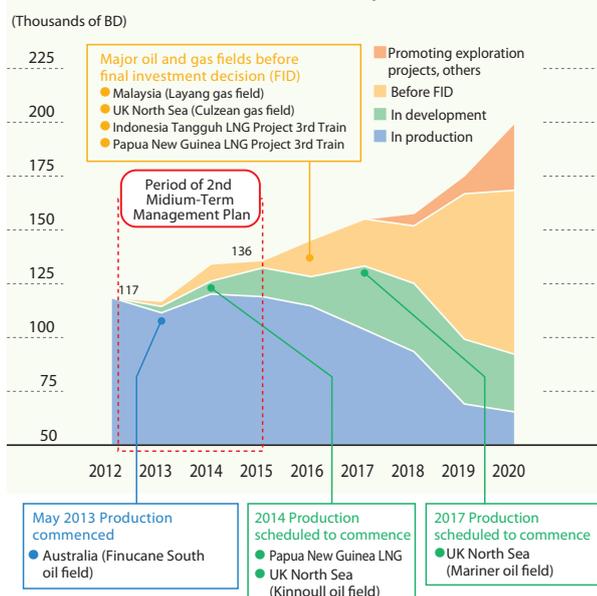
As is the case with oil and natural gas, ensuring the stable supply of metal resources is also a crucial issue.

JX Nippon Mining & Metals has actively developed copper resources, and possesses concessions at high quality copper mines around the world, including the Escondida Mine in Chile, which is the world's largest.

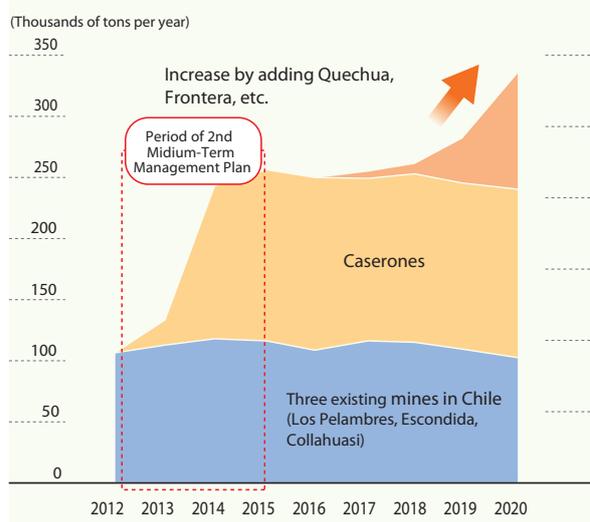
At the Caserones Copper and Molybdenum Deposit in Chile, we launched the production of refined copper in March 2013 and plan to begin production of copper concentrate in fiscal 2013. Our plans for average annual output in the first 10 years is 150,000 tons of copper concentrate (copper content), 30,000 tons of refined copper and 3,000 tons of molybdenum concentrate. Once in full operation, the ratio of equity entitlement copper-mine production\* is expected to significantly improve from under 20% to roughly 50%, and further out we target equity-entitled copper production of 350,000 tons per year.

\* The ratio of equity entitlement copper-mine production: the ratio of copper concentrate obtained from sources where a company owns mining concessions to its total copper concentrate required for its smelting and refining operations

### Production Forecast (Crude oil equivalent)



### Equity-Entitled Copper Mine Production

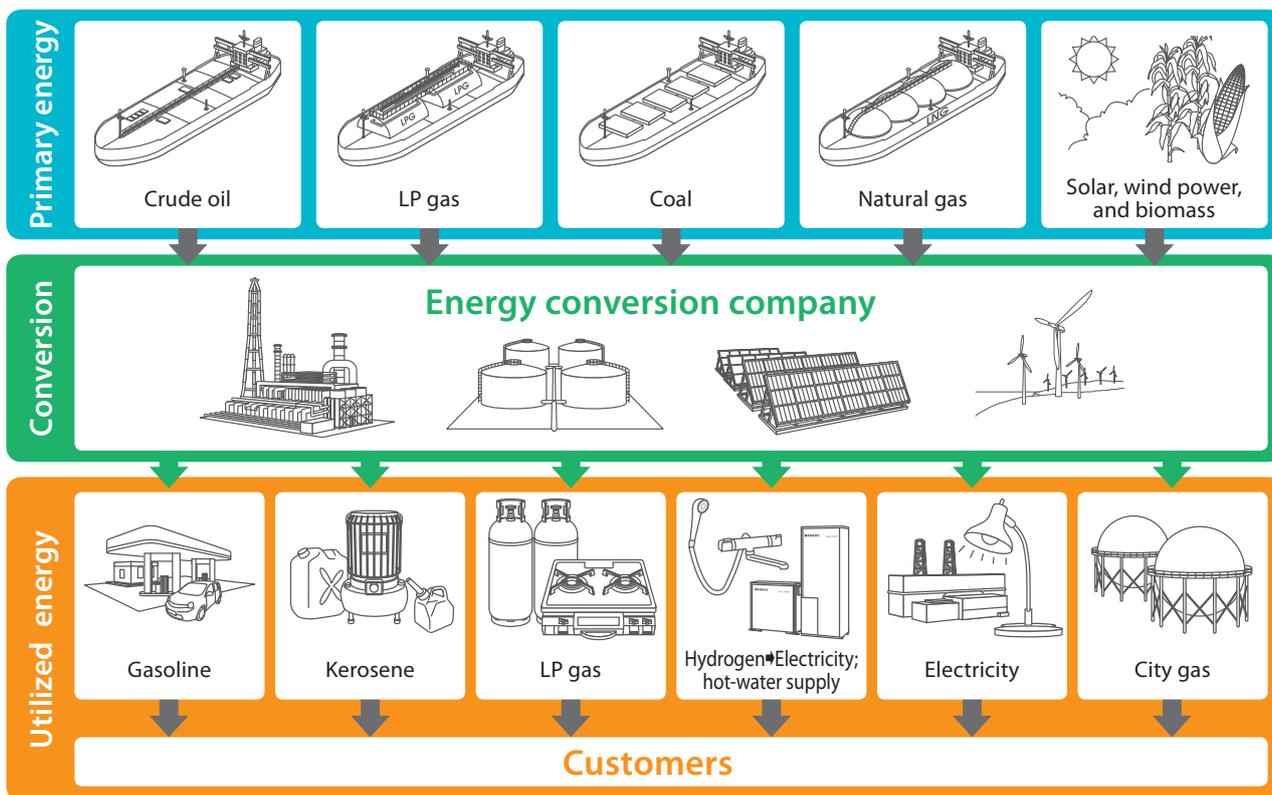


## Initiatives as an Energy Conversion Company

JX Nippon Oil & Energy Corporation is taking initiatives as an energy conversion company to efficiently convert naturally occurring primary energy, such as crude oil,

natural gas, coal and solar, into the best energy source for customers, and to deliver stable supplies of this energy. We are looking to expand our business based on the evolution of Japan's future energy policy trends following the Great East Japan Earthquake that struck in March 2011.

### Initiatives as an Energy Conversion Company



During the 1st Medium-Term Management Plan that spanned from fiscal 2010 to fiscal 2012, we expanded the Mizushima LNG Terminal and finalized plans to construct LNG terminals at Hachinohe and Kushiro<sup>\*1</sup> (operations slated to begin in 2015). In addition, we acquired mining concessions from Xstrata Coal of Australia for a coking coal block in Canada.

As an energy conversion company, going forward we will take steps to enhance our core business of petroleum refining and marketing as well as expand the following businesses.

**Electricity Business:** We will expand our business through modifications to electricity systems.

**Gas Business:** We will capture new demand and expand our supply base with the Hachinohe and Kushiro LNG terminal construction projects slated for completion and full-scale operations in 2015.

**Coal Business:** We will expand coal sales by acquiring new demand domestically and move forward with the coking coal development project in Canada.

**Renewable Energy:** In the fuel cell business, we will

continue to reduce manufacturing costs and build an optimized production system. We will expand the Dr. Ouchi-no Energy<sup>\*2</sup> household energy consulting service through partnerships with other companies. In addition, we will proactively utilize JX Group land that is idle to grow the mega solar generation business<sup>\*3</sup>.

**Hydrogen Business:** In April and May 2013 we successively opened service stations that provide both gasoline and hydrogen<sup>\*4</sup>. Based on the results of verification testing for these hydrogen stations, we will begin to develop a hydrogen supply infrastructure using our nationwide network of service stations and build an appropriate business model.

JX Nippon Oil & Energy's annual domestic sales of fuel oil stand at about 72 million kiloliters<sup>\*5</sup>, or a 37% market share. There are some 11,000 ENEOS service stations in operation across Japan, representing a 32% market share of service stations. The company also enjoys a dominant market share in the oil refining and marketing segment, which form the foundation for Japan's industrial and economic activities. Our greatest mission is to provide a stable supply of energy essential to our daily business activities and people's lives.

\*1: See page 20 for more details.  
\*3/\*4: See page 19 for more details.

\*2: See page 18 for more details.  
\*5: Data as of March 31, 2013.

## Delivering a Stable Supply of Petroleum Products

Worldwide demand is growing for energy, resources and petroleum products. As a result, one of the JX Group's most important roles in society is to continually provide a stable supply of energy, resources and materials, while carefully monitoring market needs with forward-looking insight.

We are fulfilling this responsibility as Japan's largest oil refiner and supplier and we are also responding to robust demand from Asian markets by supplying lubricants and petrochemical products.

### Supplying Products to Asian Markets where Demand Remains Rampant

JX Nippon Oil & Energy recognizes that it can leverage its integrated strengths in petroleum product research and development, manufacturing and marketing to make contributions to the development of business and industry overseas. Emerging countries have robust demand for petroleum and petrochemical products, but at the same time many of these countries lack supply capacity. We are aggressively expanding our business mainly in Asia for paraxylene, which is used as a basic chemical for the raw materials of many products and lubricants, which are used widely as a basic material.

#### ◆ Paraxylene Project in South Korea

Paraxylene is a basic chemical used to make polyester and PET bottles, and demand is expected to rise significantly going forward mainly from China. JX Nippon Oil & Energy, which is currently Asia's largest seller of paraxylene, concluded a joint venture agreement with SK Global Chemicals Co., Ltd. of South Korea in the summer of 2011 and established Ulsan Aromatics Co., Ltd. in June 2012. The planned annual production capacity of this joint venture will be one million tons (JX Nippon Oil & Energy's portion will be 500,000 tons), which will make it the largest in the world. After this project is launched, we will seek to capture greater demand from this growing market and further establish ourselves as one of the world's producer of paraxylene.

#### ◆ Expanding Overseas Lubricants Business

Demand for all types of lubricants, including those used in automobiles and for industrial applications, is on the rise, making a stable, high-quality supply of lubricant products essential mainly for emerging countries. High-quality lubricants will also play a critical role in generating greater energy savings, especially given the motorization advancements taking place in emerging countries.

We established a lubricants manufacturing and marketing company in Vietnam that will enable us to build an integrated manufacturing and marketing system in the country. We have also commenced local production of lubricant products for motorcycles and automobiles in Indonesia as well.

Going forward, we will take steps to reinforce our manufacturing and marketing systems mainly in the high growth markets of the Asia region.

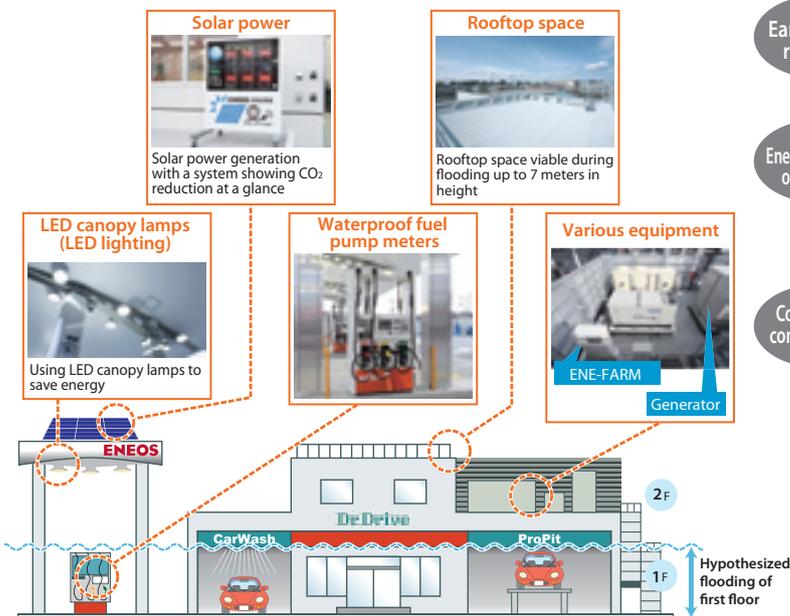
### Service Stations That Can Pump Fuel Even during an Earthquake Disaster

JX Nippon Oil & Energy has opened service stations that can continue to pump fuels even during a power outage following an earthquake. The Great East Japan Earthquake, however, brought about a new problem, as a giant tsunami destroyed the electricity system, rendering service station fill-ups impossible.

As a result, we have been conducting trial demonstrations at a new earthquake-ready service station, which has rooftop space for a water tank and evacuation site to assist the local community during an emergency. As part of this project, we have also taken measures to ensure that the service station can withstand not only a power outage, but major flooding as well, in order to accommodate risks associated with a major disaster that affects a wide area. The service station also has a fuel cell, solar power generation system, and LED lighting to help reduce energy use during normal operations.

We are currently examining whether to open earthquake-ready service stations in a total of 12 cities and wards along the Pacific Coast of Japan from Tohoku in the north to Kyushu in the south to help improve the functions of local social infrastructure. As of August 31, 2013, we had opened four earthquake-ready service stations, one each in Ishinomaki City, Miyagi Prefecture, Wakabayashi Ward, Sendai City, Yaizu City, Shizuoka Prefecture, and Onomichi City, Hiroshima Prefecture.

#### ■ Overview of the New Earthquake-ready Service Station



#### ..... ENEOS' New Earthquake-ready Service Station .....

Earthquake resilient	Flooding	Waterproof fuel pump meters (motor can be easily accessed and replaced) Emergency generators and fuel cells located on second floor
	Power outage	Emergency generator (independent, distributed energy system)
Energy efficient operations	Solar power generation system	Solar power generation system (uses renewable natural energy)
	LED lighting	LED canopy lights and indoor lighting (changed over to energy efficient lighting equipment)
Community contributions	Fuel cells	High efficiency power generation and hot-water system (JX Nippon Oil & Energy's ENE-FARM solid-oxide fuel cell system)
	Power source for charging mobile phones	Power source provided by emergency generators
	Drinking water	Approximately 2,000 PET bottles of drinking water stored onsite
	Emergency evacuation site	Located on second floor rooftop (temporary evacuation during flooding)



## Aiming for the Sustainable Use of Resources and a Recycling-Oriented Society in the Future

As an integrated non-ferrous metals company, JX Nippon Mining & Metals engages in a wide range of operations, covering upstream (resources development), midstream (metal refining), and downstream (electronic materials, and recycling and environmental services) operations. We are aiming to build a recycling-oriented society through our recycling and environmental services business, to effectively use of precious metal resources that will support our future.

