

KOGAS 2013 Sustainability Report

Better Energy, Better World



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# Better Energy, Better World

Beyond LNG, Global KOGAS



# Overview

## Significance

With the aim of creating a better world with better energy, KOGAS pursues the goal of becoming the world’s best energy company while growing alongside its stakeholders. Published annually since 2006 to communicate with stakeholders, this Sustainability Report contains the company’s activities and performances for sustainable management in 2013.

## Reporting period and scope

This report covers the period from January 1, 2013 to December 31, 2013. Some important records for the past three years are reported to identify trends in performances. Depending on the reporting period, the content for 2014 is partially included and stated in the report. The scope of this report encompasses the KOGAS’s headquarters, 12 regional business locations, and R&D centers. It also provides a summary of the business performance of Korea Gas Technology Corporation (KOGAS-Tech). Overseas offices and equity-holding companies were excluded.

## Standard for reporting and verification

This report is written to meet the core requirements of the G4 Guideline, which was disclosed in May 2013 by the GRI (Global Reporting Initiatives), a guideline for sustainability reports. The company selected elements for the report and strived to convey transparent information by investigating requirements identified from the 2013 DJSI Korea survey and interests of stakeholders in the company’s sustainable management strategies and media. Independent assurance verification was conducted to enhance credibility, and the result is contained in the report for independent assurance statement on pages 70-71.

## Additional Information

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# CEO's Message

Through transparent and responsible management, KOGAS will continue to be a globally-renowned energy company.



## Dear stakeholders,

For stakeholders who have shown unceasing care and support for Korea Gas Corporation (KOGAS), this sustainability report contains economic, environmental, and social performances as well as current situations of the management by KOGAS in 2013. It is an honor to present our efforts and results for you through this sustainability report.

Established in August 1983, KOGAS marked its 30th anniversary on August 18, 2013, thanks to your support and care. For the last 30 years, the company has opened the era of the national fuel environment and played a pivotal role in the national energy industry by pioneering new markets. As a public company for the people, we have contributed to enhancing the public welfare and benefits. In 2013, we led the normalization of the management by public enterprises as a public company, and all the executives and employees strived to fulfill their own public responsibilities.

Based on these passions and performances, we pledge to become a healthier public company to support the public economy and fulfill the following to fulfill our responsibility for the public and stakeholders.

### First, KEPCO will establish the world's best safety culture by managing safe environments more strictly.

We recognize the safety in facilities and supply stabilization as the top priority which the company needs to pursue first and minimize the risks in the process of developing and operating businesses. The company will strive to help all the executives and employees of cooperative companies to internalize safety awareness by reinforcing the company's unique management system for the EHSQ (Environment, Healthy, Safety, and Quality).

### Second, KEPCO will solidify the national fuel environment for natural gas by stabilizing the supply and demand.

We will establish our business portfolio, which can be grown sustainably, by enhancing the profitability of existing overseas businesses and entering new markets with minimized risks. With the improvement in the capability in predicting accurate demand and localization of facilities through support for technology development, we will promote the stability in supply and demand and strengthen the era of the national energy environment for using natural gas.

### Third, KOGAS will develop a desired win-win labor-management relationship.

We will remove the barrier between the labor union and management and establish a win-win labor-management relationship through communication and cooperation. In a virtuous cycle in which executives and employees' efforts and devotion lead to the company's stable growth, we will create a good working environment for all employees to work better to achieve their visions. By improving the personnel system and carrying out management innovation activities led by executives and employees, we will become a company to enhance the self-esteem of employees and their own values.

In late September 2014, KOGAS will open a new era in our new headquarters in Daegu. This movement of the headquarters will be the first step toward another new century as an energy company. We will continuously listen to the voices of our stakeholders and provide the best values to make new history in Korea's energy industry.

I hope that you continue your unceasing support and care for us as we become a global energy public company and realize national happiness with energy.  
Thank you.

Seokhyo Jang  
CEO and President of KOGAS  
*Seokhyo Jang*



## Company Profile

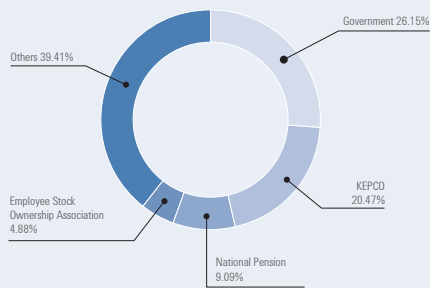
### Overview

Since its establishment in 1983, the Korea Gas Corporation (KOGAS) has consistently provided our society with a stable and convenient supply of natural gas, a form of clean energy. By developing overseas resources and supplying natural gas, we are contributing not only to progressing national economy but also improving the welfare and daily lives of the people.

|                              |   |
|------------------------------|---|
| Company name                 | Korea Gas Corporation (KOGAS)           |
| Establishment date           | August 18, 1983                         |
| Foundation for establishment | Korea Gas Corporation Act               |
| Type of corporate body       | Corporation                             |
| Location                     | 120, Cheomdan-ro, Dong-gu, Daegu, Korea |

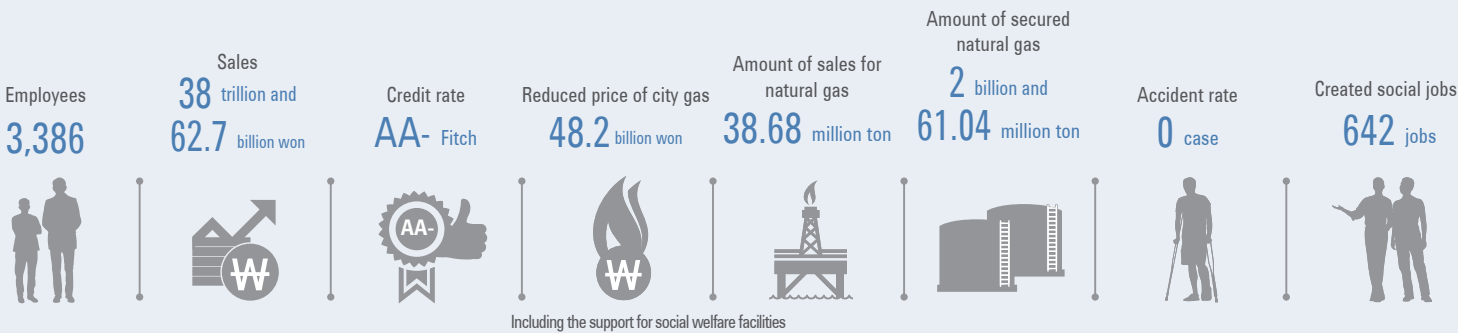
### Shareholders

KOGAS was listed on the Korea Exchange on December 15, 1999, and there has been no change in the major shareholders for the past three years.



# Better Energy, Better World

Beyond LNG, Global KOGAS





Company Profile

Business area

The world recognizes that securing and developing energy resources are among the most crucial activities to gain national competitiveness. As environmental regulations are becoming stricter due to the UN Framework Convention on Climate Change, the issue of needing to use natural gas as low-pollution, clean energy has gained more attention. KOGAS has extended its business to include exploration, development, and production of overseas resources in its existing and growing business of procurement, transport, storage, and the supply and sale of natural gas in Korea.

Overseas resource exploration business

KOGAS carries out the resource exploration business sector by utilizing the international bidding and sales method (Farm-in). We draw prospective geological structures for oil and gas fields by utilizing various regional studies and exploration methods, and we obtain natural resources by carrying out drilling work.

- Area 4 marine mine in Mozambique
- E marine mine in East Timor
- 2, 3, 9 marine mine in Cyprus
- Krueng Mane marine mine in Indonesia
- Uzunkui in Uzbekistan

Overseas resource development and production business

KOGAS has established a development plan to carry out the development and production businesses after checking the suitability for business of detected resources by exploration works. The projects undergo several development stages such as building ground production facilities and drilling underground producing wells.

- Horn River/West Cutbank development business in Canada
- Umiak mine development business in the Arctic Circle, Canada
- Cordova mine development business in Canada
- A-1, A-3 development business in Myanmar
- DSLNG Project in Indonesia
- Zubair oil field development and production business in Iraq
- Badra oil field development and production business in Iraq
- Mansuriya gas field development and production business in Iraq
- Akkas gas field development and production business in Iraq
- Surgil gas field development and production business in Uzbekistan

LNG procurement-related business

KOGAS invests in companies carrying out development and production works to secure stable procurement of LNG.

- GLNG Project in Australia
- DSLNG Project in Indonesia
- LNG investment business for a project in Oman
- Prelude FLNG Project in Australia
- RASGAS investment business for project in Qatar
- LNG investment business for a project in Yemen-

Procurement and transport business

With the increasing demand for LNG, KOGAS has diversified procurement lines for Brunei, Qatar, and Oman beyond the Southeast Asian market to secure energy resources at the optimal time. As we carry out the policies for national flag LNG carriers, which require advanced technology, we have used national carriers since 1994 and have contributed to fostering the domestic shipbuilding and shipping industries.

| Procure-ment   | Qatar | Indo-nesia | Oman | Malay-sia | Yemen | Nigeria | Russia | Brunei | Aust-ralia | Others |
|----------------|-------|------------|------|-----------|-------|---------|--------|--------|------------|--------|
| Percen-tage(%) | 34.6  | 11.5       | 11.4 | 10.6      | 9.4   | 6.9     | 5.0    | 2.8    | 1.7        | 6.0    |

Production and supply business

LNG, which is delivered by LNG carriers from gas-producing countries, is loaded at the company's domestic production sites, stored in tanks, and vaporized and transmitted through the national pipeline network.

| Category            | Pyeongtaek Production base | Incheon Production base | Tongyeong Production base | Samcheok Production base |
|---------------------|----------------------------|-------------------------|---------------------------|--------------------------|
| Start of operation  | November 1986              | October 1996            | September 2002            | July 2014                |
| Production capacity | 4,036 ton/h                | 4,700 ton/h             | 2,490 ton/h               | 780 ton/h                |

Sales business

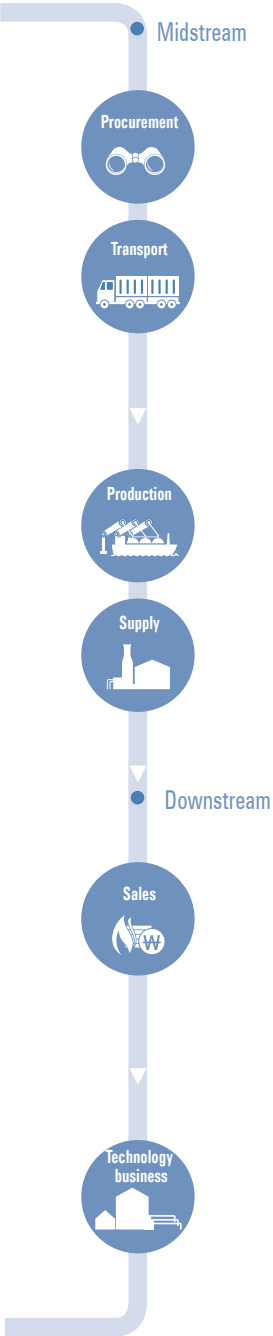
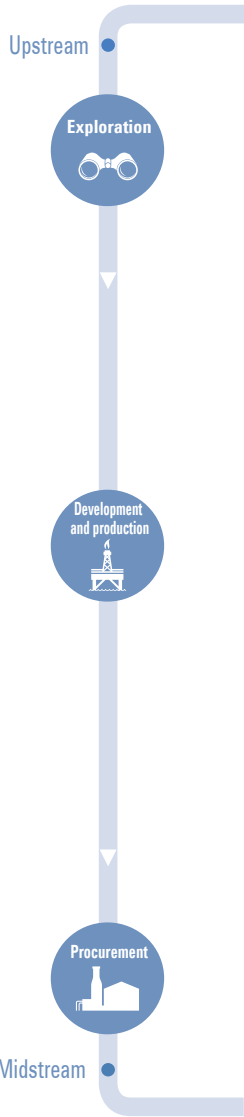
As the public awareness for clean energy has grown, the sales amount of natural gas has increased by 24 times in over 27 years since its first supply initiated in 1987.

| (Unit: 10,000 tons) |       |       |       |
|---------------------|-------|-------|-------|
| Category            | 2011  | 2012  | 2013  |
| Gas                 | 1,826 | 1,956 | 1,960 |
| Utility             | 1,531 | 1,699 | 1,908 |
| Total               | 3,357 | 3,655 | 3,868 |

Overseas technology business

Based on the technological expertise of many years , KOGAS is carrying out various technology ventures such as LNG terminals, pipeline, etc.

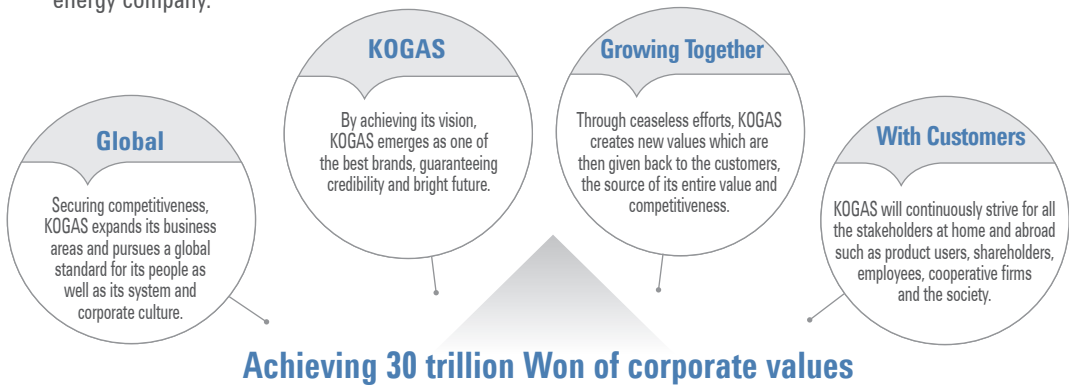
- Manzanillo LNG terminal business in Mexico
- Kirkuk-Baiji Pipeline EPC business in Iraq
- LNG terminal business in Singapore
- LNG terminal technology advisory business in Zhejiang, China
- LNG terminal technology business in Qingdao, China
- Maputo pipeline business in Mozambique
- PTT LNG terminal business in Thailand
- LNG terminal technology advisory business in the UAE
- LNG terminal storage tank design and supervision service business in Jiangsu, China



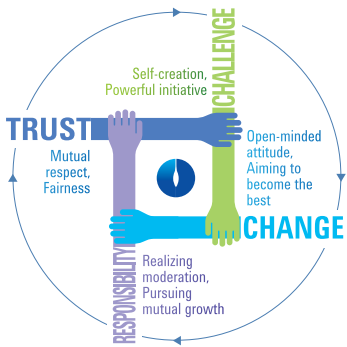
KOGAS Value System

KOGAS vision and value system

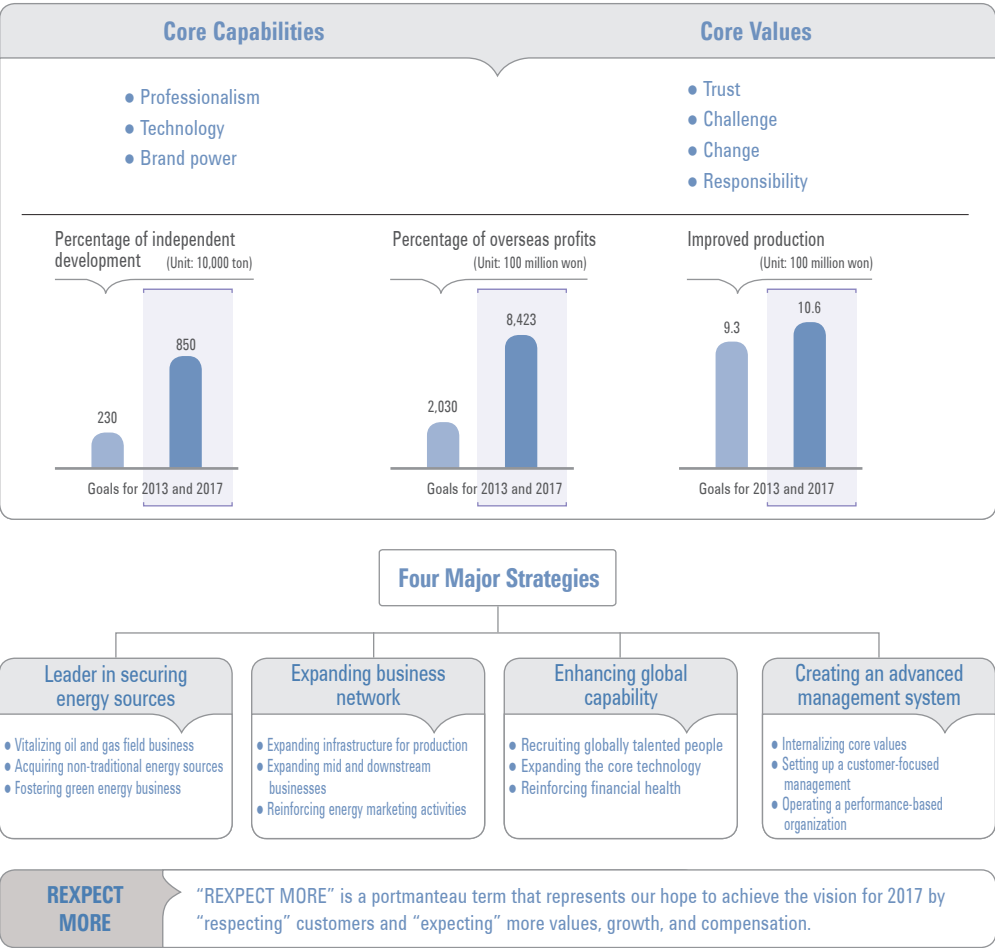
To commit to its corporate philosophy, “Better Energy, Better world,” KOGAS established its vision for 2017, “Global KOGAS, Growing Together with Customers”, as it strives to grow into a globally professional energy company.



Core Values



- **Trust for people**  
Cooperating with mutual respect and fairness, we aim for success in both the society and our company.
- **Responsibility for the society**  
Realizing moderation and pursuing mutual growth promote the harmonious development of companies and the society and contribute to the national energy industry.
- **Changes for the future**  
With an open-minded attitude, the company leads innovative changes in preparing for the future and aims to become the best.
- **Challenge for the world**  
Through continuous self-creation and powerful initiative, KOGAS will develop into a global company.



Sustainable Management System

Strategies for sustainable management

KOGAS sets up the vision for sustainable management, “Global KOGAS – With People, With the Planet” and strives for top performance by carrying out systemic activities.

