JAPEX

CSR Report 2014

Corporate Social Responsibility Report

Full Version

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

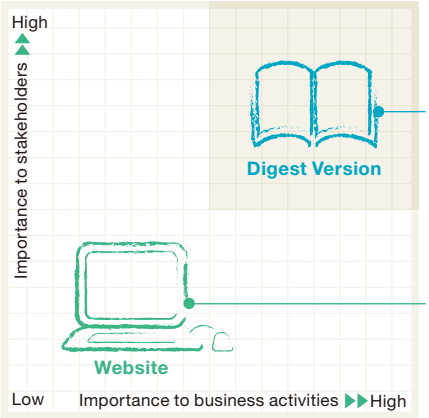
To put Corporate Vision in practice, the JAPEX Group's directors, officers and employees shall act based on the following "JAPEX Group Code of Conduct" that represents our key values:

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

Main Content of Report

In 2014, JAPEX formulated “Core CSR Issues — SHINE” after determining issues of high importance to stakeholders that also have a considerable impact on JAPEX’s business activities. This report discusses the Group’s CSR activities in relation to each of these core issues.



The booklet version of the CSR Report focuses on new initiatives of high importance.

The CSR website provides a comprehensive overview of diverse activities along with detailed data.

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 25 consolidated subsidiaries and other group firms. Environment performance data are of JAPEX and JAPEX Offshore Ltd.

Reporting period

Fiscal 2014 started on April 1, 2013 and ended on March 31, 2014.
Some statements include data before March 31, 2013 or those after April 1, 2014.

Issuing date: October 2014
(Previous issue: November 2013; next issue: October 2015)

Contents

JAPEX will continue contributing to society through the stable supply of energy.

Osamu Watanabe
President and Chief Executive Officer

Q1 What is JAPEX management's view on CSR?

Our Corporate Vision begins with the words "JAPEX is committed to contributing to local communities through a stable supply of energy." I regard all JAPEX Group business activities involving the stable supply of energy as being directly linked to corporate social responsibility (CSR).

The stable supply of energy is an important priority for Japan, which relies on imports for the supply of petroleum and natural gas, and with the current suspension of all nuclear power generation, it has become an even more pressing issue. I believe JAPEX can play a role toward the resolution of this issue through its participation in oil and natural gas development projects and the development of renewable energy and unconventional energy technologies.

JAPEX has recently implemented a major strategy to shift investment overseas, which is expanding the number of regions and countries where it undertakes projects. This in turn has broadened the impact we have on society and the global environment. JAPEX aims to do more than contribute to the economic development of such regions and countries. We also aim to achieve sustainable growth and build win-win relationships with our stakeholders through social and environmental initiatives, which we regard as core CSR issues.

Q2 Please tell us about the projects JAPEX is emphasizing as initiatives for the stable supply of energy.

Fiscal 2014 marked the halfway point of the Medium-Term Business Plan, which covers fiscal 2012 through 2016. We are making steady progress in the expansion of our three core businesses: E&P*1 business, domestic natural gas business, and environmental and innovative technology business.

E&P Business and Domestic Natural Gas Business

JAPEX has been actively carrying out key projects in its first core business (E&P). In May 2012, we commenced commercial production of natural gas in the TSB gas field in the Kangean block in Indonesia. This was followed by the start of crude oil production in the Garraf oil field in Iraq in late August 2013. In Canada, we are making preparations for the expansion of the Hangingstone oil sands development project, where production is scheduled to start in 2016.

Besides progress on these existing projects, in April 2013 we acquired a stake in a shale gas project in Canada. This project is linked to our efforts in our second core business (Domestic natural gas). We plan to import the gas produced from this project as LNG to Japan in 2019 using the receiving terminal currently under construction at Soma Port in Fukushima Prefecture, and supply this gas to the

domestic market by connecting the terminal with existing infrastructure. Our aim is to build a stable, fully integrated supply structure for natural gas that encompasses the entire gas value chain, from upstream to downstream.

Environmental and Innovative Technology Business

The primary objective of our third core business (Environmental and innovative technology) is research and development (R&D) on methane hydrate development technology under a Japanese government-led initiative. JAPEX was commissioned to be the project operator for the first offshore production tests, which were held in March 2013, and played a pivotal role in producing methane gas offshore for the first time in the world. We will continue playing a leading role as we work toward carrying out the second round of offshore production tests.

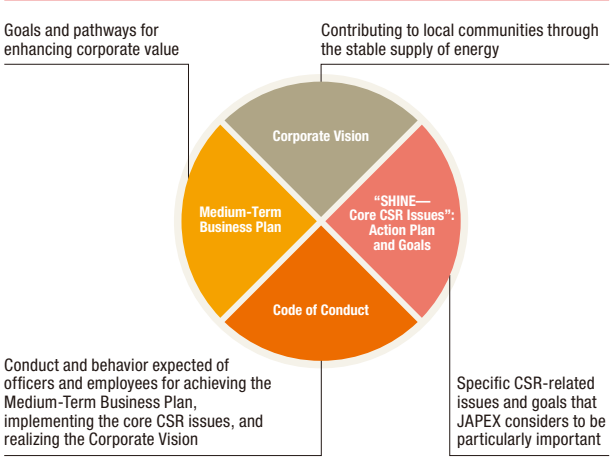
JAPEX is also actively participating in another government project pertaining to Carbon dioxide Capture and Storage (CCS*2). We have applied technology amassed through our oil and gas E&P business, and are accumulating technology with the aim of establishing a viable business. We are also pursuing renewable energy sources through geothermal projects.

03 Where does JAPEX position its five core CSR issues, which include the stable supply of energy?

After identifying issues that are highly important to both the Group's business activities and stakeholders, we conducted workshops for employees and discussions at CSR Committee meetings, culminating recently in the formulation of the "JAPEX Core CSR Issues."

The Medium-Term Business Plan I mentioned earlier is a plan aimed at enhancing the Group's corporate value on the earnings and financial side. The core CSR issues are initiatives that will enable JAPEX to become a trusted global company as it responds to the expectations and

Toward Realization of Our Corporate Vision



demands of its stakeholders. Both are indispensable for realizing our Corporate Vision.

The core CSR issues are described in this report, which I strongly urge you to read. They are important issues that are inextricably linked to our business activities, and cover HSE*3 initiatives, building relationships with local communities, and other measures.

04 What kind of mindset do you think is needed for implementing CSR activities?

I believe CSR activities arise largely from an accumulation of our routine work tasks. First of all, each individual employee must be sensitive to the needs of the people they come in contact with through their work, as well as to society and the environment.

Over the last two years, we have sought to achieve a shared awareness among our officers and employees through discussions on many occasions, regarding the current status and future vision of JAPEX. This has resulted in the formulation of the "JAPEX Group Code of Conduct" in 2013 and the "JAPEX Core CSR Issues" in 2014, and the establishment of a framework of the Group's Corporate Vision which includes the Medium-Term Business Plan. I believe we must disseminate these outcomes throughout JAPEX and implement CSR activities that are linked directly to the everyday work of individual employees.

05 Do you have a message about your aspirations for CSR initiatives?

We will steadily pursue our CSR activities based on our recently established core issues by making the best use of the JAPEX Group's management resources, such as technical capabilities and human resources. In order to shift our investment overseas and boost our global operations while responding to a rapidly changing operating environment, we must constantly reflect the diverse opinions of our stakeholders. I would like this report to serve as a foothold for open communication between our stakeholders and JAPEX.

I would be grateful for your straightforward opinions and impressions regarding this report.

*1: "E&P" stands for "Exploration and Production" (exploration, development, production and sales of oil and natural gas)
*2: "CCS" stands for "Carbon dioxide Capture and Storage"
*3: "HSE" stands for "Health, Safety, and Environment"

JAPEX is expanding its business on a global scale with the aim of realizing stable supplies of energy sources.

Business Models (Business Flow)

JAPEX is engaged in projects in Japan and overseas that span the E&P value chain of oil and natural gas resources, from exploration, development, and production to transportation and sales.

Upstream

1. Exploration

Geological surveys

These surveys analyze the properties of rock formations.

Geophysical surveys

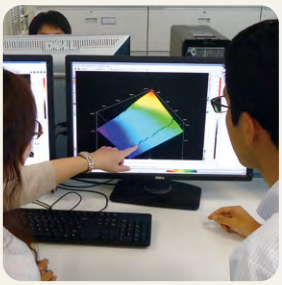
Waves reflected from the subsurface following the generation of artificial seismic vibrations are measured to determine geological structures.

Exploration wells

Exploration wells are drilled to discover oil or natural gas at optimal locations selected on the basis of the findings of geophysical surveys.

Appraisal wells and evaluation of reserves

When exploration wells discover resources, appraisal wells are drilled to confirm the size of oil and gas fields and the amount of reserves. Based on the results, a decision is made whether to proceed or not with commercial production.



2. Development and Production

FEED

When it has been determined that commercial-scale reserves exist, front-end engineering and design (FEED) is carried out in preparation for development and production.

Drilling of production wells

Production wells are drilled in accordance with development plans.

Construction of facilities and production

Production commences once the construction of facilities for the processing, storage and transportation of oil and natural gas has been completed.

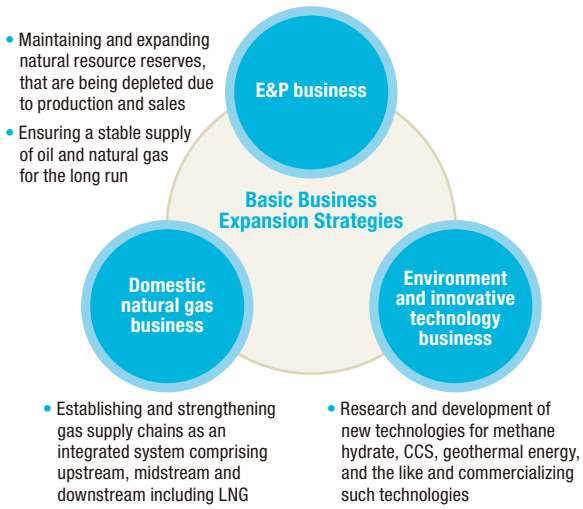
Medium-Term Business Plan (FY2012-2016)

JAPEX will expand business by focusing on E&P business, domestic natural gas business, and environment and innovative technology business.

JAPEX formulated its Medium-Term Business Plan to achieve a number of objectives. One focus is to maintain and expand the amount of reserves, which are dwindling due to production and sales. The plan also addresses changes in the operating environment, such as global competition in resource development, unstable energy prices, intensifying competition in the domestic natural gas business, and heightened social awareness of environmental problems.

The five-year plan was launched in fiscal 2012 and will finish in fiscal 2016. Positioning the three fields at the right as core businesses, the plan's goal is to increase revenues and earnings through new investment based on maximizing the value of existing assets in Japan and overseas.

Through these initiatives, we will further strengthen our business foundation and competitive edge and rigorously enhance operational efficiency, and thus achieve sustained growth and development as a corporate group.



Midstream

3. Receiving Terminals and Transportation (Crude Oil, Natural Gas, and LNG)

Crude oil

Crude oil produced from oil fields is transported via either oil tank trucks or ocean-going oil tankers.

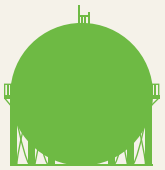
Natural gas and LNG

Domestic natural gas and LNG imported from overseas are transported using pipelines, LNG tank trucks, or LNG railway tank containers.

Downstream

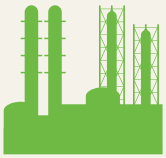
4. Sales

Gas-fired power plants



Local distribution companies

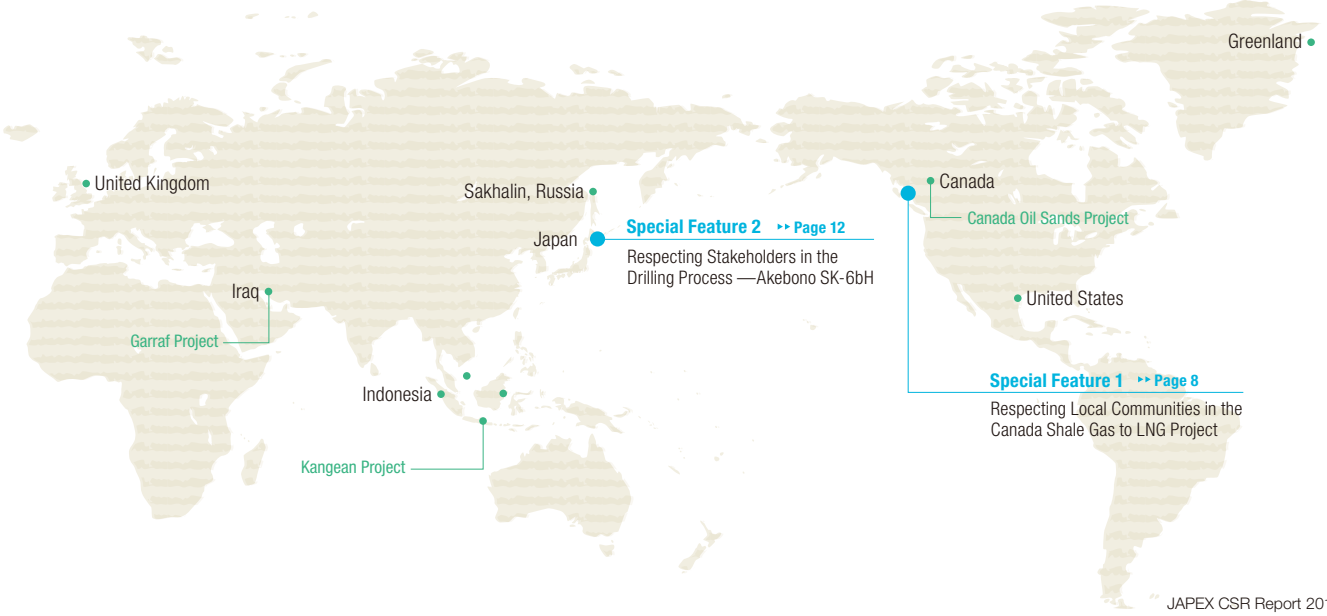
Industrial users



Refiners

Other

Operating Regions



Special Feature 1

Respecting Local Communities in the Canada Shale Gas to LNG Project

In addition to having abundant natural resources, Canada is also a leader in environmental conservation. The North Montney area (the location of the upstream, shale gas development and production project) and Lelu Island (the site for the construction of a LNG plant as part of a downstream project) are both areas of spectacular natural beauty. Canada's federal and provincial governments are heavily involved in protecting natural environments, and businesses must pass rigorous standards and screening to obtain a development license.

Respecting the indigenous people and local communities is essential if a long-term project is to succeed. In all our projects, we seek to coexist with the environment and ensure that the local people accept the proposed development. We do this through a range of activities, including protecting natural resources when undertaking development work, taking exhaustive measures to prevent pollution, and holding briefings with members of the local community.

A Project That Integrates Upstream and Downstream Phases and LNG Supply

In April 2013, JAPEX acquired a 10% stake in the shale gas block currently in production located in the North Montney area of British Columbia. The production of shale gas is increasing, and the gas will be transported via a recently built pipeline to Prince Rupert on the west coast of the province. The project partners are building a natural gas liquefaction plant with an annual production capacity of 12 million tons.

Most of our share of LNG produced there, which at 10% works out at 1.2 million tons, will be supplied to Japan via the Soma LNG terminal currently under construction. All partners in the project follow an integrated operation structure under which their participation in each phase from gas development and production, conversion to LNG, through to LNG offtake is equal to their ownership stake in the project. This structure ensures the stable and effective operation of the project.

Project flow

1 Shale gas development & production project → 2 LNG project → 3 LNG offtake → 4 Japan's domestic gas market

Upstream development area

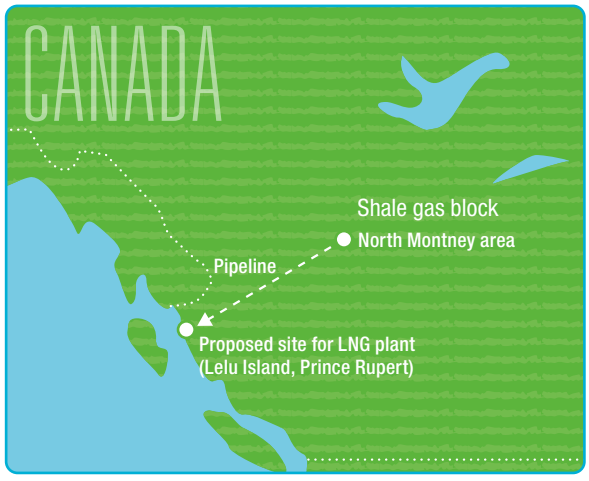
Upstream Shale Gas Development & Production Project

Block name:	North Montney area, British Columbia, Canada
Operator:	PETRONAS (includes subsidiaries)
JAPEX's interest:	10%
Project company:	JAPEX Montney Ltd. (incorporated in the state of Alberta, Canada)
Current status:	Production of natural gas currently being sold

Downstream LNG Project

Proposed plant site:	Lelu Island, Prince Rupert, British Columbia, Canada
Operator:	PETRONAS (includes subsidiaries)
JAPEX's interest:	10%
Final investment decision:	Scheduled for late 2014
Start of production:	Scheduled for late 2018*
LNG production volume:	Annual production of 12 million tons*
Current status:	Detailed design in progress

* Based on official announcement by operator



Upstream

Shale Gas Development & Production Project

The upstream development project is situated on the eastern foothills of the Canadian Rocky Mountains. The block area alone covers 750,000 acres of forested land. Progress Energy Canada, which began development work in the area in the early 2000s, has expanded the project area and continued with shale gas development since the company was acquired by PETRONAS in 2012. Because JAPEX is not the project operator, we have been reviewing project plans and processes, and suggesting improvements. In terms of the number of wells drilled annually, the project is currently the most active upstream project in British Columbia. But despite the huge amount of work being carried out on the project, the operator maintains a low accident rate.

