JAPEX

Corporate Social Responsibility Report

2013

Japan Petroleum Exploration Co., Ltd.

Corporate Vision

JAPEX is committed to contributing to local communities through a stable supply of energy. To this end, we will undertake the following activities:

- Explore for, develop, produce and deliver oil and natural gas in Japan and overseas.
- Further enhance the natural gas supply chain, supported by our own domestic infrastructures, through aggressive introduction of LNG business.
- Leverage our existing technology and expertise to develop and commercialize new technology.
- Make stakeholder trust our first priority while striving to achieve sustainable growth and maximize corporate value.

JAPEX Group Code of Conduct

To put Corporate Vision in practice, the JAPEX Group's directors, officers and employees shall act based on the following "JAPEX Group Code of Conduct" that represents our key values:

1. Comply with applicable laws and regulations of the countries and regions where our business operations are based, respect international norms, and take actions by taking the stakeholders' interests into consideration;
2. Put the top priority on paying due attentions to HSE (health, safety and environment);
3. Respect human rights and do not engage in discriminations or harassments;
4. Engage in fair, transparent and free competition as well as appropriate trading practices;
5. Keep sound and normal relationships with the politicians, political parties and government officials/agencies;
6. Resolutely confront antisocial forces and sever all relations with such individuals and groups;
7. Pay careful attentions to managing and protecting confidential information and personal/customer data;
8. Have a strong will for innovative change from the status quo and energetically engage in tasks with flexible mindset and originality; and
9. Be more responsive to information and engage in tasks in the professional manner.

Editorial Policy

We have been issuing our environmental reports since fiscal 2008. To address our stakeholders' needs with respect to information regarding corporate social responsibility (CSR), we have included substantial information on social commitment and responsible management from the current term and have renamed the title of our report to the "CSR Report".

By disclosing our CSR efforts and carefully listening to our stakeholders' voices, we would like to make use of this report as an important tool for developing our activities.

When drafting this report, we considered the following points.

- Providing information on what we are currently considering in promoting CSR activities as well as what we are planning to initiate in the future;
- Providing, as features, focused information regarding the "Socially- and Environmentally-friendly Projects to Support Stable Supply of Oil and Natural Gas" and "HSE Management", both of which represent themes for our business activities that rank high in importance from a social responsibility perspective; and,
- Put a face to our employees who support our business activities on-site by incorporating many of their voices.

Reference guidelines

- Ministry of the Environment, "Environmental Reporting Guidelines 2012"
- GRI, "Sustainability Reporting Guidelines Ver. 3.1 (G3.1)" and Oil and Gas Sector Supplement (OGSS)

Organizations covered with this report:

This report covers Japan Petroleum Exploration Co., Ltd. (JAPEX), and its 22 consolidated subsidiaries and other group firms. Environment performance data are of JAPEX and JAPEX Offshore Ltd.

Reporting period

Fiscal 2013, started on April 1, 2012 and ended on March 31, 2013.

Some statements include data before March 31, 2012 or those after April 1, 2013.

Issuing date: November 2013

Next issuing date: November 2014

Contents

Message from the President

JAPEX will grow as a trusted global enterprise, strive to contribute toward the realization of a sustainable society and become a pioneer in the future of the energy sector.

Toward Stable Supply of Energy

As Japan imports most of their oil and natural gas supplies, stable supply of energy is an important issue for Japan. Although two years and a half have already passed since the Great East Japan Earthquake, the disaster areas as well as the entire Japan are still facing difficulties in their restoration efforts. As nuclear power generation has been suspended due to the earthquake, Japan's energy situation has been deteriorating further.
Under such situation, JAPEX made a decision in March 2013 to participate in Canada's LNG project, with the aim to make available the stable supply of natural gas. This project comprehensively covers not only the upstream section of shale gas development/production, but also the midstream sections of pipeline transport and LNG production as well as LNG offtake, and will which will make possible the realization of stable and efficient operations. Coupled with our plan to construct an LNG terminal at Soma Port in Fukushima, for which we are currently considering the commercial feasibility, we believe that we will be able to greatly contribute toward making available the stable supply of natural gas to Japan as well as restoring the disaster areas in the Tohoku region. Participating in the above-stated projects is a big decision for us, but the JAPEX Group will boldly take on challenges in order to realize our corporate vision of "contributing to society through the stable supply of energy".

Toward Shifting Overseas

With respect to the "E&P Business"*, which is one of the three basic policies under JAPEX's Medium-Term Business Plan established in May 2011, we have announced that we will shift our investments overseas. We recognize that such shift is essential for our future growth and has been producing steady results to date.
First of all, under the Kangean Project in Indonesia, We has started commercial production at the Terang (TSB) gas field at the end of May 2012.
With respect to the Oil Sand Project in Canada, We has made the final decision in December 2012 to invest in the development to expand the production volume from the current 6,000 - 7,000 barrels per day to a maximum of 30,000 barrels per day.
In addition, we started production at the Garraf gas field in Iraq at the end of August 2013.
As our overseas projects progress, the JAPEX Group's

* "E&P" stands for "Exploration and Production" (exploration, development, production and sales of oil and natural gas)

responsibilities toward each nation/ region will become even greater.
The most important matters in our business operations are health, safety and the environment (HSE). At present, JAPEX has in place a corporate HSE policy and a corporate HSE management system. In line with such policy and system, each of our group companies is performing HSE activities which correspond to the actual circumstances of the relevant nation or region.
It is also important to establish trusting relationships within each nation/region. JAPEX needs to have deeper communication with people of different religious backgrounds and/or customs and must foster human resources to that end.
JAPEX will intensify these efforts as part of our company-wide CSR activities and strive toward growing as a trusted global enterprise.

Taking on Challenges toward Development of New Technologies

The technology and knowledge regarding the development of oil and natural gas that the JAPEX Group has been cultivating for many years also may be applied to the development of new technologies that are environmentally-friendly.
The Ministry of Economy, Trade and Industry (METI) is currently preparing for carrying out CCS demonstration in Tomakomai, Hokkaido. CCS is considered to be a effective way to reduce CO_2 emission. JAPEX is also taking part in this project. JAPEX plays a leading role in developing CCS technologies, and we are certain that it will contribute especially in regards to transporting CO_2 and implementing underground storage for CO_2.
In the field of renewable energy, JAPEX made a decision in December 2012 to conduct a study on geothermal energy in Shibetsu, Hokkaido. Geothermal energy is a domestically available energy source. As a volcanic nation, Japan has the third largest reserve of geothermal energy in the world. By leveraging on our extensive exploration/development technologies, JAPEX is actively participating in developing geothermal energy.
In addition, JAPEX also participates in methane hydrate technology R&D and solar power generation projects. Through the promotion of such projects, the JAPEX Group will meet the society's expectations with respect to the fields of environment and energy.

CSR of JAPEX Group

Recognizing the importance of addressing environmental/social issues through its business, such as by popularizing natural gas, which is environmentally friendly, and the like, the JAPEX Group has been promoting the above and has been actively involved in preserving the environment and contributing to society. The JAPEX Group has been participating in various activities to prevent global-warming, such as by engaging in the afforestation programs and making financial contributions to the World Bank's BioCarbon Fund. We have also been putting energy toward developing human resources who will lead our future by establishing courses at universities using our own funds and accepting student interns or overseas engineers.
In the future, in developing a more globally-oriented business that can handle a rapidly-changing environment, JAPEX needs to meet expectations of various stakeholders and fulfill a wider range of social responsibilities.
At the outset, JAPEX has set up a CSR Committee of which I serve as the chairperson, and such committee will promote CSR as top management. In addition, JAPEX has established HSSE Committee(HSE and Overseas Security) and created a structure that will comprehensively take initiatives in regards to HSSE, as ensuring HSSE is absolutely necessary for oil and natural gas developers. Going forward, we need to further clarify the meaning of CSR for the JAPEX Group and initiate CSR activities accordingly.
Our mission, which is to make available the stable supply of energy, is premised upon having a sustainable society. By making the best use of the JAPEX Group's technical capabilities, manpower and other resources, we will make further efforts to steadily perform CSR activities, starting with the preservation of the global environment and contribution to local communities. I would be grateful if our stakeholders would give us guidance and support in our endeavors.

President and Chief Executive Officer

Corporate Profile (as of March 31, 2013)

Company name:
Japan Petroleum Exploration Co., Ltd.
Address: 1-7-12 Marunouchi, Chiyoda-ku, Tokyo, Japan
Established: April 1, 1970

Paid-in capital:
¥14,288,694,000

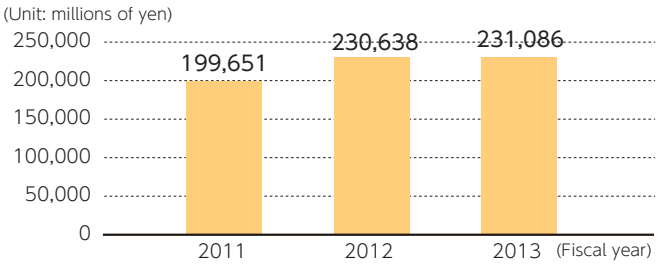
Number of employees:
1,747 Consolidated
892 Non-consolidated (except for temporary staff)

Main businesses:
Exploration, development and sales of oil, natural gas and other energy resources

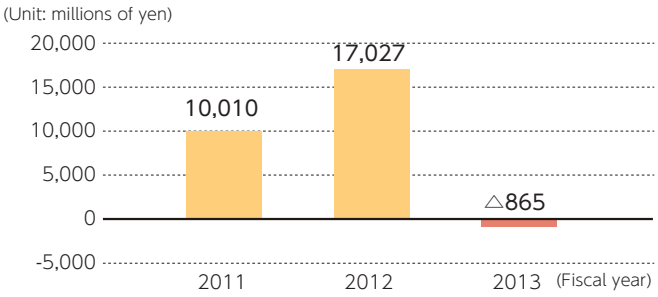
Main Offices:
Headquarters, Hokkaido, Akita, Nagaoka, JAPEX Research Center, London, Dubai, Houston, Beijing, and Jakarta

Financial highlights (consolidated basis)

Net sales



Net income



Business Models (Business Flow)

Ever since its founding, JAPEX has been acquiring mining acreage for exploration, development/production and transportation/sales of oil and natural gas resources, all done in an integrated manner. JAPEX is engaging in a highly public business with the mission of ensuring the stable supply of energy and maintaining/securing safety in operations.

Upstream

1 Acquisition of Acreage

Information gathering → Preliminary survey → Acquisition of acreage

JAPEX's headquarters and overseas offices are continually gathering information to identify highly promising projects. With respect to a potential investment, technical evaluations are performed based on relevant literature and/or purchased materials. At the same time, a preliminary survey is conducted to assess the regulatory, political and economic stability and geographical conditions of the relevant region. In addition, JAPEX carefully considers commercial feasibilities and the scale of funds required as well as strategies, such as selecting business partners for risk diversification purposes and the like.
The acquisition of acreage is achieved through international bidding or negotiations. In this process, it is important to investigate the eligibility of the potential investment within a limited time period.

2 Exploitation

Geological survey → Geophysical survey → Exploration and appraisal wells → Evaluation of reserves

Exploration for oil and natural gas deposits begins with a field geological survey. Geologists analyze the properties of fossils, oil and/or natural gas contained in sedimentary rocks to see if such rocks serve as source rocks or reservoir rocks.
Then, a geophysical survey is conducted to physically investigate the underground structures. A seismic vibrator is mainly used to generate artificial seismic vibration so that reflected waves from underground can be measured and geological structures understood.
If exploratory drilling based on results of the analyses leads to the discovery of oil or natural gas resources, several appraisal wells will be dug in surrounding locations to evaluate and identify the scale of the reserves and the feasibility of commercial production will be comprehensively determined.

Corporate History

Yufutsu oil and gas field

March 2010 Subsidiary Japex Garraf Ltd. was established

May 2007 JAPEX acquired shares in Energi Mega Pratama Inc. (affiliate firm)

December 2003 JAPEX got listed on the First Section of the Tokyo Stock Exchange

March 1989 Yufutsu oil and gas field (Hokkaido) was discovered

June 1983 Iwafune-oki oil and gas field (Niigata) was discovered

December 1978 Subsidiary Canada Oil Sands Co., Ltd. was established

June 1976 Yurihara oil and gas field (Akita) was discovered

April 1970 Reorganized as a private-sector E&P firm, Japan Petroleum Exploration Co., Ltd. was separated from JPDC

April 1968 Yoshii gas field (Niigata) was discovered

October 1967 With establishment of public corporation Japan Petroleum Development Corporation (JPDC), JPDC's business headquarters took over JAPEX' s operations, leading to dissolution of JAPEX

December 1960 Katakai gas field (Niigata) was discovered

June 1959 Higashi-Niigata gas field (Niigata) was discovered

July 1958 Sarukawa oil field (Akita) was discovered

December 1955 Japan Petroleum Exploration Co., Ltd. was established as a special firm based on Act on Japan Petroleum Exploration Co., Ltd.

Advertisement on getting listed on the First Section of the Tokyo Stock Exchange

The establishment of JAPEX

3 Development and Production

FEED → Drilling of Production wells → Construction of facilities → Oil and gas production

Midstream

If oil and gas fields are shown to have commercial-scale reserves based on the evaluation of information gathered from exploratory/appraisal drillings, front-end engineering and design (FEED) are formulated for development. Based on FEED, JAPEX drills production wells, constructs various facilities for processing, storing and transporting oil and natural gas and then starts production.

In the production phase, the operator uses a separator to separate the oil and natural gas from the fluid stream produced by the production wells and, among other tasks, regulates oil and gas pressures. Crude oil is stored in tanks within the production facilities, while natural gas is produced by carefully monitoring the supply-demand dynamics.

4 Transportation and sales

Transportation of gas and oil → Sales to customers

Downstream

Natural gas produced in Japan and overseas is supplied/sold to electric power companies and/or industrial users through pipelines. With respect to local distruibution companies (LDC), JAPEX sells natural gas through not only pipelines but also satellite systems that provides liquefied natural gas (LNG) by using tank trucks or railway containers. Crude oil produced in Japan and overseas is supplied and sold to oil refiners through marine transportation using tankers or land transportation using tank trucks or pipelines.

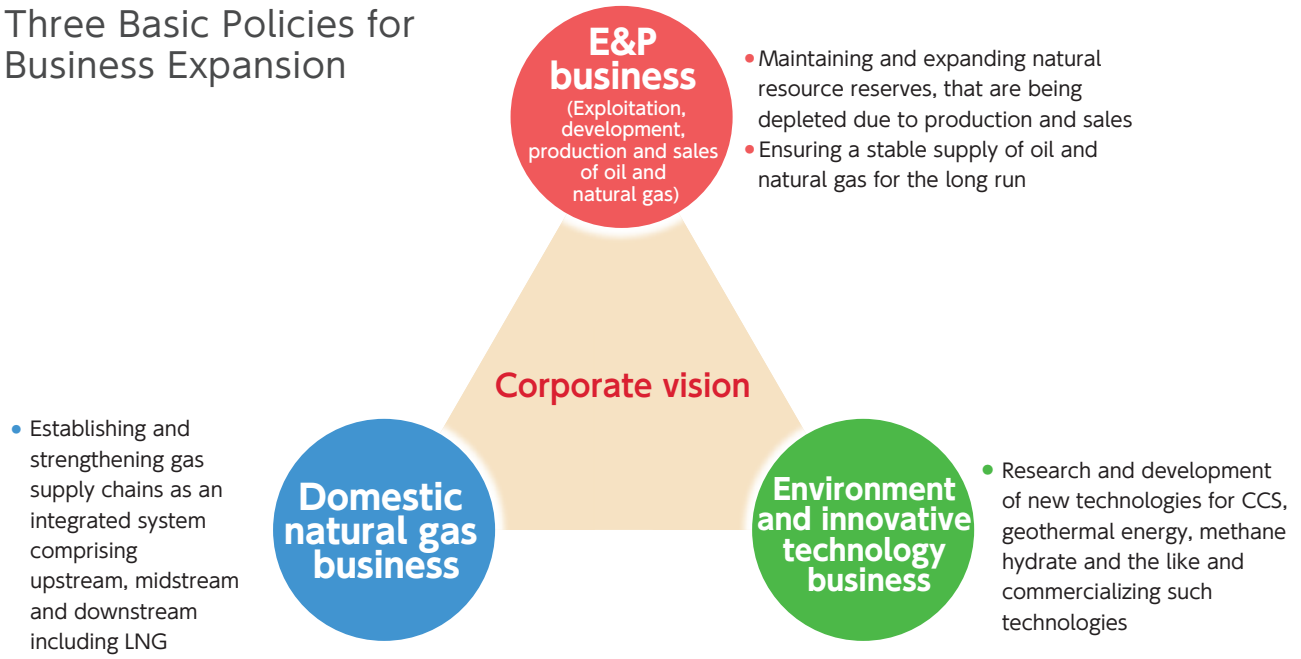
Business Plan/Vision

JAPEX prepares Medium-Term Business Plan to maintain and expand proved reserves that are being depleted due to production and sales thereof, and also to respond to changes in the business environment, such as increased competition concerning the domestic natural gas business, heightened social awareness toward environmental issues.

The five-year Business Plan, which covers the period from fiscal 2012 until fiscal 2016, recognizes the following businesses as Three basic policies, and we are striving to expand our earnings through new investments while fundamentally maximizing the value of our existing assets in Japan and overseas.

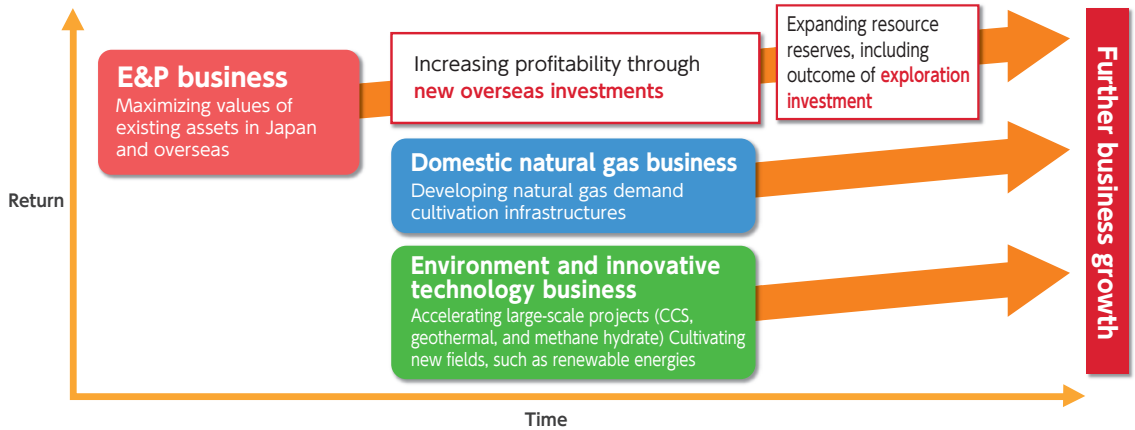
Through these efforts, we will further strengthen our business base and competitive edge, and as an enterprise group, we intend to maintain sustainable growth by thoroughly improving our management efficiency.

Three Basic Policies for Business Expansion



Growth story under Medium-Term Business Plan

With the E&P business at the center, we are aiming to increase our earnings opportunities, and thereby expand our business, by shifting our E&P business overseas and through new investments in domestic natural gas projects, the environmental and innovative technologies.



