



Better Energy Better World

Beyond LNG, Global KOGAS

KOGAS ABOUT THIS REPORT

Better Energy, Better World

KOGAS, believing in a 'Better Energy, Better World', carries out ceaseless efforts to grow as the world's leading energy company. This report, having been published since 2006 on a yearly basis, is devised to actively share our sustainability management efforts with stakeholders.

Reporting Principles

This report is in compliance with the GRI (Global Reporting Initiative) G3.1 Guidelines and reflects the demands of the DJSI (Dow Jones Sustainability Index). ISO 26000, an international guideline for CSR, has also been taken into consideration to further improve the quality of the report.

Reporting Period and Scope

This report covers the period from January 1, 2012 to December 31, 2012, entailing information of the year's sustainability activities and performance. Crucial data is presented with past records to help assess performance trends more effectively with partial inclusion of the record of 2013 (indicated when used). The scope of the report encompasses the operations of our head office, 12 regional business locations, and KOGAS' R&D center as well as providing a summary of the business performance of Korea Gas Technology Corporation (KOGAS-Tech). (Overseas office and equity-holding companies are excluded).

Report Assurance

In order to ensure reliability and objectivity of the overall content of the report, we have commissioned an independent third party to provide verification and assurance which is indicated on page 63.

Additional Information

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In order to minimize environmental damage and waste of resources, the report has been produced with a number of environment-friendly measures such as, avoiding spot and background coloring, and using environment friendly paper and soy ink during publication while avoiding coating processes.

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CEO's Message



KOGAS thrives to achieve global energy leadership with transparent and responsible management.

Dear Respected Customers,

Since its foundation in August 1983, KOGAS has been the wheel to improving the nation's quality of life and welfare by securing safe and stable supply of Natural Gas for the past 30 years. Our continued growth and excellent performance are the fruits of our tireless devotion and hard work to actualize our philosophy, 'Better Energy, Better World'.

Embarking with only 3 storage tanks in 1986, we have emerged as a global LNG company with the world's strongest LNG purchasing power (34.97 million tons at the end of 2012) and storage capacity (60 storage tanks, 8.86 million kℓ). With ceaseless efforts for further growth we have extended and diversified our operation to overseas, ultimately building a vertically integrated LNG value chain. We have penetrated the upstream business through overseas resources development, the midstream business by liquefaction plant construction and LNG trading, and the downstream business by entering overseas natural gas infrastructure market.

Our management, renowned for its responsible operation and the Grand prize recipient of the Korea Ethical Management Award, fulfills and serves the public responsibility of management disclosure with strengthened anti-corruption activities. Our commitment to environment is also demonstrated by being the first public enterprise to attain the EFS (Environmentally Friendly Site) for Samcheok Terminal Division.

Such devotion to ethical and responsible management has led us to receive various awards to heighten our reputation including being selected as the Korea's Most Admired Energy Company for 6 consecutive years, obtaining 'Excellent' grade in Customer Satisfactory Survey for Public Enterprise for 6 consecutive years, achieving No. 1 in DJSI Korea, Gas sector for 4 consecutive years, and receiving Korea Management Award as first public energy corporation.

KOGAS' Bright Future

KOGAS is flourishing beyond the Korean border, emerging as a global energy leader as manifested by the establishment of a vertically integrated LNG value chain and extended operation scope.

KOGAS' operation encompasses overseas exploration, development and production which are only within global energy corporations' capacity. Some of our tangible results include the operation of Akkas Project in Iraq, which is getting ready for production and in the success of the Mozambique exploration project, the reserve volume mounted up to approximately 130 million tons on an accumulative basis in 2012. Also, currently there are LNG-related projects such as DSLNG Indonesia, GLNG Australia and etc. in operation. Based on our expertise in LNG terminal construction and operation, solidly rooted in our past experiences, we have successfully completed the construction of LNG terminal in Manzanillo, Mexico in June, 2012 and we are in charge of its operation for the next 20 years. Acknowledging the fact that stepping up as a competitive global energy company necessarily requires technological development, KOGAS has been dedicated to developing new technologies in related fields. To mention a few, our current operation includes the world's largest LNG storage tank (270,000kℓ) development, LNG ship cargo and marine terminal gas plant technology development, self-propelled gas pipe inspection robot technology development, and hydrogen fuel cell & HCNG charging station development.

KOGAS' Eco-consciousness

In line with the vision of 'Sustainable Future Energy Enterprise', KOGAS has strategically set and pursued 52 execution tasks and 7 key missions in 3 categories of - 'Addressing climate change', 'Saving energy' and 'Securing future growth engines'. Accomplishment of such strategies is operated by the establishment of intranet-based Environmental Pollutant Emission Management System, complimented by the GHG (Greenhouse Gas) Inventory Guideline that enables the identification of emission sources and producing reduction plans accordingly. Furthermore, KOGAS produces energy reduction activities execution plan per operating site and has constituted a system of verifying the execution. Such efforts have resulted into the acquiring the industry's first energy management system certificate, ISO 50001.

KOGAS' Social Responsibility

'Global KOGAS, Growing Together with Customers' is our fundamental vision. Our appreciation of customers has been the basis to which we have practiced customer satisfaction management with online customer support system, online customer support center, and BIZ portal, built upon the VOC (Voice Of Customer) analysis. Also, acknowledging the significance of inclusive growth and reciprocal management, we have established the 'SMEs (Small and Medium Enterprises) Growth Roadmap' to support SMEs in a varied and systematic manner to improve and increase competitiveness.

We have developed our own social contribution initiative brand, 'Onnuri' to actualize the goal of 'making the entire world warm and peaceful'. The project consists of 3 initiatives - the Onnuri Love Project, Onnuri Hope Project, and Onnuri Harmony Project. From such efforts, we have received President's Prize from the National Sharing Award.

KOGAS' Global Presence

KOGAS is marching towards the global market beyond the Korean border. Whilst our path might be rocky with new difficulties arising, our commitment in transparent management, priorities of safe and healthy operation and dedicated social contribution will not be compromised but rather pave our way to emerging as one of the world's most admired energy company.

Thank you.

Seokhyo Jang
CEO and President of KOGAS

장석훈

KOGAS 2012 Highlights

01.

Received President's Prize from the National Sharing Award

KOGAS' pursuit of community outreach activities, such as Onnuri thermal efficiency improvement project for the lower income class, has been highly regarded and thus led KOGAS to receive President's prize from the National Sharing Award.



06.

Pyeongtaek Terminal Division, First to Achieve Zero-accident for the 24th times in the Industry

Since the zero-accident movement commenced on the 22nd of April, 1988, the Pyeongtaek Terminal Division has achieved its 24th zero-accident record.

02.

First Public Energy Corporation to Accept the Korea Quality Management Award

KOGAS is the first public energy corporation who received the 2012 Quality Management Award for its excellent, effective, and socially responsible management execution practices.