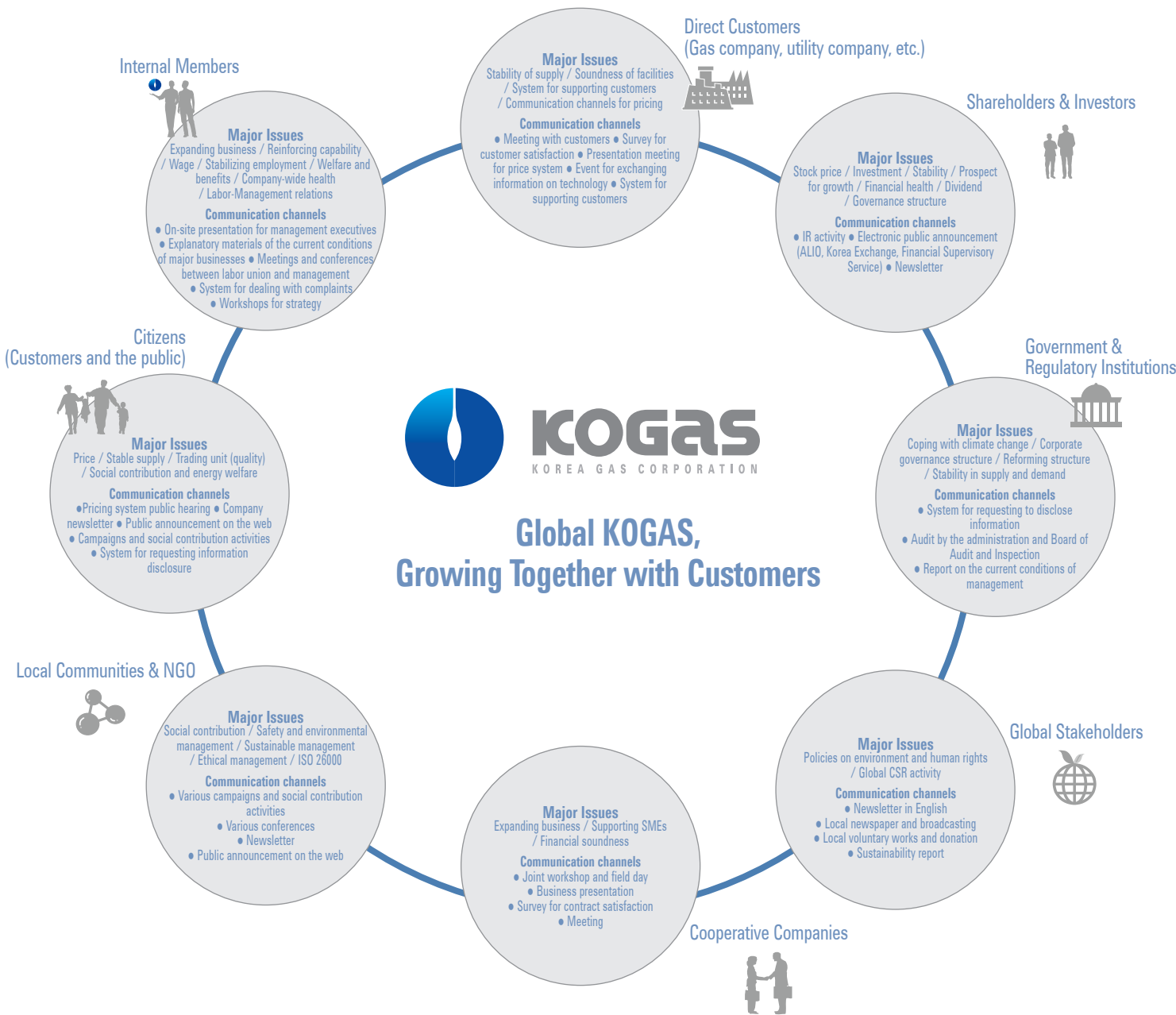
| Vision   | Global KOGAS-With People, With the Planet  |  |  |   |
|--|--|--|--|---|
| Mission  | Sustainability Excellence : DJSI Level   |  |  |   |
| Strategic directions   | Governance   | Economy  | Environment  | Society   |
|  | Securing leadership for sustainable management by strengthening the foundation for management  | Carrying out sustainable business by supplying energy in a stable manner   | Minimizing environmental impacts by adopting leading environmental management  | Creating a corporate culture focused on the people  |
| Core values  | <ul style="list-style-type: none"><li>- Raise the BOD's efficiency and accountability for sustainable management</li><li>- Improve the non-financial risk control system</li><li>- Establish integrated stakeholder management systems</li><li>- Reinforce the system to analyze and communicate issues with stakeholders</li></ul>  | <ul style="list-style-type: none"><li>- Raise energy independence</li><li>- Develop alternative businesses for gas</li><li>- Strengthen controls on demands for stable supplies</li><li>- Develop alternative energies</li><li>- Set up an anti-trust system</li></ul>   | <ul style="list-style-type: none"><li>- Re-establish environmental management policies</li><li>- Improve environmental KPI management</li><li>- Improve the response system for climate change</li></ul>   | <ul style="list-style-type: none"><li>- Heighten ethical standards</li><li>- Revamp human rights and labor practices</li><li>- Improve merit-based remuneration systems</li><li>- Reinforce safety and health management systems</li><li>- Improve infrastructures for partnerships with vendors</li><li>- Improve social accountability and performance management</li><li>- Reinforce customer management</li></ul>   |
| Establishing infrastructure for sustainable management   | - Reestablishing strategies for sustainable management   |  | - Establishing groups for sustainable management and an operational system   |   |
| Major tasks  | <b>Board of Directors</b> <ul style="list-style-type: none"><li>- Increase independence and efficiency of BOD</li><li>- Raise BOD's accountabilities for sustainability management</li></ul> <b>Risk Control</b> <ul style="list-style-type: none"><li>- Establish R&amp;R in risk-related departments</li><li>- Strengthen controls on non-financial risks</li></ul> <b>Stakeholder Management</b> <ul style="list-style-type: none"><li>- Manage stakeholders' issues on an integrated basis</li><li>- Communicate issues internally and externally</li><li>- Establish an integrated form of stakeholder management</li></ul> | <b>Energy Assets and Self-sufficiency</b> <ul style="list-style-type: none"><li>- Identify supply restraints and set up peak oil strategies</li><li>- Expand investments in overseas E&amp;P</li></ul> <b>Demand Control</b> <ul style="list-style-type: none"><li>- Raise efficiency on demand sides</li><li>- Set up plans to cooperate with industries</li></ul> <b>Development of New Business &amp; Alternative Energy</b> <ul style="list-style-type: none"><li>- Operate LNG facilities and develop transport businesses</li><li>- Reinforce business networks</li><li>- Expand R&amp;D investments in alternative energy</li></ul> | <b>Redefine Environment Management Policies</b> <ul style="list-style-type: none"><li>- Re-establish environmental management organizations</li><li>- Set up biodiversity policies and guidelines</li></ul> <b>Reinforce Environmental KPI Management</b> <ul style="list-style-type: none"><li>- Set up environmental data management standards</li><li>- Redefine environmental data KPI</li><li>- Upgrade eco-purchasing programs</li></ul> <b>Upgrade response systems to climate change</b> <ul style="list-style-type: none"><li>- Strengthen controls on greenhouse gas emissions</li><li>- Reduce carbon emissions to meet targeted goals</li><li>- Establish carbon-neutral systems</li></ul> | <b>Ethical Management</b> <ul style="list-style-type: none"><li>- Upgrade ethical management policies</li><li>- Raise management transparency</li></ul> <b>Human Resources</b> <ul style="list-style-type: none"><li>- Revamp human rights and labor practices</li><li>- Strengthen merit-based remuneration systems</li><li>- Develop global talents</li></ul> <b>Safety and Health</b> <ul style="list-style-type: none"><li>- Manage operations free from accidents / disasters</li><li>- Strengthen health controls for associates</li></ul> <b>SME Partnerships</b> <ul style="list-style-type: none"><li>- Support SME's sustainability management</li><li>- Help SMEs gain competencies</li></ul> <b>Customer Satisfaction</b> <ul style="list-style-type: none"><li>- Analyze VOC and customer feedback</li><li>- Heighten privacy protections for customers</li></ul> <b>Social Accountability</b> <ul style="list-style-type: none"><li>- Improve the management of social contribution activities</li><li>- Implement strategic social contribution programs</li></ul> |
| - Reestablishing visions and missions for sustainable management<br>- Strengthening external commitment for sustainable management |  |  | - Organizing a company-wide committee in charge of sustainable management<br>- Increasing the employees' awareness of sustainable management   |   |



Stakeholder Engagement

Stakeholders of KOGAS

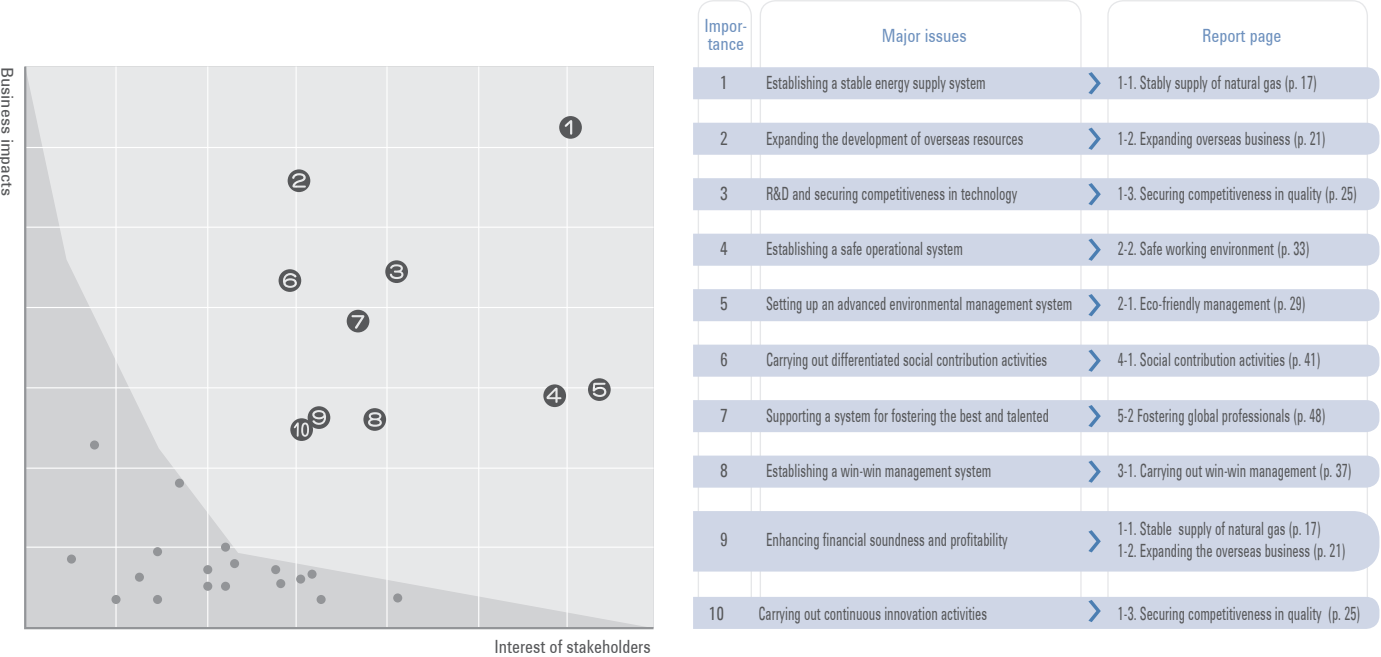
KOGAS fulfills its social responsibilities as a public company. We communicate in a transparent and proactive manner, considering every member of the society as one of our stakeholders. By carrying out overseas businesses aggressively, we exert great efforts to communicate with global stakeholders and establish communication channels. The company will continuously listen to and value opinions from our stakeholders at home and abroad and solidify the foundation for sustainable management.



Materiality test

The materiality test is used to identify issues in which stakeholders have high interest and determine the priorities for various issues. KOGAS has identified major issues related to sustainable management by analyzing management strategies, current conditions, and media, carrying out benchmarking with participation by internal and external stakeholders. By assessing priorities among identified issues, we selected the major issues that are required to proactively secure leadership and focused on reporting those issues.

Process for KOGAS materiality test





# Material Issues

Beyond LNG, Global KOGAS



1. Creating Economic Values
2. Strengthening the Implementation of Responsibility over Environmental Impacts
3. Win-win Management with Partner Firms
4. Vitalizing Local Communities
5. Creating Values for Executives and Employees





# 1. Creating Economic Values



## Interview with stakeholders - Lee Seung-hun, Head of GS EPS Department

GS EPS operates an LNG combined cycle power plant by using LNG provided by KOGAS as its main fuel. I am in charge of purchasing energy and signing contracts. KOGAS is continuously striving to ensure stable provision of energy and optimized price conditions for the national industry and general consumers. In terms of supplying LNG as a public good, the company has much more efficiency and profitability than other private companies. Currently, the energy market is affected by various factors such as anxiety over nuclear energy generation, innovation of shale gas in the U.S., and increasing demands for LNG

due to the rapid growth of emerging markets such as in China, etc. To deal with the anxiety over mid and long-term demands in the ever-changing LNG market, KOGAS needs to consider various methods to supply LNG at inexpensive costs compared to other fuels such as coal and nuclear energy. As various efforts to develop overseas gas fields have been proactively carried out, I believe that LNG needs to be provided by securing cost competitiveness by carrying out various businesses.

## 1-1. Stable Supply of Natural Gas

### DMA



#### Our Commitment

Today, every country in the world engages in fierce competition to secure energy sources, and natural gas is being recognized as one that minimizes environmental issues. KOGAS is playing a pivotal role in the national energy industry by operating every stage of business, from procurement to production, supply, and sales. We aim to enable a stable supply and control the supply and demand by improving the demand environment. We will expand the production and supply facilities at the optimal time and establish a system to produce and supply natural gas in a steady manner.



#### Our Progress

| Goal   | Current Status | Performance for 2013   |
|--|----------------|--|
| To achieve 3.5% in error rate in predicting demand                   | Complete       | Achieved the goal and surpassed by 3.38%   |
| To achieve 495km in performance for construction of supply pipelines | Complete       | Achieved the goal of 495km   |
| To achieve 11.7% in storage ratio                                    | Incomplete     | Achieved 89% of the goal with 10.4% of performance (Demand for generation increased due to suspension of nuclear power plants) |



#### Our Strategy

As demand for convenient and clean natural gas has continuously increased, KOGAS strives to improve stability in supply and demand by accurately predicting demand, monitoring the demand environment, supplying stable natural gas by expanding facilities at the right time, constructing efficient infrastructure, and securing capability for supply.

| Goals      | To develop strategic demand management system for natural gas   | To efficiently manage production of natural gas and construction and operation of supply network  |
|------------|---|---|
| Strategies | <p><b>Achieving mid and long-term stability in supply and demand</b></p> <ul style="list-style-type: none"> <li>Increasing accuracy in predicting demand</li> <li>Supplementing inefficient supply for the summer and winter season</li> <li>Establishing mid and long-term strategies for LNG</li> <li>Creating the foundation for supply and demand management</li> </ul> <p><b>Improving the environment for the natural gas demand</b></p> <ul style="list-style-type: none"> <li>Implementing measures for expanding the development of demand</li> <li>Increasing best supply for demand patterns</li> <li>Establishing a cooperative foundation for wholesale and retail business operators</li> </ul> | <p><b>Expanding and developing facility infrastructure at the right time</b></p> <ul style="list-style-type: none"> <li>Securing capacity for production by constructing facilities at the right time</li> <li>Constructing efficient facilities by improving relevant systems and reducing costs</li> </ul> <p><b>Producing and supplying natural gas in a stable manner</b></p> <ul style="list-style-type: none"> <li>Stabilizing a system for producing and supplying natural gas and setting it as a core national energy source</li> <li>Improving efficiency in operation by introducing new technology and reducing costs</li> <li>Managing the world's best and high quality facilities</li> </ul> |

# 1-1. Stable Supply of Natural Gas

## Management of a stable supply and demand of natural gas

### Importance of supply and demand control

Natural gas takes five to ten years from development to production and costs more than 10 billion dollars in investments. Due to the massive finances involved, long-term contracts for more than 20 years involve the “sales first, production later” transaction method. Because natural gas is difficult to store for a long time and storage facilities are limited, it is difficult to have flexibility in the demands for natural gas. KOGAS is furthering efforts to deal with variability in demand and cope with instability in demand by prioritizing supply and demand management and establishing relevant systems.

### Establishing a system for supply and demand control

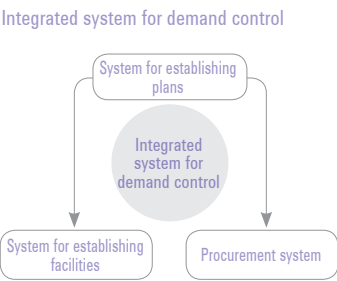
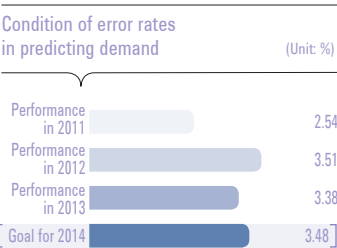
To better predict the fluctuations in supply and demand, KOGAS analyzes supply and demand performances daily and make predictions for each expected scenario on a monthly basis. We reinforce monitoring practices for variable elements such as temperature, GDP, and electricity demand and reflect the result in demand control. We launched a statistical system for big data that gives a scientific prediction for demand. In December 2012, we established an integrated system, and it is currently in the stabilization stage to ensure stable supply and demand control, and organic connectivity for each department’s tasks such as demand prediction, procurement, and facility management.

### Reinforcing the efforts to deal with variability in supply and demand

The corruption incidents related to nuclear power plant components resulted in an 838-day suspension of the nuclear power plant in 2013. Since the LNG generation is generally accustomed to compensating for the inefficient energy generated when the construction of base power plants is halted or operation is suspended, the demand for natural gas has rapidly increased. Despite this emergency in the national energy supply and demand, KOGAS additionally secured 3.65 million kW of power for the summer season by supplying natural gas at an early stage. To supplement another 2.43 million tons of natural gas, we established a cooperative system with other buyers in East Asia and reduced costs for procurement by carrying out decentralized purchasing for spot cargoes.

### Reinforcing the capability of supply and demand control

Systemic information management and an efficient decision-making process are required to procure more than 39 million tons of mid and long-term LNG supply each year. In December 2013, KOGAS implemented an information system for its resource business. The EBM (Energy Business Map) promotes efficiency in procurement by collectively managing LNG projects in the world, and DSS (Decision Support System) utilizes the statistics and analyzing function for information on procurement and sales, and provides the results to support the decision-making process by the management.



Natural gas plant for early supply (Unit: 10,000kw)

| Utility company   | Installed capacity |
|---|--------------------|
| GS EPS (Bugok Complex 3 Unit)   | 37.3               |
| MPC Yulchon Electricity (Yulchon Complex 2 Unit)                              | 88.5               |
| Korea East-West Power Co. (New Ulsan Complex Plant)                           | 87.2               |
| Korea Midland Power Co. (Sejong Cogeneration Plant, 1 <sup>st</sup> stage)    | 51.5               |
| Korea Western Power Co. (New Pyeongtaek Complex Plant, 2 <sup>nd</sup> stage) | 94.7               |
| Total   | 359.2              |

## Management of a stable supply and demand of natural gas (continued)

### Securing long-term stability in supply and demand

To prepare for long-term sufficient supply after 2020, KOGAS connected major supply lines in advance, signed four new contracts, and carried out the extension of deadlines for the two existing contracts. We carried out two-way strategies in overseas sales and domestic procurement by securing self-development supply by developing and producing independent LNG projects in Canada and Mozambique.

### Reinforcing the management of operating LNG carriers

The termination of using the four existing LNG national flag carriers is impending, and additional LNG carriers are needed to be secured to transport new supply for long-term procurement contracts. Under these circumstances, KOGAS conducted basic tasks to secure new carriers in 2013 and will place an order in 2014. We will secure economic features by drawing an optimized transport path for LNG in the U.S. from 2017.

## Developing the demand for stable natural gas

### Solving TDR (Top-down Ratio)

KOGAS is creating new demand for natural gas in the summer season to defy the pattern of “high demand in the winter and low demand in the summer.” We strived to alleviate the electric power shortage and solve TDR by replacing demand for air-conditioning electricity in the summer with demand for gas. We were able to improve the gas demand in air-conditioning and heating buildings by completing the localization of high-efficiency engines for GHP (Gas-engine Heat Pump). Furthermore, we induced customers to choose gas air-conditioning and heating devices by expanding the scope of discounts in costs for the summer season.

Performance for reducing the gap in demand among seasons

| Category   | 2011 | 2012 | 2013 |
|------------|------|------|------|
| City gas   | 3.5  | 3.1  | 3.2  |
| Generation | 1.9  | 1.8  | 1.4  |
| TDR        | 2.7  | 2.5  | 2.2  |

### Efforts to create new demand

As regulations on ocean emissions (led by advanced countries) are expected to expand to Northeast Asia, the demand for LNG-fueled ships is expected to increase. In April 2013, KOGAS signed a contract for supplying LNG with Econuri, an LNG-fueled ship at Incheon Port, for the first time in Asia and prepared for the alternative demand for diesel use for ships by predicting demand. We created new demand by renovating the engines of yard tractors, a transport device for containers in ports, and replacing diesel with LNG. Using LNG in transport equipment in ports reduces pollutants and GHG emissions. These efforts have contributed to more environmentally friendly ports, and we plan to expand this practice to major ports nationwide.

## Reinforcing the utilization of facilities for alternative fuel generation

### Best Practice

Power facilities for alternative fuels use both LNG and diesel. When LNG is insufficient, LNG is substituted with diesel to operate power generators. However, as more competition is introduced in the electricity market, those facilities have been demolished or scaled back. To solve these problems and increase the stabilization in supply and demand of natural gas, the company signed a contract for research to prepare efficient measures for operating alternative fuel power facilities. Based on the result of this research, we re-established the priority on limiting the provision of natural gas in the case of emergency in supply and demand in July 2013. In November, we made a system to apply additional fuel cost for alternative fuel power facilities to utility price in case of emergency situations such as the suspension of nuclear power plants and abnormal weather.