### Features of the Recycling and Environmental Services Business

The JX Nippon Mining & Metals Group engages in integrated operations consisting of resources development, smelting and refining, recycling and environmental services and electronic materials processing in the area of non-ferrous metals—centering around copper, but also titanium, precious and rare metals. One of the key features and strengths of the recycling and environmental services business is that we possess a full spectrum of technologies, ranging from rendering industrial waste harmless to those for recycling resources into high pure materials, which are based on comprehensive processes and know-how.

Our recycling and environmental services consists of the environmental services business to render industrial waste harmless through proper treatment methods and the recycling business to convert recyclable materials containing valuable metals into highly pure materials.

For example, the recycling business at the company's Saganoseki Smelter & Refinery, which is one of the world's largest and most efficient copper refineries, uses surplus heat from smelting and refining process to recycle scrap containing conventional and precious metals. In this manner, the refinery is helping not only to maximize the use of resources, but also contributing to reduce the Group's impact by effectively utilizing energy.

At the same time, in our environmental services business carried out in four operating sites in Japan, valuable metals are condensed from the proper treatment process and used as raw materials for the recycling business.

We leverage the technologies cultivated in resources development and smelting and refining to employ "proper treatment methods" to bring the environmental impact from these businesses as close to zero as possible.

Consequently, we aim to establish a recycling-oriented society by enhancing the synergistic benefits from various processes, and achieving both economic efficiency and environmental conservation through our recycling business, which recovers a "diverse range of metals" by using "diverse processing technologies" to process "diverse raw materials."

### Recycling and Environmental Services Business of the JX Nippon Mining & Metals Group

Recycled materials

 Copper scrap	 Precious metals scrap (e-scrap, etc.)	 Gold and silver dregs	 Copper dregs	 Used mobile phones
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Industrial waste

 Waste oil	 Waste acid	 Waste alkali
 Sludge	 Waste plastic (shredder dust)	 e-waste

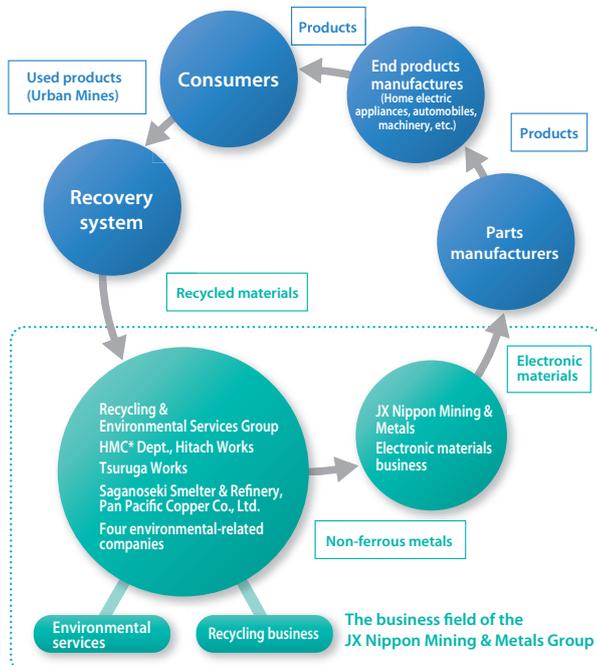
### Features and Strengths of the JX Nippon Mining & Metals Group

- 1 Proprietary technology**  
The group owns proprietary process technologies combining pyrometallurgical and hydrometallurgical technologies, based on smelting, electrolysis and analysis technologies developed over many years in the non-ferrous metal smelting and refining business.
- 2 High-quality facilities**  
The group utilizes the facilities of Saganoseki Smelter & Refinery, which has one of the world's largest, high-efficiency copper smelting and refining processes.
- 3 Location**  
The group carries out non-ferrous metal recycling at the Hitachi Works in close proximity to the Tokyo metropolitan area, an urban mine where large amounts of recycled materials are available.
- 4 Collection network**  
The group has a nationwide network of collection sites for recycled materials in Japan, as well as a collection site in Taiwan.
- 5 Treatment network**  
The group has enhanced pretreatment capabilities utilizing the four core environmental services companies (capable of addressing difficult-to-treat materials).
- 6 Group-wide capabilities of JX Nippon Mining & Metals**  
The group harnesses synergies with the copper smelting and refining and electronic materials businesses, and utilizes its group-wide network of affiliated companies.

Products

 Refined copper	 Gold	 Silver	 Slag
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## Structure of a Recycling-Oriented Society



\* Hitachi Metal-recycling Complex

## Rare Metal Recycling

In order to efficiently recycle rare metals contained in wasted electronic equipment, automotive and home electronic appliances, etc., the JX Nippon Mining & Metals Group has established a nationwide collection network. We are carrying out a rare metal recycling business at the Hitachi Works, which is in close proximity to the Tokyo metropolitan area, a so-called "urban mine" with a large volume of used products.

### ◆ Automotive Lithium Ion Battery Recycling

Demand for electric cars is expected to expand rapidly. A major issue from the perspective of stably securing raw materials and reducing environmental burden is the recycling of lithium-ion batteries, which is a core component of electric cars. To formulate the final commercialization plans, the JX Nippon Mining & Metals Group constructed new facilities at the Tsuruga Plant in April 2012 after a period of demonstration trials on recycling technologies.

### ◆ Titanium Recycling

Titanium, which possesses superior qualities as a material, is used in a wide range of industries including airplanes and medical equipment.

Toho Titanium Co., Ltd. installed a cutting-edge, large-scale EB furnace (electron beam furnace) to produce titanium ingots from material scrap and is actively engaging in the recycling of titanium, a metal for which demand is expected to increase in the future.

## Expanding the Recycling Business Overseas

The JX Nippon Mining & Metals Group is also aggressively collecting spent materials overseas owing to a decline in the amount of recyclable materials in Japan and in response to growing recycling needs worldwide.

In Taiwan, one of the world's production center of electronic equipment, we have established the Taichung Sales Office of Nikko Metals Taiwan Co., Ltd., which deals with sales of recycled raw materials and the Chiongin

Recycling Center of the company, which is collecting the raw materials there. Recyclable materials are collected and the pretreatment processes, such as crushing, are carried out, after which the waste material is sent to Japan. A wide variety of non-ferrous metals are recovered.

We are looking into expanding our operations overseas, including fortifying our collection activities in North America, to ensure that resources are recycled globally using proper treatment methods.

In addition to those, to handle an increase in the amount of incoming materials, we have expanded our pretreatment, sampling and analyzing capacity at the Saganoseki Smelter & Refinery.

## Developing New Smelting and Refining Technologies

Demand for refined copper, as a raw material to produce electrical wires or electronic components, is expected to increase, mainly in emerging economies. Meanwhile, increasing number of copper mines, which require to be dug to deeper levels, deteriorating grade of copper ore containing more impurities, and other issues are intensifying competition to acquire concessions of copper mines.

Under this circumstances, the JX Nippon Mining & Metals Group is pouring its energy into development and commercialization of new smelting and refining technologies, in order to efficiently recover value-bearing metals from low-grade copper ore. We are pursuing possibility to create new resources development methods by leveraging the new smelting and refining technologies. These include the N-Chlo process which we are uniquely developing in Australia, and the bioleaching technology which we are jointly developing with Codelco, the Chilean state-owned copper mining company.

Technologies for efficiently recovering valuable metals from low-grade copper ore is obviously beneficial to extend lives of existing mines. At the same time, they can make low-grade copper deposits, which could not generate a return enough to be approached, possible to be developed. Consequently, the technologies allow us to be competitive in not only securing mine concessions, but also conserving the global environment and ensuring the stable supply of metal resources.

### ▶ Asphalt Recycling Initiative

The JX Group is also implementing initiatives outside of its metals business aimed at achieving a recycling-oriented society. NIPPO Corporation has been recycling waste asphalt pavement materials since the beginning of the 1950s and today it receives asphalt and concrete debris (construction by-products) at its asphalt mixing plants across Japan where it actively uses these materials to manufacture\* and sell asphalt mixture and materials for base course.

The company began researching ways to utilize molten slag generated from the incinerator ash of household garbage as part of asphalt pavement materials in 1981 and since then it has established this technology for commercial use. Based on this success, today the company is exploring ways to recycle construction by-products and the by-products of other industries in order to effectively utilize resources.

\*Ratio of recycled asphalt mixture is over 70%.

## Realizing a Low-Carbon Society in the Future

As a comprehensive energy company underpinning Japan, JX Nippon Oil & Energy is working to deliver stable supplies of energy, while driving further expansion in the new and renewable energy business, which will contribute to reducing environmental impact. Through these measures, JX Nippon Oil & Energy aims to help realize a low-carbon society.



Electric vehicle charging station (Kitakyushu City, Fukuoka Prefecture)

### ENEOS SOENE Business

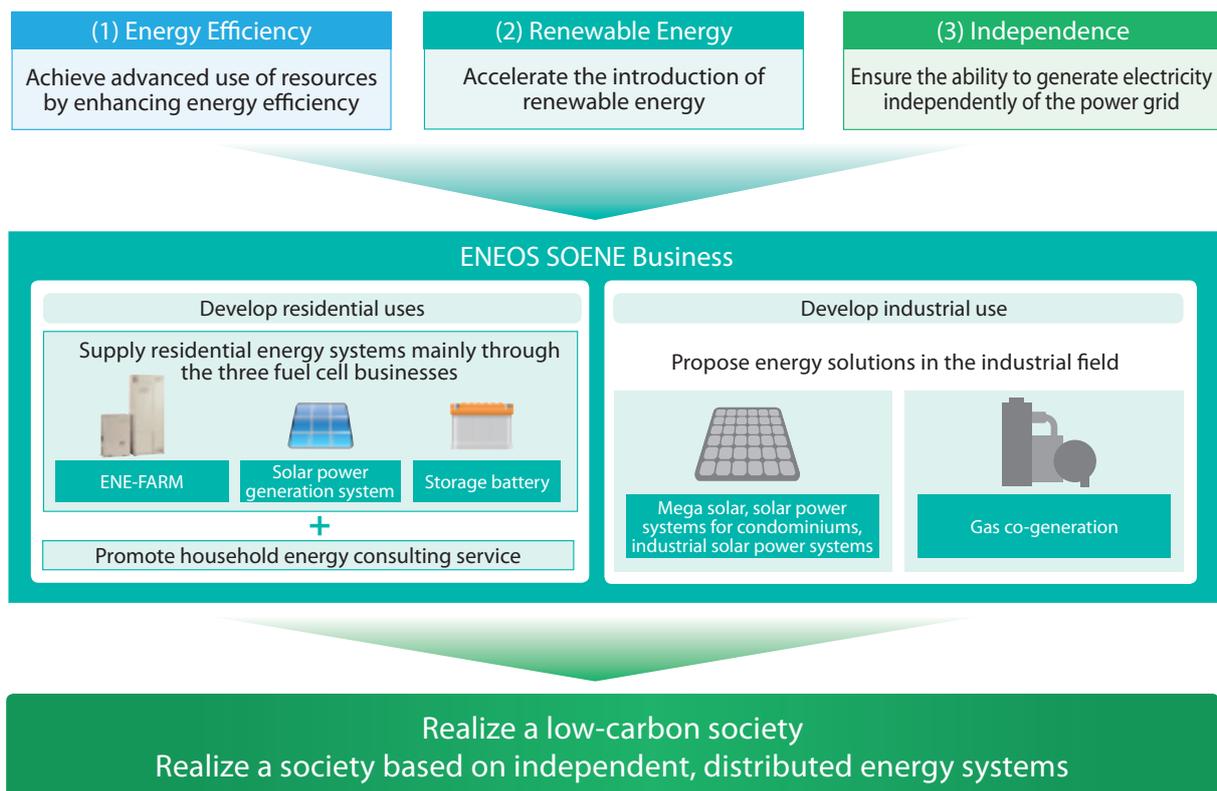
In recent years, there has been growing interest in environmentally-friendly and safe energy, sustainable and natural disaster-resilient energy, and next-generation renewable energy solutions aimed at achieving a low-carbon society.

Given this, JX Nippon Oil & Energy is pursuing the ENEOS SOENE business. This business consists of three important themes: (1) energy efficiency (enhance energy efficiency); (2) renewable energy (accelerate the introduction of

renewable energy); and (3) independence (energy self-sufficiency even during disasters).

As part of the ENEOS SOENE business, JX Nippon Oil & Energy provides the “ENE-FARM” residential-use fuel cell and solar power generation systems and “ENEOS-SOENE Renovations” service for introducing residential-use independent, distributed energy systems. In fiscal 2012 the company also commenced its mega solar power generation business. In addition, JX Nippon Oil & Energy is also expanding its presence in the industrial segment, such as by selling equipment to mega solar project operators.

#### Conceptual Diagram of ENEOS SOENE Business





The company sold about 2,000 units in fiscal 2011 and another 4,000 units in fiscal 2012, and forecasts indicate that cumulative sales will surpass 10,000 units sometime in fiscal 2013. Going forward, JX Nippon Oil & Energy will pursue further cost reductions and promote the popularization of these solutions by marketing them as an independent energy source when combined with a solar power generation system.



ENE-FARM residential-use fuel cell

### ENE-FARM Residential-use Fuel Cell

JX Nippon Oil & Energy is focused on more widely popularizing the ENE-FARM residential-use fuel cell as a major part of its ENEOS SOENE business. Fuel cells form part of a high-efficiency gas cogeneration system that uses the heat generated from a chemical reaction between hydrogen from LP gas or city gas and oxygen in the air to heat water. These highly energy efficient systems can generate residential-use electricity and hot water compared to conventional energy systems that burn fuel. This means that the greater use of fuel cells will help to significantly reduce energy consumed by the home.

JX Nippon Oil & Energy commercialized the ENE-FARM residential-use fuel cell in fiscal 2009 and became the first company in the world to launch sales of a solid oxide fuel cell (SOFC) system called the ENE-FARM Type S in October 2011. The superior environmental performance of the ENE-FARM Type S earned it the 2012 Environment Minister's Award for Global Warming Prevention Activity (Technological Development and Commercialization) and an Award of Excellence at the 2012 Nikkei Global Environmental Technology Awards organized by Nikkei Inc.

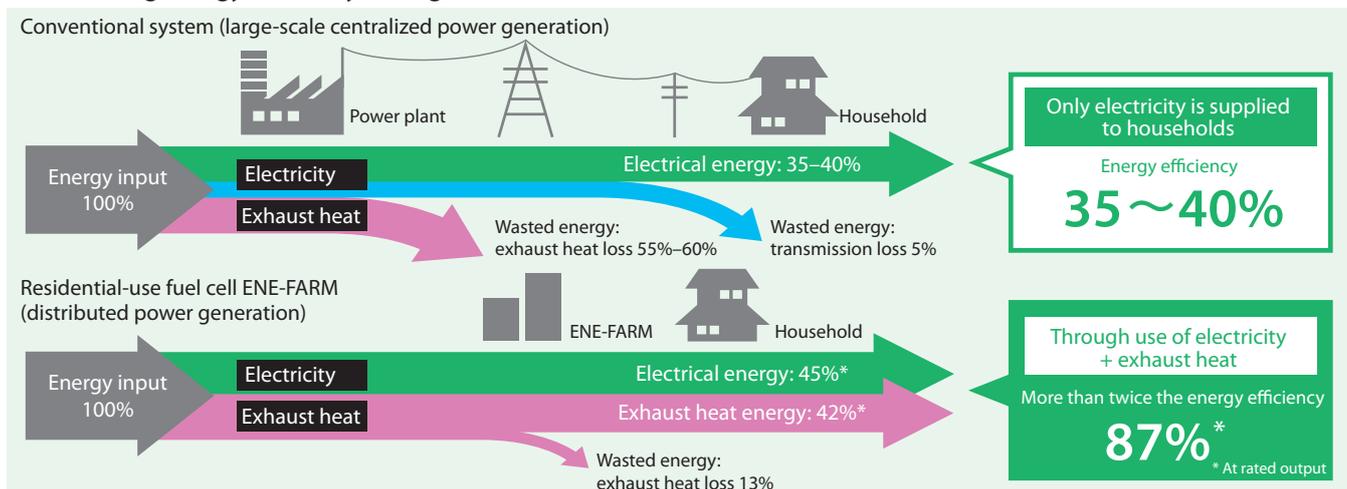
### Dr. Ouchi-no Energy Household Energy Consulting Service

The "Dr. Ouchi-no Energy" household energy consulting service offered by JX Nippon Oil & Energy proposes ways to optimize energy usage for each home based on a free diagnostic assessment performed by a household energy consultant. This service proposes improvements through an assessment of a home's energy devices, home electronics, and energy efficiency performance using 60 items via diagnostics and interviews.