07.

Topped Customer Satisfaction Survey for Public Enterprise for 6 Consecutive Years

KOGAS' continued efforts to improve the service quality has resulted in achieving top grade (Excellence) in Customer Satisfaction Survey for 6 consecutive years, scoring at 98 points.



Dow Jones Sustainability Indexes
Member 2011/12

03.

Ranked No.1 at DJSI Korea for 4 Consecutive Years in Gas Sector

For the first time in the history of Korean public enterprises, KOGAS has ranked No. 1 for 4 consecutive years in the Dow Jones Sustainability Index (DJSI) Korea Gas sector.



08.

Manzanillo, Mexico LNG Terminal Construction

Manzanillo, Mexico LNG Terminal construction signifies far more than a mere construction as it is an outcome of the first overseas LNG terminal built by cooperative network of private and public enterprises.

04.

Changing the City Gas Trading Unit

The calculation unit changed from volume (m³) to calory (MJ), providing cheaper natural gas supply and new and renewable supply in the future.



09.

ISO 50001

After Incheon Terminal Division obtained the first ISO 50001 in the energy industry, Pyeongtaek Terminal Division and Tongyoung Terminal Division have also obtained the certificate.



05.

Developing the World's Largest LNG Storage Tank

KOGAS has developed construction technology for the world's largest LNG storage tank, applying to #10-12 tanks construction at Samcheok Terminal Division. From such development, the company can save costs on operational and maintenance costs as well as 7.27 billion KRW construction cost per tank.



10.

Discovered a Supersized Gas Reserved in Mozambique and Commenced City Gas Project

The Mozambique exploration has been preceded by success after success and KOGAS will commence city gas supply from February 2014.



Reaching Out to the World 

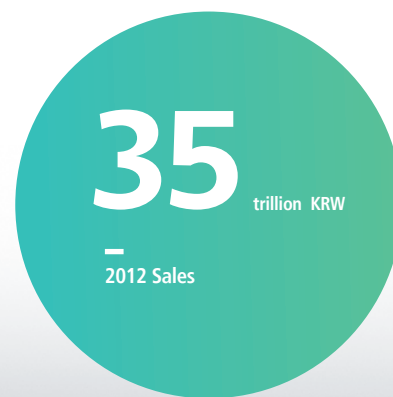
GLOBAL KOGAS

01 • Overview

Company Profile

KOGAS' upmost priority is to secure a safe and stable supply of natural gas nationwide. This has been an engine to facilitate national economic growth and the furthering efforts in the midst of globalization such as the direct involvement in overseas resource development has brought about significant energy security with reserves mounting to approximately 8.5 folds of Korea's national consumption. Standing proudly as a public enterprise, we envision a well-balanced growth with a harmonious pursuit of publicity and profitability.

Name	Korea Gas Corporation (KOGAS)
Date Established	August 18, 1983
Industry	Production and Distribution of Natural Gas
Head Office	Dolmaro 171, Bundang-gu, Seongnam-si, Gyeonggi-do, Korea
Organization	6 Headquarters, 1 Division, 21 Departments, 12 District/Terminal Divisions, 3,143 Employees (As of December 31, 2012)
IPO	Listed on the Korea Stock Exchange in 1999



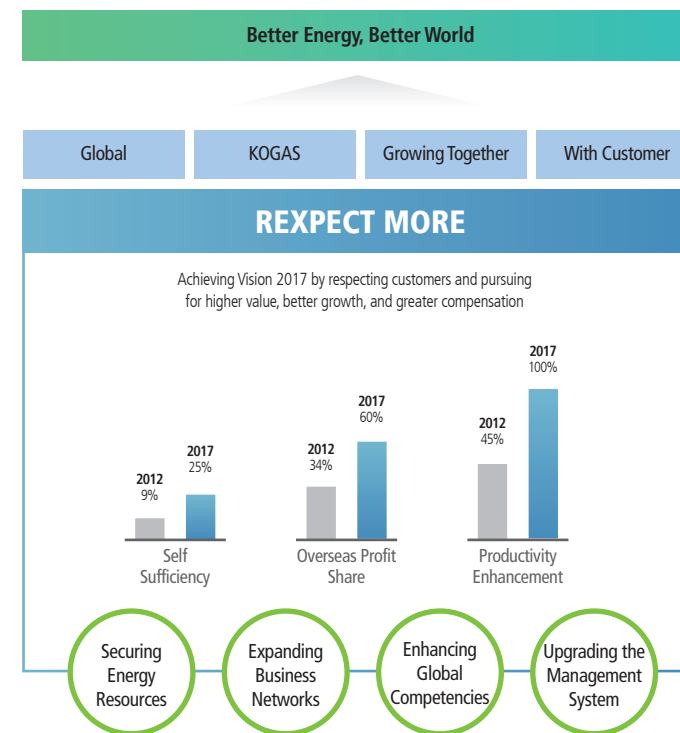
Major Business Areas

KOGAS' business encompasses a variety of areas. The major business areas entail LNG import and supply to city gas companies, LNG terminal and pipeline network construction and operation, LNG and LPG development, R&D of energy-related by-products.

- Production & distribution of natural gas and purification and sales of natural gas by-products
- Construction and operation of natural gas plant and distribution network
- Development and export/import of natural gas
- Development and export/import of liquefied petroleum gas
- Development of new and renewable energies using natural gas or its by-products, clean synthetic fuels, and eco-friendly businesses
- Execution of projects commissioned by national and local governments
- Exploration and development of petroleum resources and relevant businesses

KOGAS Vision 2017

We have built KOGAS Vision 2017 to realize the mission of 'Better Energy, Better World'. We vigorously aim to boost our corporate value to 30 trillion KRW by 2017 by raising energy self-sufficiency to 25%, increasing the proportion of overseas profit share to 60%, and doubling our productivity which is enabled by annual progress analysis.

