



Nippon Mining Holdings Group  
**CSR Report 2008**

NIPPON MINING HOLDINGS, INC.

# Petroleum & Copper

## NIPPON MINING HOLDINGS

With a corporate history and tradition going back more than 100 years, the Nippon Mining Holdings Group strives to provide a stable and efficient supply of resources, materials and energy through its two core businesses – petroleum, via Japan Energy Corporation, and metals, via Nippon Mining & Metals Co., Ltd. Through these businesses, we support social infrastructure and contribute to economic development, while at the same time aiming to create a better global environment and a sustainable society by pursuing the effective utilization of the earth's limited, valuable resources.



資源イノベーション。

100万トンのパラキセレンから、  
120億枚のポリエステル・シャツが、  
560億本のペットボトルが、

石油も、銅も。  
新日鉱ホールディングス

JOMO / ジャエコー

新日鉱ホールディングス  
東京都港区新橋2-2-2  
03-3542-1111  
www.nippon-mining.com

Newspaper advertisements (March 2008)

資源イノベーション。

限りある資源だから、都市の資源もことん活かす。  
都市鉱山開発計画。

石油も、銅も。  
新日鉱ホールディングス

JOMO / ジャエコー

新日鉱ホールディングス  
東京都港区新橋2-2-2  
03-3542-1111  
www.nippon-mining.com

## About the CSR Report 2008

The Nippon Mining Holdings Group has published a "Social & Environmental Report" summarizing the Group's annual corporate social responsibility (CSR) activities annually since fiscal 2005. This year, reflecting the creation of a system to promote CSR throughout the Group, we have renamed the report as the CSR Report and enhanced its content.

The CSR Report explains the Nippon Mining Holdings Group's business activities from a CSR perspective, and it also aims to convey our policies and approaches to all stakeholders, including shareholders and other investors, customers, business partners, employees and society, in order to proactively address the needs of society.

This report also serves as a review to the CSR reports issued by our two core operating companies – Japan Energy Corporation and Nippon Mining & Metals Co., Ltd.

Related reports can be downloaded from the respective company web sites.

Nippon Mining Holdings Group – CSR Report

<http://www.shinnikko-hd.co.jp/english/csr/>

Nippon Mining Holdings, Inc. – Annual Report 2008

<http://www.shinnikko-hd.co.jp/english/ir/library/annual/2008/>

Japan Energy Corporation – CSR Report 2008

<http://www.j-energy.co.jp/english/csr/>

Nippon Mining & Metals Co., Ltd. – Sustainability Report 2008

<http://www.nikko-metal.co.jp/e/sustainability/index.html>

### Report overview

#### Reporting Period

April 2007 to March 2008

(Some information from before or after this period is included as necessary.)

#### Boundary of report

[Implementation of environmental management]

(1) Japan Energy and Kashima Oil Co., Ltd.

(2) Nippon Mining & Metals, and 26 major subsidiaries (including 4 overseas):  
Data on overseas affiliates is added from this year (excluding environmental accounting, energy consumption intensity, fiscal 1990 energy and CO<sub>2</sub> emissions, and chemical substance management since fiscal 2004).

#### [Together with stakeholders]

Scope of business activities at Nippon Mining Holdings and functional support companies, and scope of reporting in Japan Energy's CSR Report 2008 and Nippon Mining & Metals' Sustainability Report 2008.

#### Guidelines used as reference

[Both petroleum business and metals business]

· GRI's (Global Reporting Initiative) Sustainability Reporting Guidelines, Version 3.0

· Ministry of the Environment's Environmental Reporting Guidelines 2007

[Petroleum business]

· Ministry of the Environment's Environmental Accounting Guidelines 2005 and the Study on the Japan Petroleum Energy Center's Introduction of Environmental Accounting in the Petroleum Industry

[Metals business]

· GRI's Mining and Metals Sector Supplement

#### Notes concerning forward-looking statements

This material includes Nippon Mining Holdings' future plans, strategies, earnings forecast and outlook. Information in this material is not only facts that have occurred, but is forecasts, assumptions and opinions based on available information as of June 26, 2008. This includes unlimited risks and uncertainties related to economic conditions, fierce competition in the industry, market demand, foreign exchange rates, tax system and other regulations. Hence, please note that actual results may differ from forecasts described in this material.

This report is translation of the CSR Report 2008 written in Japanese, which is published on September 2008.

## Contents

Message from CEO .....	3
Nippon Mining Holdings Group Overview .....	5
Businesses.....5 / Products.....6	
Group Mission .....	7
Long-Term Vision towards Fiscal 2015 .....	9
<b>Special feature 1 Promoting CSR and the Environment Oriented Management .....</b>	<b>10</b>
Theme 1 Recycling Metal Resources	
Theme 2 Recycling Waste Plastic	
Theme 3 Technologies for Recovering Metal from Low-Grade Ores	
Theme 4 Paraffinic Latent Heat PCM <i>Ecojoule</i> ®	
Theme 5 Polysilicon for Photovoltaic Power Generation	
Theme 6 Clean Energy	
<b>Special feature 2 Strengthening Innovation – Human Resource Development .....</b>	<b>15</b>
Management of the Nippon Mining Holdings Group .....	17
Corporate Governance.....17 / Internal Control System.....18	
CSR Management System.....18	
Compliance and Risk Management.....19	
Implementation of Environmental Management .....	21
Environmental Management.....21 / Energy Saving.....23	
Prevention of Global Warming.....25	
Prevention of Air Pollution.....27	
Prevention of Water Pollution.....28	
Chemical Substances Management.....28	
Reducing Waste and Increasing Recycling.....29	
Environment-Friendly Initiatives at JOMO Service Stations.....30	
Green Products and Services.....31	
Together with Stakeholders .....	33
Together with Shareholders and Other Investors.....33	
Together with Customers.....34	
Together with Business Partners.....36	
Together with Employees.....37	
Together with Society.....39	
Group Companies.....	43
Operating Bases in Japan and Overseas.....	44
The History of the Nippon Mining Holdings Group.....	45
Third-Party Opinion.....	46

The Nippon Mining Holdings Group strives to achieve a stable and efficient supply of and the effective utilization of resources, materials and energy while contributing to the creation of a better environment and a sustainable society.

Mitsunori Takahagi  
President and Chief Executive Officer  
Nippon Mining Holdings, Inc.



### What are the strengths of the Nippon Mining Holdings Group?

For more than 100 years, we have consistently and dynamically developed businesses related to “the earth’s resources” on the world stage. These businesses include the fields of petroleum (Japan Energy) and metals (Nippon Mining & Metals). Today, we are carrying out our mission of providing a broad sector of society with a stable supply of resources, materials and energy, while at the same time effectively utilizing the earth’s resources and working to rapidly develop groundbreaking technologies related to new energy.

### Would you discuss the Long-Term Vision towards Fiscal 2015, which was announced in May?

Our long-term vision looks seven years into the future, to fiscal 2015. It paints a picture of where we want to be as an outstanding global company with a solid financial base and the capability to generate sustainable growth and stable earnings, and it presents clear strategies to achieve those objectives. Numerical targets include ¥250 billion or more in income before special items and ROE of 12% or more, based on an optimal business portfolio spanning both the petroleum and metals businesses. At

the same time, the vision incorporates the fundamental policies of “managing with an emphasis on CSR and the environment” and “promoting innovation,” and it clarifies the Group’s CSR approach. Specifically, we will pursue R&D and business development in the fields of recycling metal resources, recycling waste plastic, technologies for recovering metal from low-grade ores, latent heat storage materials, polysilicon for photovoltaic power generation and clean energy. Moreover, to cultivate group managers, we are developing human resources through programs such as the Groupwide Nippon Mining Management College.

### What is the Group doing in the area of corporate governance?

We constantly endeavor to maintain effective controls in group businesses as well as management transparency. At Nippon Mining Holdings, in principle more than half of the members of the Board of Directors are solely responsible to the holding company, and group management is carried out with management oversight that is independent of operational execution. The presidents of each of the core operating companies also attend the meetings of the Board of Directors and the Executive Committee and report on the operations of the operating companies.

At this year's Annual General Meeting of Shareholders in June, the number of outside directors and outside corporate auditors was each increased by one. This enhanced the transparency and objectivity of the Board of Directors, and also further strengthened the oversight function and audit structure with regard to directors' execution of their duties.

### **How do you view social activities that encompass CSR?**

In regard to corporate governance and compliance, society has become increasingly critical in the way it looks at companies. Furthermore, the first commitment period under the Kyoto Protocol began in 2008, and the Chair's Summary from the G8 Hokkaido Toyako Summit, held in July, calls for global CO<sub>2</sub> emissions to be reduced by more than half by 2050. International environmental demands are increasing every day. We recognize that this makes the Nippon Mining Holding Group's role of providing a stable supply of resources, materials and energy even more important.

### **What are some of the Group's recent CSR activities?**

Previously, CSR activities were carried out separately by Japan Energy and Nippon Mining & Metals in their respective businesses, but in April 2008 we set up the Nippon Mining Holdings Group CSR Committee to further promote these activities across the Group. At its first meeting, the committee formalized the Nippon Mining Holdings Group Mission and laid out the direction for CSR activities going forward, including an aggressive pursuit of socially responsible investing (SRI).

Japan Energy has participated the United Nations Global Compact for several years, and in August of this year Nippon Mining Holdings and Nippon Mining & Metals signed on as well.

In addition, both Japan Energy and Nippon Mining & Metals have established medium-term environmental plans that set specific numerical targets for energy consumption, and they are also involved in activities to prevent global warming.

We have also asked Mizue Tsukushi, President and

CEO of The Good Bankers Co., Ltd., and a leader in the SRI field, to provide a third-party opinion to enhance the objectivity and reliability of this CSR Report. We are also working to acquire an external assurance for environmental performance indicators in next year's report.

Other ongoing social contribution activities include the JOMO Children's Story Award and the JOMO Children's Story Fund scholarship program, the JOMO Basketball Clinic for children and support for forest preservation activities, sports programs for people with disabilities and NPO activities.

We are also naturally involved in the area of safety and accident prevention. Building on each of these activities, I will endeavor to further strengthen our CSR efforts.

### **In conclusion, how would you summarize your approach toward CSR going forward?**

Facing the reality that our business activities do have an impact on the environment, we have worked to resolve environmental problems, such as smoke pollution, since the time the Company was founded.

As we move forward, I would like to resolutely address this reality while at the same time promoting aggressive growth strategies, based on the Group Mission of "striving to achieve a stable and efficient supply of and the effective utilization of resources, materials and energy while contributing to the creation of a better environment and a sustainable society."



**Mitsunori Takahagi**  
*President and Chief Executive Officer*  
Nippon Mining Holdings, Inc.

September, 2008

# Nippon Mining Holdings Group Overview

## Businesses

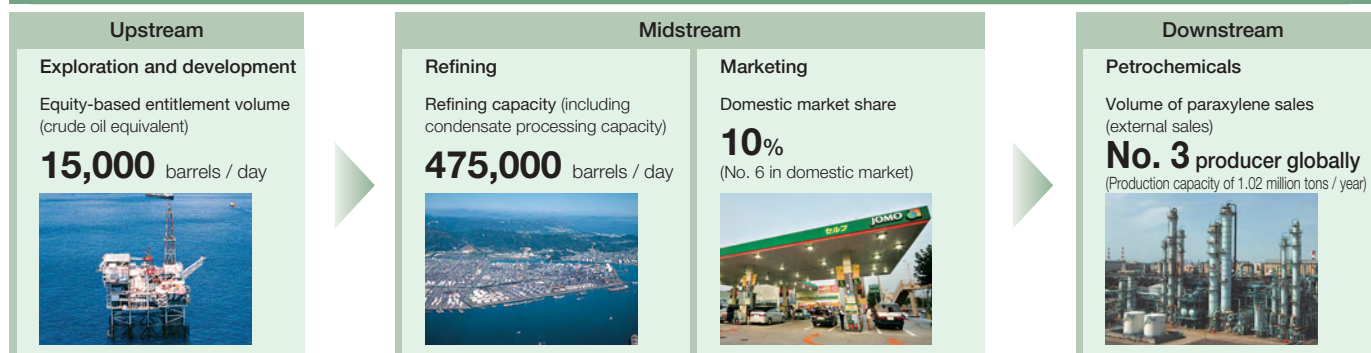
(as of March 31, 2008)

### Company profile

Corporate name	Nippon Mining Holdings, Inc.	Net sales	¥4,339.5 billion (FY2007, consolidated)
Head office	10-1 Toranomon 2-chome, Minato-ku, Tokyo, Japan 105-0001	Total assets	¥2,251.2 billion (consolidated)
Founded	September 27, 2002 (originally established December 26, 1905)	Group companies	130 (consolidated subsidiaries and equity-method affiliates)
Capital	¥73.92 billion	Group employees	10,316 (consolidated basis)
Listed exchanges	Tokyo, Osaka, Nagoya (all First Section; code 5016)		

### Petroleum business

### Japan Energy Group

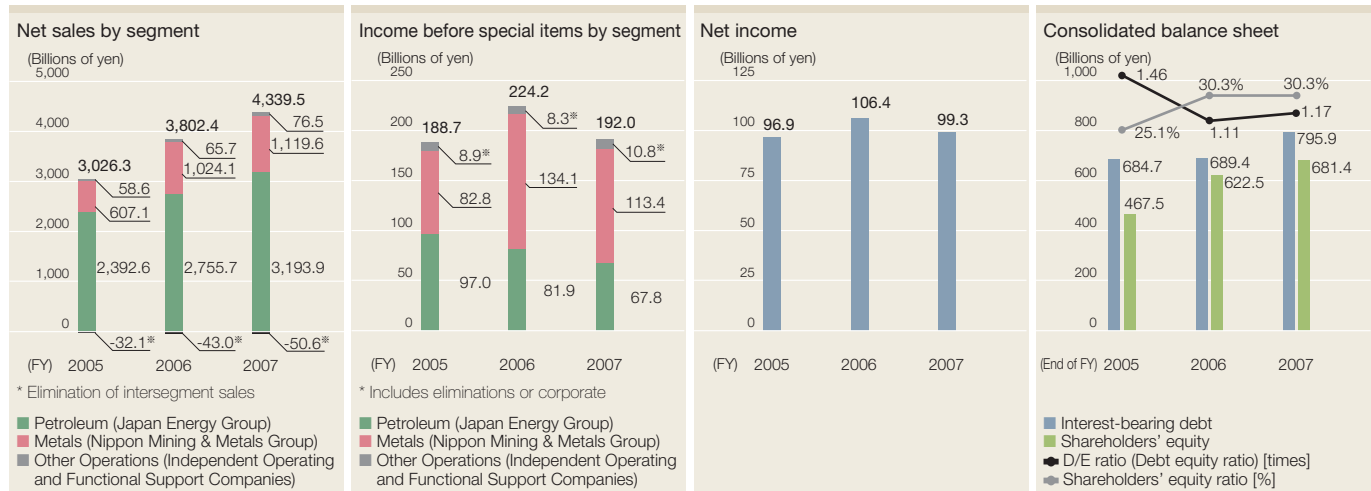


### Metals business

### Nippon Mining & Metals Group



\* Total production capacity: Pan Pacific Copper Co., Ltd. (joint venture with Mitsui Mining & Smelting Co., Ltd.; Nippon Mining & Metals holds a 66% equity stake.) – 610,000 tons / year, LS-Nikko Copper Inc. – 510,000 tons / year



## Products

### 1. Fuel and lubricants

We make **gasoline** and **gas oil** from crude oil, and have recently begun to sell biogasoline, which includes plant-derived ingredients. **Industrial fuels** (heavy fuel oil, etc.), **consumer fuels** (kerosene, LP gas, etc.) and **lubricants** are other petroleum products.

### 2. PET bottles

The petrochemical product **paraxylene** is one of the main materials used in the resin for polyethylene terephthalate (PET) plastic bottles.

### 3. Synthetic fibers

We produce **petrochemical products** from which synthetic fibers like nylon and polyester are made.

### 4. Automobiles

Precision electronic components in automobiles use **copper foil** and **semiconductor targets** (thin film materials), as well as IT materials that use a variety of **copper alloys** that combine strength and conductivity.



Providing a broad range of society  
with resources, materials and energy



### 5. LCD displays

**FPD (flat panel display) targets** are used in transparent electrodes in LCD panels, and **stainless foil** is used in backlights.

### 6. Electrical wires and telecommunications cables

Electrical wires and telecommunications cables use large amounts of **copper**, and **compound semiconductors** are used in optic telecommunications.

### 7. Personal computers

**Electrodeposited copper foil**, **magnetic targets** and **connectors** are used in components for hard disks, CPUs and memory, supporting the latest electronics.

### 8. Mobile phones

The exterior uses **petroleum**-based plastics, while the LCD screen and semiconductors use highly durable metal products – **rolled copper foil**, **phosphor bronze** and **corson alloys** – for high-precision mounting on light, thin, small circuit boards.

## Formalization of Group Mission

Over the years since the Nippon Mining Holdings Group was founded in 1905, we have fulfilled our mission of providing fundamental support for industrial development and people's daily lives, and the creation of a sustainable society, by providing a stable and efficient supply of resources, materials and energy.

At the same time, we have faced the reality that our business activities have an impact on the earth's environment, which led to our commitment to addressing the problem of smoke pollution when the Company was first established. We are committed to creating a better global environment, while at the same time striving to effectively utilize the earth's limited, valuable resources.

Since the Company was established, we have constantly sought to "Continue to do what we should, without straying from our course, whether anyone is looking or not." This position will not change in the future.

The Nippon Mining Holdings Group consists of two core companies – Japan Energy and Nippon Mining & Metals – and each has carried out CSR activities in line with the characteristics of their respective businesses. In April 2008, the Nippon Mining Holdings Group CSR Committee was established within Nippon Mining Holdings as a structure for promoting CSR across the Group. At its first meeting, held in May, the committee formalized a new Nippon Mining Holdings Group Mission based on the Company's traditional concepts noted above.

The Nippon Mining Holdings Group Mission is a broad mission that encompasses the entire Nippon Mining Holdings Group, and incorporates the Japan Energy Group's Mission and the Nippon Mining & Metals Group's Corporate Philosophy. Based on these, the Japan Energy Group has established its Business Principles and the Nippon Mining & Metals Group has established its Code of Corporate Conduct, which are the basis for the daily business activities that are the foundation of our CSR.

Going forward, we will work as one Group to fulfill our responsibilities to society as we strive to realize our Group Mission.

\* Note: For more information on the smoke pollution problem in the Company's early days, please refer to the Company's history on Page 45.



## Structure of Nippon Mining Holdings Group Mission

### Nippon Mining Holdings Group Mission

The Nippon Mining Holdings Group strives to achieve a stable and efficient supply of and the effective utilization of resources, materials and energy, while contributing to the creation of a better environment and a sustainable society.

#### Japan Energy's Mission

##### We Create Energy

for a more cohesive and dynamic society.

We activate the natural **Energy in People**, placing a high value on individual imagination and creativity.

We use the **Energy of the Earth** wisely, fully aware that the global environment forms the basis for mankind's present and future existence.

We enhance the **Energy of Society** by continually improving corporate performance and credibility, and discharging responsibility as a corporate citizen to discover new values and additional areas of growth.

Business Principles: "Five Pledges"

#### Nippon Mining & Metals Corporate Philosophy

We are committed to assisting the sustainable development of society. Innovation in the productivity of resources and materials and a harmonious relationship with our stakeholders are our way of contributing to the achievement of this goal.

Ensuring a stable supply of non-ferrous resources and materials is our social mission. We are engaged in a wide range of operations from exploration, mining, smelting and refining to metal fabrication and electronic materials production. In all aspects of our operations from development, production and marketing, we will continue to pursue technical rationality and efficiency and make improvements in quality, product properties and other matters. We will continue to promote recycling of resources and materials to achieve zero emission operations. This is our way of achieving continuous innovation in the productivity of resources and materials.

In the conduct of our business, we are committed to maintaining and enhancing a harmonious relationship with a wide range of stakeholders, including our customers and the communities in which we operate.

We are committed to contributing to the sustainable development of society on a global scale.