Given that energy consumption is increasing in the private sector, curtailing energy usage from households has become an urgent priority. As a result, the Dr. Ouchi-no Energy household energy consulting service is being promoted as a core initiative of the ENEOS SOENE business. First launched in June 2012, the service has 506 household energy consultants stationed in 43 prefectures as of the end of fiscal 2012. Going forward, JX Nippon Oil & Energy plans on deploying a nationwide force of 1,000 energy consultants.

This service was again recognized by Japan's Ministry of the Environment when the company was selected to be a dealership and gas supplier for the "Uchi-Eco Shindan Project 2013." In fiscal 2013, JX Nippon Oil & Energy will also provide this service through a partnership with the Ministry of the Environment as it takes further steps toward realizing a low-carbon society.

### Enhancing Energy Efficiency through ENE-FARM



### Start of Mega Solar Power Generation Business

JX Nippon Oil & Energy launched its mega solar power generation business in January 2013 with the goal of expanding renewable energy. The company decided to enter the mega solar business following the start of Japan's feed-in tariff system for renewable energy in July 2012. Utilizing idle company-owned lands, JX Nippon Oil & Energy has constructed solar power generation facilities with a total output of 4.8 megawatts. These facilities are located at the company's Sendai Refinery West Area (Tagajo City, Miyagi Prefecture), Kudamatsu Terminal (Kudamatsu City, Yamaguchi Prefecture), and the former site of the Tsuchiura Depot (Kasumigaura City, Ibaraki Prefecture). The Sendai and Kudamatsu solar power generation facilities began selling electricity in February and March of 2013, respectively, while Kasumigaura plans on doing the same in November 2013.

JX Nippon Oil & Energy plans on aggressively expanding its mega solar power generation business in the future beyond the three sites above. Similar solar power generation facilities are slated to come on line at the former site of the Akita Refinery (Akita City, Akita Prefecture),

\*According to research performed by JX Nippon Oil & Energy as of September 2013

former site of the Onahama Depot (Iwaki City, Fukushima Prefecture), and Okinawa CTS Corporation (Uruma City, Okinawa Prefecture). The solar power generation facility at the Okinawa CTS Corporation will be the largest in the prefecture\* at about 12 megawatts. Once the new facilities are on line, JX Nippon Oil & Energy's mega solar power generation business will have a total of six sites producing some 22 megawatts of electricity.



Kudamatsu Mega Solar Power Plant

### Launched Demonstration Trials of Hydrogen Filling Pumps at Service Stations

Fuel cell vehicles are currently being developed as the clean energy vehicle of tomorrow. Powered by hydrogen, these vehicles produce zero CO<sub>2</sub> when in operation and are more than two times as energy efficient as gasoline-powered vehicles.

Major automakers have announced that they will bring fuel cell vehicles to market sometime after 2015, creating the need for hydrogen supply infrastructure to be developed prior to this roll out.

Thirteen private sector companies from the auto and energy sectors, including JX Nippon Oil & Energy, issued a joint statement in January 2011 to develop around 100 hydrogen stations based on the launch of fuel cell vehicles in 2015 and unit sales outlook.

As part of its plans to quickly establish its hydrogen supply business, between April and May 2013 JX Nippon Oil & Energy commenced\* demonstration trials at Japan's first-ever hybrid service stations with both gasoline and hydrogen filling equipments built in Kanagawa and Aichi prefectures.

The hydrogen supply facilities at these hybrid stations feature a newly developed pump package that is smaller, uses less space and costs less to operate, which is expected to reduce hydrogen station construction costs in the future. In addition, high pressure hydrogen allows for the fuel to be filled at almost the same speed as gasoline, which improves user convenience. Going forward, the next phase of testing will center on actual service station operations aimed at final commercialization.

\*JX Nippon Oil & Energy is responsible for building and operating these hydrogen stations as part of a joint project led by the New Energy and Industrial Technology Development Organization (NEDO) and the Research Association of Hydrogen Supply/Utilization Technology (HySUT).



Ebina Chuo-Hydrogen Station

#### Overview of the Hybrid Service Stations

Name	Ebina Chuo Hydrogen Station	Kaminokura Hydrogen Station
Location	Ebina City, Kanagawa Prefecture Located at ENEOS Service Station Dr. Drive Ebina Chuo	Nagoya City, Aichi Prefecture Located at ENEOS Service Station Dr. Drive Kaminokura
Start	April 19, 2013	May 27, 2013
Hydrogen Manufacturing/Transport	Off-site method <sup>1</sup>	On-site method <sup>2</sup>
Supply Capacity	300 Nm <sup>3</sup> /h	100 Nm <sup>3</sup> /h

\*1: Hydrogen is transported by dedicated trailer and stored at the station in an accumulator (tank).

\*2: Hydrogen is produced onsite at the service station from LP gas using hydrogen manufacturing equipment and then stored in an accumulator (tank).

## Expanding the LNG Business

Compared to crude oil, there is a wealth of natural gas reserves located around the world. Japan is using more and more natural gas because it is a form of clean energy that can be supplied safely and produces less CO<sub>2</sub>.

To respond to rising demand, the JX Group is striving to build a stable supply system across the entire supply chain, from exploration to sales, including overseas gas field development, shipments from group-owned LNG terminals at Mizushima and Hachinohe, as well as domestic shipments via sea, tank truck and pipeline.

In 2007, JX Nippon Oil & Energy began operations at the Hachinohe LNG Terminal in the northern Tohoku region, which until then did not have a large-scale natural gas terminal. With an eye to growing supply, the Hachinohe LNG Terminal will be used to receive large amounts of imports, and JX Nippon LNG Service Co., Ltd. was established as a subsidiary to operate the facility. JX Nippon Oil & Energy is currently moving forward with construction of the Hachinohe LNG Import Terminal and Kushiro LNG Terminal with operations slated to begin in 2015.

### JX Group's LNG Supply System

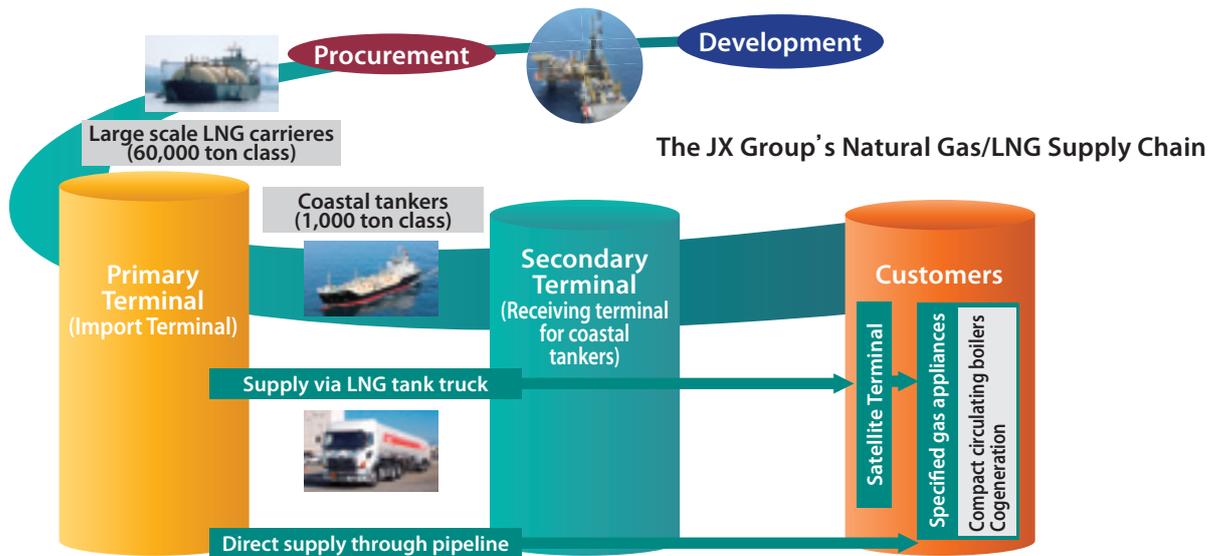
#### Hachinohe and Kushiro LNG Terminals

Current	Hachinohe (Secondary Terminal)
Start of Operations	March 2007
Tank Capacity	4,500 KL × 1 Terminal

2015 Onward	Hachinohe (Import Terminal)	Kushiro (Secondary Terminal)
Start of Operations	April 2015	
Tank Capacity	140,000 KL × 2 Terminals	10,000 KL × 1 Terminal

#### Mizushima LNG Terminal (Import Terminal)

	First Terminal	Second Terminal
Start of Operations	April 2006	April 2011
Tank Capacity	160,000 KL	160,000 KL
Investing Companies	JX Nippon Oil & Energy Chugoku Electric Power	50% 50%



### ► Augmenting Production of Cathode Materials Used in In-Vehicle Lithium-Ion Batteries

The JX Group is implementing initiatives beyond its energy business aimed at realizing a low-carbon society.

Automotive lithium ion batteries are used in electric vehicles, plug-in hybrids and other next-generation eco-friendly vehicles. With demand growing rapidly for these batteries following the popularization of eco-friendly vehicles, JX Nippon Mining & Metals is working to expand production of cathode materials used as a component. The company commenced production of these materials at its Isohara Works in September 2012 and established a production capacity of 50 million tons per year. JX Nippon Mining & Metals' original integrated process ensures reduced impurities and improved homogeneity, which helps extend service life and secure

safety.

JX Nippon Mining & Metals has also conducted a commercial feasibility trial at our Tsuruga Plant on processes for efficient recovery from spent lithium-ion batteries of the metals used as raw materials in making cathode materials. The company now is drawing up plans aimed at the final commercialization of this system. Successful realization of this resource recycling system should help assure a stable supply of raw materials for our cathode materials manufacturing at the new facility.

Providing a stable supply of high-quality cathode materials will contribute to further popularize eco-friendly vehicles and achieve a low-carbon society.

# Working with Stakeholders to Create Energy, Resources and Materials for the Future

There are a number of challenges that must be overcome to attain a sustainable society. They will require the development of social systems and technologies. The JX Group aims to utilize its own technological capabilities and work in alliance with stakeholders, such as industrial organizations, academia and specialists, to bring about these innovations.

## Symposium on Energy in the 21st Century

Japan, which depends on imports for the majority of its fossil energy needs, is promoting energy conservation but it is also confronted with the major issue of securing stable procurement.

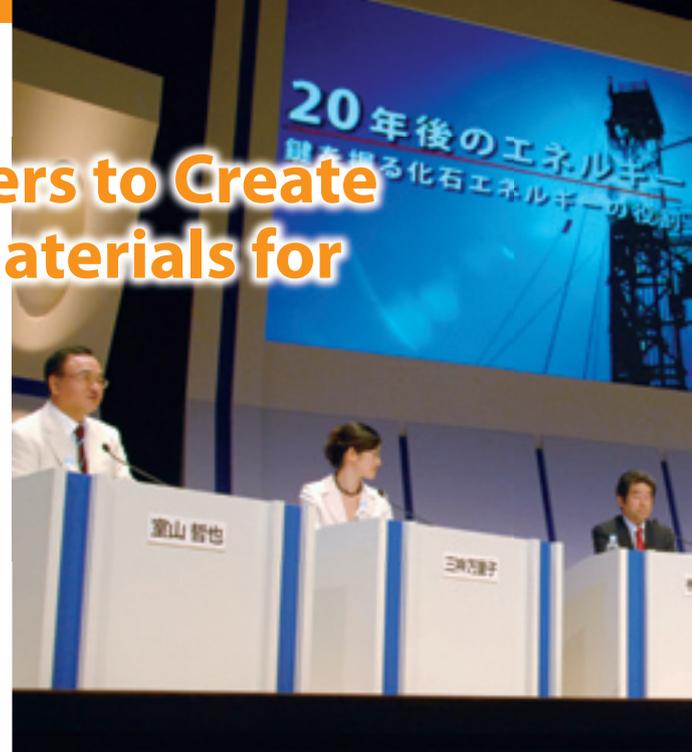
In November 2012, JX Nippon Oil & Energy held its 17th Symposium on Energy in the 21st Century to discuss energy solutions for the future with a wide variety of stakeholders. The symposium theme was “Energy Solutions in 20 years—the Vital Role of Fossil Energy.” Specialists in energy from industry, academia and the government, were invited to examine this issue.

Yasushi Kimura, the chairman of JX Nippon Oil & Energy, and Yukio Uchida, executive vice president, took the podium to discuss the company’s objective to respond to the needs of customers as an energy conversion company that provides a diverse menu of efficient and convenient energy products and services, given growing expectations for new energy resources, such as methane hydrates.

## Participated in the Kick-off Symposium for the Tohoku Innovative Materials Technology Initiatives for Reconstruction project

The Tohoku Innovative Materials Technology Initiatives for Reconstruction project is a collaboration between industry, academia and the government. The goal is to contribute to restoration efforts in areas affected by the Great East Japan Earthquake by promoting the development of the materials industry in the Tohoku region by making use of the strengths possessed by universities in the region and the nanotechnology and materials fields in the manufacturing sector.

About 170 people from universities and private-sector companies participated in the October 2012 symposium. Hiroshi Ono, general manager of the Technology Development Group at JX Nippon Mining & Metals, introduced the high efficiency rare elements extraction technology being used in the company’s recycling business.



Mr. Ono extended his support to the project, saying that he looks forward to seeing the project develop innovative recycling technologies for the recycling industry.

## Activities through the ICMM

JX Nippon Mining & Metals is a member of the International Council on Mining and Metals (ICMM) to conduct responsible business activities. We formulated our Code of Conduct based on the principles of the ICMM and are promoting the sustainable development in the metals and mining industry by sharing best practices.

In addition to introducing a case study regarding water treatment at the Toyoha Mine, we are actively participating in activities, such as the 4<sup>th</sup> Materials Stewardship Round Table meeting held by the ICMM, to exchange information with stakeholders on conflict minerals.

## Participated in the First Global LNG Producer-Consumer Conference

In September 2012, at the initiative of Japan, the world’s largest consumer of LNG, 30 natural gas producing and consuming nations and regions rallied together for the world’s first LNG Producer-Consumer Conference held in Tokyo, Japan. The JX Group, a leading company in the energy industry, cooperated in hosting this conference.