## Creating the foundation for expanding the provision of gas-use devices

### Best Practice

Gas pipelines need to be established outside buildings, but it has been pointed out that exposed pipelines result in violation of property rights and affect the beauty of buildings. In July 2013, the regulations were revised for the allowance of constructing gas pipelines in buildings and establishing gas connection devices in the form of sockets. In cooperation with the Korea Gas Safety Corporation, Korea Gas Safety Research Institute, and Korea Conformity Laboratories, the company was able to find safety measures for gas pipelines in buildings and made the foundation to expand the supply of gas-use devices. We will promote these devices by supporting producers to develop relevant products.

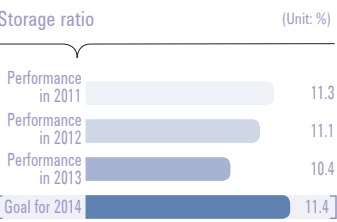
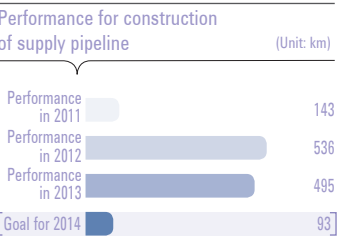


1-1. Stable Supply of Natural Gas

Producing and supplying natural gas

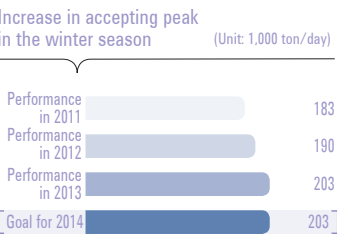
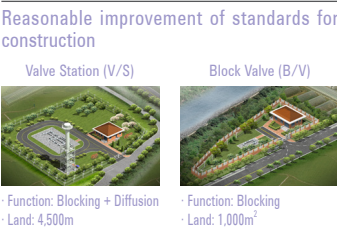
Expanding facilities according to schedule

In order to have a steady supply of natural gas, facilities need to be expanded at the right time. KOGAS is responding proactively by establishing mid and long-term construction plans. In 2013, we constructed six units of gasification facilities in the Incheon and Tongyeong production bases and completed the 495km pipeline to provide 12 areas with natural gas. The expansion in supply for non-provided areas for natural gas will be carried out by 2016 at the 2nd stage of business, and we have set the goal to improve the total supply rate for local communities by 90%.



Reducing construction cost

KOGAS is reducing construction costs by improving the standard for production facilities in a reasonable manner. According to the existing standard for pipe facilities, it was impossible to place block valves (B/V) consecutively among production management offices. Due to this limitation, there was a problem with increasing the size of sites and facilities caused by the construction of valve stations (V/S). The company made it possible to resolve this problem within certain areas by conducting a safety assessment, carrying out research to develop reasonable standards. We revised relevant standards and increased the rate of pipes so that block valves (B/V) can be installed consecutively among production management offices. In accordance with the revised standards, it is expected that about 8.5 billion won of investments will be reduced compared to the existing situation when carrying out the 2nd stage of construction in a non-supply region. We are also making efforts to reduce costs through design VE (Value Engineering). By conducting a total of 19 cases of design VE, such as adjusting operational facilities in the process of constructing pipelines, optimizing lines, and improving pipe composition, we reduced construction costs by 46.1 billion won.



Stabilizing production and supply system

KOGAS has proactively reinforced facilities to prepare for the increase in electricity demand for the winter season. By considering the decreased pressure in providing gas to the Gyeongnam region, an end point of pipe network, the company newly introduced Masan voltage-boosting facilities and supplemented the provision of pressure by constructing the main pipe in the East Sea line. In considering the declined performance of the ORV (Open Rack Vaporizer), we launched a limited generation system to secure additional supply capability. In case of a power cut, we adopted HSBT (High Speed Bus Transfer), which allows continual operation without load suspension by switching rapidly to lines. The company also secured an additional one million kW of generation by providing two power plants with natural gas at an early stage before the winter season.

1-2. Expanding Overseas Business

DMA

Our Commitment

As non-traditional resources, such as shale gas and oil sand in the U.S., are proactively developed and their reserves have recently increased, the natural gas market is facing a new golden era. With the continuous increase in domestic demand for natural gas, KOGAS is promoting the stable supply and demand for natural gas by developing resources around the world. We will enhance independence of gas resources by internalizing the resource development business and create a stable profit base by vitalizing mid and downstream business. We will grow into a globally leading energy company by developing advanced processes and technology and more strictly managing investment business.

Our Progress

| Goal  | Current condition | Performance for 2013                                      |
|---|-------------------|---|
| To achieve 2,192 million tons in annual production amount                         | Complete          | Exceeded the goal with 2,313 million tons                 |
| To achieve 73 million dollars in profits for overseas mid and downstream business | Complete          | Exceeded the goal with 118 million dollars in performance |
| To achieve 42 % of E&P technology independence                                    | Complete          | Exceeded the goal with 52.5% in performance               |

Our Strategy

KOGAS is enhancing national energy independence by developing resources by considering business prospects, efficiency, and profitability and creating new profits by carrying out mid and downstream overseas businesses by reinforcing the company's capability and cooperation with the private sector. We are striving to secure capability in business and technology to become a leading global energy company.

| Goals      | To expand resource development business   | To expand mid and downstream businesses   | To enhance global capability  |
|------------|---|---|---|
| Strategies | <p>Enhancing independence in gas resource</p> <ul style="list-style-type: none"><li>Assessing business performances and reestablishing mid and long-term strategies for developing resources</li><li>Securing gas resources for procurement-available regions and enhancing domestic procurement rate</li><li>Enhancing efficiency and profitability in development and production business</li></ul> | <p>Maximizing synergy effect in mid and downstream businesses</p> <ul style="list-style-type: none"><li>Expanding mid and downstream businesses by connecting resources development and vitalizing core capability in the company</li><li>Leading private companies to enter into the overseas market by finding various business targets</li><li>Creating stable profitability through mid and downstream businesses</li></ul> | <p>Securing capability for global business and technology</p> <ul style="list-style-type: none"><li>Making an advanced business process</li><li>Enhancing capability and technology for E&amp;P and liquefaction business</li></ul> |

1-2. Expanding Overseas Business

Expanding the development of overseas resources

Mid and long-term strategies for developing resources

KOGAS is succeeding and developing in its performance by supplementing prjects founded in the past overseas resource development. In accordance with the government’s policies, we established directions and tasks for strategies in mid and long-term resources development. Through these efforts, we set the vision for 2020 in developing new resources as “Horizontal integration of energy sources and vertical integration of value chains”. We set our goal for 400 million tons of resources and 10 million tons of production. We established three major strategic directions, including “enhancing investment efficiency”, “choose and focus”, and “reinforcing business capability”.



Performance of overseas resources development

KOGAS establishes strategies for new exploration businesses to secure oil and gas resources and is carrying out exploration business for development and procurement. These can be connected to the development of LNG by discovering prospective mining areas that make domestic procurement possible, and participating in relevant businesses. Three marine mining areas in Cyprus, whose rights for mining were obtained in 2013, are located throughout the Mediterranean, making it easy to procure resources for domestic areas. New resources are expected to be secured thanks to the high possibility of finding gas fields in the neighboring regions. In case of successful exploration, we will secure stable production resources by connecting with LNG business, thus leading to securing exploration for deep-sea mining areas and development capability by carrying out joint exploration business with Eni. In 2013, KOGAS secured 261.04 million tons, equivalent to the amount of 6.5 years of domestic demand.

Enhancing business profitability and efficiency

Since 2010, KOGAS has achieved various performances, including return of investments at the early stage and enhancing profitability by increasing 46% of annual averaged production. The A-1 and A-3 mines in Myanmar, for which exploration began in the early 2000s, have entered the stage of creating stable profits with an expected annual average of 64 billion won by 2038. As annual production is continuously increasing, KOGAS has achieved 2.31 million tons of production, which has increased by 38% in 2013 compared to the last year.

Preparing for expanding domestic procurement

KOGAS is carrying out businesses with the goal to expand the percentage of development and procurement from 2.7% in 2013 to 7.3% in 2017. We will conduct six projects related to LNG procurement at the right time by 2017 and secure about 2.64 million tons for domestic procurement.



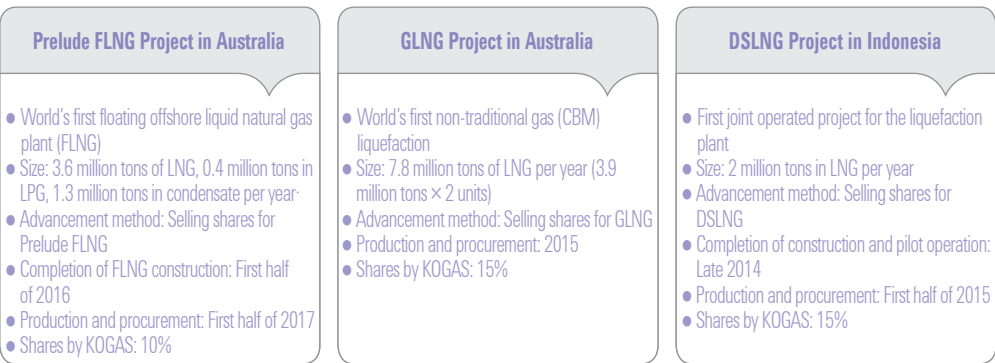
| Current condition of the amount of development and procurement<br>(Unit: 10,000 tons/year, %) |      |           |
|---|------|-----------|
| Category  | 2013 | 2017 Goal |
| Amount of development and procurement   | 105  | 264       |
| Percentage  | 2.7  | 7.3       |

Expanding into the mid and downstream markets

Completing value chains in mid and downstream markets

To cope with the rapidly changing environment in the global natural gas market, KOGAS is entering the natural gas infrastructure business, including production, collection, separation, liquefaction, and transport. We are growing as an E&P vertical business operator by engaging in plant business related to LNG project development.

Advancement for natural gas liquefaction terminal technology business



GLNG liquefaction plant in Australia

Vitalizing mid and downstream profitable business

To reduce investment risks in exploration and development projects for upstream, which have a degree of uncertainty in returning investment, KOGAS has entered into the EPC business in the investment sector that connects with up, mid, and downstream. To enter into the technology business market that has a high entrance barrier, we have occupied the initial market by focusing on new technology sectors such as floating marine terminals and created stable profit sources by expanding EPC technology exports.

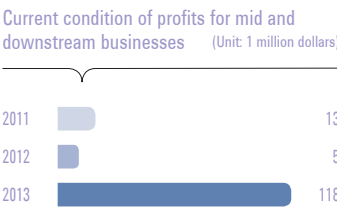
Technology exports with direct performance by KOGAS



Winning orders for new technology business

Creating profits by carrying out mid and downstream businesses

LNG plant construction and operation business in Manzanillo, Mexico, which began its commercial production in June 2012, is the first construction and operation business for overseas LNG terminals. The company won this order by being recognized as offering the world’s best capability for facility construction and operation. This project is expected to create about 400 million dollars over the next 20 years. The city gas supply business in Maputo, Mozambique, in which the domestic city gas business model was exported to a foreign country, began to supply gas in July 2014. It is expected to create about 130 million dollars in profits over the next 20 years. Thanks to the mid and downstream projects in 2013, KOGAS created about 1.18 million dollars in profits, which increased by 23 times compared to the last year.



1-2. Expanding Overseas Business

Enhancing global capability

Reinforcing the process for overseas business

To reinforce objectivity and transparency in making decisions for business, KOGAS enacted regulations on managing investment business and newly developed manual for overseas resources development business. These regulations present consistent standards and processes for every stage from feasibility study to post-management. Through these efforts, we will promote efficiency in investment business and use the operational manual as the guideline for selecting and operating business, finance, and technology, which will enable systemic development of overseas resources.

Composition of a manual for overseas resources development business

|                      |   |
|----------------------|---|
| Selection            | ● Guideline for selecting new resources development business                      |
| Operational manual   | ● Six guidelines other than the procedure for signing a contract for mining areas |
| Financial management | ● Six guidelines other than establishing and performing plans for funds           |
| Technical manual     | ● 11 guidelines other than assessment for the amount of resources and reserves    |

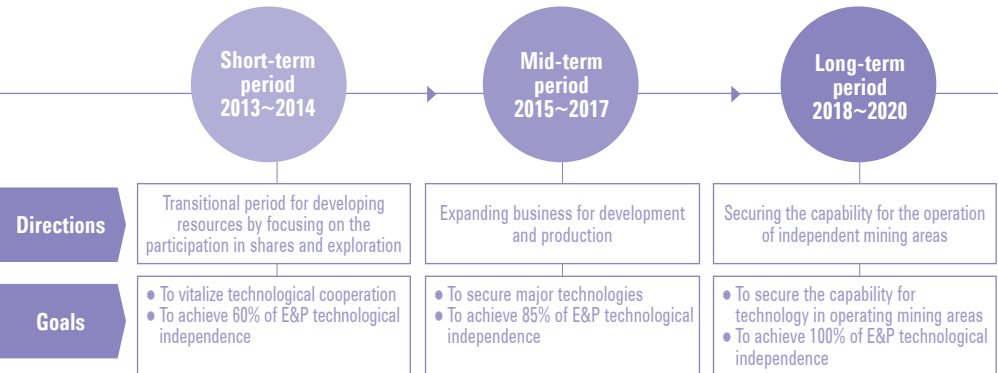
Enactment of regulations on managing investment business

|                 |   |
|-----------------|---|
| Investment plan | <ul style="list-style-type: none"><li>Establishing company-wide investment plans by considering priority in investment, standards for assessing investment business, and mid and long-term financial management plans</li></ul>   |
| Decision-making | <ul style="list-style-type: none"><li>Deciding through agreement among members including the chief of the committee after deliberation for each business</li><li>Reinforcing requirements for the BOD by checking economic features from a conservative perspective (reflecting the increased reserves for new business in the assessment for economic features)</li></ul>        |
| Post-management | <ul style="list-style-type: none"><li>Operating the committee for managing overseas business, which serves as an advisor for assessing business performances (external experts participate in the committee as members)</li><li>Regular monitoring for overseas corporate bodies</li><li>Implementing the real-name system for investment and history management system</li></ul> |

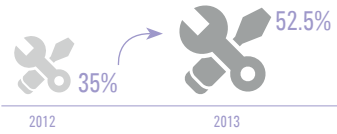
Reinforcing technological capability

KOGAS is striving to reinforce its capability by selecting 17 core technologies regarding resources development and establishing mid and long-term roadmaps for securing technology. As relevant capabilities are necessary for operating independent operation of mining areas, we will enhance our technological capability by cooperating with domestic colleges and research institutes and strengthen self-assessment for technology in business. We are improving our capability to carry out proactive LNG business. The company has established and operated the roadmap with the goal to secure 85% of the technological capability for independently operating mining areas and leading LNG business by 2017.

Roadmap for securing technological capability for developing resources



Current condition of E&P technical independence



1-3. Securing Competitiveness in Quality

DMA



Our Commitment

The gas industry is divided into three groups: the upstream sector for the exploration and development of natural gas, midstream sector for transporting LNG and carrier tanks as well as storing and supplying at the production base, and downstream sector for establishing the foundation for customers to use natural gas. The KOGAS R&D center is striving to secure new growth engines for the future by implanting research activities related to the entire process in the gas industry. We will strategically secure prospective technology by establishing a technology-based system with global standards and create the foundation for sharing information and exchanging technology for R&D performances. Based on secured technology, we will contribute to profit creation by carrying out new growth business at the early stage and serving the people by localizing facilities and realizing stable supply of natural gas.



Our Progress

| Goals   | Current condition | Performances for 2013                              |
|---|-------------------|--|
| To achieve 12 cases for registering technology patents  | Complete          | Exceeding the goal with 32 cases in performance    |
| To achieve one case for developing localized facilities | Complete          | Exceeding the goal with three cases in performance |



Our Strategy

KOGAS is establishing the internal system and investing in various technology development projects to secure technology competitiveness on the global stage. With the philosophy of new growth engines from technological foundation, we are striving to establish a technological basis and secure core technologies. We are holding forums and conferences to reinforce R&D-related network at home and abroad. Based on our secured technologies and assets, we are carrying out new growth businesses and enacting great efforts in fulfilling our public role of providing a stable supply of natural gas by localizing facilities.

|            |  |   |
|------------|--|---|
| Goals      | To establish the foundation for new growth engines   | To carry out new growth business and localizing facilities  |
| Strategies | <p>Establishing sustainable technology-based system</p> <ul style="list-style-type: none"><li>Setting up the global technology-based system</li><li>Developing core technology to secure global competitiveness</li><li>Building R&amp;D network</li></ul> | <p>Establishing the foundation for new business and localization</p> <ul style="list-style-type: none"><li>Carrying out new growth business by utilizing technologies and assets</li><li>Localizing facilities for stable supply of natural gas</li></ul> |



1-3. Securing Competitiveness in Quality

Establishing the foundation for growth

Technology-based system

To attain a technology-based system with global standards, KOGAS established visions for technology strategies and reorganized the technology system for each value chain into small groups and element technologies. Through these efforts, we have drawn 13 core technologies that must be secured among 35 of our future strategic technologies.

Future strategic technologies

| Prospective core technology group (13)  | Core technology group that must be secured (13)  | Technology group with possible business (9)   |
|---|--|---|
| Stage for technology                    | Strategies for securing  | Core technologies   |
| Stage for securing commercialization    | <ul style="list-style-type: none"><li>Reinforcing internal R&amp;D capability</li><li>Differentiating technologies and external markets</li></ul>  | <ul style="list-style-type: none"><li>3 cases including technology for LNG carrier's cargo tank</li></ul>     |
| Stage for approaching commercialization | <ul style="list-style-type: none"><li>Carrying out technological demonstration</li><li>Carrying out joint R&amp;D</li></ul>  | <ul style="list-style-type: none"><li>4 cases including FLNG design technology</li></ul>                      |
| Early stage for developing technology   | <ul style="list-style-type: none"><li>Securing external technology</li><li>Introducing the technology by joint R&amp;D</li><li>Securing technology by the government-led initiatives</li></ul> | <ul style="list-style-type: none"><li>6 cases including production technology for marine biomethane</li></ul> |

Reinforcing R&D network

KOGAS held the KOGAS R&D Forum to promote best performances of research activities inside and outside the company. We exhibited 27 research results from five research institutes by opening the R&D Forum Exhibition Hall and made a presentation for the best results. We held the event through the partnership and support from the Ministry of Trade, Industry, and Energy and media companies specialized in the gas sector. The forum gave us the opportunity to reinforce our status in the R&D sector. The company is promoting the vitalization of research related to the gas industry and improvement of technology by cooperating with industry and academic circles. We invested 1.15 billion won in nine research tasks for industrial cooperation, in which Korea Gas Safety Corporation and other SMEs are participating. We also invested 1.2 billion won in 21 universities, including Seoul National University, and nine research tasks for industrial cooperation. Furthermore, we are proactively carrying out joint research efforts with research institutes at home and abroad.

Carrying out business for new growth

Commercializing cargo tanks for LNG carriers

KOGAS has been striving to create new added values by commercializing the technology of cargo tanks for LNG carriers, which used to be exclusively overseas source technology. We developed core materials and radiant heat systems for membrane-type LNG carrier cargo tanks and completed the verification of construction ability and operation by constructing open & closed mock-up tanks. We will carry out the building of LNG carriers by adopting the relevant technology and continuously conduct analysis for risk elements and research for alleviating measures. When these technologies are commercialized, we expect to attain overseas loyalty, as well as benefits in production and employment.

Creating the foundation for LNG bunkering business

Due to the regulations on ship emissions and expansion of regions under the regulations by the International Maritime Organization, demand for eco-friendly carriers are expected to grow as well as demand for LNG bunkering for transporting and utilizing LNG. Under these circumstances, KOGAS has established the plan for domestic LNG bunkering and is striving to develop the demand for it.

Localization of facilities

Developing high-performance seawater heater

As the temperature of seawater falls during the winter season, KOGAS has completed the development of launching the localization of high-performance seawater heaters to resolve the problem of heater inefficiency. We have established and operated eight heater units at the Pyeongtaek production base to prepare for the winter season. The localization efforts for these facilities are best cases of realizing win-win growth with SMEs: we reduced investments in technology development, while SMEs as a producer increased their sales and created employment. Furthermore, relevant performance was recognized by the Ministry of Strategy and Finance as the best case for management by a public company in 2013.