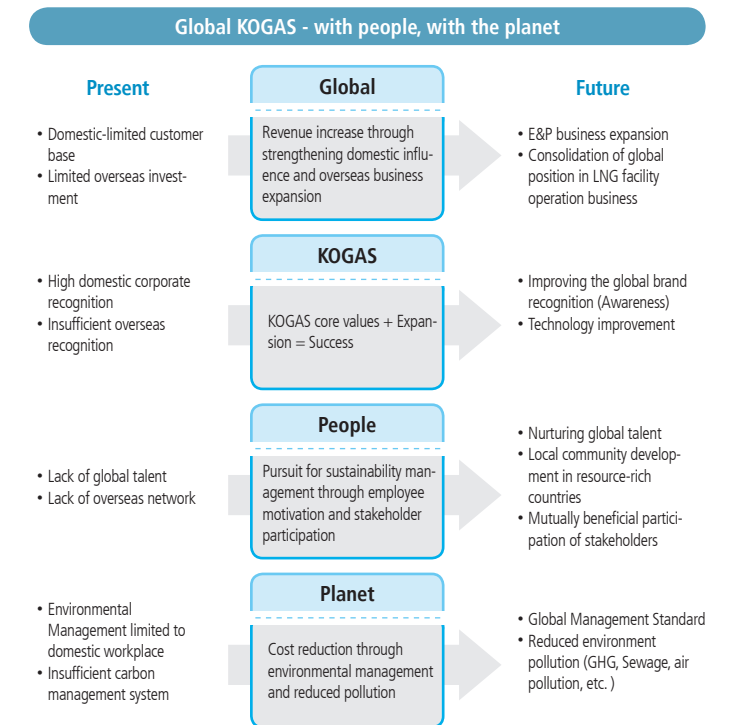


Core Values

The 4 core values - Trust, Responsibility, Challenge and Change - bear a distinctive significance for KOGAS as the fundamental foundation, setting the frame for KOGAS' operation. These are the core principles in which we will continue to build our corporate culture with.

Sustainability Management Strategy Scheme

KOGAS' sustainability management strategy is molded by the vision of 'Global KOGAS - with people, with the planet', seeking to top the DJSI Asia Pacific, Gas category. In order to actively cooperate with the government's CSR policies, we embody corresponsive strategic missions, of creating jobs, actualizing fair society as well as inclusive growth, and social contribution.



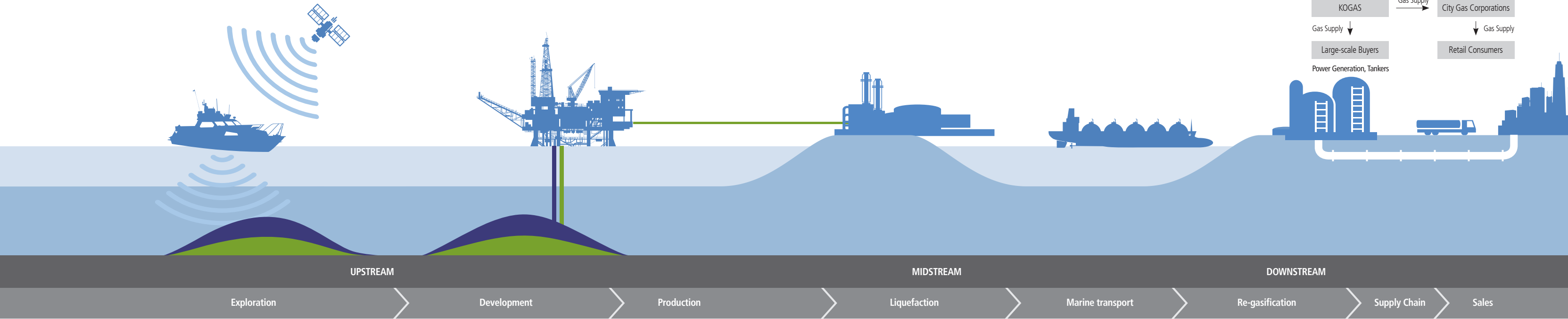
Strategic Missions	Objectives	Execution Plan
Creating Jobs	Establishing the foundation for creating overseas jobs	<ul style="list-style-type: none"> • Extending supply to unreached areas • Extending Onnuri Heat Efficiency Improvement project • Overseas research to secure new growth engines
Fair Society	Guarantee fair competition through systematization/institutionalization	<ul style="list-style-type: none"> • Building institutional infrastructure • Reinforcing subcontract management • Extend computerization • Strengthening competitiveness traditional markets
Inclusive Growth	Strengthening SMEs' self-sufficiency through technical development support	<ul style="list-style-type: none"> • Extending direct bidding opportunities • Developing New technology & product through R&D cooperation • Expanding support to liquidity • Finding Excellent cases and wider application
Social Contribution	Strategic focus on representative social contribution activities and extension	<ul style="list-style-type: none"> • Pursuing 3 brand initiatives of Onnuri • Spreading KOGAS' sharing culture • Promoting energy welfare for the underprivileged • Leading eco-friendly green management

Implementing Organization

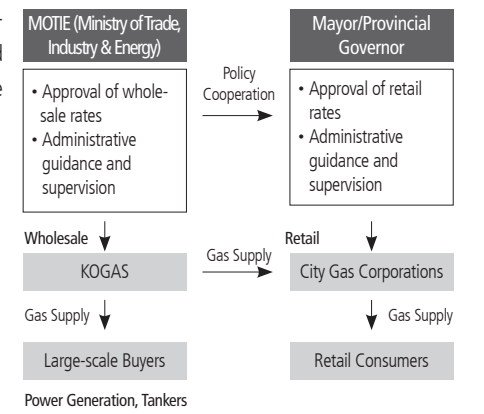
The Management Strategy team serves as the primary wheel of systematic organization and operation for effective company-wide management. The team manages and assesses the missions to encourage institutionalization and whole-application of Sustainability management through spread of the commitment through stakeholder evaluation, publication of sustainability report and etc.

Natural Gas Value Chain

Natural Gas Value Chain is categorized into upstream, midstream and downstream operations, depending on the scope of activities. Upstream, which refers to pre-liquefaction operation, consists of activities as exploration and extraction, while midstream process refers to liquefaction and transport process and downstream process stands for the post-transport process of direct supply through pipeline networks to consumers. The focus of KOGAS has shifted from downstream operation (LNG imports and direct gas companies/customer procurement) to upstream operation (exploration and development) to provide cheap and stable supply of gas.



Domestic natural gas business operates in the following form: The wholesaler, KOGAS, imports LNG and procures natural gas to power stations and city gas companies nationwide. The retailers, city gas companies, supply the gas directly to households and industrial sites to the end consumers.



Exploration

- 4 Fields East Timor
- Krung Mane Field in Indonesia
- Area 4 Field discovered in Mozambique with 1.8 billion tons of gas reserved
- Uzunkui Field in Uzbekistan
- Cyprus

Development/Production

- Reservoir of 100 million tons in Myanmar (A-1 & A-3)
- Horn River/West Cutbank in Canada
- Total production of 6.5 billion barrels of oil in Zubair, Iraq
- Total expected production of 800 million barrels of gas in Badra, Iraq
- Total production of 460 thousand tons of Gas & chemical products in Surgil, Uzbekistan
- Mining lot in Akkas, Iraq
- Total expected production of 38 million tons (20 years) in Mansuriya, Iraq
- Gas field in Umiac, North Canada
- Cordova Field
- Reservoir of 2.54 Tcf in the gas field of Senoro, Indonesia

LNG-Related Businesses

- Indonesia DSLNG
- Australia GLNG Annual Production of 7.8 million tons
- Australia Prelude Project (10% of KOGAS ownership)
- Oman O LNG Annual Production of approximately 6.6~7.2 million tons (1.2% of KOGAS ownership)
- Qatar Ras Laffan LNG Annual Production of 6.6 million tons
- Yemen Y LNG Annual Production of 6.5 million tons

Gas Sales project

- City gas and power generation LNG sales
- 6 berthing facilities, 8.86 million k0 of storage tank, main pipeline of 3,558km in place
- 2012 Sales: 36.547 million tons
- Diversification of consumers such as gas air-conditioning/heating supply expansion, LNG supply for ships and etc.