For more than a decade of operations and employment, the project partners have been building good relationships with First Nations people who live in the area, although the number of them is few. We have also been working to reduce the burden placed on the environment. Measures taken include pad drilling, in which well sites are concentrated in a single area, optimizing the plant's layout, and minimizing access roads and the pipeline footprint. We abandon the wells that have ended production, and undertake site reclamation and reforestation.

Development and production site

Protecting water resources and preventing pollution

The major feature of shale development is the process of fracturing, in which large quantities of water injected under high pressure fracture the rock and make it possible to extract gas or oil contained in a shale layer.

In the case of this project, we source most of the water from snowmelt stored in the pit (reservoir) or from river water. Permission from the provincial government is required to obtain water, with the daily amount and annual amount of water obtainable specified for each license. When obtaining water, while measuring the volume we constantly monitor water levels using a water flow meter we have installed to ensure there is no temporary drop in the river level.

We also endeavor to use as little surface water as possible. Generally, between 20% and 40% of water injected into a well is flowback that returns to the surface with the production of gas. We reuse nearly all of this water after first putting it through filters. We also prevent pollution of underground water by ensuring that the surface casings that protect wellbores are set at a depth lower than the aquifer. Also, we take measures to avoid water leaks at ground level to prevent the water we use in fracturing, which includes flowback water, from seeping underground.

The project notifies the provincial government about the amount of water used in fracturing, types of additives used and their quantities, which are published on the FracFocus.ca website. As a project partner, we endeavor to enhance transparency by disclosing information so that local residents can gain a better understanding of shale development.

Drilling rig

Spectacular scenery photographed by JAPEX's representative in Canada

Downstream

LNG Project Initiatives

Having acquired a LNG export license from the Canadian government in December 2013, the project is currently in the detailed design phase of the LNG plant for the downstream project. In February 2014, we submitted an environmental impact assessment report to the Canadian government and to the British Columbia provincial government. The report covers the potential impact of the project on the environment, society, economy, and other important aspects. In the next phase, regulatory authorities will review the project and we will undertake discussions with the indigenous people and the local community.

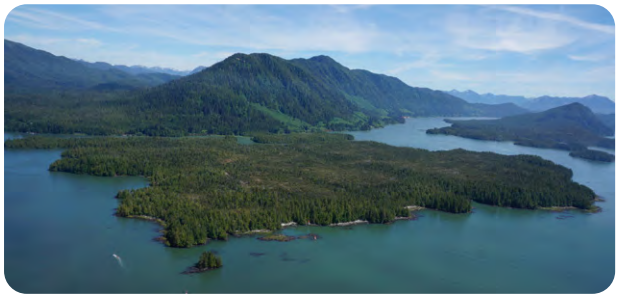
Reflecting the views of stakeholders through "open house" briefings

Since November 2012, we have held four business briefings, or "open houses" as they are known in Canada, in the Prince Rupert and Port Edward communities, situated near the LNG plant construction site on Lelu Island. Since the first open house, the project partners have incorporated the views expressed by members of local communities and their requests in the design of the facility. We have also conducted new surveys as a result of these meetings.

We endeavored to reflect community requests from the initial stage when we were examining the project concept. For example, we left as much vegetation as possible untouched on Lelu Island and set building heights in keeping with the surrounding trees, so the LNG facility would not detract from surrounding views. In line with another request from the community, we have also taken care with the compound's lighting. Here, we have prevented light pollution by ensuring that light does not spread beyond the island.

In another example, we changed a specification at a stage when basic planning for the plant was advanced and we had an overall picture of its design. Lelu Island is an uninhabited island close to the mainland. We had planned to access the site via a two-lane 250 m bridge between the mainland and the island. However, local people pointed out that building a bridge over the strait between the mainland and the island would no longer allow ships to pass through. We remedied this situation by amending the bridge's design so that even at full tide there is a gap of 11 m between the bridge and the water, thus allowing ships to continue traveling along this waterway.

Going forward, we will continue adopting this approach, which builds a relationship of trust between business and the local community.



Planned construction site for LNG plant (Lelu Island)

Bridge connecting Lelu Island and the mainland (image)

"Open House" pamphlet

Special Feature 2

Respecting Stakeholders in the Drilling Process—Akebono SK-6bH

In order to discover and obtain the oil or natural gas that lies thousands of meters underground, a well must be drilled from surface of the ground. Seen in that light, it could be said that drilling is the most fundamental and important part of oil and natural gas exploration and development.

To drill, we erect an enormous drilling rig on the surface. Depending on conditions, the process can have a notable effect on the environment and local residents. Consequently, at the planning and preparation stage we are required to undertake surveys. We can proceed with a project only when we have taken adequate mitigation measures.

For more than half a century, the JAPEX Group has drilled in a variety of regions and countries while receiving understanding and cooperation from stakeholders through open communication. In this Special Feature, we use the example of drilling in the Yufutsu oil and gas field in Hokkaido conducted in fiscal 2014 to illustrate our engagement with stakeholders.

Duration of the drilling process

Drilling depth can vary greatly between each oil or natural gas project. With a drilling depth of around 5,800m, the Akebono SK-6bH well is classified as deep well. Owing to its depth, drilling work alone takes as long as six months. The time required from formulation of drilling plans, which marks the start of the licensing procedure, to completion of the entire drilling process is around a year and a half. In short, we must pay meticulous attention to every detail throughout this considerable period of time.

Akebono SK-6bH

1 Formulation of drilling plan (Discussions of operating plan)	2 Building location	3 Drilling	4 Production tests	5 Project coordination
June 2013 (Approval July 2013)	April – August 2013 (Drilling rig installed October 2013)	October 2013 – May 2014	June 2014	July – October 2014 (planned)

1 Formulation of drilling plan

We formulate a drilling plan that considers the impact of our activities on the local community and environment, and that contains measures to mitigate such impact.

We select the best well site while conducting surveys to determine the impact on the surrounding environment. We submit the findings of the surveys and the drilling plan to the relevant authorities and apply for the necessary permission. At the same time, we explain our activities to the local community.

Main involvement with stakeholders

- **Surveys on the impact of noise and vibration, and countermeasures (Nearby businesses, local residents)**
- **Consider the site's biodiversity and determine environmental measures, such as whether or not to fell trees**
- **Leasing, purchase and sale negotiations of land for well sites (Landowners)**
- **Local community briefings on the drilling plan (Local governments, police)**
- **Licensing procedure**
  Mining Act: Project proposal (Bureau of Economy, Trade and Industry)
  Mine Safety Act: Submission of a work plan for a specified facility (Industrial Safety and Inspection Department)
  Fire Service Act: Application for permission to build hazardous materials facilities (Fire Department, other)
  Municipal ordinances: Notification of the construction of a notifiable facility (Municipal authorities)

A Stakeholder Voice — High praise for cooperation between departments

In resource development, the developer is required to go through a number of steps before it can receive government approval. From our position as a body that reviews such applications, we engage with developers to ensure they adopt appropriate measures after determining the impact a project is likely to have on the surrounding area. Because the extraction of oil and natural gas involves large-scale projects, it is not possible for the person lodging an application to have an in-depth understanding of every aspect of the project. Therefore, it is essential that we work together with the various departments of the development company that are familiar with the respective discipline or step. When dealing with JAPEX, we receive prompt replies even in response to technical questions, which we regard as an indication of seamless collaboration between their relevant departments. We trust that JAPEX will continue its efforts in fostering human resources with a wealth of specialist knowledge.

Assistant director, Mining Division,
Natural Resources, Energy and Environment Department,
Hokkaido Bureau of Economy, Trade and Industry

2 Building location

When adopting measures that take the living environment of local residents into consideration, we take safety initiatives to ensure that work is completed without any accidents.

Before work commences, we have the contractors take safety-related education. Once they have figured out the job particulars and conditions, they carry out site preparation work, bring in equipment, and prepare for the drilling rig with safety first.

Main involvement with stakeholders

- **Community briefings on the bringing in of equipment (Nearby businesses, local residents)**
- **HSE Management, including safety training for all persons admitted to the site (Work contractors)**
- **Completion inspection of hazardous materials facilities (Fire Department, other)**
- **Licensing procedure**
  Selection and notification of safety officers, notification upon commencement of use of a specific facilities (Industrial Safety and Inspection Department)
  Application for inspection upon the completion of hazardous materials facilities (Fire Department, other)

A Stakeholder Voice — Detailed explanations and instructions contribute to staying accident-free

As a general contractor, our company normally carries out project work in compliance with the Industrial Health and Safety Act. When we have worked with JAPEX, we were asked to first receive rigorous training based on the Mine Safety Act. In the case of drilling work for the Akebono well, which is situated relatively close to a residential area, we adopted a wide range of safety measures, such as avoiding streets in residential areas when transporting equipment to the site. When executing the drilling work, we are constantly aware of what is happening on site thanks to the detailed explanations and instructions we receive from JAPEX. This has contributed to nurturing a trusting relationship and keeping the site accident-free.

Mr. Yoshiyuki Uchibori
Assistant Manager, Civil Engineering, Project Management Group, Ishiyamagumi Co., Ltd.

3 Drilling

We have created a system that provides a safe work environment through HSE education to workers and regular communication.

To ensure that work is carried out safely, we provide sufficient training to drill workers and related staff. We also provide other drilling-related services. To reduce the impact on the surrounding area, we conduct ongoing monitoring while implementing measures to mitigate noise and vibration levels. We regularly monitor the water used for drilling in order to prevent pollutants that exceed standards from leaving the site.

Main involvement with stakeholders

- HSE management, such as site worker safety education and safety meetings (Drill workers, service contractors)
- Monitoring of noise, vibration and water quality (Nearby businesses, local residents)

A Stakeholder Voice

I will continue working to foster a mutually caring work environment

I have worked at drilling sites all over the world in my engineering role. With experience in 14 nations, I like Japanese sites the most. I particularly like the Akebono well, mainly due to the spirit of mutual respect and consideration of the people there. I am the leader of a four-person team, and fostering an environment in which people care for others is important to promoting safety. Indeed, nothing can be overemphasized where safety is concerned. Since routine tasks entail risks in this job, we take care to create an environment conducive to close communication, paying attention to even the most trivial matters.

Mr. Yos Vaisal
Senior Directional Driller, Schlumberger D&M

4 Production tests

We strive to give local residents peace of mind by giving them advance briefings.

We undertake production tests when there is an indication of crude oil or natural gas once we have drilled to the depth of the target geological layer. We carry out these tests after first giving sufficient explanation to the local government and residents of our intentions.

Main involvement with stakeholders

- Local community briefings concerning production tests (Local government, nearby businesses, local residents)
- Application for approval for the temporary storage and handling of hazardous substances, notification of the intention to emit smoke (Fire Department, other)

A Stakeholder Voice

We want JAPEX to be a corporation works together with residents with the area's interests at heart

We recognize that JAPEX is a corporation that fulfills its core mission, which is the stable supply of energy. As a local resident, all the dealings I have had with them so far have put my mind at rest. Because residents feel the most anxious when they don't know what is happening, this is the most important point when it comes to building a trusting relationship with the community. Although there is no precedent, in the unlikely event that something should happen that is serious enough to make the news, I would want JAPEX to make a full report without covering up any details. I would like to see JAPEX participate actively in local events as well. I hope that by having our interests at heart, they will work together with residents for the benefit of our community.

Mr. Iwao Ogura
Chairman, Numanohata Shinonome Neighborhood Association

From a local government representative

We hope there will be a flow-on effect to local businesses with regard to CSR initiatives as well

In a resource-poor country like Japan, I respect and am grateful to JAPEX, which is committed to its mission of providing a stable supply of energy. Needless to say, energy is a major factor in an economy. The role that JAPEX fulfills in underpinning industry is huge and absolutely vital for both Hokkaido and Japan.

In my view, dispelling concerns about safety is the most important duty of any business involved in resource development. Here in Tomakomai where various development projects are under way, JAPEX gives us detailed briefings on the numerous safety measures it has in place. We have been able to dispel any concerns by explaining such things through council meetings and the like, which have secured the understanding of citizens. I believe that through this process, the face-to-face communication we have had with various persons in charge along with many meetings with the general manager of the Hokkaido District Office has enhanced the trusting relationship we have with JAPEX.

Tomakomai City and its environs are also referred to as the “mecca” of the manufacturing industry in Hokkaido. Besides JAPEX and other large corporations, all sorts of companies are to be found here. For a region such as ours, the contribution JAPEX makes to society and the region goes far beyond its line of work, which is the supply of energy. Its impact does not stop at employment and other benefits that revitalize the local economy, as I am hopeful that its CSR initiatives will also have a flow-on effect to local businesses.

Mr. Isao Fukuhara
Director
Industry and Economy Department
Tomakomai City

From a district office general manager

JAPEX’s sound business operations are underscored by its integrity toward all stakeholders

Takahisa Inoue
General Manager
Hokkaido District Office
Domestic Project Division

While aware that words such as gratitude and peace of mind in messages received from stakeholders are a little excessive, I feel both very grateful and a sense of heavy responsibility at the same time. The common thread in all these comments is the trust that these stakeholders place in JAPEX. Our mission is not only the stable supply of energy. In our business activities, we must keep occupational health and safety, the environment, and the interests of stakeholders uppermost in our minds. At drilling sites in particular, we cannot carry out sound operations unless we have trusting relationships with local residents, contractors, regulatory authorities, and local government offices. Furthermore, we must be transparent and take responsibility for explaining our activities. I am always conscious of my personal motto, which is “be a role model!” For me, “model” conduct is maintaining a stance toward stakeholders that is unflinching in its integrity. I believe that it is harsh opinions, rather than compliments, that propel us forward.

CSR Management

JAPEX will promote CSR initiatives to engage with its stakeholders through business activities and to grow together with local communities.

JAPEX Core CSR Issues "SHINE"	CSR Goals	Individual Issues
Stable and sustainable energy supply ▶Page 19	• Achieve a stable supply of energy by maintaining stable supply sources and infrastructure for crude oil and natural gas, efficient and safe operations, and ensuring the quality and safety of its products. • Secure diverse sources of supply by actively participating in the development of geothermal, solar, and other renewable energy sources, as well as unconventional energy sources such as shale oil gas and methane hydrate, while contributing to the development of related technologies such as carbon dioxide capture and storage (CCS).	Stable energy supply Development of new technologies
HSE as our culture ▶Page 25	• Secure occupational health and safety, develop various risk management policies and systems, including security risks, and firmly establish a corporate culture that places top priority on occupational health, safety, and the environment (HSE). • In conducting its business, strive for energy conservation and the efficient use of natural resources to prevent global warming and ensure the sustainability of resources. • Reduce the environmental impact of its activities by preventing water, air, and soil pollution and taking care of our ecosystem.	Occupational health and safety Risk management Measures to prevent global warming Preserving biodiversity and ecosystems Pollution prevention and resource recycling
Integrity and governance ▶Page 38	• Practice highly efficient and transparent management under its governance structure. • Establish a compliance system that prevents the occurrence of improper activities and legal violations. • Foster employee awareness to promote steadfast work practices that are aligned with our Corporate Vision.	Governance Compliance
Being a good **N**eighbor ▶Page 41	• Through open and sound communication with stakeholders, gain an accurate understanding of the requirements society places on the JAPEX Group. • By creating employment in regions where the Group operates and pursuing fair business practices, achieve co-existence and growth with its business partners, clients, and oil- and gas-producing countries. • Respect local cultures and maintain good relationships with local communities through social contribution and funding initiatives outside our business activities.	Growing together with local communities Building good relationships with stakeholders
The **E**mployer of choice ▶Page 47	• Establish a friendly workplace where all its employees—encompassing a wide range of nationalities, academic qualifications, and careers—recognize the diversity of each other's attributes, fulfill their individual potential, receive appropriate evaluation and remuneration, improve their technical skills and knowledge, and are able to grow. • As a global company, provide an attractive work environment where talented people choose to work.	Respecting employee diversity Creating a fair and rewarding workplace Human resources development and training

Today, contributing to a sustainable society has become an international priority for all companies, regardless of size or line of business. Recognizing the need to clearly specify CSR policies based on a relationship of trust with all stakeholders, JAPEX recently formulated its Core CSR Issues, “SHINE.”

SHINE sets out the CSR issues that are of particular importance to us, which we identified by comprehending, prioritizing, and narrowing down the issues that are important to our business activities and stakeholders.

Going forward, we will systematically promote our CSR activities based on these core issues, and disclose information related to the approach, progress, and results of such efforts in a consistent manner.