❶ E&P business (exploration, developing, producing and selling oil and natural gas)

Goal 1: Shift to overseas investment

(FY 2012- FY2016)

As for exploration/development investment portfolio, JAPEX aims to boost overseas investment ratio from around 30% in the past five years to around 60% in the future

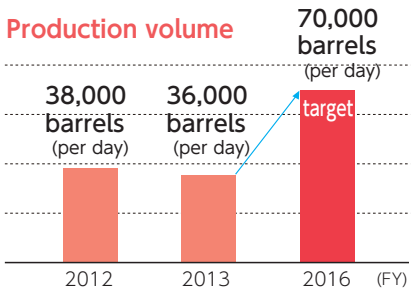
Overseas investment ratio

Approx. **60%**
(FY2012 - FY2016)

Approx. **30%**
(FY2007 - FY2011)

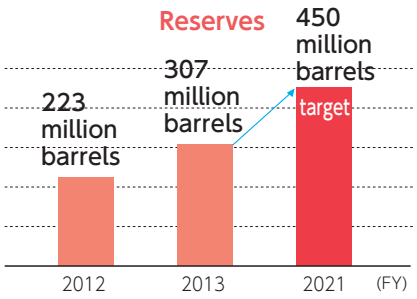
Goal 2: Increase production volume

Steadily starting production phase of projects in development/planning phase in the FY2012-FY2016, and expanding their cash flow



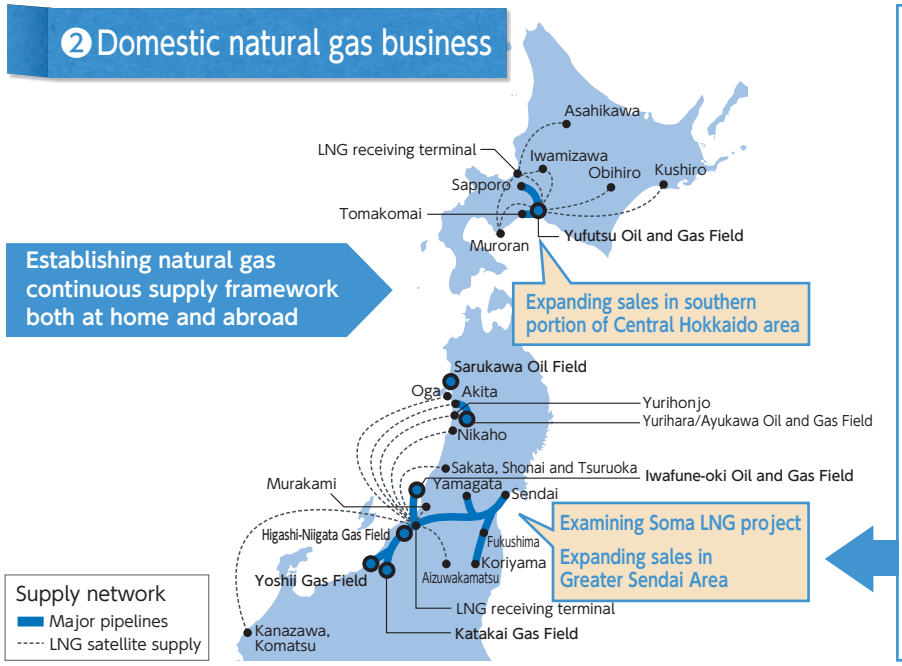
Goal 3: Expand reserves

Further expanding proved reserves by reinvesting cash flow earned from increased production

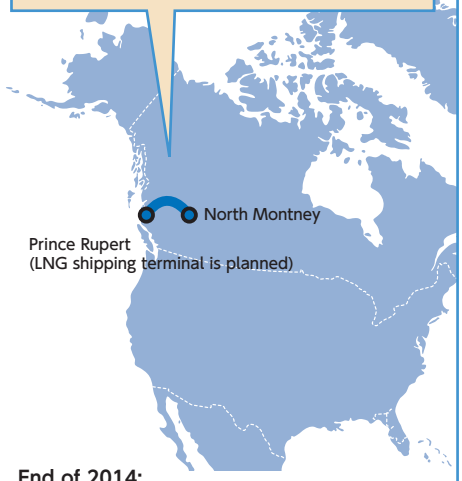


❷ Domestic natural gas business

Establishing natural gas continuous supply framework both at home and abroad



Canada Shale Gas to LNG Project



End of 2014:
FID※ of LNG plant construction (planned)

End of 2018:
Importing LNG to Japan (planned)

※ FID: Final investment decision

❸ Environment and innovative technology business

Timeline	FY2013	FY2014	FY2015	FY2016
CCS demonstration project	Demonstration test			
Akita shale oil	Demonstration test	Demonstration test		
Methane hydrate	Methane hydrate development program (phase 2)			
Geothermal power generation (Mt. Musadake area)		Structural exploratory well drilling		
Solar power generation (Tomakomai)		Construction works	Starting electric power supply	

CSR Efforts

In order to remain involved with various stakeholders through our business and develop in unison with our local communities, JAPEX will promote its efforts toward fulfilling its corporate social responsibility (CSR).

CSR in JAPEX Group

JAPEX's corporate vision is to realize "contributing to local communities through a stable supply of energy". As such, we believe that the business activity of providing a "stable supply of energy" is in itself our CSR.

In addition, our business is premised on having a trusted relationship with our various stakeholders. As development of a sustainable society is an international concern, JAPEX recognizes the importance of taking initiatives to meet its stakeholders' expectations and requests toward addressing such issue.

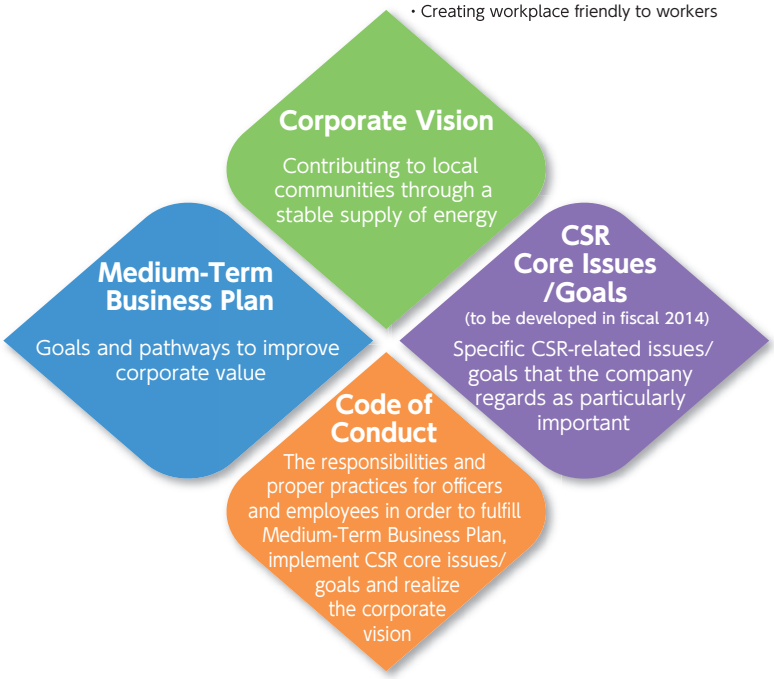
Recently, JAPEX has decided to systematically promote CSR. JAPEX will make efforts to promote CSR by having discussions with stakeholders and examining what must be done to establish and strengthen trusted relationships with our stakeholders while staying focused on our core businesses.

Relationships with stakeholders

Toward Realization of our Corporate Vision

CSR is one of the important issues in realizing our corporate vision. JAPEX will strive to realize its corporate vision by fulfilling its Medium-Term Business Plan, which aims to enhance its corporate value by improving the performance, and through setting and achieving CSR core issues/goals.

JAPEX has in place the "Code of Conducts" which set forth the responsibilities and proper practices that should be taken by its officers and employees in carrying out their daily operations.



Stakeholders' expectations and CSR core issues

Meeting stakeholders' expectations and requests will require knowing what they want. Thus, in regards to the CSR requirements set forth in ISO 26000*, JAPEX conducted interviews of internal staff and major group companies as well as surveys on all employees with the cooperation of outside experts to analyze the current state. Through the above, the circumstances of the CSR efforts within the offices and of the major group companies as well as what needs to be improved for the future have become clearer. Based on the results of such analyses, we will consider CSR core issues/goals that are important for the JAPEX Group.

*ISO 26000: Social responsibility guidance document prepared through the participation of various stakeholders and internationally agreed upon. It is widely used as an important guideline in promoting CSR activities.

Pathway to promote CSR activities

In November 2012, JAPEX decided to "systematically promote company-wide CSR activities" and "issue CSR reports by replacing the environmental reports". Before issuing the current report, JAPEX has performed the analysis of the present state of its CSR activities, establishment of its CSR promotion structure, and preparation for identification of its CSR core issues/goals.

February to April 2013

① Understanding the present status, analyzing CSR activities and identifying problems

JAPEX checks up CSR activities of related business units and major group firms in accordance with applicable rules set forth in ISO 26000.

May 2013

② Establishing CSR promotion structure (reorganizing/merging CSR-related committees)

JAPEX has set up CSR Committee in which the president serves as the chairperson.
This committee composed of vice president, senior managing directors, and officers of related business units as committee members and is expected to play leading roles in company-wide CSR promotion efforts by setting forth CSR-related basic policies.
In addition, JAPEX has also established HSSE Committee to comprehensively work on health, safety, security and environment (HSSE) programs.

April to July 2013

③ Research to identify CSR core issues/goals

JAPEX has conducted internal questionnaire survey on the three categories: Economy/governance/compliance; Products/services/society/labor; and Environment.

September 2013

④ Establishing Code of Conducts

Based on discussions that took place at the officers' summer retreat held at the end of August 2012, JAPEX proposed at general manager-level conferences and CSR Committee meetings and finalized the "Code of Conducts" which set forth actions to be taken by officers and employees in performing their tasks.

Within fiscal 2013

⑤ Identifying CSR core issues/goals

Based on analytical findings on CSR current status under 1) above and internal questionnaire survey under 3), JAPEX will finalize CSR core issues/goals.

Organization chart of CSR-related committees

CSR Committee
Laying down CSR policies, etc.
Preparing and issuing CSR reports
Chairperson:
Osamu Watanabe,
President and CEO

Internal Control Committee
Policies on frameworks to ensure appropriate business operations (internal control)
Compliance-related matters
Chairperson:
Yosuke Higai,
Managing Director

HSSE Committee
HSE/overseas safety policies
Management review on HSE management system
Chairperson:
Hiroshi Sato,
Executive Vice President

Information Security Committee
Information security policy
Basic matters on information security
Chairperson:
Nobuyuki Ogura,
Senior Managing Director

Officers' summer retreat

Socially and Environmentally Friendly Projects to Support Stable Supply of Oil and Natural Gas

This section explains how the JAPEX Group is paying careful attentions to the society and environment in worldwide energy development projects.

Iraq: Garraf project

The second international petroleum licensing auction on discovered but undeveloped oil fields was held by the Iraqi Ministry of Oil in December 2009. JAPEX, along with Malaysian state-owned oil company PETRONAS, jointly won the bid and acquired the right to enter into a development and production service contract involving the Garraf oil field located in Southern Iraq. Oil production started in August 2013, and planned to boost its production volume to 230,000 barrels per day by 2017.
Various initiatives are taken to ensure the safety of on-site workers and establish good relationships with the local communities.

Garraf oil field

For more information, see P.15

Indonesia: Kangean project

Through Kangean Energy Indonesia Ltd. (KEI), an average of 300 million cubic feet of natural gas (equivalent to 50,000 barrels of oil) per day is being produced near the Kangean Island located 200 km north of Bali, Indonesia. The natural gas that has been produced is used as fuel at local power stations or as materials at fertilizer plants. As such, the production of natural gas has been contributing to the stable supply of energy resources in Indonesia and the development of Indonesia's local economy.
JAPEX continues to maintain stable business operations in Indonesia by respecting the local culture and putting energy into educating and training its Indonesian employees.

Kangean Block, Pagerungan Island

For more information, see P.16

Canada: Oil Sands Project

Through Japan Canada Oil Sands Limited (JACOS), the JAPEX Group has been working on oil sands development in Alberta, Canada, for more than 30 years since founding JACOS in 1978. By employing SAGD method at bitumen (heavy and viscous hydrocarbons extracted from oil sands) production field, JACOS has been working on environment-friendly resource development activities, such as recycling produced water and preserving wildlife ecosystem.

Oil sands plant

For more information, see P.14

Canada: Shale Gas to LNG Project

In April 2013, JAPEX acquired 10% interest in shale gas mineral license currently under production in the North Montney area, British Columbia, Canada.
The shale gas production is projected to increase and will be transported by a new pipeline to Prince Rupert on the west coast of the province. Thereafter, such gas will be liquefied at the pace of 12 million tons per year before being exported.

Future plan

Final investment decision (LNG plant construction): At the end of 2014

Construction period: 2014 to 2018

Production will start: At the end of 2018

Project signing ceremony

For more information, see P.13

Soma LNG Project (commercial feasibility is currently examined)

JAPEX is examining commercial feasibility concerning the construction of oceangoing LNG vessels receiving terminal and connecting pipelines at Soma Port, Fukushima.
This terminal is planned to receive shale gas produced and liquefied with Canadian Shale Gas Project.

Soma LNG receiving terminal (concept design)

Akita Shale Oil

While shale oil enjoys world-wide boom mainly in North America, analysts estimate that a significant volume of shale oil reserves is available in Japan at almost the same size as conventional-type resources.
In a joint research with Japan Oil, Gas and Metals National Corporation (JOGMEC), JAPEX has examined feasibility of optimizing shale oil development technologies for domestic use from fiscal 2012 to fiscal 2013 and is currently preparing for demonstration tests in Akita Prefecture.
Analysts point out shale oil development technologies could pose some negative impacts on environment (contamination of underground water). By leveraging our past record of safe operations in the past oil exploitation projects as well as environment-friendly practices and state-of-the-art technologies in North America where shale oil R&D is highly advanced, JAPEX will push ahead with research activities, giving extra consideration to the environment.

Geological layers including shale oil (Onnagawa Layer in Yurihonjo City)

Shale oil collected

Project Focus

Canada Shale Gas to LNG Project + Soma LNG Project

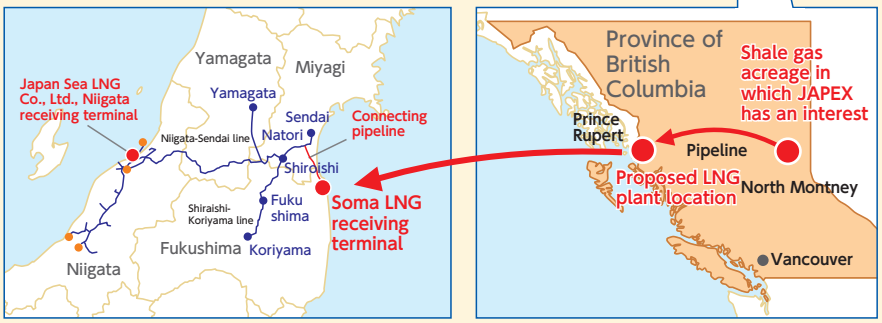
Two LNG Projects

JAPEX believes that contribution to local communities through stable supply of energy, especially through the expanded prevalence and stable supply of natural gas that has low impact on the environment, is an essential corporate theme to be pursued.

Our shale gas project in Canada has progressed steadily by means of integrated operations of exploration and production, liquefaction of natural gas and LNG offtake. The import of shale gas from Canada in the form of LNG contributes to diversifying our nation's supply sources of LNG, thus serving a role in improving the demand and supply situation of energy.

Meanwhile, the Soma LNG Project is designed to respond to the expected increase in natural gas demand in the Tohoku Pacific coastal region. Receiving LNG for a stable supply will lead to revitalizing the local economy and help restore the disaster areas by making natural gas widely available.

JAPEX, through these two projects, aims to realize the stable supply of natural gas.



Environmental and Social Considerations in Developing Shale Gas

Under this Project, shale gas is being developed with the view of conserving the natural environment of the region where woods and forests abound. Thus, such methods as re-afforesting the drilling pad and recycling the surface runoff water for drilling operation are being used to minimize the environmental burdens. Measures have been put in place to avoid affecting the ground water, by placing a surface casing to protect the wellbore to a depth deeper than the aquifer near the land surface and completely covering such cementing up to the land surface. Furthermore, the project is carried out after appropriate consultation with the native and local residents who may potentially be affected by the project.

Drilling at a Canadian shale gas project site.

Voice

Shoichi Ishii
Senior Managing Director
Executive Officer in charge of Soma Project Division

Future-Creating Energy that Contributes Also to Rehabilitation of Disaster Areas

To our customers in the Tohoku district, JAPEX has been supplying natural gas produced locally in Niigata and Akita Prefectures as well as LNG imported from abroad. At the time of the Great East Japan Earthquakes, we were able to promptly resume supply through our pipelines that are highly resilient to earthquakes, thereby scoring high evaluations for the natural gas supply network that is robust against disasters.

At this time, our Soma LNG Receiving Terminal, for which we started considering commercialization, is to secure an inlet on the Pacific coast to supply natural gas to the Tohoku district, which has hitherto been dependant on the unilateral inlet located on the Japan Sea coast.

Also, the LNG to be brought in will be the liquefied shale gas from Canada that has attracted much attention as a new type of energy.

By reshaping our infrastructure for supply of natural gas from both directions and introducing shale gas, we will strengthen our robust energy supply system and help the Tohoku district affected by the Great East Japan Earthquakes to rehabilitate and develop further along. It is our belief that the future-creating energy "Shale Gas" will symbolize the newborn Tohoku district.

We are now deeply committed to making preparations for a successful project, with the understanding and cooperation of the parties concerned and relevant local administrative authorities, so that we may soon live up to the great expectations of our local communities.

Project Focus

Canada Oil Sands Project

Environmental Considerations in Developing Oil Sands

JAPEX, through its local subsidiary, Japan Canada Oil Sands Limited (JACOS), has been engaged in developing oil sands in Alberta, Canada. The reserves of bitumen in Canada, heavy and viscous hydrocarbons extracted from oil sands, is estimated at 170 billion barrels, and it is eagerly looked at as one promising energy resource replacing the existing petroleum resources to meet the ever increasing energy demand in the world. Canada, ranked as the third largest in oil resources next to Venezuela and Saudi Arabia, is an environmentally resourceful country with abundance natural resources, where enterprises engaged in developing oil sands are expected to take special heed to minimize impact on the natural environment.

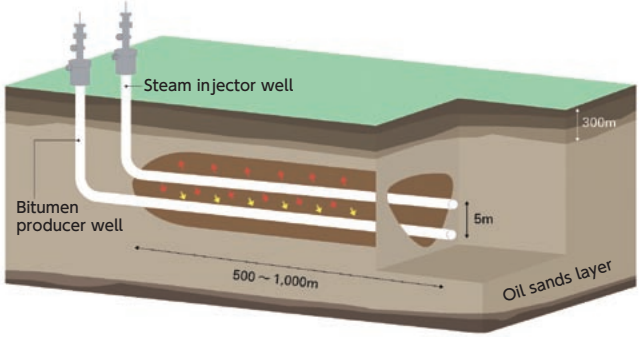
JACOS has been producing bitumen in its Hangingstone Lease from the area commonly known as the 3.75 section in amounts of 6,000-7,000 barrels per day. In November, 2012 and January, 2013 JACOS acquired approvals from the Alberta Government regulators to develop an area annexed to the 3.75 section and embarked on full-fledged development activities, aiming for the start-up of bitumen production in 2016. The approvals from the provincial government are contingent upon conducting scrupulous environmental impact studies and assuring to keep within the standards set by the provincial government for the impact on the surrounding environments during the lifecycle of development activities, including construction, operation and closure. JACOS, after spending about two and a half years for environmental impact assessment and application review, was successful in clearing the stringent government scrutiny and obtained the approvals.

Hangingstone Lease 3.75 Section

Development by Environmentally-Friendly SAGD Method

In the Athabasca region, Alberta, where JACOS has the oil sands development license, open-pit mining was the predominant method. JACOS, deeply engaged in the technology development of Steam-Assisted Gravity Drainage (SAGD), has been producing bitumen since 1999. The SAGD is an in-situ extraction method to produce the bitumen through the well as the crude oil is produced in conventional oil fields. In contrast to the open-pit mining that excavates a wide area of land, this process has less impact on the environment. Since 2000, the production volume by the SAGD has been increasing rapidly, and in Alberta, this in situ bitumen recovery method surpassed the production by open-pit mining method in 2012.

Schematic of SAGD Process



Voice

Bob Park
Japan Canada Oil Sands Limited
Operations Manager

Conservation of Water Resources in Oil Sands Development

Utilizing a world class water treatment facility, JACOS is an industry leader in produced water recycle greater than 95%. Innovative technology development such as non-condensable gas (NCG) co-injection reduces steam oil ratio (SOR) from the most mature SAGD well pairs. As a pioneer in SAGD development, JACOS takes pride in a long track record of operating a safe and environmentally responsible facility.

Project Focus

Iraq Garraf Project

Construction of Soccer Field and Regional Interchange

Exploration and production at the Garraf Oil Field are parts of a long-term project that has extended over 20 years, and with the understanding that building a favorable relationship with local communities is extremely important, JAPEX has been participating in tandem with PETRONAS in regional contribution activities in the fields of education, medicine and infrastructure ever since the launch of this project. As part of such activities, we built a soccer field within the contract area in the Garraf Oil Field at JAPEX's cost, to provide the local youths with a venue to enjoy sports in a safe and comfortable manner and for the purpose of making visible our contributions to the local community (completed in July 2012).

At the outset of 2013, in collaboration with the local communities and other NGOs, we invited 12 teams from the surrounding villages and hosted the first round of league games. JAPEX and PETRONAS, as well as Iraqi partner companies and other contractors working at the Garraf Oil Field, served as sponsors and donated uniforms and soccer balls to participating teams. Through the joint effort of companies doing business regionally and locally, the initial league games turned out to be a success. In the future, to further contribute to the healthy and sound education of local youths, we would like to see more frequent use of the soccer field and hope that it will serve as a venue to enhance mutual understanding between the local residents and JAPEX.

Opening ceremony of a water utility at the adjoining village

Soccer field

Security Measures

In December, 2011, the US military withdrew completely from Iraq. However, terrorist attacks continue to occur within Iraq. Near the Garraf Oil Field, although no serious incidents of terrorism involving casualties have occurred, much stricter security measures have been put into place than at peaceful times to prepare for any emergency. We have made efforts to strengthen the security structure by building T-walls, which are tall walls enclosing the field, increasing the installation of lookout towers and providing trainings for the security staff. Also, for emergencies, transportation means to evacuate to the Iraqi military posts are made available.

T-wall construction

Voice

Hiroka Shimoda
PETRONAS
Carigali Iraq Holding B.V.
HSE Performance Executive

Mutual Honing in Diversity

Two years have flown past since I was assigned to this the project. At first, I was overwhelmed by the internationally diverse workplace where employees and workers from over 20 different countries gathered.
The key to a successful project is none other than HSE. My work ranges widely from sanitation management, provision of safety instructions to running of emergency drills, to name a few. With respect to this enormous project under which more than 2,000 workers a day work on a 24-hour basis, any signs of accidents must be nipped by the bud. Around 20 members of the HSE staff are constantly patrolling on-site, and when any unsafe behavior is found, they are authorized to suspend work temporarily. Management is also actively involved, and the CEO holds a safety meeting once every three months.
The HSE department consists of around 40 members and I am the only Japanese. I am constantly honing my skills, inspired by our young competent Malaysian staff members.