Code of Corporate Conduct

# Long-Term Vision towards Fiscal 2015

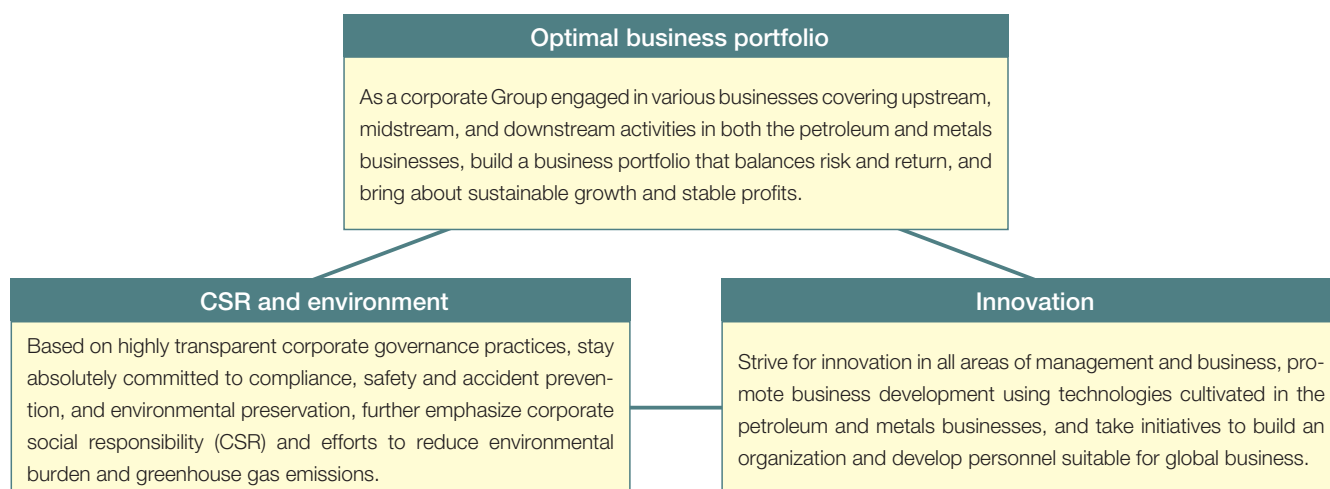
In light of the drastic changes taking place in our operating environment, in May 2008 the Nippon Mining Holdings Group established a Long-Term Vision towards Fiscal 2015, which details the Group's strategy for achieving stable and sustainable growth in volatile business environments.

## Overview of the long-term vision toward fiscal 2015

### Vision

Create an optimal business portfolio covering the petroleum and metals businesses, with the aim of becoming an outstanding global company with sustainable growth capabilities, stable profitability, and a strong financial position.

### Basic policy



### Numerical targets

<b>Profitability (fiscal 2015)</b>	<b>Income before special items: ¥250 billion or more</b> <b>Net income: ¥130 billion or more</b> (Assumptions: exchange rate = ¥1.05/USD; crude oil price = \$70/barrel (Dubai spot); copper price = 200 cents/pound)
<b>Financial position (fiscal 2015)</b>	<b>ROE: 12% or more</b> <b>Shareholders' equity ratio: 40% or more</b> <b>D/E ratio: 1.0 or less</b> * ROE = Return on Equity; D/E ratio = Debt/Equity ratio
<b>Capital expenditure (fiscal 2008-14)</b>	<b>Trillion-yen-scale capital expenditure and investment,</b> of which approximately 80% (¥790 billion) will be invested in growth strategies and competitive enhancement.



### Basic strategy

- Upstream (petroleum and copper resource exploration and development):**  
Aiming to realize a significant return on investment and stably procure resources, mainly in copper resource development.
- Midstream (petroleum refining & marketing and copper smelting & refining):**  
Maintaining a fixed level of profits by drastically enhancing cost-competitiveness.
- Downstream (petrochemicals, electronic materials, metals recycling and the eco business):**  
Harnessing our competitive superiority, expand aggressively into areas where market expansion and higher value-added are anticipated.
- Independent operations:**  
Positioning titanium as a third core business in the future, promote new businesses that offer synergies with existing businesses.

Please refer to our web site for more-detailed information regarding the long-term vision towards fiscal 2015 and the medium-term management plan for fiscal 2008-2010, which functions as an action plan for the first three years of efforts toward realizing the vision.

<http://www.shinnikko-hd.co.jp/english/ir/policy/midplan/>

One of the Nippon Mining Holdings Group’s basic policies under its Long-Term Vision towards Fiscal 2015 is “Managing with an Emphasis on CSR and the Environment.” To this end, we are currently developing new businesses with themes like “effectively utilizing the earth’s resources” “living in harmony with the global environment and reducing environmental impact” and “creating a recycling-oriented society through revolutionary technologies.” In the following pages, we introduce some of these activities.

**Theme 1 Recycling Metal Resources**



**Efficiently recovering precious metals and rare metals from “urban mines”**

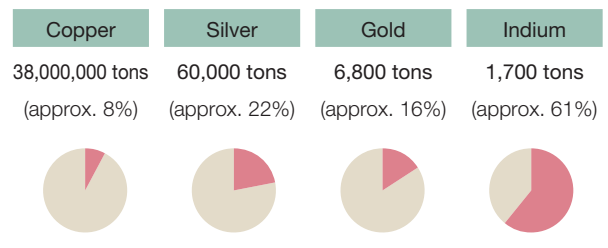
“Urban mines” is a term that refers to the useful resources (precious and rare metals, etc.) that exist in the waste produced in cities from the large volume of consumer electronics and other goods. Japan relies on imports for almost all of its metal resource requirements, but it is said that the amount of metal resources in these urban mines in Japan would make Japan a leading global producer. In particular, electronic equipment like mobile phones and personal computers use precious metal resources like gold, silver, platinum and indium in addition to copper, and the content of these resources by percentage is generally higher than in natural ore.

In addition to promoting the development of copper and other metal resources overseas, the Nippon Mining & Metals Group has long used technologies from its mine development and smelting businesses to aggressively promote the recycling of metal resources from these urban mines through its group network, with a view toward effectively utilizing the earth’s resources.

A new recycling plant is also under construction on the premises of the Hitachi Area Coordination Center in Hitachi City, Ibaraki Prefecture, as part of the HMC (Hitachi Metal Recycling Complex) Plan, with completion scheduled for the spring of 2009. Taking advantage of its location close to the greater Tokyo metropolitan area, the plan is to increase recycling output capacity as well as to recover 16 types of metal resources including precious and rare metals.

Construction has also begun on a collection yard at Nippon Mining Taiwan Co., Ltd., to increase capacity for the collection of materials for recycling (completion scheduled for February 2009).

**Size of Japan’s “urban mines” (estimated)**  
As a percentage of estimated natural global reserves



Source: National Institute for Materials Science estimates



## Theme 2 Recycling Waste Plastic

### Japan's first oil company to utilize technology for recycling waste plastic oil into petroleum

A chemical recycling process jointly developed by Japan Energy and the Packaging Plastic Oil Conversion Council uses thermal decomposition to convert household waste plastic to oil (waste plastic oil), and then uses hydrogenation purification equipment (one type of oil refining equipment) to recycle this into petroleum. Plastic products can be recycled an infinite number of times using this process, contributing to the creation of a resource-recycling-oriented social environment. This technology marks the first time a Japanese oil company has effectively applied chemical recycling to waste plastic.

Japan Energy's role in this process is to take waste plastic oil sent by cooperating petrochemical plants and make high-quality, stable petroleum (primarily naphtha). Japan Energy is working to promote this process by setting quality standards for waste plastic oil and maintaining quality with petrochemical plant operators.

Verification testing of this process began at the Mizushima Oil Refinery in April 2004, and the refinery moved to the implementation stage in July 2008. For the time being, the refinery is processing approximately 1,000 kl of waste plastic oil annually, but plans to increase its processing volume in the future.



Japan generates approximately 10 million tons of waste plastic (2006), of which approximately 10,000 tons are processed at petrochemical plants, producing approximately 5,000 kl of waste plastic oil annually.

Mizushima Oil Refinery



## Theme 3 Technologies for Recovering Metal from Low-Grade Ores

“Pyro-metallurgical refining” (melting copper ore at high temperatures in a furnace), which is the primary method for copper smelting, uses large amounts of energy. Recently, however, a “hydro-metallurgical” refining process, which does not require a melting process, has been gaining popularity and now accounts for approximately 20% of global copper production. Nevertheless, the hydro-metallurgical refining process still has technical limitations, and can only be used for a small portion of copper resources.\*

The Nippon Mining & Metals Group is developing a new hydro-metallurgical refining process using microorganisms and proprietary technologies. The successful implementation of these technologies would make it possible to greatly reduce energy consumption and CO<sub>2</sub> emissions, as well as to use low-grade ore that could not previously be utilized. This would be a major advance in terms of the effective utilization of resources.

\* Currently, hydro-metallurgical refining can be used only with a very small portion of copper resources – oxide ore and secondary sulfide ore – and has not yet been commercialized for use with primary sulfide ore, which represents the majority of copper resources.

### Joint development of copper recovery technology using biomining technology

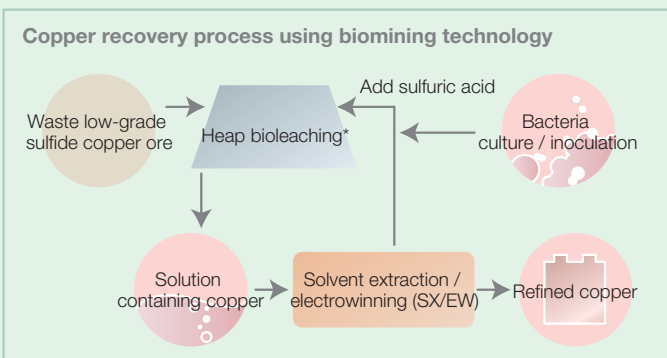
The Nippon Mining & Metals Group is working with Codelco, Chile’s national copper corporation, to develop a refining technology that uses naturally occurring microorganisms to efficiently leach out and refine copper from primary sulfide ore, which to date has proven difficult to extract. Also in the field of biomining, we have jointly established a research facility with the Keio University Institute for Advanced Biosciences at the Tsuruoka City Advanced Research Industrial Support Center in Yamagata Prefecture. Through these types of tie-ups with

outside research institutions, we are working to reap benefits from genetic engineering in microorganisms to develop technologies to extract copper more quickly and efficiently. The successful adoption of these technologies would make it possible to directly recover copper from low-grade sulfide copper ore that is now discarded as waste, in the same way as is currently done with oxide ore.

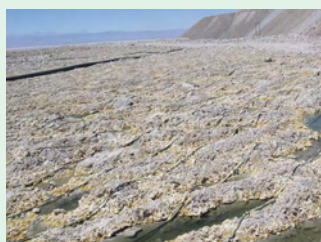
### Verification testing of new hydro-metallurgical refining technology in Australia

The Nippon Mining & Metals Group has developed a new, proprietary hydro-metallurgical refining technology called the N-Chlo Process that makes it possible to efficiently recover copper, gold and other non-ferrous metals from low-grade copper concentrate. In cooperation with a major Australian mining company, Newcrest Mining, we plan to begin verification testing of this technology in Australia in April 2009.

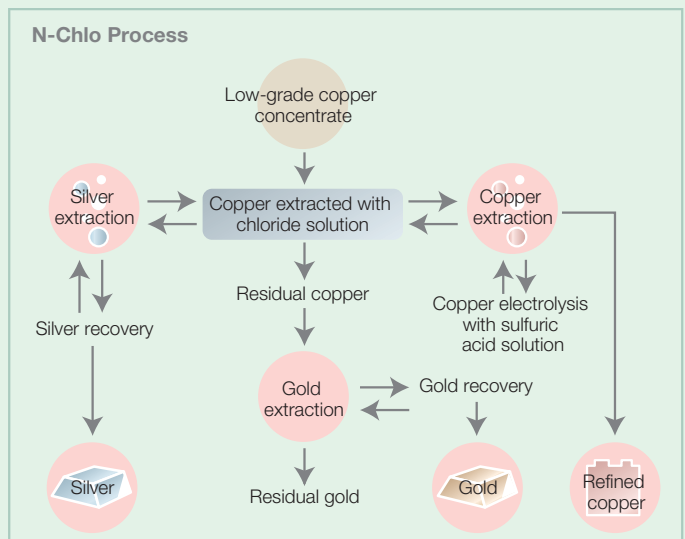
There has been a noticeable trend in recent years of copper concentrate from existing mines being of a lower grade and containing more impurities. Using the N-Chlo Process, however, it is possible to refine copper from 20% or lower grade concentrate at roughly the same cost as for standard grade concentrate. In addition to promoting the effective utilization of precious resources, this is expected to prolong the effective life of mines and to make it possible to develop types of mines that have previously been difficult to develop.



\* Heap bioleaching: Extracting copper by spreading dilute sulfuric acid on a pile of copper ore.



Site of biomining verification tests at copper mine in Chile



Pilot testing facility for hydro-metallurgical copper refining

## Theme 4 Paraffinic Latent Heat PCM *Ecojoule*<sup>®</sup>

### Contributing to energy conservation and reduced CO<sub>2</sub> emissions from air-conditioning in large buildings

Japan Energy has been developing latent heat storage materials for use in air-conditioning systems for large buildings, and in July 2008 began selling *ecojoule*<sup>®</sup>. This new product uses the property of normal paraffin extracted from kerosene to store and release heat or cold at any constant temperature. In air-conditioning systems, cold energy is stored at night (when rates for electricity are lower) and released during the daytime, thereby reducing electrical power use during the peak afternoon hours and contributing to the reduction of CO<sub>2</sub> emissions.

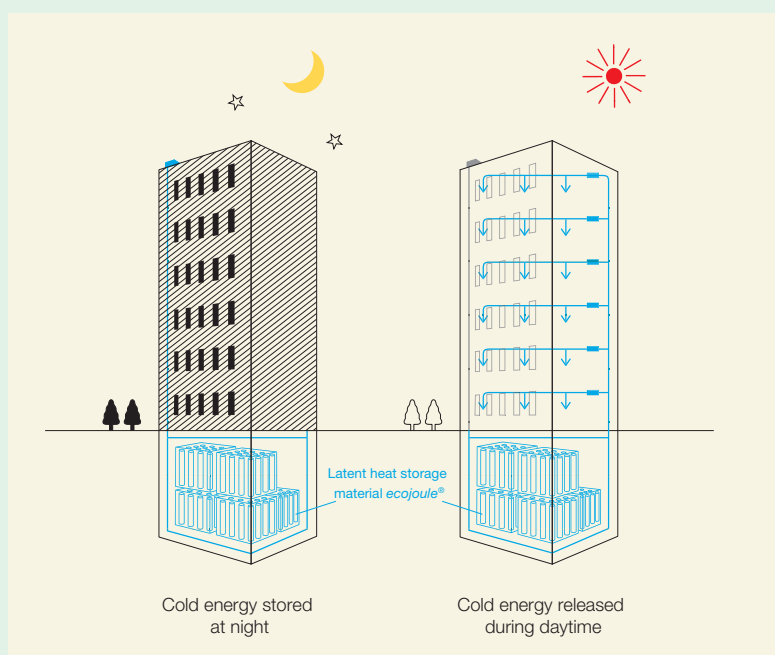
As one application of *ecojoule*<sup>®</sup>, Japan Energy and Shimizu Corporation in May 2008 jointly developed a new PCM (Phase Change Material) Skeletal Storage Air-Conditioning System. This system uses *ecojoule*<sup>®</sup>, with its large heat energy storage capacity, in the double-layer Floor Flow air-conditioning system developed by Shimizu that releases air through the floor, to achieve high storage functionality in a compact form. In addition to being ideal for buildings with limited space, running costs can be reduced 35% and energy consumption 10% relative to a conventional air-conditioning system. The two companies are

jointly testing the system with the aim of commercial introduction during fiscal 2009.

Japan Energy is also developing other applications for *ecojoule*<sup>®</sup> in a wide range of fields.



Latent heat storage material *ecojoule*<sup>®</sup>



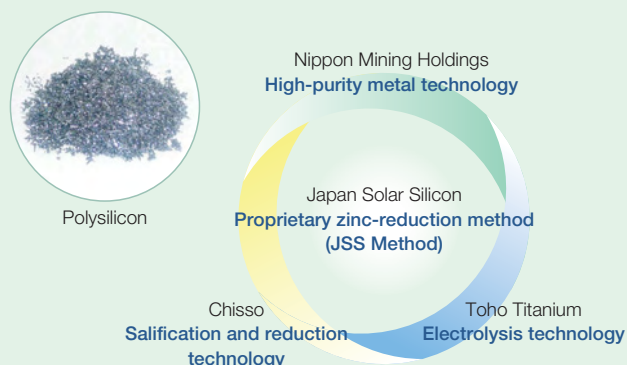
Use of latent heat storage material *ecojoule*<sup>®</sup> in an air-conditioning system (concept)

## Theme 5 Polysilicon for Photovoltaic Power Generation

### Constructing a mass production facility with proprietary manufacturing method

With demand for photovoltaic power generation growing globally as a means of preventing global warming, we anticipate continued large growth in demand for polysilicon, the main raw material for photovoltaic systems.

Nippon Mining Holdings, working together with Toho Titanium Co., Ltd. and Chisso Corporation, began verification testing of a polysilicon manufacturing technology for photovoltaic power generation that uses a proprietary zinc-reduction method (the JSS Method) in January 2007. Based on those results, the three companies established Japan Solar Silicon Co., Ltd., in June 2008. The three companies plan to invest ¥24 billion to construct a facility for mass production of polycrystalline silicon within the Kashima industrial complex in Ibaraki Prefecture, and are targeting annual production of 3,000 tons in fiscal 2012.



The three companies aim to provide a stable supply of high-quality, low-cost polysilicon for photovoltaic power generation, with the possibility of expanding the facility in the future to an annual production capacity of 10,000 tons.

## Theme 6 Clean Energy Please refer to Page 26 for information about other clean energies including hydroelectric and wind power generation.

### R&D of fuel cell systems

As the world looks to diversify energy sources and achieve a recycling-oriented society that thinks about environmental considerations, fuel cells that create electricity through a chemical reaction of hydrogen and oxygen are a focus of attention as a clean and efficient technology. Japan Energy has been conducting research in fuel cells since the 1980s and has been taking part in large-scale experiments with stationary fuel cells run by the New Energy Foundation (NEF) begun in fiscal 2005. Japan Energy installed 30 LP gas fuel cell systems in homes in fiscal 2005, another 40 in fiscal 2006 and 34 in fiscal 2007 – bringing the total to 104 – and is currently gathering data on their operation. The plan is to install an additional 50 systems in fiscal 2008, the final year of the project.

Test results so far have shown energy savings of:

- Primary energy savings rate: 15-20%
- CO<sub>2</sub> emission reduction rate: 20-30%

Two of these systems (manufactured by Toshiba Fuel Cell Power Systems Corp.) have generated power for 20,000 hours (generating approximately 8,400 kWh), a first for that company's fuel cell systems in an ordinary home.



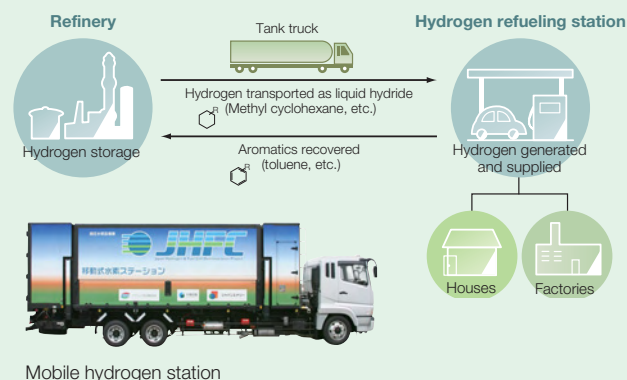
Residential fuel cell

### Supplying hydrogen energy for fuel cells

Japan Energy is also taking part in the national government's Japan Hydrogen & Fuel Cell Demonstration Project (JHFC), and has opened a (mobile) hydrogen refueling station in Funabashi district in Chiba Prefecture. This station is sent to events around the country to supply hydrogen to fuel cell vehicles.