Overseas LNG Terminal Project

- Manzanillo, Mexico LNG terminal project
- Thailand PTT LNG terminal EPC project: annual LNG supply of 5 million tons
- Singapore LNG terminal testing and education project
- UAE LNG terminal technical advisory project
- Zehjiang and Jaingsu in China LNG terminal technical project
- KOGAS' first overseas LNG terminal storage tank construction

Overseas Pipeline Project

- Iraq Kirkuk~Baiji Pipeline EPC project (pipe length of 110km)
- Maputo, Mozambique city gas project



Mozambique Area 4 Field Exploration



East Timor Field Exploration



Zubair, Iraq Oil Production Project



Horn River/West Cutbank in Canada



Australia GLNG Project



Ras Laffan, Qatar LNG Project



Thailand PTT LNG Terminal Project

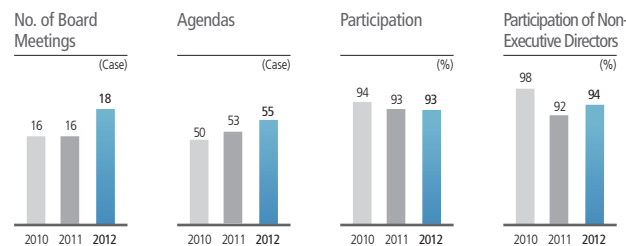


Manzanillo, Mexico LNG Terminal Project

02 • Corporate Governance

Corporate Governance Structure

With the aim to protect shareholders' and stakeholders' rights and pursue long-term growth, KOGAS endeavors to consolidate a BOD-centered management system. In order to build a governance structure with effective checks and balances function, we enhance pragmatic checks and balances on decision-making by emphasizing the role of non-executive directors. Under the BOD, the Audit Committee, Planning · Strategy Committee, and Overseas Project Committee have been set up to facilitate efficient operation. We realize the significance of feedback and thus have pursued various measures to hear the voices of associates.



61%
Proportion of Public Shareholders



Composition of Shareholders

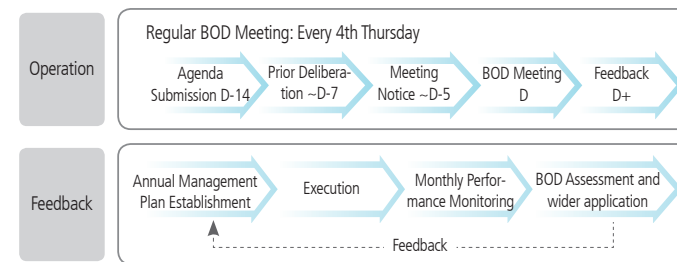
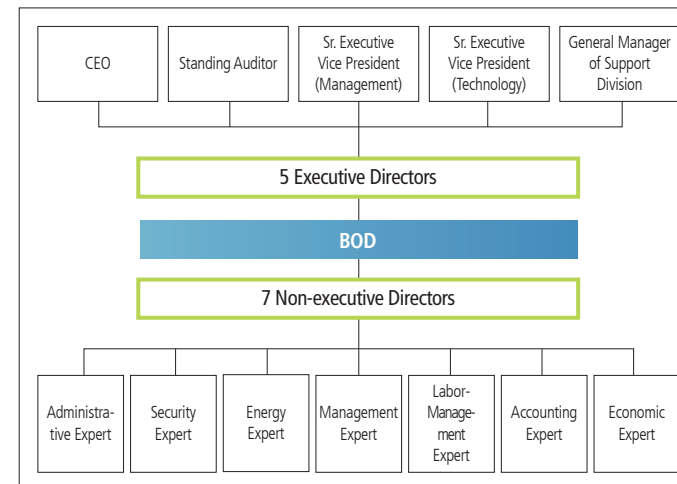
KOGAS' shares are owned by public and private investors. Public entities such as the Korean government, Korea Electric Power Corporation (KEPCO), and local administrations aggregately hold a stake of about 61%, leading to a stable management.

(As of December 31, 2012)

Shareholder	Shares	Proportional Ownership
Government	20,758,110	26.86%
Public	18,900,000	24.46%
Local Administrations	7,326,600	9.47%
Private Investors	30,299,800	39.21%
Total	77,284,510	100%

Composition of BOD

KOGAS believes in the strengthened power of the BOD'S decision-making and check and balances power for effective operation. As KOGAS' highest decision-making organization, the BOD consists of 5 executive and 7 non-executive directors, while the role of chairman is assumed by a non-executive director. Its area of concern ranges from strategies and policy to providing managerial support and monitoring. With a composition that appreciates the significance of checks and balances function, manifested by emphasis on the role of non-executive directors, operational issues are handled by the board of non-executive directors.



BOD Operation

In 2012, a total of 18 BOD meetings were held to make decisions on 55 agendas which were thoroughly examined and discussed. The BOD attendance rate was 93% and 94% of the non-executive directors attended, which is a 2% increase from that of 2011.

Subcommittees

KOGAS' BOD has three subcommittees - Audit Committee, Planning · Strategy Committee, Overseas Project Committee - under its wing to utilize the expertise of non-executive directors to examine the agenda in depth and improve checks and balances in management.

Committee	Agenda	Composition
Audit Committee	<ul style="list-style-type: none"> Operating and accounting audits Evaluation of internal accounting management systems Audit of directors' actions 	<ul style="list-style-type: none"> 2 non-standing auditors 1 standing auditor
Planning & Strategy Committee	<ul style="list-style-type: none"> Long-term strategies and visions Major investment projects, budget (operation) schemes Management assessment, PR 	<ul style="list-style-type: none"> 2 non-executive directors 2 executive directors
Overseas Project Committee	<ul style="list-style-type: none"> Development and production of overseas resources Export of plants and technologies Procurement of natural gas and other overseas projects 	<ul style="list-style-type: none"> 3 non-executive directors 1 executive directors

Transparent and Systematic Operation

An Executive Nomination Committee, with 3 non-executive directors and 2 external members, is formed to ensure transparent operation of the BOD and appointment process. The results are released to stakeholders through our website. Also, the PYCS (BOD working system) is in place to improve operational process in a systematic and effective manner.

Strengthening Non-Executive Director's Role and Expertise

Professional and experienced experts from a variety of fields are serving as non-executive directors at KOGAS. The company provides comprehensive and systematic support to improve their competencies and understanding of our operation by enabling them to engage in field operations. Such efforts have been applied in the company policies and nurtured improved business performance.