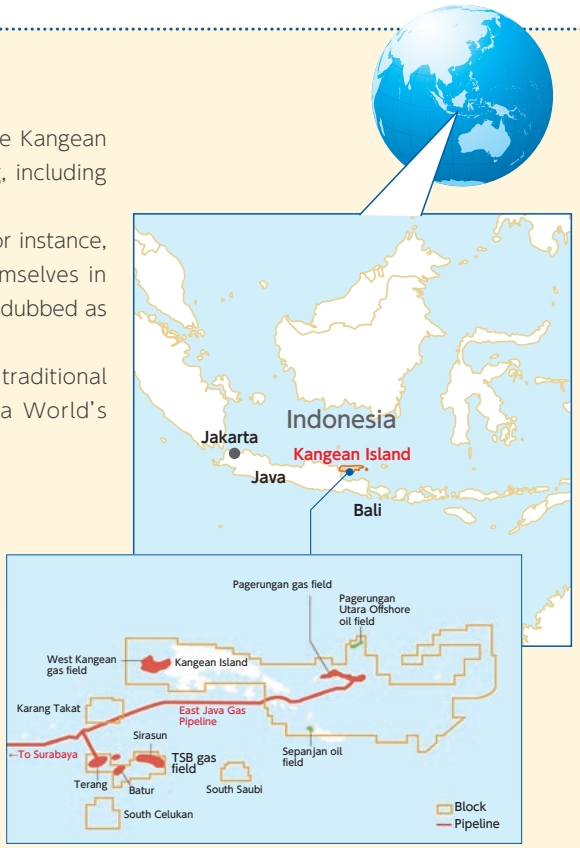
Project Focus

Indonesia Kangean Project

Introduction of Batik Day

The headquarters of Kangean Energy Indonesia Ltd. (KEI), supervising the Kangean Project, is located in Jakarta, where some 200 employees are working, including about 10 Japanese staff members dispatched from JAPEX.
The company is run in a manner showing respect for the local culture. For instance, male employees working usually in white shirts with no ties dress themselves in traditional shirts made of Batik textile on Friday every week, which day is dubbed as Batik Day.
Batik, sometimes called Java calico, is the textile used for Indonesian traditional costume, which was designated by UNESCO in October, 2009, as a World's Intangible Cultural Heritage.

Office scene on a Batik Day



Training of Young KEI Staffs in Japan

JAPEX invites young engineers of KEI to Japan and provides them with six months of on-the-job training. The trainees attend lectures given by JAPEX engineers and experience conducting on-site geological surveys and geophysical prospecting, performing drilling work, observing and performing production operations, performing assessments at the head office, performing analyses at the technical research laboratory and the like.
During the training period, trainees are given the opportunity to learn about the Japanese culture, which leads to the creation of an international workplace environment at JAPEX.

On-the-job training for field study

Training session at office

Voice

Faradina Deliani
Kangean Energy Indonesia Ltd.
Geologist

6-month Job Training in JAPEX head office

During the job training, I gained deeper geological knowledge. The first two months of training emphasized the area of exploration and development geology with considerable field study and practical work. I also obtained hands-on experience in a high standard laboratory research center as appropriate.
In the last four months, I was assigned to involve in a field study under domestic department which offered me an excellent teamwork with experts of geology, geophysics and reservoir engineering. This goal oriented project was met with real design challenges, but carried out under the supervisions of high professional of E&P area.
Overall, the training was a great experience and gave me many opportunities not only to develop my technical skills that add a real value to daily work in KEI, but also to experience Japanese culture and life in Japan.

HSE Management

Corporate HSE management system is established and operated to form the basis of corporate culture that prioritizes employees' occupational health, safety and environmental conservation.

Introduction of Corporate HSE Management System

In exploring and developing oil and natural gas, one accident can lead to a catastrophic disaster that endangers human lives and the environment.

Without having to compromise other crucial management matters, HSE (Occupational Health, Safety and the Environment) should be made a first priority, and our business should be premised on securing and protecting this principle. JAPEX places HSE to be the most important issue in terms of corporate social responsibility (CSR).

We instituted in 2009 our Corporate HSE Policy, setting forth the general directions of and approach to HSE applicable to the entire group, and put into effect the corporate HSE Management System (HSE-MS) to implement such policy. This is in line with the activity, where manuals are formulated in conformity to such international standards as OGP (International Association of Oil and Gas Producers) HSE Guideline, ISO14001*1 and OHSAS18001*2 which the industry considers exemplary, and each company sets its objectives and goals to make improvements under the PDCA cycle.

At our business affiliates overseas led by JAPEX and at each department and division at our head office that supervises their operations, the operation of HSE-ME commenced as of January, 2010, and preparations are now under way to start operating HSE-ME in our domestic operation sites from January 2014.

*1 ISO14001: International standard specifications for constructing environmental management systems to implement continuous improvements in environmental performance such as reduction in environmental loads in products and services.

*2 OHSAS18001: Internationally recognized specifications for constructing occupational health and safety management systems to prevent hazards for occupational health and safety and to improve workers' benefits and welfare and organizational efficiency.

JAPEX

HSE POLICY (環境労働安全衛生方針)

JAPEX is committed to conducting its business in a manner that protects occupational health, safety and the environment. Our HSE standards will not be compromized by other business priorities.

To accomplish this, JAPEX will:

- Fully comply with all applicable laws and regulations.
- Provide and maintain safe and healthy working conditions to create an incident-free workplace.
- Ensure that adequate medical support is provided to our employees.
- Identify and assess the hazards arising from activities and control any associated risks.
- Provide training to enable employees to work in a healthy and safe manner and foster awareness of protecting the environment.
- Regularly review HSE performance in order to demonstrate continuous improvement of our HSE practices.
- Strive to reduce waste and the consumption of materials, fuels and energy.
- Minimize adverse environmental effects associated with our activities.
- Require contractors to manage HSE in line with this policy.

The policy is implemented through the application of the HSE management system which is an integral part of JAPEX's overall management approach.

石油資源開発㈱は、当社の事業活動において環境労働安全衛生を最優先課題と位置づけ、他の経営上の重要事項に譲歩することなく、環境の保全、労働安全及び衛生の確保に取り組むことを宣言します。

この方針を達成するため、当社は以下の取り組みを実施します。

- 適用される全ての法律・規則を遵守します。
- 事故のない職場づくりのために、安全で衛生的な労働条件を提供し維持します。
- 労働者に対し、適切な医療支援を確実に提供します。
- 業務によって生じる危険源を特定・評価し、関連するリスクを緩和します。
- 労働者が衛生的かつ安全に働けるよう訓練を提供するとともに、環境保全に対する意識の向上を図ります。
- 環境労働安全衛生への取り組みを継続的に改善するために、環境労働安全衛生パフォーマンスの定期的な見直しを行います。
- 廃棄物及び原材料、燃料、エネルギーの削減に努力します。
- 事業活動に関連する環境負荷を最小化します。
- 本方針に従った環境労働安全衛生の管理を請負業者に義務づけます。

本方針は、当社の総合的な管理手法として不可欠な、環境労働安全衛生マネジメントシステムを適用して実施されます。

November 11th, 2009

石油資源開発株式会社
代表取締役社長

Osamu Watanabe

Osamu Watanabe
President, Japan Petroleum Exploration Co., Ltd

Voice

Junichi Matsumoto (second from left in photo)
Senior Managing Director
Executive Officer in charge of HSE Department

HSE-MS, Basis for Trust Relations with All

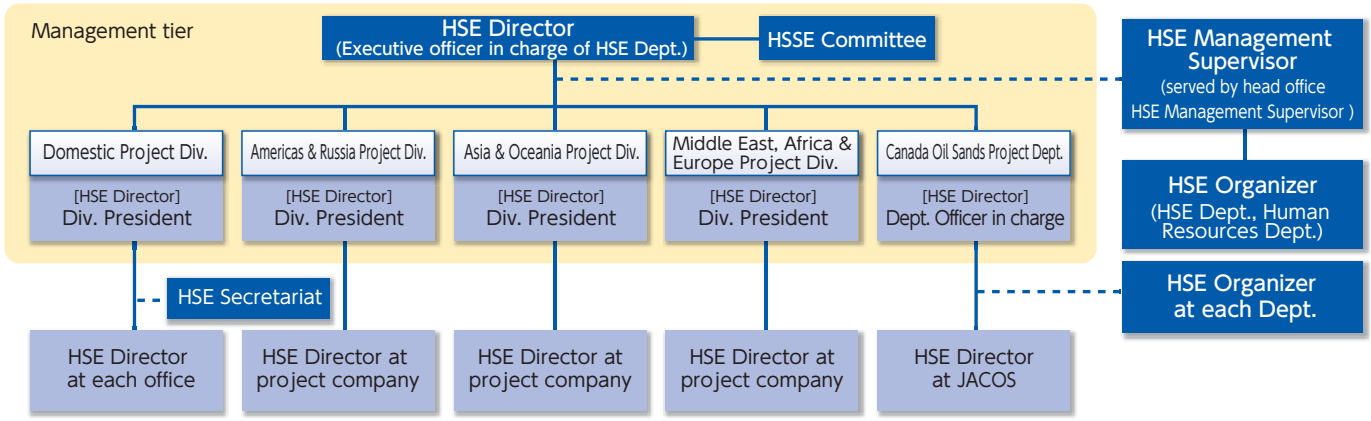
It is our earnest intent to secure sustainable corporate growth on the basis of trust relationships with all parties concerned in regional communities, our customers, governments of oil/gas producing countries and our business partners. To this end, we are required to make the best use of HSE Management System in fostering constantly our corporate culture that prioritizes HSE activities in our business operations both in Japan and overseas. Only by expressing our considerations for safety and environment in a concerted effort as a humane corporate entity, and by bringing joy and pleasure to all those who render support to our businesses in various respective manners, shall we be able to make a leap toward the next stage, so do we believe.

HSE-MS structure

At each project company abroad, an independent HSE-MS is established and implemented to suit its national and regional circumstances of each company's business based on the basic corporate HSE-MS.
JAPEX audits to make sure that the HSE-MS of each project company is in conformance with the corporate HSE-MS as well as its own HSE-MS. Each person in charge of HSE acts as the contact during audit, and annual meeting is held at the head office to share issues and information among peers. Management review, where the manager of each project gathers, has been held once a year. From fiscal 2014, however, management review will be conducted by the newly established HSSE* Committee and efforts will be made for continuous improvement.
The implementation of the HSE-MS in Japan is scheduled to commence in January 2014 and, at present, preparations are underway as part of the trial period.

*HSSE (Health, Safety, Security, Environment)

HSE-MS Structure



Introduction of Domestic HSE-MS and Future Approach

JAPEX is already certified by ISO14001 and has an EMS (Environmental Management System) in place. In formulating the manuals for HSE-MS in Japan, we have added portions for H (Health) and S (Safety) based on the system documents of EMS and maintained consistency with the corporate HSE-MS and the international standards of ISO14001 and OHSAS18001 as well as with the Guidelines for Occupational Health and Safety Management System by the Ministry of Health, Labour and Welfare.

The manuals formulated cover all of HSE issue and are closely linked to the existing manuals and procedures. As for implementation of HSE-ME in Japan, continuous improvements will be made through the PDCA cycle.
The corporate HSE-MS manual needs to be further refined so that it may be applied as the global standard. Improvements to the corporate HSE-MS manual will not only strengthen HSE-MS of overseas project companies, but also lead to improvements of HSE-MS in Japan. Thus, we will actively implement such manual and take initiatives toward the creation of effective systems.

PDCA cycle of HSE-MS

Voice

Kaori Itoh
HSE Department

Trained as HSE-MS Internal Auditor

In January 2013, I attended a training course for HSE-MS internal auditors whose function is to be in charge of the C (Check) process in the PDCA cycle of HSE-MS.
Thanks to the lecturer's explanation, I have gained understanding of the contents of the manual, which are rather difficult to grasp by just reading. It was helpful for me to learn the knowhow of the audit through a role-play session in the course. Many people will find the manual too hard to understand and may not know what to do. As such, I truly felt that more opportunities should be offered to more people so as to further spread the understanding of HSE-MS within the company.

Audit/Management Review of Overseas Projects

Canada Oil Sands Project

JAPEX, along with the JACOS head office in Calgary, Canada, conducts every year HSE audit at the oil sands project site located in the Hangingstone Block south of Fort McMurray. In the autumn of 2013, we schedule an HSE audit of the expanded development project in Hangingstone for which our final investment decision was made in December, 2012.

At the HSE audit conducted in December, 2012, we confirmed whether the corrective measures pointed out in the previous audit of the existing plant were addressed. As a result, it was affirmed that the suggested points have well been corrected.

HSE audit at JACOS

Indonesia Kangean Project

In April, 2013, together with our HSE consultants and the operation auditor, JAPEX visited the Floating Production Unit (FPU) on board the vessel Joko Tole, operating at the Terang Gas Field offshore of Bali, which is owned by KEI, the operator of the Kangean Project, to audit its HSE and operations-related matters.

In regard to the HSE, several suggestions were made for improvements, pointing out the need to renew the emergency measures and management plans covering the FPU operations. As for the operations, no significant matter was pointed out, except for partial deficiency in documentation.

HSE audit at KEI

Iraq Garraf Project

This project is operated by PETRONAS and its HSE-MS has been put in place for matters related to occupational health and safety as well as environment.

JAPEX is providing advice and support to PETRONAS, as needed, in a systematized structure.

Meeting of Persons in Charge of Overseas HSE Held

In October, 2012, after approximately three years since the launch of overseas HSE-MS, a meeting was called by the HSE manager of JAPEX's overseas operator projects (and equivalent projects) for overseas persons in charge of HSE. This was the very first convocation where persons in charge of HSE from overseas projects within the JAPEX group met together at once.

A total of 15 persons, consisting of two Canadians from JACOS, two Indonesians from KEI, one Japanese dispatched to PETRONAS for the Garraf Project, one Australian HSE consultant and nine head office HSE staff members, participated in this meeting.

In the meeting that lasted two days, matters of concern and/or issues regarding HSE with respect to each project were introduced. Furthermore, active discussions took place in regards to, among other matters, suggestion for an emergency contact system when serious accidents occur under an overseas project or proposals for standardization of a unified intra-office standard as to the reporting format when accidents/disasters arise.

No unified standards were immediately agreed upon as relevant laws and regulations differ country by country. Nonetheless, the meeting produced significant results in that future directions were determined to a certain degree based on face-to-face communication and understanding of the state of affairs and issues faced by the other participants.

The participants voiced their desire to have such meeting on a regular basis. Thus, such meeting is scheduled to take place again in fiscal 2014.

Meeting for persons in charge of HSE overseas

Environmental Management System

Through company-wide integration of the environmental management systems, initiatives to protect the environment as a unified group are being promoted.

Environmental Policy

Basic Policy

At our JAPEX Group, we strive for the safe and stable development and supply of limited resources of oil and natural gas, specifically trying hard for global and communal conservation of the environments through expansive prevalence of environmentally-friendly natural gas.

1. Taking into consideration the environment in our domestic and international business activities

Alleviate the environmental loads that arise from our business activities. To this end, consistently comply with all applicable laws and regulations while at the same time implementing a set of voluntary environmental standards. In addition to continuously improving environmental management systems (EMSs), strive to prevent pollution, conserve energy as well as resources, reduce waste and promote recycling. Furthermore, pursue the efficient development of oil and gas while proactively conducting surveys as well as research and development into the introduction of effective new energy alternatives that help to protect the environment.

2. Supplying energy that contributes to environmental protection

Contribute to the protection of the environment in partnership with customers by promoting environmentally friendly energy resources. For this purpose, endeavor to enhance the safety and quality of products.

3. Strengthening environmental partnerships

Actively promote environmental activities in collaboration with customers, business partners and local communities. Serve as an integral community member by raising environmental awareness generally.

Environmental Action Plan

❶ Work to prevent global warming.
❷ Work to prevent air, water and soil pollution.
❸ Work to protect biodiversity.
❹ Strive to save energy and resources and reduce waste.
❺ Thoroughly comply with environmental laws.
❻ Promote development and use of new technologies that support environmental protection.
❼ Contribute to society through environmental protection activities.

Environmental Management System

To achieve the goals set out in its Environmental Policy, JAPEX has introduced the Environmental Management System (EMS). After the Sapporo District Office (currently the Hokkaido District Office) was certified to ISO14001 in 2002, all domestic offices, including the JAPEX head office and the Niigata District Office of our subsidiary JAPEX Offshore Ltd., individually adopted EMS by 2005.
In 2009, the systems for each office were consolidated and instead of individual ISO14000 certification, JAPEX received a Company-wide certification.

With the company-wide integration of EMSs, environmental policies that were prepared by each office have been unified into one, and based on such unified Environmental Policy, a structure under which each office can plan and execute EMS activities that capitalize on such office's strengths has been established, making it possible for a more active and efficient operation. Furthermore, all of the group companies are promoting environmental protection initiatives as one entity, such as by having the HSSE Committee, of which top management is the member, make decisions on the contents of company-wide environmental protection initiatives and conduct annual management reviews of the EMS activities and the like.

Item Managed by Each Offices with EMS (as of April, 2013)

Environmental Action Plan	Head office/ Research Center	Hokkaido District Office	Akita District Office	Nagaoka District Office	JAPEX Offshore Ltd.
❶ Work to prevent global warming.	○	○	○	○	○
❷ Work to prevent air, water and soil pollution.		○	○	○	○
❸ Work to protect biodiversity.	○				
❹ Strive to save energy and resources and reduce waste.	○	○	○	○	○
❺ Thoroughly comply with environmental laws.	○			○	
❻ Promote development and use of new technologies that support environmental protection.					
❼ Contribute to society through environmental protection activities.	○			○	○

○:Denotes office having environmental objectives/goals. Offices without indication mean those either having little environmental loads or having approaches transferred to maintenance/control items as for environment action plans.

Environmental Impact of Business Activities

We keep track of inputs of energy and water resources and of emission outputs of greenhouse gas and wastes associated with our business activities so that we may mitigate the environmental loads.

Environmental Data (Fiscal 2013)

INPUT

Energy resources : Total 3,168.0 TJ
Water resources : Total 807,418 kl

	Office	Exploration	Drilling	Production	Transportation
Energy resources Unit: TJ*	47.9	3.2	260.2	2,391.6	465.1
Water resources Unit: kl	24,184	0	17,255	765,007	972

Major environmental loads from offices:
- Electricity used by office machines, air conditioners, lighting, etc.
- Paper use
- Generation of wastes, etc.
- Water used

Major environmental loads at exploration stage:
- Fuels used as geophysical exploration data are collected

Major environmental loads at drilling stage:
- Fuels used for drilling machine operations
- Water used to make mud water for drilling
- Industrial wastes generated in drilling operations

Major environmental loads at production stage:
- Electricity and fuels used in processing oil/ natural gas
- Water used in processing oil/ natural gas
- Emission of carbon dioxide contained in natural gas
- Emission of volatile organic compounds (VOC) contained in oil/ natural gas
- Generation of wastes, etc.

Major environmental loads at transportation stage:
- Emission of natural gas from the relocation of pipelines due to road works, etc.
- Fuels used for transporting oil and LNG

OUTPUT

	Office	Exploration	Drilling	Production	Transportation
Greenhouse gas Unit: t-CO_2	2,298	220	18,104	203,989	42,835
Wastes Unit: t	168	0	25,407	3,271	0
Waste water Unit: kl	24,184	0	29,266	991,418	972

Greenhouse gas: Total 267,446 t-CO_2
Wastes: Total 28,846 t
Waste water: Total 1,045,840 kl

*TJ: Tera Joule (10^{12} J)

Measures to Prevent Global Warming

We consider responding to global warming issues as a major topic for management and take initiatives in expanding the use of environmentally-friendly natural gas, reducing greenhouse gas emissions and performing afforestation activities.

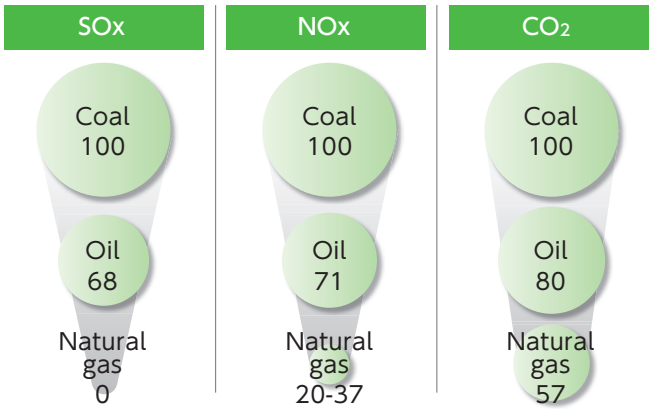
Expand Use of Natural Gas

Stable supply of natural gas in Japan

Natural gas is an environmentally-friendly energy source with less emissions than other fossil fuels such as oil and coal of carbon dioxide (CO_2) when burned, sulfur oxides (SOx) and nitrogen oxides (NOx) that cause acid rain.

With the use of co-generation systems, it allows much energy saving and leads to prevention of global warming.

We are committed to continuously strive to prevent global warming through expanded use and stable supply of natural gas.



* Comparative ratios of emissions per unit heat generated, with coal indexed at 100.
Source: "IEA Natural Gas Prospects to 2010 (1986)"

Supply via pipelines

Pipelines are capable of supplying natural gas efficiently in huge quantities and contribute to reducing substantially the environmental loads during energy transportation process.

JAPEX has long been building extensive pipeline networks, through which city gas companies, power stations and industrial users have been supplied.

Our pipelines run through Hokkaido, Akita, Yamagata, Niigata, Miyagi, and Fukushima prefectures, covering over 900km total extension (about 800km of gas pipelines and about 100km of crude oil pipelines).

A gas pipeline bridge linking Niigata and Sendai.

Reduction in Greenhouse Gas Emission during Transportation

Reduction in greenhouse gas emission

In relation to our business activities, the transportation department engages in the following: crude oil transportation by domestic vessels; crude oil transportation by tank trucks; LNG transportation by tank trucks; LNG transportation by rail; and, LNG transportation by domestic vessels.

We have been striving to reduce greenhouse gas emissions by developing the transportation of LNG tank containers by rail, which led to the realization of a modal shift, and thoroughly putting into practice eco-driving of tank trucks.

LNG transportation by tank trucks

As awareness toward environmental issues heightens, expectations for implementation of natural gas have grown even in areas where pipeline networks are yet to be put in place. We have been supplying liquefied natural gas (LNG) by tank trucks under our "LNG Satellite Supply" system since 1984.