Japan Energy is also developing kerosene desulfurization systems and reforming catalysts for hydrogen manufacturing, as well as efficient, compact "reforming reactors" that use hydrogen separation membranes. Japan Energy continues to conduct R&D into an "organic hydride method" for safely storing and supplying hydrogen in liquid form.

#### Hydrogen storage and supply system using the organic hydride method



The Nippon Mining Holdings Group emphasizes the strengthening of “innovation” as one of its basic policies toward the achievement of its long-term vision. In terms of organization and staffing in particular, we are active in the area of human resource development in order to further raise our ability to meet the global standards of the resources and energy industry.



At the Nippon Mining Management College, managers from our two core businesses – petroleum and metals, which are different fields within the same resources industry – interact with colleagues with different sets of experiences and propose new management solutions. We are the only specialist petroleum and mining company that has this type of interaction between different industry sectors within the group, and this creates dynamic energy in a variety of new and different ways.

Mitsunori Takahagi  
Dean, Nippon Mining Management College  
(President and Chief Executive Officer, Nippon Mining Holdings, Inc.)

## Human Resources at the Nippon Mining Holdings Group

Since the Hitachi Mine first commenced operations in 1905, the concept of “valuing people” has been at the core of the Nippon Mining Holdings Group’s management. People are the source of a company’s competitive strength, and we view human resource development as one of our most important management issues.

The Council of Human Resources Development was established in April 2005 as an advisory body to the president, creating a structure from which to study human resource development laterally across the entire Group. This council, which

consists of the presidents and human resources managers of Nippon Mining Holdings and the two core operating companies, in principle meets once a year to discuss issues and exchange opinions, focusing on the establishment of the basic policies for the operation of the Nippon Mining Management College, introduced below. The policy established for fiscal 2007 was “Developing professional managers by cultivating specialized knowledge and leadership abilities related to management.”

## Operation of the Nippon Mining Management College

The Nippon Mining Management College is a research system established in April 2005 with the president of Nippon Mining Holdings acting as the dean, and the aim of developing managers who are able to swiftly and accurately address rapid changes in the operating environment.

The college provides customized group training for Nippon

Mining Holdings Group directors and key managers, and also sends them to outside research institutions and invites outside experts to give lectures. Since the Group was integrated under the holding company structure, the college has also held a group training program for new hires, recognizing that they are the candidates for future management.



Group training for new employees





**Training programs at the Nippon Mining Management College (fiscal 2007)**

<b>Directors' program</b>	Through extensive discussion on the themes of "Antitakeover measures" and "Business strategies and capital investment plans under the long-term vision," 78 directors gained a common awareness and understanding of current issues.
<b>Managers' program</b>	Four courses, targeting different levels and attended by a total of 96 newly appointed managers and general managers, dealt with themes to cultivate management skills and gain knowledge through practical training.
<b>Open college</b>	Five voluntary courses – financial analysis, marketing, logical thinking, leadership and risk management – are offered for employees who wish to study these subjects, and these were attended by a total of 61 people.
<b>Group training for new hires</b>	This program, held for 63 new hires at core company headquarters, aimed to (1) promote a general understanding of each core company and interactions between companies, (2) teach business etiquette and cultivate an understanding of being a member of society and (3) improve language skills.
<b>Correspondence courses</b>	Voluntary correspondence courses are offered with common curricula for the entire Group. During fiscal 2007, 207 courses were offered and 284 people participated.



Management College (directors' program)



Web site for correspondence courses

Our core operating companies also strive to cultivate human resources through training programs at the company level, reflecting the special features of their businesses.

**Japan Energy**  
Toshihiko Ogawa  
*General Manager, General Administration & Human Resources Dept.*

At Japan Energy we firmly believe that "people themselves are society's greatest asset," and we work to develop and cultivate the abilities of directors and employees.

We offer a variety of curricula, including group courses targeting specific levels from new hires to directors and opportunities to study abroad, to develop business leaders and a global workforce. The Open College and correspondence courses are also available for anyone who wants to participate.

We also work to deepen specialized skills and build careers through job placement and rotations, taking into account the intentions and desires solicited via our Self-Declaration System along with the individual's appropriateness and abilities.

**Nippon Mining & Metals**  
Ryo Nagatsu  
*General Manager, Human Resources Administration Dept.*

Our basic policy at Nippon Mining & Metals is for businesses to be managed by a select few. This makes it essential to develop the abilities of each individual employee.

We are currently in the process of reorganizing our companywide training structure, and we launched a new managerial development program in 2007. During 2008, we are systematically promoting training for managers, including through personnel rotation, with the primary purpose of human resource development. At the same time, as a comprehensive non-ferrous metals manufacturer, we are also aggressively offering courses designed to improve skills on the factory floor.

Our wide variety of efforts to develop human resources also include specialist programs for studying management, law or technology at overseas graduate schools, domestic study at MINETEC and studying at overseas language schools.

## Corporate Governance

### Basic approach

In order to enhance enterprise value based on efficient management throughout the Nippon Mining Holdings Group and ensure the optimal allocation of management resources, Company Group management is structured around basic management agreements between Nippon Mining Holdings (the Company) as a pure holding company and its core operating companies, while the Company Group respects the operating autonomy of each Group company. The Company's basic policy with regard to corporate governance is to maintain effective control over Company Group operations and ensure management transparency by keeping operations separate from Company Group management through the holding company system.

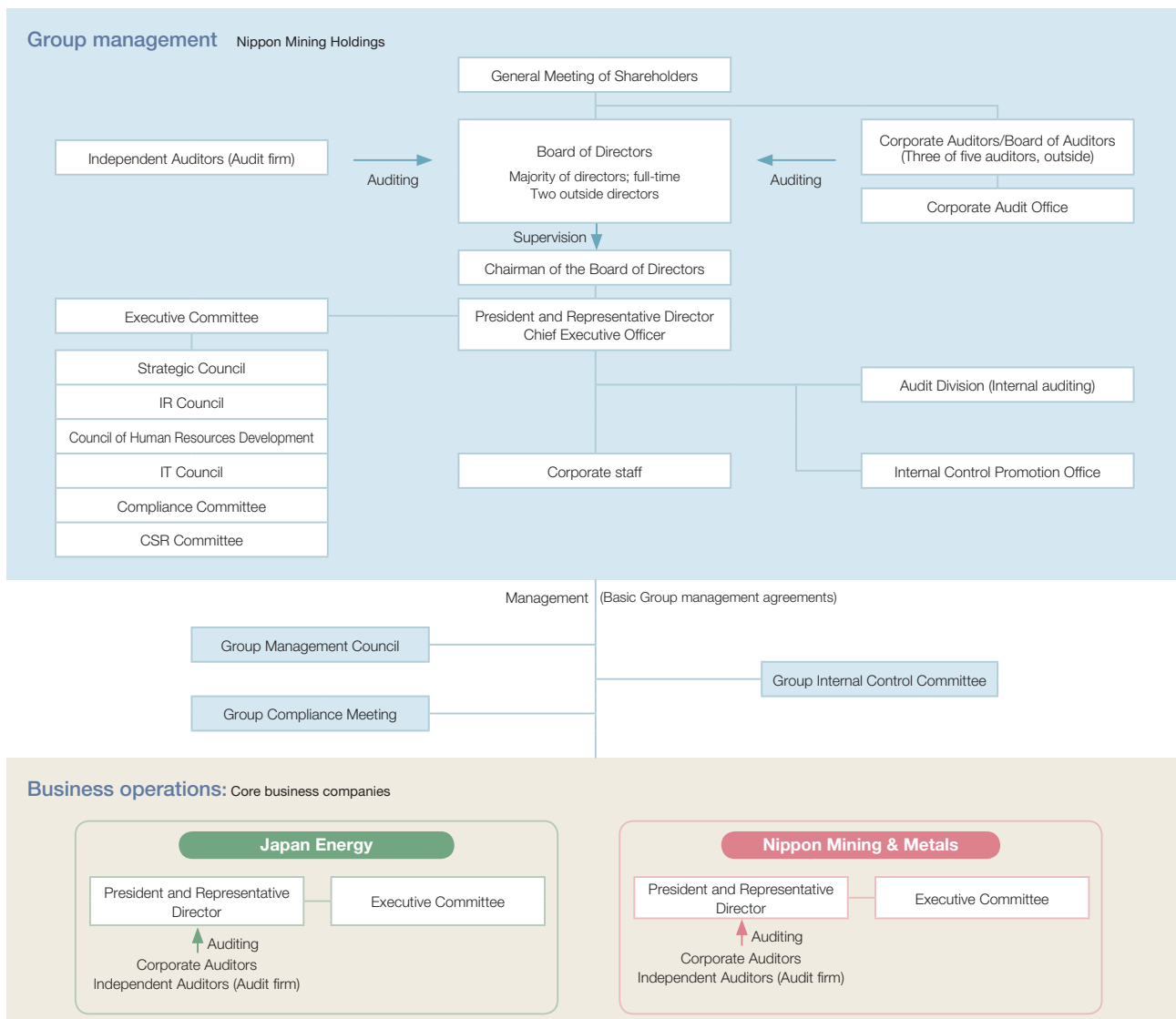
### Method of implementing operations

Within the Nippon Mining Holdings Group, the Board of Directors, the Executive Committee and other bodies make important management decisions on behalf of Group companies to maximize the profit of the Company Group as a whole. In the fiscal year ended March 31, 2008, the Board of Directors met 18 times, and the Executive Committee met 26 times.

### Method of auditing and oversight

A majority of directors are full-time directors of the Company as a rule and manage and supervise Company Group operations independently of each business operation.

Nippon Mining Holdings Group's corporate governance system (as of July 1, 2008)



Responsible for operational implementation, the presidents of the core operating companies report to the Board of Directors and the Executive Committee on the corporate governance performance of each core operating company.

In addition, the 6th Annual General Meeting of Shareholders, held on June 26, 2008, increased the number of outside directors from one to two in order to strengthen the supervision of the performance of duties by directors and encourage even greater transparency and objectivity in the decision making of the Board of Directors. Also, in order to further reinforce the audit system, the 6th Annual General Meeting of Shareholders changed the Company's Articles of Incorporation to increase the maximum number of corporate auditors from four to five. As a result, the Company increased its outside corporate auditors from two to three.

## Internal Control System

### Basic approach

Using the Internal Control Promotion Office as a secretariat, Nippon Mining Holdings develops its internal control system and advances internal control initiatives. Further, the Group Internal Control Committee examines and discusses policies for internal control planning, document preparation and evaluation for the whole Company Group.

A meeting of the Board of Directors on May 10, 2006, established an overall system to ensure that Company operations are implemented correctly in accordance with Article 362, Paragraph 4-6 of the Corporation Law and Article 100 of the Corporation Law Enforcement Regulations. This system is subject to ongoing review and any necessary amendments to ensure that Company operations remain in accordance with the enactment, revision or abolition of relevant laws and regulations and reflect changes in social conditions.

### Measures to eliminate antisocial forces

Firmly and without yielding to pressure, the Nippon Mining Holdings Group and its directors and employees deal with antisocial forces that make inappropriate demands. Accordingly, the Company Group's basic policy is to develop and appropriately apply internal regulations and systems consistent with that stance.

Established in May 2006, Group Compliance Basic Regulations stipulate responses to antisocial forces. Further, the Nippon Mining Holdings Group Compliance Committee monitors divisional compliance with those regulations. Moreover, the Company undertakes education and training to rigorously inform directors and employees about those regulations and related laws and statutory regulations. The Company takes other educational measures as needed through in-house newsletters and other tools.

## CSR Management System

### Establishment of the Nippon Mining Holdings Group CSR Committee

In order to create a group wide CSR management system, in April 2008 the Nippon Mining Holdings Group established the Nippon Mining Holdings Group CSR Committee as an advisory body that provides the president with consultation and opinions on important CSR matters. The core operating companies Japan Energy and Nippon Mining & Metals have already established CSR management systems headed by each company's president. The establishment of the Nippon Mining Holdings Group CSR Committee realizes a management system covering the whole Company Group.

Comprising directors of Nippon Mining Holdings and executive officers of the core operating companies, the committee convenes twice yearly to discuss overall issues and activities of the Company Group. The committee will fulfil the role of establishing the Company Group's overall CSR policy, monitoring and reviewing Group companies' progress in CSR initiatives and discussing important CSR matters relating to the Company Group.

Convened in May 2008, the first meeting of the Nippon Mining Holdings Group CSR Committee confirmed the scheme of the Nippon Mining Holdings Group's Mission and discussed plans for CSR activities.

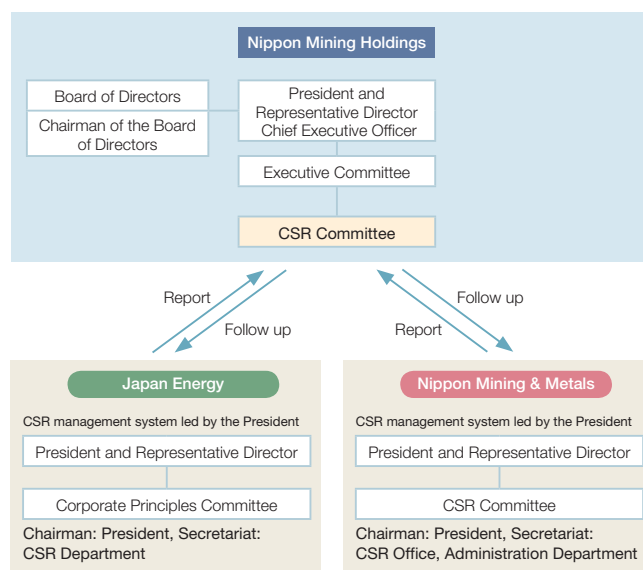
#### Main CSR activities planned for the fiscal year ending March 31, 2009

- ◆ Participate\* in the United Nations Global Compact
- ◆ Enhance the contents of the Nippon Mining Holdings Group's CSR report
- ◆ Address socially responsible investment issues
- ◆ Search for common CSR activities that will activate Group synergies

\* Please see Page 42.

#### Nippon Mining Holdings Group's CSR management system

(as of July 1, 2008)



## ■ Compliance and Risk Management

### Basic compliance policy

In May 2006, Nippon Mining Holdings established Group Compliance Basic Regulations that stipulate basic compliance policy and specific standards to which the directors and employees of the Nippon Mining Holdings Group must adhere and created a system for compliance implementation.

#### Group compliance basic regulations (excerpt)

##### Basic policy

At the member companies of the Nippon Mining Holdings Group, senior management take the lead in ensuring each directors and employee, as an individual who is subject to public scrutiny, behaves sincerely and in compliance with laws, statutory regulations, social norms and corporate ethics. To that end, Group companies continuously reform their organizational cultures and establish systems to prevent misconduct and clarify responsibilities.

##### Specific compliance standards

Adherence to the Antimonopoly Act	Prohibition of receipt of gifts
Prohibition of insider trading	Prohibition of unfair discrimination
Environmental protection	Prevention of sexual harassment
Safety management	Protection of personal information
Adherence to the Unfair Competition Prevention Law	Prevention of child labor and forced labor
Fair relations with politicians, public agencies and public officials	Prohibition of conflicts of interest
Consumer protection	Prohibition of private usage of company property
Disclosure of information and accountability	Assurance of security of company information
Dealing with antisocial forces	Appropriate management of exports
Appropriate accounting	Prohibition of trading for speculative purposes
Fair reporting of working hours	Rigorous crisis management

Further, directors and employees must comply with all related laws and statutory regulations and perform their duties in accordance with social norms and corporate ethics.

### The compliance advancement system of the Company Group

After establishing the Group Compliance Basic Regulations, the Company created the Nippon Mining Holdings Compliance Committee in October 2006. Chaired by the president of Nippon Mining Holdings, the committee comprises members that the president appoints from among directors and senior officers of Nippon Mining Holdings and directors and executive officers of core operating companies.

Normally convened twice yearly, the committee considers and approves priority targets for each fiscal year and reports on progress. The Company rigorously informs employees of measures and encourages implementation by posting committee minutes on the intranet so that all employees can view them.

Further, the committee manages the whistleblower systems of Nippon Mining Holdings and the Group companies that report directly to it.

In addition, the Company extends and strengthens compliance initiatives by convening the Nippon Mining Holdings Group Compliance Committee, which comprises the members of the Nippon Mining Holdings Compliance Committee and the presidents of Group companies.

### Risk management including compliance management

The Nippon Mining Holdings Group conducts risk management, which includes the management of compliance by each Group company in accordance with the characteristics of its business. As the holding company, Nippon Mining Holdings monitors the progress of compliance committees and, as part of Group management, operates a risk management system covering the whole Company Group.

### Establishment of a business continuity plan in preparation for a large-scale earthquake

In the summer of 2007, Nippon Mining Holdings and Group companies in the Shinnikko Building distributed emergency-use items to assist those returning home in the event of a large-scale earthquake with an epicenter in the Tokyo metropolitan area. At the same time, the companies introduced a system for confirming the safety of employees based on mobile telephones. Recently, as the second stage of this initiative each Group company prepared a business continuity plan in preparation for a large-scale earthquake in order to create a system that will allow Group companies to make a unified initial response in the event of such an earthquake. Further, Japan Energy completed the preparation of its business continuity plan in April 2007.



Training for the establishment of an Emergency Countermeasures Headquarters in the event of a large-scale earthquake

#### Fire at the Kashima Oil Refinery of Kashima Oil Co., Ltd.

On April 20, 2008, a fire occurred in the vicinity of a pump within the No. 2 paraxylene unit of Kashima Oil Refinery. Warping of the pump due to a rapid change in temperature caused the accident. We improved equipment and operational control methods in order to prevent a recurrence.

## Implementation progress within the Company Group

### Japan Energy Group

Since establishing its Mission in 1997, Japan Energy has convened the Corporate Principles Committee, chaired by its president, every month in principle. Also, Japan Energy created the Mission Consultation Office for Internal Reporting as an in-house body in June 2001. As well as responding to the questions, opinions and concerns of directors and employees about the Mission, the office helps prevent misconduct by providing consultation and a point of contact for whistleblowers, based on the Basic Compliance Rules established in May 2004. Moreover, in order to complement and add to its existing channel for reporting misconduct, Japan Energy created a whistleblower helpline that enables consultation with external lawyers in April 2006.

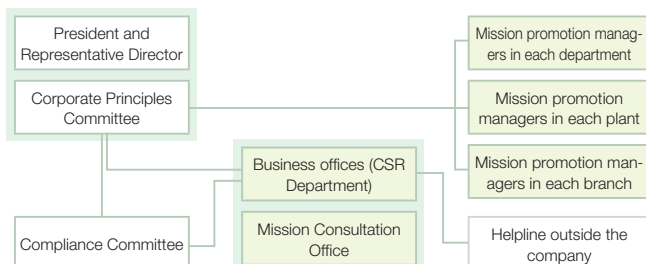
Risk management can be divided into risk assessment (preventative), risk control (dealing with problems), and risk communication (public relations). Japan Energy places particular emphasis on preventative risk assessment. The company evaluates the highest-risk aspects of its business activities – the production equipment of its oil refineries – using the HAZOP\* method.

\* HAZOP (Hazard and Operability Study): a method for evaluating the safety of processes.



A training meeting of the Emergency Countermeasures Headquarters

### Japan Energy's Mission and compliance promotion system



A compliance guidebook

A portable tool distributed to employees



### Nippon Mining & Metals Group

The Nippon Mining & Metals Group incorporates compliance education into annual training programs for each class of employee. Also, the Nippon Mining & Metals Group heightens awareness of compliance by providing information on related laws and statutory regulations through its intranet. In May 2007, the Nippon Mining & Metals Group Compliance Guidebook was prepared and distributed to all directors and employees. As a practical manual on conforming to the Nippon Mining & Metals Group's Code of Corporate Conduct, the guidebook includes explanations of important points for specific areas and categories. Further, from July to December, 18 presentations were conducted at the major operating bases of Nippon Mining & Metals Group companies.