Management Performance Directed by Non-Executive Directors' Management Advice

Management Advice	Application
<ul style="list-style-type: none"> Efforts for financial soundness needed Efforts for capital increase needed Providing appropriate countermeasure and applying auditing advices received regarding overseas resource development and communicating with the public to demonstrate our stance Improving of workplace environment in remote areas needed Quarterly business plans needed Continuous reporting on crucial pending issues needed 	<ul style="list-style-type: none"> Financial management measures such as receivable securitization Promoting rights issue (Securing government funding) More proactive communication through Media PR and etc. to accurately present our stance Revision and Modification of overseas employees/expat guidelines Systematic quarterly evaluation of performance Performance reporting through meetings

Evaluation of Directors and Executives

KOGAS has actualized an effective BOD operation by identifying needs and loopholes through objective assessments - individual evaluation of directors' and executives' as well as the BOD overall. Remuneration for executives includes basic salary, incentives, and retirement allowances. The annual basic salary is determined by non-executive directors within the limits approved at the shareholders' meeting. The CEO proposes specific management objectives to achieve KOGAS' corporate mission and vision and award incentives according to the performance assessments pursuant to the management contract formed with the Ministry of Trade, Industry & Energy. The executive directors form performance contracts with the CEO and receive incentives according to performance assessments.

03 • Management Innovation

Innovation System and Activities

KOGAS understands the necessity of consistent innovations in emerging as a global leading energy company, and therefore have pursued the BnF (Best & First) Campaign, our authentic innovation activities. Also, the KMS (Knowledge Management System) and CoP (Community of Practice) have been established to collect employees' knowledge and ideas efficiently and improve problem-solving ability. Through the annual BP (Best Practice) competition, we select the best innovation activity and excellent knowledge practice. Selected practices at the annual BP competition are applied company-wide after a technical assessment.

184.5 billion KRW
 Financial Benefits of KMS-led Operational Improvement



KOGAS' Innovation Brand : BnF

In order to improve loopholes and enhance essential competitiveness, KOGAS promotes BnF (Best & First) Campaign, our authentic innovation activities. KOGAS' management innovation necessarily requires employees' participation in autonomous objective setting and practicing. This is a cornerstone of establishing a corporate culture that is built around innovation and autonomous participation.

BnF Activity Direction

KOGAS establishes 3 core activity directions and 9 core areas of improvement annually. The 3 core activity directions of 2012 are HR/Technology Value Creation, Information Value Creation and Organization Value Creation.

3 Core Activity Directions	HR/Technology Value Creation	Information Value Creation	Organization Value Creation
9 Main Areas of Improvement	<ul style="list-style-type: none"> Strengthening Global Competencies Strengthening Professional Technology Competencies Consolidation of Learning Culture 	<ul style="list-style-type: none"> Improving Information Productivity Improving Execution Methods in Operation Eliminating Unnecessary Tasks 	<ul style="list-style-type: none"> Facilitating Open Organizational Culture Building a challenge and transformation-orientated innovative culture Building a happy workplace

BnF Activity Process



Field BnF Rainbow Activity

KOGAS is promoting field BnF rainbow activity which is a system where missions are selected autonomously by 12 regional divisions in accordance with their own unique characteristics. Like rainbow, the program appreciates the unique varieties of innovation of district divisions. The system facilitates employees' participation in a variety of activities ranging from the mission identification to experience sharing. Moreover, best practices are awarded through annual BP Competition and are spread at company-wide level after a technical assessment for field application.

Knowledge Management System

Since 2009, an ERP-based KMS (Knowledge Management System) is in use at KOGAS. Any employee can easily access to register and share their experience and knowledge. CoP (Community of Practice) which is formed by three employees at least can present their operational improvement ideas and results. All KMS-registered individual knowledge and CoP activities are assessed by approximately 170 experts of 44 knowledge categories, and are finally selected by 'Expert Evaluation TFF' at the end of the year. And the selected 'Excellent knowledge & CoP activities' receive incentives.

Community of Practice, CoP

A system of autonomous learning, CoP (Community of Practice) creates excellent group knowledge and ultimately improves organizational problem-solving capacity. In 2012, 537 CoPs were formed and operated. The excellent knowledge found from such activity is to

be applied to enterprise-level operation after a technical assessment. Also, by supporting patenting, KOGAS facilitates knowledge capitalization.

2012 Company-wide BP (Best Practice) Competition

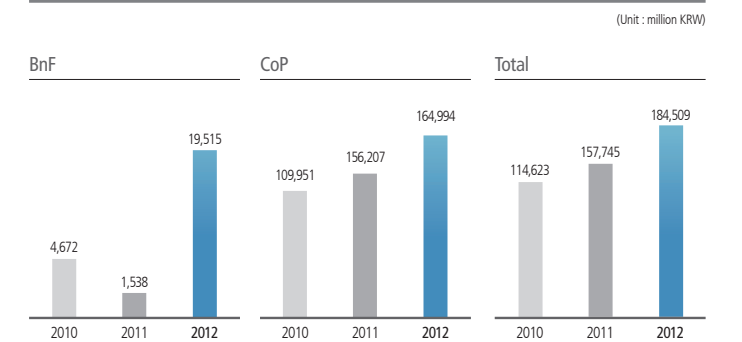
KOGAS holds 'KOGAS BP Competition' in November every year to systematize our hands-on experience and accelerate our drives to improve work processes. In 2012, 6 out of 537 CoPs and 4 out of 12 field BnF activities participated for their excellent operation and the grand prize was received by Incheon Terminal Division with 'the World's First Intelligence Map Design Project'. The project was highly respected for its ability to integrate approximately 51,000 maps into one 3D drawing, eliminating facility inspection deadzones and reduce accidents through swift and accurate use of the plan, which is estimated to lead approximately 4.4 billion KRW of production cost reduction in the future.



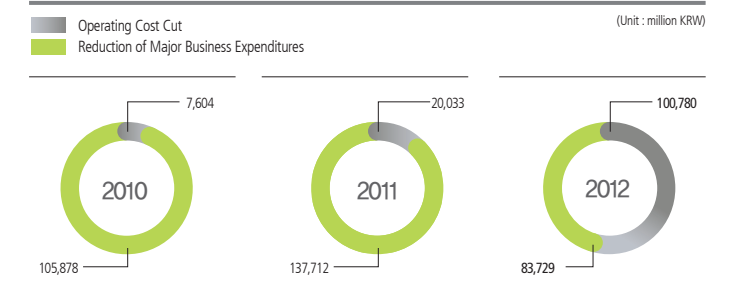
Knowledge Management Performance

In 2012, KOGAS' knowledge management activity resulted in 184.5 billion KRW of financial benefits. In comparison to previous year, the company saw an increase of 16.97% with reduction of operating cost rating at 54.6% and major business expenditure rating at 45.4%.