CSR Action Plan and Targets in FY 2015

- Pursue projects designed to increase production and reserves and expand gas supply infrastructure
- Achieve zero interruption to the supply of natural gas
- Introduce and provide training for globally adopted incident command system (ICS) for emergency responses

- Pursue commercialization of geothermal energy
- Conduct demonstration tests of the Onnagawa Formation (shale oil) in the Fukumezawa oil field
- Continue initiatives for commercial development of methane hydrate
- Continue technology development toward commercialization of CCS
- Conduct studies and submit proposals on marine resource development through participation in technical discussion meetings on the development of a marine mineral resource exploration system

- Familiarize all employees with HSE activities (zero accidents causing injury or death, zero accidents causing damage to property, zero disasters affecting the public, and zero accidents caused by illegal activities) • Efficiently operate and improve HSE management system • Hold regular training sessions on human factors that cause accidents
- Manage near misses appropriately and make improvements • Conduct Safety Awareness Surveys (questionnaires) with the aim of preventing human errors

- Formulate a Manual of Initial Responses at Earthquakes for corporate headquarters and carry out training
- Progressively implement safety drills for overseas operations

- Set JAPEX targets in accordance with the Japan Petroleum Development Association’s Low-Carbon Society Execution Plan, and monitor greenhouse gases
- Establish energy conservation measures for production operations • Implement electricity-saving and other energy conservation measures at offices

- Plan and implement tasks that take account of the impact on biodiversity

- Continue monitoring VOC emissions in accordance with voluntary action plan as a member company of Japan Natural Gas Association
- Reduce benzene, toluene, and xylene (BTX) emissions from production operations • Schedule and implement checks on the soundness of aging facilities and pipes

- Establish and operate an IT environment that complies with JAPEX’s information security policy, and provide education and training on information security
- Hold training sessions on insider trading

- Update and disseminate the Compliance Manual and collection of case studies, and provide compliance training

- Contribute to local communities and engage in social activities in regions where we operate and conduct overseas projects
- In conjunction with the Soma Project, contribute toward attracting new industries to the region affected by the Great East Japan Earthquake, establishing businesses using the port, and creating jobs for the local community

- Communicate proactively with stakeholders through information disclosure

- Pursue activities that promote diversity and increase the recruitment of women and non-Japanese people

- Implement the management by objective (MBO) system emphasizing superior-subordinate communication; promote and provide training in physical and mental well-being

- Develop human resources and provide education in accordance with Career Development Guideline
- Plan and implement education programs for overseas employees

Process leading to identification of core CSR issues

To begin the process of identifying our core CSR issues, we launched a survey in February 2013 to comprehend and analyze the status of CSR activities within the JAPEX Group. This was followed by numerous workshops, CSR Committee discussions, and other activities, which finally led to the formulation of JAPEX Core CSR Issues "SHINE" in June 2014.

February to April 2013

Comprehending status, analyzing, and identifying problems of CSR activities within JAPEX Group

We investigated the implementation status of CSR activities of relevant business units and main JAPEX Group companies in accordance with guidelines set forth in ISO 26000.

* ISO 26000: A document formulated with participation by a diversity of stakeholders that provides guidance in considering an organization's "social responsibility." Backed by international consensus, it is used widely as a valuable guideline to help companies pursue CSR activities.

April to July 2013

Survey to identify core CSR issues/goals

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

February to June 2014

Identification of core CSR issues

Issues were extracted from the survey results and consideration of our Corporate Vision and other factors. Next, these issues were prioritized according to the relative importance of their impact on stakeholders and our business activities. We then produced a final list after internal workshops and deliberations of the CSR Committee.

Employee workshops

We gathered together 18 male and female employees of varying ages from different divisions and divided them into four groups. Each group discussed the question, "How does JAPEX define CSR?" First, group members were asked to think intuitively about CSR issues they considered important. At the end of their discussions, they came up with five key issues. Of particular note is that many participants agreed on the importance of stable energy supply and HSE, indicating that our employees intuitively identified themselves with two issues—our Corporate Vision "stable supply of energy" and "HSE as a corporate culture."

Participants listing up their core CSR issues

Participants discussing their views in groups

Stable and sustainable energy supply

JAPEX's business activities themselves embody key issues in the promotion of CSR. We develop new technologies and work in various ways to ensure the stable supply of energy.

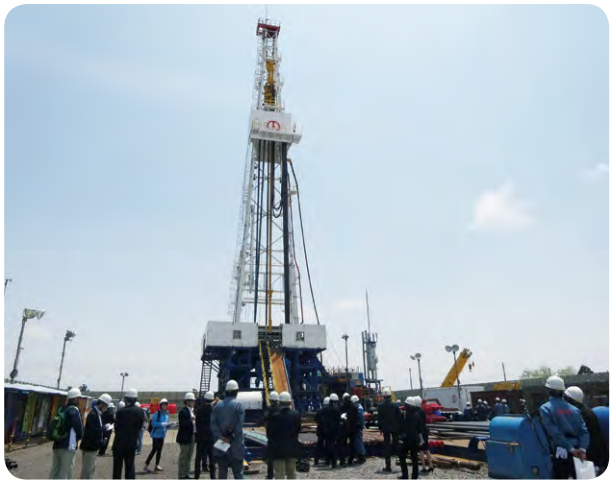
Tight Oil (Shale Oil) Development Initiatives

Start of commercial production in Akita prefecture

In October 2012, JAPEX succeeded in extracting the first shale oil in Japan, from the Onnagawa Formation in the Ayukawa oil and gas field in Yurihonjo City, Akita Prefecture. In April 2014, we commenced commercial production of around 35 kl/day from the field.

Shale oil is an unconventional crude oil that is obtained from tight formations and other layers of base rock. Commercial production of the oil was not feasible using existing technologies. Today, the most advanced technologies for obtaining shale oil in the world are found in North America. JAPEX recently began commercial production after optimizing technology for application in oil fields in Japan and conducting demonstration tests.

With the Onnagawa Formation extending across a wide area in Akita Prefecture, there is potential for further development. We will continue developing technology and expanding reserves with the aim of supplying energy obtained from a variety of sources.



Drilling rig

Shale oil (production well: Kurosawa AK-1)

Investigative commission on environmental measures at Fukumezawa

Following the commercial production of shale oil from the Ayukawa oil and gas field, JAPEX made preparations for conducting demonstration tests at the Onnagawa Formation in the Fukumezawa oil field. In September 2013, we established the Investigative Commission on Environmental Measures at Fukumezawa as an internal body to enhance the reliability and transparency of environmental measures needed as a result of these activities. Experts were invited to join the Commission, which convened on a total of three sessions. The Commission conducted risk assessments of individual measures related to underground water quality, soil, vibration, noise, air pollution, and other environmental factors.

As a result, the Commission called for the adoption of risk mitigation measures, monitoring, and the establishment of thresholds, which required the suspension of operations when reached. It concluded that the level of environmental risk was low.

Investigative Commission on Environmental Measures at Fukumezawa

Report of the Investigative Commission*

* JAPEX press release of March 6, 2014

Exhibiting at the Oga Festival of the Sea

The "Oga Festival of the Sea 2013 in Akita" was held from July 13 to 28, 2013. JAPEX took part through its booth in the "Sea Exhibition," one of the festival's main attractions. The Company explained its business activities in the area, focusing on shale oil development demonstration tests in Oga, as well as methane hydrate—a new form of energy. The many visitors to the booth included local residents, who learned about the existence of valuable underground resources right on their doorstep.

Display panel

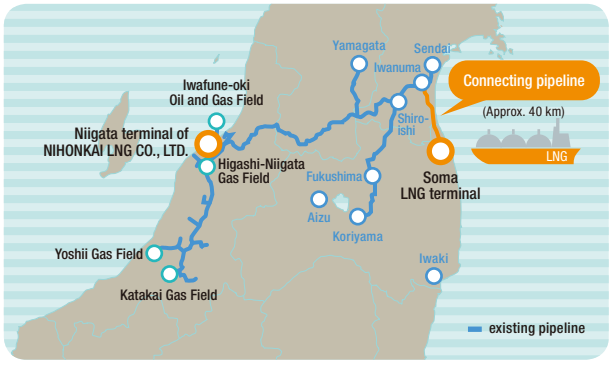
The Soma Project

JAPEX launched the Soma Project in November 2013. One of the project's objectives is to build an LNG terminal at Soma Port on the Pacific coast in Shinchi Town, Fukushima Prefecture. The other is to build a new connecting pipeline for delivering vaporized LNG gas received at the terminal to the Company's main pipeline.

When the Great East Japan Earthquake occurred, the delivery of natural gas via our pipeline enabled local distribution companies to resume natural gas supplies in a short time. The performance of our pipeline network at the time of the disaster demonstrated the network's excellent earthquake resistance.

Construction of the LNG terminal is scheduled to begin in 2014, with a view to commencing operation in fiscal 2018. Once completed, the pipeline will connect both LNG terminals on the Pacific coast and the Japan Sea coast. The expanded pipeline network will enable the Company to provide a stable supply of natural gas to the Tohoku (northeast) Pacific coastal region to meet demand generated by revitalization activities in the region.

We also expect that the project will attract new industries and create local employment in this region. JAPEX has received generous support from local authorities, as well as from government agencies. The Reconstruction Agency recognized the Soma Project as a reconstruction promotion plan under the Great East Japan Earthquake Reconstruction Special Zone Act. The Soma Project also qualified for subsidies as a business that creates employment in a region affected by the tsunami and nuclear power plant accident.

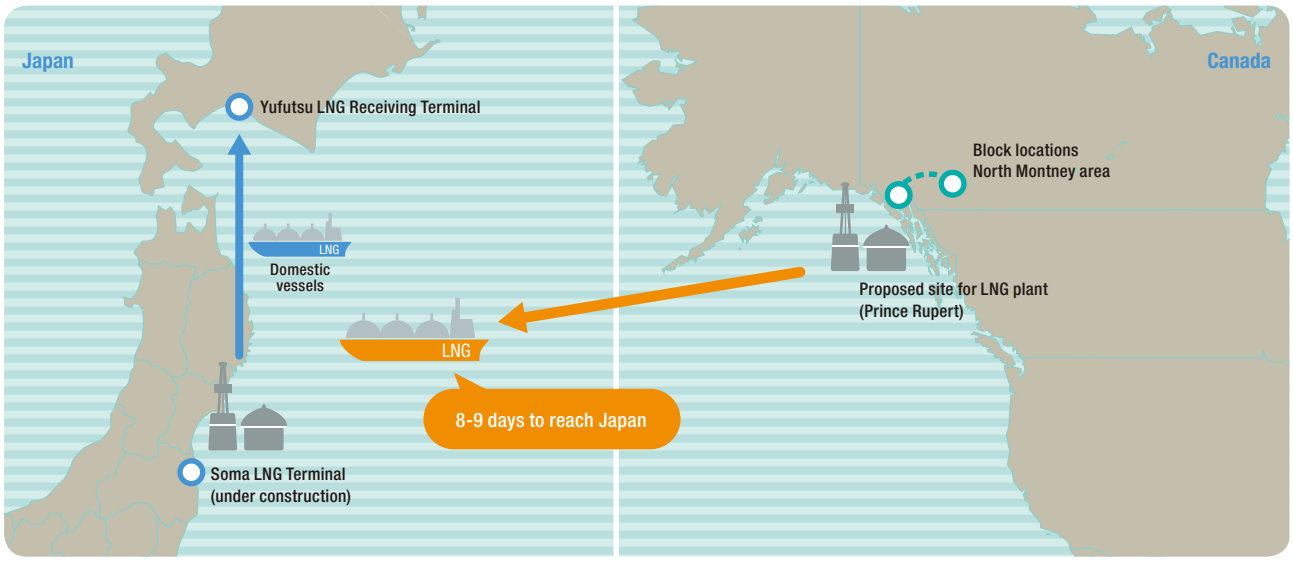


Pipeline network


Soma LNG Terminal (basic design)

Land designated for the construction of the terminal (Shinchi Town, Fukushima Prefecture)

Gas Received from Canada Shale Gas to LNG Project



Methane Hydrate Development Initiatives

Environmentally friendly clean energy

One molecule of methane is composed of one carbon atom and four hydrogen atoms. Methane is a hydrocarbon that is a major component in natural gas, and it is used as fuel for thermal power plants and other applications. It is a common energy source in Japan. Natural gas is called a "clean energy source" because when it combusts it emits less carbon dioxide, nitrogen oxide, and other greenhouse gases compared with petroleum and coal.

Methane hydrate as an energy resource

Methane hydrate (MH) is often called "fiery ice," which is an ice-like solid formed by methane gas that captures water inside under low-temperature and high-pressure conditions. According to a survey of the original MH in place*1 performed 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), the volume of methane in the MH concentrated zone is approx.1.1 trillion m^3*2. This volume roughly corresponds to the total amount of imported LNG for 11 years (based on 2011 figure)*3 in Japan. If MH production techniques and commercialization are established, it is expected to become a new domestic energy source and contribute to stable supplies of clear energy for Japan. Assuming that it is possible to recover 10% methane gas from the 1.1 trillion m^3 of the original MH, this volume roughly corresponds to around 100 years of JAPEX's annual produced amount (1.1 billion m^3 in 2013).

*1 Original volume in place: Simple calculation of deposits and not technically recoverable reserves
*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

Since MH is stable under low-temperature and high-pressure environment, it is not easy to extract as gas above ground. Thus, the commercialization of MH is difficult. Theoretically, there are several methods to extract methane gas from MH layers, such as by heating the formation or decreasing the formation pressure and using chemicals to shift the phase equilibrium. As a result of previous experiences in MH onshore production test and investigation of the MH zone in Canada*4, it was confirmed that the depressurization method is most efficient to extract methane gas from the MH layer.

The world's first offshore production test of MH, which JAPEX also engaged in operator work, was conducted using "The Deep-Sea Drilling Vessel, CHIKYU" at the Daini Atsumi knoll, located between Atsumi Peninsula and Shima Peninsula off the coast of Japan in March 2013. As a result, we were the first in the world to succeed at the continuous production of methane gas from an undersea MH layer (production continuing for six days; average volume: approx. 20,000 m^3 /per day; cumulative total volume: approx. 120,000 m^3*5).

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

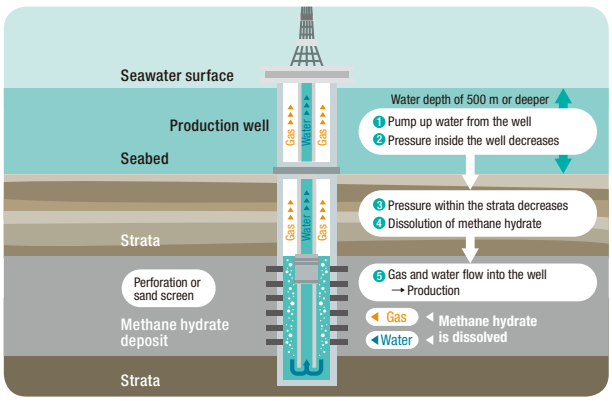
JAPEX's involvement

JAPEX was quick to recognize the potential of MH and provide technology, experience and knowhow cultivated in oil and gas development to Japan's MH development and R&D. We will continue to participate in the development of MH as a clean energy resource in Japan. JAPEX will continue to participate in the development of MH as a clean energy resource in Japan.

Scientific drilling ship, "CHIKYU" Source: JAMSTEC

Methane hydrate production testing
Source: Japan Oil, Gas and Metals National Corporation (JOGMEC)

Schematic of Depressurized Production Method



Based on a diagram from MH21 Research Consortium

Challenges for Geothermal Development

Geothermal power is one of the most reliable renewable energy sources. Geothermal power plants use high-temperature steam and hot water extracted from deep in the ground to generate electricity. Currently, there are geothermal power stations operating in 17 areas of Japan.

Geothermal power generation is an environmentally friendly power generation method with extremely low CO_2 emission. In addition, this generation method is stable. It can generate electricity continuously day and night regardless of weather conditions, and further development is, therefore, expected.

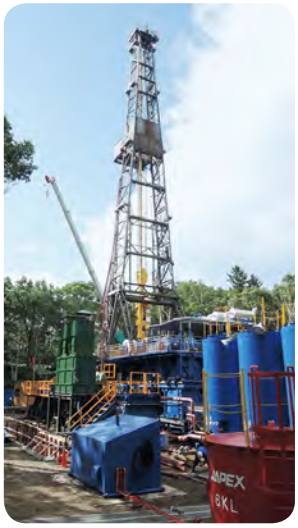
Since the Great East Japan Earthquake, there is much expectation for further geothermal development. In order to promote such development, the Japanese government has introduced various measures, such as 1) deregulation for development in national parks; and 2) establishment of FIT (feed-in tariff), a fixed-price trading system, which offers long-term contracts to renewable energy producers.

JAPEX has been conducting geothermal surveys in eastern Hokkaido since 1977 and identified the Musadake field, located in Shibetsu Town, as one of the most prospective areas. Subsequently, the New Energy and Industrial Technology Development Organization (NEDO), a government-related organization, has conducted geothermal development promotion surveys in various areas, including the Musadake field, in stages since fiscal 1994. This survey reconfirmed the existence of promising resources (formation temperature of over 280°C) in the Musadake area.

By utilizing the accumulated data, JAPEX has promoted geothermal surveys in this area, aiming for the development of geothermal power generation. In 2013, JAPEX drilled the first exploratory well (total depth of 2,383 m) and confirmed steam production. JAPEX is now drilling the second exploratory well (planned total depth of 2,000 m) in 2014.