Compliance education

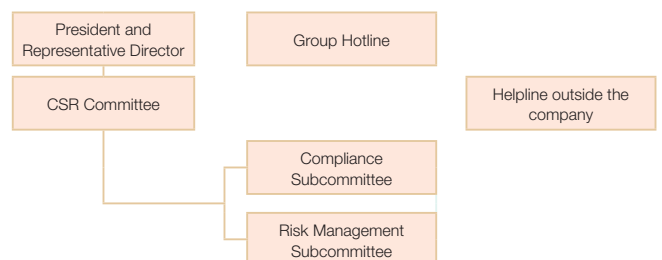
The risk management of the Nippon Mining & Metals Group centers on the Risk Management Subcommittee of its CSR Committee. Guided by the subcommittee's basic policies and advancement plans, the group identifies and evaluates risk at operating bases, prepares risk countermeasure plans and steadily implements them. The Nippon Mining & Metals Group reviews risk countermeasure plans and implementation progress twice a year. In addition, the Nippon Mining & Metals Group continuously improves risk management through a PDCA cycle in which divisions annually review risks and undertake self-evaluations of progress in implementing measures.

The risk management of the Nippon Mining & Metals Group centers on the Risk Management Subcommittee of its CSR Committee. Guided by the subcommittee's basic policies and advancement plans, the group identifies and evaluates risk at operating bases, prepares risk countermeasure plans and steadily implements them. The Nippon Mining & Metals Group reviews risk countermeasure plans and implementation progress twice a year. In addition, the Nippon Mining & Metals Group continuously improves risk management through a PDCA cycle in which divisions annually review risks and undertake self-evaluations of progress in implementing measures.

In April 2006, the Nippon Mining & Metals Group further improved compliance and risk management by establishing the Nippon Mining & Metals Group Hotline, providing points of contact and consultation inside and outside the Nippon Mining & Metals Group to in-house whistleblowers.

Also, in response to an on-site inspection by the Japan Fair Trade Commission in relation to the purchasing of molten scrap metal, the group again conducted education on the Antimonopoly Act for the sales managers of related divisions. And, the Nippon Mining & Metals Group undertakes theme-based education for the employees of related divisions.

### Nippon Mining & Metals compliance and risk management system



# Implementation of Environmental Management

The Nippon Mining Holdings Group regards the provision of stable supplies of resources, materials and energy as a significant social mission. Also, the Company Group is taking steps to create a better global environment based on its Five Promises to the Earth.

## Environmental Management



### Five Promises to the Earth

In the process of providing society with indispensable resources, materials and energy, the business activities of the Nippon Mining Holdings Group place a certain burden upon the global environment. In light of that fact, the Nippon Mining Holdings Group sought to mitigate that burden on the global environment as much as possible and contribute to the achievement of a better global environment by establishing Five Promises to the Earth to guide the development of its business activities.

### Environmental management system

Centered on the two core operating companies – Japan Energy and Nippon Mining & Metals – the Nippon Mining Holdings Group's environmental activities reflect the characteristics of both companies' operations. An environmental management system is being built for operating company groups, with both core operating companies having prepared basic environmental policies and autonomous action plans for environmental protection and acquired ISO 14001 certification.

In April 2008, Japan Energy began a new medium-term environmental plan and in May 2008 Nippon Mining & Metals revised the autonomous action plan on environmental protection that it established in 2006, including major overseas operating bases. Both operating company groups are undertaking ongoing initiatives to achieve their targets.

### Environmental accounting

The environmental expenses and capital investment for environmental improvement of the Nippon Mining Holdings Group in the fiscal year ended March 31, 2008, are as shown in the following table. In the fiscal year, the Company Group mainly checked the effectiveness of stepped-up measures to reduce sulfur in fuel, pollution prevention measures and resource recycling.

#### Environmental expenses and investment

(Billions of yen)

	Japan Energy Group	Nippon Mining & Metals Group	Other	Total
Environmental expenses	50.25	22.19	4.90	77.34
Capital investment	21.35	7.90	0.00	29.25

### Environmental risk management

Based on the Soil Contamination Measures Law, the Nippon Mining Holdings Group conducts ongoing surveys to check for the presence of soil contamination at plants, delivery terminals, former sites of JOMO service stations and other land owned by the Group. If contamination is discovered, the Group deals with it appropriately.

Regarding the Funakawa Works soil remediation project for areas within the operating base and on land owned by the Group outside the operating base, which began in the fiscal year ended March 31, 2002, work on land owned by the Group outside the operating base has been completed. At present, we are proceeding with measures inside the operating base, which we plan to complete by the fiscal year ending March 31, 2011.

**FY2008 – FY2010 medium-term environmental plan**

**Global warming prevention, energy saving**

- Energy consumption intensity of oil refineries (FY2008 – FY2012 average)

Crude oil equivalent kl / 1,000 kl

**8.59 or lower**

- Transportation energy consumption volume  
Reduce 4% or more compared with FY2006
- Office energy consumption volume  
Reduce 10% or more compared with FY2006

**Reduction of air pollutants**

- Emissions of volatile organic compounds (FY2010)

Compared with FY2000

**Reduce 30% or more**

**Reduction of waste**

- Waste-to-landfill ratio

**1% or less**

- Advance separated collection at offices
- Paper used by offices  
Reduce by 10% or more compared with FY2006

**Other initiatives**

- Soil contamination countermeasures: conduct soil contamination surveys of Japan Energy-owned service stations and delivery terminals, implement planned introduction of double-walled underground tanks
- Appropriate management of chemical emissions and transportation volume: reduce through countermeasures for volatile organic compounds
- Development and increased sale of environment-friendly products and services
- Advancement of green purchasing: realize green purchasing ratio of 80% or more for office supplies
- Advancement of environmental contribution through forest protection activities

**Autonomous action plan on environmental protection (FY2006 – FY2010)**

**Energy saving**

- Energy consumption intensity (FY2010)

Compared with FY2003 – FY2005 average\*

**Reduce 5%**

**Global warming prevention**

- CO<sub>2</sub> emissions intensity (FY2010)

Compared with FY2003 – FY2005 average\*

**Reduce 7.5%**

**Reduction of waste**

- Waste to landfill intensity (FY2010)

Compared with FY2003 – FY2005 average\*

**Reduce 30%**

**Tasks**

- Prevent global warming
- Encourage energy saving and recycling
- Reduce waste
- Advance management of chemicals
- Advance recycling operations
- Advance development of technologies and products and introduction of new technologies
- Advance green purchasing
- Inform employees rigorously about autonomous action plan and advance education, publicity and Nippon Mining & Metals activities to raise awareness of environmental protection initiatives

\* FY2006 results for certain overseas operating bases.

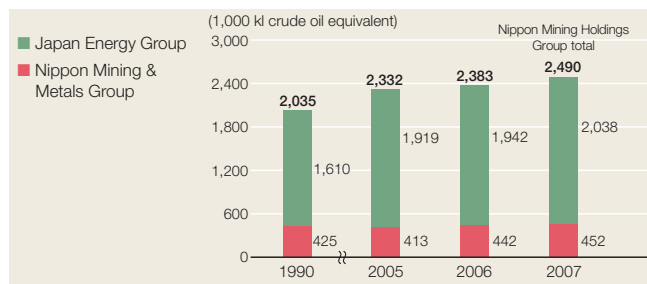
## Energy Saving

### Initiatives of the Nippon Mining Holdings Group to reduce energy consumption

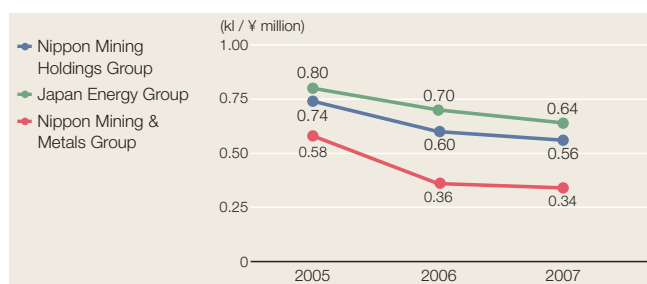
In the fiscal year ended March 31, 2008, the crude oil equivalent energy consumption of the Nippon Mining Holdings Group's target operating bases in Japan and overseas increased year on year to 2,490,000 kl. For Japan alone, consumption was 2,421,000 kl, up 455,000 kl compared with the fiscal year ended March 31, 1991, and 107,000 kl compared with the fiscal year ended March 31, 2007. Due to an increase in revenue, energy consumption intensity relative to revenue, which represents business size, was 0.56 kl / ¥ million, down 6.7% from 0.60 kl / ¥ million in the fiscal year ended March 31, 2007.

Further, as explained later, operating bases related to smelting and refining – which account for the largest part of the Nippon Mining Holdings Group's energy consumption – have improved energy consumption intensity.

#### Energy consumption of the Nippon Mining Holdings Group



#### Energy consumption intensity relative to revenue of the Nippon Mining Holdings Group



#### Japan Energy Group

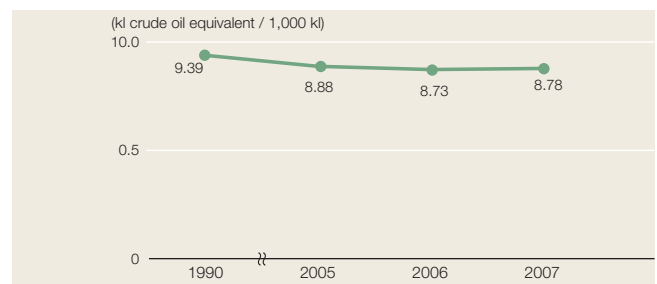
The basic approach of the Japan Energy Group is to help prevent global warming through countermeasures focused on energy saving. Accordingly, Japan Energy is implementing energy-saving measures in relation to its refineries, transportation, JOMO service stations and offices.

In the fiscal year ended March 31, 2008, the Japan Energy Group worked to reduce fuel consumption by reducing flare gas at refineries, promoting waste heat recovery and taking other steps. However, due to the trial operation of new equipment at the Kashima Oil Refinery, energy consumption intensity worsened.

As a result, in the fiscal year ended March 31, 2008, energy consumption intensity\* deteriorated 0.6% year on year, to 8.78 kl crude oil / 1,000 kl. Nevertheless, that was 6% better than the benchmark fiscal year, ended March 31, 1991. In the fiscal year ending March, 31, 2009, the Japan Energy Group will promote continuous energy-saving activities to achieve the targets of its medium-term environmental plan, including the incorporation of energy-saving measures during regular repair work at the Chita Oil Refinery.

\* Energy consumption intensity: Because oil refining facilities comprise a variety of equipment and the configuration of equipment varies among oil refineries, comparisons have been made by calculating energy consumption relative to production volume using adjustment coefficients that reflect the characteristics of facilities.

#### Energy consumption intensity of the Japan Energy Group



This report gives an overview of the environmental performances of the Japan Energy Group and the Nippon Mining & Metals Group and includes some details of related activities. For further information, please see the reports included in the following company web sites.

Japan Energy Corporation, CSR Report 2008

<http://www.j-energy.co.jp/cp/csr/report/> (Japanese language)

Nippon Mining & Metals Co., Ltd., Sustainability Report 2008

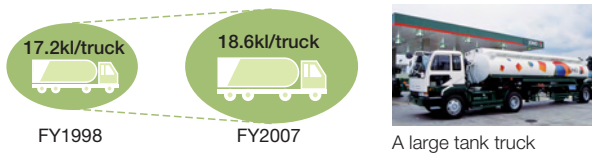
<http://www.nikko-metal.co.jp/environment/> (Japanese language)



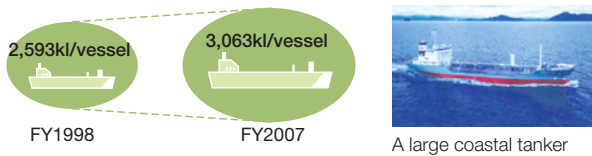
## Energy saving at logistics

The transportation of petroleum products can be broadly classified into land transportation and sea transportation. Land transportation is carried out by tank trucks and railway tanker cars, while sea transport is carried out by coastal tankers. For some time, the group has been increasing the capacity of its coastal tankers and tank trucks in order to improve transportation efficiency and consume less fuel. The Japan Energy Group will continue taking steps to save even more energy in transportation.

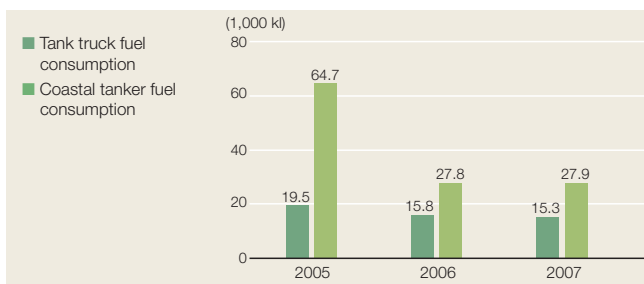
### Increasing the capacity of tank trucks (average truck size)



### Increasing the capacity of coastal tankers (average ship size)



### Energy consumption of tank trucks and coastal tankers transporting fuel oil

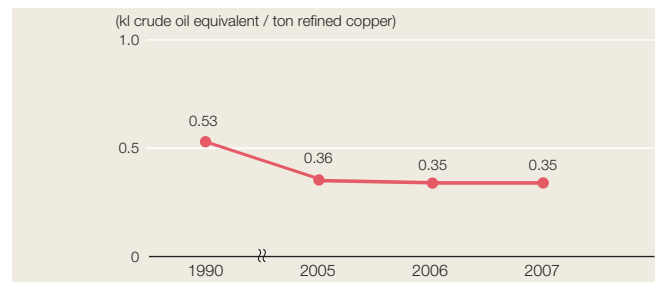


Based on the Law Concerning the Rational Use of Energy, the energy consumption calculation method was changed from FY2006.

In the fiscal year ended March 31, 2008, the energy consumption of the Nippon Mining Holdings Group's targeted operating bases in Japan and overseas increased year on year to 452,000 kl. Meanwhile, operating bases in Japan alone accounted for 383,000 kl, down 10% from 425,000 kl in the benchmark fiscal year, ended March 31, 1991. Further, operating bases related to smelting and refining, which accounted for 54% of the Nippon Mining & Metals Group's energy consumption, increased energy consumption efficiency. The group achieved that improvement through such measures as operating a single flash furnace to increase the efficiency of smelting, refining and sulfuric acid processes and use waste heat effectively. Also, operating bases increased electric current efficiency by introducing the permanent cathode method\* to the copper refining process. As a result, operating bases related to smelting and refining reduced energy consumption intensity 34% compared with that of the fiscal year ended March 31, 1991.

\* Permanent cathode method: A method for refining copper by using a stainless steel plate as a cathode, resulting in better-quality refined copper and higher electric current efficiency than conventional methods.

### Energy consumption intensity of the Nippon Mining & Metals Group's operating bases related to smelting and refining



## Energy saving at logistics

The Nippon Mining & Metals Group is promoting a modal shift\*<sup>1</sup> from land transportation to sea and rail transportation and increasing transportation efficiency. In the fiscal year ended March 31, 2008, cargo transportation volume\*<sup>2</sup> rose approximately 400,000 tons, energy use was up 400 kl and CO<sub>2</sub> emissions increased 1,600 t-CO<sub>2</sub> year on year. However, as well as transporting the increased portion of cargo by sea, the group achieved improvements by increasing the size of transportation equipment and enhancing loading ratios. Consequently, the group realized improvements of roughly 10% in energy consumption and CO<sub>2</sub> emissions.

\*1 Modal shift: the shift of cargo transportation from trucks to rail or ships.

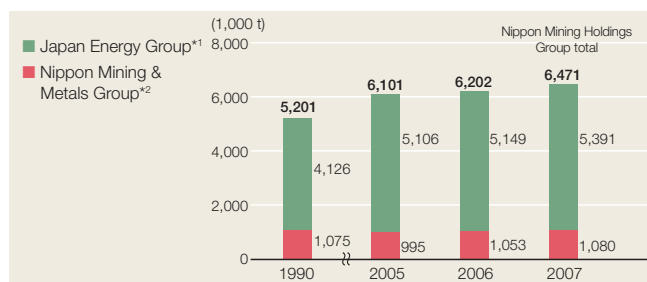
\*2 Total for three companies: Pan Pacific Copper Co., Ltd., Nikko Smelting & Refining Co., Ltd., and Kasuga Mines Co., Ltd.

## ■ Prevention of Global Warming

### Initiatives of the Nippon Mining Holdings Group to reduce CO<sub>2</sub> emissions

In the fiscal year ended March 31, 2008, the CO<sub>2</sub> emissions of the Nippon Mining Holdings Group's target operating bases rose 6,471,000 tons year on year, while operating bases in Japan saw increase of 6,299,000 tons. However, as explained later, the Japan Energy Group's CO<sub>2</sub> emissions intensity\*<sup>1</sup> (CO<sub>2</sub> emissions (tons) per 1,000 kl of production volume) decreased 3.3%, from 24.1 in the fiscal year ended March 31, 1991, to 23.3 in the fiscal year ended March 31, 2008. Similarly, the Nippon Mining & Metals Group's operating bases related to smelting and refining reduced CO<sub>2</sub> emissions intensity (CO<sub>2</sub> emissions (tons) per ton of refined copper produced) 40%, from 1.38 in the fiscal year ended March 31, 1991, to 0.83 in the fiscal year ended March 31, 2008.

#### CO<sub>2</sub> emissions of the Nippon Mining & Metals Group



\*1 The 2007 report included the direct emission volumes of the Japan Energy Group. However, that method has been revised to allow for energy purchased and sold.

\*2 The CO<sub>2</sub> emission volumes of the Nippon Mining & Metals Group are based on CO<sub>2</sub> emitted by combusting energy sources.

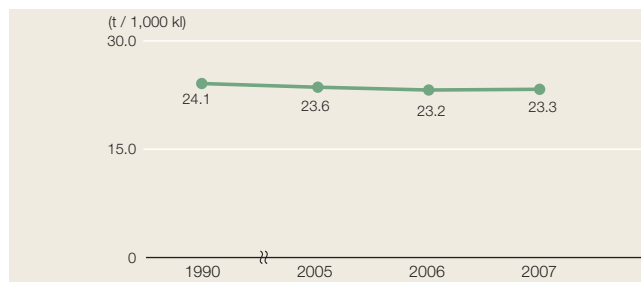
### Japan Energy Group

#### Initiatives to reduce CO<sub>2</sub> emissions

The CO<sub>2</sub> emissions from oil refineries are generated by fuel combustion in furnaces during crude oil treatment and reforming reactions during hydrogen production.

In the fiscal year ended March 31, 2008, the group progressed steadily with energy-saving measures for refining processes, including the recovery of heat from furnaces, the recovery of heat by using heat exchangers and improvements in control methods for air supplied to furnaces. However, due to an increase in fuel use resulting from higher volume of crude oil treated and the trial operation of new equipment, CO<sub>2</sub> emission intensity worsened slightly year on year.

#### CO<sub>2</sub> emission intensity of the Japan Energy Group



### Groupwide project for sharing best practice

The Mizushima Oil Refinery, the Kashima Oil Refinery and the Chita Oil Refinery each produces a distinctive lineup of petroleum products. Since 2004, the group has been implementing the groupwide project, which involves analyzing production flows laterally and incorporating into other oil refineries methods and procedures that are the most efficient and result in the greatest energy-saving benefits.

As part of that initiative, the Chita Oil Refinery, which produces petrochemical raw materials, revised the configuration of refining processes that increase the purity of the polyester raw material paraxylene, benzene, toluene and xylene, and, by consolidating distillation columns, successfully achieved significant reductions in the energy used for distillation. Through such energy-saving initiatives to reorganize facilities and through everyday Total Productive Maintenance activities\*, the group will continue striving to help prevent global warming.

\* Total Productive Maintenance activities: Developed by the Japan Institute of Plant Maintenance, these activities aim to improve environmental protection and ensure safety through the participation of all employees.