A tank truck

LNG transportation by railway in tank containers

As a means of safe LNG transportation to our customers located far from our LNG receiving terminals and to areas where inclement weather and bad road conditions are expected in winter, we have developed unique technology to transport LNG in tank containers by railway and started our LNG Satellite Supply to city gas providers in Ishikawa Prefecture in 2000.

A LNG tank container

JAPEX's Greenhouse Gas Emissions

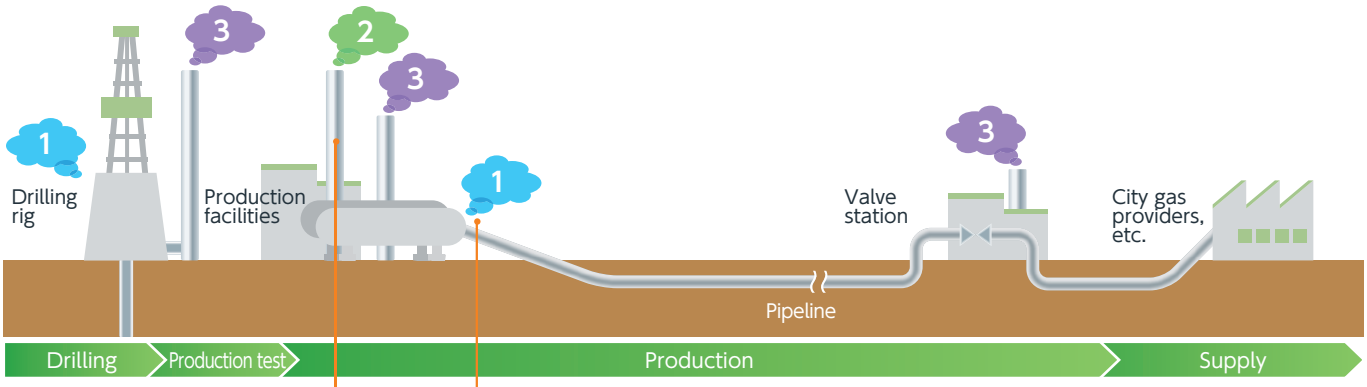
The greenhouse gas emitted through our business operations can be categorized as follows (See Figure below).

1. Greenhouse gas emissions from the use of fuels and electricity.
2. Greenhouse gas emissions from separation and removal processes of carbon dioxides contained in natural gas.
3. Greenhouse gas emissions from production tests, maintenance works of production facilities, and pipeline replacement works.

Our total emissions of greenhouse gas in fiscal 2013 were 253 thousand tons-CO_2, showing an increase of 10 thousand tons-CO_2 (4.3%) from fiscal 2012, of which energy-caused greenhouse gas emissions were 161 thousand tons-CO_2, registering a reduction of 1 thousand tons-CO_2 (0.6%) compared to fiscal 2012. This overall slight reduction resulted from the reduced total productions, which required less energy consumption and compensated for an increase in energy due to the startups in trial drillings for methane hydrate from ocean beds in fiscal 2013 and certain new facilities that went into operation for efficient recovery of crude oil. Also, the total emissions of greenhouse gas from non-energy-origins in fiscal 2013 amounted to 93 thousand tons-CO_2, an increase of 12 thousand tons-CO_2 (14.2%) compared to fiscal 2012. This was largely attributed to the increase in production tests and pipeline replacement.

* The above emissions exclude Scope 3.
As for Scope 3, refer to Page 24, "Transitions in greenhouse gas emissions."

Emission Mode of Greenhouse Gas and Major Energy-Saving Activities in Our Production Processes



Effective use of surplus low-reassure gas

Generated in the processing of crude oil and natural gas, the surplus low-pressure gas is one greenhouse gas of non-energy origin. This gas, which is low in pressure and fluctuates in heat quantity and amounts generated, has limited uses and is usually disposed of in flares. We are actively concerned with how to make better use of this surplus low-reassure gas by setting up certain pressure recovery equipment, LPG collection facility, and boilers or heaters usable for surplus low-pressure gas.
At the Yufutsu Oil and Gas Field, the surplus low-pressure gas so far disposed of in flares has now been put to effective uses, and the Yufutsu LPG Plant (CO_2 Reduction Facility) went into operation in June, 2011, which was built to reduce the carbon dioxide emitted in flares.
The surplus low-pressure gas contains heavy hydrocarbon gases such as propane and butane, which are collected at the Plant and refined and produced into liquefied petroleum gas (LPG) and other petroleum products for sale. The Plant reduced carbon dioxide emissions by 31 thousand tons in fiscal 2013.

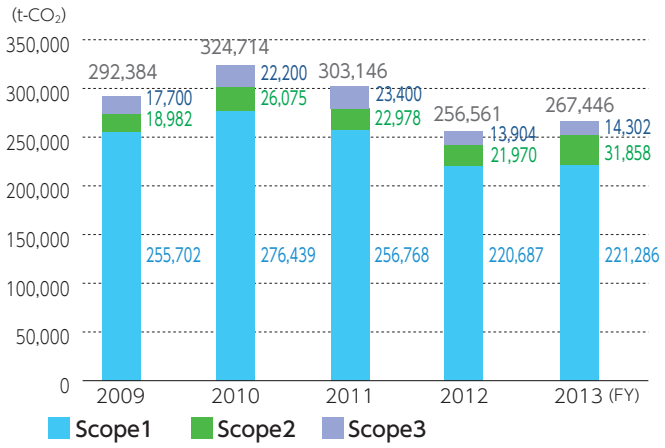

Yufutsu LPG Plant (CO_2 Reduction Facility)

Co-Generation system

At our production site and plant, energy-saving activities are in progress with the aim to reducing emissions of greenhouse gas of energy origins. The Yufutsu Plant has introduced co-generation systems, which generate electricity by means of gas turbines powered by natural gas, while the exhaust heat is used to produce steam for an efficient utilization of energy. The co-generation system generated 6,709 thousand kWh of electricity in fiscal 2013.


Gas turbine electricity generator at the co-generation system

Transitions in Greenhouse Gas Emissions



Calculation and reporting of greenhouse gas emissions and energy consumptions are made according to the segments of GHG protocol standards. The GHG protocol is the most commonly used international standards for calculating and reporting GHG emissions.

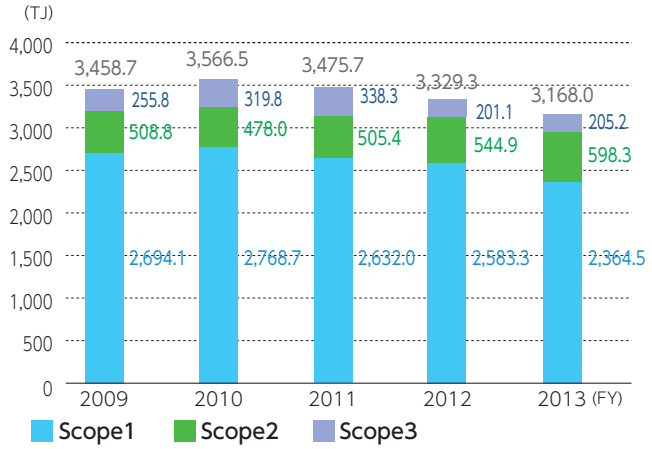
Scope1: Direct greenhouse gas emissions occur from sources that are owned or controlled by the company.
Scope2: Indirect greenhouse gas emissions occur from uses of electricity or heat supplied by others.
Scope3: Of other indirect emissions, such emissions from transportation process as commissioned to third parties by the company as the shipper.

Promotion of Energy-Saving Activities

Engaging consultants for energy-saving since 2011, we have been tackling with various works to secure compliance with the revised Energy Saving Act regarding rational use of energy (Energy-Saving Act) which was put into effect in fiscal 2011. While readjusting our systems in the medium to long terms in conformity with the Revised Energy-Saving Act, we are now committed to reducing the energy consumption primary unit by 1 % or higher on an annual average.

As an approach to energy-saving in offices, we practice power-off of office machines not in use, lowering room lighting intensity, and switching off of room lighting and PC's during lunch hours.

Transitions in Energy Consumption



Participation in Voluntary Action Plan of the KEIDANREN (Japan Business Federation)

Through the Japan Petroleum Development Association, JAPEX has participated in KEIDANREN's Environmental Voluntary Action Plan for Global Warming Countermeasures. Such plan has as its objective the reduction of the average value over five years from fiscal 2009 through fiscal 2013 of the intensity of greenhouse gas emissions at mining facilities by 20% as compared to fiscal 1991. JAPEX has set up as its own goal a 10% reduction in intensity as compared to fiscal 1991 after taking into consideration each participant's circumstances.

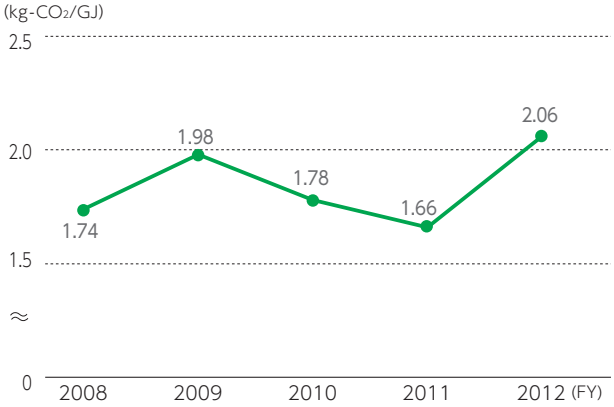
The emission intensity for fiscal 2013 was significantly greater than that of the previous fiscal year at 2.06kg-CO_2/GJ (see graph below). This was due to a decrease in production volume, which is the denominator in calculating the intensity, and an increase in greenhouse gas emissions, which is the numerator, due to an increase in flaring and emission from production tests, etc.

To achieve our goal under the Voluntary Action Plan, JAPEX is scheduled to utilize the emission credits acquired from the BioCarbon Fund to which we have subscribed (see P. 25).

As such, we plan to achieve our goal under the Voluntary Action Plan as well as the goal of the Japan Petroleum Development Association (a 20% reduction in average emission intensity over five years).

From fiscal 2014, JAPEX intends to participate, through the Japan Petroleum Development Association, in the Low-Carbon Society Execution Plan that the KEIDANREN formulated as a new plan in December 2009, subsequent to the formulation of the Voluntary Action Plan. This new plan not only sets as its goal the reduction of greenhouse gas in 2020 but also states as its vision "the fulfillment of a core role by Japan's industry in achieving the reduction of the world's greenhouse gas emissions by half by 2050 through its technologies". JAPEX will continue to make best efforts toward reducing greenhouse gas.

Changes in Greenhouse Gas Emission Intensity



Participation in the BioCarbon Fund

JAPEX signed up to the World Bank BioCarbon Fund in 2005 pledging the investment of 2.5 million US dollars (approx. 270 million yen).

The fund is intended to finance projects in developing and poor countries, in areas such as land use/alteration and forestation, in an effort to restore ravaged land, protect water resources, preserve biodiversity, and reduce greenhouse gas emissions in the relevant countries, thereby stimulating economic development.

Through the fund, JAPEX is contributing to the improvement and development of local communities overseas while acquiring carbon credits.

The fund has been supporting 12 projects in Asia, Africa, South America, etc. as of June 2013. Within these projects, 11 projects have already been certified under the United Nations Clean Development Mechanism (CDM) and the remaining one project is showing steady progress with the certification process well underway.

The World Bank estimates JAPEX will acquire 130,000 tons worth of credits by December 2013.

Project in Moldova (Source: World Bank)

Before

After

Afforestation Programs

As part of our effort in combatting global warming and reducing CO_2 emissions, JAPEX has been carrying out afforestation and forest management programs since fiscal 2006. These programs are currently being carried out in Hokkaido, Akita, and Niigata prefectures where we have business operations.

After the completion of planting, we are putting our efforts into growing them well, managing their development to restore the forests.

Afforestation programs in Hokkaido

Name:	JAPEX Morappu Forest
Location:	around Shikotsu Lake, Tomakomai city
Area:	approx. 7.6ha
Planting period:	3 years from 2006
Number and type of trees:	approx. 11,000 saplings of needle-leaf trees (Sakhalin spruce and Sakhalin fir)

Afforestation program in Akita prefecture

Name:	JAPEX Yuri Forest
Location:	Minami-yurigahara highland at the northern foot of Mt. Chokai, Yurihonjo city
Area:	approx. 4.5ha
Planting period:	3 years from 2005
Number and type of trees:	approx. 8,000 saplings of broad-leaf (Japanese beech, oak, sargent cherry, and mountain maple, etc.) and needle-leaf (cedar) trees

Afforestation program in Niigata prefecture

Name:	JAPEX Jomon Forest
Location:	east side of the western hill area of Nagaoka city
Area:	11.9ha (of which 4.9ha is for afforestation and 7.0ha is an existing forest)
Planting period:	2007, 2010, and 2014 (planned)
Number and type of trees:	approx. 10,000 saplings of broad-leaf trees (Japanese zelkova, Japanese hackberry, Japanese rowan, and mountain maple, etc.)

Afforestation program in Niigata prefecture

Name:	JAPEX Sennenmatsu Forest
Location:	Seiro town, Kitakanbara county
Area:	approx. 6.4ha
Planting period:	3 years from 2007
Number and type of trees:	approx. 14,800 saplings of needle-leaf (Japanese red pine) and broad-leaf (Japanese hackberry and Korean mountain cherry, etc.) trees

JAPEX Jomon forest in Niigata prefecture

Conservation of Biodiversity

In developing energy resources closely tied to the local natural environment, we strive to minimize the impact to the ecosystem and the biodiversity by conducting environmental impact studies of the subject region from the survey and planning phases of a project.

Canada

In Canada, stringent environmental assessment is mandatory before starting any oil sands project. In JACOS's Hangingstone expansion project as well, we applied for scheme approval after having confirmed the development would not significantly impact the ecosystem of the area by conducting an environmental impact assessment including wildlife survey covering all seasons. During the execution phase after receiving the approval, we scheduled our clearing work so as not to disturb nesting and breeding seasons of the wild birds and, in operation, we are paying close attention to the preservation of local biodiversity.

Deer in the forest

Geothermal Resources

Most of the geothermal resources in Japan lie in nature conservation areas. In such places of natural beauty and rich wildlife, survey and development must be conducted in such a way as to minimize impacts on the site. Our operation takes the environment seriously, listening to the opinions of specialists from the early survey phase.

Planned geothermal well site (Musadake, Shibetsu town, Hokkaido)

Geophysical Survey on the Southern Side of Mt. Chokai

As a measure to protect golden eagles, mountain hawk eagles and goshawks, which inhabit the region subject to our geophysical survey and are designated as especially rare domestic species of the birds of prey based on the Law for the Conservation of Endangered Species of Wild Fauna and Flora (Species Conservation Act) (No. 75, 1992), geophysical surveys on the southern side of Mt. Chokai were conducted in 2008, 2011 and 2012 under the guidance of the Ministry of the Environment's Chokainanroku Ranger Office and Reptores Conservation Center, and such surveys were scheduled and conducted by avoiding access to areas near the nesting sites during the breeding seasons of each such species.

* Raptores are type of birds with specially developed physical characteristics to catch its prey.

Vibrators and Mt. Chokai

A goshawk

Voice

Lawrence Nasen
Japan Canada Oil Sands Limited
Environmental and Regulatory Coordinator

Environmental and social considerations as social responsibilities of the land user

The goal at the Hangingstone Facility is responsible and efficient resource development that minimizes potential adverse effects to the local and regional environment through the combined efforts of supervisors, managers, operators, contractors and sub-contractors. Through the implementation of reclamation plan and research projects at the site, we promote responsible and proactive land stewardship, while at the same time contribute to industries understanding of reclamation practices in the region.

Reduction of Environmental Loads

Observing strictly the laws and regulations of the operating locations, we are committed to reducing the environmental loads generated from the operation.

Reduction of VOC Emissions

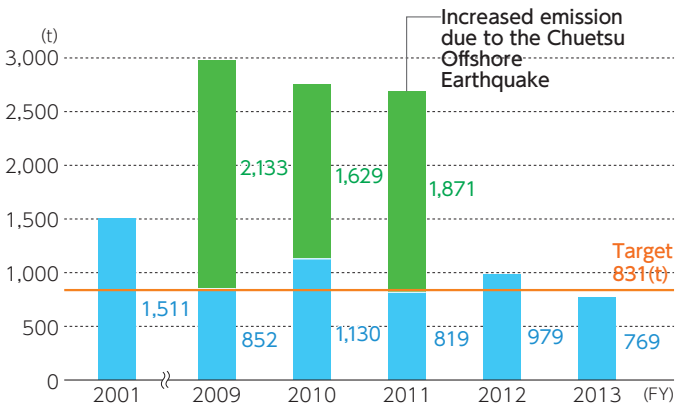
Volatile Organic Compounds (VOCs) are said to be the causative agent of suspended particulate matters (SPMs) and photochemical oxidants in the atmosphere. VOC emissions are being controlled by employing a best-mix approach with respect to which synergistic effect is expected, appropriately combining regulations based on law, such as the Revised Air Pollution Control Act (fiscal 2005) and the like, and the industry's voluntary initiatives.

Most of the VOCs are volatile hydrocarbons, except methane, released from crude oil storage tanks and in the course of gas processing, such as removing water contained in the gas, and they include PRTR substances such as benzene, toluene and xylene (BTX). Common emission control measures include hermetic sealing of crude oil storage tanks and incineration, recovery and removal of VOCs produced in gas processing facilities.

Since fiscal 2006, JAPEX, as a member of the Japan Natural Gas Association, has been participating in self-imposed action plans and making efforts as an industry to control VOC emissions with the goal of 45% reduction in fiscal 2011 as compared to fiscal 2001. However, due to the Chuetsu Offshore Earthquake that occurred in July 2007, our crude oil pipelines were damaged, forcing us to switch the means of transportation from such pipelines to tank trucks. This caused the generation of surplus low pressurized gas and significantly increased the VOC emissions after the earthquake. However, thanks to the successful completion of a permanent structure, we achieved significant reduction and met our goals under the Voluntary Action Plan in fiscal 2013.

Since fiscal 2012, we have been continuously executing the Voluntary Action Plan that mainly focuses on monitoring, and we will continue to make efforts in controlling the emission of VOCs.

Changes in VOCs emission



Prevention of Air Pollution

Natural gas is a clean energy source that not only produces less greenhouse gas as compared to coal or oil, but also releases very little nitrogen oxides that produce photochemical oxidants and sulfur oxides which causes acid rain since it does not contain sulfur or nitrogen compounds. We actively promote the use of natural gas, and 69% of the energy used (mainly by the production department) comes from gaseous fuel such as natural gas and the like. On the other hand, 11% of the energy used (mainly by the drilling department) comes from liquid fuels, such as light and heavy oils. As shown in the table below, all the emission readings from the machineries used in the production sites are way below the official standard values.

Results of emission readings

Machinery*1		Measurement item*2			
		Particulate concentration (g/Nm³)		Nitrogen oxide concentration (ppm)	
		Reading	Standard	Reading	Standard
Yufutsu plant	Boiler	<0.005	0.1	100	150
	Gas turbine	<0.007	0.05	40	70
	Gas engine	<0.008	0.05	400	600
Yufutsu LNG plant	Boiler	<0.01	0.1	79	150
	Gas turbine	<0.01	0.05	67	70
Yoshii site	Gas engine	0.015	0.05	17	2,000
Shiunji site	Gas engine	<0.0047	0.05	250	600
Iwafune-oki platform *3	Diesel generator	0.06	0.1	470	950
	Gas engine	<0.01	0.05	14	1,000
	Gas turbine	<0.01	0.05	46	70

*1: As defined as a smoke generating facility, etc. in the Mining Safety Act, Air Pollution Control Act, and the Electric Utility Industry Law
*2: The standard values shown in the Air Pollution Control Law
*3: JAPEX OFFSHORE LTD.

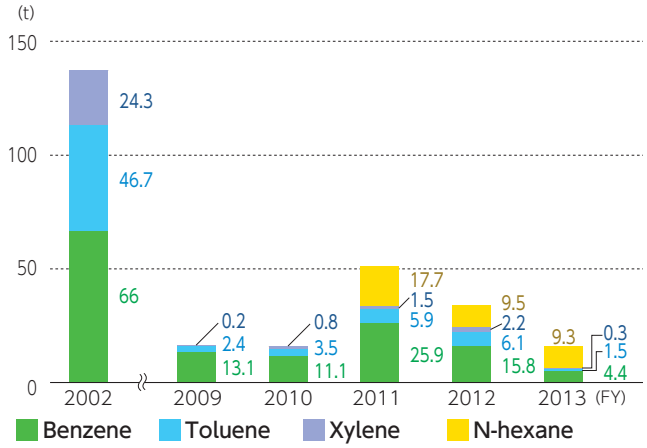
Reduction of Chemical Substances

Pollutant Release and Transfer Register (PRTR) is a system to collect and publish information on environmental releases and transfers of toxic chemicals from the source to industrial and other facilities and ultimately to the disposal. There are 462 substances designated as Class 1 Designated Chemical Substances under the PRTR law, which are known to exist widely in the environment and are harmful to the health of humans and ecosystems.

Substances to be reported are benzene, toluene and xylene (BTX) and n-hexane newly added to the list with the revision of the law, which we are produced during gas processing as well as leakage from crude oil tanks. We have been working on reducing BTX emissions since fiscal 2003.

As shown in the graph below, emissions increased significantly in fiscal 2011 due to malfunction of the reduction system in one of our production site. The repair was completed in October 2011, showing good improvement in emission volume since then.

Changes in emission volume of PRTR class 1 chemical substances



Handling of Asbestos

Asbestos was contained in mud-water used in well drilling till 1989, but not since then. We had also found some machinery had asbestos in woven form, but replacement is now all completed.