Financial Benefits by Program



Financial Benefits by Category



04 • Risk Control

Company Wide Risk Management

KOGAS has built a company-wide risk control system to minimize the potentials for crisis. Such system is not merely a measure to prevent accident or crisis but also a system of effective risk control due to its intrinsic link with performance and value creation. Also, an integrated analysis, as a part of risk control process, is in place to assist the operational decision making which can prevent the occurrence of risk or crisis preemptively and minimize the damage in case of crisis.

36 times
—
Risk and Crisis Announced



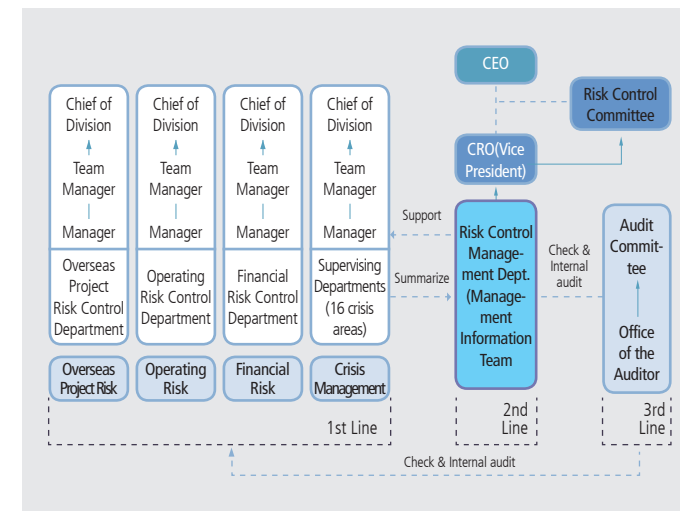
Company-wide Risk Management System

KOGAS defines risk as the dangers or crisis factors which pose uncertainties or cause the loss of opportunities to interfere with the accomplishment of strategic and business goals. Thus, preemptive management of risk is crucial in KOGAS' management and activities of value creation. Correspondingly, building on the risk factor analysis in 2010, we have constructed a company-wide risk management system in 2012.



Risk Management Organization

KOGAS operates risk control organization in line with the '3 Lines of Defense' model. The Risk Control Committee, directly led by the CEO, is the highest decision-making institution that determines all issues related to risk controls. The CRO, as the responsible member of overall company-wide risk management, bears the responsibility of reporting to the Risk Control Committee. The committee holds regular meeting at least once a year to review the company's risk control status and responses and make decisions on relevant agendas.



Risk Management Performance

Type	Risk Control				Total	Crisis Control			Total
	Attention	Caution	Alarm	Critical		Caution	Warning	Total	
2010	3	7	2	1	13	N/A	N/A	—	13
2011	4	7	4	—	15	N/A	N/A	—	15
2012	3	3	7	—	13	17	6	23	36

Risk and Crisis Announced

We had 36 cases of reported risk and crisis warning in 2012 and the situations were effectively managed accordingly.

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 category with further advancement.

Company-wide Risk Management	
Risk Control	Crisis Control
<ul style="list-style-type: none"> • Operating Risk Control • Overseas Project Risk Control • Financial Risk Control 	<ul style="list-style-type: none"> • Disaster Management • Communication Conflict

Risk Control System

Operating Risk Control We identify and monitor risk factors that are obstacles to our achievement of strategic missions and assignments. In addition, 43 KPIs have been set accordingly.

Overseas Project Risk Control Risk control departments apply qualitative and quantitative risk control methodologies respectively to monitor potential risk factors in overseas projects and prevent actual risks.

Financial Risk Control The International Finance Team and Financing IR Team control financial risks as well as conduct assessment and manage the corporate financial indices on exchange rates, interest rates, and liquidity.

Crisis Control System

Several departments supervise the management of 16 different crisis categories and compose reports on crisis management activities to strengthen countermeasures and implement other government programs.

Category	Crisis	Definition
Disaster	Environmental Crisis	Environmental contamination caused by leaks from facilities or LNG carriers
	Facility Crisis	Gas leaks and fire outbreaks caused by destruction of production or distribution facilities
	Disaster Crisis	Disruptions to natural gas supplies caused by earthquakes, typhoons or floods
	Information System Crisis	System malfunctions or operating disruptions caused by hacking attacks or virus terrorism
Management	Regulatory Crisis	Decrease of market presence due to appearance of new competitors
	Overseas Project Crisis	Deterioration of business environment due to the suspension of variable pricings on fuel costs
	Strategic Crisis	Inevitable changes or suspension of overseas projects
	Supply Crunch	Disruptions to the achievement of management objectives due to failures to procure resources for strategic implementations
	Financial Crisis	Decline in LNG inventories due to supply disruptions or demand hikes
Communication	Financial Crisis	Deterioration of financial soundness or liquidity due to volatilities in exchange rates, oil prices, interest rates, or credit ratings
	Social Accountability Crisis	Negligence in social accountability
	Human Resource Crisis	Lower employee satisfactions
	Operating Crisis	Occurrence of internal corruptions
Conflict	Marketing Crisis	Bankruptcy of city gas supplier
	PR Crisis	Deterioration of corporate image or reputation caused by the wrong or negative media coverage
	Labor Strife	Disruptions to gas supplies due to walkouts or other labor strife (including illegal actions)
Conflict	Collective Complaints	Disruptions to operations caused by collective complaints over facility operations or construction processes

05 • Stakeholder Communication

Stakeholder Communication

KOGAS identifies its stakeholders and manage them accordingly. In 2012, in effort to strengthen our connection with stakeholders, an 'Integrated Stakeholder Engagement System' has been established and we will endeavor to reflect further our pursuit upholding transparent and open sustainability management system.



Determined by impact and responsive measure, KOGAS has identified 4 categories of customers and depending on the managing channel and organizing body, the categories are sub-divided into 7 groups. In order to effectively manage each stakeholder groups' unique interests, we offer a wide range of communication channels and manage the complaints through integrated reporting portal, including kind/unkind reports, budget waste, inconvenience, information disclosure request, irregularity report and illegal subcontracting report.

Value Creating Customer: Employees

Those who create and transfer values to customers through cooperation

<p>Employees</p>	<p>Core Issue: Business expansion/ Competency strengthening/ Remuneration/ Stable employment/Welfare benefits/ Health & safety/ Employment Relations</p>	<p>Communication Channel: Field briefing for managers / Data on major business Labor-management conferences / Ombudsman / Strategy workshop</p> <p>Responsible Organization: Management Strategy Team/ Labor Cooperation Team</p>
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Value Delivery Customer: Partners, Suppliers

Those who heighten and enrich the values of both parties' demand, leading to a mutually beneficial relationship.