Paraxylene production facility at the Chita Oil Refinery



Aromatics production facility at the Kashima Oil Refinery



Sulfur-free gasoline production facility at the Mizushima Oil Refinery

### Participation in Clean Development Mechanism

In May 2006, as part of efforts to reduce greenhouse gas (GHG) emissions, Japan Energy concluded a contract to purchase 1.5 million tons of CO<sub>2</sub>-equivalent emission credits from JMD GHG Reduction Co., Ltd., which was jointly established by JGC Corporation, Marubeni Corporation and Daioh Construction Co., Ltd. In the first commitment period of the Kyoto Protocol, from 2008 to 2012, Japan Energy will acquire emission credits equivalent to 300,000 t-CO<sub>2</sub> / year.

JMD GHG Reduction's clean development mechanism (CDM) operations recover and break down CFC greenhouse gases emitted from a CFC-substitute production plant in Zhejiang, China.

### Investment in the Japan Greenhouse Gas Reduction Fund

In December 2004, Japan Energy concluded a contract to invest US\$1 million in the Japan Greenhouse Gas Reduction Fund.

The Japan Bank for International Cooperation, the Development Bank of Japan and Japanese companies jointly established the fund, which purchases emission credits generated by greenhouse gas reduction projects in developing countries and Eastern Europe and distributes them among investors in the fund. By investing in this fund, Japan Energy supports projects that reduce greenhouse gas emissions.

### Renewable energy – wind power generation

The Japan Energy Group generates electricity by using wind power as a clean energy. In March 2005, the group opened wind power generation facilities at the Kashima Oil Refinery. In the fiscal year ended March 31, 2008, those facilities generated 3,754,000 kWh of electricity, which is equivalent to approximately 2,000 tons of CO<sub>2</sub> emissions.



Wind power generation facilities at the Kashima Oil Refinery

### Initiatives to reduce CO<sub>2</sub> emissions

In the fiscal year ended March 31, 2008, the CO<sub>2</sub> emitted by combusting energy sources at the Nippon Mining & Metals Group's target operating bases in Japan and overseas were up year on year to 1,080,000 tons, while bases in Japan also saw a year-on-year increase to 908,000 tons. However, emissions in Japan were 16% lower than those in the fiscal year ended March 31, 1991. Furthermore, operating bases related to smelting and refining, which account for 54% of the Nippon Mining Holdings Group's CO<sub>2</sub> emissions, reduced CO<sub>2</sub> emission intensity to 60% compared with that of the fiscal year ended March 31, 1991, through a variety of energy-saving measures that included operating a single flash furnace.

#### CO<sub>2</sub> from energy combustion at the Nippon Mining & Metals Group's operating bases related to smelting and refining



### Renewable energy – hydroelectric power generation

Hydroelectric energy generated by using the difference in water levels of rivers is a clean and renewable form of energy that does not emit CO<sub>2</sub>.

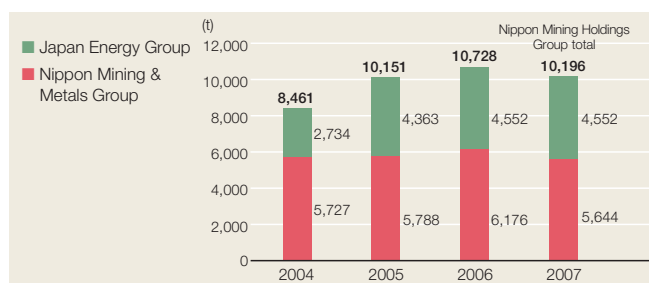
In 1907, soon after its foundation, the forerunner of Nippon Mining & Metals began generating electricity using water power. At present, the company generates electricity in Fukushima Prefecture, which it sells to power producers and suppliers. In the fiscal year ended March 31, 2008, the company's hydroelectric power generation operations produced electricity equivalent to 7,500 kl of crude oil (17,000 t-CO<sub>2</sub>), which represents 3% of the electrical energy consumption of the whole Group and 24% of the consumption in the Hitachi district.

## ■ Prevention of Air Pollution

The Nippon Mining Holdings Group monitors gas emissions from its facilities based on the Clean Air Act, ordinances, agreements and voluntary standards. Further, in order to prevent air pollution by the production processes of our plants, we install a range of environment-friendly equipment and use fuel low in sulfur and nitrogen.

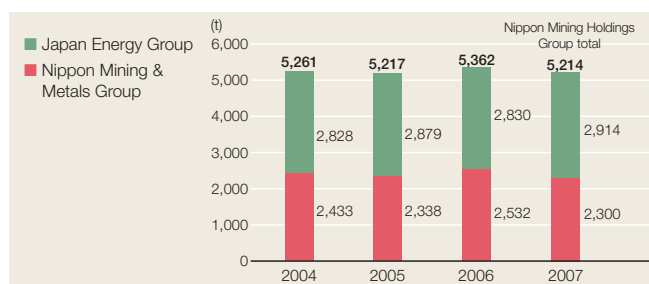
In the fiscal year ended March 31, 2008, we reduced emissions of sulfur oxides and nitrogen oxides year on year.

### Emissions of sulfur oxides of the Nippon Mining Holdings Group



In fiscal 2004, emissions were lower because of a shutdown of equipment due to damage from high tides at the Mizushima Oil Refinery and an accident at the Kashima Oil Refinery.

### Emissions of nitrogen oxides of the Nippon Mining Holdings Group



Sulfur recovery and flue-gas desulfurization equipment at the Mizushima Oil Refinery



Flue-gas denitration equipment at the Mizushima Oil Refinery

### Japan Energy Group

The group uses low-sulfur fuel for furnaces and boilers in order to reduce emissions of sulfur oxides. Also, thanks to the use of environment-friendly equipment, the group's emissions are at least 65% below the regulatory limit. In order to curb emissions of nitrogen oxides, the group uses low-nitrogen fuel for furnaces and boilers. And, through the use of environment-friendly equipment, emissions are more than 50% lower than the regulatory limit.

In efforts to reduce emissions of volatile organic compounds, the group is curbing the evaporation of volatile organic compounds from stored oil by replacing fixed-roof tanks with floating-roof tanks. In the fiscal year ended March 31, 2008, the group replaced the roof of one crude oil tank at the Funakawa Works.

### Nippon Mining & Metals Group

Year on year, operating bases in Japan reduced sulfur oxide emissions by 567 tons and decreased nitrogen oxides emissions slightly. They achieved those reductions by improving the sulfuric acid inversion rates at copper smelters, increasing the volume of electricity generated by turbines that effectively use recovered steam and reducing the operating rates of diesel electric generators that use heavy fuel oil as fuel.

At overseas operating bases, emissions of sulfur oxides were almost unchanged because some operating bases rely on in-house power generation based on diesel engines due to the instability of electricity supplies. Further, emissions of nitrogen oxides were higher than in Japan. However, the group aims to reduce emissions of sulfur oxides and nitrogen oxides from within operating bases by promoting electricity purchasing.

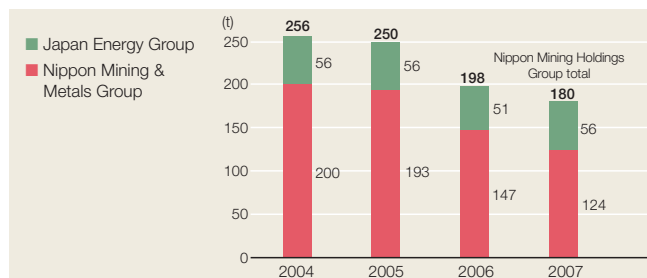


Saganoseki Smelter & Refinery

## Prevention of Water Pollution

The Nippon Mining Holdings Group monitors wastewater emissions from its facilities based on the Water Pollution Control Law, ordinances, agreements and voluntary standards.

### Chemical oxygen demand load volumes of the Nippon Mining Holdings Group



The Kashima Oil Refinery (Kashima Oil Co., Ltd.) is not included here because its waste is treated at the Ibaraki Prefecture Kashima Sewerage Office's Fukushima Treatment Plant.

Using such indicators as the presence or absence of oil or sludge in water and chemical oxygen demand, which shows water pollution levels, the Japan Energy Group manages wastewater appropriately through treatment systems. Although those indicators change according to wastewater volumes, the group is working to reduce the pollution levels as shown by these indicators.

Nippon Mining & Metals processes waste liquid and wastewater produced by plants at wastewater treatment facilities. The company's Kurami Works has wastewater treatment facilities that extract metals as sludge from waste liquid and wastewater, which are used as recycled resources. In 2007, the Kurami Works introduced new technology that reduces the water content of sludge 10%. This improvement lowers waste volumes and the energy needed for recycling.



Wastewater treatment facilities that use activated carbon absorption



The Kurami Works

## Chemical Substances Management

### Management of chemicals

The Nippon Mining Holdings Group sets out emissions reduction targets for each of its operating bases and related companies and appropriately manages chemicals based on the Pollutant Release and Transfer Register Law\*1.

The Japan Energy Group's web site discloses the emissions and transfer volumes of each oil refinery and delivery terminal.

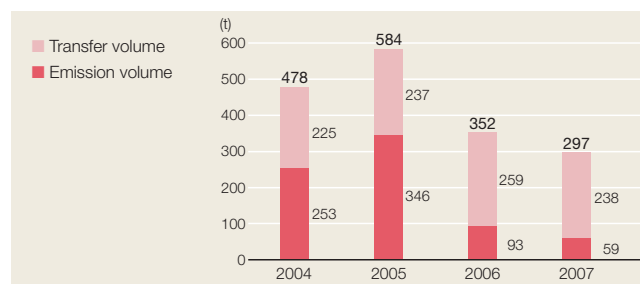
Reporting on 43 substances, the Nippon Mining & Metals Group emitted and transferred a total of 297 tons\*2, down 55 tons year on year. The decrease was attributable to a large reduction in landfill, or emissions, due to the repeat use of the entire amount of neutralized slag in the furnaces at smelting and refining works and reduction in waste acid, or transfer volume, stemming from lower production of rolled metal products. Other contributory factors included curbing the release of heavy metals into the atmosphere\*3 from copper smelting processes by actively preventing dispersal and installing electrostatic precipitators based on source investigations. The group will identify sources even more accurately and continue taking reduction measures.

\*1 The Pollutant Release and Transfer Register Law aims to promote improvement of the monitoring and management of the release of designated chemical substances into the environment.

\*2 The calculation method has been changed, and past data has been amended to reflect the new method. Further, only operating bases to which the Pollutant Release and Transfer Register Law applies are covered.

\*3 Emissions of lead and lead compounds into the atmosphere increased year on year. However, that increase was due to the processing at recycling and environment-related operating bases of industrial waste that included large amounts of lead.

### Total release and transfer of designated chemical substances of the Nippon Mining Holdings Group



### Management and detoxification of PCB waste

The operating companies of the Nippon Mining Holdings Group appropriately store and manage capacitors and oil containing PCBs. Regarding those items, including stored items and items in use, we used the early registration system of the Japan Environmental Safety Corporation and completed registration in the fiscal year ended March 31, 2006. Based on that company's plan, we will complete processing by March 2015.

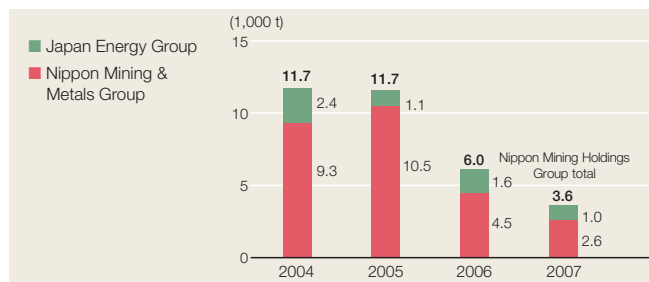


Inside a storage facility

## Reducing Waste and Increasing Recycling

The bar graph below shows the waste to landfill of the Nippon Mining Holdings Group. In the fiscal year ended March 31, 2008, waste to landfill decreased 41% year on year.

Waste to landfill of the Nippon Mining Holdings Group



### Japan Energy Group

Waste generated at refineries includes waste oil, sludge, waste acid, waste alkali, dust collected from electrostatic precipitators, used catalysts and construction materials. The group reduces waste volumes through intermediary treatment, including the recovery of oil from waste oil and sludge and the dehydration or incineration of sludge. Moreover, we are undertaking initiatives to make effective use of such waste. For example, the group re-refines waste oil, makes sludge and dust into raw material for cement that can be used as roadbase, and recycles resources by separating the remains of construction material such as scraps of metal and concrete.

In the fiscal year ended March 31, 2008, waste to landfill decreased 583 tons year on year, to 1,027 tons, and the landfill ratio was 1.2%.



Filling caissons\* with copper slag

\* Caissons: hollow concrete boxes used for underwater construction of such structures as breakwaters.

### Nippon Mining & Metals Group

The Nippon Mining & Metals Group is targeting a 30% reduction in waste to landfill intensity over the five years from April 2006 to March 2011, taking the average value for the period between April 2003 and March 2006 as a benchmark. In the fiscal year ended March 31, 2008, the group significantly reduced waste to landfill, which was down 53% compared with a target of 12%.

In the fiscal year ended March 31, 2008, the Nippon Mining & Metals Group generated a total of 234,000 tons of waste. Of that, 83%, or 195,000 tons, was internally recycled, and total final emission was 39,000 tons. Of that, excluding externally recycled waste, landfill was approximately 2,600 tons, 1,900 tons lower than in the previous fiscal year. The group achieved that reduction by repeat use of the entire amount of neutralized slag at operating bases related to smelting and refining and lowering waste acid volumes through operational improvements at the operating bases of the electronic materials business.

### By-products

In the fiscal year ended March 31, 2008, by-product sales amounted to 3,633,000 tons, which comprised 1,805,000 tons of sulfuric acid, 1,213,000 tons of slag<sup>\*1</sup>, 143,000 tons of iron concentrate<sup>\*2</sup> and 472,000 tons of gypsum.

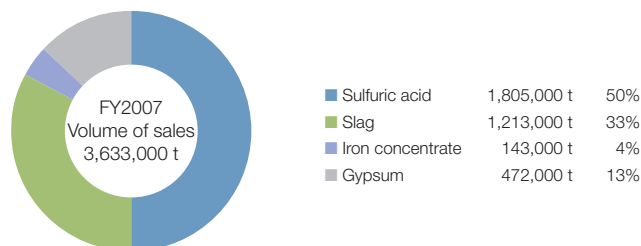
Slag is used as a material for sandblasting<sup>\*3</sup>, a raw material for cement, a filling material for caissons and an aggregate material for wave-breaking blocks, while iron concentrate and gypsum are used as raw materials for cement.

\*1 Slag: composite oxides containing iron, silicon and other materials produced by the flash furnace processes at smelting and refining works and the melting furnaces of recycling companies.

\*2 Iron concentrate: a high-iron-content powder obtained by beneficiating the converter slag of smelting and refining works.

\*3 Sandblasting material: an abrasive material used in the shipbuilding field to maintain and remove rust from ships by blasting them with the material using compressed air or centrifugal force.

### Sales of by-products





## Environment-Friendly Initiatives at JOMO Service Stations

In collaboration with JOMO service station dealerships, Japan Energy implements measures to save energy, recycle waste, reduce water used to wash cars, prevent soil contamination and curb vapor emissions from gasoline and other substances.

### ■ Promotion of energy saving ■

In 2006, JOMO service stations began introducing energy-saving lighting systems – jointly developed by JOMO Enterprise Co., Ltd., and Toshiba Corporation in 2005 – in order to reduce the environmental burden by using less electricity. In the fiscal year ended March 31, 2008, 201 JOMO service stations changed over to energy-saving lighting systems. In the fiscal year ending March 31, 2009, plans call for the installation of those systems at 120 service stations, which will give a total of 410 service stations with energy-saving lighting systems.

Further, the group is introducing clean solar power generation by installing solar panels on the roofs of some JOMO service stations. As of March 31, 2008, 16 service stations used solar power generation systems.



A JOMO service station installed with solar panels for power generation

### ■ Appropriate waste treatment ■

An affiliate, JOMO Guardian Co., Ltd., is contracted to treat industrial waste that JOMO service stations produce, such as waste oil and waste elements. JOMO Guardian appropriately processes industrial waste by recycling waste oil, selecting reliable waste treatment service providers, concluding contracts, providing support for manifest management and managing data. Also, the affiliate collects information from waste treatment service providers and various bodies on the waste disposal methods of respective local authorities or related revisions, which it provides as needed to JOMO service stations.

### ■ Reusing car wash water ■

Because JOMO service stations use large amounts of water to wash cars, the group has installed recycling equipment that allows effective use of water resources by recycling 80% to 90% of wastewater.



A water-recycling car wash machine

### ■ Purifying wastewater ■

Surface wastewater at JOMO service stations is collected in oil separating tanks, and water is discharged after oil and sludge have been removed.

### ■ Collecting fuel-oil vapor ■

When tank trucks fill JOMO service station tanks with gasoline and other oils, vapors containing hydrocarbons escape. As well as causing photochemical smog, those vapors can cause foul odors in surrounding areas and harm the health of service station customers and employees. Therefore, since 1990 we have been changing over to service station tank vents that have recovery devices which collect and return vapors to tank trucks.

### ■ Preventing soil contamination ■

The Japan Energy Group has implemented JOMO fuel leakage risk control since 2002. These measures entail investigations of oil contamination risks and the removal of pollutants, the upgrading of facilities and prioritized monitoring in accordance with plans. As of March 31, 2008, the group had carried out secondary surveys of 338 JOMO service stations.



Soil contamination investigation

In order to protect the soil around underground tanks, we reduce risk by encouraging change over to highly safe underground facilities, such as double-walled tanks and plastic pipes. In the fiscal year ended March 31, 2008, the group undertook related measures at 16 service stations.



Renewal work for double-walled tanks

In April 2008, voluntary investigations of soil and groundwater contamination within the premises of two service stations affiliated with Japan Energy – JOMO Value5 Kurashiki in Kurashiki City, Okayama Prefecture, and JOMO Todoroki Station in Setagaya-ku, Tokyo – revealed levels of benzene higher than environmental standards permit. In addition to reporting those cases to regulatory authorities, the group took appropriate steps that included the replacement of soil.

## Green Products and Services

This section introduces some of the petroleum products, metal products and related services that the Nippon Mining Holdings Group's operating companies Japan Energy and Nippon Mining & Metals provide. Also, this section reports on both companies' environment-friendly initiatives.

### Japan Energy Group

#### Environment-friendly fuel oil

Japan Energy produces environment-friendly gasoline and gas oil products that help reduce CO<sub>2</sub>, the cause of global warming, and toxic substances in vehicle exhausts.

##### ●Biogasoline

In April 2007, Japan Energy began selling biogasoline (bio ETBE\* blend), which is a mixture of conventional gasoline and plant-based fuel, on a distribution trial basis. As of June 2008, 10 JOMO service stations sold biogasoline.



\* Ethyl Tertiary Butyl Ether: a gasoline base product made from bioethanol.

##### ●Sulfur-free Fuel

"Sulfur-free" gasoline and gas oil contain extremely small amounts of sulfur, 10ppm or less, or 0.001% or less. Japan introduced regulatory limits for sulfur in gas oil in 2007 and for sulfur in gasoline in 2008.

Ahead of the introduction of those regulations, Japan Energy began providing sulfur-free premium gasoline from May 2002 and sulfur-free regular gasoline and gas oil from January 2005.

#### Environment-friendly petrochemical products

For its wide range of petrochemical products including industrial detergents and industrial solvents, Japan Energy is developing environment-friendly products that do not contain chlorine, toluene and xylene, which are said to affect health and the environment and are designated substances under the Occupational Health and Safety Law and the Pollutant Release and Transfer Register Law.

#### Environment-friendly lubricating oils

Japan Energy has a track record in the marketing of environment-friendly lubricating oils. In February 2004, the group launched the JOMO ECO Series as an energy-saving, long-life, biodegradable lineup that complies with environmental regulations. Also, October 2007 saw the unveiling of JOMO Hydlux HP-ES, a power-saving hydraulic actuation oil that, as a flammable liquid, is compliant with the revised Fire Service Law. Further, belonging to the JOMO ECO Series, all JOMO Bio Series products have acquired the Japan Environment Association's Eco Mark as products that do not adversely affect the natural environment because leakages can be broken down quickly using microorganisms.