As for our administration and production facility buildings, a very small number of them had been found to have asbestos-containing building materials on record, however asbestos particles were not found as a result of environmental assessments. The works to remove and seal all the asbestos containing building materials was completed in March 2006.

Waste Reduction

We are doing our best to collect, separate and recycle our waste by working closely with waste disposal companies. All the industrial wastes from our business activities are being disposed of appropriately in accordance with applicable laws and regulations.

We have also been making efforts to recycle various wastes from our business activities, and to reduce general wastes from offices. As for some of the oil wastes generated by our production sites and metal scraps being disposed of by our steel factories, we outsource the disposal thereof to specialists so that such wastes may be recycled.

In addition to having each office separate its wastes, we participate in the Zero Emission System ZERO21* operated by Midori Anzen Co., Ltd. by collecting used hard hats, work clothes, safety shoes and the like.

* A system under which collected hard hats and metal parts are recycled as raw materials for plastics and metals while the other collected items are dissolved in a high temperature furnace and reused as industrial gas, raw materials, construction materials or the like after being separated into gas, sulfur, mixed salt, metallic hydroxides, metals and/or slags.

Waste generation by operations in fiscal 2013

(Unit: t)

	General waste	Industrial waste	Total
Office	90	78	168
Exploration Div.	0	0	0
Drilling Div.	82	25,325	25,407
Production Div.	32	3,239	3,271
Transportation Div.	0	0	0
Total	204	28,642	28,846

Voice

Ayako Onaga
HSE Department

Environmental Information Managing System

We have developed and have been using an environmental information managing system called “Together” to collect and manage our environmental load data. Each office can easily enter new data using a Web browser and in this way all the operations can share environmental load data. The system enabled us to collect and use various data accurately and efficiently. We will be improving the system, adapting to the changing situation, such as revision of the environmental related laws and regulations.

Preservation of Water Resources

Preservation of water resources in Canada

In oil sands project in Canada, water, as much as two to four times in volume to the bitumen produced, is necessary to extract the bitumen from the oil sands. In order to minimize water consumption, we are carrying out initiatives to recycle the used water.

In our Hangingstone block, high-temperature and high-pressure steam is injected into the reservoir to reduce the viscosity of the bitumen, which in turn flows down, collects and emerges aboveground with water in the processing facility. More than 95 % of the water collected aboveground will be recycled and reused as the steam to be injected again.

Preservation of water resources in Japan

At our production sites and plants, water for industrial use, tap water and underground water are being used mainly as coolants at the processing facilities, as boiler water and for the process of cleaning natural gas and melting snow and ice during winter. We are making efforts to reduce the use of water by recycling and reusing it to the extent possible.

We are also making efforts to reduce water consumption associated with cooling of machinery used in well drilling operations by employing a circulation system. Moreover, we recycle rain by collecting it in a pit of drilling site and then separating such water into pure water and solids by a pit wastewater processing device so that pure water may be reused as mud water in drilling operations.

After we finish penetrating the superficial aquifer, we create a barrier between such aquifer section and the areas being penetrated to protect such aquifer and prevent impacting the underground water resources and/or surface leakage.

Water consumption by operations in fiscal 2013

(Unit: kl)

	Tap water	Industrial water	Underground /river	Total
Office	20,184	0	4,000	24,184
Exploration Div.	0	0	0	0
Drilling Div.	4,783	1,300	11,172	17,255
Production Div.	64,244	399,108	301,655	765,007
Transportation Div.	972	0	0	972
Total	90,183	400,408	316,827	807,418

Effluent by operations in fiscal 2013

(Unit: kl)

	Sewage	Pit-water reuse	Underground injection	Release/ evaporation	Total
Office	20,184	0	0	4,000	24,184
Exploration Div.	0	0	0	0	0
Drilling Div.	0	0	1,606	27,660	29,266
Production Div.	46,642	564,118	0	380,658	991,418
Transportation Div.	972	0	0	0	972
Total	67,798	564,118	1,606	412,318	1,045,840

Prevention of Marine Pollution

Iwafune-oki platform operated by JAPEX Offshore LTD. is currently Japan's only offshore oil and gas field. It is taking various measures to prevent marine pollution.

❶ ESD system

ESD is a system that enables emergency shutdown valves in crude oil pipework when abnormality is detected in production equipment, solves the problem or stops the problem spreading. SSSV, which is installed approximately 100 meters below seabed, is one of the main emergency shutdown valves. It shuts automatically when fire or damage on the platform is detected, preventing leakage of crude oil from the well.

❷ Anticorrosion measures of offshore pipeline

Offshore pipelines that carry crude oil, etc. to the onshore facility have double anticorrosion measures of polyethylene outer casing and electrolytic protection.

❸ Wastewater processing

As for the drainage of the platform, water that may contain oil is processed using a oil-water separator called a sump caisson, and only purified water is released into the sea. The quality of the water released to the sea is monitored every month by a public body, confirming the compliance of the quality.

❹ Safety design and maintenance

The platform is designed in accordance with the American Petroleum Institute's design standard that can withstand the maximum level of a 100-year storm with the wind speed of 52.7 meters per second and wave height of 18.4 meters. The structure of the platform is maintained in excellent order, examined every year by a specialist company.

Iwafune-oki platform

Prevention of Leakage of Crude Oil and Pit-water

At our production sites and plants, we design and install our facilities and have in place operating manuals based on our risk assessment (hazard registration), in order to prevent accidents and disasters, including leakage of crude oil and pit water. In addition, the hazard registration is reviewed periodically to provide for appropriate operation management and maintenance check system responding to deterioration of facilities over time and change in operations and other environment.

We monitor the facility's operation using 24-hour remote monitoring system and through patrolling by the staff members, so that any leakage can be detected early and further spread of pollution through such leakage prevented.

Reducing the Environmental Load of Pit-wastewater

In order to reduce the environmental loads of pit-wastewater generated by drilling, etc., we have installed a pit-wastewater processing system, using a reduced-pressure distillation mechanism. The resultant distilled water is recycled and used for boilers and concentrated sludge is treated as industrial waste. In fiscal 2013, 4,193kℓ of recovered water was used for boilers.

Pit-wastewater processing system

Green Procurement

We are committed to our Green Procurement Basic Policy stated below, and procure as much as possible 'green' products and services which have less environmental loads.

We have set a target of 100% of the use of green printing/copying papers and stationaries in the headquarters and site admin offices, and achieved 100% and 99.8%, respectively, in fiscal 2012.

Green Procurement Basic Policy

1. Consider thoroughly the necessity of products, services and construction before purchasing or starting them.
2. Give priority to environmentally friendly products and services as much as practicably possible. In construction work, make every effort to reduce environmental impact.
3. Actively cooperate and engage with suppliers and contractors to preserve local and global environment.

Natural Gas Pipeline Maintenance and Management

Steel pipes with high-tensile strength

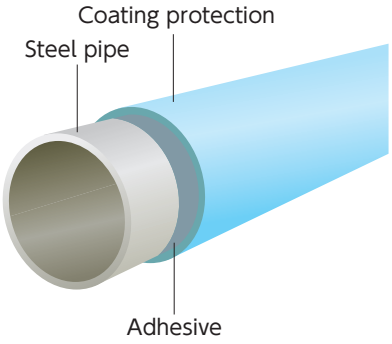
JAPEX uses high-tensile-strength steel pipes, which can withstand distortions and impacts and have a high safety record, in the construction of our natural gas pipelines. Designed to withstand major earthquakes, these pipes have demonstrated their reliability during the Miyagi Prefecture Offshore Earthquake and the Niigata Prefecture Chuetsu Earthquake.

As a result of the Great East Japan Earthquake, damages were found in part of the ancillary ground facilities that manage the natural gas pipeline between the cities of Niigata and Sendai. However, the pipeline itself kept its integrity and within 12 days following the earthquake, provisional repair was completed, which contributed toward a quick recovery in terms of supplying natural gas to Sendai City and re-commencing the operation of the thermo-electric power plant.

Anti-corrosion technologies

Our underground pipes are doubly protected by anti-corrosion coating and an electrolytic anti-corrosion system. By these measures, they are protected from the risk of natural corrosion and have a virtually permanent life span.

Structure of steel pipe



Monitoring system

The flow rate and pressure of natural gas channeled to local distribution companies (LDCs) and other customers are monitored on a 24-hour basis using remote monitoring and control systems. Other measures include patrols by the staff along the entire length of the pipeline, regular maintenance and inspection, as well as placing security tags and sign posts where appropriate.

Nagaoka Pipeline Monitoring Center

Environment and Innovative Technologies

As one of the three basic policies of our Medium-Term Business Plan, we are working hard to develop environmental and innovative technologies.

Carbon dioxide Capture and Storage (CCS)

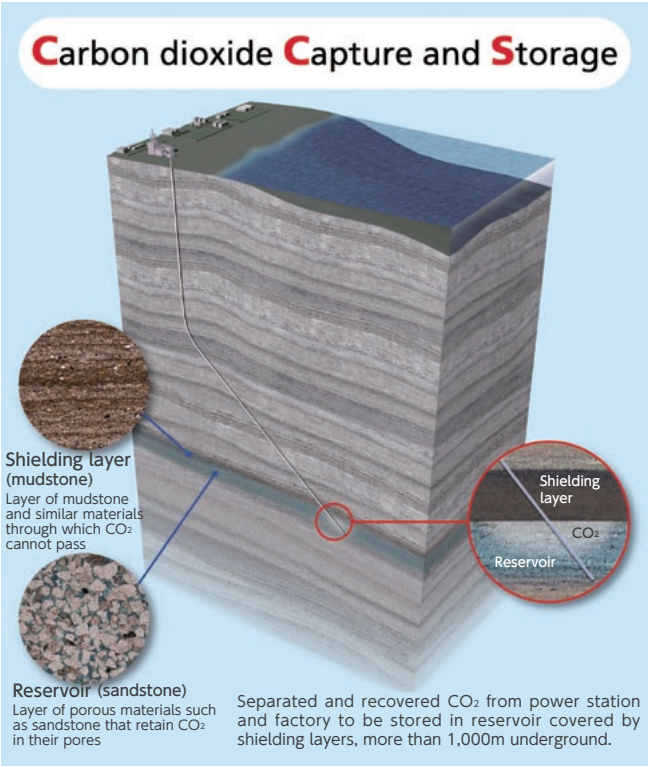
What is Carbon dioxide Capture and Storage?

Carbon Dioxide Capture and Storage (CCS)*1 is a technology that separates and recovers carbon dioxide (CO_2) emitted from industrial activities and stores it underground. It is drawing a lot of attention today, since the technology offers a chance for reducing a large amount of CO_2 that is produced from burning fossil fuel safely with immediate effects. Recovered CO_2 can be stored in aquifers, depleted oil and gas, and coal reservoirs that lie more than 1,000 meters underground. In Japan, there appears to be potential for storing approximately 150 billion tons of CO_2 in aquifers and depleted oil and gas reservoirs*2. Such amount is equivalent to CO_2 emissions of 100 years worth in Japan.

*1 Strictly speaking, CCS includes technologies such as involving ocean sequestration and mineral fixation. However, CCS referred herein is limited to geological storage which is already in the demonstrations phase.

*2 Source: Industrial Structure Council, the Ministry of Economy, Trade and Industry, May 2006

Schematic of CCS



Source: Japan CCS Co., Ltd.

Advanced and integrated technologies

We have advanced and integrated technologies accumulated over half a century through oil and gas exploration and development in Japan and overseas. In oil and gas development, the following advanced technologies are being used: technologies to estimate underground structures and rock properties; to drill in a range of several hundred meters vertically and horizontally (i.e. Extended Reach Drilling ;ERD); to evaluate formation properties by well logging, to produce oil and gas safely; to simulate fluid behavior in oil and gas reservoirs; and to monitor underground by seismic surveys. The integration of these advanced technologies is the key to the development of CCS.

Driving large-scale early reduction of CO_2

At the G8 Hokkaido Toyako Summit that took place in 2008, the participating countries declared their support for launching 20 large-scale CCS demonstrations globally by 2010. In Japan, a draft of the basic law regarding global warming countermeasures that pledges to promote CCS technologies was adopted by the cabinet in 2010. However, we at JAPEX had started preparation of CCS technology as early as 2002 and have actively been supporting Japan CCS Co., Ltd. (JCCS).

- **2002**
  CCS main management section established (Environmental Engineering Project Section)
- **2003-2005**
  Experimental demonstration of injecting a total of approx.10,000 tons of CO_2 carried out by the Research Institute of Innovative Technology for the Earth (RITE), at Nagaoka city in Niigata prefecture
  The first step of CCS in Japan. Various technical supports provided by JAPEX
- **2008**
  JCCS established
  Major power, steel, engineering, and petroleum related companies with cutting-edge CCS technologies came together to carry out a large-scale demonstration. JAPEX is playing an important role in the organization
- **2016** (planned)
  Start CCS demonstration backed by the Ministry of Economy, Trade and Industry (Tomakomai city, Hokkaido)
  JCCS is to carry out construction of the injection facility and drilling of the injection well

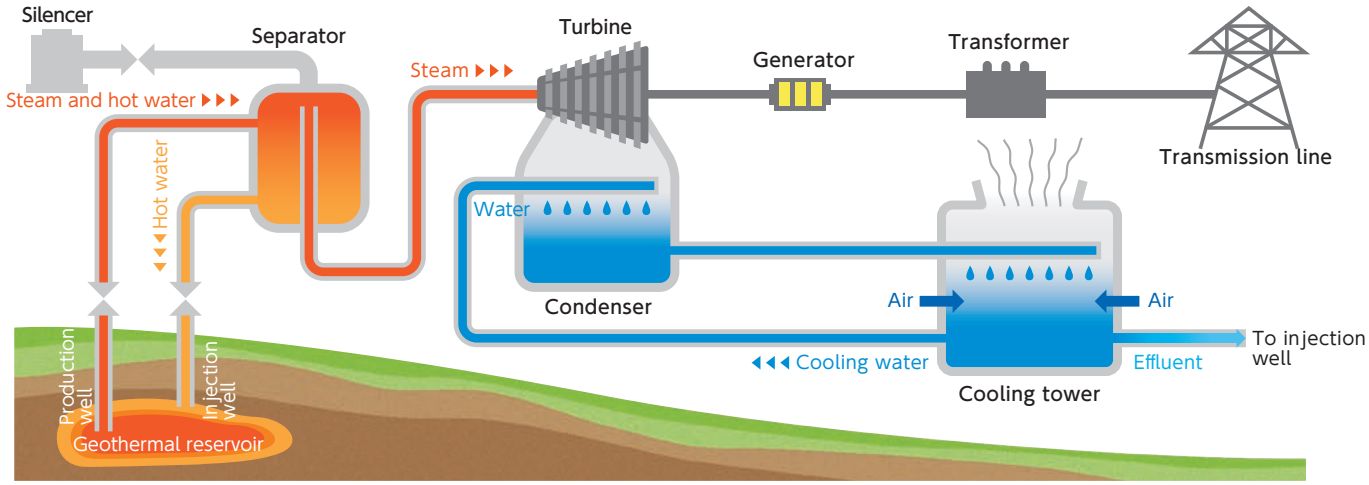
We are also playing a vital role under the CCS Promotion Council in Tomakomai City, established in 2010, together with the city's chamber of commerce, enterprises, schools and NGOs in contributing toward the promotion of CCS technology not only in Japan but also overseas, such as by participating in a technology exchange with China and the like.

Development of Geothermal Resources

Geothermal resources, one of the renewable energies, extract steam and hot water from deep underground for power generation. Currently there are geothermal power stations operating in 17 areas in Japan.

Geothermal energy is a clean energy with less greenhouse gas emission. Also, geothermal energy is stable, which can generate continuously day and night. From this point of view, JAPEX aims to commercialize the geothermal power generation.

Structure of geothermal power generation



By utilizing the technologies and experiences accumulated in its oil and gas explorations, JAPEX has been conducting geothermal surveys in regions of Hokkaido, Tohoku, and Kyusyu since 1977. One successful example is Yamagawa field in Kagoshima Prefecture. JAPEX constructed a 30,000kW geothermal power plant in 1995 in collaboration with Kyusyu Electric Power Co., Inc., (hereafter "Kyuden") and took the responsibility of steam supply. (All the JAPEX' s assets in the plant were transferred to Kyuden in 2005)

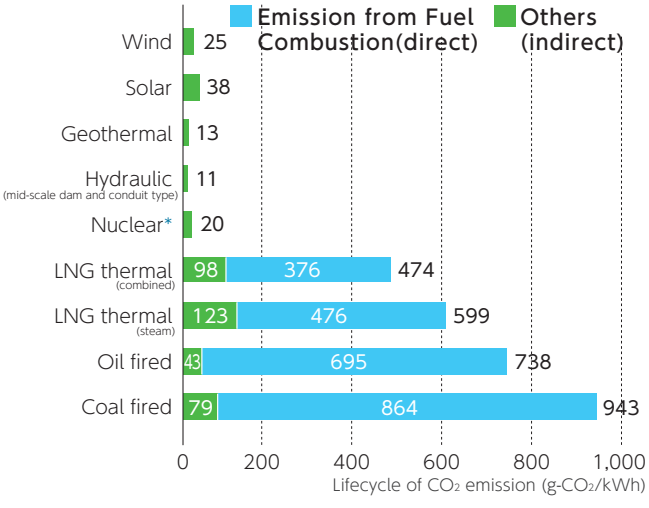
JAPEX also had conducted geothermal surveys in eastern Hokkaido region, including Akan area(City of Kushiro) and Musadake area (Shibetsu Town). They were followed by the government, which reconfirmed existence of promising resources.

Recent geothermal activities of JAPEX were in Kirishima-eboshidake area(Kagoshima Prefecture) from 2001 to 2004, Shibetsu-serayama area(Hokkaido) from 2005 to 2006, and Musadake area(Shibetsu Town) in 2010, that were sponsored by the government and contributed to geothermal development.

There are so much expectation for geothermal development, and in order to promote it, Japanese government has introduced 1) Deregulation for development in national parks, 2) Foundation of FIT(Feed-in Tariff, fixed price trading system), which offers long-term contracts to renewable energy producers, and so on.

By applying to these incentives, JAPEX has started geothermal well drilling in Musadake area(Shibetsu Town) since August, 2013. At the same time, JAPEX is pursuing new geothermal potentials in various areas including Furebetsu-dake-minami area(City of Kushiro) and Fukushima Bandai-Azuma-Adatara area.

Average lifecycle CO_2 emission by power source



*Nuclear is calculated including reprocessing of spent fuel, use of pluthermal, high-level radioactive waste disposal processing, etc.

Source: CRIEPI Research Report, Y09027 "Evaluation of Lifecycle CO_2 Emissions of Power Generation Technologies of Japan," July 2010

NEDO Geothermal Development Promotion Survey 2001-2004, Kirishima-Eboshidake area geological survey, blowout test undertaken by JAPEX

Methane Hydrate (MH)

Environmentally friendly clean energy

MH is often called "fiery ice", but 1m^3 of which dissociate to approximately 160 to 170m^3 (at 0°C and 1 atmosphere) of methane gas. MH requires a low temperature and high pressure environment in order to exist.

Fiery ice (artificial methane hydrate)
Source: MH21 Research Consortium

Methane Hydrate as an energy resource

The areas that permit the existence of MH on the earth are limited to permafrost zones in the polar regions, and layers within several hundred meters below the seafloor of the ocean with the depth of 500 m or deeper. According to a survey of the original MH in place*1 in the Nankai Trough area (the deep water zone spanning from an area off the coast of Shizuoka Prefecture to an area off the coast of Wakayama Prefecture) , volume of MH concentrated zone is 1.1 trillion m^3*2. This volume is the equivalent of about 11 years' worth of imported amounts of LNG (2011)*3 in Japan. When MH production technology is established and commercialization realized, it is expected to become a new clean domestic energy source that will significantly contribute to the securing of stable energy supply for Japan.

*1 Original volume in place: simple calculation of deposits and not technically recoverable reserve
*2 MH21 Research Consortium web site
*3 LNG imports of Japan (2011): 105.5 billion m^3 (Trade Statistics, the Ministry of Finance)

Methane hydrate development technology research

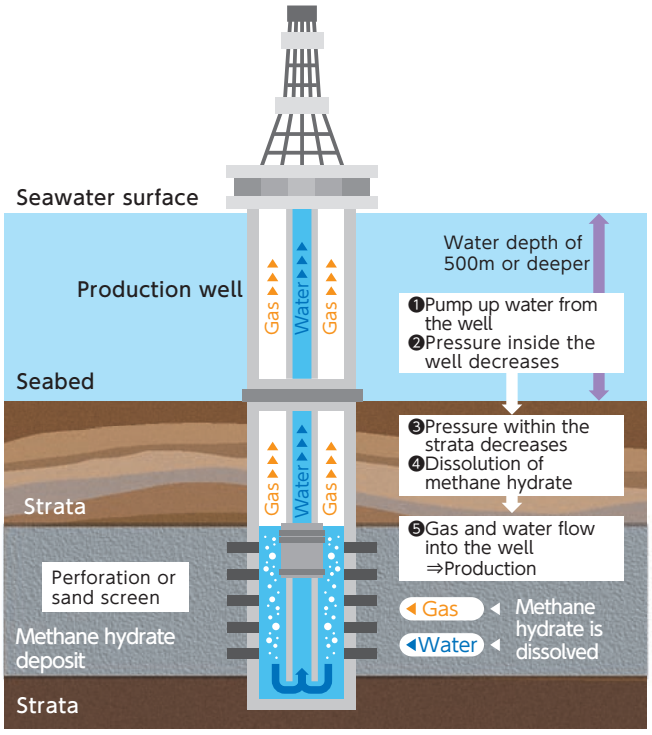
MH is stable in the layers within several hundred meters below the seafloor but is not easy to extract it as gas above ground. Thus, the commercialization of MH is difficult. Theoretically, there are two methods - namely, by increasing temperature or decreasing pressure - in extracting methane gas from MH layers, and a production test carried out at permafrost area of Canada confirmed that the depressurization method is more efficient in dissolving MH and extracting methane gas.*4

Based on such result, a series of production tests were conducted for approximately six days in March 2013 off the coast of Japan, at Daini Atsumi Knoll located between the Atsumi peninsula and the Shima peninsula, using a scientific drilling ship named "Chikyu". Through such tests, continuous production of gas (average production: approximately 20,000m^3 per day, cumulative gas production: approximately 120,000m^3*5) from the offshore MH layers was achieved for the first time globally. JAPEX acted as the administrative agent for the operator of this production test.