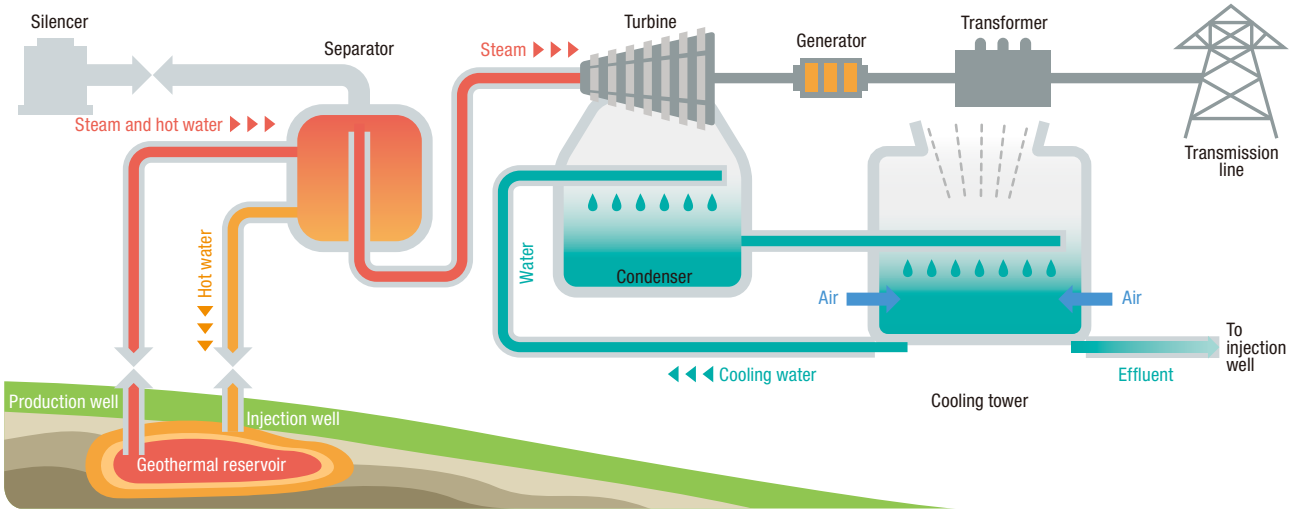
Moreover, JAPEX has been engaged in geothermal surveys in the Bandai-Azuma-Adatara field (Fukushima Prefecture), operated by a joint venture organization composed of 10 geothermal-related companies. At the same time, we are pursuing new geothermal potential in various areas, including in the Furebetsu-Dake-Minami area (City of Kushiro).


Mt. Musadake


Drilling rig at geothermal site


Fumarolic testing

Concept of Geothermal Power Generation



CCS Technology

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 it permits reductions in the large amount of CO_2 produced from burning fossil fuel safely and immediately.

Recovered CO_2 can be stored in aquifers, depleted oil and gas reservoirs and coal beds that lie more than 1,000 m 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. This amount is equivalent to 100 years of CO_2 emissions in Japan.

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

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

Advanced and integrated technologies

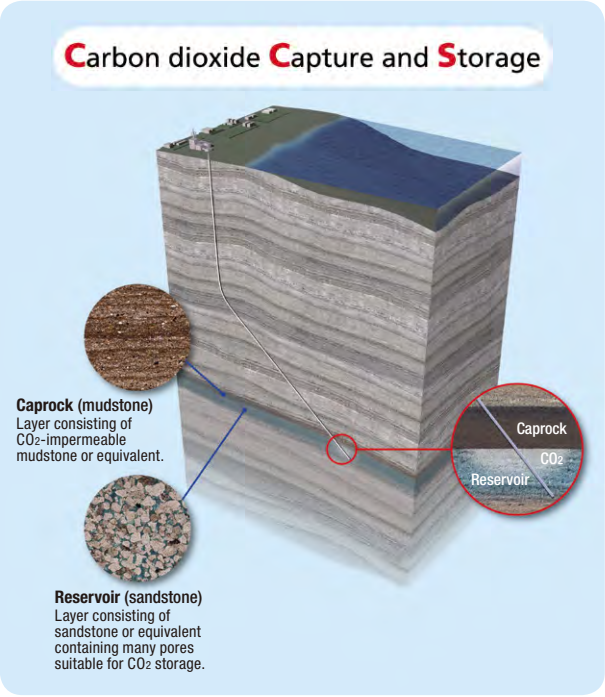
JAPEX has advanced and integrated technologies, accumulated over half a century through oil and gas exploration and development in Japan and overseas. In oil and gas development, we are using advanced technologies to estimate underground structures and rock properties, to drill in a range of several 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 key to the development of CCS.

Demonstration tests

The Basic Energy Plan, approved by Japan's cabinet in April 2014, calls for research and development in CCS with a view to commercialization by around 2020. The objective is to establish an environment for the efficient and stable use of fossil fuels.

JAPEX began preparing for CCS in 2002, and established Japan CCS Co., Ltd. (JCCS) jointly with private companies in May 2008. Japan's Ministry of Economy, Trade and Industry (METI) commissioned JCCS to conduct a CCS demonstration test in Tomakomai City, Hokkaido from April 2012. JCCS is currently making preparations for injecting CO_2. JAPEX was contracted to undertake part of this demonstration project. By supporting JCCS, JAPEX is working to establish the technologies that will lead to the commercial application of CCS.

METI has a plan to commence CO_2 injection for subsurface storage from April 2016. Two observation wells to monitor the CO_2 storage conditions, as well as engineering work to construct the facilities required for CCS, were completed for this purpose by JCCS in 2013. JCCS is also installing monitoring equipment required for investigating environmental changes before and after injection. JAPEX has been contracted to drill the two aforementioned observation wells and conduct a reservoir simulation study with JCCS. The purpose of this simulation study is to confirm that the injected CO_2 can be stored under stable conditions for a long period of time in the reservoir. JAPEX also conducted analyses of rock and fluid samples from the wells, and the findings from such analyses are being utilized to improve the accuracy of the simulations.



Schematic of CCS Source: Japan CCS Co., Ltd.

Solar Power Generation

Solar power generation is an environmentally friendly power generation method with extremely low CO_2 emissions. Solar-power plants with a scale for more than 1,000 kW are called as “mega-solar power plants.”

JAPEX will operate two mega-solar plants: one on unused land occupied by our Hokkaido District Office, and another on a neighboring site. Tomakomai, where the sites are located, is a suitable location for solar power generation, with good conditions and minimal snowfall. For the mega-solar power plant on the neighboring site, JAPEX established Solar Power Tomakomai Co., Ltd., a joint venture with Sumitomo Corporation (20% investment by JAPEX).

Mega-Solar Power Generation Project

	Hokkaido District Office	Solar Power Tomakomai Co., Ltd.
Generating capacity	1,800 kW	13,000 kW
PVC panels	2,400 kW (14,000 panels)	15,200 kW (62,000 panels)
Output	2,500,000 kW/annum	16,000,000 kW/annum
Operation commencement	August 2014	December 2014

Solar panels (Solar Power Tomakomai Co., Ltd.)

Hokkaido District Office’s mega-solar power plant site

Biogas

Biogas is an environmentally friendly renewable energy source. It is a combustible gas consisting mainly 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 a biogas refining and compression plant at a municipal landfill site in Taiyuan, Shanxi Province. The plant supplies raw material for natural gas used in automobiles, as well as for town gas.

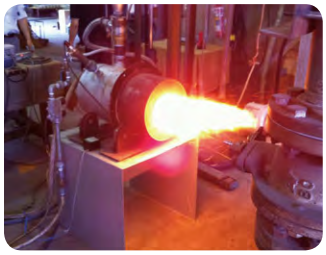
This project, which effectively uses waste to generate biogas, has received high acclaim from both local and central governments in China.

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. (SKE) has submitted a proposal suggesting the introduction of wood powder as the main source of fuel for cities and towns in Niigata and Akita prefectures, based on the thinking that proliferation of local renewable energy would reduce the environmental burden and contribute to the local economy. SKE has already conducted a feasibility study on the adoption of wood powder by public facilities, as well as demonstration tests, and has formulated a basic plan for a wood powder system. SKE is currently working with interested parties on the adoption of the system.



Wood powder boiler

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

HSE as our culture

By using its HSE Management System (HSE-MS), JAPEX fosters a corporate culture that places top priority on occupational health and safety and environmental protection.

HSE Management System

Full-scale Launch of HSE-MS in Japan

On January 1, 2014, JAPEX began operation of its HSE-MS in Japan. The system encompasses and integrates existing systems/activities related to safety, environmental protection, and health. Our revised HSE policy on occupational health and safety and the environment came into effect on the same day. Each worksite will independently establish and carry out activities annually based on this policy.

Initiatives during HSE-MS trial period (July 1 – December 31, 2013) and future approach

JAPEX produced HSE-MS manuals and took various other preparatory measures during this period. The management system is implemented using the PDCA cycle. All personnel involved in HSE activities and all employees are required to apply the system as appropriate in the context of the system the acronym PDCA stands for “Plan,” “Do” (implement and operate), “Check” (examine and take corrective measures), and “Act” (conduct management review).

To achieve this, we held intensive in-house education programs to familiarize all employees with the system. In addition, we held seminars and training sessions at JAPEX’s headquarters, as well as each district office and production site, and provided training to internal HSE-MS auditors. As this in-house education program is an important element of the HSE-MS, we plan to continue providing the program next year and in the future. We have also distributed a handy HSE-MS pocket guide to employees in Japan so that they can refer to the HSE policy and HSE-MS items to be implemented whenever necessary.

We are aware that more work needs to be done in this area. Therefore, we plan to integrate the Japanese HSE-MS manual with the manual for the Environmental Management System (EMS), for which we have already acquired certification. We will also simplify the corporate HSE-MS, and add standards and guidelines to HSE-MS documents.

JAPEX

HSE POLICY（労働安全衛生・環境方針）

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

January 1st, 2014

Osamu Watanabe
President, Japan Petroleum Exploration Co., Ltd

ジャペックスは、事業活動においてHSE(労働安全衛生・環境)を最優先課題と位置づけ、労働安全衛生の維持、環境の保全に取り組むことを宣言します。

この宣言の実現のために、以下の取り組みを実施します。

- 適用される全ての法律・規則を順守します。
- 事故災害のない職場づくりのために、安全で衛生的な労働環境を提供します。
- 従業員に対し、適切な医療支援を実施します。
- 業務実施に当たって想定される危険源を特定・評価し、関連するリスクを統制します。
- 従業員が衛生的かつ安全に働けるよう訓練を実施するとともに、環境保全に対する意識の向上を図ります。
- HSE 活動状況を定期的に見直し、HSEへの取り組みを継続的に改善します。
- 廃棄物及び原材料、燃料、エネルギーの削減に努めます。
- 事業活動に伴う環境負荷を最小化し、環境汚染の予防に努めます。
- 本方針に従った HSE の管理を請負業者に求めていきます。

本方針は、総合的な管理手法として不可欠な、HSE マネジメントシステムを適用して実施します。

石油資源開発株式会社
代表取締役社長

HSE POLICY

Message from Executive Officer in Charge of HSE Department

Well-organized HSE activities

To date, JAPEX has carried out HSE activities based on the dual perspectives of mining safety activities and the environmental management system. Following their integration into the HSE-MS launched in January 2014, HSE activities at JAPEX have entered a new phase.

Until recently, JAPEX’s business activities had been conducted mainly in Japan. However, this has changed with the enhanced focus of our operations overseas and our participation in large-scale projects outside the country. In the course of their work, team members at all of JAPEX’s worksites receive support from shareholders, people from foreign countries and regions where projects are based, business partners, and subcontractors. Going forward, we will continue valuing ties with one another with safety, well-being, and environmental protection assuming top priority. This approach underpins our daily business activities and creates and fosters our new HSE culture. We would like to give back to everyone the benefits we obtain through this process.

Our relationships based on trust with various stakeholders are a valuable asset, and we will carry out HSE activities as we continue striving for the sustainable growth of JAPEX.

Junichi Matsumoto
Executive Vice President & Executive Officer

HSE as our culture

Operation of the HSE-MS

JAPEX began operating its HSE-MS in Japan in January 2014. This launch marks the completion of a framework for the operation of HSE management systems worldwide under our corporate HSE-MS.

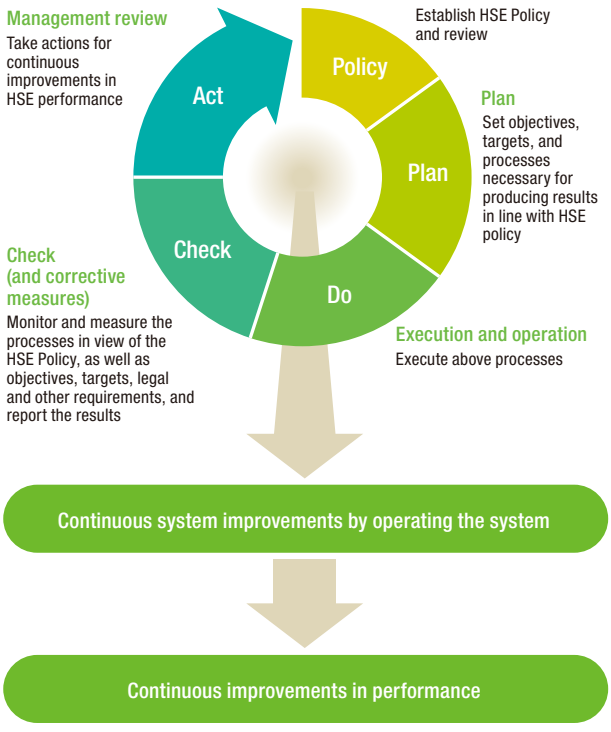
When preparing the HSE-MS manual for our operations in Japan in fiscal 2014, we added the “Health” and “Safety” aspects to the “Environmental Management System” guidelines. We also made sure that the manual complied with our corporate HSE-MS, international standards such as ISO 14001*1 and OHSAS 18001*2, and the Guidelines for Occupational Health and Safety Management Systems published by the Ministry of Health, Labour and Welfare. We have linked all existing procedures and documents to the manual.

We plan to continuously improve the contents of the corporate HSE-MS manual so that we can use it as a global template. Improvements to the manual will not only reinforce the HSE-MS of overseas project companies, but will also lead to improvements in our domestic HSE-MS. Therefore, we will work actively to make enhancements in order to create an effective system.

*1 ISO 14001: An international standard for environmental management systems. In addition to legal compliance and reduction of environmental risks, it outlines important environmental management items that must be continuously undertaken to protect the environment through efforts to achieve environmental targets and objectives.

*2 OHSAS 18001: An internationally recognized standard for building occupational health and safety (OHS) management systems. Its objectives are to prevent OHS-related risks, enhance the welfare of workers, and improve the efficiency of the organization.

PDCA Cycle of HSE-MS



HSE-MS Audits

Conducting safety audits of oil and gas fields in Japan is not mandatory by law, but JAPEX performs voluntary safety audits as one of its routine business practices.

The basic concept behind voluntary safety activities is to prevent accidents by requiring each operator to ensure safety in accordance with on-site conditions.

JAPEX recognizes the importance of voluntary safety activities. We strive to reinforce voluntary safety while making continuous improvements. Holding voluntary safety audits is an effective way to realize continuous improvements. Safety audits are carried out once a year to check compliance with a variety of safety-related items. The audits examine safety management systems as prescribed by mining safety regulations, safety committees, safety promotion activities based on safety policies, risk assessments, safety education, and emergency response measures. The audits also check the safety records of mining license holders, and assess and review both general and safety measures that such license holders should have in place.

JAPEX will continue carrying out HSE-MS audits as part of its HSE-MS for Japan, which was launched on January 1, 2014.

HSE-MS audit in progress (Sarukawa field)

Safety Education

JAPEX provides employees with safety education by adhering to a list of competency requirements. They include statutory and voluntary qualifications for safety managers and operation supervisors, voluntary qualifications for mining field workers, and guidelines covering planned participation in various seminars and workshops. In order to secure qualified employees, we have an incentive scheme that rewards employees who have obtained specific qualifications.

LNG fire-fighting drill

Frequency of Accidents (Units)

	Cases of physical injury	Frequency rate*1	Severity rate*2
FY 2013	0	0	0
FY 2014	1	0.8	0.1

*1 Frequency rate: Number of injured persons per million working hours
*2 Severity rate: Number of working days lost per million working hours

HSE-MS for Overseas Projects

Each project company abroad establishes and implements its own independent HSE-MS to meet its national and regional requirements according to the basic corporate HSE-MS.

JAPEX conducts audits to make sure that the HSE-MS of each project company conforms to the corporate HSE-MS, as well as its own HSE-MS. Each person in charge of HSE acts as the contact person during the audit, and an annual meeting is held at the head office to share issues and information among peers.

Up to fiscal 2013, we held annual management reviews of HSE activities. From fiscal 2014, these management reviews are being conducted by our newly established Health, Safety, Security, Environment (HSSE) Committee in order to make continuous improvements to the system.

HSE Audits of the Oil Sands Project in Canada

JAPEX conducts annual HSE audits of overseas operator projects based on its corporate HSE-MS. In September 2013, we carried out an audit at the expanded Hangingstone development site operated by Japan Canada Oil Sands Limited (JACOS), headquartered in Calgary, Alberta.

The audit confirmed that road and site preparation work and the drilling work that had commenced at the just-completed well site complied with the enforced safety management system. The construction of facilities for the project is scheduled for completion in 2016. In line with this schedule, during the next fiscal year we plan to conduct an HSE audit of construction work on the central processing facility and the well pad facility.