(Eco Mark certification numbers)  
Bio Turbine 32: 05 110 008 / 46: 03110 018  
Bio Hydro 32: 05 110 007 / 46: 03110 019  
Bio Grease EP: 04 110 026



JOMO Bio Hydro

#### Environment-friendly LPG

LPG (liquefied petroleum gas) is a clean energy with several advantages: it emits less CO<sub>2</sub> than oil or coal when combusted and does not produce soot or ash. Japan Energy is developing highly environment-friendly LPG-based energy supply systems and promoting the spread of LPG vehicles.

##### ●Promoting the spread of residential cogeneration systems

The ECOWILL LPG-based residential gas cogeneration system generates electricity in homes, and the resulting heat can be used for hot water and room heaters. Thanks to a high energy efficiency of 87% and the incentive provided by government grants, these systems are spreading rapidly.

##### ●Helping popularize LPG vehicles

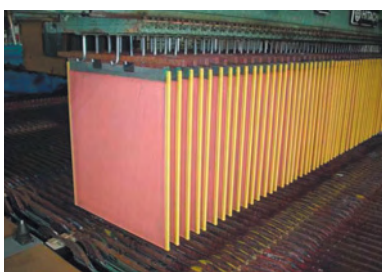
Japan's national government and local authorities are encouraging the spread of LPG vehicles as low-pollution vehicles with exhaust emissions that do not include black smoke or suspended particulate matter and contain low levels of nitrogen oxides and hydrocarbons.

From the fiscal year ended March 31, 2008, Japan Energy embarked upon its own initiative to encourage the spread of LPG vehicles within the Japan Energy Group and reach targets for the spread of LPG vehicles. Supplementing government grants, the group introduced a change-over subsidy that partially covers the cost of switching from diesel to LPG vehicles.



### Introduction of the permanent cathode method

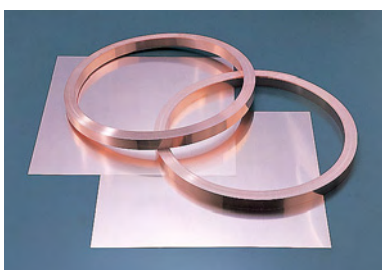
In refining processes for the production of refined copper, the Nippon Mining & Metals Group has established and introduced the permanent cathode method as a production technology that results in better-quality refined copper and higher electric current efficiency than conventional methods. The permanent cathode method entails refining copper by using a stainless steel plate as a cathode, which increases energy efficiency and production capacity.



Refined copper produced using the permanent cathode method

### Highly recyclable copper alloys with advanced functionality

Metal recycling is difficult when alloys contain elements harmful to humans or the elements contained in alloys are not known. Such electronic device components as connectors and switch contacts are becoming smaller, thinner and more densely packaged. Nippon Mining & Metals uses original high-precision production process technologies to realize products that have advanced functionality and are easily recycled.



Hyper Series copper and special steel products that have the same constituents as conventional products, maintain recyclability and realize significantly improved functionality

### Pioneering the development of lead-free electrodeposited copper powder

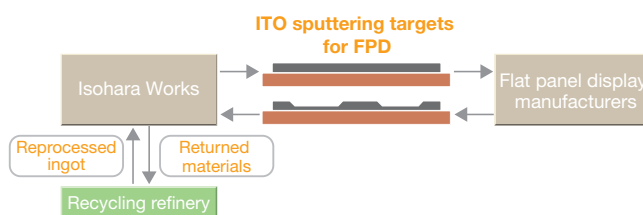
With the increasing emphasis on environment-friendly manufacturing, calls have grown for the reduction of harmful substances in raw material powders used in powder metallurgy, conductive pastes and other electronic materials. A particular concern is lead impurities in electrodeposited copper powder. The conventional electro-deposition method produces copper powder that contains approximately 100 to 1,000ppm of lead impurities. Nippon Mining & Metals' Electronic Materials Group contributes to the realization of lead-free electronic devices by providing a stable supply of lead-free electrodeposited copper powder with lead content of 1ppm or less. The company achieves this by using a titanium electrode coated in precious metal as an indissoluble positive electrode in the electrolytic copper-removal process.

### Using recycled resources

The group conserves resources in the production of the electronic material electrodeposited copper foil by using remnant materials from copper electric wire and cable plants as the main raw material as well as reusing mill-ends from the electrodeposited copper foil process as a raw material. Other efforts to effectively reuse resources include creating raw material ingots by the refining of materials from ITO sputtering targets, which customers return to us after producing flat panel displays\*.

Further, in the manufacture of copper and copper alloys, the group uses virgin raw materials, which are smelted and refined from copper concentrate and recycled scrap materials. The Kurami Works effectively uses resources by reusing mill-ends generated in production processes as raw materials and collecting and recycling commercial scrap.

### Recycling of materials from returned ITO sputtering targets for FPD\*



\* Flat panel displays (FPD): liquid crystal, plasma and other flat panel displays

Companies are members of society. The Nippon Mining Holdings Group aims to fulfil its responsibilities as a corporate citizen, build relationships of trust with its stakeholders and develop sustainably with society.

## ■ Together with Shareholders and Other Investors

### Measures to revitalize general meetings of shareholders and further facilitate the exercise of voting rights

Nippon Mining Holdings strives to achieve the early dispatch of convocation notices for annual general meetings of shareholders. The Company Group sent notice of the 6th Annual General Meeting of Shareholders, held on June 26, 2008, at least three weeks prior to the meeting, on or before June 3rd. In addition, Japanese and English convocation notices are available on the Company's web site. In order to avoid the June 27 "peak" date, when most companies hold their shareholders' meetings, the Company Group set the date of the annual general meeting of shareholders one day before. Also, we facilitate the exercise of voting rights by enabling online voting.

### Investor relations activities

Nippon Mining Holdings aims to achieve highly transparent management through prompt, appropriate and equitable disclosure to its shareholders and other investors. As well as disclosing in compliance with related laws and statutory regulations, the Company Group actively releases information about management policies and operations to achieve widespread understanding of the Nippon Mining Holdings Group's business activities. Also, through presentations of financial and business results and the medium-term management plan, we aim to provide an adequate range of opportunities for investors to receive explanations directly from our senior management team. Furthermore, we strive to communicate our activities through our web site in a fair and readily understandable manner.

For individual investors, we held meetings in February 2008 in Tokyo, Osaka and Nagoya, and staged a roundtable session for shareholders in which the president outlined the Company Group's business situation. And, in addition to holding presentations for individual investors at major cities across Japan, we hold quarterly results briefings for analysts and institutional investors and briefings on the medium-term management plan. For overseas investors, we organize road shows and briefings by the president and other officers on the medium-term management plan and our progress in implementing it.

Our web site carries details of business policies, information on our financial position and business performance, press releases, various investor relations materials and stock information.

Moreover, in order to facilitate equitable disclosure, we release on our web site written and video materials from roundtable sessions for shareholders and briefings for analysts and institutional investors.



The investor relations section of our web site



Our most recent annual report



Reports for our shareholders

### Evaluation from external organizations

Nippon Mining Holdings received the 13th Disclosure Award in the Tokyo Stock Exchange's Awards for Listed Companies for the fiscal year ended March 31, 2008. Daiwa Investor Relations Co., Ltd., awarded the Company Group with the Internet IR Effort Award. And, a survey of the web sites of all listed companies conducted by Nikko Investor Relations Co., Ltd., selected our web site as a superior web site under its general ranking.

Further, the Pension Fund Association included the Company Group's shares in its Corporate Governance Fund in July 2008. Also, September saw the Company Group's addition to the Morningstar Socially Responsible Investment Index.



## ■ Together with Customers

The Group companies of the Nippon Mining Holdings Group undertake a variety of activities to heighten quality and customer satisfaction even further.

### Protection of personal information

In accordance with the Act on the Protection of Personal Information, Nippon Mining Holdings has established rules for personal information protection and developed a system for protecting personal information that covers the whole Company Group.

In addition, respective Group companies conduct basic education on the Act on the Protection of Personal Information through e-learning and presentations incorporating videos and other visual media to further understanding of the law and ensure stringent compliance with laws and statutory regulations. Each Group company includes the Nippon Mining Holdings policy on the protection of personal information on its web site.

#### The Nippon Mining Holdings Group's personal information protection policy

<http://www.shinnikko-hd.co.jp/privacy/> (Japanese language)

### Improvement of customer satisfaction

In order to reflect customer feedback in its services, Japan Energy accepts customers' opinions and requests about JOMO service stations through e-mail and a toll-free telephone number operated by the JOMO Customer Center, which was established in July 1998.

As well as responding quickly to customer inquiries, Japan Energy enters them into a database for use in the preparation of improvement targets. And, the group has established a dedicated web site to enable information sharing and further improve customer satisfaction in relation to JOMO service stations.

Since 1994, Japan Energy has been conducting customer satisfaction surveys twice a year at 2,000 JOMO service stations nationwide. Starting in October 2006, the company had consumers act as "mystery shoppers" in order to get an unbiased, customer-centered view of fueling, maintenance, customer service, shop facilities and cleanliness.

In order to be chosen as customers' "best partner," Nippon Mining & Metals reflects customer feedback in efforts to improve products and services. Aiming to develop a system that facilitates the stable, efficient production of high-quality products satisfying customers' specific requirements, product specifications and standards, the company is obtaining certification under ISO 14001 9001 – which is a set of international standards for quality management systems – mainly focusing on its electronic materials plants. Each plant is taking measures to improve customer satisfaction

based on specific targets for reducing the number of customer complaints.

#### Other customer-friendly initiatives at JOMO service stations

- "Value Style" service stations  
The group contributes to customer comfort by making JOMO service stations non-smoking areas and including cafes and kids corners.
- Barrier-free service stations  
Japan Energy is developing JOMO service stations that incorporate such universal design features as access ramps, automatic doors, sliding doors and restrooms accessible to wheelchair users.

#### Information on JOMO service stations with barrier-free restrooms can be found at the following web site.

<http://www.j-energy.co.jp/station/ss/> (Japanese language)



An automatic door with a ramp



A Value Style service station

#### Improper invoicing at a JOMO service station

In December 2007, improper invoicing was discovered at the JOMO Miyauchi Station in Kawasaki City, Kanagawa Prefecture. The agent that managed the service station embezzled a portion of sales revenues and improperly dispersed invoices for the same amount among customers using the JOMO credit card and other credit cards. To customers that suffered losses, the group apologized, explained the cause of the incident and repaid the full amount of the improper invoices.

### Construction of a quality assurance system

Keenly aware that quality is fundamental to customer satisfaction, the Japan Energy Group prepared a common Quality Policy for the group in 2006. Further, Japan Energy established the Liaison Meeting of Quality Assurance Personnel as a Japan Energy Group organization. At the same time, the group created a quality assurance and quality control advancement system based on the establishment of administrative departments for each product range.

As a non-ferrous metals manufacturer, the Nippon Mining & Metals Group has to provide high-quality products and services that meet the exacting requirements of a wide range of customers. With that in mind, the group undertakes a variety of improvement activities such as NPM\* activities. Further, for each of its operations the group is building integrated quality assurance systems that include managers responsible for sales, manufacturing, technology and product development.

Furthermore, both companies are constructing quality assurance systems based on ISO 9001.

\* The company has adapted the Japan Institute of Plant Maintenance's Total Productive Maintenance concept to create NPM, or Nippon Mining & Metals Total Productive Maintenance, activities aimed at minimizing all kinds of losses due to such factors as disasters, accidents and defective products.

### Product safety

Nippon Mining & Metals takes a preventative approach to product safety. In addition to complying with related laws and statutory regulations, the company considers the safety of products at all stages – from development and production through to sales – in light of their characteristics. Further, the company provides material safety data sheets for all products to ensure the safety and health of those handling products. Dealing with 2 million tons of sulfuric acid annually, Pan Pacific Copper Co., Ltd., uses material safety data sheets to rigorously educate divisions and the companies responsible for transportation about the handling of chemicals. Similarly, Japan Energy also provides material safety data sheets for all of its products.

A material safety data sheet



### Participating in various exhibitions

As part of efforts to cultivate relationships with customers and provide even better products and services, the companies of the Nippon Mining Holdings Group actively exhibit at events showcasing leading-edge technologies.



The Japan Energy booth at the Energy Solution & Thermal Storage Fair 2008



The Nippon Mining & Metals displays at the IC Packaging Technology Expo

### Awards from customers

#### Awards received from customers by the Nippon Mining & Metals Group

Date	Client/Award
April 2007	Texas Instruments Inc. / Supplier Excellence Award
May 2007	Japan Electronics Packaging and Circuits Association / 3rd JPCA Award
July 2007	Semiconductor Manufacturing International Corporation / Outstanding Vendor Award
November 2007	Taiwan Semiconductor Manufacturing Company / TSMC Award
December 2007	MOLEX Interconnect Shanghai Co., Ltd. / Excellent Supplier Award
January 2008	Rexchip Electronics Corporation / Vendor Appreciation Award
March 2008	Intel Corporation / Intel's 2008 SCQI

As a supplier of products that underpin advanced technologies, the Nippon Mining & Metals Group aims to realize quality, technological capabilities and stable supplies in its everyday business activities. Those efforts have earned recognition from a variety of customers in the semiconductor industry and other industries.

## ■ Together with Business Partners

### Integrating purchasing through Nippon Mining Procurement

In order to ensure stable and efficient purchasing, Nippon Mining Procurement Inc. conducts integrated purchasing for the core operating companies of the Nippon Mining Holdings Group. In accordance with purchasing policies, Nippon Mining Procurement handles purchasing in an equitable and highly transparent manner. In 2006, the company started up a purchasing system that is compliant with the Act against Delay in Payment of Subcontract Proceeds, Etc. To Subcontractors and enables socially responsible purchasing. Based on that system and the mutual trust it engenders, the Company Group is building partnerships with business partners.

### Green purchasing initiatives

Environmental protection is included in the "Course of Action for Purchasing Deals" set out in Nippon Mining Procurement's purchasing policies. By advancing green purchasing, the company endeavors to contribute to the formation of a recycling society and the prevention of global warming. Nippon Mining Procurement conducts questionnaire surveys of business partners and gives priority to purchasing from those with environmental measures above

certain benchmarks. And, the company has begun encouraging business partners that do not meet those benchmarks to step up their environmental measures.

### Receiving evaluations from business partners through questionnaire surveys

Nippon Mining Procurement conducts questionnaire surveys of business partners to obtain opinions, requests and other feedback. In the fiscal year ended March 31, 2008, 293 companies responded to a questionnaire on progress in implementing "Our Promise to Business Partners" and the "Course of Action for Purchasing Deals" set out by Nippon Mining Procurement. The company received favorable evaluations from many business partners for putting its policies into practice. However, some commented that the content of the policies was difficult to understand. Taking those results seriously, the company will use its web site to further familiarize stakeholders with its purchasing policies.

Also, the results of questionnaires are available at the following web site.

 <http://www.shinnikko-pr.co.jp/> (Japanese language)

## Nippon Mining Procurement purchasing policies

### Role

1. We will provide the Group companies of the Nippon Mining Holdings Group with the necessary materials and services in the most efficient and stable manner.
2. We will contribute to the competitiveness of the Group companies of the Nippon Mining Holdings Group by working with Group companies to reduce the cost of the materials to be purchased.
3. We will conduct business with high levels of precision, speed and transparency so that we can gain the trust and satisfaction of the Group companies of Nippon Mining Holdings Group.
4. We will share information with the Group companies of the Nippon Mining Holdings Group in order to make both parties aware of the progress and results of the purchasing process and thus strengthen the purchasing functions of the Nippon Mining Holdings Group.
5. We will make purchasing information available to business partners so that we can offer the maximum number of business opportunities.

### Course of action for purchasing deals

1. **Transparency:** Purchasing deals will be carried out in an open manner from start to finish.
2. **Fairness:** Selection of suppliers will be carried out based on fair evaluations.
3. **Rigorous legal compliance:** During purchasing deals, we will comply with all related regulations, and will not only observe the individual clauses of each law, but will also adhere to the spirit of the law.
4. **Environmental protection:** We regard the environment as the most important thing, and endeavor to "purchase green."
5. **Mutual trust:** We will build relationships of trust with our suppliers, based on equal partnerships.
6. **Ethics:** The person in charge of purchasing will keep fair relationships with business partners based on a rigorous ethical viewpoint.

### Our promise to business partners (fundamental rules for purchasing deals)

1. **Fair entry opportunities:** We will provide companies that wish to trade with us fair opportunity to do so and will respond to any proposals earnestly.
2. **Fair evaluation:** Selection of suppliers will be conducted based on a fair evaluation of product quality, price, delivery schedules, performance and other factors.
3. **Clear specification of purchasing procedures:** We will clearly publicize the Course of Action for Purchasing Deals, the Fundamental Rules for Purchasing Deals, registration procedures for new suppliers, various procedures from ordering through payment and the contact details for the person in charge as well.
4. **Management of confidential information:** We will strictly manage information received in the course of purchasing operations and ensure maintenance of confidentiality.
5. **Disclosure of the reasons behind selections:** Where suppliers are not selected in tenders or competitive bids, we will clearly inform them, if requested, of the facts and reasons behind our decision.

## ■ Together with Employees

### Respect for human rights

Nippon Mining Holdings Group believes that respect for human rights is fundamental to building relationships not only with employees but also with all stakeholders. The Nippon Mining Holdings Group Basic Compliance Regulations set out the Company Group's basic position on respect for human rights by including the prohibition of unfair discrimination, the prevention of sexual harassment and the prevention of child labor and forced labor.

Nippon Mining Holdings, Japan Energy and Nippon Mining & Metals have clearly indicated their respect for human rights by becoming signatories to the United Nations Global Compact\*. Also, Nippon Mining & Metals is a member of the International Council on Mining and Metals.

\* Please see Page 42.

### Creating a more inclusive workplace for women

Nippon Mining Holdings Group aims to increase the employment of women while creating workplace environments that empower female employees to play active and significant roles.

Of Japan Energy's 225 female employees, four are in management positions. The company intends to increase the recruitment of women while expanding the areas in which female employees can work. To that end, as an organizational initiative the company is supporting female employees that want to increase their expertise and develop their careers by providing systems for studying overseas in association with Japanese universities and assigning female employees overseas. Further, of the 115 female employees at Nippon Mining & Metals as of March 31, 2007, 18% were in managerial positions\*.

\* Managerial positions: supervisors or above



Japan Energy (Singapore) Pte. Ltd.



Petroleum Refining Research and Technology Center, Japan Energy

### Supporting work-life balance

Based on a belief in the importance of achieving a work-life balance, Nippon Mining Holdings Group is actively creating systems that allow employees to simultaneously meet their work and family commitments. Group companies are developing various support

systems and implementing, expanding and upgrading educational programs to raise awareness.

Japan Energy has developed a human resources system based on the Law for Measures to Support the Development of the Next Generation, which requires companies to prepare concrete action plans to help employees balance work and childcare. In April 2007, the director of the Tokyo Labour Bureau recognized Japan Energy as a company that supports childcare and gave it permission to use the next-generation certification logo. After acquiring certification, the company prepared a two-year action plan that calls for lengthening childcare leave and strengthening support for those returning to work after childcare leave.

In compliance with various laws and statutory regulations, Nippon Mining & Metals operates childcare and nursing-care leave systems and systems for shortening working hours. In the fiscal year ended March 31, 2008, among the employees of Japan Energy and Nippon Mining & Metals, eight used systems for leave before childbirth, after childbirth or childcare.



The next-generation certification logo

### Introduction of reemployment system for retirees

In response to the Revised Law Concerning Stabilization of Employment of Older Persons, the Nippon Mining Holdings Group operates a reemployment system for the employees aged 60 and above that have reached retirement age. We expect that the reemployment of retirees will not merely engage them in day-to-day duties but will enable them to pass on technological know-how and skills to younger employees and contribute to operational management by maintaining and improving safety and quality control. In the fiscal year ended March 31, 2008, 14 of 19 Japan Energy Group retirees and 26 of 43 Nippon Mining & Metals Group retirees were reemployed.