*4: MH21 Research Consortium production tests in 2002 and 2008 at Mallik, Canada
*5: JOGMEC news release, March 19, 2013

Scientific drilling ship, "Chikyu"
Source: JAMSTEC

Schematic of depressurized production method



Source: MH21 Research Consortium

JAPEX's involvement

We had recognized the huge potential in MH from the early days and have been actively involved in the government led MH21 Research Consortium as a key member. Japex will continue to participate in the development of MH as a clean energy resource in Japan.

Solar Power Generation

Solar power generation is environmentally friendly clean energy that does not emit CO_2, a greenhouse gas. Those facilities that can generate more than 1,000kW are called "mega-solar power plants".
JAPEX will be running two mega solar plants, one in our unused land in the company's Hokkaido site and another in a neighboring site. Tomakomai, where the sites are located, is a suitable location, blessed with good conditions for sunlight and fewer snowfalls. The neighboring plant will be run by Solar Power Tomakomai Co., Ltd., a joint company with Sumitomo Corporation with JAPEX having a 20% interest.

Planned image of Hokkaido District Office's mega solar power plant site

	Generating capacity	PVC panels	Output	Category	Site area	Operation commencement
Hokkaido District Office	1,800kW	2,400kW (14,000 panels)	2,500,000kW/ annum	High voltage (6,000V)	60,000㎡	August 2014
Solar Power Tomakomai Co.,Ltd	13,000kW	15,200kW (62,000 panels)	16,000,000kW/ annum	Special high voltage (66,000V)	290,000㎡	December 2014

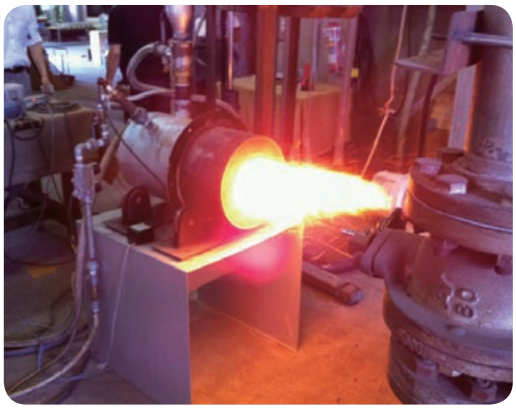
Biogas

Biogas is an environmentally friendly renewable energy source. It is a combustible gas mainly comprised of methane and carbon dioxide, generated by methane fermentation in landfills, sewage treatment facilities, and food manufacturing factories.
Shandong Bio-energy Corporation, a joint venture set up in August 2007 with Shandong Environmental Protection Energy Corporation, constructed and has been operating a biogas refining and compression plant at a municipal landfill site in Taiyuan, Shanxi province.
The project, which makes use of waste effectively to generate biogas, is highly appreciated by both local and the central governments in China.

A truck carrying refined biogas

Wood Powder

Wood powder is a new form of woody biomass that has been developed*. By crushing the wood to 100-200 μm and directly burning it, it ends up with a high combustibility rate, and because lighting/extinguishing it becomes easier, temperature may be controlled accurately like oil and gas. Though less marketable than wood pellets, it can be used as an alternative to oil and gas. As wood powder can be produced and consumed locally, it is expected to become more popular in the future.
SK Engineering Co., Ltd. has submitted a proposal suggesting the introduction of wood powder as the main source of fuel for Yurihonjo City in Akita, based on the thinking that use of local renewable energy would reduce the environmental burden and contribute to the local economy. In fiscal 2013, the company conducted a survey on whether wood powder can be implemented by public facilities as well as performed powder boiler demonstrations. The company will work together with the city and prefecture toward the launch of a wood powder system in fiscal 2015.



* Wood biomass powder is a patent-pending product manufactured by BIOMASS PRODUCTS CO., LTD.

Commitment to Local Communities

Through continuous dialogue and various forms of contribution,
JAPEX is striving to be a company that is trusted by the society.

Garraf Vocational Training Center (GVTC)

GVTC is a training center that provides vocational training opportunities for the local people in order to stimulate employment in the area. It was built with the financial support of the Japanese government, based on a proposal by MRDS, an NGO in Iraq, JAPEX and PETRONAS.
The center accepts around 600 trainees every year, offering courses on electric wiring, repairing air conditioners, English and IT, as well as sewing and beautician classes for women. Over 20% of those who completed the course found employment within six months, and one of them opened a small machine repair shop in the local village. In this way, the center is contributing toward promoting employment of local people and the local economy.

Class of the Training Center

The center building

Kangean Project

KEI contributes to the local community of Pagerungan Island (population 6,000), located 200km to the north of Bali, Indonesia, where KEI has an oil and natural gas field operations.
It is providing free electricity generated at the production base, dispatching the company doctor stationed at the base free of charge to the village clinic, providing financial help to build and repair a school, donation of an ice-making facility to promote the fishing industry, and maintenance of a football field.

School after repair

School's plaque commemorating the KEI's financial help for the repair

Canada Oil Sands Project

JACOS is very active in building cooperative relationships with local communities through community investment initiatives. JACOS is also gaining a better understanding of the business development opportunities through continuous dialogue with the community residents. In the Hangingstone Block, JACOS and the local communities and residents have established the Aboriginal Review Group (ARG). This forum allows the company to report the current state of our development, share information and have communication regarding our environmental impact assessment and post-operation land reclamation. The company respects the traditional way of life of the local residents and where their aboriginal, treaty or land use rights (such as hunting) are affected by our operations we compensate for losses incurred Directly.
The company is also participating in various environmental and conservation activities as a member of such organizations as the Alberta Biodiversity Monitoring Institute (ABMI), the Canadian Association of Petroleum Producers (CAPP), the Oil Sands Community Alliance (OSCA) and the Wood Buffalo Environmental Association (WBEA). Other activities include offering scholarships to students at the local Keyano College and providing employment opportunities by accepting trainees in our operations from the local aboriginal communities.

Safety wishing ceremony by ARG members

Hangingstone site staff, the key player in our safe operation

Involvement in Local Events

We are actively involved in local events wherever we operate, in an effort to ensure local communities obtain a deeper understanding of the company's activities.
We welcome site tours by the local government, corporate sector and schools as well as participating in local festivals and events, including Kanto (bamboo pole) Festival in Akita City where we enter the parade carrying bamboo poles with the company's logo thereon. We also sponsor fireworks displays every year at the Nagaoka Festival in Nagaoka City, Katakai Festival in Katakai of Ojiya City in Niigata.
Shirone Gas Co., Ltd., a group company, enters the Battle of Giant Kites: Shirone every year with a huge kite bearing the company's name.

Katakai Festival in Katakai, Niigata prefecture
A firework sponsored by the company
Photo: Katakai-machi Enka Kyokai

The Battle of the Giant Kites: Shirone

Voice

Makoto Enda
Administration Department
Akita District Office
Domestic Project Division

On participating in a local event

Kanto Festival, one of the three major festivals in the Tohoku district, has a history of more than 250 years and has been designated as a Important Intangible Folk Cultural Asset of Japan. We have been participating in the festival (August 3-6) thanks to the cooperation of Ushijima Kanto Association in Akita city.
One of the greatest attractions of this festival is a sense of unity among the parade participants and the onlookers, with their cheers of "dokkoisho!" while the parades show their skill in handling bamboo poles, balancing them on hands, foreheads, shoulders, and hips. You will feel how friendly the atmosphere is, when talking to them at group photo sessions, etc.
As a company operating in Akita, we would like as many people as possible to know about this great festival, and above all we cherish our good relationship with the local community so that they understand us more.

Kanto Festival in Akita city

Traffic Safety Volunteering near Schools

Volunteers from our Nagaoka District Office have been providing guidance to the school children on their way to their elementary or junior high school located near the volunteers' office.
For 40 minutes from 7:00 a.m. on three days of the week (Mondays, Wednesdays and Fridays), the volunteers stand at two or three crossings on each side of the road and use flags to indicate when it is safe for the children to cross the road.
The office was awarded the Kanto Traffic Safety Contributors Award in 2012 for this volunteer activity.
The Nagaoka District Office has been able to continue this activity since its commencement in January 2011 due to the strong commitment of volunteer leaders and the support by a total of 1,500 participating volunteers. With the endorsement from Geophysical Surveying Co., Ltd., two companies are presently participating in this activity in cooperation with each other.

Volunteers at school crossing

Thank you letters from children

Local Community Safety Patrol

Since 2006, JAPEX Pipeline Natori Maintenance Office has been offering a community patrol service, under which its four patrol vehicles having crime prevention stickers attached thereon conduct routine patrols on the Niigata-Sendai gas pipeline routes.
Crimes against socially vulnerable people including children are increasing, and as a company who is closely-knit with the local community, we are happy to play a part in keeping a safe environment in cooperation with the police, the local authorities and the schools, by keeping an eye on the children's safety and looking out for anything unusual on the streets.
We believe this activity provides a sense of security to the local residents as well as effectively prevent crimes. We will continue to do our best to contribute to the local communities.

Local community safety patrol

Dietary Education and Cooking Classes for Children

As part of contributing to the local community, since fiscal 2011, Shirone Gas Co., Ltd. has been providing dietary education at elementary schools, day-care centers and preschools in Tsubame city, Niigata to which its city gas is supplied, with the aim of contributing to the healthy development of children in such local community.

At elementary schools, fifth- and sixth-grade students experience cooking such dishes as dried curry and paella using gas-operated rice cookers and stoves as part of the home economics curriculum. During the cooking lesson, eco-friendly cooking methods and good dietary habits are explained, in addition to how to use gas equipment and cooking utensils. At day-care centers and preschools, under the title, the "Visiting Lecture on Dietary Education: Let's Make Rice Balls by Ourselves", children cook rice in a heat-resistant glass pot utilizing the rice cooking function of a stove and make rice balls.

About 10 classes are annually held by one external professional instructor and five or six eco-cooking instructors* from within the company.

* Qualification given by Eco-cooking Promotion Committee consisting of universities, NPOs, Energy Environmental Education Information Center, and Japan Gas Associations

Dietary education and cooking class for children

Internship/Support for Foreign Engineers

Internship students are accepted at our business offices in Japan and overseas, oil and gas fields, and sites of geophysical survey by JGI, Inc. In fiscal 2013, we provided technical training at domestic production fields and on-the-job training for legal affairs and other corporate businesses at the head office for a week-a month to a total of 26 students including 22 university (undergraduate and graduate) students, one high school student, and three foreign adult students. Some of training programs can be certified as a credit in university.

Furthermore, as outside educational activities, we send lecturers to foreign engineers support programs, special technology courses, project seminars, and programs to learn fundamental knowledge on petroleum mining, which are held by JOGMEC, as well as petroleum seminars conducted by Japan Petroleum Development Association.

Internships at Katakai Gas Field

Internship at the head office

Geological survey training

Collection of PET Bottle Caps

Since 2010, we have collected PET bottle caps. With cap collection boxes set up on each floor, volunteer employees collect and wash the caps. Thereafter, such caps are donated to the Japan Committee for "Vaccine for the World's Children (JCV)" through a department store called Daimaru Tokyo, so that they can be used to raise funds for providing vaccinations to children in developing countries. As of the beginning of July 2013, 216kg of caps in total were collected, which ended up funding the vaccination of approx. 163 children.

Donating bottle caps

Partnership between Industry and Academics

Today, world energy demand has been increasing more and more and the development of new hydrocarbon resources such as shale gas and the like has been advancing.

JAPEX established four courses at universities at its own cost in fiscal 2008, in order to contribute to the development of energy resources with the support of the universities. Among such courses, a course by "JAPEX Earth Energy Frontier Research Department" continues to this day at Hokkaido University and research on coalbed methane and shale gas is progressing.

Through joint research and dispatching of instructors to universities, we will continue to support research related to advanced technologies for resource development and aim to foster human resources who will carry the future of our industry.

Major Commendations

The JAPEX Group and its employees have received commendations in recognition of mine security activities, studies of new technologies, social activities, and other activities in various fields. Major commendations in fiscal 2013 are shown below:

Major commendations in FY2013

National Award for Mine Safety	Excellent mines in safety	
		Amarume Mine, Akita District Office of Domestic Project Division, Amarume Gas Field
		Yamadani Mine, Nagaoka District Office of Domestic Project Division, Yoshii Gas Field
	Excellent safety personnel	
		1 employee of JAPEX
Award from chairman of the Mining Safety and Health Association, Japan	Excellent persons in security and safety, and risk management	
		4 employees of JAPEX
Japan Institute of Energy Award (in Technical Division)	Establishment of a Japan-GTL Process	
		JAPEX awarded jointly with JOGMEC and 5 other companies
Best Paper Award from Society of Exploration Geophysicists of Japan	High-precision depth conversion of reflection seismic data	
		3 employees of JAPEX
Award for persons of merit in traffic safety in Kanto	Excellent business office in traffic safety	
		Nagaoka District Office of Domestic Project Division
Award from chairman of Japan Explosives Safety Association	Excellent business office in safety	
		Geophysical Surveying Co., Ltd.

Award for Mine Safety

Scene of receiving the award from Japan Explosives Safety Association

Involvement in National Policies

Development of oil and natural gas is considered to be one of the highest priority issues in national policies. We intend to contribute to society by achieving our mission, which is the stable supply of oil and natural gas. Based on the above, we have been proactively involved in the formulation of national policies through participation in study groups and discussion groups of industry groups, such as of the Japan Petroleum Development Association and Japan Natural Gas Association, and the government.

In fiscal 2013, we worked to realize the stable energy supply at low cost by, for example, submitting petitions related to policies, budgets and tax systems to the Agency for Natural Resources and Energy via industry groups and making proposals in a meeting of the government council concerning the improvement in infrastructures to supply natural gas from the viewpoint of using conventional infrastructures.

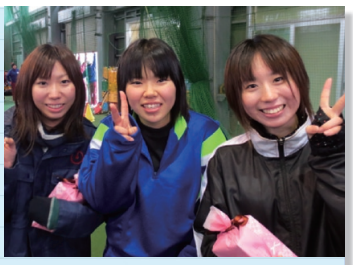
We will continue to make efforts to contribute toward realizing national policies, while maintaining sound and highly transparent relationships with governmental and administrative agencies.

Support for Disaster Area by the Great East Japan Earthquake

After the Great East Japan Earthquake, in order to assist in rescue missions and recovery efforts in the disaster areas, we donated relief money and supplies equivalent to 100 million yen in total and had a total of 182 members of the JAPEX Group remove debris at three locations in Miyagi (Minami Sanriku town, Higashi Matsushima City and Ishinomaki City) with the support of JAPEX.

In fiscal 2013, we invited junior high school students from Minami Sanriku town to Akita and provided assistance in running softball games for the purpose of caring for the children's well-being.

Voice



Eriko Suzuki
(Right in the photo)
Administration Department
Akita District Office
Domestic Project Division

Friendly games of softball with junior high school students in the disaster area

Akita District Office conducted volunteer activities for the first year after the Great East Japan Earthquake. In the second year, it was decided that softball games would be held in Akita prefecture at the request of the disaster areas. In this project, we hoped to offer encouragement to the junior high school students from the disaster areas by inviting them to practice games and joint training sessions with students in Akita so they could exercise their hearts out. We played a supportive role. Many employees participated in the two-day activity during a holiday, desiring to refresh children in the disaster area.

Unfortunately the weather was bad on the Sunday when I participated in the event and activities were conducted indoors. We gathered early in the morning to help out with the joint lessons and delivered box lunches and miso soup with pork and vegetables at lunch time. As children from the disaster area seemed to enjoy two days in Akita, I was very happy to see all of them smiling in the picture taken at the end of the event. Since the Great East Japan Earthquake, I had not been able to do anything to help people in areas hit by the disaster. However, I was able to participate in the volunteer activity through the Company. I intend to take a proactive part in volunteer activities in order to help people in the disaster areas as much as possible.

Commitment to Customers

We conduct safety and quality control and provide appropriate information that enables customers to feel safe using oil and natural gas products.

Policy on Product Responsibility

In selling oil and natural gas to customers, JAPEX is committed to a safe and stable supply of products that comply with laws, regulations, government decrees, ordinances, and voluntary standards related to products, which customers can use with peace of mind. Adequately understanding features of products, we conduct safety and quality control and provide necessary information to customers and people in local communities. Should an emergency arise, we will deal efficiently with the situation in close cooperation with inside and outside concerned parties, while quickly providing pertinent information to our customers.

To Enable Customers to Use Products without Anxiety

We work hard to provide a controlled and safe supply of energy that enables customers to use it without any worries and deepen customer understanding of our products and business contents through the provision of information on products, as well as, offer production field and plant tours.

At the same time, we periodically conduct safety education for outside parties involved in the transportation of oil and LNG.

We strive to supply products which can satisfy customers by quickly and properly improving situations in response to customer feedback.

Product Quality Control

Safety and quality control for oil products

Oil products JAPEX sells, which are mainly crude oil produced at domestic oil fields, are used as raw material for oil factories and fuels for plants. Crude oil produced at oil fields and plants is shipped to distributors and customers with tank trucks and tank vessels. At time of shipment, JAPEX checks quality and safety of products in light of related laws, regulations, sales contracts, and voluntary standards.

In order to respond to unexpected contingency during transportation and make distributors handle products in a safe manner, we issue SDS* to clearly indicate hazardous properties, ingredients, and information on handling.

*SDS (Safety Data Sheet)
This sheet contains necessary information to handle chemicals and raw materials including chemicals in a safe manner.

Safety and Quality Control for Natural Gas

Natural gas produced at gas fields is delivered to distributors and customers through pipelines. Some of it is produced as LNG and shipped with LNG tank trucks, etc. Before transportation through pipelines and shipment of LNG, moisture and impurities contained in natural gas are removed and checked within production fields and plants to maintain proper quality and safeness.

Quality of natural gas on sale is ensured in accordance with applicable laws, regulations, voluntary standards, and sales contracts. Furthermore, SDS is issued to clearly indicate hazardous properties, ingredients, and information on handling.

Yufutsu Plant

Voice

Genki Ono
Crude Oil Group
Marketing & Sales Dept. I
Marketing & Sales Division

For customers' satisfaction

As a member of the crude oil sales team, I am working on daily to supply products, in a safe and stable manner, that customers can use with confidence.

Now, I would like to explain about our efforts for a "stable supply" and "quality control" . For a stable supply, crude oil tankers and tank trucks used exclusively by JAPEX transport products to customers, ensuring flexible responses. We also collect information on climates, sea conditions and traffic through transportation routes, and have close and timely communication with customers and concerned parties and can thereby select optimal transportation routes and achieve reliable deliveries.

For quality control, we are making efforts for fulfilling customer needs by setting in-house quality standards, giving safety and the environment first priority, and forming mutual and close alliances with production fields and district offices. Quality of crude oil is based on density, sulfur contents, moisture and other elements. As a matter of fact, while the quality depends largely on the original properties of crude oil produced at each field, we are committed to a quality control of crude oil that can satisfy customers, carefully considering individual needs and making proposals for improvement in facilities and operations.

Commitment to Shareholders, Investors, and Business Partners

We are striving to build favorable relationships with stakeholders with timely and appropriate information disclosure, and fair and equal procurement, etc.

Research Center Tour for Shareholders

Since 2007, JAPEX has held the Research Center tour for shareholders as requested by shareholders. Receiving hundreds of applications for approx. 60 places available, we hold the tour at Research Center in Chiba city, Chiba prefecture for two days every year.

In the tour held in January 2013, outlines of JAPEX's major business and cutting edge technologies were explained by engineers who are active in the front lines. Geophysical exploration was also demonstrated in cooperation with JGI, Inc. Through events, for example, in which the shareholders can experience artificial oscillation caused by a vibrator vehicle, they deepened understanding about our businesses.

Explanation with a panel

Demonstration of a vibrator vehicle

Investment with Consideration to the Environment and the Society

With respect to major investment cases, JAPEX identifies not only profitability and technical issues but also actual and potential environmental and social issues as subject to assessment.

The investment evaluation process is carried out step by step starting from consideration by the responsible division, and the decision-making procedures are performed after going through the Investment Evaluation Committee. After evaluating risks and methods for solving such risks, if it is determined that such risks cannot be eliminated, the consideration of an investment will be suspended halfway.

When it is finally decided that the project should move forward, we then strive to minimize the environmental impacts through initiating environment impact studies and the like.

Timely and Appropriate Information Disclosure

Internal Information Management Regulations and prevention of insider trading

In regards to understanding the information that should be disclosed and other management systems, JAPEX has established the "Internal Information Management Regulations" and takes initiatives for timely disclosures and thorough prevention of insider trading.

The prohibition of insider trading is mentioned as a compliance matter under the "Compliance Manual" , and such information is being spread internally by introducing specific cases of insider trading, offering seminars run by outside instructors and through discussions at trainings based on rank.

SR/IR Activities

For shareholders and investors, Annual Report and Business Report (semiannual for shareholders) are issued, and various documents are placed on the website to provide information. Like this, we strive to make opportunities to receive frank opinions about JAPEX.