Developing ultra-low temperature camera for checking LNG storage tanks

As LNG storage tanks need to maintain ultra-low temperature, inspection cameras for long-term operation need to be operated at very low temperatures. With cooperation with SMEs, KOGAS succeeded to develop the technology for ultra-low temperature cameras. Now that we have developed the relevant technology, we applied for two cases of technology patents. We are opening new markets by making a presentation for relevant cases at Gastech 2014 Conference and Exhibition.

Commercialization of LNG carrier cargo tanks



Developing high-performance seawater heaters



Gastech 2014

KOGAS holds Gastech Conference and Exhibition in March 2014. This is one of the three major international conferences in the global natural gas industry. At Gastech, attendees share information about the business market, latest technology trends, and projects from all sectors in the whole natural gas value chain. Through this event, we could help domestic companies in the infrastructure, shipping, and marine industries to pioneer business markets. This event paves way for business meetings with best overseas companies, and provides opportunities for domestic companies to cooperate with large companies by holding product exhibitions and to participate in overseas exhibitions of SMEs. The success of Gastech 2014, the largest Gastech event to date, will enhance the company's global status and help develop the domestic gas industry and promote national competitiveness.



## 2. Strengthening Implementation of Responsibility for Environmental Impacts



### Interview with stakeholders — Park Ju-myeon, Director of Eco Sense

Beginning with the attainment of the certificate for energy management system by KOGAS Incheon Terminal Division in 2011, KOGAS has participated in establishing its energy management system and developing the eco-view system at the Pyeongtaek and Tongyeong Terminal Division, and is currently establishing integrated energy management systems at the Production Division. Eco-view is a system for supporting various analyses and management efforts, such as setting up and allocating goals for energy use and GHG emissions, checking the amount of energy use, analyzing statistics, managing emission-reducing efforts, etc. At lectures by the government and industry-academic circle research institutes, our cases are presented as best cases in the management of GHG emissions and energy.

Due to the rotation duty at KOGAS, some cases have relatively limited information when work is taken over. If the situation allows us to apply each capability to work by using the relevant manuals to accomplish the goal for continuously reducing GHG emissions, greater work efficiency can be expected.

Korea has established the national goal for reducing GHG emissions by 30% compared to the BAU by 2020. Along with the government-led goal, KOGAS is proactively dealing with the situation by launching and integrating company-wide energy management systems.

I look forward to seeing KOGAS carry out great efforts to fulfill its environmental responsibility for climate change as a global energy company.

## 2-1. Eco-friendly Management

### DMA



#### Our Commitment

KOGAS is establishing a preemptive system for climate change and continuously launching facilities for new renewable energy to cope with climate change, identify environmental risks and opportunities, and carry out eco-friendly management. We will enact eco-friendly management in various ways, such as developing technology for new renewable energy based on environmental changes, finding items for business, operating eco-friendly business sites, and enhancing the awareness of executives, employees, and partner firms for eco-friendly management.



#### Our Progress

| Goals  | Current condition | Performances for 2013  |
|--|-------------------|--|
| To develop the technology for new renewable energy   | Ongoing           | Developing technology for GTL, hydrogen production, and biogas                     |
| To establish a system for advanced energy management | Complete          | Acquiring ISO 50001 for the best level as a public company and in the gas industry |



#### Our Strategy

Under the vision of “Sustainable Future Energy Company”, KOGAS has selected and carried out seven major tasks in three sectors to achieve three major goals.

| Vision | Sustainable future energy company                  |  |   |
|--------|--|--|---|
| Goals  | To establish the status as a future energy company | To create new growth engines with new energy technology  | To achieve the goal for reducing GHG emissions and energy use |
| Tasks  | Securing the engines for new energy and new growth | <ul style="list-style-type: none"> <li>● R&amp;D for new energy</li> <li>● Making business for new energy technology</li> </ul>  |   |
|        | Reducing energy                                    | <ul style="list-style-type: none"> <li>● Carrying out low-cost and low-carbon management by reducing energy use</li> <li>● Adopting new energy technology at business sites</li> </ul>   |   |
|        | Adapting to climate change                         | <ul style="list-style-type: none"> <li>● Managing GHG emissions collectively</li> <li>● Coping with climate change and reinforcing the network</li> <li>● Coping with climate change that is affecting daily lives and growing in importance to employees</li> </ul> |   |

2-1. Eco-friendly Management

Using eco-friendly energy

Expanding the procurement of new renewable energy

KOGAS is conducting company-wide carbon-reducing activities by promoting green business sites and supplying new renewable energy. We produce a portion of internally consumed electricity independently by adopting facilities for solar and wind power and fuel cells. We are focusing on greenhouse gas-reducing activities by utilizing solar power and geothermal heat for air-conditioning and heating devices while producing various new renewable energy sources.

| Category          | Solar power generation | Solar power heating system | Wind power generation | Geothermal heat energy | Fuel cell |
|-------------------|------------------------|----------------------------|-----------------------|------------------------|-----------|
| Amount            | 531kW                  | 615m <sup>2</sup>          | 6.7kW                 | 110RT                  | 1kW       |
| Branches (number) | 36                     | 7                          | 3                     | 2                      | 1         |

Realizing low-carbon business sites

KOGAS is realizing low-carbon business sites by launching new renewable energy facilities suitable for the characteristics of supply offices and production bases and at the same time, reducing energy use. In 2014, we will establish eco-friendly buildings, which can reduce energy by 50% compared to regular buildings, by adopting solar power generation facilities and thermal power systems for air-conditioning and heating loads. These improvements will be applied to the new headquarters in Daegu, which will be set up in 2014 and has a high electricity demand for lighting. At Samcheok base, we are realizing eco-plants by introducing solar power facilities as well as fuel cells, which are a new form of low-noise and high-efficiency renewable energy that uses LNG evaporated gas. .

Biogas refinement facility



Developing technology for new renewable energy (Growth Technology, GT)

KOGAS is preparing the development of technology for new renewable energy, which is expected to reduce GHG emissions as well as help efficient energy use. We have developed GTL technology, which produces eco-friendly synthetic oil from synthetic gas such as shale gas and limit gas, hydrogen fuel cell technology and biogas technology. We will solidify the basis for procuring new renewable energy by developing a system for manufacturing synthetic gas, optimizing hydrogen-production device modules, and commercializing and establishing the basis for refining biogas.

|                                |  |
|--------------------------------|--|
| GTL core technology            | <ul style="list-style-type: none"><li>● Contents: Securing competitiveness in mid-sized gas fields by developing compact GTL technology</li><li>● Performances: One case of patent application for GTL and one case for presentation at an academic conference</li></ul>   |
| Hydrogen production technology | <ul style="list-style-type: none"><li>● Contents: Demonstration of KOGAS hydrogen-production models and fuel cells, localization of hydrogen-improvement system</li><li>● Performances: One case for technology transfer, three cases of patent application, two cases of presentation at international forums</li></ul> |
| Biogas technology              | <ul style="list-style-type: none"><li>● Contents: Developing and launching biogas purification devices at a size suitable for commercialization (Sewage treatment plant in Wonju)</li><li>● Performances: Developing GHG emission-reduction typed technology for collecting CO<sub>2</sub></li></ul>                     |

Coping with climate change

Efforts for reducing energy use and GHG emissions

To realize eco-friendly management in low-carbon green growth, KOGAS has been operating the GHG & Energy Target Management System since 2011. This system manages greenhouse gas emissions and consumption by setting targets for greenhouse gas emission and fossil fuel use in advance and checking relevant performances. We have improved facilities by launching systems and technologies that restrain GHG emissions and strived to reduce GHG emissions by introducing an electricity production system, which uses natural gas pressure energy from depression, for the first time in Korea. We realized the improvement of technology in electricity facilities and reduced electricity costs by developing a localized system for preventing and detecting electricity facilities. Thanks to these efforts, we are expecting profits for value-added electricity production worth 180 million won per year.

Reinforcing low-carbon green operation

To proactively cope with climate change, KOGAS is enhancing the capability to implement the GHG & Energy Target Management System and is providing information on greenhouse gas in a transparent manner. In 2011, we prepared an objective basis for leaving out GHG emissions by developing calculation methods that secure credibility in data. To reinforce the capability for verification by executives and employees, we participated in presentations and education on policies regarding certified emission reduction. From 2011 to 2013, we held projects for opening carbon information three times and enhanced our credibility to investors.

Expanding the energy management system

The energy management system is used to improve energy efficiency, and is spreading as a new paradigm for energy management in the U.S. and Europe. In 2011, KOGAS launched this system at Incheon terminal for the first time as a public utility company to reduce GHG emissions and control energy management more systematically. Currently, three base terminal divisions and five district divisions acquired the related certification. To expand energy management in all business areas, we are striving to establish an efficient energy management system by making preparations to obtain the certificate from the U.S. certification office in 2014.



**ISO 50001** certification for the first time  
in the gas supply sector  
(five district divisions)

Operating the company-wide integrated management system for greenhouse gas and energy (ECO<sub>2</sub> View)

Best Practice

KOGAS established and is operating the IT-based integrated management system at all business sites to manage greenhouse gas and energy use more efficiently; greenhouse gas is a byproduct of producing and supplying natural gas. We are reducing energy use by establishing a pilot system, which monitors the amount of energy used on a real-time basis, and utilizing the result as data for various analyses.





2-1. Eco-friendly Management

Reinforcing environmental management at business branches

As an eco-friendly company, KOGAS is aggressively managing the environment at business sites by setting up standards that are stricter than legal standards for discharging pollutants in the air and water. We calculate and manage environmental costs by categorizing activities into a total of four groups: Expenses for processing environmental pollutants, expenses for pollution prevention activities such as facilities investment, development expense for environmental education and research, and environmental subsidies such as eco-friendly business. We support events by environmental groups and efforts for dealing with legislation related to environmental fines and penalties for violating environment-related laws.

Performances for environmental management



2-2. Safe Work Environment

DMA

Our Commitment

KOGAS is preparing advanced standards for managing EHSQ (Environment Health Safety Quality) to operate sustainable and stable gas facilities. As confirmed in the result of checking safety culture in 2013, the performance of operating the EHSQ management system is maintained above a certain level, while the standard for safety culture is relatively low compared to the global advanced standard. We are striving to share and achieve various tasks in the entire company for improving both an advanced EHSQ management system and the level of safety culture.

Our Progress

| Goals  | Current condition | Performances for 2013   |
|--|-------------------|---|
| To achieve the safe working culture index with the level of globally leading companies by 2017 (8.1) | Ongoing           | Increasing the index for safe working culture compared to the last year (5.75-)6.1)           |
| To achieve zero-accident status on business sites  | Complete          | Accident rate: 0 /<br>Number of facility accidents: 0   |
| To diagnose stability in gas facilities and develop technology for monitoring                        | Complete          | Developing technology for assessing quantitative risks in LNG facilities and buried pipelines |

Our Strategy

KOGAS aims to set up directions for safety management with an advanced management system, realizing improvements in safe work environments and reinforcing safety in facilities. By making an advanced EHSQ management system to meet the global standard, we hope to enhance the level of safety management.

| Goal                 | To create an advanced EHSQ management system at a world-class level |  |
|----------------------|---|--|
| Direction            | Improving the level of safety management                            |  |
| Directions and tasks | Making an advanced management system                                | <ul style="list-style-type: none"><li>● Making an advanced EHSQ management system</li><li>● Reinforcing on-site implementation through the EHSQ management system</li><li>● Expanding the global EHSQ management system</li></ul>  |
|                      | Improving the level of safe working culture                         | <ul style="list-style-type: none"><li>● Sharing goals for safe work environments and improving them continuously</li><li>● Vitalizing communication and activities in safety management by leaders</li><li>● Strengthening training and education for enhancing awareness of safety</li></ul>        |
|                      | Reinforcing safety in facilities                                    | <ul style="list-style-type: none"><li>● Reinforcing the accident management system by cooperating with relevant institutions</li><li>● Identifying risk elements and reinforcing the capability for taking measures</li><li>● Scientific diagnosis and monitoring for safety in facilities</li></ul> |

2-2. Safe Work Environment

Establishing a system for safe operation

Establishing the mid and long-term roadmap for improving safety level

KOGAS is carrying out comprehensive and company-wide safety management by establishing the mid and long-term roadmap for improving safety level. To define tasks and improve effects, we have set up the goal to achieve an advanced EHSQ management system by securing world-class safety. Depending on the tasks, we are setting detailed mid and long-term quantitative goals and monitoring performances to prevent disasters in the same type of business, improving the safety culture index, and reducing accident rates among partner firms.

Establishing mid and long-term quantitative goals

| Goals to be achieved by 2017                                |  |
|---|--|
| Rate of operation capability for the EHSQ management system | Grade 9 / Grade 10 as the best level                           |
| Index for safe working culture                              | 8.1 out of 10  |
| Accident rate of KOGAS                                      | A third below the accident rate in the utility industry        |
| Accident rate of partner firms                              | A third below the average accident rate in public institutions |
| Cases of facility accidents                                 | None   |

Reinforcing the level of top-down safety culture

The management of KOGAS recognizes the importance of safety and puts great emphasis on it, increasing the number of on-site checks by the management from 188 to 205. Along with the government-led initiative, “Strengthening the safety management for energy facilities”, we expanded the scope of operation by the committee for safety management and shared secondary incidents and accidents by identifying issues related to safety for each site while discussing measures for improvement at company-wide meetings attended by EHSQ staff members. We are striving to reinforce company-wide safety culture by implementing leadership education for executives and cyber education on safety awareness for all the employees.

Creating an advanced EHSQ management system

KOGAS expanded the scope of participation by business branches by improving the EHSQ management information system and enabling the direct application of the system to sites. In addition, we are reflecting the safety management index to the internal assessment and conducting intensive EHSQ education programs for executives and employees. We assessed the compliance with the safety management regulations for each office and received the review for renewing ISO integrated certificates such as ISO 19001 (quality), 14001 (environment), OHSAS1800 (safety and health), etc. The company is also conducting internal and external assessment and verification, which utilize a global assessment system for the evaluation of the company’s EHSQ performances. Beyond the efforts for strengthening the independent EHSQ management system, we established the standard model for the system, developed the checklist for assessing safety management activities, and supported the establishment of the EHSQ management system in Akkas and Manzanillo, reinforcing the EHSQ management system so that it meets the global standards.

Reinforcing safety and health for executives and employees

Accident prevention activities

|                                       |   |
|---------------------------------------|---|
| On-site safety management             | <ul style="list-style-type: none"><li>● Goal: To maintain a work environment without accidents and hazards<ul style="list-style-type: none"><li>- Safety-checking day event attended by all executives and employees</li><li>- Managing on-site works by strictly complying with the procedure for working permission</li><li>- Assessing the safety level for facilities before construction (5-year cycle)</li><li>- Regular checks and maintenance</li></ul></li></ul>   |
| Assessing safety level                | <ul style="list-style-type: none"><li>● Goal: To prevent possible risk elements in facilities which are newly established, added, and changed<ul style="list-style-type: none"><li>- Presenting recommendations and future plans to alleviate and eradicate risk elements depending on the result after prior analysis for risk elements</li><li>- Checking and analyzing effects comprehensively, such as effects by changes and legal permission</li></ul></li></ul>  |
| Inventory system for risk elements    | <ul style="list-style-type: none"><li>● Goal: To prove risk elements in gas facilities and assessing risk level<ul style="list-style-type: none"><li>- Preparing measures for reducing risks and applying to actual situations</li><li>- Establishing items for major safety management and sharing risk elements with the entire company</li></ul></li></ul>   |
| Establishing accident response system | <ul style="list-style-type: none"><li>● Goal: To minimize damage in case of accidents<ul style="list-style-type: none"><li>- Securing the 24-hour monitoring system for gas facilities (Central control office, 8 regional control offices, 4 production adjusting offices)</li><li>- Launching emergency equipment and operating safety systems such as passive systems and comprehensive controlling facilities</li><li>- Establishing cooperative systems such as hotlines with relevant institutions</li><li>- Performing continuous emergency drills in accordance with on-site management manual for gas accidents, earthquake, storm and flood, terrorist attacks, information system, environmental risks, etc.</li></ul></li></ul> |

Health management system for executives and employees

KOGAS is establishing a health management system to prevent industrial accidents and occupational diseases by identifying potential risk elements to safety and health while working at sites. We regularly collect and display the latest data on safety and health in materials that we provide to workers for easy reference. We also manage the committee for industrial safety and health and draw reasonable solutions to secure safe work environments and promote the health of the company’s members. The committee is composed of the same number of members of the labor union and meeting is held more than once each quarter at all business sites.

Center for Experience and Drills for Gas and Fire Accidents

Best Practice

KOGAS is fostering capability to prevent gas and fire accidents by operating the Center for Experience and Drills for Gas and Fire Accidents and deals with those accidents with executives and employees responding in a rapid, accurate, and safe manner. We are conducting drills for coping with various types of gas-related accidents, such as drills including emergency measures for fire accidents and using fire extinguishers and mock-up drills with equipment. Beyond the education for executives and employees, we have realized enhanced awareness of the risk of large-scale fire accidents due to the increasing demand for gas and complicated fire accidents. As a public company, we are fulfilling our responsibility for social safety by providing this education for partner, general, and overseas companies.



0 (zero)  
case of accidents at the entire  
company for six consecutive years

Accident rate of partner companies  
0.138 %



### 3. Win-win Management with Cooperative Firms



#### Interview with stakeholders — Kim Yang-su, Head of Civil Engineering Department, Daelim Industrial Co.



Since 1997, I have engaged in the construction of LNG storage tanks at KOGAS Incheon, Tongyeong, Pyeongtaek, and Samcheok. I've recognized that the company is striving to enhance cooperation between actual business sites and the headquarters by operating various programs. The company is continuously holding on-site team-building events and team workshops with participation from the headquarters, designers, and on-site partner firms. We are securing accurate estimates for construction period and quality. We are also reducing errors by conducting jobs such as VE and error correction and improving procedures through discussion after deliberating on the specifications, designs, and procedures. These results are

reflected immediately or given feedback, and are then adopted for prospective construction in the future. We have collected various opinions from construction companies and subcontractors by holding monthly committee meetings for win-win growth, created better work environments by improving construction methods, and strived to solve complaints from workers proactively. I expect the company to lead win-win growth more aggressively by increasing opportunities to freely discuss opinions on mutual cooperation.

### 3-1. Carrying Out Win-win Management

#### DMA



#### Our Commitment

KOGAS is contributing to improving the competitiveness of small and mid-sized partner firms by vitalizing cooperative efforts for technology development and expanding the purchase of products by those partner firms. We are striving to make a sound corporate environment in the domestic natural gas industry by conducting a campaign for establishing the order for fair transaction and spreading our mutual management culture with SMEs.



#### Our Progress

| Goal  | Current  | Performance for 2013  |
|---|----------|---|
| To reinforce the technological competitiveness of partner firms | Ongoing  | 16 cases for new tasks in cooperation for technology development                                      |
| To expand the purchase of products by SMEs                      | Complete | 555 billion won in the amount of purchased / Increased by 115.8 billion won compared to the last year |



#### Our Strategy

KOGAS is supporting the growth of small and mid-sized partner firms and carrying out win-win management by making fair cooperative relations. In addition to supporting technology and entering new markets to improve their competitiveness, we established strategic tasks such as expanding the purchase of SME products and spreading the culture of win-win growth. We have selected 12 tasks and are currently carrying out those tasks. Depending on the roles required by these tasks, five committees are organized for efficient and systemic operation.

| Strategy | Encouraging social investment by mutual growth and win-win management |  |  |
|----------|---|--|--|
| Tasks    | Vitalizing cooperation for technology development                     | Enhancing competitiveness in small and mid-sized partner firms |  |
|          | Expanding the purchase of SME products                                | Spreading the culture of win-win growth                        |  |





Number of new cooperative tasks for technology development 16 cases in 2013, Increased **60%** compared to the last year (10 cases in 2012)

Management Doctor System



Survey for satisfaction among wholesale and retail business operators for win-win education

(Unit: score)



### 3-1. Carrying Out Win-win Management

#### Reinforcing technological competitiveness of partner firms

##### Cooperation for technology development

KOGAS is carrying out win-win cooperation by conducting cooperative business for technology development with small and mid-sized partner firms and enhancing the rate of localization for major parts in gas facilities. We support those companies with funds for technology development and sharing on-site experience. We select small and mid-sized partner firms by assessing business for developing major parts in gas facilities with their technology, while selecting engaged small and mid-sized partner firms by holding contests for cooperative tasks for developing technology. Thanks to these efforts, we reduced the expenses for purchasing foreign goods through localization, improved facility performances, achieved efficient maintenance, and created a stable foundation for production. At the same time, small and mid-sized partner firms are securing their own technology and improving management profitability by pioneering markets.