There were around 600 people in attendance at the conference, including ministers from many nations and top executives from energy-related companies. The discussions were lively, focusing on topics such as long-term forecasts for LNG supply and demand, market trends and export plans for US shale gas. The chairman and president from JX Nippon Oil & Energy and JX Nippon Oil & Gas Exploration, respectively, also participated. Shigeo Hirai, president of JX Nippon Oil & Gas Exploration, made a presentation about LNG project finance at the conference.

For Japan, which has seen a rise in LNG demand since the Great East Japan Earthquake, the conference was especially significant for the stable supply of energy in the future.



Symposium on Energy in the 21st century

### Human Resources Development through the Industry-academia Collaboration Program

JX Nippon Mining & Metals, in 2012, established the Endowed Research Unit for Non-ferrous Metals Resource Recovery Engineering (Endowed Research Unit) jointly with the University of Tokyo's Institute of Industrial Science. Efficient, low-cost recovery technologies and collection capabilities are the main challenges to the metal recycling business. Outstanding human resources are required to solve these issues, therefore research is being carried out in partnership with the university. We aim to develop human resources and set up industry-academia collaboration programs to engage in activities, such as research related to recycling engineering for metal materials, with the ultimate goal of achieving a recycling-oriented society.

In November 2012, as a part of the Metal Manufacturing Process Study Group of the Endowed Research Unit, a total of 35, most of whom are studying metal smelting and refining at the University of Tokyo, visited our Hitachi Works. The students toured our worksite that are recovering value-bearing metals, and listened intently to an explanation of our undertakings at the Technology Development Center.

Initiatives of the Endowed Research Unit arouse the great hope that the development of human resources will energize Japan's non-ferrous metal industry. Eventually, the human resources cultivated in the Endowed Research Unit are also expected to contribute to the sustainable development of society.



Members contributed to the establishment of the Endowed Research Unit

### Public trust ENEOS Hydrogen Trust Fund

Hydrogen is gaining attention as a new energy source. Major technological innovations are required in the field of hydrogen manufacturing, transport, storage and CO<sub>2</sub> solidification to promote the use of hydrogen as an energy system.

In March 2006, JX Nippon Oil & Energy established the public trust, ENEOS Hydrogen Trust Fund, with the goal of contributing to the rapid development of a hydrogen energy community. This fund grants a total of 50 million yen annually for creative and pioneering basic research in the field of hydrogen energy supply. The fund aims to provide subsidies for up to 30 years for cutting-edge basic research.

In fiscal 2012, grants were provided to five research projects associated with the manufacturing and storage of hydrogen and CO<sub>2</sub> solidification.



Grant presentation ceremony



# JX Group Values Report

The JX Group continues to conduct activities based on the JX Group values the EARTH.

## What does the EARTH mean to me?



### Ethics

JX Nippon Procurement has established its own Basic Procurement Policy based on EARTH, which we also publish on our website to make it more visible for our suppliers. I feel that the supplier selection process is one of the most important aspects of procurement. Rather than focus solely on quality, cost and delivery, however, I strive to objectively determine a supplier's compliance with environmental policies and legislation as well.



**Hiroshi Morishita**  
Procurement Department,  
Capital Equipment  
Capital Equipment Group II  
JX Nippon Procurement Corporation



### Advanced ideas

The world's major automakers are all planning to sell electric vehicles (EV) in 2013, with 2013 poised to be the first year of the EV era. I'm hoping to contribute to higher battery performance by developing new materials based on concepts that are not contingent on past results and which leverage proprietary technologies. As a result, I will be happy if our initiatives lead to the prevalence of these batteries used in EVs and household power supplies.



**Yoshio Kajiya**  
Surface Treatment Department  
Thin Film Materials Division  
Electronic Materials Group  
JX Nippon Mining & Metals Corporation



### Relationship with society

I decided to take part in the ENEOS Environmental Classes as a teacher and also volunteer for an earthquake recovery assistance program because I wanted to do my part. During the volunteer work I was with colleagues from the JX Group, which made it a very encouraging and valuable experience. If the opportunity presents itself, I would like to take part in our CSR activities again to help contribute to society and the local community.



**Yuko Kan-no**  
Systems Integration Group  
Tohoku Branch Office  
JX Nippon Oil & Energy Corporation



### Trustworthy products/services

I am in charge of sales of our lubricants developed with Japanese advanced technology to the customers in Central and South America. I am doing my part jointly with my colleagues not only in Brazil but also in Japan and overseas countries to provide the customers with the best quality, best price and best service in order to enhance customer satisfaction. I am also very proud of our lubricants, which have beneficial effects on environmental protection.



**Simone Kanzaki Hashizume**  
Business Development & Marketing  
JX Nippon Oil & Energy do Brasil  
Comércio de Lubrificantes Ltda



### Harmony with the environment

The monotonous sound coming from a drilling rig disrupts the quiet of the surrounding habitat. This is the frontline of exploration activities. The Baram River, which winds through the jungle, is the border between the jungles of Borneo and modern civilization. The challenge is how to conduct our business operations while maintaining harmony with nature. "Nature, the best legacy we have to pass on to our children." Passing on this legacy to the next generation is our responsibility.



**Manabu Nakajima**  
Senior General Manager, Development,  
Miri Office  
JX Nippon Oil & Gas Exploration Corporation



# Ethics

The JX Group has formed a highly ethical stance based on thoroughness of compliance, strengthening of risk management and respect for human rights, and has set its sights on becoming a true leading company in the field.

## Compliance

### Basic Approach

The JX Group has declared a policy of regulations and other rules to ensure that thoroughness of compliance will be established by each Group company, and laws, the Articles of Incorporation and regulations shall be observed in every aspect of work performance.

The JX Group has established the JX Group Compliance Committee as a subcommittee under the JX Group CSR Council. The committee has selected an action policy for the JX Group and reviews the outcome these activities. Furthermore, all principal group companies have an internal whistle-blowing system in place for the early discovery and correction of any behavior that has or could result in violation of the law and other regulations.

### Policy Prohibiting Connection to Anti-social Forces

The JX Group formulated a basic policy to prevent any connection whatsoever to anti-social forces and a set of basic rules for tackling anti-social forces, and promotes measures in this regard.

### Operational Shutdown at Refineries and Future Initiatives

Compliance violations under the High Pressure Gas Safety Act were discovered at the Mizushima Refinery B-Plant of JX Nippon Oil & Energy Corporation, causing the refinery to shut down for a long period of time. At the same time, a number of equipment troubles at the company's other refineries have also resulted in a spate of shutdowns. The JX Group deeply regrets these problems at its refineries, which are supposed to focus first and foremost on safe and stable operations, and will make collective, group-wide efforts to reinforce compliance and to strengthen initiatives aimed at ensuring safe and stable operations.

## Human Rights

### Basic Approach

The JX Group recognizes that achieving corporate behavior firmly rooted in highly ethical values ultimately rests on the actions of its individual executives and employees. Accordingly, the JX Group strives for labor, personnel management, and human resource development underpinned by respect for human rights.

The JX Group strives to cultivate strong ethical values among its executives and employees by respecting international rules such as the Universal Declaration of Human Rights and the ILO Conventions, and providing them with supportive environments for performing meaningful work. The individual policies and specific measures are decided based on group company business characteristics and scale.

Also, JX Holdings is fostering a management class with highly ethical standards through specific training for executives at each group company and joint training for managers across the group.

### Supporting the UN Global Compact's 10 Principles

JX Holdings and its three core operating subsidiaries are also participants in the United Nations Global Compact, implementing and promoting the compact's 10 principles in the four areas of human rights, labor, the environment and anti-corruption.

▶ Please refer to page 40 for the UN Global Compact's Ten Principles.

### Initiatives to Eliminate Child Labor and Forced Labor

The JX Group strives to comply with local laws, including age restrictions placed on hiring, and properly administer its personnel at all of its business sites in Japan and overseas.



**Mayu Noda**

Legal Affairs Section,  
Administration Department,  
JX Nippon Mining & Metals Corporation

### What does "ethics" mean to me?

Our company values the connections between individuals and trust. I have heard it said that mutual trust and close relationship are barriers to preventing misconduct. However, I think what is needed is to maintain the connections among people and the warm relations, while at the same time building the necessary checks into the systems.



# Advanced ideas

Dedicated to meeting the challenges of cutting-edge research and technology development with advanced ideas, the JX Group will contribute to society as a whole by creating technologies, products and services that help to answer social concerns.

## Technology and R&D

### Basic Approach

With advanced nations leading the move to structure low-carbon, recycling-oriented societies amid growing awareness of the urgent need to address global environmental problems, the role of the energy, resources and materials industry has become more important than ever before.

Guided by its Group mission statement to “contribute to the development of a sustainable economy and society through innovation in the areas of energy, resources and materials,” the JX Group is aggressively pursuing technology development in each of its business domains. At the same time, we are advancing joint research and demonstration tests in collaboration with public institutions, universities and other entities. JX Holdings also generates synergies by combining technologies within the JX Group as well as planning and coordinating technologies across the entire JX Group.

### Photovoltaic Power Generation System for Individual Condominium Units

JX Nippon Oil & Energy was the first in the industry to develop and successfully manufacture a photovoltaic power generation system for individual condominium units called “ene SOLAR Koko Eco,” which was launched nationwide in Japan in 2010. Ene SOLAR Koko Eco uses a proprietary developed power conditioner (a device that converts direct current electricity generated by the photovoltaic module into alternating current electricity used in the home) that makes it possible for solar power to be generated by each individual condominium unit. This system also enables condominium owners to take advantage of Japan’s program for selling back surplus photovoltaic electricity through a direct contract with a power company in much the same way as homeowners with a similar system are able to do.

Although the use of photovoltaic power generation systems by detached homes has steadily risen in recent years, the same cannot be said for condominiums, which

tend to have better sunlight conditions than detached homes. The main reason for this is the danger posed when multiple power conditioners are installed in a single location such as a condominium building in which interference is caused between the power condition units that makes it impossible for the power system to detect a power outage, causing electricity to continually be supplied from the building. JX Nippon Oil & Energy, which has been working on this issue since it was first discovered, came up with a function to interrupt the supply of electricity from the building in the event of a power outage.

This system also offers the most compact sized (A4) power conditioners for individual condominium units in Japan, making it easier than ever to install. New condominium buildings have already begun to use this system, which is helping each household in the building to cut back on electricity usage and reduce their CO<sub>2</sub>.

The ene SOLAR Koko Eco system was awarded the New Energy Foundation Chairman’s Prize at the 2011 New Energy Awards organized by the New Energy Foundation.



The photovoltaic power generation system for individual condominium units installed at Leben Heim Hikarigaoka Koen (Takara Leben Co., Ltd.)

### Utilizing Enhanced Oil Recovery (EOR) Technology

At JX Nippon Oil & Gas Exploration, we have worked on field application of CO<sub>2</sub>-EOR technology which enhances oil recovery while reducing CO<sub>2</sub> emissions into the atmosphere.

In general, oil is accumulated in the pore of the underground reservoir rock. The primary oil recovery factor by natural depletion is 5%-30% while the secondary recovery factor using water injection is at most 30%-40%. Focus is being placed on enhanced oil recovery (EOR) technology, whereby gas or chemicals are injected to



#### Yuka Egashira

Advanced Polymers Technology  
Development Group Advanced Materials  
Department Specialty Chemicals &  
Materials Division  
JX Nippon Oil & Energy Corporation

### What do “advanced ideas” mean to me?

I’m involved in the development of high performance polymers. Every day I listen carefully to our customers’ needs and find ways to respond to their ever-changing needs. I always keep an open, creative mind when working with customers and I am giving it my all to develop materials that are truly beneficial to society.



further improve the recovery factor.

Carbon Capture and Storage (CCS) technology is also gaining attention as a method for reducing CO<sub>2</sub> emissions. With this technology, CO<sub>2</sub> is injected and captured underground for storage, such as in depleted oil reservoir or aquifer, to reduce CO<sub>2</sub> emissions, which is one form of greenhouse gas.

The CO<sub>2</sub>-EOR technology is a combination of CCS and EOR, in which CO<sub>2</sub> is injected into the reservoir for additional oil recovery and JX Nippon Oil & Gas Exploration has implemented the field application of the technology.

In 2011, we successfully conducted a pilot test for the CO<sub>2</sub>-EOR technology, jointly with Japan Oil, Gas and Metals National Corporation (JOGMEC) and the state-run Vietnam Oil and Gas Group (PETROVIETNAM) in Rang Dong oil field offshore Vietnam, where the operator is our subsidiary Japan Vietnam Petroleum Co., Ltd. In this pilot test, CO<sub>2</sub> was injected into a well and then crude oil was produced from the same well. It was confirmed this method was effective and contributory to improving the oil recovery factor.

This is the global first case where a pilot test employing this method of CO<sub>2</sub>-EOR technology was implemented offshore, and this is also the first case where a CO<sub>2</sub>-EOR technology was employed offshore in South East Asia.

Moreover, owing to the results of the CO<sub>2</sub>-EOR pilot test, both we and JOGMEC won the Distinguished Contribution Award of the Japanese Association for Petroleum Technology (JAPT) in June 2013.



A supply vessel provides CO<sub>2</sub> for injection into the reservoir

## Development of the Hazard-Reducing Bed (HRB) Method

Major earthquakes can cause gaps in road surfaces due to ground settlement, making the roads impassable for vehicles. NIPPO Corporation together with Chuo University and Maeda Kosen Co., Ltd. developed the hazard-reducing bed (HRB) method of construction that makes it possible for vehicles to travel on these roads that would otherwise be impassable.

Once a major earthquake affects the ground, impacts on roadways are unavoidable. However, if the road surface can be changed into a smoother shape that reduces the destruction of pavement or uneven road surfaces during an earthquake, emergency vehicles and transport vehicles could operate, making it possible to evacuate local residents before a possible tsunami strike. The HRB method of construction paves on top of rigid surfaces a surface that uses reinforcing materials in the form of a sheet called the “Geogrid.” This allows the road to move as the ground changes, which ensures this material can withstand ground settlement of up to 60cm. Many expect this method to be widely used to build disaster-resilient cities.



HRB technique



Conventional technique



### Atsushi Hatakeyama

Group Manager  
Reservoir Engineering Group  
Exploration &  
Production Technology Department  
JX Nippon Oil & Gas Exploration Corporation

## What do “advanced ideas” mean to me?

CO<sub>2</sub>-EOR is a proven technology which has been employed since the 1970s. In addition to the benefit of increasing oil production at depleted oil fields, recently focus has turned to the combined potential with the underground storage of CO<sub>2</sub>. I hope to utilize the experience obtained in Vietnam to globally introduce new ideas that are friendly to the environment into the E&P business.



# Relationship with society

We strive to earn society's trust by faithfully meeting the needs of our diverse stakeholders. Through sports, culture, programs for positive youth development and support, and environmental protection activities, we hope to deepen our relationships with communities and the public, and to coexist with society as a corporate citizen.

## 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.

### 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. Furthermore, the company conducts highly transparent investor relations (IR) activities in line with regulations to prevent insider trading, including in-house training to promote awareness. In Fiscal 2012, we received commendations from multiple external evaluation institutions for our IR activities.

### 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 31.

### Business Partners

JX Nippon Procurement Corporation oversees purchasing operations for JX Group companies. While making purchasing information available to business partners on its website and actively providing opportunities to business partners, JX Nippon Procurement strives to

ensure fair and honest trading opportunities. JX Nippon Procurement builds mutually beneficial partnerships through supplier surveys and promotes purchases of materials and equipment with reduced environmental impacts.