Fair Trade with Suppliers and Contractors

With the basic policy of procurement established, JAPEX conducts procurement activities in accordance with the following principles:

- **Providing fair opportunities**

We, in principle, conduct procurement activities through fair and impartial competitions, providing opportunities to not only suppliers and contractors who have worked with us but also those who have a good reputation and a potential to become a partner. For selection of suppliers and contractors, we fairly and comprehensively compare and evaluate qualities, prices, delivery time, technical abilities, reliabilities, financial conditions, etc. to make an economically rational decision.

- **Balancing between competition and cooperation**

We aim at mutually beneficial 'win-win' relationship with suppliers and contractors through fair and impartial procurement activities. We always assess the conformity of products and services and seek a strong and long term relationship with business partners who have an established time, quality and safety management system.

- **Compliance**

In procurement activities, we comply with relevant laws and regulations, their spirit, and social ethics and norms, and ask suppliers and contractors to comply with the same. We do not make any business deal which is contrary and harmful to our social confidence. We will maintain a stable and safe business environment in corporation with our business partners.

Commitment to Employees

Aiming at creation of a workplace in which all employees can work safely and lively, we respect diversity in human resources as an organizational basis to create values through global business activities.

Personnel Policy

In order to establish a personnel foundation to support the expansion of overseas businesses and the enhancement of technological ability while steadily conducting domestic businesses, we improve personnel affairs and systems of human resource development. We also work to create the working environment in which employees can lively work with high motivation and a challenging spirit.

● Initiatives toward development of individual abilities and achievement of organizational goals in business performance

The organizational business goals are clearly indicated and familiarized inside the organization to achieve the management goals. Reflected in individual targets, it would lead to the achievement of the organizational goals in business performance with PDCA. Through this system, we are working to use and foster employees' abilities.

● Career development and educational programs

For a long-term human resource development, cooperation between individuals and the Company is required. In order to enable individuals to voluntarily develop their career, we clearly indicate the image of personnel we seek and career paths, and work to enhance supportive systems to realize them.

● Creation of the environment in which senior employees can be active

Senior employees, who are reemployed after mandatory retirement, are expected to increase in number. They are important work force for JAPEX. In order to enable them to become more active and treat them in ways that suits their work style, we need to make clear their duties and expected roles.

In addition, as more of our operations are shifting overseas, we will improve various systems to enable employees stationed abroad to focus on their work and demonstrate their abilities without stress. In Japan, we will make efforts for effective human resource management by implementing periodical rotations that take into consideration placement of employees in connection with the review of operational structure at production fields.
We will also strive to diversify human resources by, for example, employing women and foreign employees.

Breakdown of work force

As of March 31, 2013

JAPEX (non-consolidated)	No. of employees (persons)	No of temporary staff (persons)	Average age (years old)	Average service years (years)
	882	163	39.87	18.25

Consolidated	No. of employees (persons)	No of temporary staff (persons)
	1,747	468

Recruitment

In recent years, we have employed approx. 30 new graduates on a regular basis. According to the expansion of businesses, we also hire mid-career employees through a year.
Meanwhile, JAPEX has proactively employed people with disabilities. As of the end of March 2013, the employment rate of people with disabilities was 1.75% , slightly lower than the statutory employment rate (1.80%).
In fiscal 2012, JAPEX's job turnover rate (retirement for personal reasons/the total number of employees) was 0.57% .

The number of employees who were hired over the last year (from April 2012 to March 2013) (JAPEX)

	New graduates			Mid-career employees			Total
	Male	Female	Subtotal	Male	Female	Subtotal	
Office	8	0	8	1	2	3	11
Exploration Div.	4	0	4	0	0	0	4
Development Div.	15	1	16	2	0	2	18
General Staff	0	3	3	0	0	0	3
Total	27	4	31	3	2	5	36

Changes in the employment rate of people with disabilities (JAPEX)

(As of end of March in each fiscal year)

FY	2009	2010	2011	2012	2013
Employment rate (%)	1.70	1.65	1.53	1.89	1.75

Communication with Labor Union

JAPEX has established a sound labor-management relationship based on mutual understanding and trust through proactive communication between workers and management.
As places for discussion with the labor union on a regular basis, the central production council (management-related matters), the central security meeting (matters related to employees' safety, accidents, and disasters), and the labor-management survey committee on personnel systems (verification of personnel systems and matters related to improvement) have been in place.
Each district office holds the production council and security meetings to proactively exchange opinions in each region. In March 2012, the "labor-management joint declaration on proper management of working hours" was made with the goal of the proper management of working hours and higher efficiency.

Occupational Health and Safety

Safety activities based on the security policy

JAPEX develops the Company-wide safety activities in accordance with a safety policy and safety objectives set every year. Each district office and field office formulates specific safety goals and safety priority policy plans, and develops effective safety activities suitable to each site. We review those safety activities and evaluate the results at the end of fiscal year. The results are incorporated into the following year's safety activities to increase awareness of safety on a continuous basis and eliminate accidents and disasters.

FY2014 Safety Policy and Objectives

Safety Policy

In the spirit of respect for human dignity and with safety as our utmost priority, employees at headquarters and each district office, representative office, and field office will work as one to keep safety first and to build an accident-free, safe and pleasant working environment.

Safety Objectives

1. To achieve zero workplace accidents
2. To achieve zero environmental pollution
3. To create a safe and pleasant working environment

Voluntary safety audit

After obligatory audit was abolished with enforcement of the Mine Safety Act revised in April 2005, sefty has been ensured mainly through voluntary safety activities performed by business operators. The basic concept of voluntary safety activities is to prevent disasters and accidents by requiring business operators to voluntarily ensure safety that suits the actual status of sites with minimum involvement of the government.

Recognizing the importance of voluntary safety activities, we are making efforts toward enhancing safety through continuous improvement. As part of such efforts, we conduct voluntary safety audit. Such audit is conducted once a year for the purpose of confirming the safety management system provided for in the mine safety rules, the safety committee, safety promotion activities based on the safety policy, risk assessment, safety education, responses during disasters, measures to be taken by a mining right holder, evaluation and review of safety measures and whether safety records are properly filed.

Scene of voluntary safety audit (Mitsuke Oil Field)

Zero Accident Campaign

JAPEX develops its unique "Zero Accident Campaign" in the entire Company, aiming at elimination of accidents.

For three years from fiscal 2012, we have been working on this campaign titled "Zero Accident Step Up 21EXT," under the slogan of "Advancing on a new note, aiming at accident-free workplaces full of smiles."

In fiscal 2013, JAPEX had no physical injury. As a result, both the frequency rate (the number of the injured per 1 million working hours) and the accident severity rate (work-days lost per 1,000 working hours) were zero, which are indices of occurrence of accidents. Any third parties were not injured.

Safety education

We have decided fundamental matters of our safety education, such as statutory and voluntary qualifications for safety administrators and operation supervisors, voluntary qualifications for mine workers, and guidelines for planned participation in various kinds of seminars and workshops. In accordance with them, we provide employees the safety education. We strive to constantly ensure qualified employees, for example, by providing an incentive for employees who obtained specific qualifications through a compensation system.

Scene of the hazard forecast drill

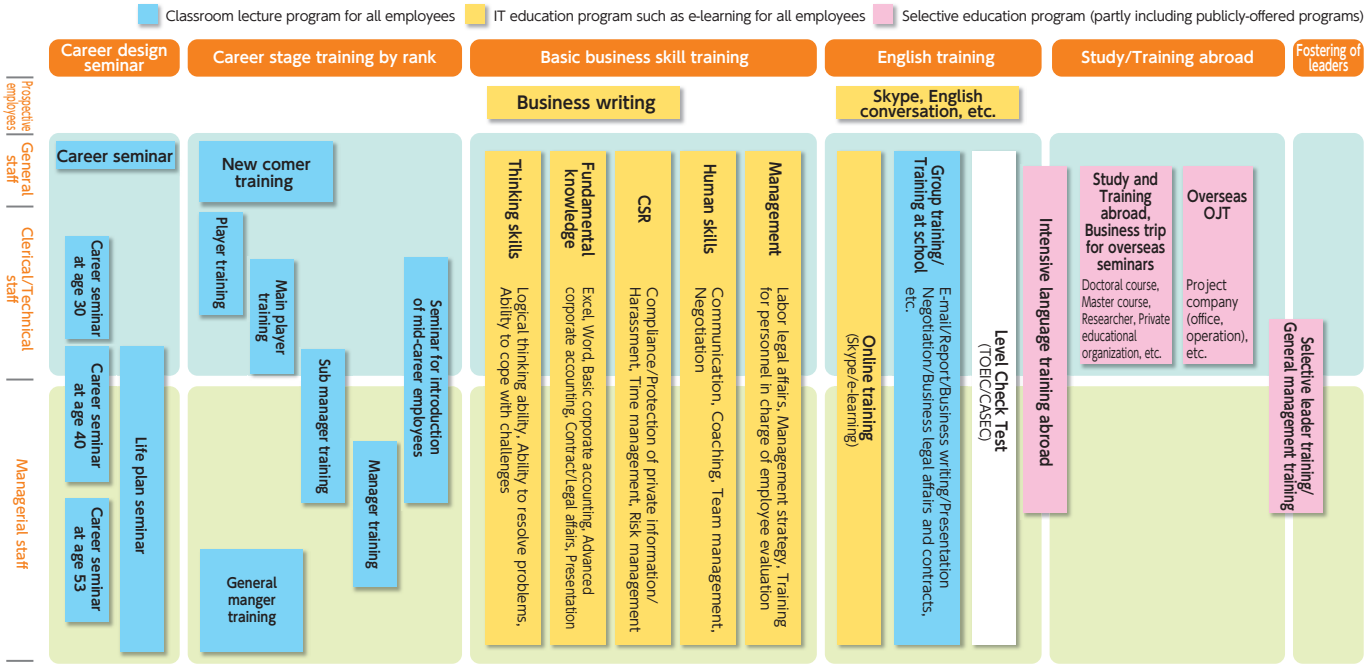
Scene of field tour (Nagaoka Plant)

Human Resource Education - Career Development and Educational Programs

While based on ability development through OJT and scheduled transfers, the human resources education of JAPEX also aims at effective career development by enhancing support through Off-JT. We offer our employees opportunities to develop wide range of abilities including specialized knowledge in each division so as to enable them to have greater career option and to contribute broadly to the organization. Presently, we are preparing a "Career Development Guideline" which will assist our employees in their own career development and are working to establish a system necessary for them to design and achieve their career goals (future ideal image).

Universal education programs for all employees include specialized education provided systematically by each department, group trainings by rank to promote changes in the way of thinking (career stage training), e-learning to enhance fundamental business skills, English proficiency trainings to foster more personnel who can handle overseas operations and overseas trainings for young employees. Selective trainings are also incorporated to foster personnel with comprehensive abilities including leadership and negotiation ability.

Diagram of training systems (excluding training specialized in each division)



Welfare Program (Company Housing/Dormitory)

JAPEX has owned a total of 12 residential buildings including 3 general residences for employees with family and 9 dormitories for bachelors and employees living away from their families. Even if employees are transferred to the head office and other district offices, etc. for a business reason, they can accompany and live with their family in a new place of work.


Second Tomakomai Dormitory

JAPEX's residences and dormitories

As of March 31, 2013

	General residence	Bachelor dormitory
Tokyo	100 households (Musashino city)	84 rooms (Chofu city)
Hokkaido		84 rooms (Tomakomai city)
Akita		39 rooms (Akita city, Yurihonjo city, etc.)
Niigata	29 households (Nagaoka city)	105 rooms (Nagaoka city, Niigata city, etc.)

*We have a system to rent housing as a company residence where needed.

Voice

Ryusuke Sakurai
Recruit & Personnel Education Group
Human Resources Department

Toward creating a robust foundation of human resources

As JAPEX engages in resources development from upstream to downstream, its employees are required to maintain a high performance level due to the peculiarities of diverse and long-term projects. I believe that well-balanced personnel who have developed both the "depth" of expertise in each domain and the "width" of universal skills such as language ability, basic business skills, management and leadership, would be able to perform well even in business environments in which it is difficult to predict the future. As a department in charge of recruitment and education, we intend to create a robust foundation of human resources by firmly establishing education systems to develop the above-mentioned skills.

Work-Life Balance

JAPEX is aiming to create a work environment in which each and every employee can work comfortably while striking a work-life balance, and to enhance relevant systems.

Support for childcare and nursing care

In order to support childcare, we have the following systems in place: statutory childcare leave; payment of 20% of salary during the period of such leave; reduced working hours for childcare of children up to third grade in elementary school (three years old or younger by law); and, paid nursing care leave of up to five days, which can be taken by the hour, to care for children. Through these measures, almost all employees who have taken advantage of the childcare leave system have returned and continue to work at JAPEX.

In support of nursing care, we have the following systems in place: nursing care leave of up to 365 days (93 days in total by law); reduced working hours for nursing care; payment of 20% of salary during the period of such nursing care leave; and, social insurance premiums paid by the company.

Use of supportive measures for childcare and nursing care

FY		2009	2010	2011	2012	2013	Total
Childcare leave	(persons per year)	8	11	10	7	5	41
Reduced working hours for childcare	(persons per year)	7	9	15	16	16	63
Nursing care leave for children	(persons per year)	18	29	34	33	40	154
	(days per year)	65.0	97.0	110.0	106.5	97.0	475.5
Nursing care leave	(persons per year)	2	2	0	0	0	4
Reduced working hours for nursing care	(persons per year)	0	1	0	0	0	1
Days off for nursing care	(persons per year)	0	0	2	1	1	4
	(days per year)	0.0	0.0	5.0	2.0	3.0	10.0

Appropriate management and streamlining of working hours

Making the "labor-management joint declaration on appropriate management of working hours" in March 2012, we are working to promote appropriate management and streamlining of working hours in cooperation with labor union.

In addition, measures considering the work-life balance have been implemented, for example, No Overtime Day on Wednesdays, facilitating use of a consecutive leave in summer, and granting a refreshment leave according to service years (10, 20, 30 years).

Mental Health Care

JAPEX has taken approaches to mental health care for employees of JAPEX and its Group companies as shown below:

❶ Line care seminar (for managerial staff)

The seminar was held for the purpose of recognizing something wrong with subordinates, and early responding to it.

❷ Stress check (for all employees)

Individual employees underwent a stress check. For employees with unfavorable results, necessary measures were taken by specialized institutions.

❸ Self-care seminar (for all employees)

The seminar was held to properly understand depression, and learn its precaution and how to cope with depression.

The increase in the number of workers who are in their prime but have a mental health problem which would seriously affect the workers and their families has been recognized as a critical social problems in recent years. We expect each employee to learn and actually control their own stress through those seminars, and actively work like themselves.

Mental health seminar

Voice — Care for employee's health

Takae Kawamura
Health nurse
Healthcare Office of Headquarters

People in Japan today are required to do more things more precisely and quickly at work, and they constantly mentally and physically stressed about something. In order to enable employees striving under such conditions to live healthy lives, our mission as industrial health staff is to offer support in preventing their health from deteriorating.

We not only wait for the employees to come to the healthcare office, but we also visit their workplaces frequently. This is necessary, in addition to mere health checkups, in order to understand the workplace conditions and provide better support to employees who work a great deal of overtime or are frequently absent.

Aiming to create a healthier working environment from the viewpoint of HSSE (Health, Safety, Security, Environment), we will conduct mental and physical support activities for "Team JAPEX" in cooperation with industrial doctors and relevant departments.

Corporate Governance

We enhance corporate governance to realize efficient and transparent management.

Basic Concept

Recognizing the importance of corporate governance, JAPEX strives to improve and enhance systems therefor, in order to earn profits through efficient management and continue to be a beneficial and acceptable company to the society.

June 2005: Introduced an executive officer system to clarify business execution systems
June 2007: Appointed one outside director to enhance the supervising function of the Board of Directors

At JAPEX, with respect to management by the representative directors and executive officers who are familiar with and responsible for their duties, we have, as a company that employs an auditor system, secured a supervisory function that audits the execution of important duties. Also through the system in which an outside director has an advisory and supervisory role, decision-making is done in an appropriate manner.

Corporate Governance Structure

Board of Directors and Executive Committee

JAPEX's Board of Directors holds regular meetings once a month to make decisions on execution of important duties and supervise the execution thereof based on the reports from directors and executive officers.

In order to speed up the decision-making, an Executive Committee comprising directors based at the headquarters and the like makes decisions on matters other than those to be resolved by the Board of Directors, and holds discussions to assist in the decision-making by the Board of Directors. The meeting of the Executive Committee is held twice a month generally and otherwise as necessary.

Board of Corporate Auditors and Auditors

JAPEX is a company that employs an auditor system. The Corporate Auditors attend the Board of Directors meetings. Full-time corporate auditors attend meetings of the Executive Committee and other important meetings, and make suggestions and provide advice to relevant departments as needed.

Corporate auditors receive reports on the status of accounting audit from accounting auditors as needed, as well as reports on internal audit from the Auditing Department. Full-time corporate auditors receive explanations regarding the status of auditing on a regular basis.

Internal Control System

JAPEX has an Internal Control Committee that deliberates on policies regarding the internal control system and formulates basic internal control plans. The Auditing Department is in charge of assessing improvements and operations based on such plans and periodically reports about the progress thereof to such committee. Through the above, systems to ensure appropriate duties are inspected and improved, and its results are disclosed through internal control reports.

Remuneration for Directors and Corporate Auditors

Compensations for JAPEX's directors and cooperate auditors are decided as stated below:

Monthly salary: up to the maximum amount as decided at the General Meeting of Shareholders;

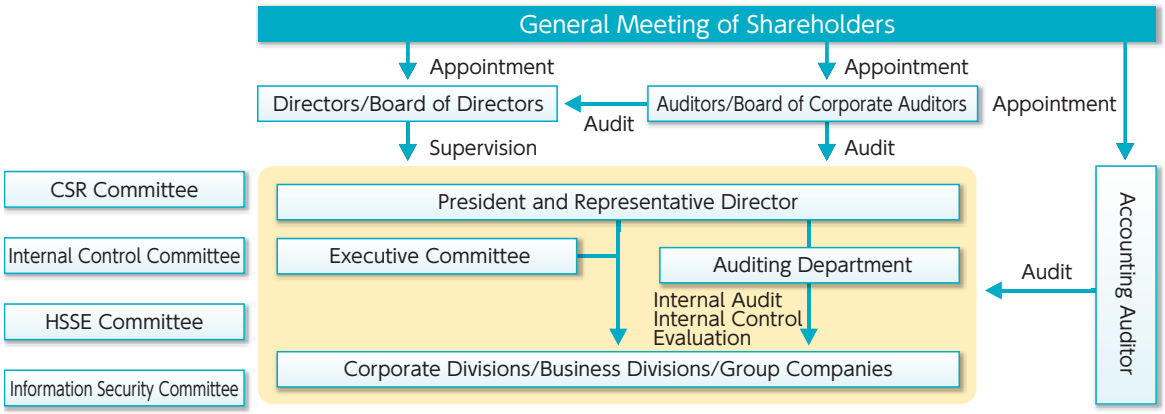
Bonus: based on the total payment amount for each business year as decided by the General Meeting of Shareholders;

Monthly salary and bonus for directors: decided by the president in accordance with the resolution at a Board of Directors meeting; and,

Monthly salary and bonus for corporate auditors: decided through consultation among corporate auditors.

Through the resolution at the General Meeting of Shareholders, retirement benefits are provided to retiring directors and corporate auditors in accordance with JAPEX's prescribed standards. Specific amounts, timing of provision, methods and other matters for retiring directors are decided by the Board of Directors, and the same for retiring corporate auditors are decided through consultation among and approval by corporate auditors.

Corporate Governance Structure



Compliance

In order to continue to be a company trusted by the society, we comply with laws, regulations, social norms, and internal rules, etc., respect human rights, and conduct ourselves in accordance with high ethical standards.

Compliance Systems

Complying with laws and regulations related to our business, common wisdom, and social norms, the JAPEX Group conducts corporate activities focusing on compliance so as to respond to the trust of stakeholders. As part of it, we have produced a compliance manual and a collection of cases, disseminated them to officers and employees of JAPEX and its subsidiaries, and implemented training as needed, in an effort to increase awareness of compliance. In addition, systems of reporting and consultation on compliance have been established. When a violation related to compliance occurs, the internal control committee verifies it, and formulates preventive measures against reoccurrence. Through internal audit, etc., it is confirmed whether the measures continue to be operated or not.

Compliance Manual

Our Compliance Manual provides for criteria to which individual officers and employees shall conform in day-to-day duties, including the following eleven compliance rules.

Compliance Rules

1. Respect for human rights
2. Compliance with relevant laws and regulations
3. Prohibition of insider trading
4. Protection of intellectual property rights
5. Gift-giving and business entertainment which are reasonable in light of common sense
6. Environmental conservation
7. Proper management of information
8. Proper use of information technologies
9. Proper accounting treatment and tax declaration
10. Prohibition of conflict-of-interest behaviors
11. Prohibition of providing favors to anti-social forces

Respect for Human Rights

Through the Compliance Manual, the JAPEX Group requires respect for human rights and ban of discrimination and harassment in compliance with the Constitution, the Universal Declaration of Human Rights, and International Covenants on Human Rights, etc. In the countries into which we advanced, we conduct business activities as respecting various international rules including ones for human rights, and considering cultures and customs, as well as interests of stakeholders.

Prevention of Corruption

The JAPEX Group is widely conducting business activities in Japan and overseas. In the Compliance Manual, it is stipulated that we must not illegally provide economic favor to civil servants and persons in similar positions, and that we should reasonably associate with business partners in light of common sense, in compliance with the National Public Service Ethics Act, the Unfair Competition Prevention Act, etc. in order to thoroughly conform to these rules.