##### Strengthening SMEs' job capability

KOGAS is providing various education and advisory programs to improve job capability for small and mid-sized partner firms. We are operating the "Management Doctor System", providing executives of SMEs with advice on management, and conducting job education for their employees to enhance their capability in overall management. The company is sharing relevant technologies and experience by dispatching experts in the facility operation sector among the company's retirees and professionals with extensive business experience. In 2013, we provided two SMEs with professional experts and spread technology related to natural gas pipelines and LNG storage tanks. Both companies are carrying out the relevant technology development.

##### Partnership for production innovation

KOGAS is providing consulting services to improve the productivity of primarily small and mid-sized partner firms. We are providing support for establishing management systems and advice on technology for production and operation. The average profit rates of engaged companies increased by 40% compared to the last year. Furthermore, primary SME partner firms are sharing their capabilities to support secondary and tertiary partner firms, thus expanding sustainable win-win growth.

##### Supporting SMEs to pioneer new markets

In order for technology development to lead to successful management performances by small and mid-sized partner firms, KOGAS is prioritizing the purchase of products which were successfully localized and supporting their efforts to enter new markets. In 2013, the company purchased products that adopted successful technology worth 11.5 billion won. We supported 18 partner firms to participate in exhibitions at home and abroad and 10 firms to hold consultation events for purchase by public institutions. In 2014, we supported 22 SME partner firms to attend "Gastech 2014", one of the world's largest gas exhibitions, to lay the foundation for them to enter the global market. We will carry out various activities to support their efforts to pioneer new markets, including holding conferences for overseas export and support for engagement in overseas exhibitions.

#### Joint venture into overseas businesses

KOGAS is entering the relevant areas in the overseas market together with the small and mid-sized cooperative firms. Through these efforts, we are helping partner firms enter the overseas market with high entrance barrier and supporting them to enhance their global competitiveness. In 2013, 17 SME partner firms participated in various businesses, including the CNG charge and cylinder project in Uzbekistan, construction project for pipelines in Maputo, Mozambique, and EPC project in Kirkuk, Iraq.

#### Expanding sustainable management with partner firms

##### Safety management for partner firms

The company puts great priority on the safety management of energy supply facilities and strives to realize a zero-accident environment by expanding practices to partner firms. We are checking the safety management systems of partner firms and carrying out activities to enhance safety culture to help everyone in each business site to secure safety in daily life. We solidify our efforts to reduce gas accidents by holding resolution conferences with employees in charge of safety management at each division and partner firm and pledge to carry out measures for safety management by holding various meetings.

##### Reinforcing communication channels for partner firms

KOGAS is operating communication channels to identify various needs and provide partner firms with practical systems. Twice a year, we consult small and mid-sized partner firms about related policies by the committee for win-win growth. We are also collecting opinions from partner firms and improving measures for support by holding various meetings. In 2013, major issues included vitalization of cooperative business for technology development, strengthening promotion for products developed by SME partner firms, and support for retirees. The company has established a system for supporting products developed by SME firms and provided them support for participating in exhibitions, including attending WEC for 18 companies and establishing divisions for promoting their products. We are striving to establish transparent construction culture by operating 23 anti-corruption committees in 10 construction sites and immediately enacting improvements situations after listening to complaints from subcontractors. Through engaging in communication with partner firms, we are proactively collecting opinions from SMEs and realizing cooperation for win-win growth.

##### Fair transaction culture

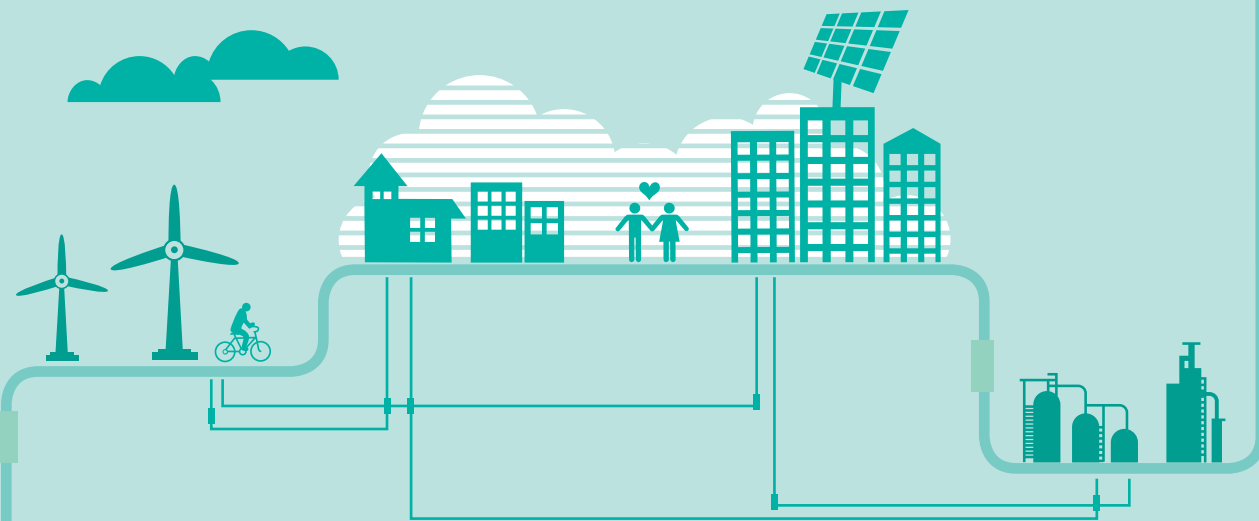
To secure fairness in contracts, KOGAS is operating a transparent electronic bidding system by disclosing background for private contracts in advance and establishing the assessment function for bidding satisfaction. We have improved the system for preventing overdue payment to protect subcontracting transactions by operating a system for checking payment for subcontractors and conducting checks for the current situation twice a year. We will continuously strive to create a transparent transaction culture and root out illegal subcontracts by improving contract systems.

Meeting with construction companies





## 4. Vitalizing Local Communities



### Interview with stakeholders — Park Yeong-bin, Manager of Korea National Council on Social Welfare

The Korea National Council on Social Welfare is implementing the Onnuri Projects, a representative social contribution program of KOGAS. The Onnuri Projects started five years ago as a project for providing the vulnerable with heating fuel costs for heating oil and coals. From 2010, KOGAS has expanded the size of their budget and is proactively carrying out efforts to achieve goals for exchanging heat sources from a long-term perspective, not just support for short-term fuel costs, and improving energy environment. The projects are evolving into multilateral cooperative models by adding cooperation with various stakeholders such as local governments, city and provincial welfare committees, and private companies. Social and economic values have increased through

these projects: the economic burden caused by energy use for the disadvantaged and social welfare facilities was reduced, the quality of housing welfare was improved, and jobs for the underprivileged were created by selecting self-dependent communities and social companies as construction partners. Environmental improvement effects are also being created by reducing energy consumption with the construction of high-efficiency heating facilities. Creating various economic and social benefits, KOGAS's Onnuri Projects are not just one of companies' social contribution activities for simply providing support, but are recognized as exemplary social contribution activities. If KOGAS will continue its business by considering the direction for business from the perspective of not just the company but also that of beneficiaries, KOGAS will become a leading company conveying warmth not only to the entire country but also to the world, fulfilling the meaning of the project name, Onnuri, a combination of 'On', which means warmth, and 'Nuri', which means the world.

## 4-1. Social Contribution Activities

### DMA



#### Our Commitment

KOGAS will become the most trusted and respected Korean company, carrying out business for the improvement of the national energy welfare. KOGAS conducts customized social contribution activities for each business site to fulfill its own social responsibility as a public company.



#### Our Progress

| Goal  | Current condition | Performances for 2013  |
|---|-------------------|--|
| To expand energy welfare support for the socially disadvantaged             | Ongoing           | Providing gas supply to a total of 192 non-supplied regions including cities and provinces |
| To meet the international standard for responsibility for local communities | Ongoing           | Joining 2013 DJSI Asia Pacific for the first time  |



#### Our Strategy

KOGAS is carrying out social contribution activities by establishing "Onnuri" as KOGAS-typed social contribution brand to enhance energy welfare, spread sharing culture, and invigorate local communities.

| Missions   | Love Humanity            | Sharing  | Happy Society |
|------------|--------------------------|--|---------------|
| Activities | Onnuri Love Project      | <ul style="list-style-type: none"> <li>Goals: To enhance energy welfare for the disadvantaged</li> <li>Activities: KOGAS Onnuri project for improving heat efficiency, Reducing city gas costs for the disadvantaged</li> </ul>  |               |
|            | Onnuri Hope Project      | <ul style="list-style-type: none"> <li>Goals: To foster the future generation and improve the public interest</li> <li>Activities: Blue Sky Project, protecting cultural heritage sites, project for medical services and scholarships, nurturing traditional markets</li> </ul>   |               |
|            | Onnuri One Heart Project | <ul style="list-style-type: none"> <li>Goals: To spread sharing culture</li> <li>Activities: Operating programs for participation by executives and employees, matching grants, donations for the socially underprivileged</li> </ul>  |               |
|            | Onnuri Harmony Project   | <ul style="list-style-type: none"> <li>Goals: To establish trust with local communities and global citizens</li> <li>Activities: Cooperation with local communities, Operating Onnuri voluntary groups, global fellowship, improving education in Mozambique, support for sports in East Timor, medical support</li> </ul> |               |

4-1. Social Contribution Activities

Onnuri Love Project

Energy for people with low-income

KOGAS is striving to realize the goals for improving the quality of life of the socially underprivileged. From May 2013, we have significantly improved the energy welfare system, such as changing a system of city gas bills to a flat rate system and expanding the scope of discount, qualifying households with many children to avail for price discount. We are promoting the stabilization of the economy for low-income class and fulfilling its social responsibility as energy public company by expanding the supply of natural gas to non-supplied regions and reducing fuels compared to LPG.

Onnuri thermal efficiency improvement project

Since 2010, KOGAS has invested two billion won every year and implemented the “Onnuri Project for the Improvement of Heat Efficiency.” This project aims to provide financial support for the installation of city gas pipelines and improve thermal efficiency by providing floor, wall insulation and changing windows and doors; it is also contributing to the creation of jobs. In 2013, we contributed to the improvement of thermal efficiency in 131 low-income households and 68 social welfare facilities and provided 26 socially disadvantaged households with installment costs for gas pipelines. We created 642 jobs by assigning construction works, sharing jobs such as energy checks for 17 social companies

Onnuri Hope Project

KOGAS is enhancing living environments of the people and their values by supporting social welfare projects. We are providing disabled children and teenagers from disadvantaged households with aids for recovery and conducting medical treatments with the cooperation with Seoul National University Bundang Hospital. We have improved the education environment by reforming facilities for regional children centers in business sites and supporting them with educational devices and cultural experiences, while promoting a better future for the youth by providing scholarships for children from vulnerable families. We are also checking gas safety in 23 tangible cultural assets in areas near business sites to preserve regional culture and purifying environment on a half-yearly basis. Furthermore, the company is contributing to vitalizing regional economy by signing contracts for supporting traditional markets at each business site.

Onnuri Unison Project

KOGAS is implementing the “Volunteer 5-up Movement,” a creative project for sharing practices. Setting a goal to enhance social contribution points by more than 5% compared to last year, we have implemented sharing movements continuously and spread culture throughout the whole company and regional societies by carrying out joint voluntary activities with the labor union and management, voluntary work with family members, and donating Labor-Management funds.



Discount of city gas cost for the socially underprivileged and social welfare facilities

48.2 billion won

Profit ratio of social investment in the project for improving thermal efficiency

Recruitment of the physically challenged

Income effects

Reducing energy use



Social contribution point system

Connecting voluntary work by employees to the internal management assessment system (applying to index for chief of offices and departments)

Operating matching grant system

Supporting the vulnerable by utilizing donated funds from employees (55 groups, 41 individuals)

Social contribution day

Carrying out Labor-Management joint voluntary work by utilizing Labor-Management Harmony Day (on a quarterly basis)

Programs with the participation of executives and employees

Weekend voluntary work with family members (4 times/year), Voluntary works by food truck, sharing books (twice/year) Sharing gifts on national holidays

Settling Labor-Management culture for win-win growth

Donations to the socially disadvantaged from the labor union and management to collect a small amount of money below 1,000 won from each donor

Emblem for social contribution



The emblem represents the love for neighbors, environment, and the global world by KOGAS Onnuri voluntary groups to pursue a better and happier society.

1. Inviting and conducting surgeries for children with heart disease
2. The completion ceremony of the elementary school in Mozambique
3. Onnuri architectural academy
4. Onnuri voluntary work for the Improvement of Heat Efficiency
5. Volunteer medical service with Seoul National University Hospital

Onnuri Harmony Project

KOGAS is carrying out various social contribution activities to establish trust with local communities and residents in overseas sites. KOGAS Onnuri voluntary groups, who carry out activities nationwide, are expanding a systemic and professional support system to improve lives in regions near production sites beyond typical social contribution activities by doing voluntary work for areas near business sites and forming cooperative relationships between the company and villages. The company expects that these efforts will have a positive impact on entering the overseas market as well as overseas resources development by improving the existing domestic social contribution activities and enhancing exchanges with local residents for global contribution business.

Global social contribution activities

|   |  |
|---|--|
| <br>Global fellowship                             | <ul style="list-style-type: none"><li>● Goal: Scholarship for foreign students from countries with overseas resources development</li><li>● Support: Providing tuition, living costs, and internship</li><li>● Support limit: 50 million won/person, 2 years</li><li>● Candidates: 10 persons/year</li></ul>   |
| <br>Improving education environment in Mozambique | <ul style="list-style-type: none"><li>● Goal: To provide support for establishing elementary schools in areas near Mozambique</li><li>● Support: Establishing the local school for the first time (Vida Abundante Elementary School), support for academic equipment and payment for meals in public elementary schools by joint cooperation between the labor union and company</li></ul> |
| <br>Sports exchange                               | <ul style="list-style-type: none"><li>● Goal: To support the youth soccer team in East Timor for domestic field training</li><li>● Support: Providing soccer-related goods, playing fields, vehicles and board and lodging</li><li>● Cooperative institution: The Korea Gas Union</li></ul>  |
| <br>Medical support                               | <ul style="list-style-type: none"><li>● Goal: To invite and conduct surgeries for children with heart disease from regions near related overseas business sites (Anbar, Iraq) and foster the best medical personnel at local sites</li><li>● Cooperative institution: Seoul National University Bundang Hospital</li></ul>   |





# 5. Creating Values for Executives and Employees



## Interview with stakeholders — Jo Gyu-Yeong, Branch manager of KOGAS Middle East

At KOGAS Middle East branch, I am in charge of identifying current economic and political trends in the Middle East and collecting and studying information on the local market for the procurement and development of LNG. I realized that the best and talented people are needed in this chaotic region to develop resources, and capable managers and management systems are also needed to supervise and manage employees. The KOGAS education system fosters the best and talented people by dividing sectors from practical education to professional education, especially sectors for resources technology, finance, and management. Thanks to the long-term education program conducted along with the expansion of overseas business, I studied economics and finance. After returning to Korea, I planned the investment for adequate facilities in the Jeju LNG base and drafted a system for assessing and managing overseas resources development. All of these activities were possible thanks to long-term education program by KOGAS. To become a prominent major overseas resources developer, however, education should be expanded to a wider variety of sectors. Resources development business is not just about the issues for technology, economics, and management, but deals with various factors, such as politics, economic conditions, other countries' cultures, and diplomatic relations with these countries. After I came here to the Middle East, I have realized that we need to secure not only resources technology but also employees specialized in various sectors such as finance, law, accounting, politics, military affairs, and negotiation. I hope that KOGAS will foster the best and talented in various fields for the success of resources development.

## 5-1. Creative Corporate Culture

### DMA



#### Our Commitment

As the legislation for introducing competition in the gas industry among public companies is under discussion, conflicts between the labor union and company have intensified. Focusing on the issue for normalization of public companies from 2013, the importance of Labor-Management cooperation has greatly increased. To deal with these internal and external anxieties and create continuous management performances, KOGAS is strengthening relations between the labor union and management for win-win growth.



#### Our Progress

| Goals   | Current condition | Performances for 2013  |
|---|-------------------|--|
| To establish an advanced Labor-Management relationship                    | Ongoing           | 73 scores for satisfaction in Labor-Management relation (71 scores in 2012)                                |
| To support the balance between work and life for executives and employees | Complete          | Received the best award among the public energy sector for the "best company for working in Korea in 2012" |



#### Our Strategy

KOGAS is establishing its own Labor-Management culture by recognizing the importance of a reasonable Labor-Management relationship to achieve successful management goals. With the goal of achieving a win-win Labor-Management relationship to create values for the future, we are operating various channels for forming a consensus and communication and creating an advanced Labor-Management culture based on the compliance with basic principles by operating compliant-solving channels and reasonable systems for collective agreement.

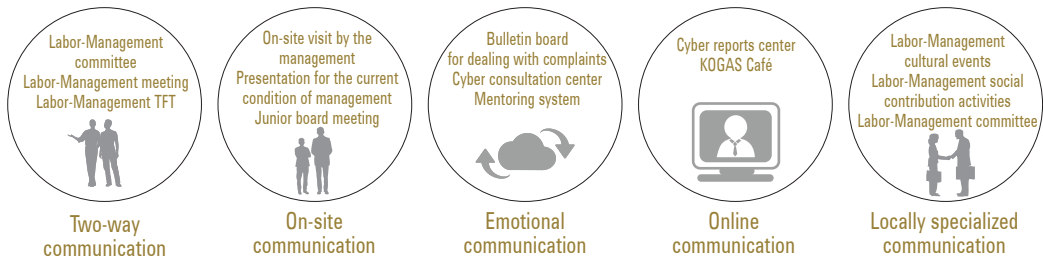
| Goal                 | To achieve management goals by realizing the Labor-Management relation for win-win growth |               |   |             |
|----------------------|---|---------------|---|-------------|
| Core values          | Win-win growth  | Communication | Trust   | Cooperation |
| Strategic directions | Carrying out advanced strategies in Labor-Management relation                             |               | Establishing fair and responsible corporate culture |             |
|                      | Reinforcing communication and capabilities  |               | Rationalizing collective agreement                  |             |

5-1. Creative Corporate Culture

Advanced Labor-Management relation

Communication channels between labor union and management

KOGAS is operating various Labor-Management communication channels, such as two-way communication with the management, on-site communication, and communication dealing with complaints. With this two-way communication, discussion is carried out regarding the working environment, with which both the labor union and company are satisfied. Through on-site communication, we conduct strategies to internalize business which is necessary at the business site and draw reasonable management measures. The company is enhancing the understanding between the labor union and management by dealing with grievances, improving unfair systems, and preparing various communication channels to form consensus.



Vitalizing a system for dealing with grievances

KOGAS is preventing conflicts between the labor union and management by dealing with grievances and on-site problems swiftly and managing them proactively. We are carrying out on-site consultation for working conditions by conducting circulatory consultation for 13 business sites and striving to help executives and employees present their complaints and opinions more easily through the electronic notice system. The company is expedient in resolving complaints by holding the committee for dealing with complaints on a monthly basis and presenting improvement measures to prevent similar complaints from recurring in the future. For complaints related to personal information, we are providing support to solve problems with detailed and practical approaches by providing employees with consultation services from professional institutions. We are making it possible to solve problems immediately by reinforcing a mentoring system for new employees and labor union-led complaint-solving measures. We are also rooting out grievances related to gender difference by conducting mandatory education for preventing sexual harassment once a year and building awareness of the relevant content among all executives and employees.

Number of complaints received and solved (Unit: case)



Solving current issues fast by operating the Task Force Team (TFT)

Best Practice

KOGAS is sharing awareness of major issues which threaten management activities and operating the Task Force Team (TFT), which deals with issues immediately. In 2013, we recognized the necessity of improving the financial condition of our public energy company by responding to the needs for normalization of public companies and established tasks for improving financial structures, including austerity management and asset sales. Through proactive communication and cooperation between the labor union and management, we have strived to carry out measures for improvement. As a result, we resolved the current issues at the right time and reinforced the trust between the labor union and management by cooperating with each other to overcome crises.