HSE audit (JACOS)

Comment

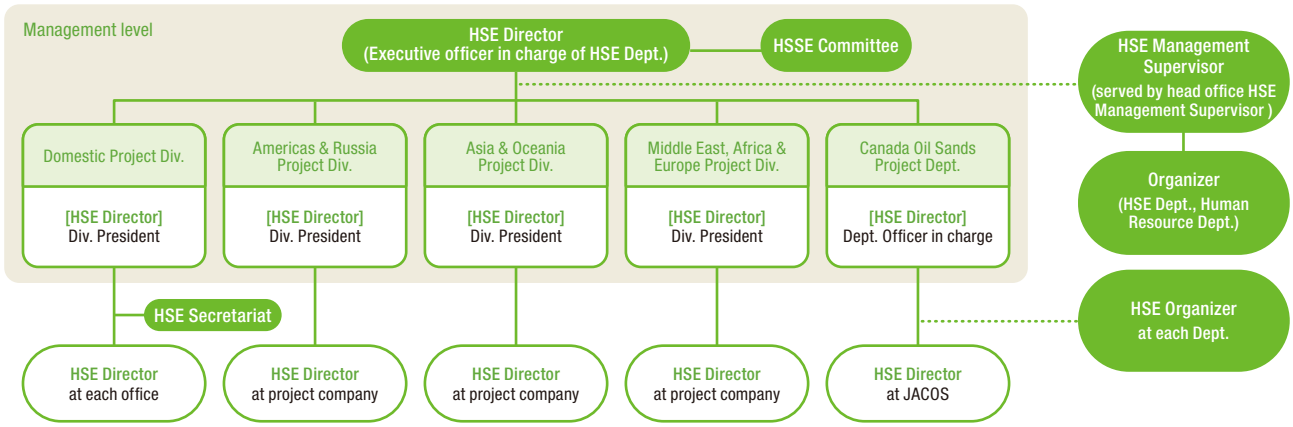
Attending an HSE manager meeting

In October 2013, I had the opportunity to visit JAPEX's headquarters to attend a meeting of overseas HSE managers. My time in Japan was an extremely valuable experience. I found the information provided at the meeting on HSE initiatives carried out by the JAPEX Group's overseas companies extremely interesting.

The visit to the Hokkaido District Office also left a deep impression on me. Thanks to the experienced employees who operate the plant, firsthand observation of work practices deepened my understanding and knowledge of HSE.

Dodo Taumahnw (second from right, front row)
SHE Coordinator
Kangean Energy Indonesia Ltd.
[At the Hokkaido District Office]

HSE-MS Structure



Crisis Management

Comprehensive Management by HSSE Committee

Previously, there were separate committees, including environment committees, that deliberated issues concerning HSE. In May 2013, we established the HSSE Committee, which is responsible for HSE and overseas security. The committee is tasked with formulating basic policy and plans concerning HSSE, monitoring progress, and conducting HSE-MS management reviews. By combining HSSE-related bodies into a single committee, we sought to realize comprehensive management while enabling decision-making without the need to consult with other deliberative organs.

We establish special committees as subordinate bodies to investigate specific topics, including the examination of individual issues and information gathering. When necessary, the system enables these committees to report to the chairman and members of the HSSE Committee without delay.

In the petroleum and natural gas exploration and development business, an accident can have an enormous impact on human life and the environment. Having introducing this system, we can now make decisions immediately on HSSE-related matters without having to defer to other important management matters.

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 formulate a “Manual of Initial Responses at Earthquake” to enhance systems to deal with risks.

Initiatives for Safe Work Practices Overseas

At JAPEX, the HSSE Committee is tasked with formulating basic policies on overseas safety and security and deliberating important matters. The Overseas Security Measures Special Committee, consisting of managers from relevant departments, gather information, make decisions on the advisability of sending employees overseas, and engage in other overseas security-related activities on a daily basis.

The Garraf project in Iraq presented the most serious risk to security among all of the Group’s overseas project sites. We sent investigation teams to Iraq on two occasions in May 2013 and in February 2014. The teams examined the situation regarding security and safety, and held discussions with PETRONAS (the project operator) on reinforcing security at the site. Since July 2013, the committee has prepared and made available weekly reports on the security situation in Iraq.

JAPEX has also participated in intensive seminars organized by Japan’s Ministry of Foreign Affairs. We have also held discussions with other companies on the subject of overseas security.

Main Overseas Security Measures

Activity	Frequency	Remarks
HSSE Committee (on overseas security-related issues)	3 times	
Discussions by the Overseas Security Measures Special Committee (discussions concerning sending employees overseas)	105 times	Includes discussion papers
Same as the above (other issues)	5 times	(In relation to Garraf)
Investigation team sent to Garraf to look into the security situation there	2 times	
Intensive seminars on overseas security for public- and private-sector participants	4 times	

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.

Environmental Protection Initiatives

Environmental Impact of Business Activities

Environmental Data (April 1, 2013 – March 31, 2014)

Input

Energy resources: Total 2,951.2 TJ
Water resources: Total 786,049 kl

Office	Exploration	Drilling	Production	Transportation
Energy resources 48.7 TJ*	Energy resources 2.5 TJ	Energy resources 265.3 TJ	Energy resources 2,112.3 TJ	Energy resources 522.4 TJ
Water resources 22,571 kl	Water resources 0 kl	Water resources 54,457 kl	Water resources 708,054 kl	Water resources 967 kl

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 when geophysical survey data are collected in the field

Major environmental loads at drilling stage:

- Fuels used for drilling machine operations
- Water used to make mud 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 (VOCs) 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 by road/rail

Office	Exploration	Drilling	Production	Transportation
Greenhouse gas 2,373 t-CO_2	Greenhouse gas 174 t-CO_2	Greenhouse gas 21,065 t-CO_2	Greenhouse gas 182,744 t-CO_2	Greenhouse gas 44,765 t-CO_2
Wastes 176 t	Wastes 0 t	Wastes 18,358 t	Wastes 3,017 t	Wastes 0 t
Waste water 22,571 kl	Waste water 0 kl	Waste water 68,397 kl	Waste water 925,129 kl	Waste water 967 kl

Output

Greenhouse gas: Total 251,121 t-CO_2
Wastes: Total 21,551 t
Waste water: Total 1,017,064 kl

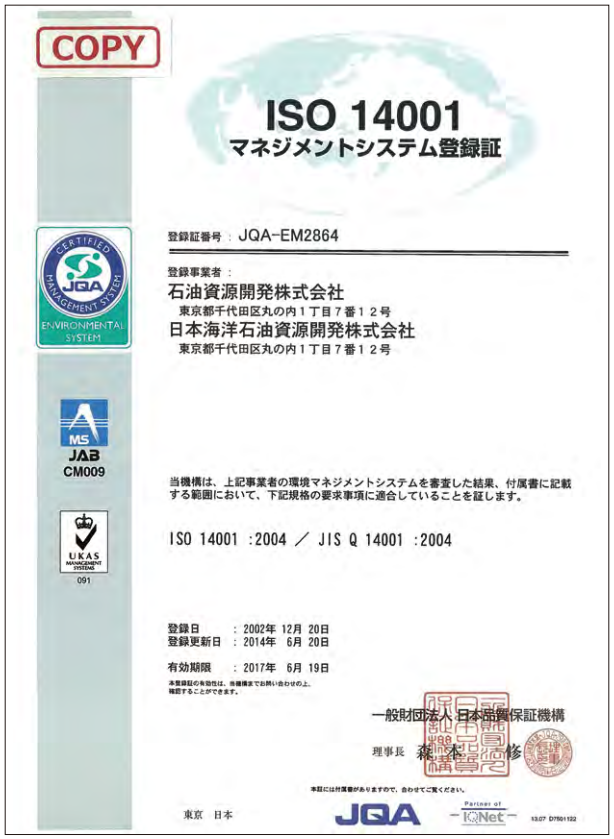
* TJ: Terajoule (10^{12}J)

Environmental Management System

To achieve the goals set out in its HSE Policy, JAPEX has introduced its own Environmental Management System (EMS). After the Sapporo District Office (currently the Hokkaido District Office) received ISO 14001 certification in 2002, all domestic offices—including the JAPEX Head Office and the Niigata District Office of its subsidiary, JAPEX Offshore Ltd.—individually adopted the EMS by 2005.

In 2009, the systems for each office were integrated into one system, and instead of individual ISO 14000 certifications, JAPEX received companywide certification.

The integration of EMS into the HSE Policy has made it easier to understand and more efficient to operate. Furthermore, all of the district offices and production fields are promoting environmental protection initiatives as one entity, such as by having the HSSE Committee, with top management as members. The Committee makes decisions on the contents of companywide environmental protection initiatives and conducts annual management reviews of EMS activities.


COPY

ISO 14001
マネジメントシステム登録証

登録証番号：JQA-EM2864

登録事業者：
石油資源開発株式会社
東京都千代田区丸の内１丁目７番１２号
日本海洋石油資源開発株式会社
東京都千代田区丸の内１丁目７番１２号

JAB CM009

当機構は、上記事業者の環境マネジメントシステムを審査した結果、付属書に記載する範囲において、下記規格の要求事項に適合していることを証します。

ISO 14001 :2004 ／ JIS Q 14001 :2004

登録日　：2002年 12月 20日
登録更新日：2014年 6月 20日
有効期限　：2017年 6月 19日

一般財団法人 日本品質保証機構
理事長 森本 修

東京 日本

ISO 14001 certificate

Initiatives to Protect Ecosystems

Mt. Musadake geothermal survey

In 2013, JAPEX began an environmental impact survey in parallel with a drilling survey of a structural exploratory well in the Musadake area in Shibetsu Town, Hokkaido. The aim is to develop geothermal power generation at the site.

We conducted a botanical survey, birdlife survey, and a survey on the behavior of brown bears. The botanical survey looked at native vegetation requiring protection at the survey site and surrounding area. The survey found that no native plants required protection. The survey on birdlife investigated the habitats of the Blakiston's fish owl—a national natural treasure—as well as birds of prey and other birds. The survey found that the geothermal survey would have a limited impact on the Blakiston's fish owl and other rare species. The brown bear survey investigated the habitats and behavioral patterns of brown bears. It concluded that further investigation is required when the decision to go ahead with the development project is made.


Japanese crane

Japan Canada Oil Sands Limited (JACOS)

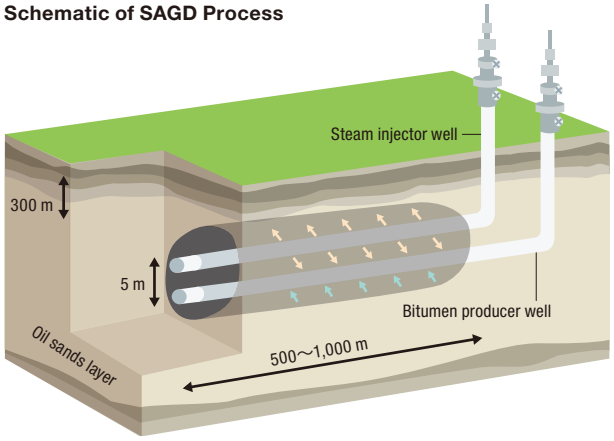
A reindeer called the woodland caribou inhabits the area near the Hangingstone lease where JACOS is engaged in oil sands development. The woodland caribou is designated an endangered species, and human activities and forest fires have affected around 80% of its native habitat. Protecting the caribou's living environment, therefore, has become a matter of urgency. JACOS has established the Caribou Mitigation and Monitoring Program. The program aims to ensure that oil sand development has minimal impact on the woodland caribou's habitat. It is implemented jointly with the local community with the aim of restoring habitats that have already been destroyed.


Caribou Source: Chris kolaczan/Shutterstock.com

Oil Sands Development by Environmentally-Friendly SAGD Method

JACOS has oil sands leases in the Athabasca region of Alberta, Canada. While open-pit mining was the predominant method in that region, JACOS engaged deeply in developing technology based on the Steam-Assisted Gravity Drainage (SAGD) method and has been producing bitumen using that method since 1999. SAGD is an in-situ extraction method to produce bitumen through wells, as crude oil is produced in conventional oil fields. In contrast to open-pit mining, which excavates wide areas of land, this process has less impact on the environment. Since 2000, production volume using SAGD has been increasing rapidly in Alberta, and production using in-situ bitumen recovery methods, including SAGD, surpassed that of the open-pit mining method in 2012.

Schematic of SAGD Process



Canada oil sands production plant

HSE Activities in the Kangean Project

At the Kangean Block in Indonesia, Kangean Energy Indonesia Ltd. (KEI) has production operations at the Pagerungan gas field and the Terang gas field, which is part of the TSB gas field currently under development. We use floating production units to obtain gas from the Terang gas field.

Under the supervision of regulatory agencies and in accordance with earlier environmental impact assessments, we ensure that our operations place as minimal a load as possible on the environment. We have received a rating from the Indonesia's Ministry of Environment that indicates we are complying with the relevant laws and regulations.

Through the preparation of an HSE manual, as well as frequent meetings and training sessions, we have made sure that employees understand the importance of HSE. Thanks to these efforts, our employees pay the utmost attention to environmental measures and safety. As a result, in the 24 years from January 1990, we have not had a single accident at the Pagerungan gas field. Our safety initiatives have earned high praise from the Ministry of Manpower and Transmigration and the East Java state government, from whom we have received commendations.

In March 2014, JAPEX received a "Best Performance of Financial Reporting & Compliance 2013" award from the Special Task Force for Upstream Oil and Gas Business Activities of the Republic of Indonesia. The awards are presented to six companies engaged in petroleum operations in Indonesia with the highest scores when assessed against two criteria: (1) financial performance, and (2) business processes and corporate conduct.

Going forward, we will continue production and development activities at our oil and gas fields, with environmental-friendliness and safe operations as the most important considerations.

A floating production unit

Pagerungan Island and production facilities

Initiatives to Tackle Global Warming

JAPEX's Greenhouse Gas Emissions

Greenhouse gases emitted through our business operations can be categorized as follows (see figure below).

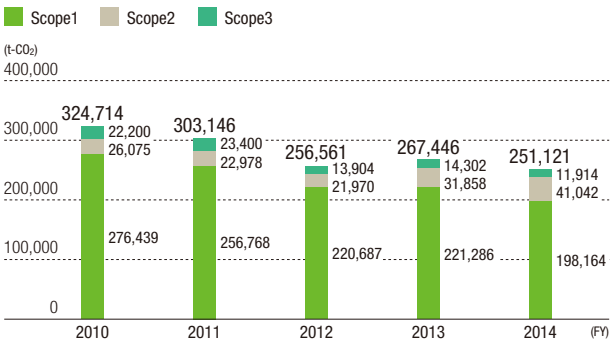
a. Greenhouse gas emissions from the use of fuels and electricity

b. Greenhouse gas emissions from separation and removal processes of carbon dioxides contained in natural gas

c. Greenhouse gas emissions from production tests, maintenance works of production facilities, and pipeline replacement works

With respect to greenhouse gas emissions (excluding Scope 3), the Company emitted 239,000 tons of carbon dioxide in fiscal 2014, down 15,000 tons (6%) from fiscal 2013. Within this total, we emitted 158,000 tons of carbon dioxide from energy-related sources, down 3,000 tons (2%), and 81,000 tons from non-energy sources, down 12,000 tons (13%).

Transitions in Greenhouse Gas Emissions



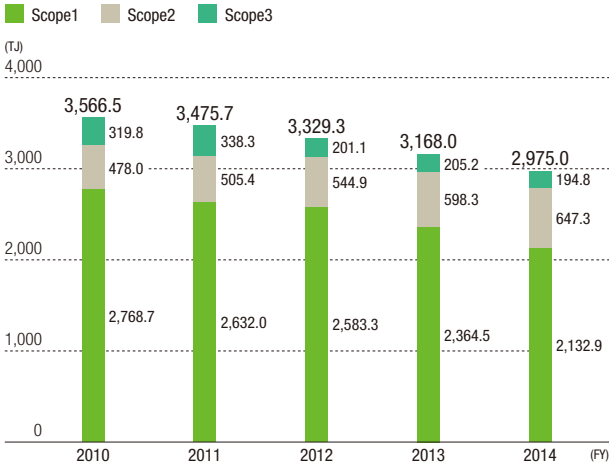
Promotion of Energy-Saving Activities

With assistance from consultants related to energy-saving since 2011, we have been working in various ways to comply with the revised Act Concerning the Rational Use of Energy (Energy Conservation Act).

While readjusting our systems in the medium to long terms in conformity with the revised Energy Conservation 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 our offices, we turn office machines off when not in use, lower room lighting intensity, and switch off room lighting and PCs during lunch hours.

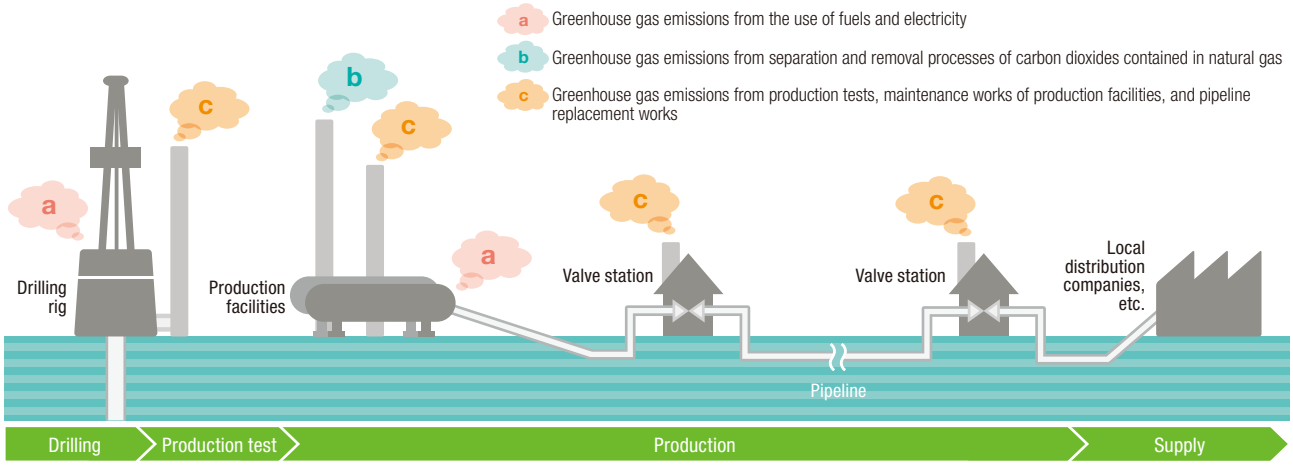
Energy Consumption Trends



The calculation and reporting of greenhouse gas emissions and energy consumption are made for each scope of the Greenhouse Gas Protocol Standards. Internationally, the Greenhouse Gas Protocol is the most common set of standards used to calculate and report greenhouse gas emissions.