▶ For more information, please refer to page 32.

### NPOs/NGOs

For the Click Donation Campaign for the Enegorikun Forest, JX Nippon Oil & Energy donates one yen to the Japan Wildlife Conservation Society (JWCS) for every time the donation button on its website is clicked. The JWCS uses these funds to help protect gorillas as part of its habitat assistance project.

JX Nippon Oil & Energy also sponsors a charity book drive every year where it collects secondhand books from employees and sells them back to other employees. The proceeds of these sales are in turn donated to Peace Winds Japan, a specified non-profit organization, which uses them to help support environmental activities in East Timor and fund recovery efforts for the Great East Japan Earthquake.

### Local Communities / Global Society

#### Preparing for Disasters Together with the Local Community at Oil Stockpiling Terminals

JX Nippon Oil & Energy Staging Terminal Corporation's Kiire Terminal works together with surrounding communities to reinforce its crisis management practices in order to prepare for unforeseen disasters. Kiire Terminal is one of the JX Nippon Oil & Energy Group's leading transshipment stations connecting oil producing countries with refineries. Each year the facility handles about 500 crude oil tankers and also holds more than 300 disaster training drills, part of which are conducted jointly with local government bodies and local community members. In this manner, Kiire Terminal has established a solid framework for ensuring safety and security both on land and at sea.



**Etsuko Hanashima**

Investor Relations Group  
Finance and Investor Relations Department  
JX Holdings, Inc.

#### What does "relationship with society" mean to me?

I make it a point to proactively disseminate information on our business activities and financial situation, and hold dialogue with the markets through presentations and one-on-one meetings to ensure we receive the most pertinent corporate valuation from the markets. I will continue to enhance our investor relations activities in order to deepen understanding and trust of the JX Group among our shareholders and investors.



## Relationship with Employees

### Basic Approach

It is crucial for companies to incorporate the opinions of a diverse array of personnel in business activities in order to respond to societal changes and achieve sustainable development. The JX Group actively hires senior citizens and people with disabilities in an effort to promote diversity in the workforce. Furthermore, in addition to a good workplace, employees need 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.

#### [Workforce Composition]

		JX Holdings	JX Nippon Oil & Energy	JX Nippon Oil & Gas Exploration	JX Nippon Mining & Metals
Total headcount		93	5,765	347	1,354
Male employees	Headcount	75	5,213	314	1,247
	Average age	45.0	42.3	41.8	41.0
	Average years of service	21.3	20.7	16.6	17.0
Female employees	Headcount	18	552	33	107
	Average age	41.7	40.9	35.7	38.5
	Average years of service	19.3	19.0	10.0	12.0

#### [Number of Recent Graduate Recruits]

		JX Holdings	JX Nippon Oil & Energy	JX Nippon Oil & Gas Exploration	JX Nippon Mining & Metals
Total headcount		—	173	7	53
Male university graduates		—	39	5	24
Female university graduates		—	10	0	1
Junior college/vocational school graduates		—	8	0	5
Senior high school and other graduates		—	116	2	23

#### [Employment Rate of Persons with a Disability, Number of Employees Re-hired after Retirement, Usage Rate for Annual Paid Leave, and Number of Employees Taking Leave]

		JX Holdings	JX Nippon Oil & Energy	JX Nippon Oil & Gas Exploration	JX Nippon Mining & Metals
Employment rate of persons with a disability		— <sup>*1</sup>	2.01 %	1.67 %	1.84 %
Number of employees re-hired after retirement		— <sup>*1</sup>	176	6	30
Number of annual paid leave days granted		20.0	19.6	19.2	20.8
Number of annual paid leave days taken		11.7	14.6	10.6	13.5
Usage rate for annual paid leave		58.5 %	74.4 %	55.2 %	64.9 %
Number of employees taking nursing care leave		0	0	0	0
Number of employees taking childcare leave		2	46	1	5
(incl. male employees)		2	17	0	0

\*1 "Employees" refer to those seconded from operating companies, and are accounted for at their companies of origin.

#### [Frequency of Industrial Accidents and Accident Severity Rate]

		JX Holdings	JX Nippon Oil & Energy	JX Nippon Oil & Gas Exploration	JX Nippon Mining & Metals
Frequency of industrial accidents <sup>*2</sup>		0.00	0.36	— <sup>*4</sup>	0.53
Accident severity rate <sup>*3</sup>		0.00	0.01	— <sup>*4</sup>	0.00

\*2 Number of deaths and injuries due to industrial accidents per 1 million working hours

\*3 Number of lost work days per 1,000 working hours

\*4 JX Nippon Oil & Gas Exploration has not adopted these indicators

#### ▶ Opening the JX Safety Education Center

In January 2013, the JX Group opened the JX Safety Education Center to enhance risk sensitivities among employees through simulations of impending dangers that exist regularly in the workplace. It serves as a hands-on safety education facility aimed at preventing occupational injuries before they happen by sharpening risk sensitivities among both workers and managers. The JX Group recognizes that safety along with compliance is absolutely essential to the continuity of business. We are implementing safety education at our group companies to eradicate occupational injuries. We plan to further enhance the Group's overall safety management system through the active use of this center.



Learning about dangers in high places during the center's opening ceremony



**Aki Tsukahara**

Accounting & Finance Department,  
JX Nippon Mining & Metals Corporation

#### What does "relationship with society" mean to me?

In restoring of the Oya and Takatama mines damaged by the Great East Japan Earthquake, we decided to take permanent measures that exceed the requirements stipulated by law in terms of size and quality. Accounting work is often conducted away from the site of business operations, but for me, promoting understanding through discussions with onsite personnel and carrying out the mission as accounting personnel is an act of fulfilling CSR.



# Relationship with society

## Corporate Citizenship

### Basic Approach

The JX Group views CSR activities that contribute to society as an important issue, and takes proactive steps in this area. The JX Group Corporate Citizenship Committee, with members drawn from across the JX Group, deliberates and reports on the group's social contribution efforts, while sharing information on such contributions with group companies. Under the Basic Policy for JX Group Social Contribution Activities, the JX Group collectively implements initiatives in the priority fields of (1) advancement of sports and culture, (2) next generation development and support, and (3) environmental protection.

### Advancement of Sports

The JX-ENEOS Baseball Team, which has won Japan's Intercity Baseball Tournament a leading 11 times, hosts little league baseball clinics and provides support for the NPB12 Team Junior Tournament ENEOS Cup and the national invitational tournament for disabled baseball teams.

The JX-ENEOS Sunflowers women's basketball team is also highly decorated, having won Japan's W League championship 16 times and the All Japan Basketball Tournament 17 times, the most of any team. The JX-ENEOS Sunflowers also hold the JX-ENEOS Basketball Clinics for youth players across Japan every year.



The JX-ENEOS Baseball Team winning the Intercity Baseball Tournament



The JX-ENEOS Sunflowers winning the W League championship

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

The JX Group calls for submissions every year of original children's literature on the theme of "heart-to-heart contact." The best works are awarded and published in a collection called *The Bouquet of Children's Stories*. Sponsored by the Japan Federation of Primary School Principals Association, the Japan Junior High School Principals Association and the National Council of Prefectural Boards of Education Association, the JX Children's Story Award has a more than 40-year history and to date more than 300,000 works have been submitted.

The JX Group donates copies of *The Bouquet of Children's Stories* to single-mother families, foster homes and welfare facilities across Japan through the Tokyo Zen-i Bank and other social welfare organizations. Copies are also given out to children and senior citizens living in the disaster areas affected by the Great East Japan Earthquake as part of the JX Group's activities to support emotional care.

*The Bouquet of Children's Stories* is purchased by dealerships, which operate service stations, and LPG dealerships, with all proceeds going to the JX Children's Story Fund. This fund makes donations every year to the Japan National Council of Social Welfare. The donations are used by the JX Scholarship Program established by the council to support children from foster-care facilities, single-mother support facilities and foster homes as they enter university and undertake other education. In fiscal 2012, 368 high school students received scholarships.

Donations are also being used for a three-year period spanning from fiscal 2011 to assist children affected by the Great East Japan Earthquake.

*The Bouquet of Children's Stories* is bound in paper made from raw materials derived from wood produced as a by-product of forest thinning in areas where the JX Group is working on forestation. This initiative therefore helps to increase the absorption of carbon dioxide emissions by forests in Japan. Through *The Bouquet of Children's Stories*, the JX Group is supporting Kizukai Undo (Tree-Use Movement), a domestic forest preservation program promoted by Japan's Forestry Agency.



**Shinya Ishida**  
Manager,  
Dr. Drive Self Izumi Intercity Station  
Sendai Branch office,  
ENEOS Frontier Co., Ltd.

### What does "relationship with society" mean to me?

We are working on making our facilities safer and more convenient for our customers and the local community through our involvement in local cleanup activities and making our service stations earthquake ready. We continue to donate a portion of our sales to benefit the disaster-hit areas and I always find it rewarding to know that the harder we work, the greater positive impacts we have on these areas in need.

## Environmental Conservation

In a partnership with local governments or the National Land Afforestation Promotion Organization, the JX Nippon Oil & Energy Group is involved in forest stewardship activities at eight ENEOS Forests across Japan. Employees and their families volunteer to take part in tree planting, thinning and bush clearing that helps to ensure the forests are maintained in a responsible manner.

Since 1998, JX Nippon Oil & Gas Exploration has also been implementing pine forest preservation activities on the site of Nakajo Field Office (Niigata Prefecture) and in the surrounding area. Employees and their families

participate as volunteers. Meanwhile, in fiscal 2012, JX Nippon Mining & Metals conducted reforestation activities at six sites of closed mines in Japan, to promote the conservation of the natural environment there. The Company also carried out a similar activity in Taiwan.



Forest stewardship activities at the ENEOS Forest in Nagano Prefecture

### ► Social Contribution Activities in Vietnam

In Vietnam, one of our core business countries, JX Nippon Oil & Gas Exploration has been conducting activities in an effort to socially benefit to the local community. We have thus far made donations for the construction of five schools with a view to helping to educate children for the future. Moreover, we have also contributed funds to build two rehabilitation facilities for people disabled by defoliants (dioxin) sprayed during the Vietnam War.



High school in Hai Phong



Rehabilitation facilities

### ► JX Group Volunteer Activities Supporting Restoration and Recovery

In an effort spearheaded by the JX Group Corporate Citizenship Committee, JX Group executives and employees have been broadly recruited to take part in volunteer activities to support recovery in the areas affected by the Great East Japan Earthquake.

From its launch in July 2011 to the 27th round of volunteer activities conducted in August 2013, this effort has grown to see participation from more than 900 people. These volunteer activities have mainly been organized in Iwate and Miyagi prefectures to help remove rubble and shovel mud away from street gutters. Given the new needs of the disaster-stricken areas, in fiscal 2012 volunteer activities focused on the emotional care of local residents in Iwate, Miyagi and Fukushima prefectures and included youth baseball clinics, festivals at temporary housing sites, and opportunities for people to interact with senior citizens.

The JX Group will continue to organize similar activities that benefit the emotional care of local residents in fiscal 2013 as well.

Please see the following link for more information about the JX Group's volunteer activities supporting restoration and recovery. <http://www.hd.jx-group.co.jp/english/csr/volunteer/>



Bookmark making activity held in Iwaki City, Fukushima Prefecture with senior citizens



Festival held at a temporary housing site in Ishinomaki City, Miyagi Prefecture



Youth baseball clinic held in Minamisanriku Town, Miyagi Prefecture



Seashore cleanup activity in Otsuchi Town, Iwate Prefecture



**Nguyen Thi Thu**

Senior Business Liaison Manager  
Japan Vietnam Petroleum Company,  
Limited

### What does “relationship with society” mean to me?

Developing and maintaining a good relationship with society is as important as conducting safe and sound operations. It helps maintain the company's image and contributes to the company's success. Our relationship has well developed with the society including the Governmental Authorities, the host party, partners and the community. We are proud of it and will continue to do our best to maintain it.



# Trustworthy products/ services

To satisfy customers, the JX Group aims to provide even more trustworthy products and services by working diligently to improve product and service quality from the customer's perspective, and to ensure product safety.

## Quality Assurance, Product Safety and Customer Satisfaction

### Basic Approach

Because the JX Group is involved in a broad range of operations, each group company practices quality control, and each company and business site has obtained ISO 9001 certification, the internationally recognized standard for quality management systems, as part of efforts to ensure quality.

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

**Web** Please visit the following websites for information about the quality initiatives of JX Nippon Oil & Energy and JX Nippon Mining & Metals.

**JX Nippon Oil & Energy**  
<http://www.no.jx-group.co.jp/csr/social/customer/quality.html>  
 (Available only in Japanese)

**JX Nippon Mining & Metals**  
[http://www.nmm.jx-group.co.jp/english/industry/ind07\\_08.html](http://www.nmm.jx-group.co.jp/english/industry/ind07_08.html)

## Launched Sales of Highly Conductive, High-strength Copper Alloys

Copper alloys are employed for connectors carried in eco-friendly vehicles, batteries, and such gizmos as smartphones and tablets. Growing desires for thinner and smaller electronic gadgets and further increases in battery capacity requires copper alloys with higher conductivity and improved strength to be developed. In order to heighten conductivity of a copper alloy, it is necessary to reduce substances added into copper in copper alloys, but this reversely results in impairment of strength of the alloys. JX Nippon Mining & Metals succeeded in developing copper alloys designed for electronic gadgets, which have 1.5-2 times conductivities of conventional copper alloys while maintaining the same high strengths, by leveraging its precision process control technologies cultivated over the years.



The newly launched highly conductive, high-strength copper alloy for electronic parts

## Trustworthy Products / Services

### Basic Approach

With customer's demands toward products and services growing more diverse, the JX Group is striving to provide new products and services that are trustworthy and that fulfill the needs of customers.

## ENEOS Diagnostic Services

ENEOS's Dr. Drive is a comprehensive service station that offers refueling as well as other vehicle maintenance services, such as safety checks, vehicle inspections, oil changes, and car washes, to ensure customers get the most out of their cars and trucks.

In addition, the "Dr. Ouchi-no Energy" household energy consulting service is provided to consumers free of charge and involves a visit by ENEOS-certified household energy consultants who diagnose the way energy is being used in a household. This service evaluates all aspects of home energy efficiency, from energy devices and home electronics to the building itself, and proposes energy saving advice customized for each home.



**Noriko Tsuchiya**  
 Quality Assurance Officer  
 JX Nippon Mining & Metals Philippines, Inc.

### What do "trustworthy products/services" mean to me?

From our customers' side, our efforts to address quality issues are what we are supposed to be doing. To enhance our prerequisite ability to address these quality issues, I want to improve my English skills and deepen my understanding of the Company's technology.

As our customers' important partner, I intend to continue efforts to can tribute operations to our customers in the aspect of quality assurance.



## Purchasing

### Basic Approach

Procurement sources are growing increasingly diverse in step with economic globalization. Numerous examples exist of cases in which supplier-side problems concerning compliance practices, the environment and human rights have ultimately impacted consumable goods.

Responsible supply chain management has become an important element in garnering trust in products and services. While the JX Group promotes transparent and fair transactions, and environmentally friendly purchasing activities, the group will pursue stronger communication with business partners, aiming for mutually beneficial outcomes by building partnerships based on mutual trust.