Innovation activities by executives and employees

Carrying out voluntary innovation activities

KOGAS is making a creative and efficient working environment by innovating employee-led working conditions. With the CoP (Community of Practice) activities as voluntary learning communities, we are realizing improvement in individual performances for solving problems and creating group knowledge, which in turn enhances working efficiency by sharing performances within the general company. With BnF (Best & First), activities for innovating on-site jobs, we are selecting and operating company-wide innovation tasks at each base and regional division.

By holding contests for the best examples to improve company-wide works, we are motivating employees to voluntarily participate in the company's innovation and enhancing their sense of belonging. In 2013, a total of ten teams, including four best cases in BnF and six best cases in CoP, participated in the BP contest. The principles learned in these ten best examples are being applied and expanded to all business sites.

Financial effects by autonomous innovation activities (Unit: 100 million won)



Realizing stable natural gas supply

Best Practice

As vaporization efficiency of Open Rack Vaporizer (ORV) has drastically decreased due to the reduced seawater temperature in the winter season, KOGAS carried out a project with "Research for Securing Capability for Stable Vaporization in the Winter Season" as a strategic CoP to increase seawater temperature. Thanks to performances by CoP activities, we saved about 55 billion won in investments by developing localized high-performance seawater heaters and realized win-win growth and cooperation with SMEs. Recognized its performances in improving its working conditions, the company was selected as the best case in management for a public company by the Ministry of Strategy and Finance in 2013.



Promoting balance between work and life

KOGAS is creating a corporate culture that strikes a balance between work and life by expanding various types of work and a system for utilizing leisure. We are enhancing the awareness of the flexible working system by analyzing the current conditions of the system and increasing convenience in procedures for registration and cancellation. The company is promoting parental leave and establishing measures for operating a system for reducing work hours during the infant care period to prevent female employees from ending their careers due to childcare. We are supporting the balance between work and life and contributing to job creation by recruiting part-time employees who can work in sectors in which they can work independently. By balancing work and life and supporting childcare, we are making an environment where employees can focus on their work and enjoy greater satisfaction and concentration.



5-2. Fostering Global Experts

DMA



Our Commitment

KOGAS is establishing strategies for fostering the best and talented for the necessary capability required to the company’s vision and strategies to select and foster the best prospective employees with expertise in the gas industry. We are operating assessment and compensation systems to help executives and employees to work with responsibility and pride. We will improve employees’ satisfaction by continuously compensating for any defects.



Our Progress

| Goals  | Current condition | Performances for 2013                                     |
|--|-------------------|---|
| To strengthen global capabilities in jobs and leadership of executives and employees | Ongoing           | Establishing e-HRD Portal system (education portal)       |
| To diversify the pool of executives and employees by open employment                 | Complete          | Recruiting 124 young interns and 16 high school graduates |

KOGAS has established and operated a system for fostering the best and talented people by focusing on their capability connecting with the company’s vision and strategic directions. We are crafting an annual plan for training and education by analyzing the needs of the company, executives, and employees and developing various job courses to reinforce the company’s capability and secure individual capability.



Our Strategy

| Capabilities | Basic capability  | Job capability | Leadership capability                            | Global capability |
|--------------|---|----------------|--|-------------------|
| Systems      | Operating a system with plans for self-development  |                | Operating internal training courses (37 courses) |                   |
|              | Providing externally consigned courses for each capability  |                | Establishing e-HRD system                        |                   |
| Measures     | <ul style="list-style-type: none"><li>● Reinforcing executives and employees leadership and core values education</li><li>● Connecting the promotion of the best and talented people and human resources management</li><li>● Strengthening job education for fostering experts</li><li>● Reinforcing global capability to expand overseas businesses</li></ul> |                |  |                   |

Programs for fostering core employees

On-the-job experts

KOGAS has established and operated a system to secure future growth engines and foster on-the-job experts who can proactively deal with on-site issues. We support education for professional sectors, including up, mid, and downstream sectors, and provide the job education required at business sites by abolishing unnecessary procedures. In regard to dispatching overseas employees, we established a system for verifying available job capabilities, and by developing government-accredited certificates regarding natural gas, we are fostering core employees in the operation, maintenance, and construction sectors for overseas business. In 2013, the company newly secured 34 experts in operating facilities and 17 experts in maintaining machines and relay schemes. A total of 531 employees in both sectors acquired internal certificates.

Global experts

KOGAS is improving the process for fostering globally talented people who meet the company’s needs along with the expansion of global resources development. We established a system for fostering employees by introducing the “Career Path” system and nurturing technology personnel to enhance professionalism in all sectors by having employees work in a rotational way for technology and business departments or dispatching employees to overseas sites after completing on-the-job training. In 2013, the company helped employees to acquire practical performances in overseas sites by dispatching 150 employees to 21 institutions in nine countries. We are creating a foundation for securing globally talented employees by supporting specialized colleges for developing resources, selecting and fostering professional personnel at the early stage.

Demand-predicting experts

KOGAS is recruiting new research personnel for predicting demand and operating a long-term program for existing employees to enhance capability for predicting demand. As for personnel with doctoral degrees, in which fostering personnel takes a long time, we secure experts by recruiting new employees and train them into professionals by conducting regular learning programs and step-by-step professional education, acquiring professional certificates and expanding education infrastructures. Considering the characteristics of the gas industry, which procures 80-90% of demand through mid and long-term contracts, we expect that the company can realize stable supply and demand control with minimum cost by accurately predicting demand.

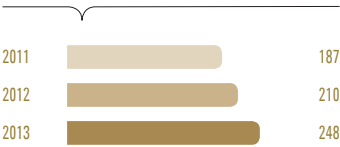
Female leaders and experts

KOGAS is operating various programs to cultivate female employees into the best leaders and experts. We are providing pre-manager courses and leadership development training courses to enhance the required capabilities for female leadership. We are also making the foundation for helping female employees to secure high-level positions by expanding the scope of dispatching and promoting female workers for major departments in the headquarters. Through these efforts, the company expects to achieve successful management performances by ensuring synergy effects with differentiated capabilities by each gender.

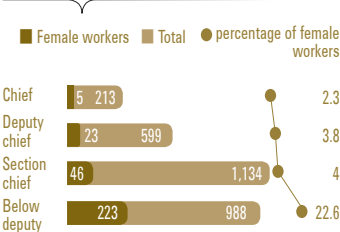
Dispatching employees to overseas sites



Current condition for securing globally talented workers (Unit: person)



Current condition of female workers for each position (Unit: person, %)

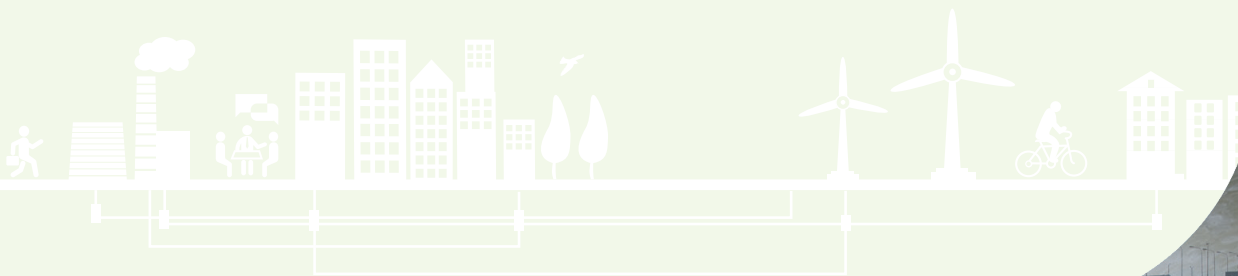


\* As of January 2014



# Governance

Beyond LNG, Global KOGAS



Integrity and Ethical Management  
Reinforcing Risk Management  
Sound Corporate Governance





Integrity and Ethical Management

Reforming the strategies for integrity and ethical management

KOGAS is pursuing a “Clean KOGAS” to fulfill its social responsibility while seeking sustainable growth with customers. We established three major strategic directions, as well as organized the committee for global ethical and integrity innovation to strive for clean and transparent management. We analyze various performances by continuously monitoring the ethical management system and operating a feedback system, and then reflect the result to our policies.



Creating an advanced integrity and ethical infrastructure

Expanding communication channels for stakeholder engagement

To enhance the practice for ethical management, KOGAS has established the ethical management system connecting with Management Committee, Office of the Auditors, Promotion Department, Funding Department, and Accounting Department by focusing on the Social Contribution Department. We systemized external stakeholder engagement by establishing communication channels for various stakeholders such as partner firms, communities, shareholders, customers, and the government. We are discussing current issues with partner firms with the Corruption Prevention Committee.

Improving the system for promoting ethical management

In addition to enhancing the transparency in executing budgets, KOGAS has improved the system as the foundation of ethical management by strengthening the anti-corruption system and social responsibilities. We have reinforced the regulations on punishment standards and corruption reports as well as the procedure for collecting public opinions in the guidelines for dealing with contracts.

Realizing the best ethical company with integrity

Best Practice

KOGAS held an event to set our resolution to become an ethical company with integrity and realize a “Clean KOGAS.” Through this effort, we are implementing measures for improving ten major measures in five sectors for integrity and ethical management, including improving corruption-vulnerable sectors, punishing corruption strictly, and cooperating with private sectors. We reaffirmed that the company will eradicate corruption practices by prohibiting acquiring money, treats, and favors, complying with the code of ethics and conduct, and internalizing ethical behavior with integrity. In addition to internal efforts to improve corporate culture, system and awareness structure, the company has pledged to fulfill its social responsibility as public company by promoting its ethical culture with integrity.



Creating ethical corporate culture with integrity

Internalizing ethical culture with integrity

KOGAS is realizing advanced ethical management by internalizing integrity and ethics in the whole company from the management to the executives and employees. As executives and the management expressed their willingness to carry out ethical management and the assessment for integrity level of high officials has expanded, an environment for ethical management is being created, led by the executives. We have strengthened the assessment for corruption effects by finding out and implementing 169 measures for improving corruption prevention systems in the company and removing potential corruption elements for 21 regulations including the guideline on investment management. Through our internal communication channels, we are sharing internal cases for corruption and our regular code of conduct and reinforcing motivation by expanding incentives and benefits.

Creating an ethical culture with integrity by education

KOGAS is developing and operating customized education contents for integrity and ethics to establish an ethical culture. On-site integrity education is enhancing the willingness of executives and employees to carry out ethical management by introducing code of conducts, corruption cases, and policies on ethical management. We are also implementing education for partner firms about the KOGAS code of conducts and the prohibition of receiving money and gifts.

Spreading ethical culture with integrity

With the cooperation of private sectors, KOGAS is spreading ethical awareness by carrying out ethical and integrity activities. Thanks to these efforts, our external integrity level among institutional integrity grades has increased from the third grade to the second grade

| Category   | Major contents  |
|--|---|
| Expanding the Committee for Preventing Corruption        | ● Expanding from the operation by partner firms in the construction sector to the operation including natural gas producers (city gas producers, etc.)                            |
| Operating the Committee for Win-win Growth               | ● Forming and spreading consensus for ethics in the private sectors by communicating with small and mid-sized partner firms<br>● Held twice in 2013 (April, November)             |
| Agreement for integrity and ethics in the public society | ● Signing agreements with two companies, including Daegu Facilities Management Corporation, spreading best examples of ethical management<br>● Held twice in 2013 (July, October) |

Reinforcing internal control for preventing corruption

KOGAS has enhanced the efficiency in the internal check by developing internal control and monitoring. In addition to regular monitoring, we reinforced internal control by reforming internal control for overseas business and the process for internal audit. We are strictly punishing structural misconduct while strengthening intensive special audits and inspection activities and performing preventive audits by carrying out precautionary diagnosis for management. In 2013, a total of 45 corruption cases were reported through the internal control systems such as the corruption report center on the KOGAS website. Through investigation, we took measures for one case in which money and gifts were received and three cases of misconduct regarding work by punishing involved employees with dismissal (two cases) and suspension of operation (two cases). To prevent the recurrence of such incidents, we are preventing corruption in advance by strengthening the efficiency in the internal control systems such as regular monitoring and reinforcing the management to prevent similar cases by sharing the result of internal audits.

Performances of ethical management education

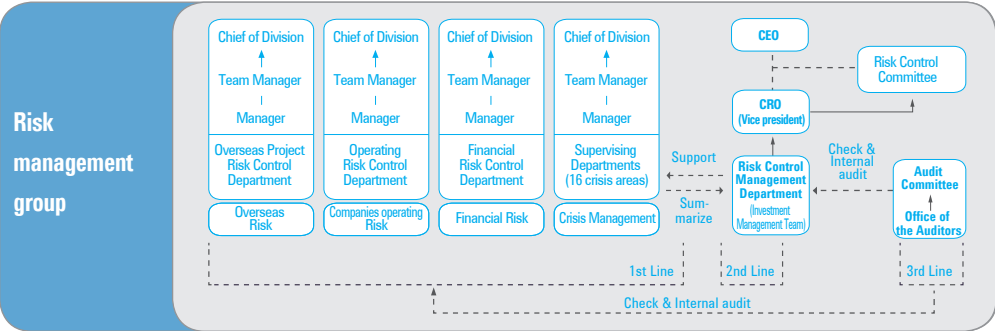
| Category  | Target                                       | Participants (person) |
|---|--|-----------------------|
| On-site integrity education                                     | Executives and employees                     | 1,374                 |
| Integrity and ethical education                                 | New employees                                | 209                   |
| Global KOGAS Forum  | Executives above the second rank             | 88                    |
| Education for partner firms about anti-corruption and integrity | Construction companies and on-site employees | 724                   |
| Cyber integrity education                                       | Executives and employees                     | 2,924                 |
| Education on ethics, integrity and code of conducts             | Executives and employees                     | 2,861                 |

Reinforcing Risk Management

Approaches for risk control

Risk control system and organization

Risk, defined by KOGAS, is a concept including hazard and crisis. It pertains to elements of uncertainty that result in loss of opportunities, thus hampering strategies and business goals. To cope with these elements, the company established a risk control system to carry out company-wide risk control and monitoring. To manage the system more efficiently, we have designed and operated a risk management group based on the “3-lines of defense” model. This model is organized organically in interaction among the departments in charge of relevant works and general task management and an audit group. The Risk Control Committee is the top decision-making group responsible for every decision regarding company-wide risk control. This committee checks current conditions on company-wide risk control by holding quarterly meetings and makes decisions on various agendas.



Categorization of Risks

KOGAS categorizes risk factors into those under proactive monitoring systems and others under post-management. We sub-classified risk control into the management of operation, overseas projects, and financial risks in establishing our own enterprise-wide risk control system. The risk control areas consist of disaster, management, communication, and conflict.

Risk control activities

Improving company-wide risk control system

KOGAS has spread the ERM (Enterprise Relationship Management) culture by operating systemic education programs. We conducted OJT (On the Job Training), including risk control for seven best overseas institutions such as Mitsubishi, and implemented short-term education courses, such as risk control process and ERM conferences. We established a proactive response system by reforming our risk control system. Considering the insufficient standards in the existing risk assessment and inadequate awareness of risks, the company assessed risk elements in a qualitative manner and made it possible to control risks in an adequate and integrated way by establishing response plans. We will fully develop our risk control system by 2014.

Financial risk control activities

KOGAS is aggressively dealing with risks in exchange rates, interest rates, and liquidity to control various financial risks related to increased foreign loans due to the expansion of overseas business, expected reduction of quantitative easing, and increased interest rates accompanying economic recovery. We are preparing various measures with consideration of economic issues at home and abroad and prospects for the capital market by operating the Financial Risk Control Committee and Advisory Committee for Procuring Assets with the engagement of external experts.

Risk control performances

| Category     |          | 2011          | 2012 | 2013 |
|--------------|----------|---------------|------|------|
| Risk control | Interest | 4             | 3    | 10   |
|              | Warning  | 7             | 3    | 9    |
|              | Caution  | 4             | 7    | 1    |
|              | Serious  | -             | -    | 1    |
|              | Subtotal | 15            | 13   | 21   |
| Risk control | Notice   | Not conducted | 17   | 8    |
|              | Warning  | Not conducted | 6    | 21   |
|              | Subtotal | -             | 23   | 29   |
| Total        |          | 15            | 36   | 50   |

Sound Corporate Governance

Operation of the BOD

Composition and independence of the BOD

As the top decision-making group at KOGAS, the Board of Directors (BOD) is in charge of making decisions on major strategies and policies and supervising and supporting management on current management issues. The BOD is composed of a total of eight members, including one executive director and seven non-executive directors. The BOD has three subcommittees: the Audit Committee, Planning & Strategy Committee, and Overseas Project Committee. The company has reinforced the independence in governance structure by appointing Kim Seong-gi, non-executive director, as the chief of the BOD, and secured the independence of non-executive directors by guaranteeing their authority, providing information, and supporting activities.

Transparency and professionalism in appointing executive directors

As for the appointment of executive directors, KOGAS organizes the Executive Nomination Committee in accordance with the relevant legislation and regulations and secures transparency and fairness by establishing a systematic process for selecting executives. To secure a reasonable decision-making process and professionalism, the company is appointing non-executive directors among experts with extensive experience and expertise in various sectors such as energy facilities and construction, investment, and fund procurement. We are also providing support to enhance the capability of non-executive directors for performing jobs, including reporting major current conditions and management issues, presenting agendas in advance, providing supplementary materials, and on-site visits.

Communication with the BOD

KOGAS is establishing various channels to convey opinion from executives and employees to the BOD by proactively communicating with the CEO. In 2013, the CEO visited a total of 13 domestic business sites and listened to various opinions from employees by receiving reports of current issues for each business site and checking safety. Through these efforts, we formed a consensus in regard to responding to management crisis and future strategies. We will expand communication channels, such as discussion forums by the CEO and presentations about current management issues, in the future.

Subcommittee activities

KOGAS has established and operated three subcommittees under the BOD to reinforce the functions of check and supervision of management and deliberates on issues more closely by utilizing the professionalism of non-executive directors. Although the number of meetings of the Planning & Strategy Committee and Overseas Project Committee has slightly decreased, we have strengthened the role of checking management activities by the Audit Committee along with the government-led policy directions of transparent and responsible management of public institutions.

Current condition of subcommittees under the BOD and major performances in 2013

| Subcommittee                  | Composition                                       | Roles   | Performances for 2013   |                    |   |
|-------------------------------|---|---|-------------------------|--------------------|---|
|                               |   |   | Number of meetings held | Participation rate | Issues  |
| Planning & Strategy Committee | 2 non-executive directors / 2 executive directors | Establishing long-term strategies and visions                 | 1                       | 100                | Establishing mid and long-term management goals                                       |
| Overseas Project Committee    | 3 non-executive directors / 2 executive directors | Exploration, development and production of overseas resources | 1                       | 100                | Reporting the assessment of overseas investment business for the first half of a year |
| Audit Committee               | 2 non-executive directors / 1 executive directors | Accounting and audit works                                    | 12                      | 100                | Reporting the result of annual audit  |

Current composition of the BOD

| Cate-gory               | Name          | Position  |
|-------------------------|---------------|---|
| Executive director      | Jang Seok-hyo | CEO and President   |
| Non-executive directors | Kim Seong-gi  | Chief and auditor of the BOD<br>Emeritus professor of the Business Administration Department at Seoul National University |
|                         | Lee Sin-won   | Chief of Jeonnam Division of Federation of Korean Trade Unions  |
|                         | Jeong Bu-gyun | Former CEO of World Futures Forum   |
|                         | Han Gyeong-no | Former standing auditor of KOGAS  |
|                         | Go Yeong-tae  | Professor of Department of Materials Science and Engineering at Sungkyunkwan University                                   |
|                         | Jang Man-gyo  | Former auditor of Plant & Mechanical Contractors Financial Cooperative of Korea   |
|                         | Lee Won-tak   | Former member of the National Assembly of the Republic of Korea Trade, Industry & Energy Committee                        |



Sound Corporate Governance

Activities and assessment of the BOD

In 2013, KOGAS held a total of 19 BOD meetings. A total of 76 cases were processed, including 43 cases for making decisions on issues such as overseas resources development and 33 cases for reporting. The BOD participation rate was 95%, an increase by 2% compared to the last year. The participation rate by non-executive directors was 94%. The remuneration for executives is composed of basic salary, incentives, and severance pay. The yearly basic salary is decided in the BOD meetings for non-executive directors within the scope of salary limit, which is approved in a shareholder's meeting. The president receives incentives depending on the result of assessment of management performances after signing a management contract with the chief of the relevant institution, and executive directors receive incentives after making a contract for performance with the president.