- Scope 1: Direct emissions of greenhouse gases from a company from the use of fuel and processes
- Scope 2: Indirect emissions of greenhouse gases from the use of electricity or heating supplied by another company
- Scope 3: Other indirect emissions from company's contracting of transportation services for the company's products

Emission Mode of Greenhouse Gas in Our Production Processes



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. 7.6 ha
Planting period: 3 years from 2006
Number and type of trees: approx. 11,000 saplings of needle-leaf trees (Sakhalin spruse 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. 4.5 ha
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: 11.9 ha (of which 4.9 ha is for afforestation and 7.0 ha 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. 6.4 ha
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 Yuri Forest

JAPEX Jomon Forest

Measures to Prevent Global Warming (Initiatives Based on KEIDANREN's Voluntary Action Plan)

From 2008 to 2012, JAPEX participated in KEIDANREN's Voluntary Action Plan through the Japan Petroleum Development Association. With efforts by members of the Association to reduce greenhouse gas emissions and the credit obtained from the Bio-Carbon Fund, we have achieved KEIDANREN's goal of a 20% reduction in the amount of greenhouse gas emissions from mining facilities compared with 1990 levels. From 2013, we have participated in the Low-Carbon Society Execution Plan, a new voluntary action plan formulated by KEIDANREN in December 2009. Under the new plan, we will strive to further reduce greenhouse gas emissions by 2020. We will continue implementing measures to prevent global warming, such as the promotion of CCS, energy conservation, and reduction of abandoned low-pressure gas.

Reduction of Environmental Impact
(Pollution Prevention, Resource Recycling)

Reduction of VOC Emissions

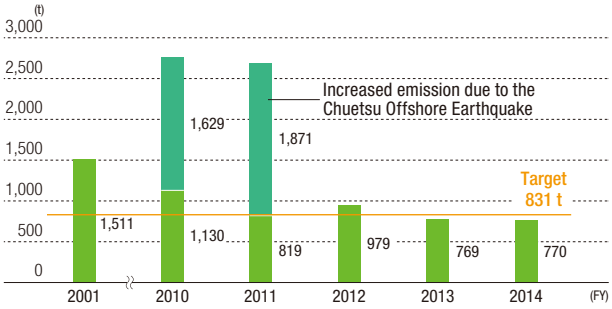
Volatile Organic Compounds (VOCs) are said to be the causative agent of suspended particulate matters (SPMs) and photochemical oxidants in the atmosphere. VOC emissions are being controlled by employing a best-mix approach with respect to which synergistic effect is expected, appropriately combining 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 Pollutant Release and Transfer Resiger (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 a voluntary action plan and making efforts as an industry to control VOC emissions with the goal of 45% reduction in fiscal 2011 compared with 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, due to the completion of a VOC mitigation facility, 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 compared with coal or oil, but also releases very little nitrogen oxides, which produce photochemical oxidants, and sulfur oxides, which causes acid rain. This is because it does not contain sulfur or nitrogen compounds. We actively promote the use of natural gas, and 66% of the energy used (mainly from production fields) comes from gaseous fuel, such as natural gas. On the other hand, 10% of the energy used (mainly from the drilling activities) comes from liquid fuels, such as light and heavy oils. As shown in the table below, all the emissions from the machines used in the production sites are below the regulation standard limits.

Results of Emission Readings

Machinery*1		Measurement item*2			
		Particulate concentration		Nitrogen oxide concentration	
		g/Nm³		ppm	
		Reading	Standard	Reading	Standard
Yufutsu plant	Boiler	<0.006	0.1	140	150
	Gas turbine	<0.009	0.05	55	70
	Gas engine	<0.007	0.05	550	600
Yufutsu LNG plant	Boiler	<0.01	0.1	79	150
	Gas turbine	<0.01	0.05	63	70
Yoshii site	Gas engine	<0.005	0.05	42	2,000
Shiunji site	Gas engine	<0.0044	0.05	260	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 Act *3 JAPEX Offshore Ltd.

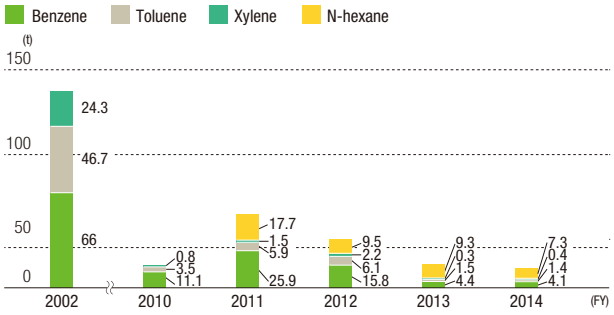
Reduction of Chemical Substances

PRTR is a system to collect and disclose 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 due to the revision of the law, which are produced during gas processing as well as vapored 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 sites. Repair were completed in October 2011, and emission volumes have improved steadily since then.

Changes in Emission Volume of PRTR Class 1 Chemical Substances



Waste Reduction

We are doing our best to collect, separate and recycle our waste by working closely with waste disposal companies. All the industrial waste 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 waste from our business activities, and to reduce general waste from offices. As for some of the oil waste 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 waste may be recycled.

In addition to having each office separate its waste, 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. Other collected items are dissolved in a high-temperature furnace and reused as industrial gas, raw materials, construction materials and the like after being separated into gas, sulfur, mixed salt, metallic hydroxides, metals and/or slag.

Waste Generation by Operations in FY 2014 (Unit: t)

	General waste	Industrial waste	Total
Office	73	103	175
Exploration Div.	0	0	0
Drilling Div.	0	18,358	18,358
Production Div.	29	2,988	3,017
Transportation Div.	0	0	0
Total	102	21,449	21,551

Environmental Information Management System: “Together”

Compiling data on the environmental impact of our business activities is an enormous and very complicated operation. This is because our many different divisions—including the exploration, drilling, production, and transportation divisions—as well as each district office and production site, obtains and manages their own data. Moreover, errors can arise when collating data, and the collation process itself cannot be performed quickly. To solve these problems, JAPEX developed an environmental information management system, called “Together.” In July 2007, the system was fully launched, enabling us to speedily and accurately input, aggregate, and manage environmental load data.

The system’s key features are:

(1) Each office can easily input and output data using a Web browser

(2) All departments and divisions can share the various kinds of environmental load data in real-time

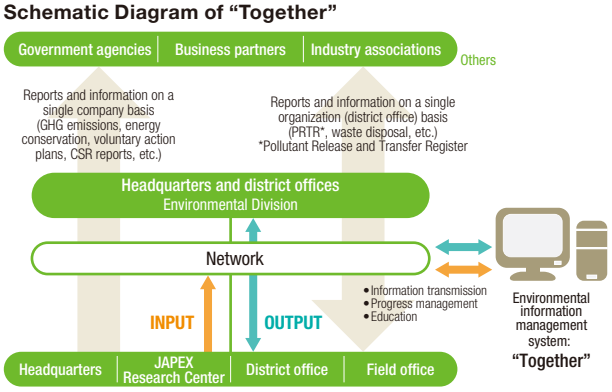
(3) Assured reliability of environmental load data

(4) All environmental load data managed in a single database

This system makes it easy to provide reports to government agencies and environmental information to business partners and industry associations we belong to. Moreover, we are now able to assess in real-time the benefits of our environmental initiatives.

We are constantly refining the system as appropriate to address changes in environmental laws and regulations and the addition of new substances targeted for regulation.

Schematic Diagram of “Together”



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 90 % 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 system 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 FY 2014 (Unit: kl)

	Tap water	Industrial water	Underground/ river	Total
Office	22,031	0	540	22,571
Exploration Div.	0	0	0	0
Drilling Div.	12,510	97	41,849	54,457
Production Div.	49,529	400,805	257,720	708,054
Transportation Div.	967	0	0	967
Total	85,038	400,902	300,109	786,049

Effluent by Operations in FY 2014 (Unit: kl)

	Sewage	Pit-water reuse	Underground injection	Release/ evaporation	Total
Office	22,031	0	0	540	22,571
Exploration Div.	0	0	0	0	0
Drilling Div.	0	0	5,573	62,824	68,397
Production Div.	35,051	463,243	0	426,835	925,129
Transportation Div.	967	0	0	0	967
Total	58,049	463,243	5,573	490,199	1,017,064

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.

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 m 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.

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.

Wastewater processing

As for the drainage of the platform, water that may contain oil is processed using an 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 specialized body, confirming the compliance of the quality.

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 m per second and wave height of 18.4 m. 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 a check system to address 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 2014, 13,863kl 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 99.7%, respectively, in fiscal 2014.

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

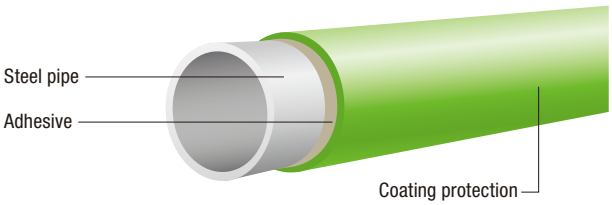
JAPEX uses high-tensile-strength steel pipes, which can withstand distortions and impacts and have a high safety record, in the construction of our natural gas pipelines. Designed to withstand major earthquakes, these pipes have demonstrated their reliability during the Miyagi Prefecture Off shore Earthquake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

Anticorrosion technologies

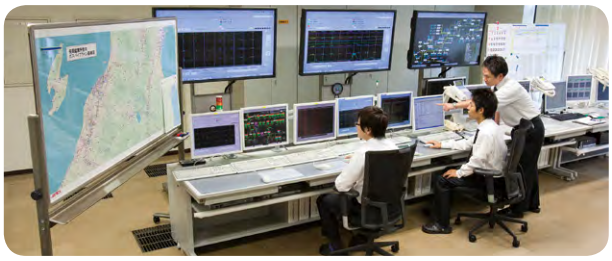
Our underground pipes are doubly protected by anti-corrosion coating and an electrolytic anticorrosion system. By these measures, they are protected from the risk of natural corrosion and have a virtually permanent life span.

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

Integrity and governance

JAPEX practices highly efficient and transparent management under its governance structure. In addition to complying with domestic and overseas laws and regulations and international standards, we respect human rights and meet the highest ethical standards.

Corporate Governance

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.

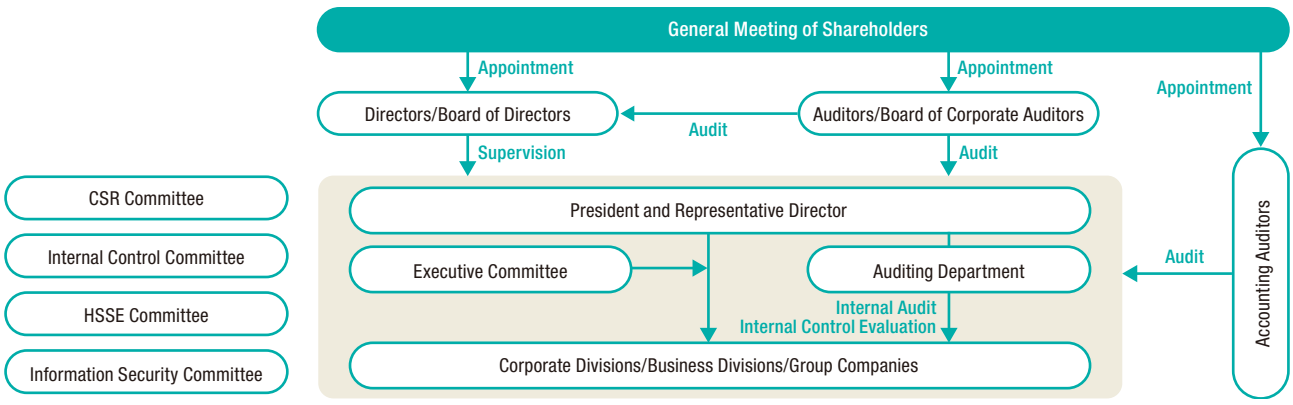
Remuneration for Directors and Corporate Auditors

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



Information Security

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

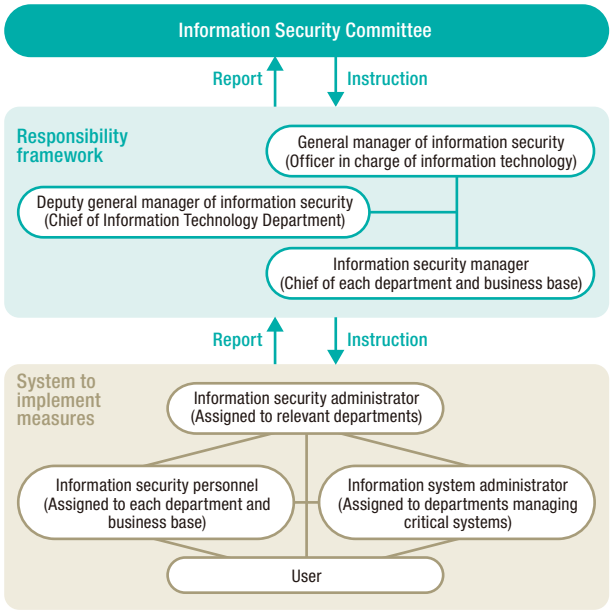
To this end, considering it important to establish the organization-wide system, we set up the Information Security Committee.

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.

Information Security Management System



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.

Voice

Ensuring that each employee maintains a high level of awareness

When organizing the meeting of the Information Security Council, we were careful to provide opportunities for information security personnel to learn more about their role and responsibilities. The meeting was much more than a briefing session, as we allocated time to discuss different aspects of information security, including the discovery of in-house risks and raising the awareness of personnel concerning information security problems. The 2013 meeting was very successful, despite it being the first. Each member demonstrated a good understanding of the relevant issues and engaged in meaningful discussions.

Naoki Kobayashi (center)
Information Technology Department

Compliance

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

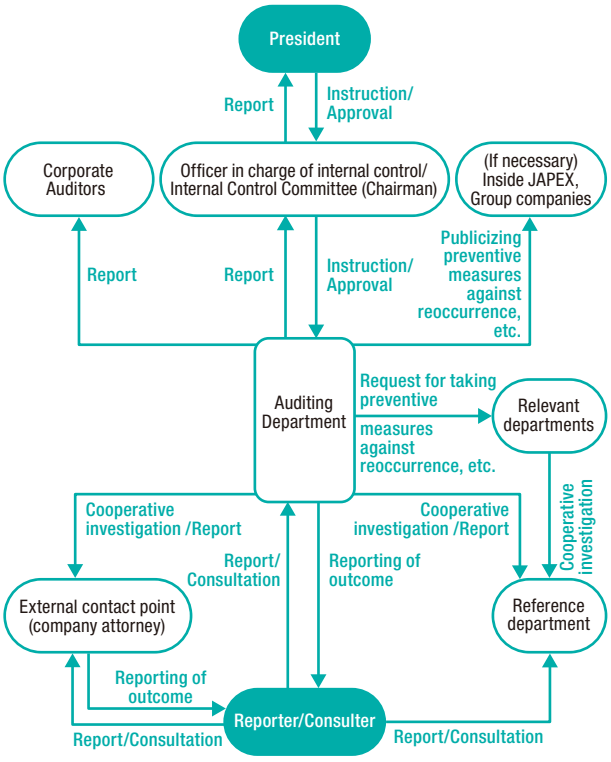
Internal contact point

The Auditing 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.)

External contact point

Mr. Katsunori Kitamura, JAPEX's company attorney

Diagram of Contact Point for Report and Consultation



Being a good Neighbor

As a corporate citizen, JAPEX endeavors to be a company that earns the trust of society through various contribution activities and continuous dialog with local communities.

Developing in Partnership with Local Communities

Responsible Canadian Energy Award Received (JACOS)

JACOS works actively to build cooperative relationships with the local people who live near its oil sands development project site in Canada. Continuous dialog with the local community not only gives residents a better understanding of JACOS's development project, but also promotes participation in, and assistance with, community events, social contribution activities, and employment opportunities. JACOS has formed an advisory group, known as the Aboriginal Review Group (ARG), made up of potentially impacted indigenous peoples. ARG shares knowledge and ideas on environmental preservation with JACOS and collectively provides input into JACOS's environmental monitoring operations and other initiatives.

In 2013, ARG held four meetings. Participants discussed programs for protecting wild animals with habitats near the project site and environmental monitoring. ARG also invited an expert on vegetation restoration to hold a workshop for the group.

In May 2014, the Canadian Association of Petroleum Producers*1 awarded JACOS and ARG the Responsible Canadian Energy Award*2 for their environmental impact survey and monitoring activities.

*1 Canadian Association of Petroleum Producers: The association represents roughly 90% of all petroleum and natural gas producers throughout Canada.
*2 Responsible Canadian Energy Award: Awards are given to members who demonstrate innovation and commitment to improvements as a means of enhancing the standing of the industry within society.