<p>Business Partners</p>	<p>Core Issue: Business expansion/ SMEs Support/ Financial soundness</p>	<p>Communication Channel: Joint workshop and sports matches/ Business information sessions / Surveys on contract satisfaction / Discussion meetings</p> <p>Responsible Organization: SMEs Support Team / Inventory & Contract Team</p>
<p>Procurement Companies</p>	<p>Core Issue: Business cooperation/ Safe supply/ Supporting schemes</p>	<p>Communication Channel: English newsletter / Sustainability Report / Local newspaper / Broadcast</p> <p>Responsible Organization: Global Relations Team</p>

Value Demand Customer: Direct Customers (City gas and power generation companies)

Those who consume KOGAS' produced value.

<p>Direct Customers</p>	<p>Core Issue: Safe supply/ Facility soundness/ Customer supporting schemes/ Billing</p>	<p>Communication Channel: Customer discussion meetings / Customer satisfaction survey / Pricing briefing technical / Information meetings / Customer service system</p> <p>Responsible Organization: City Gas Sales Team / Power Generation Sales Team / LNG Sales Team</p>
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Value Effect Customer: Shareholders and investors, Government and authorities, Local communities

Those who influence KOGAS' value creation.

<p>Shareholders and Investors</p>	<p>Core Issue: Stock price/ Investment/ Security/ Growth potentials/ Financial soundness/ Dividends/ Corporate governance</p>	<p>Communication Channel: IR Activities / Electronic posting (Allo, KRX, and FSS) / Newsletter</p> <p>Responsible Organization: Financing & IR Team</p>
<p>Government and Authorities</p>	<p>Core Issue: Addressing climate change/ Corporate governance/ Safety of supply and demand</p>	<p>Communication Channel: Information disclosure request system / Business reports / Congressional or BAI audits</p> <p>Responsible Organization: External Cooperation Team</p>
<p>Local Communities</p>	<p>Core Issue: Social contribution/ Safety & environment management/ Sustainable management/ Ethical management/ ISO 26000</p>	<p>Communication Channel: Campaigns and social contributions / Conferences / Newsletters / Web posting</p> <p>Responsible Organization: Public Relations Team</p>

Materiality Test

It is very important to accurately identify stakeholders' interests and business impact in writing sustainability report. KOGAS, with its own material test process established, produces the sustainability report with careful assessment to include all KOGAS' core issues raised by stakeholders.

1. Sustainability Management Issue Pool Identification	2. Stakeholder Interests Research	3. Business Impact Analysis	4. Stakeholder Evaluation	5. Core Issues Identification
<ul style="list-style-type: none"> • Previous year's core issues • CSR Trend analysis 	<ul style="list-style-type: none"> • Media analysis • Industrial core issue analysis • Corporate responsibility guideline analysis 	<ul style="list-style-type: none"> • Management performance Indices • Management Disclosure • Management Evaluation • Employee Survey • Sustainability Management T/F Opinion Poll 	<ul style="list-style-type: none"> • Stakeholder survey • Stakeholder interview 	<ul style="list-style-type: none"> • Confirm 8 core issues

Step 1 Sustainability Management Issue Pool Identification

We built "The issue pool" using last year's core issues, recent CSR trends and 2012 CSR performance analysis.

Step 2 Stakeholder Interests Research

Media Analysis: Domestic, regional and economic newspaper and TV broadcast news, internet newspaper, and domestic English newspaper have been the basis of media analysis that entailed 382 news articles on KOGAS.

Industrial CSR Issue Analysis: Core issues of 4 benchmarked companies in the industry from websites, sustainability reports, and annual reports have been studied.

Social Responsibility Guideline Analysis: Core issues have been identified from the UNGC 10 principles, which KOGAS complies to, and ISO CSR guideline as well as global standards like the GRI G3.1 guideline.

Step 3 Business Impact Analysis

The common issues demonstrated in management performance index, disclosure and evaluation as well the issues identification from internal survey regarding the factors that are highly influential on KOGAS' management have been incorporated.

Step 4 Stakeholders Evaluation

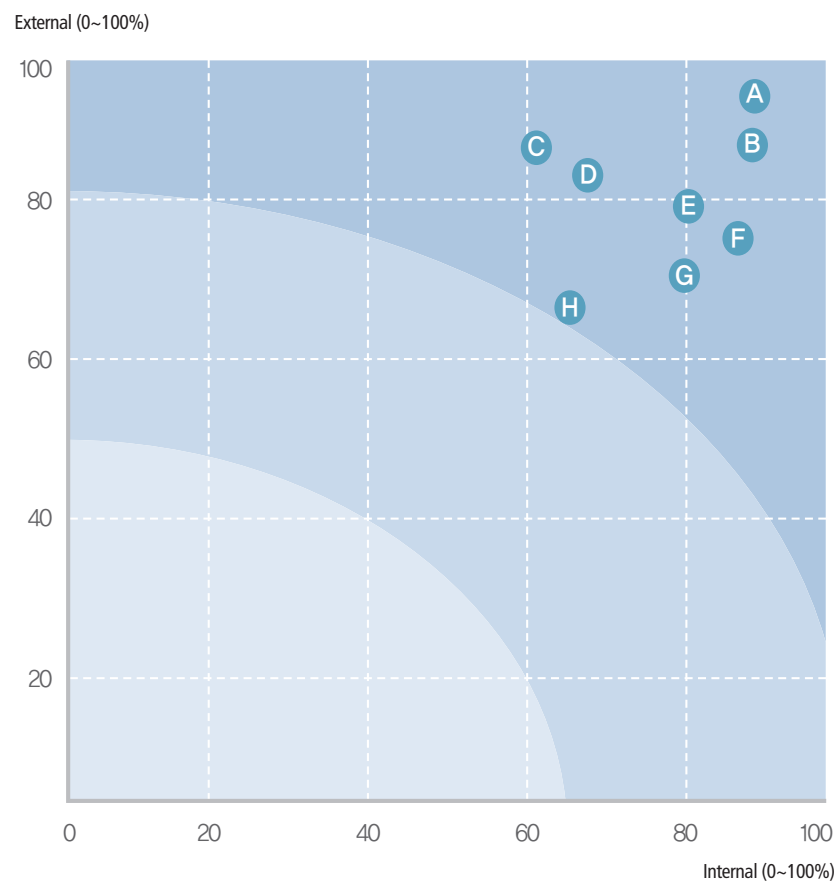
While paying attention to the issues raised by stakeholders, we are also focusing on the corresponding measures as follow-ups. The reflection of internal and external stakeholders' opinions are collected and reflected through annual stakeholder awareness survey. The survey was carried out for 10 days between 22nd and 31st of May 2013 with 3,114 employees and 2,439 external stakeholders, with return of 1,063 valid answers.

Step 5 Core Issue Identification

Whilst there was a minor difference among stakeholders regarding prioritization, 8 common core issues have been identified.