Reinforcing the role of non-executive directors

KOGAS organizes the personnel pool with incumbent and former non-executive directors in various sectors from energy to construction, finance, and accounting and utilizes this pool for management. Based on these experiences, the company is reinforcing the roles of non-executive directors. To enhance the understanding of the company's jobs, we operate programs for each step and promote actual participation in management and support the management by visiting business sites at home and abroad while providing advice and consultation. In 2013, the number of management advice given by non-executive directors was 65 cases, among which the advice from seven consultations was adopted in major policies. The company is expanding participation in not only activities for ethics and anti-corruption with integrity but also social contribution activities by strengthening the role of non-executive directors for CSR management.

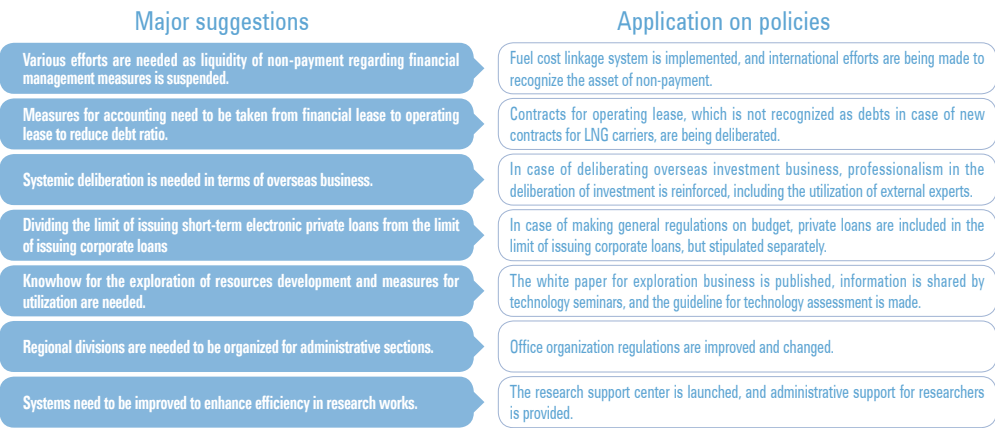
| Remuneration cost       |                   |                              |                                  |
|-------------------------|-------------------|------------------------------|----------------------------------|
| (Unit: One million won) |                   |                              |                                  |
| Category                | Number of persons | Total amount of remuneration | Averaged remuneration per person |
| Registered executives   | 4                 | 719                          | 180                              |
| External executives     | 7                 | 252                          | 36                               |
| Executive auditors      | 1                 | 153                          | 153                              |

\* Standard for integrated announcement by a public institution (as of full attendance per year)

Programs to enhance understanding for non-executive directors



Current condition of the application of consultation by non-executive directors (2013)



Appendix

- Performances of Sustainable Management
- GRI G4 Content Index
- Initiatives of Sustainable Management
- Awards & Associations
- Independent Assurance Statement
- Organization Chart & Affiliates

Performances of Sustainable Management

Economic performances

| Major financial performance | Category   | Unit            | 2011    | 2012    | 2013    |
|-----------------------------|------------|-----------------|---------|---------|---------|
|                             | Sales      |                 | 284,298 | 350,313 | 380,627 |
|                             | Profit     | 100 million won | 10,232  | 12,666  | 14,882  |
|                             | Net profit |                 | 1,747   | 3,620   | -2,036  |

Key financial indicators

|               | Category                          | Unit | 2011   | 2012   | 2013    |
|---------------|-----------------------------------|------|--------|--------|---------|
| Growth        | Sales growth                      |      | 21.55  | 23.22  | 8.65    |
|               | Net profit growth                 |      | -36.46 | 107.23 | -156.25 |
| Profitability | Total asset net profit ratio      |      | 0.53   | 0.94   | -0.48   |
|               | Return on equity ratio            |      | 2.22   | 4.41   | -2.35   |
| Stability     | Current ratio                     | %    | 147.32 | 115.74 | 146.78  |
|               | Debt ratio                        |      | 347.73 | 385.39 | 388.83  |
|               | Net worth ratio                   |      | 22.33  | 20.60  | 20.46   |
| Productivity  | Total asset investment efficiency |      | 7.22   | 7.64   | 6.23    |

\* Due to changes in writing standards of the Ministry of Strategy and Finance in 2013, some figures have changed compared to the last year’s report.

Summary for financial statement

|         | Category              | Unit            | 2011    | 2012    | 2013    |
|---------|-----------------------|-----------------|---------|---------|---------|
| Asset   | Current assets        |                 | 119,783 | 117,856 | 122,395 |
|         | Non-current assets    |                 | 240,280 | 288,361 | 314,269 |
|         | Total assets          |                 | 360,153 | 406,217 | 436,664 |
| Debt    | Current liability     | 100 million won | 81,371  | 101,831 | 83,384  |
|         | Non-current liability |                 | 198,343 | 220,696 | 263,952 |
|         | Total liability       |                 | 279,714 | 322,527 | 347,336 |
| Capital | Capital               |                 | 3,864   | 3,864   | 4,616   |
|         | Others                |                 | 76,575  | 79,826  | 84,712  |
|         | Total capital         |                 | 80,439  | 83,690  | 89,328  |

Performance of receiving the government subsidies

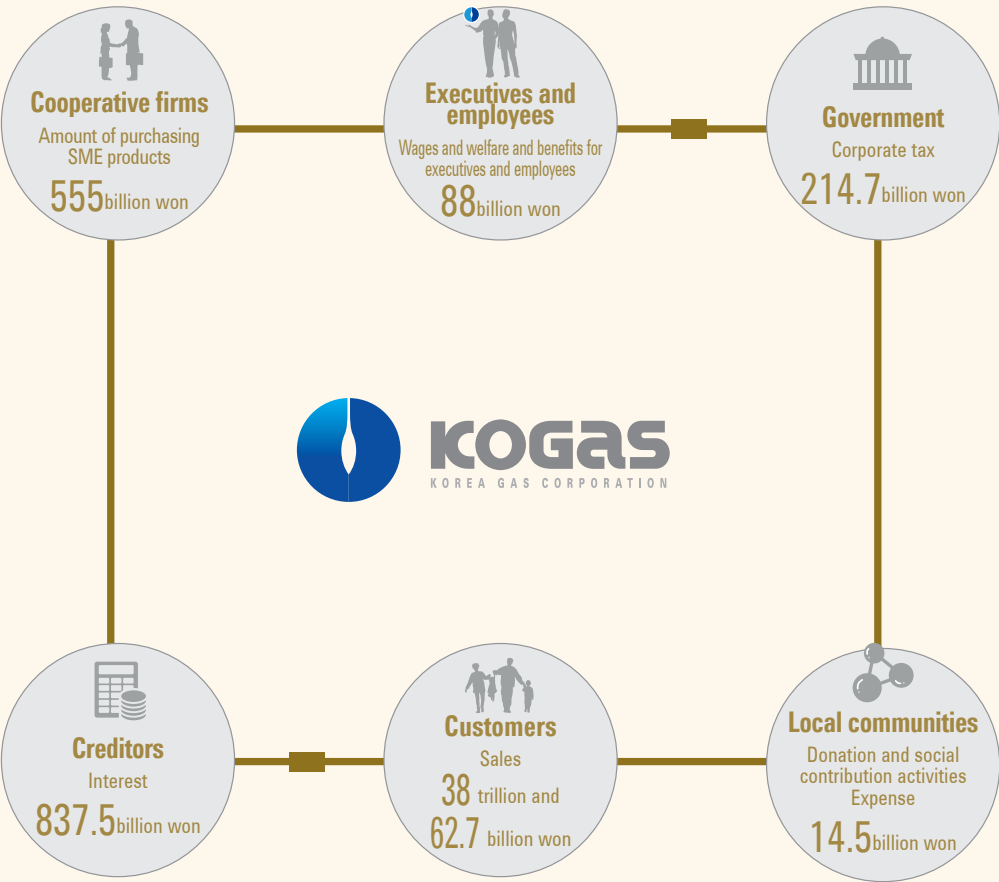
| Category             | Unit            | 2011 | 2012 | 2013 |
|----------------------|-----------------|------|------|------|
| Government subsidies | 100 million won | 425  | 425  | 425  |

R&D

| Category                     | Unit            | 2011 | 2012 | 2013 |
|------------------------------|-----------------|------|------|------|
| R&D investments              | 100 million won | 455  | 481  | 443  |
| Number of technology patents | Case            | 23   | 28   | 39   |

Creating and sharing economic values

KOGAS is distributing values, created by the company’s management activities, to internal and external stakeholders evenly. In 2013, the total amount of distributed values to various stakeholders is about 39,772.4 billion won.





Performances of Sustainable Management

Social performances

Current condition of executives and employees

As of late 2013, KOGAS has 3,347 permanent employees and 39 temporary employees. The company strictly prohibits all distribution on information related to personnel matters due to gender, and the basic salary for both genders is equally maintained. In 2013, the ratio of new employee wage is 273% compared to the legal minimum wage.

| Category                       |  | Unit       | 2011     | 2012     | 2013      |
|--------------------------------|--|------------|----------|----------|-----------|
| Total executives and employees |  |            | 3,014    | 3,193    | 3,386     |
| Employment                     | Permanent workers  | Person     | 2,949    | 3,145    | 3,347     |
|                                | Temporary workers  |            | 65       | 48       | 39        |
| Employees by age               | Below 30s  | Person     | 932      | 1,009    | 1,167     |
|                                | 40s  |            | 1,562    | 1,610    | 1,615     |
|                                | Above 50s  |            | 455      | 526      | 565       |
| Social minor class             | Female executives and employees                          | Person (%) | 242(8.2) | 302(9.6) | 345(10.3) |
|                                | Female managers  | Person (%) | 1(0.03)  | 1(0.03)  | 2(0.06)   |
|                                | Disabled   | %          | 2.4%     | 2.5%     | 2.8%      |
| New employment                 | Total  | Person     | 104      | 227      | 269       |
|                                | The disabled   |            | 3        | 3        | 12        |
|                                | Female workers   |            | 19       | 63       | 47        |
|                                | High school graduates                                    |            | 3        | 8        | 59        |
|                                | Workers that majored in natural sciences and engineering |            | 78       | 158      | 220       |
|                                | Regional applicants                                      |            | 43       | 86       | 133       |

Performances of the BOD

| Category   | Unit      | 2011 | 2012 | 2013 |
|--|-----------|------|------|------|
| BOD meetings                                     | Number    | 16   | 18   | 19   |
| Agendas with decision making                     | Case      | 53   | 55   | 43   |
| Pre-deliberation rate                            | %         | 81   | 83   | 94   |
| Agendas with revised decisions                   | Number, % | 4, 5 | 2, 2 | 0, 0 |
| Reported agendas                                 | Number    | 25   | 25   | 33   |
| Participation rate of the BOD                    | %         | 93   | 93   | 95   |
| Participation rate of non-executive directors    | %         | 92   | 94   | 94   |
| Percentage of remarks by non-executive directors | %         | 54   | 64   | 65   |

Current condition of education for executives and employees

| Category  | Unit        | 2011  | 2012  | 2013  |
|---|-------------|-------|-------|-------|
| Investments in training and education           | One million | 8,493 | 9,244 | 8,658 |
| Education hours for each person                 | Hours       | 122   | 136   | 136   |
| Training and education expenses for each person | 1,000 won   | 2,815 | 2,941 | 2,580 |

Employment education for policies and procedure on human rights

| Category                                     | Unit   | 2011  | 2012  | 2013  |
|--|--------|-------|-------|-------|
| Hours for ethics education                   | Person | 2,711 | 2,777 | 2,861 |
| Cyber integrity education (Code of conducts) |        | 2,733 | 2,787 | 2,924 |

Employee education for assessing performances

KOGAS is establishing a performance and value-based corporate culture by operating a fair performance-based compensation system. We are securing fairness and eliminating discrimination in assessing individuals by introducing detailed standards for assessment, from setting up goals for each individual and job to establishing goals. We are also supplementing the system and process to expand interaction between assessors and subjects. Thanks to these efforts, the company is enhancing the acceptance of assessment and credibility in the assessment result

| Category   | Unit | 2011 | 2012 | 2013 |
|--|------|------|------|------|
| Ratio of applying the assessment on performances | %    | 100  | 100  | 100  |

Retention rate of employees after parental leave

KOGAS is promoting parental leave so that employees can continue their careers, instead of quitting due to pregnancy and childbirth, and to strike a balance between work and life.

| Category                                   | Unit   | 2011 | 2012 | 2013 |
|--|--------|------|------|------|
| Applicants for parental leave              | Person | 14   | 19   | 15   |
| Male employees applying for parental leave |        | 1    | 3    | 3    |
| Retention rate after parental leave        | %      | 100  | 89.5 | 93.3 |

Employee retirement management

KOGAS is supporting the future financial stability for retired employees by operating the retirement pension system. By making a system for Defined Benefits (DB) or Defined Contribution (DC), we provide employees with the opportunity to choose a system depending on their preference.

| Category                         | Unit            | 2011  | 2012  | 2013  |
|----------------------------------|-----------------|-------|-------|-------|
| Funds                            | 100 million won | 725   | 1,180 | 1,251 |
| Male employees with subscription | Person          | 2,949 | 3,145 | 3,181 |

Performances of Sustainable Management

Social performances

|  | Category                    | Unit   | 2011  | 2012  | 2013  |
|--|-----------------------------|--------|-------|-------|-------|
| Current condition of joining labor union | Labor union members         | Person | 2,610 | 2,701 | 2,922 |
|  | Rate of joining labor union | %      | 88.5  | 85.9  | 87.9  |

Current condition of partner firms

KOGAS is realizing mutual growth by cooperating with various partner firms. As of 2013, the number of partner firms that have signed contracts is 55, and we have formed new partnerships with 37 new partner firms.

| Category            | Unit  | 2011 | 2012 | 2013 |
|---------------------|-------|------|------|------|
| Major partner firms | Total | 15   | 18   | 55   |

Purchasing products from partner firms and making contracts

KOGAS is distributing economic performances from management activities in transactions with partner firms. In 2013, the amount of SME products purchased is 555 billion won.

| Category                              | Unit            | 2011  | 2012  | 2013  |
|---------------------------------------|-----------------|-------|-------|-------|
| Products purchased from partner firms | 100 million won | 3,018 | 4,392 | 5,550 |
| Ratio of purchasing SME products      | %               | 24.0  | 26.2  | 27.2  |

| Support for competitiveness<br>of partner firms | Category                                | Unit                             | 2011               | 2012  | 2013  |          |
|---|---|----------------------------------|--------------------|-------|-------|----------|
|   | Joint Research and<br>Development       | Cases                            | Case               | 5     | 10    | 16       |
|   |   | Participating companies          | Number             | 5     | 10    | 16       |
|   |   | Ratio of budgets in R&D          | 100 million<br>won | 6     | 20    | 28       |
|   | Joint entrance to the<br>market*        | Business cases                   | Case               | -     | -     | 3        |
|   |   | Cooperative private<br>companies | Number             | -     | -     | 17       |
|   |   | Business size                    | 100 million<br>won | -     | -     | 1.15 USD |
|   | Financial support                       | Pre-payment                      | 100 million<br>won | 1,347 | 1,549 | 2,586    |
|   | Support for reinforcing<br>capability** | Application                      | Case               | -     | 18    | 22       |

\* As the preparation for overseas EPC business has been prolonged, the participation of SMEs has been limited.

\*\* From 2011, the organization for supporting SMEs has been formed, and support business has begun in 2012.

|                       | Category  | Unit  | 2011 | 2012 | 2013 |
|-----------------------|---|-------|------|------|------|
| Customer satisfaction | Public-service Customer Satisfaction Index (PCSI) | Score | 99.0 | 98.0 | 100  |

|  | Category                                 | Unit            | 2011   | 2012   | 2013   |
|--|--|-----------------|--------|--------|--------|
| Purchasing products of partner firms and making a contract | Total hours for voluntary work           |                 | 35,775 | 25,205 | 52,558 |
|  | Hours for voluntary work for each person | Hours           | 15     | 11     | 21     |
|  | Discount rate of gas prices              | 100 million won | 335    | 349    | 482    |

Environmental performances

| Energy use    |    | Category                   | Unit | 2011   | 2012   | 2013   |
|---------------|----|----------------------------|------|--------|--------|--------|
| Direct energy | TJ | Total amount of energy use |      | 12,129 | 13,130 | 13,775 |
|               |    | Fuel                       |      | 6,000  | 6,081  | 6,486  |
|               |    | Electricity                |      | 6,129  | 7,049  | 7,289  |

| Water use |    | Category                   | Unit | 2011    | 2012    | 2013          |
|-----------|----|----------------------------|------|---------|---------|---------------|
|           | m³ | Total amount of water use* |      | 446,838 | 468,676 | 1,634,824,872 |
|           |    | Seawater                   |      | -       | -       | 1,634,424,870 |
|           |    | Water supply               |      | 426,462 | 448,657 | 387,763       |
|           |    | Others                     |      | 20,376  | 20,019  | 12,239        |

\* This is the management of the amount of seawater use from 2013. The total amount of water use has increased as well.