ARG members participate in a pre-land-disturbance ceremony

ARG and JACOS members at the award ceremony

Supply of Drinking Water (Garraf Project, Iraq)

In the Garraf Contract Area, there is one town with a population of more than 100,000 residents, and also there are about 30 rural villages in the surrounding area. Together with the operator, PETRONAS, we organize a variety of CSR activities with a central focus on the approximately 50,000 inhabitants of these villages. In light of the large number of inhabitants living under harsh conditions in the area, local communities have high expectations for CSR activities.

An initiative that we newly started from 2014 is the supply of drinking water to surrounding villages, in which people have limited access to clean water. There is strong demand for access to clean water in the area, along with road construction and education. In January 2014, we chartered a water tanker and began supplying water to seven villages. And since June, we started supplying drinking water twice a week to nearly all of the villages in the area by increasing the number of water tankers to three.

Water tanker supplies drinking water

Children gather around a water tanker

Supplying Electricity on Pagerungan Island, Indonesia

Kangean Energy Indonesia Ltd. (KEI) is involved in a variety of social contribution activities that help the population of around 6,000 people who live on Pagerungan Island. KEI has oil and natural gas production facilities on and around the island, which is located roughly 200 km north of Bali. For example, it supplies free electricity to islanders from the production facility's power generation plant and gives the island a fixed monetary donation every year. In 2013, KEI installed diesel power generation equipment and provided technical training to local operators, to ensure there are no power supply problems in the future, even after oil and gas production ends on the island.

Local activity (power plant supplies electricity)

As a Member of Local Communities

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. In addition to welcoming oil and gas field tours for local government bodies, businesses, and other organizations, JAPEX allows elementary school students to visit its facilities and conducts tours, lectures, and seminars to support senior high school and university students in their search for employment.

We also actively participate in local festivals. For example, our employees serve as dancers in the Tomakomai Port Festival in Tomakomai City, Hokkaido, and in the Kanto (bamboo pole) Festival in Akita City, we enter the parade carrying bamboo poles displaying the Company's logo. We also sponsor fireworks displays every year at the Nagaoka Festival in Nagaoka City and the Katakai Festival in Katakai, Ojiya City, Niigata Prefecture.

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.

Tomakomai Port Festival

Kanto Festival

Fireworks display at the Nagaoka Matsuri
Photo provided by the Nagaoka Matsuri Council

The Battle of the Giant Kites: Shirone

Traffic Safety Volunteer Activities

Volunteers from the Nagaoka District Office have been providing guidance to the school children on their way to their elementary or junior high school located near the office.

For 40 minutes from 7:00 a.m. on 3 days of the week, 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 Nagaoka District Office is working together with Geophysical Surveying Co., Ltd. to continue the initiative, which started in January 2011, as a JAPEX Group CSR activity for local communities. In the past three-and-a-half years, a total of 1,800 volunteers have participated.

The office was awarded the Kanto Traffic Safety Contributors Award in 2012 and the Niigata Prefecture Road Safety Governor Award in 2014 for this volunteer activity.

Children walking to school

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

Every year, Shirone Gas provides cooking classes to elementary school, day-care center, and kindergarten pupils in Tsubame City, Niigata Prefecture to teach children about healthy development.

The lessons are held in conjunction with the home economics curriculum for fifth- and sixth-grade elementary school children. They learnt how to handle gas appliances and cooking implements, and were taught about eco-friendly cooking methods and healthy dietary habits.

In the lessons given to pre-schoolers called “Visiting Lecture on Dietary Education: Let’s Make Rice Balls!,” the children were shown how to cook rice using a gas rice cooker and make onigiri rice balls.

Dietary education and cooking class for children

The children learned a lot while having a great time. Other fun activities included comparing soup stocks made from a variety of ingredients, and a game in which they used cooking utensils.

Supplying Gas to Disaster Victims

Iwaki Gas Ltd. has received requests for the supply of city gas to housing being built for residents affected by the Great East Japan Earthquake. Iwaki Gas is currently making preparations supply gas via pipeline in Iwaki City. In early 2015, the company plans to begin supplying gas to 200 homes built by the Fukushima Prefectural Government that will house residents forced to flee their homes because of the nuclear power plant accident. In fall 2015, it will start supplying gas to 190 homes built by the Iwaki Municipal Government for people made homeless by the 2011 earthquake and tsunami.

Fukushima Prefectural housing under construction

Coastal settlements in Iwaki City were completely destroyed by the huge tsunami, and the aftershocks that followed have caused serious damage to homes and social infrastructure. What is more, many people have sought refuge in Iwaki City due to the accident at the nuclear power plant.

As a local company that supplies city gas, Iwaki Gas is doing its utmost to help residents resume a stable lifestyle as soon as possible and contribute to the revitalization of the local economy.

Gas pipeline construction

Continuing Great East Japan Earthquake Restoration Volunteer Activities

In 2013, we once again invited 13 students from Shizugawa Junior High School in Minami Sanriku to take part in a softball camp with junior high school students from Akita. The purpose of the camp is to raise the spirits of children affected by the 2011 disaster. After taking part in joint trainings and playing softball games, all members had a bath together, cooked rice and made a curry dish for their evening meal. Members provided their own entertainment and had great fun getting to know each other.

Softball camp

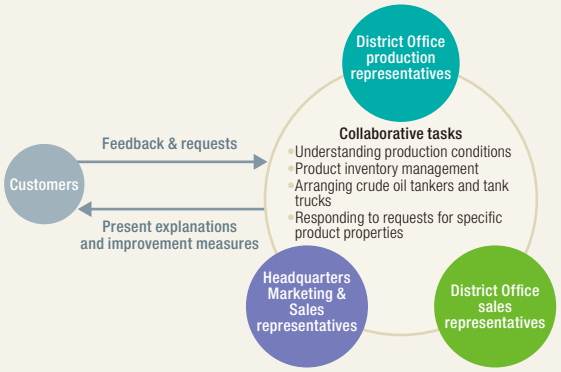
Building Good Relationships with Stakeholders

Working Together to Understand Customers' Needs

Representatives from JAPEX's headquarters and district offices work together to find optimal solutions that meet the various needs of customers. To give customers peace of mind when using our products, we not only strive to provide stable supplies and safety management, but we also focus on explaining the Group's products and business activities to customers. Such efforts include providing information and on-site tours of mines and facilities.

In seeking to supply products that meet with customer satisfaction, we respond to customer feedback by making prompt and appropriate improvements, as well as sharing information among the relevant offices and representatives.

Working Together on Crude Oil Sales



From the Perspective of a Headquarters Marketing & Sales Representative

Delivering products that customers can use with total peace of mind

Genki Ono
Marketing & Sales Dept. I
Marketing & Sales Division

Our customers have varying requirements related to delivery dates, quantities, product properties, and numerous other factors. A critical aspect of my job is to notify the sales and production representatives at our district offices about such requirements without delay. Equally critical is the need to make optimal arrangements involving all concerned parties so that our deliveries meet customers' requirements. For example, there is a list of conditions that must be met in order to meet a delivery date. They include obtaining up-to-date information on JAPEX's production levels, the amount of oil stored in tanks, constraints related to export ports and receiving ports, and sea conditions along oil tanker transportation routes. Even if we succeed in finalizing a plan by coordinating all the variables, it doesn't necessarily mean that we have met 100% of customer requirements. Still, by providing customers with highly accurate schedules and updating them on the situation, I make every effort to ensure that delivery is reliable.

From the Perspective of a District Office Production Representative

Delivering a stable product supply

Takanori Miyano
Production Management Group,
Technical Department,
Akita District Office

Production representatives at district offices like myself work together with production sites and district office sales staff on the quality control and shipment management of the crude oil we deliver to customers.

In order to respond to customer requests relating to crude oil quality, we work on quality control while working together with other representatives to expand and improve our production sites. To ensure optimal shipment management, we carefully adjust the timing of routine inspections of production facilities. To achieve stable shipments, we also share information on the current situation regarding production and production estimates for each well.

From the Perspective of a District Office Sales Representative

Understanding the needs of local customers

Yuya Uesugi
Sales Group,
Administration Department,
Akita District Office

As a district office sales representatives, I strive to meet the needs of customers. When a sale involves bringing a crude oil tank truck to our region, I endeavor to have deliveries made in accordance with a shipping schedule that best meets each customer's requirements. When shipments are made outside Akita Prefecture using oil tankers, I liaise with the sales representative at headquarters concerning the shipping schedule, while sharing information on the production situation with the district office production representative. Smooth shipments are the result of maintaining close contact with both customers and the various managers involved.

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.

Tours of the JAPEX Research Center for Shareholders

In December 2013, we invited shareholders to a tour of the JAPEX Research Center situated in Chiba City, Chiba Prefecture. We have held similar tours annually since 2007.

A total of 60 shareholders took part in the tour, which was held over a two-day period. Participants received a brief overview of JAPEX's main activities, while our frontline engineers explained cutting-edge technology. JGI, Inc. treated shareholders to a demonstration of geophysical exploration. Tour members also had the chance to experience artificial vibration caused by a vibrator truck.

An employee explains our business activities

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.

Informing Communities about Geophysical Surveys

We conduct geophysical surveys to investigate subsurface geological structures as the part of our oil and gas exploration activities. One commonly used geophysical method is the seismic reflection survey, which uses vibrator trucks as the source of artificial vibrations. We can get the image of geological structure by measuring reflecting waves from the subsurface. As the vibrator trucks cause vibration and noise in this work, it is important that we explain the survey to government agencies, locals, farmers and other related parties in the area before the survey.

In 2013, we conducted two seismic surveys in Niigata Prefecture. We visited more than 40 related parties and gathered various information, including agricultural activities and buried pipes under roads (to avoid damage), and we planned the survey to minimize the environmental impact.

We get the understanding and cooperation from locals for the survey by informing them the survey details in advance.

Explaining our work to a local organization

Vibrator trucks at work

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 2014, JAPEX, through industry groups, submitted a number of documents to the Agency for Natural Resources and Energy, such as a “Policy Request Submission,” “Budget Request Submission,” and “Tax System Submission.” Other activities directed at realizing the stable and inexpensive supply of energy included submitting a proposal on making the gas business more effective and efficient to the government committee charged with reforming Japan’s gas system.

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

Internship/Support for Foreign Engineers

Internship students are accepted at our business offices in Japan, JAPEX Research Center, oil and gas fields, and sites of geophysical survey by JGI, Inc. In fiscal 2014, we provided practical 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 22 students including 19 university (undergraduate and graduate) students, 1 high school student, and 2 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 the Japan Petroleum Development Association.


Student interns

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 2014 are shown below:

Major Commendations in FY 2014

National Award for Mine Safety	Excellent mines in safety
	Mishima Mine Nagaoka District Office of Domestic Project Division Mishima Mine
	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
	5 employees of JAPEX
Kanto-Koshin’estu Area Award from the Japanese Association for Safety of Hazardous Materials	Outstanding office
	Yoshii Mine, Nagaoka District Office of the Domestic Project Division
Award from the Indonesian government	Best Performance of Financial Reporting & Compliance 2013
	Kangean Energy Indonesia Ltd.

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.

The Employer of choice

As an organization that generates value through global business activities, we respect the importance of diversity in human resources. We aim to create lively workplaces where all employees can work safely and with peace of mind.

Diversity Promotion Activities

JAPEX works actively to be an organization that accepts and harnesses differences in attitudes, values, and behavior patterns based on gender, nationality, age and other attributes. We seek to create a framework that brings out the full potential of each individual employee. At the same time, we strive for diverse human resources through the recruitment of women, foreigners, and people with disabilities with the aim of enhancing the organization's performance.

In fiscal 2014, we invited a company that is a leader in the promotion of diversity to hold workshops and engage in discussions with female employees. We also bolstered measures to support female employees when they give birth and raise children to enable them to continue working. In addition, we have adopted an approach that respects and nurtures each other's individuality as a personnel evaluation item.

A workshop on diversity

Introduction of a "Management by Objective" System

JAPEX is reforming its system of human resources to create fair and rewarding workplaces.

To this end, we plan to introduce the "management by objective" system from 2014. In 2013, we designed the system, holding employee training sessions, and making other preparations.

The management by objective method invigorates communication between superior and subordinate and encourages an autonomous and proactive approach to achieving goals, with employees making a strong commitment to attaining their own challenging objectives. The system fosters individual skills and contributes to career development through activation of the PDCA cycle. The PDCA cycle confirms whether objectives have been realized, and where necessary provides support for improvements and early intervention.

A workshop on establishing objective management system

Training Courses for Employees Aimed at Overseas Business Development

Throughout 2013, with the aim of expanding the talent pool of people qualified to engage in overseas projects, we held more than 20 practical training courses on varied themes of commercial project management. The courses attracted a lot of participants from both the administration and engineering sections.

The courses featured experienced employees as instructors so as to pass on to the younger people their knowledge and experience acquired over a long time of service.

We hope that the courses would also offer a great opportunity for employees currently on domestic assignment to learn about international business.

Examples of course topics

- Sequence for acquisition of concessions
- Basics of English-language contracts and petroleum exploration development contracts
- Basic finance course
- Actual exploration data review
- Actual project promotion

The number of employees participating in training courses on overseas projects (total for fiscal 2014): 633

Voice

Taking JAPEX to the APEX

Today the world is being dominated by growing globalization and the energy needs are in rampant ascension. A strong human resource acquired with great expertise and a global insight, combined with intellectual skills, social skills, and personal traits, is indispensable for the growth and development of our organization. To help JAPEX smoothly sail through the precarious nature of the industry, we at the HR department wish to foster personnel who are ready to embrace a wide spectrum of skills and demonstrate their full capabilities. Together with a highly diverse and a motivated force of employees, we can bring out the APEX hidden in JAPEX.

Apurva Jain
Recruitment & Personnel Education Group
Human Resources Department

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.

Specialist and highly skilled positions

We clarify the roles of employees whose specialist knowledge and skills make a substantial contribution to our business. We also strive to reinforce our corporate competitiveness by putting in place environments that encourage such individuals to make full use of their expertise and skills. In conjunction with this system, we are focusing on fostering global leaders capable of pursuing next-generation business projects.

Career development and educational programs

For a long-term human resource development, cooperation between individuals and the Company is required. At JAPEX, we clearly indicate the image of personnel we seek, potential career paths, and competencies required for each job title. We will continue strengthening supportive systems so that individual employees can proactively shape their own careers.

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 emphasize effective human resource management by implementing periodical rotations and undertaking personnel changes for career development, including rearrangement of personnel in line with operational structure changes.

We will also strive to diversify human resources by, for example, employing women and foreign employees, while working to improve overall organizational performance.

Breakdown of Work Force

(JAPEX) As of March 31, 2014

	Male (persons)	Female (persons)	Total (persons)	Average age (years old)	Average length of service (years)
Employee	750	124	874	39.88	18.02
Temporary staff	—	—	173	—	—

(Consolidated) Unit: persons

Employees	Temporary staff
1,782	482

Management Position Ratios

(JAPEX) As of March 31, 2014

	Male (persons)	Female (persons)	Total (persons)	Percentage of women
Employees in management positions	317	10	327	3.1%

Recruitment

In recent years, we have employed approximately 30 new graduates annually. We endeavor to recruit outstanding graduates irrespective of gender or nationality. According to the expansion of businesses, we also hire mid-career employees through the year.

Due to unexpected retirements after December 2013 and other factors, the employment rate of people with disabilities fell to 1.57% as of March 31, 2014, below the statutory employment rate, which has been raised from 1.80% to 2.0%. In fiscal 2015, we will actively employ persons with disabilities in order to reach the statutory rate as soon as possible.

In fiscal 2014, JAPEX's job turnover rate (retirement for personal reasons/the total number of employees) was 0.98%.

Number of Employees Hired from April 2013 to March 2014

(JAPEX) Unit: persons

	New graduates			Mid-career staff			Total
	Male	Female	Subtotal	Male	Female	Subtotal	
Office	5	2	7	11	1	12	19
Exploration Div.	5	0	5	0	0	0	5
Development Div.	13	0	13	4	0	4	17
General Staff	0	2	2	0	0	0	2
Total	23	4	27	15	1	16	43

Changes in the Employment Rate of People with Disabilities

(JAPEX) As of end of March in each fiscal year

FY	2010	2011	2012	2013	2014
Employment rate (%)	1.65	1.53	1.89	1.75	1.57

* The rate at October 1, 2014 is estimated to be 1.98%.

Re-employment Rate (Includes Re-employment of JAPEX Retirees in Group Companies)

	At mandatory retirement age (persons)	Re-employed (persons)	Re-employment rate
FY 2012	16	14	87.5%
FY 2013	15	14	93.3%
FY 2014	19	17	89.5%

Number of Employees Hired over the Last Three Years and Employees Taking Retirement for Personal Reasons

(JAPEX) As of March 31, 2014 Unit: persons

	University & Graduate Schools		Vocational Schools		Total employed as of April 1	Retirees for personal reasons
	Career track	General staff	Career track	General staff		
FY 2012	23	0	8	0	31	2
FY 2013	20	0	7	3	30	0
FY 2014	22	0	3	2	27	0
Total	65	0	18	5	88	2

Communication with Labor Union

JAPEX has established a sound labor-management relationship based on mutual understanding and trust through ongoing, proactive communication between employees and management.

We discuss management-related issues, matters related to employees' safety, accidents and disasters, and verification of personnel systems with the labor union on a regular basis.

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.