Compliance Education

Education about fundamental compliance is provided to new comers during the period of training at the headquarters. In addition, we provide compliance education to participants in career stage seminars held by the Human Resource Department every year, in an effort for increasing awareness and enlightenment. Briefing sessions on compliance are held for employees of subsidiaries and affiliated companies as necessary.

Contact Point for Report and Consultation

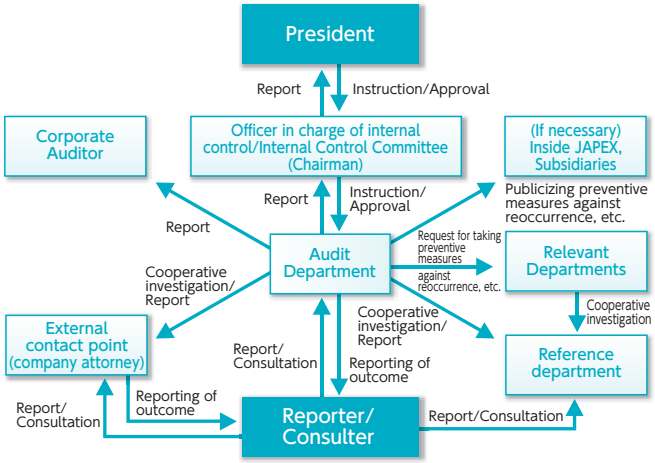
1. Internal contact point

The Audit Department is supposed to receive reports and consultations related to all of the compliance rules in the Compliance Manual. Other departments are supposed to receive them according to contents of the compliance rules. (Administration Dept., Human Resources Dept., Finance & Accounting Dept., Information Technology Dept., HSE Dept., Technical Planning & Coordination Dept.)

2. External contact point

Mr. Katsunori Kitamura, JAPEX' s company attorney

■Diagram of contact point for report and consultation



Risk Management

In order to ensure stable and continuous operation of highly public energy business, we have enhanced system to understand and deal with risks.

Measures against Large Scale Disasters

In preparation for occurrence of large scale disasters, JAPEX has established the "Disaster Prevention Measures Guideline" for the headquarters, and the "Contingency Plan Guideline" for each district office. When the Great East Japan Earthquake occurred in March 2011, measures were taken in accordance with those guidelines.

Using experiences in the disaster, we expanded communication tools for emergency, replenished emergency stockpiles, etc., and enhanced other measures in order to maintain headquarters' functions. District offices located in coastal areas have reviewed countermeasures, for example, conducting evacuation drills in case of issue of great tsunami warning.

On the assumption of earthquakes occurring directly beneath the Tokyo Metropolitan Area, etc., we will take measures in response to the ordinance for comprehensively promoting measures for stranded persons that came into force on April 1, 2013, and identified problems in measures at the time of the Great East Japan Earthquake. We will consider and formulate a "Manual of Initial Responses at Earthquake" to enhance systems to deal with risks.

Countermeasures against the New Influenza

As a business operator involved in maintenance of gas supply which is one of social functions, JAPEX is required to keep functions to supply gas to a certain extent, even at time of highly-virulent influenza pandemic. Therefore, by formulating the "Business Continuity Plan with Countermeasures against New Influenza" including infection-control measures for employees, we have been prepared for ensuring safety of employees and continuing business activities.

Information Security

JAPEX is aware that it is important to manage information appropriately and safely, and use it efficiently.

To this end, considering it important to establish the organization-wide system, we set up the Information Security Committee.

The committee established the information security management system by formulating the Information Security Basic Policy in December 2012, and the Information Security Measures Standards in May 2013.

JAPEX is working to review and improve technical countermeasures against constantly advancing cyber-attacks, etc. on a continuous basis. With implementation of periodical education and awareness campaigns, we are striving to increase awareness of information security.

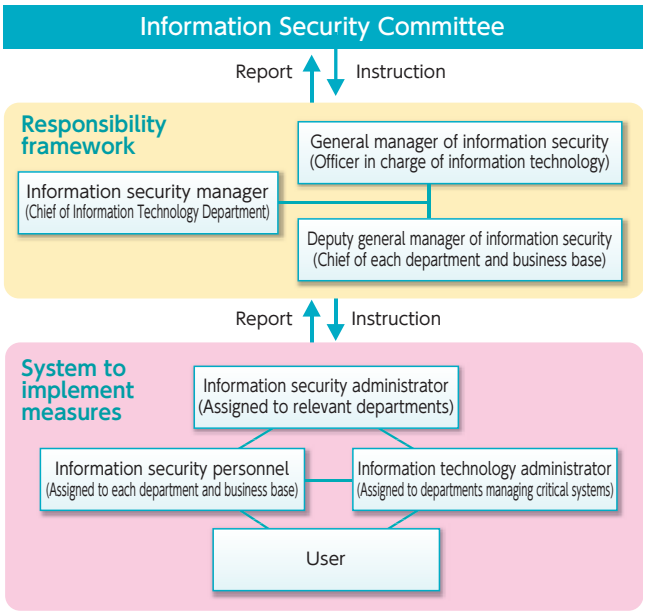
Overseas Safety Measures - HSSE Committee

In operation of overseas businesses, it is the most important to ensure employees' safety. JAPEX, which is proactively shifting businesses to overseas, conducts exploration and development activities and strives to seek new projects in various countries worldwide, including regions where security situation is not stable.

In Iraq, where we are participating in the Garraf Project for which PETRONAS is serving as an operator, terrorist activities have been going on due to religious conflicts, and such a situation shows little sign of stabilization. PETRONAS has had extremely strict security management systems for all accommodations, sites of works, and traffic routes, in cooperation with the army and the police, in addition to a private armed security company.

In JAPEX, HSSE Committee deliberates important matters, with the basic policy for overseas security measures established. Establishing a guideline and a manual concerning overseas security and risk management, this committee has enhanced systems to be able to response quickly and appropriately to emergency with an emergency task force set up at the headquarters and the site. Under the committee, the overseas security measures special committee consisting of chiefs of Human Resource Department and relevant departments has been set up to conduct day-to-day overseas security activities, for example, constantly collecting information, and judging whether to allow a business trip to a region which is expected to be dangerous to some extents.

Information Security Management System



Third Party Opinions

Mika Takaoka
Professor, College of Business
Rikkyo University

Points to be praised

■ Japan Petroleum Exploration Co., Ltd. changed the title of the "Environmental Report" to the "CSR Report" in fiscal 2014 and considerably enhanced information on the relationship with society and CSR management. In addition, voices of on-site employees are shared throughout the report and, thus, put a face to the report.

■ I would like to highly praise the following points: 1) analyses of the present state and issues in accordance with items provided for under ISO26000 in order to formally promote CSR activities; 2) prompt enhancement of CSR promotion systems by establishing a CSR committee chaired by the President; 3) establishment of the HSSE committee; and, 4) the conducting of internal surveys to identify CSR core issues.

■ I credit JAPEX's business activity of providing a stable supply of energy, i.e., the attitude that its main business is in it of itself its CSR. As stated in the President's Message, technologies cultivated by the JAPEX Group are foreseen as playing a very important role in the future of our global environment. As for carbon dioxide capture and storage (CCS), while it is said that there are few places suitable for storage, through combinations with enhanced oil recovery (EOR) and other efforts within the Group shifting to overseas operations, actual costs for CCS can be reduced and new businesses can be developed. And, I would like the Group to pursue its CSR through its main business.

■ The continued abundance of environmental data is clear evidence that the JAPEX Group is highly aware of global warming and the need to reduce the burden on the environment.

■ The featured articles demonstrate that each project is conducted with an effort to contribute to local communities and with a respect for local culture as well as the global environment.

Under the section relating to society, the Group's social contribution activities together with voices from employees on-site are introduced in a lively manner. I was impressed that the Group develops its contribution activities by stepping in the shoes of their stakeholders, such as by enhancing employment through the provision of opportunities for job trainings and the like.

Suggestions

■ Given the B to B business model, the difficulty in including in the report how the company is responding to customer needs is understandable. For the next fiscal year, if specific cases are expressed regarding the "collaboration with production fields and district offices" mentioned in the "Voice" sections of this report, the company may be able to deepen the understanding of their readers.

■ Employees are important stakeholders. I can guess from JAPEX's low job turnover rate, enriched career development and educational programs that it has in place a satisfying work environment. From the viewpoint of enhancing competitiveness, the fact that diversity is being promoted by increasing the hiring of more foreign and female employees is clearly stated in the report is highly commendable. I hope more data will be disclosed from the next fiscal year in this regard. For example, how about providing the ratios regarding female managerial staff members and reemployment?

JAPEX's responses to Third-Party Review

Hiroshi Sato
Executive Vice President
Executive Officer

We appreciate that Professor Takaoka provided us with her honest opinions. This report is the first CSR report after shifting from the previous Environmental Report. We wanted as many people as possible to look through the report and, therefore, it was prepared based on readability and clarity.
Thus, we are very glad that Professor Takaoka could put a face to this report. We are also glad to receive her praise that we treat our business activity of providing a stable supply of energy itself as our CSR. Her praise will encourage our officers and employees to perform their duties with more pride and confidence than ever before.
Meanwhile, it was suggested that we should enhance disclosure of data on relationships with customers and employees. We will make efforts toward improving the next report by incorporating her suggestions and carefully considering what type of information may be beneficial to our stakeholders. We will also continue to steadily tackle issues, such as setting CSR core issues and the like.

GRI Guideline Content Index

Profile Disclosure/ Indicator		Disclosure	Pages
1. Strategy and Analysis			
	1.1	Statement from the most senior decision-maker of the organization.	3-4
	1.2	Description of key impacts, risks, and opportunities.	3-4
2. Organizational Profile			
	2.1	Name of the organization.	5
	2.2	Primary brands, products, and/or services.	5
	2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	5
	2.4	Location of organization's headquarters.	5
	2.5	Number of countries where the organization operates, and names of countries with either major operations or that are specifically relevant to the sustainability issues covered in the report.	5
	2.6	Nature of ownership and legal form.	5
	2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	5
	2.8	Scale of the reporting organization.	5
	2.9	Significant changes during the reporting period regarding size, structure, or ownership.	N/A
	2.10	Awards received in the reporting period.	38
3. Report Parameters			
Report Profile	3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	2
	3.2	Date of most recent previous report (if any).	N/A
	3.3	Reporting cycle (annual, biennial, etc.)	2
	3.4	Contact point for questions regarding the report or its contents.	裏表紙
Report scope and boundary	3.5	Process for defining report content.	9-10
	3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	2
	3.7	State any specific limitations on the scope or boundary of the report (see completeness principle for explanation of scope).	2
	3.8	Basis for reporting on joint ventures, subsidiaries, leased facilities, outsourced operations, and other entities that can significantly affect comparability from period to period and/or between organizations.	N/A
	3.9	Data measurement techniques and the bases of calculations, including assumptions and techniques underlying estimations applied to the compilation of the Indicators and other information in the report. Explain any decisions not to apply, or to substantially diverge from, the GRI Indicator Protocols.	24,27,4142
	3.10	Explanation of the effect of any re-statements of information provided in earlier reports, and the reasons for such re-statement (e.g.,mergers/ acquisitions, change of base years/periods, nature of business, measurement methods).	N/A
	3.11	Significant changes from previous reporting periods in the scope, boundary, or measurement methods applied in the report.	N/A
GRI Content Index	3.12	Table identifying the location of the Standard Disclosures in the report.	本表
Assurance	3.13	Policy and current practice with regard to seeking external assurance for the report.	—
4. Governance, Commitments, and Engagement			
Governance	4.1	Governance structure of the organization, including committees under the highest governance body responsible for specific tasks, such as setting strategy or organizational oversight.	45
	4.2	Indicate whether the Chair of the highest governance body is also an executive officer.	45
	4.3	For organizations that have a unitary board structure, state the number and gender of members of the highest governance body that are independent and/or non-executive members.	45
	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	41,45
	4.5	Linkage between compensation for members of the highest governance body, senior managers, and executives (including departure arrangements), and the organization's performance (including social and environmental performance).	45
	4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	46
	4.7	Process for determining the composition, qualifications, and expertise of the members of the highest governance body and its committees, including any consideration of gender and other indicators of diversity.	45
	4.8	Internally developed statements of mission or values, codes of conduct, and principles relevant to economic, environmental, and social performance and the status of their implementation.	1,10
	4.9	Procedures of the highest governance body for overseeing the organization's identification and management of economic, environmental, and social performance, including relevant risks and opportunities, and adherence or compliance with internationally agreed standards, codes of conduct, and principles.	10,45
	4.10	Processes for evaluating the highest governance body's own performance, particularly with respect to economic, environmental, and social performance.	—
Commitment to external initiatives	4.11	Explanation of whether and how the precautionary approach or principle is addressed by the organization.	22-34,47
	4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	9,17,18,24, 25,28,33,46
	4.13	Memberships in associations (such as industry associations) and/or national/international advocacy organizations in which the organization: * Has positions in governance bodies; * Participates in projects or committees; * Provides substantive funding beyond routine membership dues; or * Views membership as strategic.	38
Stakeholder engagement	4.14	List of stakeholder groups engaged by the organization.	—
	4.15	Basis for identification and selection of stakeholders with whom to engage.	—
	4.16	Approaches to stakeholder engagement, including frequency of engagement by type and by stakeholder group.	—
	4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded to those key topics and concerns, including through its reporting.	—
5. Disclosure on Management Approach (DMAs) and Performance Indicators			
Economic			
DMA EC			7-8
Economic performance	EC1	Direct economic value generated and distributed, including revenues, operating costs, employee compensation, donations and other community investments, retained earnings, and payments to capital providers and governments.	5
	EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change.	—
	EC3	Coverage of the organization's defined benefit plan obligations.	—
	EC4	Significant financial assistance received from government.	—
Market presence	EC5	Range of ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation.	—
	EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation.	—
	EC7	Procedures for local hiring and proportion of senior management hired from the local community at significant locations of operation.	—
Indirect economic impacts	EC8	Development and impact of infrastructure investments and services provided primarily for public benefit through commercial, in-kind, or pro bono engagement.	15,35
	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	13
Environment Environmental			
DMA EN			20
Materials	EN1	Materials used by weight or volume.	N/A
	EN2	Percentage of materials used that are recycled input materials.	N/A
Energy	EN3	Direct energy consumption by primary energy source.	24
	EN4	Indirect energy consumption by primary source.	24
	EN5	Energy saved due to conservation and efficiency improvements.	23
	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	23
	EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	23
Water	EN8	Total water withdrawal by source.	21,29
	EN9	Water sources significantly affected by withdrawal of water.	—
	EN10	Percentage and total volume of water recycled and reused.	29,30

Profile Disclosure/ Indicator		Disclosure	Pages
Biodiversity	EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas.	—
	EN12	Description of significant impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas.	26
	EN13	Habitats protected or restored.	—
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	26
	EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk.	—
Emissions, effluents and waste	EN16	Total direct and indirect greenhouse gas emissions by weight.	21,24
	EN17	Other relevant indirect greenhouse gas emissions by weight.	22
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	22-25
	EN19	Emissions of ozone-depleting substances by weight.	—
	EN20	NOx, SOx, and other significant air emissions by type and weight.	27
	EN21	Total water discharge by quality and destination.	21,29
	EN22	Total weight of waste by type and disposal method.	21,28
	EN23	Total number and volume of significant spills.	30
	EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally.	—
	EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff.	—
Products and services	EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation.	31-34,39
	EN27	Percentage of products sold and their packaging materials that are reclaimed by category.	N/A
Compliance	EN28	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations.	—
Transport	EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce.	21,22
Overall	EN30	Total environmental protection expenditures and investments by type.	—
Social: Labor Practices and Decent Work			
DMA LA			41
Employment	LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	41
	LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	41
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	43
	LA15	Return to work and retention rates after parental leave, by gender.	44
Labor/management relations	LA4	Percentage of employees covered by collective bargaining agreements.	41
	LA5	Minimum notice period(s) regarding significant operational changes, including whether it is specified in collective agreements.	—
Occupational health and safety	LA6	Percentage of total workforce represented in formal joint management-worker health and safety committees that help monitor and advise on occupational health and safety programs.	—
	LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work-related fatalities by region and by gender.	42
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	44
	LA9	Health and safety topics covered in formal agreements with trade unions.	41
Training and education	LA10	Average hours of training per year per employee by gender, and by employee category.	—
	LA11	Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings.	43
	LA12	Percentage of employees receiving regular performance and career development reviews, by gender.	—
Diversity and equal opportunity	LA13	Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity.	41
Equal remuneration for women and men	LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	—
Social: Human Rights			
DMA HR			46
Investment and procurement practices	HR1	Percentage and total number of significant investment agreements and contracts that include clauses incorporating human rights concerns, or that have undergone human rights screening.	—
	HR2	Percentage of significant suppliers, contractors and other business partners that have undergone human rights screening, and actions taken.	—
	HR3	Total hours of employee training on policies and procedures concerning aspects of human rights that are relevant to operations, including the percentage of employees trained.	46
Non-discrimination	HR4	Total number of incidents of discrimination and corrective actions taken.	—
Freedom of association and collective bargaining	HR5	Operations and significant suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights.	—
Child labor	HR6	Operations and significant suppliers identified as having significant risk for incidents of child labor, and measures taken to contribute to the effective abolition of child labor.	—
Prevention of forced and compulsory labor	HR7	Operations and significant suppliers identified as having significant risk for incidents of forced or compulsory labor, and measures to contribute to the elimination of all forms of forced or compulsory labor.	—
Security practices	HR8	Percentage of security personnel trained in the organization's policies or procedures concerning aspects of human rights that are relevant to operations.	—
Indigenous rights	HR9	Total number of incidents of violations involving rights of indigenous people and actions taken.	—
Assessment	HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments.	—
Remediation	HR11	Number of grievances related to human rights filed, addressed and resolved through formal grievance mechanisms.	—
Social: Society			
DMA SO			11-16,35
Local communities	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	11-16,35
	SO9	Operations with significant potential or actual negative impacts on local communities.	11-16,35
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	11-16,35
Corruption	SO2	Percentage and total number of business units analyzed for risks related to corruption.	—
	SO3	Percentage of employees trained in organization's anti-corruption policies and procedures.	43,46
	SO4	Actions taken in response to incidents of corruption.	—
Public policy	SO5	Public policy positions and participation in public policy development and lobbying.	38
	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	46
Anti-competitive behavior	SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	40
Compliance	SO8	Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with laws and regulations.	N/A
Social: Product Responsibility			
DMA PR			39
Customer health and safety	PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement, and percentage of significant products and services categories subject to such procedures.	39
	PR2	Total number of incidents of non-compliance with regulations and voluntary codes concerning health and safety impacts of products and services during their life cycle, by type of outcomes.	N/A
Product and service labelling	PR3	Type of product and service information required by procedures, and percentage of significant products and services subject to such information requirements.	39
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	39
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	39
Marketing communications	PR6	Programs for adherence to laws, standards, and voluntary codes related to marketing communications, including advertising, promotion, and sponsorship.	—
	PR7	Total number of incidents of non-compliance with regulations and voluntary codes concerning marketing communications, including advertising, promotion, and sponsorship by type of outcomes.	—
Customer privacy	PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data.	—
Compliance	PR9	Monetary value of significant fines for non-compliance with laws and regulations concerning the provision and use of products and services.	N/A

Contacts

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Paper from forests which have been managed under sustainable principles

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November 2013

Dear Sir or Madam,

Japan Petroleum Exploration Co., Ltd.

Announcement of publication of Japan Petroleum Exploration Co., Ltd. “CSR report 2013”

We are pleased to announce that we have published "CSR report" as a tool to develop and disclose the CSR activities of the JAPEX group, adopting a voice of stakeholders. We would very much appreciate it if you could take a moment to tell us your comments and opinions on the report.

Sincerely,

Japan Petroleum Exploration Co., Ltd.
Corporate Strategy Dept.

Japan Petroleum Exploration Co., Ltd.
Corporate Social Responsibility Report 2013
Reader Comment Sheet

Thank you for reading our “Corporate Social Responsibility Report 2013”.

I would appreciate if you could fill out the following questionnaire and return it by fax.

FAX：+81-3-6268-7302

Japan Petroleum Exploration Co., Ltd. Corporate Strategy Dept.

❶ How do you evaluate the report?

Information Content	☐ Satisfactory	☐ Moderate	☐ Insufficient
Understandability	☐ Easily understandable	☐ Moderate	☐ Hard to understand
Number of pages	☐ Too many	☐ Adequate	☐ Deficient
Design	☐ Good	☐ Moderate	☐ Bad

❷ How did you obtain this report?

☐ The JAPEX group’s employees ☐ Directly sent from the Company

☐ The Company website ☐ Seminar/meeting ☐ Other（ ）

❸ What do you expect from JAPEX group as its corporate social responsibility? Check all that apply.

☐ Stable supply of Energy (oil & gas) ☐ Safety management and disaster prevention

☐ Return the Company’s profit to local community, social contribution and donation

☐ Contribution to nations and society through the business operations

☐ Human resource development and creation of good working environment

☐ Employment generation and maintenance

☐ Improvement of business performances as sales and income

☐ Prevention of environmental accidents as oil spills and leakages

☐ Technical contribution to environmental improvement(CCS, renewable resource, etc.)

☐ Energy saving activities ☐ Efforts to address global warming

☐ Other（ ）

❹ Please give us your comments/opinions on this report, or expectations on JAPEX group.

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Please complete as far as possible.

●Situation of the reader（Please choose one)

☐ employee of JAPEX group company ☐ business partner ☐ stockholder/investor

☐ Neighboring ☐ Student ☐ Administrative ☐ Environment and CSR expert

☐ NPO/NGO ☐ The environmental and CSR person in charge of a company

☐ Other（ ）

Thank you for your cooperation.

●Sex ☐ male ☐ female ●Age（ ）

Your precious comments and opinions shall be reflected to the CSR activities of JAPEX group including the preparation of the CSR report.