### Basic Policy on Procurement

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

#### Basic Policy on Procurement

- 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.
- We will always create and innovate using new ideas and strive to employ new products and services.
- We will pursue stronger communication with suppliers and strive to make contributions to society based on relationships of mutual trust.
- Each JX Group company will provide trust and satisfaction based on activities that are highly accurate, prompt and transparent.
- We will strive to create a sustainable society by encouraging the procurement of materials, equipment and services that have lower environmental impacts.

**Web** JX Nippon Procurement Corporation is in charge of procurement operations for materials.  
<http://www.pr.jx-group.co.jp/>  
 (Available only in Japanese)

### Supplier Survey

JX Nippon Oil & Energy and JX Nippon Mining & Metals also conduct a supplier survey to complement their procurement of environmentally friendly products, materials and services in accordance with the Basic Policy on Procurement.

JX Nippon Oil & Energy conducts a supplier survey that includes questions about green purchasing. Thirty-one percent of the company's suppliers that had not yet adopted green procurement practices in fiscal 2011 did so in fiscal 2012.

JX Nippon Mining & Metals surveys suppliers in terms of their green purchasing as well as their approach to human rights and other social issues, including conflict minerals. Starting last fiscal year, the company also began checking for changes in supplied products, manufacturing processes or raw materials. Suppliers for which such changes were found will be asked to retake the survey.

#### ► Our approach to the Conflict Minerals Problem

Companies listed on the stock exchanges in the US that use tin, tantalum, tungsten and gold are required to file a report the use of conflict minerals\* to the U.S. Securities and Exchange Commission (SEC) indicating whether the minerals they use were exported from the Democratic Republic of the Congo or surrounding nations. Then in August 2012, the SEC adopted specific procedures for reporting to the commission. In February 2013, JX Nippon Mining & Metals revised its Basic Procurement Policy's Article 4, the provisions stipulating its principles on conflict minerals, putting the information into the Company's web-site to attend to customer enquiries.

In June 2013, Group company Pan Pacific Copper Co., Ltd., which produced gold, was audited to assess whether it is in compliance with the London Bullion Market Association (LBMA) Responsible Gold Guidance, and received an assurance report. Based on this audit, JX Nippon Mining & Metals received LBMA certification and was put on the Conflict Free Smelter list.

Regularly conducting in-house training and internal audits, the company will supply reliable materials that customers can safely use.

\* Conflict minerals: Resources mined in region where conflicts are occurring such as Africa. For example, tantalum, gold, tin and tungsten mined in the Democratic Republic of the Congo and surrounding countries and their derivatives are considered sources of funds for conflicts.



**Takako Yamaguchi**

Keihin Truck Terminal,  
Keihin Branch  
Maruwn Transport Eastern Japan Co., Ltd.

### What do "trustworthy products/services" mean to me?

I am a tank truck driver and deliver petroleum products to our customers. My loads are hazardous materials, so I make it a point to drive safely and work carefully under pressure, but also have a smile, to gain the trust of our customers.



# Harmony with the environment

The JX Group collectively develops technologies and services for creating a better global environment, and is involved in ongoing and vigorous efforts to use energy, resources and materials effectively, and to preserve the environment.

## Environment

### Basic Approach

“Harmony with the environment” is one component of the JX Group Values. Accordingly, the environment is a vital theme in the Group’s CSR activities.

#### ● 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.

Through environmental actions enabled by operation of an Environmental Management System (EMS), coupled with deliberation and reporting on the Group environmental safety by the JX Group Environment & Safety Committee, the JX Group manages progress on the Medium-Term Environmental Management Plan by the Group.

## Compliance with Environmental Laws

The JX Group believes compliance with environmental laws forms the basis of and is critical to its business activities, and conducts extensive compliance checks and environmental education to this end. In fiscal 2012, compliance checks performed at JX Holdings and core operating subsidiaries turned up no major violations.

## JX Group Medium-Term Environmental Management Plan

JX Group companies strived to implement the Medium-Term Environmental Management Plan (FY2010-2012), but factors such as the changing business environment meant that unfortunately we were unable to achieve part of the target laid out in the plan.

The main targets for reducing specific energy consumption and CO<sub>2</sub> emissions in fiscal 2012 were not achieved at our core operating subsidiaries because of either operational troubles or the changing business environment. However, all other targets were met.

### ▶ Formulating New Medium-Term Environmental Management Plan (FY2013-2015)

The JX Group has formulated a new three-year Medium-Term Environmental Management Plan for the period from fiscal 2013 to fiscal 2015, based closely on the results of the First Medium-Term Environmental Management Plan implemented collectively from fiscal 2010 to fiscal 2012 as well as reviews and deliberations made within the JX Group on recent environmental and societal trends. The three most important items under the JX Group Environmental Policy have been set as shared targets for the new plan. Although specific matters and targets differ based on the unique characteristics of each operating company, the entire JX Group will collectively work together to achieve these targets.

#### Shared Targets for the New JX Group Medium-Term Environmental Management Plan

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



**Takuya Kashimura**

Project Department II  
Project Division  
JX Engineering Corporation

### What does “harmony with the environment” mean to me?

I pursue my daily work while constantly thinking about my responsibility as a creator of new things that need to be environmentally-friendly, waste-free, rationally designed and reduce industrial waste in each phase of Engineering, Procurement and Construction (EPC) and maintenance.



## [Results and Evaluation of the JX Group Medium-Term Environmental Management Plan (FY2010–FY2012)]

### Energy Business (JX Nippon Oil & Energy Group)

Activities	Specific energy consumption reduction	Soil contamination countermeasures	Waste reduction
Targets	Reduce 3% over 3 years compared with FY2009 Reduce 1% in FY2010 (compared with FY2009) Reduce 2% in FY2011 (compared with FY2009) Reduce 3% in FY2012 (compared with FY2009)	Operating properties: Prevent external leakage Decommissioned properties: Conduct deliberate surveys and treatment measures	Maintain the waste-to-landfill ratio and "Zero Emission Plus" goals Maintain at 0.5%
FY2010 results and evaluation	Reduced 1.6% compared with FY2009 Target achieved (refining division)	Soil surveys implemented: 352 sites Treatment measures: 103 sites Target achieved	0.33% Target achieved
FY2011 results and evaluation	Reduced 1.1% compared with FY2009 Target not achieved (refining division)	Soil surveys implemented: 406 sites Treatment measures: 87 sites Target achieved	0.41% Target achieved
FY2012 results and evaluation	Reduced 0.3% compared with FY2009 Target not achieved (refining division)	Soil surveys implemented: 245 sites Treatment measures: 107 sites Target achieved	0.19% Target achieved

### Oil and Gas Exploration and Production Business (JX Nippon Oil & Gas Exploration Group)

Activities	Reduction of CO <sub>2</sub> emissions*	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 3% in three years (compared with FY2009) Reduce 1% in FY2010 (compared with FY2009) to no more than 323 thousand tons Reduce 2% in FY2011 (compared with FY2009) to no more than 319 thousand tons Reduce 3% in FY2012 (compared with FY2009) to no more than 316 thousand tons	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
FY2010 results and evaluation	294 thousand tons Target achieved	Implemented Target achieved	Held 3 HSE Committee meetings, etc. Target achieved
FY2011 results and evaluation	303 thousand tons Target achieved	Implemented Target achieved	Held 3 HSE Committee meetings, etc. Target achieved
FY2012 results and evaluation	335 thousand tons Target not achieved	Implemented Target achieved	Held 3 HSE Committee meetings, etc. Target achieved

\* CO<sub>2</sub> emissions are calculated from energy consumption.

### Metals Business (JX Nippon Mining & Metals Group)

Activities	Reduction of CO <sub>2</sub> emission intensity	Specific energy consumption improvement	Waste reduction
Targets	FY2010: 7.5% reduction (Compared with FY2003–2005 average) FY2011: 1.0% reduction (Compared with FY2008–2010 average) FY2012: 2.0% reduction (Compared with FY2008–2010 average)	FY2010: 5% reduction (Compared with FY2003–2005 average) FY2011: 1% reduction (Compared with FY2008–2010 average) FY2012: 2% reduction (Compared with FY2008–2010 average)	FY2010: 70% reduction in waste-to-landfill ratio (Compared with FY2003–2005 average) FY2011 and FY2012: Under 1% (non-application waste ratio)
FY2010 results and evaluation	Reduced 8.1% compared with FY2003–2005 average Target achieved	Reduced 5.4% compared with FY2003–2005 average Target achieved	Reduced 78% in waste-to-landfill ratio compared with FY2003–2005 average Target achieved
FY2011 results and evaluation	Increased 5.9% compared with FY2008–2010 average Target not achieved	Increased 5.3% compared with FY2008–2010 average Target not achieved	Non-application waste ratio 0.8% Target achieved
FY2012 results and evaluation	Increased 0.2% compared with FY2008–2010 average Target not achieved	0.0% (no change) compared with FY2008–2010 average Target not achieved	Non-application waste ratio 0.4% Target achieved

### Other Businesses (Listed Subsidiaries and Other Companies)

Activities	NIPPO CORPORATION	Toho Titanium Co., Ltd.	Other Group Companies
Targets	CO <sub>2</sub> emissions intensity (sales amount) reduction targets FY2010: 3% (Compared with FY2007) FY2011: 2% (Compared with FY2009) FY2012: 3% (Compared with FY2009)	CO <sub>2</sub> emissions intensity (Titanium volume) FY2010: 3% reduction (Compared with FY2005–2007 average) FY2011: 4% reduction (Compared with FY2005–2007 average) FY2012: 5% reduction (Compared with FY2005–2007 average)	Implement the JX Group EMS at each company, establish environmental targets according to business characteristics, and implement PDCA cycle
FY2010 results and evaluation	Reduced 6.3% compared with FY2007 Target achieved	Reduced 5.1% compared with average for FY2005–2007 Target achieved	Reviewed target achievement at each company via the JX Group Environmental Committee
FY2011 results and evaluation	Reduced 6.2% compared with FY2009 Target achieved	Reduced 4.0% compared with average for FY2005–2007 Target achieved	Reviewed target achievement at each company via the JX Group Environmental Committee
FY2012 results and evaluation	Reduced 5.2% compared with FY2009 Target achieved	Increased 3.5% compared with average for FY2005–2007 Target not achieved	Reviewed target achievement at each company via the JX Group Environmental Committee



#### Seiji Kaijima

General Administration Group  
Chita Plant  
JX Nippon Oil & Energy Corporation

### What does “harmony with the environment” mean to me?

Three years ago the Chita Plant began to set up its vast in-plant green space including green belts and biotopes to provide better habitats for surrounding flora and fauna. In this manner, we are working hard to enhance biodiversity on the Chita Peninsula together with Aichi Prefecture, local NPOs, students, neighboring companies and local people.



# Harmony with the environment

## Environmental Performance

### Basic Approach

The environmental performance data on pages 35 to 36 covers a total of 57 business sites at 31 companies engaged in the Energy Business, the Oil and Gas Exploration and Production Business, the Metals Business, and Other Businesses.

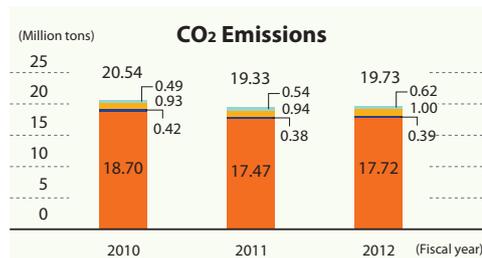
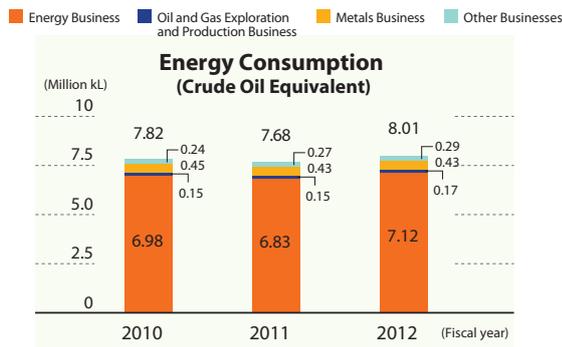
- Energy Business: 20 sites at 11 companies
- Oil and Gas Exploration and Production Business: 3 sites at 1 company
- Metals Business: 25 sites at 16 companies
- Other Businesses: 9 sites at 3 companies

For the Energy Business, we have recorded data on business sites involved in petroleum product refining and production only (data for fiscal 2012 includes depots). For the Metals Business and other businesses, we have retroactively restated the figures from fiscal 2010. Consequently, the figures differ from the data for previous fiscal years in "JX Report for a Sustainable Future 2012."

### Initiatives to Prevent Global Warming

Energy consumption in fiscal 2012 (crude oil equivalent) for the entire JX Group was 8.01 million kL, marking a 0.33 million kL increase.

CO<sub>2</sub> emissions for the JX Group in fiscal 2012 totaled 19.73 million tons, a year-on-year increase of 0.4 million tons.



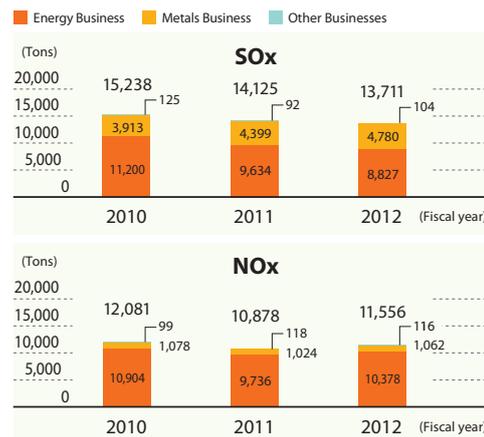
\* CO<sub>2</sub> emissions include emissions from energy consumption (electricity, fuel, etc.) as well as greenhouse gases emitted mainly in oil and gas production converted to CO<sub>2</sub>.

### ► Use of Renewable Energy

Since the early 20<sup>th</sup> century the JX Nippon Mining & Metals Group has used small hydroelectric generation from the Ishioka No.1 Power Station to supply energy for the operation of its refining facilities in the Hitachi Area. In 1955, the company commenced operations at its Kakinosawa Power Plant in Iwaki City, Fukushima Prefecture, with today generates from around 2,300kW up to 4,800kW of a maximum generating capacity.

### Initiatives to Prevent Air Pollution

In line with laws, ordinances, accords and voluntary standards to prevent air pollution, the JX Group closely monitors gases emitted into the atmosphere by its facilities. The JX Group reduced its total SO<sub>x</sub> (sulfur oxide) emissions in fiscal 2012 by 414 tons, but NO<sub>x</sub> (nitrogen oxide) emissions increased by 678 tons.



\* Not applicable for the Oil and Gas Exploration and Production Business.  
\* Figures for NIPPO CORPORATION in Other Businesses were estimated by its 50 main plants.