GRI G4 Content Index

| GRI G4 Specific Standard Disclosure |                           |   |  |   |                    |       |
|-------------------------------------|---------------------------|---|--|---|--------------------|-------|
| Category                            | Aspects                   | Indicators  | Contents   | Page  | External Assurance |       |
| Economic                            | Economic Performance      | G4-EC1  | Direct value generated and distributed   | 58–59   | 68–69              |       |
|                                     |                           | G4-EC2  | Financial implications and other risks and opportunities for the organization’s activities due to climate change   | 30–31   | 68–69              |       |
|                                     |                           | G4-EC3  | Coverage of the organization’s defined benefit plan obligations  | 61  | 68–69              |       |
|                                     |                           | G4-EC4  | Financial assistance received from government  | 58  | 68–69              |       |
|                                     | Market Presence           | G4-EC5  | Ratios of standard entry level wage by gender compared to local minimum wage at significant locations of operation   | 60  | 68–69              |       |
|                                     | Indirect Economic Impacts | DMA   | Material Aspect  | 17  | 68–69              |       |
|                                     |                           | G4-EC7  | Development and impact of infrastructure investments and services supported  | 18–20   | 68–69              |       |
|                                     |                           | G4-EC8  | Significant indirect economic impacts, including the extent of impacts   | 59  | 68–69              |       |
|                                     | Procurement Practices     | G4-EC9  | Proportion of spending on local suppliers at significant locations of operation  | 62  | 68–69              |       |
|                                     | Environmental             | Energy  | DMA  | Material Aspect                                   | 29                 | 68–69 |
| G4-EN3                              |                           |   | Energy consumption within the organization<br>1) Including fuel type, was reported as a multiple unit, or that the total fuel consumption of the joule used in non-renewable fuel sources.<br>2) Including fuel type, was reported as a multiple unit, or that the total fuel consumption of the joule used in renewable fuel sources. | 63  | 68–69              |       |
| G4-EN6                              |                           |   | Reduction of energy consumption  | 30  | 68–69              |       |
| G4-EN7                              |                           |   | Reductions in energy requirements of products and services   | 30  | 68–69              |       |
| Water                               |                           |   | G4-EN8   | Total water withdrawal by source                  | 63                 | 68–69 |
| Emissions                           |                           | DMA   | Material Aspect  | 29  | 68–69              |       |
|                                     |                           | G4-EN15   | Direct greenhouse gas (GHG) emissions (scope 1)  | 32  | 68–69              |       |
|                                     |                           | G4-EN16   | Energy indirect greenhouse gas (GHG) emissions (scope 2)   | 32  | 68–69              |       |
|                                     |                           | G4-EN19   | Reduction of greenhouse gas (GHG) emissions  | 32  | 68–69              |       |
|                                     |                           | G4-EN20   | Emissions of ozone-depleting substances(ODS)   | 32  | 68–69              |       |
|                                     |                           | G4-EN21   | NOx, SOx, and other significant air emissions  | 32  | 68–69              |       |
|                                     |                           | Effluents and Waste   | DMA  | Material Aspect                                   | 29                 | 68–69 |
|                                     |                           |   | G4-EN23  | Total weight of waste by type and disposal method | 32                 | 68–69 |
| G4-EN24                             |                           |   | Total number and volume of significant spills  | 32  | 68–69              |       |
| Products and Services               |                           | G4-EN27   | Extent of impact mitigation of environmental impacts of products and services  | 30–31   | 68–69              |       |
| Compliance                          |                           | G4-EN29   | Monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations  | 32  | 68–69              |       |
| Overall                             |                           | G4-EN31   | Total environmental protection expenditures and investments by type  | 32  | 68–69              |       |
| Supplier Environmental Assessment   | G4-EN33                   | Significant actual and potential negative environmental impacts in the supply chain and actions taken | 35   | 68–69   |                    |       |
| Social                              | Employment                | DMA   | Material Aspect  | 45  | 68–69              |       |
|                                     |                           | G4-LA2  | Benefits provided to full time employees that are not provided to temporary or part time employees, by significant locations of operation  | 47  | 68–69              |       |
|                                     |                           | G4-LA3  | Return to work and retention rates after parental leave, by gender   | 61  | 68–69              |       |

| KOGAS 2013 Sustainability Report    |  |   |   |                 | 67                 |       |
|-------------------------------------|--|---|---|-----------------|--------------------|-------|
| GRI G4 Specific Standard Disclosure |  |   |   |                 |                    |       |
| Category                            | Aspects  | Indicators  | Contents  | Page            | External Assurance |       |
| Social                              | Labor/Management Relations                       | G4-LA4  | Minimum notice periods regarding operational changes, including whether these are specified in collective agreements  | 47              | 68~69              |       |
|                                     |  | DMA   | Material Aspect   | 33              | 68~69              |       |
|                                     | Occupational Health and Safety                   | G4-LA5  | 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                      | 35              | 68~69              |       |
|                                     |  | G4-LA6  | Type of injury and rates of injury, occupational diseases, lost days, and absenteeism, and total number of work related fatalities, by region and by gender   | 34              | 68~69              |       |
|                                     |  | G4-LA7  | Workers with high incidence or high risk of diseases related to their occupation  | 35              | 68~69              |       |
|                                     |  | G4-LA8  | Health and safety topics covered in formal agreements with trade unions   | 35              | 68~69              |       |
|                                     |  |   | DMA   | Material Aspect | 48                 | 68~69 |
|                                     |  | G4-LA9  | Average hours of training per year per employee by gender, and by employee category   | 61              | 68~69              |       |
|                                     | Training and Education                           | G4-LA10   | Programs for skills management and lifelong learning that support the continued employability of employees and assist them in managing career endings   | 49              | 68~69              |       |
|                                     |  | G4-LA11   | Percentage of employees receiving regular performance and career development reviews, by gender and by employee category  | 61              | 68~69              |       |
|                                     | Diversity and Equal Opportunity                  | G4-LA12   | Composition of governance bodies and breakdown of employees per employee category according to gender, age group, minority group membership, and other indicators of diversity                        | 60              | 68~69              |       |
|                                     | Equal Remuneration for Women and Men             | G4-LA13   | Ratio of basic salary and remuneration of women to men by employee category, by significant locations of operation  | 60              | 68~69              |       |
|                                     | Labor Practices Grievance Mechanisms             | G4-LA16   | Number of grievances about labor practices filed, addressed, and resolved through formal grievance mechanisms   | 46              | 68~69              |       |
|                                     | Human Rights Grievance Mechanisms                | G4-HR2  | Number of grievances about human rights impacts filed, addressed, and resolved through formal grievance mechanisms  | 39              | 68~69              |       |
|                                     | Freedom of Association and Collective Bargaining | G4-HR4  | Operations and suppliers identified in which the right to exercise freedom of association and collective bargaining may be violated or at significant risk, and actions taken to support these rights | 61              | 68~69              |       |
|                                     | Indigenous Rights                                | G4-HR8  | Total number of incidents of violations involving rights of indigenous peoples and actions taken  | 32              | 68~69              |       |
|                                     |  |   | DMA   | Material Aspect | 41                 | 68~69 |
|                                     | Local Communities                                | G4-S01  | Percentage of operations with implemented local community engagement, impact assessments, and development programs  | 42~43           | 68~69              |       |
|                                     |  | G4-S02  | Operations with significant actual or potential negative impacts on local communities   | 42~43           | 68~69              |       |
|                                     | Anti-Corruption                                  | G4-S03  | Total number and percentage of operations assessed for risks related to corruption and the significant risks identified   | 53              | 68~69              |       |
| G4-S04                              |  | Communication and training on anti corruption policies and procedures       | 53  | 68~69           |                    |       |
| G4-S05                              |  | Confirmed incidents of corruption and actions taken                         | 53  | 68~69           |                    |       |
| Public Policy                       | G4-S06   | Total value of political contributions by country and recipient/beneficiary | No  | 68~69           |                    |       |
| Social                              | Supplier Assessment for Impacts on Society       | G4-S09  | Percentage of new suppliers that were screened using criteria for impacts on society  | 39              | 68~69              |       |
|                                     |  | G4-S010   | Significant actual and potential negative impacts on society in the supply chain and actions taken  | 39              | 68~69              |       |
|                                     | Customer Health and Safety                       | G4-PR1  | Percentage of significant product and service categories for which health and safety impacts are assessed for improvement   | 35              | 68~69              |       |
|                                     | Product and Service Labeling                     | G4-PR5  | Results of surveys measuring customer satisfaction  | 63              | 68~69              |       |
|                                     |  | G4-PR6  | Sale of banned or disputed products   | No              | 68~69              |       |
|                                     | Marketing Communications                         | G4-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          | 0               | 68~69              |       |
|                                     | Customer Privacy                                 | G4-PR8  | Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data   | 0               | 68~69              |       |



## ISO 26000

| Topic   | Key issues  | Page   |
|---|---|--|
| 6.2 Organizational governance   | 6.2.3 Decision-making processes and structures  | 4, 5, 6, 55, 56  |
| 6.3 Human rights  | 6.3.3 Due diligence   | 61   |
|   | 6.3.4 Human rights risk situations  | 61   |
|   | 6.3.5 Avoidance of complicity   | 61   |
|   | 6.3.6 Resolving grievances  | 32   |
|   | 6.3.7 Discrimination and vulnerable groups  | 32, 60   |
|   | 6.3.8 Civil and political rights  | 32, 61   |
|   | 6.3.9 Economic, social and cultural rights  | 18, 19, 20, 35, 42, 43, 59   |
|   | 6.3.10 Fundamental principles and rights at work                                      | 48, 60, 61   |
| 6.4 Labour practices  | 6.4.3 Employment and employment relationships   | 47, 60, 61   |
|   | 6.4.4 Conditions of work and social protection  | 47, 60, 61   |
|   | 6.4.5 Social dialogue   | 47, 61   |
|   | 6.4.6 Health and safety at work   | 34, 35   |
|   | 6.4.7 Human development and training in the workplace                                 | 49, 61   |
| 6.5 The environment   | 6.5.3 Prevention of pollution   | 29, 32   |
|   | 6.5.4 Sustainable resource use  | 29, 30, 31, 63   |
|   | 6.5.5 Climate change mitigation and adaptation  | 30, 31, 32,  |
|   | 6.5.6 Protection of the environment, biodiversity and restoration of natural habitats | 32   |
| 6.6 Fair operating practices  | 6.6.3 Anti-corruption   | 53   |
|   | 6.6.4 Responsible political involvement   | The Company is prohibited under the domestic laws of political participation, and We comply with the regulations |
|   | 6.6.5 Fair competition  | This Report  |
|   | 6.6.6 Promoting social responsibility in the value chain                              | 30, 31, 35, 59, 62   |
|   | 6.6.7 Respect for property rights   | 32, 42, 43, 59   |
|   | 6.7 Consumer issues   | 6.7.3 Fair marketing, factual and unbiased information and fair contractual practices                            |
| 6.7.4 Protecting consumers' health and safety                         |   | 35, 63   |
| 6.7.5 Sustainable consumption   |   | 35, 63   |
| 6.7.6 Consumer service, support, and complaint and dispute resolution |   | No marketing and customer service dispute case   |
| 6.7.7 Consumer data protection and privacy                            |   | No consumer privacy dispute case   |
| 6.7.8 Access to essential services                                    |   | 63   |
| 6.7.9 Education and awareness   |   | 63   |
| 6.8 Community involvement and development                             |   | 6.8.3 Community involvement  |
|   | 6.8.4 Education and culture   | 18, 19, 20, 35   |
|   | 6.8.5 Employment creation and skills development                                      | 18, 19, 20, 42, 43, 49, 59, 62   |
|   | 6.8.6 Technology development and access   | 18, 19, 20, 59   |
|   | 6.8.7 Wealth and income creation  | 18, 19, 20, 42, 43, 58, 59, 62   |
|   | 6.8.8 Health  | 35   |
|   | 6.8.9 Social investment   | 18, 19, 20, 58, 59   |

**UNGC**

| Category        | Principle   | Page           |
|-----------------|---|----------------|
| Human rights    | 1. Business should support and respect the protection of internationally proclaimed human rights.                         | 32, 46, 60, 61 |
|                 | 2. Business should ensure that it is not complicit in human rights abuses.  |                |
| Labor           | 3. Business should uphold the freedom of association and the effective recognition of the right to collective bargaining. | 46, 61         |
|                 | 4. Business should support the elimination of all forms of forced and compulsory labor.                                   | 46, 49, 60, 61 |
|                 | 5. Business should support the effective abolition of child labor.  |                |
|                 | 6. Business should support the elimination of discrimination in respect of employment and occupation.                     |                |
|                 | 7. Business should support a precautionary approach to environmental responsibility.                                      |                |
| Environment     | 8. Business should undertake initiatives to promote greater environmentally friendly technologies.                        | 31, 32         |
|                 | 9. Business should encourage the development and diffusion of environmentally friendly technologies.                      | 30             |
| Anti-corruption | 10. Business should work together against corruption in all its forms, including extortion and bribery.                   | 53             |

## Awards

| Award name  | Host  |
|---|---|
| The Top grade (Excellence) in the Customer Satisfaction Survey for public enterprises for 5 consecutive years               | Ministry of Strategy & Finance                                      |
| Korea's Most Admired Energy Company for 6 consecutive years   | Korea Management Association  |
| Presidential Citation in the Archives Management  | National Archives of Korea  |
| Prime Minister's Commendation, Korea Safety Award (Pyeongtaek Terminal Division)  | National Emergency Management Agency                                |
| Minister Citation for Land Infrastructure and Transport   | Ministry of Land, Infrastructure and Transport                      |
| Fire Safety Best building (Tongyeong Terminal Division)   | National Emergency Management Agency                                |
| Joining 2013 DJSI Asia Pacific  | Korea Productivity Center   |
| Grand Prize in the eco-friendly construction sector, Global Green Management Excellence Awards (Samcheok Terminal Division) | Ministry of Trade, Industry and Energy /<br>Ministry of Environment |
| Grand Prize in the Public Sector, Korea Ethics Management   | New Industry Management Academy                                     |
| Excellent Institution in Anti-Disaster Safety Management  | Ministry of Trade, Industry and Energy                              |
| Excellent Institution in Cultural Heritage Safety Management  | Cultural Heritage Administration                                    |
| The Excellence grade in the Transparency Survey   | Anti-corruption & Civil Rights Commission                           |

## Associations

| Organization |   | Key activities  | Note    |
|--------------|---|---|---------|
| Overseas     | IUNC  | Biodiversity  | Support |
|              | UN Universal Declaration of Human Rights                    | Human Rights  | Support |
|              | UN Global Compact   | Compliance with the Global Code of Ethics & COP Reporting                 | Member  |
| Domestic     | Institute for Global Economics                              | Analysis of global economic trends and major economic issues, etc.        | Member  |
|              | Energy & Mineral Resources Development Association of Korea | Energy resource development planning, etc.                                | Member  |
|              | Green Company Council                                       | Accomplishment of the low-carbon green growth vision                      | Member  |
|              | Korea Environmental Preservation Association                | Research, development, education, and PR on environmental preservation    | Member  |
|              | Ethical Management SM Forum                                 | Activities of the CEO and working groups for ethical management practices | Member  |

## Independent Assurance Statement

### Dear Managers and stakeholders of KOGAS,

IMCSR (hereinafter referred to as “assessor”) has been requested for the independent assurance for the “KOGAS 2013 Sustainability Report (hereinafter referred to as the “report”) by KOGAS. The assurance statement is submitted as follows:

### Responsibility and independence

KOGAS is held responsible for all the information and opinions regarding the report. The assessor is held responsible for the assessment of opinions for the report and has no business interest related with KOGAS to secure independence and autonomy as an independence assessment institution.

### Standards for assessment

The assessor performed assessment based on the AA1000AS (2008) assessment standard and checked the appropriateness in principles of Inclusivity, Materiality, and Responsiveness in accordance with AA1000APS (2008). We assessed the report in consideration of the Global Reporting Initiative (GRI) G4 report principles and seven major issues of ISO 26000.

### Types and level of assessment

The assessor carried out assessment in accordance with the Type 1 and Moderate Level of the AA1000AS (2008) standard. To assess the report in accordance with Type 1, the assessor deliberated on the appropriateness of data presented in the report and assessed the announced data, reporting system, and performance management methods based on three major principles (Inclusivity, Materiality, and Responsiveness) of AA1000AS (2008). However, checks for the credibility of provided data are not included in the assessment. The assessor secured demonstration data, which can reduce errors in the report, and conducted assessment suitable for the Moderate Level by asking and receiving answers from staff members in each sector for performances.

### Assessment methods

The assessor collected and assessed necessary information, data, and clues by using the following methods.

- Collecting opinions of stakeholders and checking and identifying process which guarantees stakeholder engagement
- Checking and identifying appropriateness for the process of deciding major issues for selecting report issues
- Checking the process for implementing sustainable strategies and the relevant system
- Conducting interviews with managers, executives, and employees in charge of managing sustainable issues
- Checking the process for creating, collecting, and reporting data in each sector for performances
- Checking for compliance with the GRI G4 guideline and reporting principles

### Result of assessment

After carrying out the assessment activities, the assessor decided that the content contained in the report indicates sustainable management activities by KOGAS without any major error and prejudice.

The opinions on the principles presented in AA1000APS (2008) are as follows.

### Inclusivity: Stakeholder engagement

The assessor decided that KOGAS is operating an appropriate engagement process and channels to secure stakeholder engagement. We recommend

that company set priorities for stakeholders, conduct stakeholder engagement more strategically, and continue to report engagement process and performances.

### Materiality: Selecting and reporting major issues

The assessor recognized that KOGAS identified major issues through the process for deciding materiality in identifying sustainability issues. We recommend the company to operate its materiality assessment process more strategically by deciding priorities for stakeholders and optimizing communication channels.

### Responsiveness: Company’s response for issues

The assessor decided that KOGAS is applying important sustainable management issues to the strategies and activities of the company and meeting needs from stakeholders.

We highly praised that the company establishes and operates strategies for sustainable management, monitors performances, and identifies and carries out additional improvement tasks.

The opinions for the GRI G4 reporting principles and reporting requirements are as follows.

### General Standard Disclosures

The assessor identified that the report complies with the requirements in the Core Option and General Standard Disclosures.

### Specific Standard Disclosures

The assessor identified that the report complies with the requirements for Material Aspect, DMA, and indicators, which were decided in the process for reporting items.

### Recommendations

The assessor suggests the following recommendations within the scope that does not influence the result of assessment

- We recommend the company to develop the materiality assessment process so that it is a unique process suitable for the situations and characteristics of KOGAS. The company should also prioritize the specification of major issues in the report.
- We recommend the company to continuously develop the index system, including the assessment for financial impact of non-financial index, to explain the company’s strategies and business models that create short, mid, and long-term values for information users.

### Assessment team

IMCSR was requested to assess the report by KOGAS, and has conducted assessment tasks by organizing professionals with expertise and knowledge in sustainable management and CSR sectors



September 2014

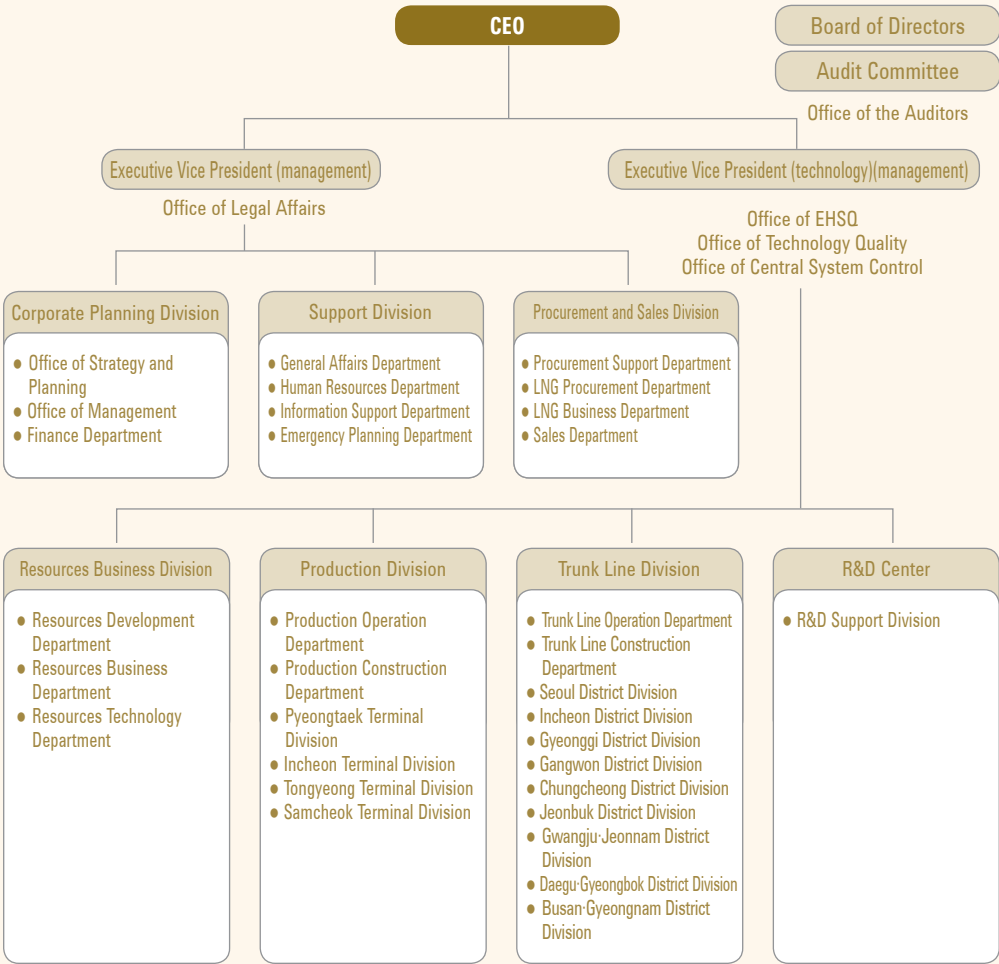
IMCSR

CEO and President

Lee Hyeon

Organization Chart & Affiliates

Organization Chart  
(As of December 2013)



Affiliates & Subsidiaries

| Country  | Company                            | Establishment | Major business                           | Shares (%) |
|----------|------------------------------------|---------------|--|------------|
| Korea    | Korea Gas Technology Corporation   | 1993          | Maintenance & engineering                | 100        |
| Iraq     | KOGAS Iraq B.V                     | 2009          | Development & production of oil and gas  | 100        |
|          | KOGAS Badra B.V                    | 2010          |  | 100        |
|          | KOGAS Akkas B.V.                   | 2010          |  | 100        |
|          | KOGAS Mansuriya B.V                | 2010          |  | 100        |
|          | KOGAS Australia Pty Ltd.           | 2008          |  | 100        |
| Overseas | KOGAS Canada Ltd.                  | 2010          | Development & production of oil and gas  | 100        |
|          | KOGAMEX Investment Manzanillo B.V. | 2009          | Construction & operation of LNG terminal | 100        |
|          | KOMAN ENERGY LNG                   | 2008          | Trading                                  | 50         |
|          | KOGAS Vostok LLC                   | 2009          | Gas exploration & inspection             | 100        |



This report was printed on environment friendly paper with soybean oil ink.