### Encouraging the employment of the physically challenged

At the Nippon Mining Holdings Group in Japan, we are taking steps to create workplaces that are safe and easy to work in for physically challenged individuals. As of March 31, 2008, the Japan Energy Group employed 32 physically challenged individuals, which represented 1.97% of the workforce. Further, in the fiscal year ended March 31, 2008, on average physically challenged employees accounted for 1.86% of the workforce. Meanwhile, the Nippon Mining & Metals Group met the legally required 1.8% employment ratio as of June 1, 2008. We will maintain and raise the percentage of physically challenged individuals that we employ.

## Employee health

Employees are important stakeholders, and companies need to ensure that employees remain physically and mentally healthy while they work. Based on the guidance of industrial physicians, the Nippon Mining Holdings Group and its health insurance union work in close collaboration to manage the health of employees. Further, for mental healthcare we undertake employee education and stress checkups for employees, and we have established an in-house counseling system. Moreover, we have created a permanent external consultation service in order to actively use the expertise of outside organizations.

Aiming to maintain the mental and physical health of our employees, we support a variety of sports events, provide free use of sports facilities and organize such events as the *Arukearuke* walking event.

Nippon Mining Holdings takes mental healthcare measures that cover the whole Company Group. From July 2008, we began regularly sending mental health specialists and counselors to operating bases. And, Nippon Mining Holdings has concluded contracts that enable employees to consult directly with outside counselors, without going through the Company Group as an intermediary.



Mental healthcare pamphlets



The December 2007 Nippon Mining Holdings Group *Arukearuke* walking event

## Asbestos investigations and countermeasures

Based on investigations of asbestos use at the operating bases of Japan Energy and Nippon Mining & Metals, the Company Group completed the removal or protection of all areas where there was a risk of the dispersal of exposed asbestos in the fiscal year ended March 31, 2007. Further, some plant facilities use heat-resistant seals that contain asbestos. We plan to replace those with non-asbestos products during maintenance and repair work.

## Occupational health and safety initiatives

The Nippon Mining Holdings Group carries out day-to-day business activities based on a firm commitment to protecting the health and safety of workers as its first priority. Guided by their basic health and safety policies, Japan Energy and Nippon Mining & Metals prepare health and safety management policies for each fiscal year that target the elimination of accidents and set out priority measures.

In the fiscal year ended March 31, 2008, Japan Energy's priority measures were preventing accidents caused by human error and providing follow-up support at operating bases, in collaboration with industrial physicians, to employees with health concerns discovered through health checkups. Also, labor and management carefully monitor employees' working hours and paid leave taken and manage working hours through a flextime system.

For the fiscal year ended March 31, 2008, the Nippon Mining & Metals Group's priority measures were 1) conduct rigorous education to heighten danger awareness, 2) identify and establish countermeasures for causes of danger in normal operations, 3) enforce compliance with rules and safety-first practices, 4) build a health and safety management system and undertake risk assessment, and 5) set out and implement concerted health and safety activities with affiliates and partner companies. The group actively advanced those initiatives, carrying out safety audits of its 18 operating bases in Japan, which focused on checking implementation progress and the bedding down of PDCA cycle systems. In March 2007, Pan Pacific Copper Co., Ltd.'s Hibi Smelter (including Hibi Kyodo Smelting Co., Ltd.'s Tamano Smelter) obtained certification under OHSAS 18001, which is a set of standards for occupational health and safety management systems. Aiming to follow that example, other operating bases are working toward early acquisition of certification.

### Number of occupational accidents

Fiscal year		2004	2005	2006	2007
Resulting in lost work time	Japan Energy Group	1	2	0	1
	Nippon Mining & Metals Group	8	9	16	8
Not resulting in lost work time	Japan Energy Group	3	3	3	0
	Nippon Mining & Metals Group	16	15	21	13

For Japan Energy and Nippon Mining & Metals, in the fiscal year ended March 31, 2008, the frequency rates for injury or death among employees due to occupational accidents per 1 million labor hours were 0.29 and 0.32. The severity rates for labor days lost per 1,000 labor hours were 0.00 and 0.08.

(reference) In the fiscal year ended March 31, 2007, in Japan the frequency rate was 1.90 for industry as a whole and 1.02 for the manufacturing industry, and the severity rate was 0.12 for industry as a whole and 0.11 for the manufacturing industry.

## ■ Together with Society

### Communication with local communities

The Nippon Mining Holdings Group invites local residents to participate in study tours of its operating bases. For example, Japan Energy has been holding JOMO Science Classes since 2004 at its R&D Center for an elementary school in Toda City, Saitama Prefecture. Also in 2007, Japan Energy responded to a request from Toda's local authorities and began sending its researchers to teach JOMO I Love Science Classes at an elementary school.

A member of the Nippon Mining & Metals Group, Nikko Tsuruga Recycle Co., Ltd., organizes events and meetings for the viewing and appreciation of fireflies that appear around the Nikkori River irrigation canal on the company's southern side in collaboration with a local environmental preservation group, Aqua Sangha, and the Tsuruga Machizukuri Hagi-No-Kai.

### Clean-up activities in local communities

For many years, in Japan and overseas, employees at the operating bases of the Group companies of the Nippon Mining Holdings Group have participated in voluntary activities to beautify the environment by undertaking clean-ups and campaigns to collect garbage and cans.

### Participating in local initiatives to prevent crime and disasters

In order to preserve the safety of local communities, the Nippon Mining Holdings Group jointly undertakes disaster prevention activities with companies and local authorities in the vicinity of its operating bases. In addition, the Company Group cooperates with crime prevention campaigns.



Let's clean  
(Japan Energy, Hokkaido Branch Office)



Operation clean-up Fukui  
(Nikko Tsuruga Recycle Co., Ltd.)



A clean-up near a plant and disaster prevention training at an overseas base  
(Nippon Precision Technology (Malaysia) Sdn. Bhd.)



A plant study tour and a firefly appreciation meeting organized by Nikko Tsuruga Recycle Co., Ltd.



Our fire-fighting teams undergo training  
(left: Mizushima Oil Refinery of Japan Energy, right: Kurami Works of Nippon Mining & Metals)



A JOMO science class and a JOMO nature appreciation class  
(R&D Center, Japan Energy)



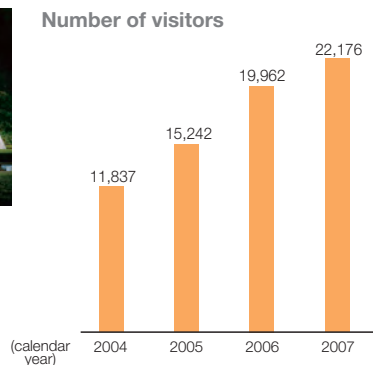


## Nippon Mining Museum

Built on the site of the former Hitachi Mine, the birthplace of the Nippon Mining Holdings Group, the Nippon Mining Museum exhibits materials from the Company Group's history, which spans more than 100 years. The Ministry of Economy, Trade and Industry recognized the museum as a modern industrial heritage site in November 2007. Through such symbolic images as the large chimney stack and tree-planting activities, the museum's displays communicate a philosophy of coexistence with the global environment and local communities. As a result, many elementary and junior high schools in Hitachi use the museum as a location and a topic for lessons.



Nippon Mining Museum



## Providing aid for disaster areas

In order to provide emergency humanitarian assistance when disasters occur, the directors and employees of Nippon Mining Holdings and its core operating companies undertake fund-raising activities. And, the Company Group makes donations matching the amounts collected.

Nippon Mining Holdings Group made a donation of ¥10 million to help victims of Tropical Cyclone Nargis, a large cyclone that struck Myanmar in May 2008. In addition, Nippon Mining Holdings and Nippon Mining & Metals made donations based on the above-mentioned donation-matching systems, while Japan Energy contributed through the JOMO Fureai Fund, which comprises fixed amounts donated from the salaries of directors and employees.

In May 2008, the Nippon Mining Holdings Group also provided ¥10 million to assist earthquake victims in Szechuan, China. As well as that donation, the stores in Chengdu, Szechuan, of Shanxi Japan Energy Lubricants Co., Ltd., which has 90 JOMO lubricant oil stores across China, participated in aid activities and provided free hydraulic actuation oil and diesel engine oil for the maintenance of construction machines used in rescue and restoration work.

## Forest preservation activities

Volunteers from among Japan Energy's employees work to protect forests. In Niigata Prefecture, Japan Energy Development Co., Ltd., has been revitalizing red pine forests inside and outside its Nakajo Oil and Gas Field for many years. Employees began participating in those efforts as volunteers from 2004. Further, Japan Energy concluded Forest Foster Parent agreements with Hara Village, Suwa County, Nagano Prefecture, in 2005 and with the incorporated NPO Fureai no Sato/Takahashi and Takahashi, Okayama Prefecture, in 2006. As a result, in addition to providing funds for forest development, three times a year the company's employees and their families work voluntarily with local people to create forests.



Volunteers for forest creation activities

## Initiative to create forests at the sites of former mines

The Nippon Mining Holdings Group is creating forests at the sites of former mines that it currently manages. In the fiscal year ended March 31, 2008, the Company Group planted three hectares of trees and cleared weeds from three hectares at the site of the former Kameda Mine in Hakodate, Hokkaido Prefecture, and thinned 14 hectares of trees at the site of the former Takatama Mine in Koriyama City, Fukushima Prefecture. The Nippon Mining Holdings Group manages a number of sites of former mines. However, at some of those sites we have not yet created forests because of the sites' large areas. Therefore, we plan to continue regenerating forests at the sites of closed mines.



Beech seedlings planted at the former site of the Kameda Mine

## The JOMO Children's Story Award

Japan Energy began social initiatives based on the composition of children's stories in 1970. Since 1973, the company has hosted a children's story competition themed on "heart-to-heart contact." Japan Energy presents awards to the best entries and publishes them as *The Bouquet of Children's Stories*, which is widely distributed among the general public. As well as distributing them to JOMO service station customers, the company donates the books to local schools, nurseries, kindergartens and other facilities. Held in the fiscal year ended March 31, 2008, the 38th JOMO Children's Story Award received 9,004 entries.



The JOMO Children's Story Award

Further, Japan Energy operates the JOMO Children's Story Fund in conjunction with the Nationwide JOMO Association and the Nationwide LP Gas JOMO Association, which are organizations for affiliated stores that handle JOMO brand products. Receiving revenues from sales of *The Bouquet of Children's Stories* to employees and affiliated stores, the fund enables JOMO Scholarship Grants for children at child welfare facilities and single mother support facilities across Japan through the Japan National Council of Social Welfare.

This CSR report and *The Bouquet of Children's Stories* use "3.9 Paper," made from thinning timber\* produced by forest maintenance activities. Thinning timber used to be frequently left in forests, which hindered the development of saplings. The "3.9 Paper" system enables effective use of thinning timber as a paper raw material by passing on to paper users the cost of transporting domestically produced thinning timber. That system helps preserve Japan's forests and enlarges CO<sub>2</sub> carbon sinks. Furthermore,

because the forest owners receive the profits from thinning timber, the system encourages forestry development.

\* Thinning timber: Thinning refers to the felling of some trees in overly dense forests to let in more light and thereby promote growth. The felled trees are referred to as thinning timber.

## JOMO Basketball Clinic

Aiming to promote basketball and benefit local communities, Japan Energy has held basketball clinics since 1995 in which members of the JOMO Sunflowers women's basketball team teach basic skills. In the fiscal year ended March 31, 2008, Japan Energy organized 54 clinics, which attracted 1,987 participants. Through sports, the company aims to energize society and children – the leaders of the future.



Full-time employees teaching basketball skills

### JOMO Basketball Clinic

[http://www.j-energy.co.jp/jomo\\_clinic/](http://www.j-energy.co.jp/jomo_clinic/) (Japanese language)

In addition, Japan Energy is involved in a wide range of social contribution activities, including the support of sports for the physically challenged and sponsorship of guide dog rearing. Further details are available in Japan Energy's CSR reports and on the company's web site.

<http://www.j-energy.co.jp/english/csr/>



## Participating in international activities for the environment and sustainability

Nippon Mining Holdings and Nippon Mining & Metals signed on participating in the United Nations Global Compact on August 26, 2008, and Japan Energy has participated in the Global Compact since September 2002. As a result, Nippon Mining Holdings and its two core operating companies are now United Nations Global Compact participants. The companies endorse and support the Global Compact's ten principles in the areas of human rights, labor, environment and anticorruption.

Please see the United Nations information center web site for further details about the 10 principles of the United Nations Global Compact.

 <http://www.unglobalcompact.org/>

Nippon Mining & Metals is a member of the International Council on Mining and Metals, a global organization engaged in initiatives

to enable the sustainable development of the non-ferrous metal industry. Also, Nippon Mining & Metals uses satellites to conduct investigations and research on regional environments and sends its engineers to developing countries to help address local environmental problems arising from mines, smelting and refining through projects undertaken on behalf of the Earth Remote Sensing Data Analysis Center and the Japan International Cooperation Agency, an independent administrative institution.

## Supporting the activities of NPO 2050

Nippon Mining & Metals sponsors the initiatives of NPO 2050, which tackles global problems such as rapid population growth, poverty, environmental destruction, and HIV and AIDS. That organization believes the key to solving these problems is to increase the status and quality of life of women in developing nations. Accordingly, NPO 2050 undertakes projects to help women in poor families to become self-reliant through educational funds and agricultural instruction in Pakistan, Nepal, India, Bangladesh and Guizhou Province, China.

### The Global Compact's Ten Principles



#### Human Rights

**Principle 1:** Businesses should support and respect the protection of internationally proclaimed human rights; and

**Principle 2:** make sure that they are not complicit in human rights abuses.

#### Labour Standards

**Principle 3:** Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;

**Principle 4:** the elimination of all forms of forced and compulsory labour;

**Principle 5:** the effective abolition of child labour; and

**Principle 6:** the elimination of discrimination in respect of employment and occupation.

#### Environment

**Principle 7:** Businesses should support a precautionary approach to environmental challenges;

**Principle 8:** undertake initiatives to promote greater environmental responsibility; and

**Principle 9:** encourage the development and diffusion of environmentally friendly technologies.

#### Anti-Corruption

**Principle 10:** Businesses should work against corruption in all its forms, including extortion and bribery.

# Group Companies (consolidated subsidiaries and equity-method affiliated companies)

(as of March 31, 2008)

## Nippon Mining Holdings

●...Equity-method affiliated companies

Petroleum (Japan Energy Group)		Percentage of voting rights	Other Operations (Independent Operating and Functional Support Companies)		Percentage of voting rights
Japan Energy Corporation	100.0%	Kurobe Nikko Galva Co., Ltd.	93.4%	Central Computer Services Co., Ltd. *4	100.0%
Japan Energy Development Co., Ltd.	100.0%	Nikko Shoji Co., Ltd.	100.0%	Nichiyo Engineering Corporation	100.0%
NMC Pearl River Mouth Oil Development Co., Ltd.	100.0%	Nikko Shoji Taiwan Co., Ltd. *2	100.0%	Nikko Real Estate Co., Ltd.	100.0%
Southern Highlands Petroleum Co., Ltd.	80.0%	Nikko Art & Craft Co., Ltd.	100.0%	Automax Co., Ltd.	100.0%
Kashima Oil Co., Ltd.	70.7%	Nikko Environmental Services Co., Ltd.	100.0%	Nippon Mining Finance Co., Ltd.	100.0%
Kashima Aromatics Co., Ltd.	80.0%	Tomakomai Chemical Co., Ltd.	100.0%	Nippon Mining Procurement Inc.	100.0%
JOMO-NET Sapporo Co., Ltd. *1	100.0%	Nikko Tsuruga Recycle Co., Ltd.	100.0%	Nippon Mining Research & Technology Co., Ltd.	100.0%
JOMO-NET Tohoku Co., Ltd. *1	100.0%	Nikko Mikkaichi Recycle Co., Ltd.	100.0%	Nippon Mining Business Support Co., Ltd.	100.0%
JOMO-NET Kitakanto Co., Ltd. *1	100.0%	Nikko Plant Saganoseki Co., Ltd.	100.0%	Nippon Mining Ecomanagement, Inc.	100.0%
JOMO-NET Higashitokyo Co., Ltd. *1	100.0%	Nippon Marine Co., Ltd.	100.0%	Nippon Mining Insurance Services Co., Ltd.	100.0%
JOMO-NET Nishitokyo Co., Ltd. *1	100.0%	Circum Pacific Navigation Co., Ltd.	100.0%	Nippon Mining IT Co., Ltd.	100.0%
JOMO-NET Minamikanto Co., Ltd. *1	100.0%	Nikko Logistics Partners Co., Ltd.	90.0%	● Tatsuta Electric Wire and Cable Co., Ltd.	33.5%
JOMO-NET Tokai Co., Ltd. *1	100.0%	Nissho Kou-un Co., Ltd.	100.0%	● Toho Titanium Co., Ltd. *5	42.7%
JOMO-NET Kansai Co., Ltd. *1	100.0%	Nikko Exploration and Development Co., Ltd.	100.0%	● Maruwn Corporation	43.4%
JOMO-NET Sanyo Co., Ltd. *1	100.0%	Nikko Drilling Co., Ltd.	100.0%		
JOMO-NET Kyushu Co., Ltd. *1	100.0%	● Minera Los Pelambres	25.0%		
JOMO Retail Service Co., Ltd.	100.0%	● Japan Collahuasi Resources B.V.	30.0%		
J-Quest Co., Ltd.	100.0%	● JECO Corporation	20.0%		
Asia Shoji Co., Ltd.	100.0%	● LS-Nikko Copper Inc.	49.9%		
JOMO Sun Energy Co., Ltd.	100.0%	● Hitachi Wire Rod Co., Ltd.	20.0%		
Japan Energy (Singapore) Pte. Ltd.	100.0%	Nikko Materials Philippines, Inc. *3	100.0%		
Nikko Liquefied Gas Co., Ltd.	51.0%	Gould Electronics GmbH	100.0%		
Kyo-Pro Co., Ltd.	100.0%	Nikko Materials USA, Inc. *3	100.0%		
JOMO-Pro Kanto Co., Ltd.	100.0%	Nikko Materials Taiwan Co., Ltd. *2	100.0%		
Petrocokes, Ltd.	85.0%	Nikko Materials Korea Co., Ltd. *3	100.0%		
Irvine Scientific Sales Co., Ltd.	100.0%	Nikko Fuji Electronics Co., Ltd.	100.0%		
Nissho Shipping Co., Ltd.	72.5%	Nikko Fuji Electronics Dongguan Co., Ltd.	100.0%		
Nippon Tanker Co., Ltd.	100.0%	Nikko Coil Center Co., Ltd.	100.0%		
JOMO Enterprise Co., Ltd.	100.0%	Nippon Precision Technology (Malaysia) Sdn. Bhd.	80.5%		
JOMO Support System Co., Ltd.	100.0%	Nippon Mining Taiwan Co., Ltd. *2	100.0%		
● Abu Dhabi Oil Co., Ltd.	31.5%	Nippon Mining Shanghai Co., Ltd.	100.0%		
● United Petroleum Development Co., Ltd.	35.0%	Nippon Mining & Metals (Suzhou) Co., Ltd.	100.0%		
● am/pm JAPAN Co., Ltd.	20.0%	Nikko Fuji Precision (Wuxi) Co., Ltd.	100.0%		
		● Poongsan-Nikko Tin Plating Corp.	40.0%		
Metals (Nippon Mining & Metals Group)		Percentage of voting rights	Other Operations (Independent Operating and Functional Support Companies)		Percentage of voting rights
Nippon Mining & Metals Co., Ltd.	100.0%	Nippon Mining & Metals (Suzhou) Co., Ltd.	100.0%		
Nippon Mining of Netherlands B.V.	100.0%	Nikko Fuji Precision (Wuxi) Co., Ltd.	100.0%		
Nippon LP Resources B.V.	60.0%	● Poongsan-Nikko Tin Plating Corp.	40.0%		
Kasuga Mines Co., Ltd.	100.0%				
Japan Korea Joint Smelting Co., Ltd.	80.0%				
Pan Pacific Copper Co., Ltd.	66.0%				
Nikko Smelting & Refining Co., Ltd.	100.0%				
Hibi Kyodo Smelting Co., Ltd.	63.5%				
Pan Pacific Copper Taiwan Co., Ltd.	100.0%				
Pan Pacific Copper Shanghai Co., Ltd.	100.0%				
PPC Canada Enterprises Corp.	100.0%				
Minera Lumina Copper Chile S.A.	100.0%				
Compania Minera Quechua S.A.	100.0%				
Japan Copper Casting Co., Ltd.	65.0%				
Changzhou Jinyuan Copper Co., Ltd.	58.0%				

\*1 Integrated with the newly established company JOMO-NET Co., Ltd., in July 2008.