**Naoto Araki**

Production Section, Nakajo Field Office  
JX Nippon Oil & Gas Exploration Corporation

### What does "harmony with the environment" mean to me?

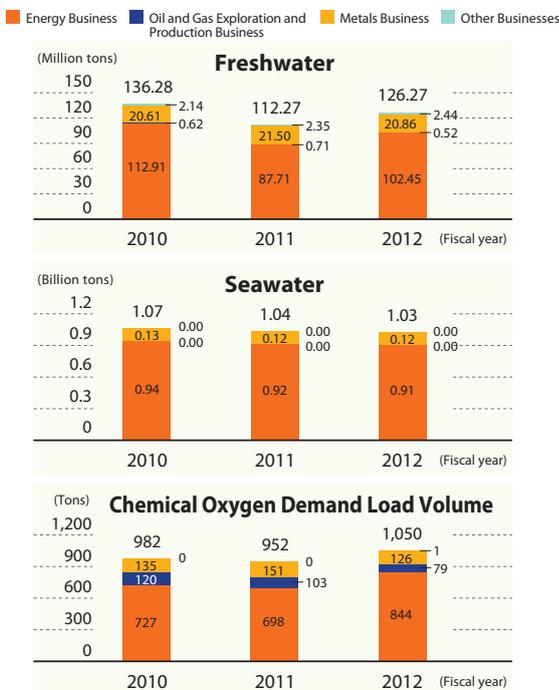
One of our most important jobs is to properly treat associated water when we produce oil and gas. We have been working together with external organizations to study new treatment facilities as we aim for the eventual adoption of such facilities in the future. I am also involved in a variety of activities together with local community members to help protect the rich natural environment around.

## Initiatives for Protecting Water Resources

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 2012 the JX Group consumed a total of 126.27 million tons of water resources (freshwater resources), marking an increase of 14.00 million tons compared to fiscal 2011. The JX Group's use of seawater decreased 10 million tons to 1.03 billion tons.

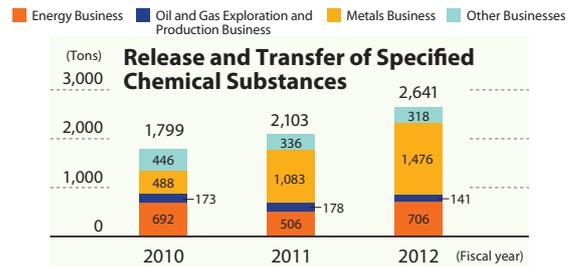
The JX Group's chemical oxygen demand (COD) load volume in fiscal 2012, an indicator of water pollution levels, increased 98 tons year-on-year to 1,050 tons.



\* Figures for overseas sites (Malaysia and Vietnam) are not applicable in the figure for the Oil and Gas Exploration and Production Business.

## Initiatives for Management of Chemical Substances

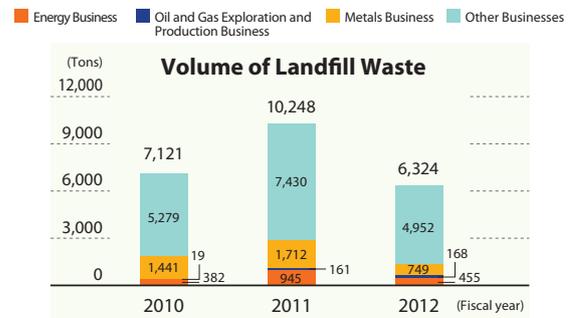
The JX Group conducts proper management of specified chemical substances stipulated under the Pollutant Release and Transfer Register (PRTR) Law and also strives to reduce chemical emission levels. In fiscal 2012, the JX Group's release and transfer of specified chemical substances totaled 2,641 tons, marking an increase of 538 tons over fiscal 2011.



\* Figures for overseas sites (Malaysia and Vietnam) are not applicable in the figure for the Oil and Gas Exploration and Production Business.

## Initiatives to Reduce Waste

In fiscal 2012, the JX Group's final waste disposal volume totaled 6,324 tons, which was 3,924 tons less than fiscal 2011.



## Initiatives for Conserving Biodiversity

The JX Group is taking steps to conserve biodiversity as one of the three shared targets laid out in its Medium-Term Environmental Management Plan and each group company is implementing measures to this end.

### ► Creation of Guidelines on Biodiversity

The JX Nippon Oil & Energy Group has established an action policy on biodiversity known as the JX Nippon Oil & Energy Group Guidelines on Biodiversity based on a fundamental policy that states, "We will take measures considerate of biodiversity in every aspect of our business activities under the recognition that our business activities are deeply related to the Earth's biodiversity." The company is now striving to ascertain and analyze the impacts its business activities have on biodiversity, to make improvements, as well as to take part in corporate citizenship activities that contribute to biodiversity conservation, such as nature protection and environmental education.



**Steve Kohut**  
Director of Operation Department  
JX Nippon Mining & Metals USA, Inc.

## What does "harmony with the environment" mean to me?

I am currently working on making the company more energy efficient with a new air conditioning management system. This system has enabled us to achieve the optimal conditions for manufacturing and also conserve energy because we can now control the air conditioning for parts of the plant not in use on an hourly or daily basis. Moving forward, I will make further efforts to achieve a comfortable work environment and greater energy savings.

## Corporate Governance

The basic approach to corporate governance within the JX Group is to make decisions and execute operational activities quickly and flexibly to implement growth strategies for the JX Group as a whole and make appropriate responses to changes in the business environment. In addition, the company endeavors to secure the soundness and transparency of its management to respond to the trust and confidence of all its stakeholders.

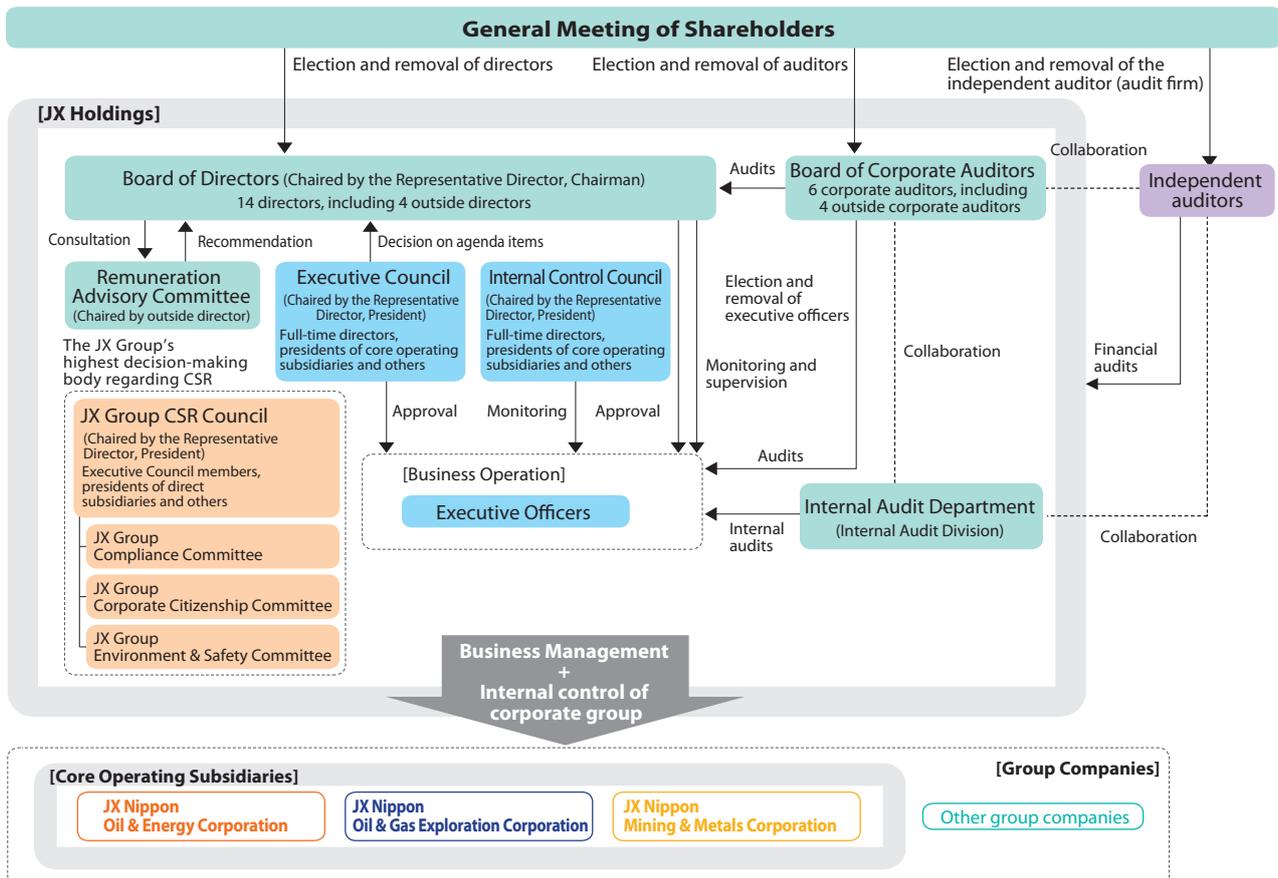
Guided by this basic policy, JX Holdings, as the ultimate holding company of the JX Group, focuses especially on formulating medium- to long-term strategies for the JX Group and strategically allocating management resources and conducting risk management to implement these strategies. Under JX Holdings, its three core operating subsidiaries wholly owned by it have been positioned to be responsible for each of the group's three core businesses, namely the Energy Business, the Oil and Natural Gas Exploration and Production Business, and the Metals Business.

In addition, JX Holdings' corporate governance structure is characterized by the following features:

1. Directors are elected for a term of one year and must stand for re-election each year at the General Meeting of Shareholders.
2. Independent outside directors with management insight and extensive experience, are appointed to strengthen the supervisory function over the management from an objective perspective.

3. In addition to full-time directors and outside directors, the presidents and certain other key personnel of the core operating subsidiaries are elected as directors of JX Holdings to deliberate and decide on cohesive group-wide business strategies at meetings of the Board of Directors of JX Holdings.
4. The majority of corporate auditors consist of independent outside corporate auditors appointed on the basis of management insight and extensive experience. This structure ensures the effectiveness of audits of directors' performance of management duties by the Board of Corporate Auditors.
5. A Compensation Advisory Committee comprising two outside directors and two representative directors has been formed as an advisory body to the Board of Directors, in order to ensure the transparency and objectivity of the decision-making processes related to compensation of directors and executive officers as well as related matters.
6. The Executive Council has been formed as a body to discuss matters that require the approval of the president and other important issues with respect to the execution of the president's duties based on authority handed from the Board of Directors. This council is composed of full-time directors, the presidents and certain other key personnel of the core operating subsidiaries. The Executive Council helps to ensure appropriate and efficient decision making by the president.
7. The Internal Control Council has been established as an advisory body to the president to ensure appropriate execution of operation. This council, which consists of the same members as the Executive Council, monitors, confirms and reviews the appropriateness of business operation status as an autonomous self-control system.

### [JX Group Corporate Governance Framework]



## 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]

<p><b>1. System to ensure that the execution of the duties by the directors and the employees complies with laws and regulations, and the Articles of Incorporation</b></p> <p>(1) Develop and implement various rules and ensure compliance with laws and regulations, the Articles of Incorporation, and various other rules.  (2) Establish and operate the JX Group Compliance Committee, implement the compliance status checks, and address the results.  (3) Develop and implement an internal whistle-blowing system.  (4) Hold Board of Directors' meetings on a monthly basis and conduct adequate discussion and reporting, based on the Rules for the Board of Directors.  (5) Ensure objectivity and improve appropriateness through the appointment of outside directors and outside corporate auditors.  (6) Establish an Internal Audit Department independent of other divisions and conduct internal audits.  (7) Develop and implement an internal control system for the Financial Instruments and Exchange Act.  (8) Develop and implement rules to prevent relationships with anti-social forces and ensure thorough compliance with such rules.</p>
<p><b>2. System for the storage and management of information to execution of duties by the directors and the employees</b></p> <p>(1) Develop and implement rules concerning documents.  (2) Develop rules for preparing minutes of Board of Directors' meetings and other documents related to decision-making, and ensure their appropriate implementation.  (3) Develop and implement rules regarding information security, and ensure thorough compliance with such rules through training and other programs.  (4) Provide proper external disclosure of information, including timely disclosure.</p>
<p><b>3. Rules and other systems for management of risk of loss</b></p> <p>(1) Analyze risks and clarify policy for handling them in the Board of Directors' meetings and Executive Committee.  (2) Develop and implement a system and rules for handling large fluctuations in economic conditions, resource prices and foreign currency exchange rates, along with natural disasters and other risks.  (3) Develop and implement a system and rules for handling crises and emergency situations.</p>
<p><b>4. System to ensure efficient execution of duties by directors and the employees</b></p> <p>(1) Establish and implement "Rules on Organization and Authority", and efficiently execute duties.  (2) Ensure appropriate and efficient approval by the president through discussions in the Executive Council before making decisions in Board of Directors' meetings.  (3) Formulate the medium-term management plan, and develop and implement a management system.</p>
<p><b>5. System to ensure appropriateness of business within the corporate group</b></p> <p>(1) Ensure penetration and thoroughness of "the JX Group Mission Statement" and "the JX Group Values".  (2) Ensure presidents of core operating subsidiaries and others attend meetings of the Board of Directors and Executive Council.  (3) Discuss group companies' business execution projects to a certain extent in the Board of Directors' meetings and the Executive Council of JX Holdings.  (4) Formulate and implement "Rules on operation of the JX group" and ensure thorough compliance with the rules.  (5) Establish and implement a compliance system and extend to group companies.</p>
<p><b>6. System to ensure effective auditing by the corporate auditors</b></p> <p>(1) Ensure respect for audit standards and audit plans, along with cooperation with the efficient execution of audits and the development of an audit environment.  (2) Ensure corporate auditors attend meetings of the Executive Council and other meetings, and establish and implement a reporting system for requested items.  (3) Establish and implement a system for promptly reporting to corporate auditors regarding the discovery of material breaches of laws and regulations and the Articles of Incorporation, as well as any discovery of misconduct.  (4) Ensure corporate auditors and management personnel exchange opinions regarding the group's management issues and other matters.  (5) Ensure close collaboration between the corporate auditors and the Internal Audit Department.  (6) Establish an Auditors Affairs Office independent of divisions responsible for business execution.</p>

## Risk Management

In the JX Group, each company has prepared risk management systems appropriate for their respective lines of business and implements measures in consideration of 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 Rules for Responding to Crises and Emergency Situations, 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 response and management. 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 to be taken be reported immediately to the head of the crisis response unit.

Also, depending on the magnitude of the crisis, at its discretion, JX Holdings may form a crisis response headquarters or a joint crisis response headquarters with JX Group companies to respond quickly and appropriately to the crisis.

### Information Security Management

Based on its Basic Rules for Information Security, the JX Group works to prevent the improper usage or disclosure, including leakage, of company information, which is a corporate asset. The JX Group also strives to maintain the accuracy and reliability of its corporate information as well as prevent falsification or erroneous handling while making it possible for authorized users of information to have constant access to information when they need it.

## 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 system (TDnet) provided by the Tokyo Stock Exchange and others, and the same information is made available on JX Holdings' website.