In fiscal 2015, we will introduce a "management by objective" system. To make effective use of the system, we are encouraging employees to exchange opinions without hesitation and cooperate so the system will embraced by all employees.

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 up to third grade in elementary school (under three years old by law); paid nursing care leave of up to 5 days (10 days for two people or more), which can be taken by the hour, to care for children; a staggered office hours system, and accumulated vacation (up to 20 days) 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 93 days, reduced working hours for nursing care that can be taken within 365 days, paid nursing care vacation for up to 5 days (10 days for two people or more) that can be taken by the hour, a staggered office hours system, and accumulated vacation (up to 20 days). We also pay of 20% of an employee's salaries, as well as his/her social insurance premiums, during the period of nursing care leave.

Use of Supportive Measures for Childcare and Nursing Care

Category / FY		2010	2011	2012	2013	2014	Total
Childcare leave	(persons per year)	11	10	7	5	12	45
Reduced working hours for childcare	(persons per year)	9	15	16	16	18	74
Nursing care leave for children	(persons per year)	29	34	33	40	42	178
	(days per year)	97.0	110.0	106.5	97.0	137.0	547.5
Nursing care leave	(persons per year)	2	0	0	0	0	2
Reduced working hours for nursing care	(persons per year)	1	0	0	0	0	1
Days off for nursing care	(persons per year)	0	2	1	1	5	9
	(days per year)	0.0	5.0	2.0	3.0	19.0	29.0

Appropriate management and streamlining of working hours

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).

Number of Days of Paid Leave Taken (Includes Special Leave)

Category / FY	2012	2013	2014
Paid leave per year (days/person)	12.9	13.4	12.6
Uptake (%)	64.5	67.0	63.0

Mental Health Care

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

Line care seminar (for managerial staff)
The seminar was held for the purpose of recognizing something wrong with subordinates, and early responding to it.

Stress check (for all employees)
Individual employees underwent a stress check. For employees with unfavorable results, necessary measures were taken by specialized institutions.

Self-care seminar (for all employees)
The seminar was held to properly understand depression, and learn its precaution and how to cope with depression.

Online mental healthcare checks (for employees posted overseas and their dependents)
We have established a convenient system that enables employees posted overseas and their dependents to check their stress levels and mental health online. Where necessary, we provide a follow-up services that includes counseling.

The increase in the number of employees who are in their prime but have a mental health problem which would seriously affect the employees 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.

Welfare Program (Company Housing/ Dormitory)

JAPEX owns 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.

Employee dormitory in Kawasaki, Nagaoka City

JAPEX's Residences and Dormitories As of March 31, 2014

	General residence	Bachelor dormitory
Tokyo	100 households (Musashino city)	84 rooms (Chofu city)
Hokkaido	—	84 rooms (Tomakomai city)
Akita	—	85 rooms (Akita city, Yurihonjo city, etc.)
Niigata	29 households (Nagaoka city)	105 rooms (Nagaoka city, Niigata city, etc.)

* In addition to the above, we provide rental Company housing close to each business facility.

Voice

Care for employees' health

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. Our mission as industrial health staff is to offer support for employees in such conditions, enabling them to live healthy lives and prevent any deterioration in their well-being due to health concerns.

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 care-based activities in cooperation with industrial doctors and relevant departments aimed at enhancing the mental and physical well-being of "Team JAPEX."

Takae Kawamura
Health nurse
Healthcare Office of Headquarters

Human Resource Education – Career Development and Educational Programs

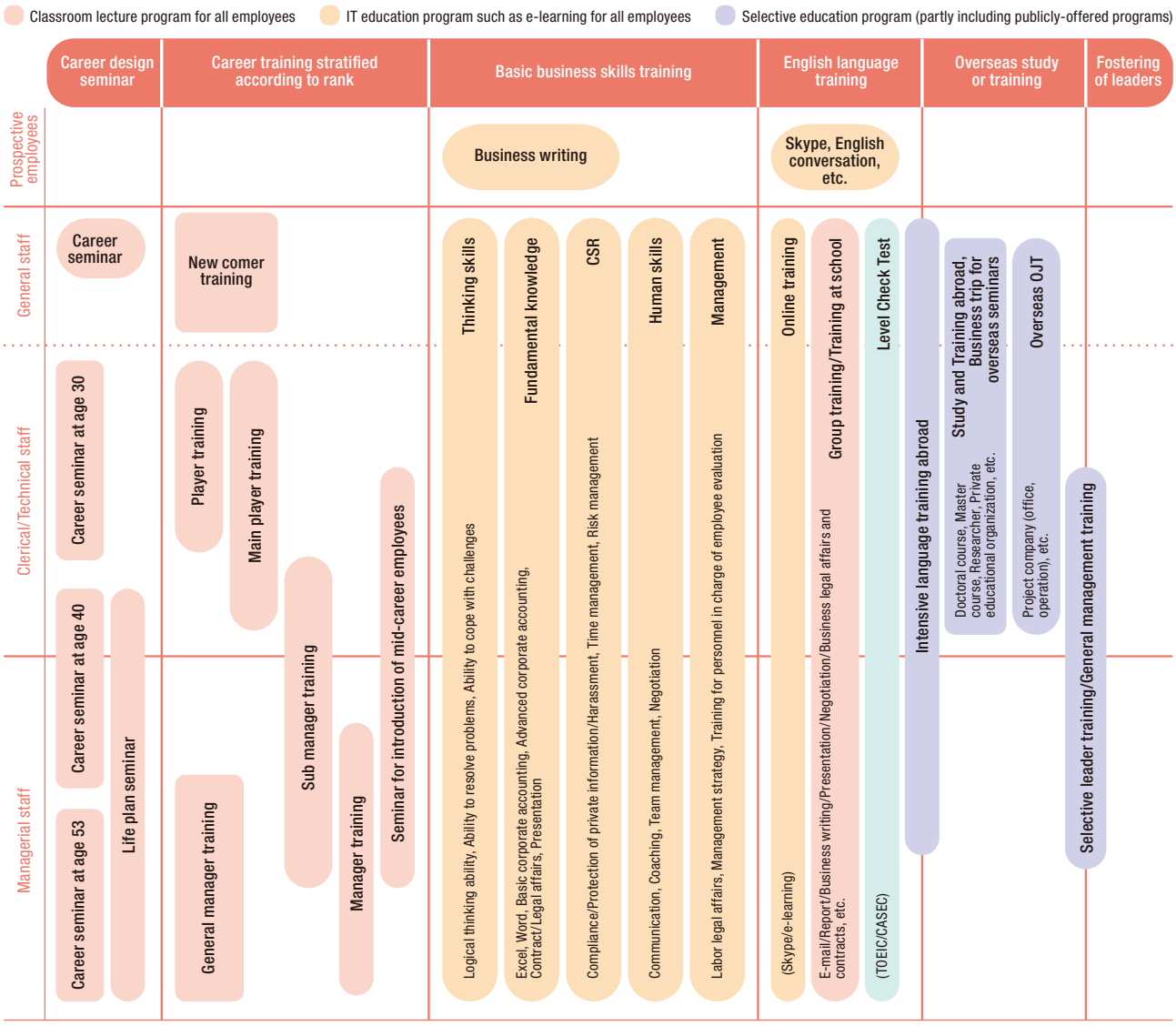
While based on ability development through OJT and scheduled transfers, the human resources education of JAPEX also aims at effective career development by enhancing support through Off -JT. We offer our employees opportunities to develop wide range of abilities including specialized knowledge in each 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” to assist our employees in their own career development, as well as a “Skill Map” covering all job descriptions. We are also working to establish a system necessary for them to design and achieve their career goals (future ideal image). In addition, we are compiling a database covering the work histories of employees.

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.

Employees Receiving Training in FY 2014 (Excludes Specialist Training Provided by Each Division)

Training Category	No. of employees
Career training stratified according to rank	109
Basic business skills training (employees who took at least one course as recommended by JAPEX)	969
English language training	348
TOEIC	271
Overseas study or training	20

Training System Overview (Excludes Specialist Training Provided by Each Division)



GRI Guideline Content Index

Profile Disclosure/Indicator		Disclosure	Full Version Page
1. Strategy and Analysis			
	1.1	Statement from the most senior decision-maker of the organization.	4-5
	1.2	Description of key impacts, risks, and opportunities.	4-5
2. Organizational Profile			
	2.1	Name of the organization.	(Page 30 of Digest version)
	2.2	Primary brands, products, and/or services.	
	2.3	Operational structure of the organization, including main divisions, operating companies, subsidiaries, and joint ventures.	
	2.4	Location of organization's headquarters.	
	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.	
	2.6	Nature of ownership and legal form.	
	2.7	Markets served (including geographic breakdown, sectors served, and types of customers/beneficiaries).	
	2.8	Scale of the reporting organization.	
	2.9	Significant changes during the reporting period regarding size, structure, or ownership.	N/A
	2.10	Awards received in the reporting period.	31, 46
3. Report Parameters			
Report Profile	3.1	Reporting period (e.g., fiscal/calendar year) for information provided.	3
	3.2	Date of most recent previous report (if any).	3
	3.3	Reporting cycle (annual, biennial, etc.)	3
	3.4	Contact point for questions regarding the report or its contents.	Back cover
Report scope and boundary	3.5	Process for defining report content.	18
	3.6	Boundary of the report (e.g., countries, divisions, subsidiaries, leased facilities, joint ventures, suppliers). See GRI Boundary Protocol for further guidance.	3
	3.7	State any specific limitations on the scope or boundary of the report.	3
	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.	32, 34, 48, 49
	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.	This table
Assurance	3.13	Policy and current practice with regard to seeking external assurance for the report. If not included in the assurance report accompanying the sustainability report, explain the scope and basis of any external assurance provided. Also explain the relationship between the reporting organization and the assurance provider(s).	—
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.	38
	4.2	Indicate whether the Chair of the highest governance body is also an executive officer (and, if so, their function within the organization's management and the reasons for this arrangement).	38
	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.	38
	4.4	Mechanisms for shareholders and employees to provide recommendations or direction to the highest governance body.	38, 49
	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).	38
	4.6	Processes in place for the highest governance body to ensure conflicts of interest are avoided.	40
	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.	38
	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.	2, 16, 17
	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..	38
	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.	32-37
	4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes or endorses.	5, 18, 25, 26, 33, 35, 40
	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.	45
Stakeholder engagement	4.14	List of stakeholder groups engaged by the organization.	12-14
	4.15	Basis for identification and selection of stakeholders with whom to engage.	16-18
	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.	11-14, 49

Profile Disclosure/Indicator		Disclosure	Full Version Page
5. Disclosure on Management Approach (DMAs) and Performance Indicators			
Economic			
DMA EC			5, 6
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.	(Page 30 of Digest version)
	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.	41, 43
	EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts.	8-9, 20
Environmental			
DMA EN			25
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.	32
	EN4	Indirect energy consumption by primary source.	32
	EN5	Energy saved due to conservation and efficiency improvements.	32
	EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives.	32
	EN7	Initiatives to reduce indirect energy consumption and reductions achieved.	32
Water	EN8	Total water withdrawal by source.	29, 36
	EN9	Water sources significantly affected by withdrawal of water.	10
	EN10	Percentage and total volume of water recycled and reused.	36, 37
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.	10-11, 13, 30
	EN13	Habitats protected or restored.	10-11
	EN14	Strategies, current actions, and future plans for managing impacts on biodiversity.	10-11, 13, 30
	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.	29, 32
	EN17	Other relevant indirect greenhouse gas emissions by weight.	32
	EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved.	32-33
	EN19	Emissions of ozone-depleting substances by weight.	—
	EN20	NOx, SOx, and other significant air emissions by type and weight.	34
	EN21	Total water discharge by quality and destination.	29, 36
	EN22	Total weight of waste by type and disposal method.	29, 35
	EN23	Total number and volume of significant spills.	37
	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.	19-24
	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.	29
Overall	EN30	Total environmental protection expenditures and investments by type.	—

GRI Guideline Content Index

Profile Disclosure/Indicator		Disclosure	Full Version Page
Social: Labor Practices and Decent Work			
DMA LA			48
Employment	LA1	Total workforce by employment type, employment contract, and region, broken down by gender.	48-49
	LA2	Total number and rate of new employee hires and employee turnover by age group, gender, and region.	48
	LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees, by major operations.	50
	LA15	Return to work and retention rates after parental leave, by gender.	49
Labor/management relations	LA4	Percentage of employees covered by collective bargaining agreements.	49
	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.	26
	LA8	Education, training, counseling, prevention, and risk-control programs in place to assist workforce members, their families, or community members regarding serious diseases.	13, 14, 50
	LA9	Health and safety topics covered in formal agreements with trade unions.	49
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.	51
	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.	48
	LA14	Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation.	—
Social: Human Rights			
DMA HR			40
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.	40 (also on page 24 of Digest version)
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			8-15, 41
Local communities	SO1	Percentage of operations with implemented local community engagement, impact assessments, and development programs.	8-15, 41
	SO9	Operations with significant potential or actual negative impacts on local communities.	8-15, 41
	SO10	Prevention and mitigation measures implemented in operations with significant potential or actual negative impacts on local communities.	8-15, 41
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.	40, 51
	SO4	Actions taken in response to incidents of corruption.	—
Public policy	SO5	Public policy positions and participation in public policy development and lobbying.	45
	SO6	Total value of financial and in-kind contributions to political parties, politicians, and related institutions by country.	40
Anti-competitive behavior	SO7	Total number of legal actions for anti-competitive behavior, anti-trust, and monopoly practices and their outcomes.	—
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			45
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.	10-15
	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.	45
	PR4	Total number of incidents of non-compliance with regulations and voluntary codes concerning product and service information and labeling, by type of outcomes.	45
	PR5	Practices related to customer satisfaction, including results of surveys measuring customer satisfaction.	45
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

Opinions from third parties about JAPEX's "Corporate Social Responsibility Report 2014"

Points to Be Praised

• This is the second year I have provided my opinion as a third party regarding the JAPEX Group CSR Report. Compared with the previous year, I received the impression that the approach of JAPEX to engage in various business and CSR activities with its stakeholders, including customers, business partners, local communities, employees, local governments, and government agencies is clearer, and the contents are more enhanced.

• I think the greatest highlight of this year's CSR Report is the extraction, formulation and disclosure of JAPEX Core CSR Issues "SHINE," which identifies issues that are highly important to stakeholders and greatly influence JAPEX's business activities. As stated in the "Interview with the President," identifying its core issues is essential for JAPEX to achieve growth as a trusted global corporation. Above all, I highly commend JAPEX's swift response in the second publication of its CSR Report for its full recognition of its position as a globally active corporate group and its response to expectations of society.

• The Special Feature section of this report describes the "Canada Shale Gas to LNG" project, which is an initiative to materialize the stable supply of energy. This project will contribute to the stable, integrated supply of natural gas to Japan by importing LNG in the future. The Report on Core Issues section includes an introduction of our initiative for tight-oil development in Japan. Regarding the demonstration tests being conducted in the Fukumezawa oil well, there are high expectations for the establishment of Japan's first multiple-stage fracturing (hydraulic fracturing) technology. I trust that JAPEX will continue its serious pursuit of CSR activities through its core business; the stable supply of energy.

• I regard highly that from January 2014, JAPEX began the full-fledged operation of its HSE Management System, integrating its domestic safety activities and environmental management system, and that it has emphasized information-sharing and education within the organization in order to disseminate the implementation of the PDCA cycle.

• This year's report contains more detailed data about its employees, who are valuable company assets. I would like to applaud the disclosure of data, such as the ratio of female managers, re-employment rate, and paid-leave uptake, which were not included in last year's report, as clear improvements. I also note the active training of employees to accommodate the shift to overseas operations. Although the JAPEX Group has been directing its efforts for some time toward human resource education to maximize the capabilities of each employee, I hope that JAPEX will further diversify and enhance the education of its human resources in order to improve its overall organizational performance.

Mika Takaoka
Professor, College of Business
Rikkyo University

Suggestions

• In next year's report, I wish to suggest that JAPEX formulate and publish a CSR action plan that includes numerical targets that are more specific than the 2014 CSR Action Plan and Targets. In order to achieve the five core CSR issues, we will emphasize the PDCA cycle of setting objectives for each item, monitoring the activities actually conducted, and confirming the progress of achievements should be implemented. These initiatives should further contribute to the promotion of the JAPEX Group's CSR activities.

JAPEX's Response to Third-Party Review

Motofumi Hyodo
Managing Director
Executive Officer

We greatly appreciate the valuable opinions of Professor Takaoka regarding our CSR report, which she also provided last year.

This is the second year in which the JAPEX Group has pursued CSR activities in a systematic manner. Last year, we expanded our former Environmental Report and produced our first CSR Report. In this year's report, we have identified our five core CSR issues "SHINE," which I feel provides a clear roadmap for our CSR promotion activities.

I strongly believe that our corporate mission—contributing to local communities through the stable supply of energy, and growth as a global corporation while shifting our operations overseas—are achieved by tackling the core issues identified in this year's report, and striving for an ever higher level of performance.

Professor Takaoka's praise for our efforts on enhanced data disclosure and our approach toward CSR activities has given us confidence in the direction of our initiatives, as well as encouragement. Going forward, we will consider her suggestions as we set specific targets and conduct fruit-bearing CSR activities that are directly linked to our regular business. We will also strive to raise the effectiveness of our PDCA cycle.

Contacts

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

1-7-12 Marunouchi, Chiyoda-ku, Tokyo, Japan
Tel: 03-6268-7040 Fax: 03-6268-7302