\*2 Nikko Shoji Taiwan Co., Ltd., merged with Nikko Materials Taiwan Co., Ltd., and Nippon Mining Taiwan Co., Ltd., in April 2008, and the corporate name of the surviving company was changed to Nikko Metals Taiwan Co., Ltd.

\*3 The corporate names of Nikko Materials Philippines, Inc., and Nikko Materials Korea Co., Ltd., were changed to Nikko Metals Philippines, Inc., and Nikko Metals Korea Co., Ltd., respectively, in April 2008, and the corporate name of Nikko Materials USA, Inc., was changed to Nikko Metals USA, Inc., in June 2008.

\*4 In April 2008, the Company transferred 60% of shares held in wholly owned subsidiary Central Computer Services Co., Ltd. (CCS), to NTT DATA Corporation. The corporate name of CCS was changed to NTT DATA CCS Corporation, which became an equity-method affiliate of the Company.

\*5 Following the annual shareholders' meeting of Toho Titanium Co., Ltd., held on June 27, 2008, Nippon Mining Group members constituted a majority on the board of directors of Toho Titanium, which became a consolidated subsidiary of the Company.

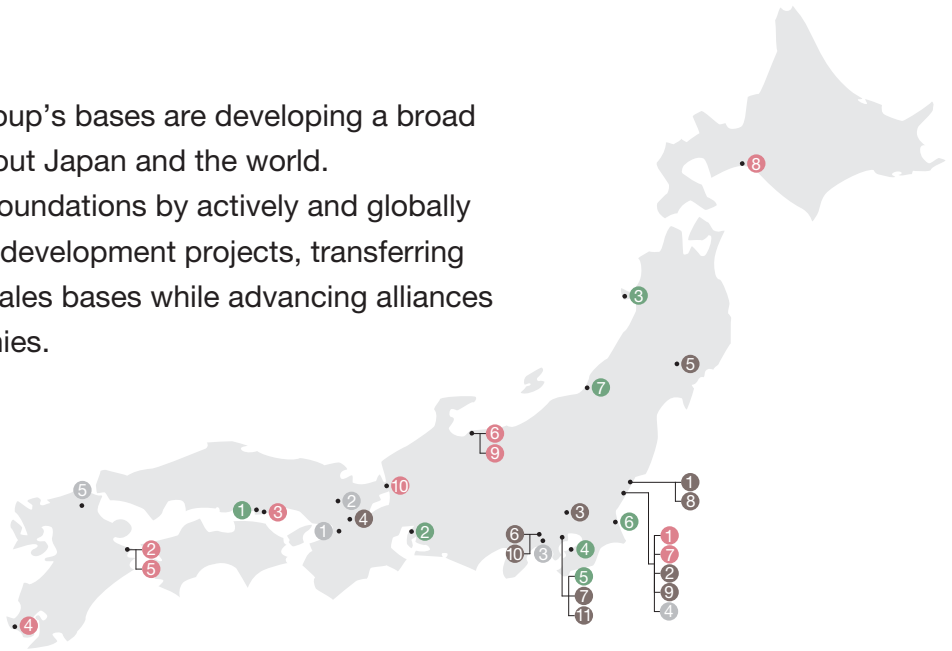
# Operating Bases in Japan and Overseas

The Nippon Mining Holdings Group's bases are developing a broad spectrum of operations throughout Japan and the world.

We are further cementing solid foundations by actively and globally participating in natural resource development projects, transferring production bases and building sales bases while advancing alliances with the world's leading companies.

## Petroleum (Japan Energy Group)

- 1 Mizushima Oil Refinery, Japan Energy
- 2 Chita Oil Refinery, Japan Energy
- 3 Funakawa Works, Japan Energy
- 4 Sodegaura Lubricants Plant, Japan Energy
- 5 Kawasaki LP-Gas Terminal, Japan Energy
- 6 Kashima Oil Refinery, Kashima Oil Co., Ltd.
- 7 Nakajo Oil and Gas Field, Japan Energy Development Co., Ltd.



## Metals (Nippon Mining & Metals Group)

### Metals

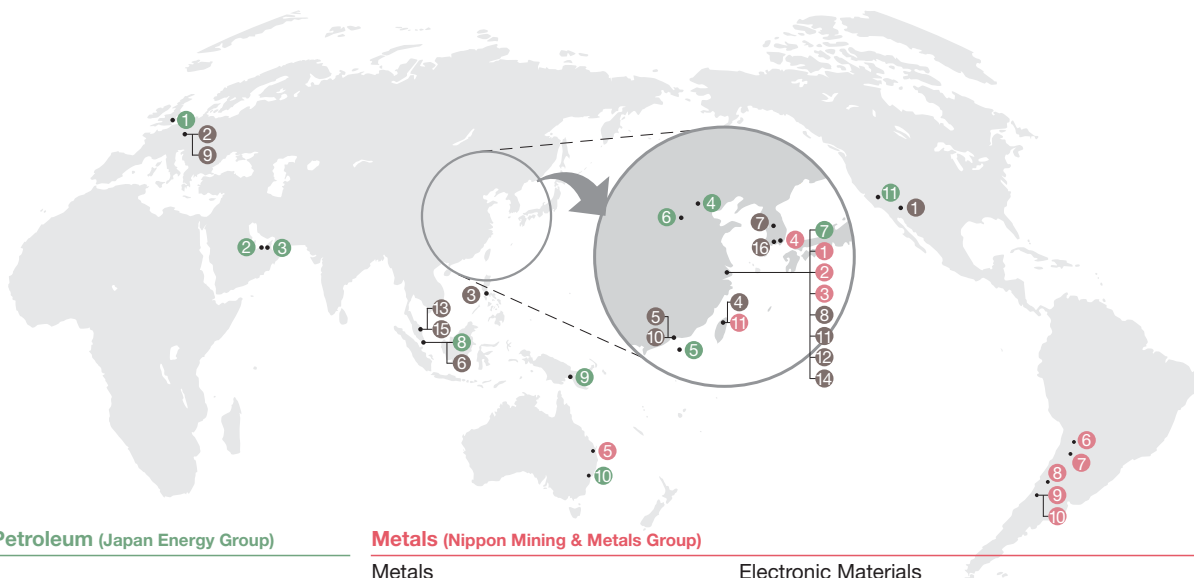
- 1 Hitachi Works, Nikko Smelting & Refining Co., Ltd.
- 2 Saganoseki Smelter & Refinery, Nikko Smelting & Refining Co., Ltd.
- 3 Tamano Smelter, Hibi Kyodo Smelting Co., Ltd.
- 4 Kasuga Mines Co., Ltd.
- 5 Japan Copper Casting Co., Ltd.
- 6 Kurobe Nikko Galva Co., Ltd.
- 7 Nikko Environmental Services Co., Ltd.
- 8 Tomakomai Chemical Co., Ltd.
- 9 Nikko Mikkaichi Recycle Co., Ltd.
- 10 Nikko Tsuruga Recycle Co., Ltd.

### Electronic Materials

- 1 Isohara Works, Nippon Mining & Metals
- 2 Shirogane Works, Nippon Mining & Metals
- 3 Toda Works, Nippon Mining & Metals
- 4 Takatsuki Plant, Nikko Shoji Co., Ltd.
- 5 Ichinoseki Foil Manufacturing Co., Ltd.
- 6 Kurami Works, Nippon Mining & Metals
- 7 Kurami Works, Kawasaki Plant, Nippon Mining & Metals
- 8 Isohara Plant, Nikko Fuji Electronics Co., Ltd.
- 9 Hitachi Plant, Nikko Fuji Electronics Co., Ltd.
- 10 Kurami Office, Nikko Coil Center Co., Ltd.
- 11 Kawasaki Plant, Nikko Coil Center Co., Ltd.

## Independent operating companies

- 1 Osaka Plant, Tatsuta Electric Wire and Cable Co., Ltd.
- 2 Fukuchiyama Plant, Tatsuta Electric Wire and Cable Co., Ltd.
- 3 Chigasaki Plant, Toho Titanium Co., Ltd.
- 4 Hitachi Plant, Toho Titanium Co., Ltd.
- 5 Yahata Plant, Toho Titanium Co., Ltd.



## Petroleum (Japan Energy Group)

- 1 Japan Energy (U.K.) Ltd.
- 2 Abu Dhabi Oil Co., Ltd.
- 3 United Petroleum Development Co., Ltd.
- 4 Japan Energy Corporation Beijing Office
- 5 NMC Pearl River Mouth Oil Development Co., Ltd.
- 6 Shanxi Japan Energy Lubricants Co., Ltd.
- 7 Japan Energy (Shanghai) Trading Co., Ltd.
- 8 Japan Energy (Singapore) Pte. Ltd.
- 9 Southern Highlands Petroleum Co., Ltd.
- 10 Japan Energy Oceania Pty., Ltd.
- 11 Irvine Scientific Sales Co., Ltd.

## Metals (Nippon Mining & Metals Group)

### Metals

- 1 Changzhou Jinyuan Copper Co., Ltd.
- 2 Nippon Mining & Metals Co., Ltd., Shanghai Office
- 3 Pan Pacific Copper (Shanghai) Co., Ltd.
- 4 LS-Nikko Copper Inc.
- 5 Nippon Mining & Metals Co., Ltd., Australia Office
- 6 Collahuasi Mine
- 7 Escondida Mine
- 8 Los Pelambres Mine
- 9 Nippon Mining & Metals Co., Ltd., Chile Office
- 10 Pan Pacific Copper Co., Ltd., Chile Office
- 11 Nikko Metals Taiwan Co., Ltd.

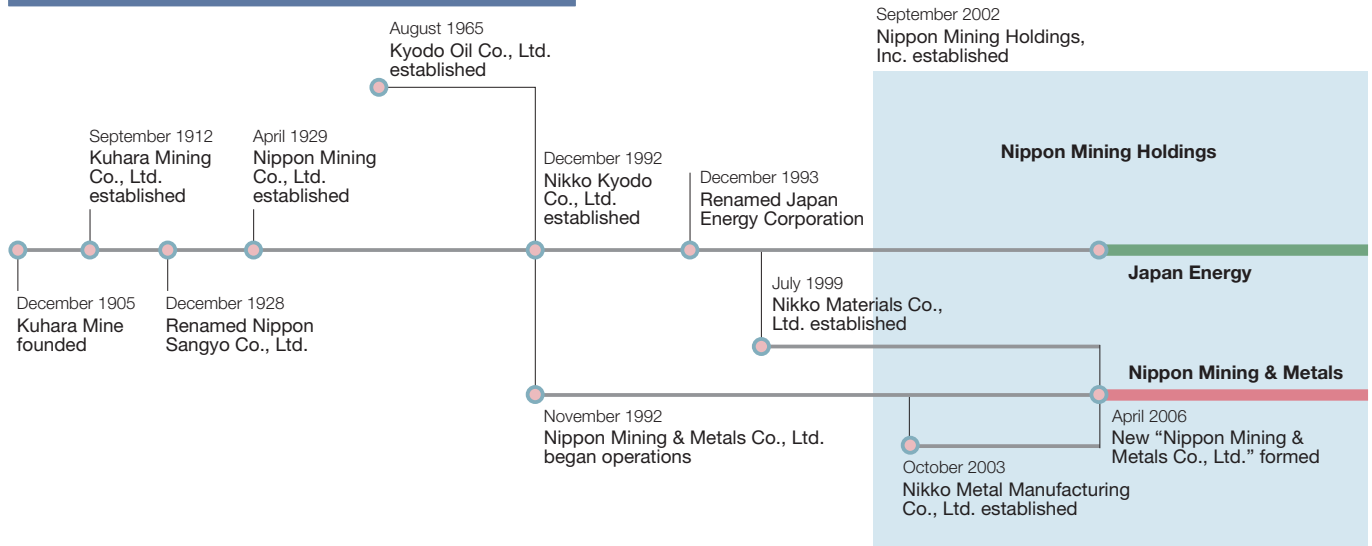
### Electronic Materials

- 1 Nikko Metals USA, Inc.
- 2 Gould Electronics GmbH
- 3 Nikko Metals Philippines, Inc.
- 4 Nikko Metals Taiwan Co., Ltd.
- 5 Nikko Metals Hong Kong Ltd.
- 6 Nikko Metals Singapore Pte. Ltd.
- 7 Nikko Metals Korea Co., Ltd.
- 8 Nikko Metals Suzhou Co., Ltd.
- 9 Nikko Metals Europe GmbH

- 10 Nikko Fuji Electronics Dongguan Co., Ltd.
- 11 Nikko Fuji Precision (Wuxi) Co., Ltd.
- 12 Nippon Mining & Metals (Suzhou) Co., Ltd.
- 13 Nippon Precision Technology (Malaysia) Sdn. Bhd.
- 14 Nippon Mining Shanghai Co., Ltd.
- 15 Materials Service Complex Malaysia Sdn. Bhd.
- 16 Poongsan-Nikko Tin Plating Corp.

# The History of the Nippon Mining Holdings Group

## Changes in the Nippon Mining Holdings Group



## The Origins of the Nippon Mining Holdings Group's Corporate Social Responsibility

The Nippon Mining Holdings Group traces its history back more than 100 years to December 1905, when Fusanosuke Kuhara purchased the Akasawa Copper Mine in Ibaraki Prefecture and began operating it as the Hitachi Mine. At the beginning of the 20th century, Japan's rapid modernization and industrialization led to a major social problem – air pollution. Sulfurous acid gas from copper smelting operations damaged local crops and forests. In 1914, the Hitachi Mine solved its air pollution problem by building the world's largest smokestack, "The Giant Stack." Further, we have taken steps to restore the natural environment by working with local residents to plant more than 10 million trees, including *oshimasakura* cherry and black pine. The area has regained its greenery, and every spring the hills are covered in white *oshimasakura* cherry blossoms. In fact, the cherry blossom has become a symbol of Hitachi.



The large chimney stack just before completion

The Giant Stack became a familiar landmark in Hitachi. However, in 1993 the upper part of the Giant Stack collapsed. After restoration work, it was one third of its original height. Nevertheless, the Giant Stack symbolizes the history of many years of effort by the Company Group and local residents to coexist by overcoming

the air pollution problem and restoring the natural environment. Therefore, we view it as the starting point of our corporate social responsibility activities.



Planted *oshimasakura* cherry trees thriving in the early days of the environmental project



The Giant Stack today

### Aru Machi no Takai Entotsu

The popular Japanese historical novelist, Jiro Nitta wrote the novel about the Giant Stack 'Aru Machi no Takai Entotsu' based on the actual story of the efforts of the Hitachi Mine and local residents to work together to solve the problem of air pollution. With the local residents' young leader as its hero, the novel tells the story of how a company and a local community seek coexistence by overcoming a air pollution problem and restoring the natural environment.



'Aru Machi no Takai Entotsu' First published 1969

## Third-Party Opinion



### Ms. Mizue Tsukushi

President and CEO, The Good Bankers Co., Ltd.

After studying at the University of Paris and being a full-time housewife, Ms. Mizue Tsukushi joined a French company and then became Deputy General Manager in charge of Institutional Marketing of UBS (Trust and Banking) Limited, a Swiss company. She established The Good Bankers Co., Ltd., in 1998. In 1999, she created the Nikko Eco-fund as Japan's first financial product based on socially responsible investing. Only investing in companies rating favorably in relating to environmental problems, the fund was the first financial product to win a Good Design Award. Also, Ms. Tsukushi's Family Friendly Fund, developed in 2004, won the Good Design Award and the Work-Life Balance Award. In September 2005, she received the Prime Minister's Award for her contribution to the creation of a gender-equal society. Ms. Tsukushi is a member of the Japanese National Commission for UNESCO and the Central Environmental Council and fulfils numerous other public roles.

The Nippon Mining Holdings Group's CSR Report 2008 clearly communicates that as a whole the Nippon Mining Holdings Group is stepping up corporate social responsibility activities and that through these efforts it aims to be a first-class global company that earns society's esteem and a sound international reputation.

The report reveals the Nippon Mining Holdings Group's corporate social responsibility strategy, and I read it with interest from an investing standpoint. The report is written in an easy-to-understand, concrete style, and it is educational. Reading the whole report gives the reader a good grasp of the Company Group's business lines and production processes. I think that it would serve as a good reference document for students hoping to work for the Company Group. Also, the report would make a good guide for new employees to the Company Group's overall operations. The report uses tables and graphs in a balanced manner that is visually effective without being too detailed. I think all stakeholders will find the layout reader-friendly.

I understood that the Nippon Mining Holdings Group is a general energy resource company based on Nippon Mining Holdings as a holding company and global operations, the main pillars of which are the oil business of Japan Energy and the non-ferrous metal business of Nippon Mining & Metals. Moreover, I understood that the Company Group's corporate social responsibility is to provide stable, efficient supplies of resources, materials and energy, and take pains to do so in a way that is environment-friendly and uses resources effectively. Further, the establishment of the Nippon Mining Holdings Group CSR Committee in order to realize that corporate social responsibility is commendable because it will clarify the Company Group's overall corporate social responsibility advancement system, clarify the Company Group's philosophy, systematize initiatives and enable clearer prioritization. The positioning of the committee as an advisory body to the president is particularly unique.

The Company Group's level of corporate social responsibility is praiseworthy. Also, from the standpoint of socially responsible investment, the Nippon Mining Holdings Group deserves considerable credit for its efforts to achieve resource efficiency in various aspects of its operations, innovate related technologies and focus on the personnel that create such innovations. The Company Group is moving forward with diverse measures, and each of these measures is reasonable. However, people invest with some expectation of change. Therefore, showing speed in

management and technology development is important. In other words, having personnel that are young and diverse making decisions is viewed as a source of competitiveness. In this regard, I would have liked some explanation. Perhaps we should look at the history of resource development and recall that the tireless prospecting efforts of young engineers, unshackled by common assumptions, have led to some major discoveries. For example, after the Second World War the discovery of the natural gas in the Po River basin supported the recovery of Italy's economy. Another example is the Escondida copper deposit in Chile, said to be possibly the largest such find in the 20th century. In relation to technology development, I was interested in the urban mine recycling business, which uses technology the Company Group has already developed. Also impressive was the initiative to become the first Japanese oil company to reprocess oil from waste household plastic as a commercial venture. However, given the scarcity of copper in comparison with such resources as iron and aluminum, I would have liked some mention of the development of the innovation of technologies that will help conserve copper resources.

In addition, the Nippon Mining Holdings Group should be commended for its forest development and conservation initiatives. However, I received the impression that there is not enough emphasis on forests as a resource and that initiatives are restricted to social contribution activities. Playing crucial roles such as preventing global warming, securing water resources and preventing landslide disasters, forests are the only replenishable "industrial resource" on earth. Furthermore, forests are the only industrial resource for which Japan could become self-sufficient. In order to continue developing as a general resource company, the Nippon Mining Holdings Group should redouble forest creation efforts that reflect an understanding of the strategic importance of forestry resources.

A winner of the Naoki Award, author Jiro Nitta wrote a novel based on actual events in the Company Group's early history. Published in 1969, the book focuses on a young man as its hero while telling the story of the efforts of a company and local residents to coexist. As someone who believes that corporate cultures have DNA and that research on corporate cultures is an important facet of investment decisions, I think that the novel testifies to the high regard that the origins of Nippon Mining Holdings Group's corporate social responsibility initiatives merit.



**NIPPON MINING HOLDINGS, INC.**

10-1 Toranomom 2-chome, Minato-ku,  
Tokyo, Japan, 105-0001  
<http://www.shinnikko-hd.co.jp/english/>

**Inquiries**

---

Corporate Social Responsibility

Telephone: 81-(0) 3-5573-5129

E-mail: [ask@shinnikko-hd.co.jp](mailto:ask@shinnikko-hd.co.jp)