## CSR Management

### Basic Approach

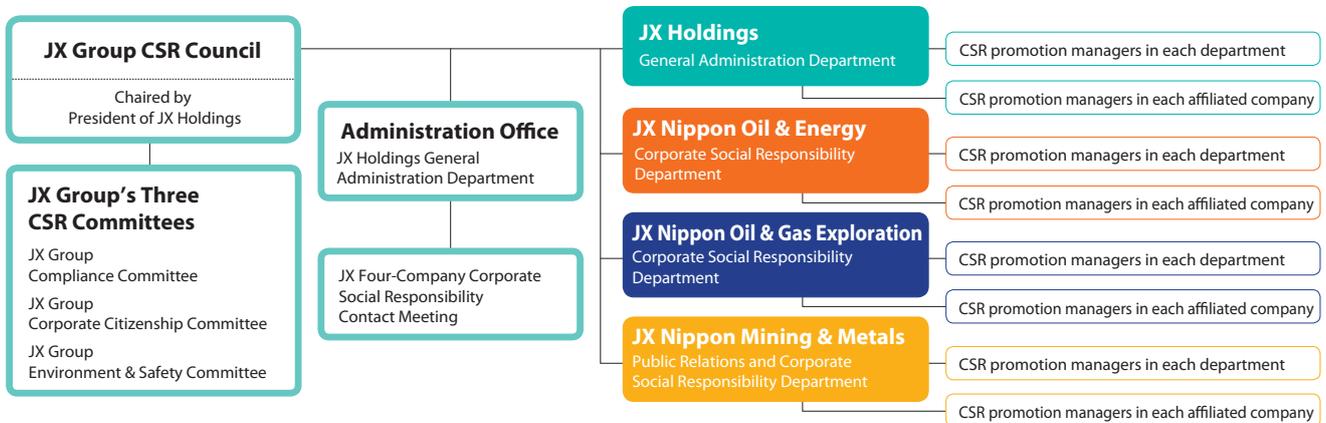
As a group of companies involved in the energy, resources and materials fields, which are vital for people's lives and economic activity, we believe that the embodiment of CSR is to ensure a stable and efficient supply of energy, resources and materials, and the implementation of the Mission Statement by every employee in 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, Priority Fields and Results of Activities

We established the JX Group CSR Council, which is chaired by the president of JX Holdings, to formulate and promote the JX Group's basic policy on CSR and to manage and coordinate CSR activities across the JX Group. We have specified three priority areas for CSR: 1) compliance (including information security and human rights), 2) social contribution, and 3) environment and safety. JX Group CSR committees have been established for each field, and these committees act as advisory bodies to the chairman of the JX Group CSR Council. Each committee deliberates and makes recommendations on actual business operations and shares information. Furthermore, group CSR promotion managers have been assigned to each workplace in the JX Group. The group CSR promotion managers cooperate with the department responsible for CSR in each company, working at the frontline of CSR promotion to manage CSR in the workplace. In addition, group CSR promotion managers gather once a year for a conference at which they attend training events and share opinions.

The results of activities undertaken for each of the three priority fields are presented below. Initiatives for priority fields of each fiscal year are reported at the JX Group CSR Council, while priority fields for subsequent fiscal years are selected based on reports made at each subcommittee meeting. In this manner, the entire JX Group uses the PDCA cycle to implement CSR activities.

[JX Group CSR Implementation Structure]



[Key Themes for JX Group's Three CSR Committees]

	Fiscal 2012	Fiscal 2013
<b>JX Group Compliance Committee</b>	<ul style="list-style-type: none"> <li>Conduct compliance status checks and follow-up inspections.</li> <li>Raise awareness of the compliance hotline program (an internal whistleblowing system) and enhance usability.</li> <li>Establish an anti-bribery program overseas.</li> </ul>	<ul style="list-style-type: none"> <li>Globally systemize and standardize current compliance activities by referencing the corporate compliance system designated by the U.S. Department of Justice.</li> </ul>
<b>JX Group Corporate Citizenship Committee</b>	<ul style="list-style-type: none"> <li>Promote continuous support activities for regions affected by the Great East Japan Earthquake.</li> <li>Expand measures to enhance public awareness of the JX Children's Story Award.</li> </ul>	<ul style="list-style-type: none"> <li>Continuous support for regions affected by the Great East Japan Earthquake.</li> </ul>
<b>JX Group Environment &amp; Safety Committee</b>	<ul style="list-style-type: none"> <li>Operate JX Group Environmental Management System (EMS).</li> <li>Follow up on the 2010-2012 JX Group Medium-Term Environmental Management Plan.</li> <li>Formulate the 2013-2015 JX Group Medium-Term Environmental Management Plan.</li> <li>Promote safety-related activities.</li> </ul>	<ul style="list-style-type: none"> <li>Operate JX Group EMS.</li> <li>Follow up on the 2013-2015 JX Group Medium-Term Environmental Management Plan.</li> <li>Promote safety-related activities.</li> </ul>

# 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 their 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>



- ▶ JX-ENEOS Children's Story Award
- ▶ JX Group Volunteer Activities Supporting Restoration and Recovery
- ▶ JX Group CSR Reports

### Other Related Information about JX Holdings

- > About JX Group
  - Establishment of JX Group
  - JX Group Mission Statement
  - Objectives and Basic Concept
  - Business Integration Disclosure Materials
- > Corporate Profile
  - JX Group Mission Statement
  - Group Companies
  - Management Strategy
  - Corporate Data
  - Executives
  - Organization
  - Corporate History
- > Investor Relations
  - IR News
  - Management Policies
  - Financial Highlights
  - IR Library
  - Shareholder & Stock Information

## JX Nippon Oil & Energy

<http://www.no.e.jx-group.co.jp/english/index.html>



- ▶ Corporate Profile
- ▶ CSR Report
- ▶ Products

## JX Nippon Oil & Gas Exploration

JX Nippon Oil & Gas Exploration ▶ Safety, Environment and Community  
<http://www.nex.jx-group.co.jp/english/environment/index.html>



- ▶ HSE Policy
- ▶ HSE Management System
- ▶ Operation Safety
- ▶ Environment
- ▶ Community and Compliance
- ▶ 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
- ▶ CSR Activities of the JX Nippon Mining & Metals Group
- ▶ Sustainability Report
- ▶ JX Nippon Mining & Metals' Corporate DNA and CSR
- ▶ Material Issues of the JX Nippon Mining & Metals Group
- ▶ Economic Activities Report
- ▶ Environmental Activities Report
- ▶ Social Activities Report

## NIPPO CORPORATION

<http://www.nippo-c.co.jp/english/index.html>

## TOHO TITANIUM CO., LTD.

TOHO TITANIUM CO., LTD. ▶ About Us  
 ▶ Quality and Environmental Management System  
 ▶ CSR Activities  
[http://www.toho-titanium.co.jp/en/about/quality\\_en.html](http://www.toho-titanium.co.jp/en/about/quality_en.html)

## The UN Global Compact's Ten Principles

Human Rights		
Principle 1	Businesses should support and respect the protection of internationally proclaimed human rights; and	P24
Principle 2	make sure they are not complicit in human rights abuses.	P24
Labour		
Principle 3	Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	P24
Principle 4	the elimination of all forms of forced and compulsory labour;	P24
Principle 5	the effective abolition of child labour; and	P24
Principle 6	the elimination of discrimination in respect of employment and occupation.	P24, P28
Environment		
Principle 7	Business should support a precautionary approach to environmental challenges;	P25~26, P33~36
Principle 8	undertake initiatives to promote greater environmental responsibility; and	P25~26, P30, P33~36
Principle 9	encourage the development and diffusion of environmentally friendly technologies.	P25~26, P31
Anti-corruption		
Principle 10	Businesses should work against corruption in all its forms, including extortion and bribery.	P24, P32

# Third-Party Opinion



## Masaatsu Doi

Associate Professor  
Faculty of Regional Policy  
Takasaki City University of Economics

Associate Professor Doi earned his undergraduate degree at the Hitotsubashi University Faculty of Economics, and completed his doctoral degree at the Hitotsubashi University Graduate School of Commerce and Management. He began his current job as an associate professor in 2009. He is the co-author of *CSR Management: Corporate Social Responsibility and Stakeholders*, and *The Creation and Diffusion of Social Innovation*, published by CHUOKEIZAI-SHA, Inc and NTT Publishing Co., Ltd., respectively.

This year's JX Report for a sustainable future adds messages from the leadership of the Group's core operating subsidiaries, which conveys a sense that the entire JX Group is tackling CSR collectively and not just the holding company. It is essential for a major corporate group like the JX Group to ensure the leadership of its core operating subsidiaries articulates their commitment and vision for CSR. Although this was not mentioned in the report, the JX Group held a training workshop for all of its 140 CSR promotion managers from across Japan to ensure thorough understanding and implementation of the JX Group Mission Statement. I hear that plans are moving forward for these employees to serve as change agents that help to penetrate CSR and the JX Group Mission Statement throughout the entire JX Group and its 26,000-strong workforce. I believe that through these ongoing collective efforts involving the top, middle and bottom of the workforce will ensure that the entire JX Group recognizes the importance of CSR management.

One issue I noticed with this year's report was the connection between the JX Group's newly drawn up Second Medium-Term Management Plan and CSR. I believe the Medium-Term Management Plan should include a specific action plan and check system, in addition to a total CSR management plan that includes both environmental (page 33) and social aspects, such as the supply chain, human rights and employment. The other questions that arise involve the type of challenges that have been faced over the past three years of CSR initiatives and how these are being addressed. As I pointed out in last year's third-party opinion, the JX Group needs to identify its current management challenges and draw upon new perspectives through stakeholder engagement. At the same time, it needs to convey its stance to stakeholders in an easy-to-understand manner.

One of the biggest news events surrounding the JX Group in recent years was the decision by JX Nippon Oil & Energy

to shut down crude oil refining at its Muroran Refinery at the end of March 2014 and to create a new action plan for the refinery (November 2, 2012). The other was the excavator accident at Mizushima Refinery's undersea tunnel that occurred in February 2012, which was reported on closely by the media as a serious accident until the completion of salvaging the shield machine from the tunnel (August 24, 2013). The problem with the former is not related to the fact that support and understanding were obtained from employees and the local community, but rather to the decision-making process with regard to Sophisticated Methods of Energy Supply Structures, which is a serious issue directly related to Japan's post-quake crude oil supply. The problem with the latter was related to the mention of the accident in the contract with the contractor and the fact that the cause of the accident has yet to be uncovered. While it is difficult to cover this topic in this report, the JX Group needs to disclose this type of information demanded from local community members and consumers to prevent misunderstandings. The role of a CSR report should be to disclose this type of information and I would like to point out that not proactively disclosing such information could very well lead to future risks.

Meanwhile, the Global Reporting Initiative (GRI) released the G4 updated guidelines for international sustainability reporting in May 2013. The key point of these changes was related to material aspects, which if pursued further question the way material issues are identified. Rather than stop at the basic stance of "establishing both of proper governance backed with thorough compliance and CSR implement structure" noted on page 7, the JX Group should take a step further to identify the material challenges facing its CSR activities and how these challenges were brought to light through data analysis and discussions. Only after this work has been performed will value be achieved through the implementation of the PDCA cycle using key performance indicators (KPI) and through an established monitoring process.

Today the methods for disclosing non-financial data have been seriously called into question internationally. As a result, I would like to emphasize once again the importance of building "sustainable and responsible competitiveness" through a steady PDCA cycle that sheds light on future challenges based on progress monitoring as well as positioning CSR as an importance aspect of management activities (Medium-Term Management Plan).

## Response to Third-Party Opinion

We are very grateful for Associate Professor Doi's valuable opinions and suggestions on how the JX Group can make improvements to its CSR activities.

The JX Group undertakes its business activities with the social mission of delivering a stable supply of energy, resources and materials. The basis for these activities can also be found in proper governance and the establishment of a CSR implementation structure. Given this, I am very honored that Associate Professor Doi has commended our collective Group-wide efforts to address CSR and disseminate this in our mission statement, and the fact that the three CEOs of our core operating subsidiaries have clarified their CSR vision in this report.

At the same time, Associate Professor Doi also

provided constructive criticism about our approach to disclosing information to stakeholders and how we identify material issues facing JX Group CSR activities. We take this criticism very seriously and plan on further evolving the JX Group's CSR activities. We will encourage proactive information disclosure and identification of issues through stakeholder engagement. In turn, we will use the PDCA cycle to steadily build "sustainable and responsible competitiveness."

As a good corporate citizen, the JX Group is dedicated to working together with stakeholders to contribute to the development of both a sustainable economy and a sustainable society.

## Ichiro Yamamoto

Executive Officer and  
General Manager of General  
Administration Department  
JX Holdings, Inc.



(TRANSLATION)

## Independent Practitioner's Review Report

September 30, 2013

Mr. Isao Matsushita,  
Representative Director, President,  
JX Holdings, Inc.

Deloitte Tohmatsu Evaluation and  
Certification Organization Co., Ltd.  
Chief Executive Officer, Hiroshi Inanaga

### 1. Scope of Review

We have reviewed the report titled "JX Report for a Sustainable Future 2013" (the "Report") prepared by JX Holdings, Inc. (the "Company"). The purpose of our review was to provide limited assurance from an independent practitioner about whether the material quantitative environmental information for the period from April 1, 2012 to March 31, 2013 included in pp.33-36 of the Report was accurately measured and calculated in accordance with the Company's calculation methods which refer to the Environmental Reporting Guidelines - Year 2012 version (issued by the Japanese Ministry of the Environment), the GRI Sustainability Reporting Guidelines (Version 3.1) and the GRI Mining and Metals Sector Supplement.

### 2. Responsibility of Management and Responsibility of the Independent Practitioner

The Report is the responsibility of the Company's management. Our responsibility is to provide our limited assurance with respect to our review performed on the Report as an independent practitioner.

### 3. Summary of Review

To obtain an adequate and valid basis for providing limited assurance with respect to our conclusions, we performed our review in accordance with the International Standard on Assurance Engagements 3000 (issued by the International Federation of Accountants in December 2003) and the Proposed Environmental Report Review Standard (issued by the Japanese Ministry of Environment in March 2004).

The review procedures performed for the material quantitative environmental information for the period from April 1, 2012 to March 31, 2013 included in pp.33-36 of the Report consisted of: 1) agreeing information to summary tables and supporting documents on a sample basis; 2) interviewing the responsible Company personnel and the persons in charge; 3) reviewing and agreeing information to the relevant Company minutes, the Company's regulations, and related documents, etc.; 4) site visits; and 5) comparing information with other available supporting internal and external materials.

### 4. Conclusion

On the basis of the review procedures described in the preceding paragraph, nothing has come to our attention that caused us to believe that the material quantitative environmental information for the period from April 1, 2012 to March 31, 2013 included in pp.33-36 of the Report was not accurately measured or calculated, in all material respects, in accordance with the Company's calculation methods which refer to the Environmental Reporting Guidelines - Year 2012 version (issued by the Japanese Ministry of the Environment), the GRI Sustainability Reporting Guidelines (Version 3.1) and the GRI Mining and Metals Sector Supplement.

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



## JX Holdings, Inc.

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<http://www.hd.jx-group.co.jp/english/>

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

After you have read the JX Report for a Sustainable Future 2013, feel free to submit any opinions or comments you may have. Please send an email.



As of September 30, 2013, JX Holdings was a constituent of the following major SRI Indexes:

MEMBER OF

## Dow Jones Sustainability Indices

In Collaboration with RobecoSAM

DJSI Asia Pacific: A global index of 152 companies selected for their outstanding sustainability from among the 600 largest companies in the Asia-Pacific region.



モーニングスター社会的責任投資株価指数  
Morningstar Socially Responsible Investment Index

MS-SRI: This index comprises 150 stocks selected from among listed companies in Japan on the basis of noteworthy social responsibility efforts. This is Japan's first socially responsible investment index.



This report was printed using an environmentally friendly waterless printing process and vegetable oil ink. In support of the Kizukai Undo (Tree-Use Movement) promoted by Japan's Forestry Agency, JX Holdings has printed this report on "3.9 paper," made from wood produced through forest thinning in areas where the JX Group is engaged in forest maintenance. This contributes to increased absorption of CO<sub>2</sub> by Japanese forests.