KOGAS Sustainability Management Core Issues

A majority of stakeholders manifested an interest in overseas resource development expansion/ securing new growth engines, stable energy procurement and advancement of industrial infrastructure, customer-orientated management and integrated risk control and etc. This report will present all 8 core issues to be discussed here to accurately reflect the views of our stakeholders. We will endeavor to provide effective operation by offering tailored sustainability management activities empathized by the stakeholders and the performance will be recorded in the next issue of our sustainability report.



Core Issues

- A** Overseas Resources Development and Securing New Growth Engine
- B** Securing Stable Energy Procurement and Advancement of Industrial Infrastructure
- C** Customer-Orientated Management
- D** Integrated Risk Control
- E** Globalization of Product, Customer, Capacity and Performance
- F** New and Renewable Energy Supply and Industry Facilitation
- G** Furthering Global Social Contribution
- H** Integrated Countermeasures to Climate Change

Stakeholder Interview

KOGAS values stakeholder communication as a top priority in sustainability management. We heard from a wide range of stakeholders - business partners, community, government, employees and etc. - to ensure that the diversity in stakeholder groups is also reflected in our feedback. We believe that continuous communication with stakeholders can greatly improve our pursuit of sustainability management with such varied opinions and expectations especially for the future direction of our operation. We are here to share the stakeholder interviews and will ensure to reflect your precious opinions in our operation.



01
Adnan Rajab
Oman LNG CCO
(Chief Commercial Officer)

Change and Innovation for Sustainable Alternative Energy Development.

KOGAS is one of the leading figures of the world energy industry. It has established itself as a highly cooperative company and this is a positive asset as it builds the kinship to comfort and treat the partners as members of KOGAS. As an LNG producer, O LNG greatly appreciates KOGAS' fair and solid cooperation. I believe that KOGAS should acknowledge the fact that the resources are scarce and further its efforts to find high-efficiency, low cost and sustainable alternative energy. Therefore, innovative and groundbreaking R&D, regarding resource usefulness and efficiency, will be crucial in actualizing KOGAS' vision.



02
Chanyoung, Song
Representative of Gastron

To Go Fast Go Alone, to Go Far Go Together.

Africa is the land of infinite deserts and sands. For them, if one wished to go far, there was always a companion. It's not surprising that we can go further with a companion to rely on. I believe that this proverb can be applied to KOGAS and the SMEs' relationship, too. The mutual growth of both parties should be the answer to resolving social inequality and sustainable development. I look forward to seeing a great future where mutual growth for KOGAS and the SMEs can cooperate in the global market for mutual growth.



03
Jinho, Ahn
Ministry of Trade, Industry and Energy,
Gas Division

Stabilization of Natural Gas Supply is Important for Energy Security.

It is through stabilization of natural gas supply that Korea can obtain energy security and further pursue with overseas resources development operation. KOGAS, seeking for such aim, should establish effective strategies to lower the price for the citizens, rather than pushing for quantitative expansion. I believe that this is also a great opportunity for KOGAS to enhance its global competitiveness.



04
Giho, Kim
Vice President, Korea City Gas
Association

Preparing the Future Inclusive Growth with Natural Gas.

Natural gas is the most realistic measure to addressing climate change and flow of the gas will only increase as time passes with rising popularity. Therefore, it is crucial that KOGAS endeavors to enhance its technological capabilities to develop a variety of equipment and machinery that uses natural gas. Also, considering the marketing to facilitate new demand (gas air-conditioning/heating & transportation fuel), KOGAS and wholesalers and retailers should consider developing a system or supporting scheme to advantage in competition with other energy.



05
Chungho, Je
KOGAS, Executive Vice President of
Corporate Planning Division

I will concentrate on strengthening organizational capacity in accordance with swift environmental changes.

KOGAS' sustains its safe and stable supply of natural gas in seek of assisting with citizens' life to enhance welfare and convenience. Domestically, we are concentrating on the expansion of natural gas production/supply facilities and internationally, we are carrying out various projects - exploration, development, production and etc.- all across the value chain. Furthermore, built on our past experience, we hold a sustainable foundation for growth which will help with our emergence as a global energy leader. However, in order to achieve such goal, we ought to consider the significance of technology and information in the midst of swiftly changing environment. KOGAS, to rise as a global leader in the energy industry, will continue its ceaseless efforts in strengthening our own organizational capacity.

Sustainable Value

01

Sales 2012



35 trillion KRW

Storage Facilities



60/8.86 unit / million kℓ

National Pipeline Network



3,558 km

Natural Gas Sales 2012



36.55 million tons



Area 4 Field in Mozambique

KOGAS is responsible for Korea's sustainable energy development and operation.

We, through expanding our horizon to upstream operation, including resource exploration and development, and mid/downstream operation, such as overseas LNG terminal / pipeline business and etc., compliment and strengthen Korean initiative to develop self-sufficiency and secure stable supply.

Stable Supply of Natural Gas

Stable Supply of Natural Gas	24	Improvement of City Gas Trading Unit	31
Building a Vertically Integrated LNG Value Chain	26	Major Economic Performance	32
Stable Facilities Operation	30		

Forecast on Natural Gas Demands

Higher Accuracy in Demand Forecast KOGAS is continuously working to upgrade its forecast model to better reflect the ever-changing demand conditions. Considering the heightened abnormal climate conditions, such model is complementary in strengthening flexibility of the model to facilitate the scenario-based demand forecasts accuracy. We produce an annual short-term supply and demand plan in April every year with the past experiences with power generation shutdowns and other cases of demand fluctuations.

Leading a High Quality Market Development

We employ various measures for natural gas demand development and national energy consumption rationalization such as grants, system improvement and R&D capacity building strategy such as gas equipment domestication and efficiency research. For mid-/long-term security of demand volume, the company has set a higher target of 4.63 million tons by 2022 by increasing the demands of combined heat and power gas, air-conditioning, fuel cell, transportation and industrial gas supplies.

Managing Demand Gap

In order to resolve the problem of demand gap, KOGAS builds short-term and winter supply and demand program. The company has also been expanding storage facilities and setting price lower during summer, relative to that of winter, to provide stable supply of gas. Furthermore, the supplies to the sources with less seasonal gap, such as air-conditioning, industrial and combined heat and power gas, are encouraged by various means to increase the demand. The efforts range from institutionalization and a dedicated team for Demand development team, subsidies (9,904 million KRW), development of high efficiency facilities/equipments and etc. As a result, apart from power generation and residential gas, we supplied 8.26 million tons (42% of city gas sales) in 2012, which is an increase of approximately 1.03 million tons from 2011. The effective use of such system has led to an improvement to 1.945 of demand fluctuation in 2012, from 2.307 of that in 2011.

Developing Demand for LNG Ships

KOGAS signed the LNG ship fuel supply contract as the first Asian corporation and the supply will commence from 2013. Rooted in the tightened environmental restrictions on gas emission of ship and marine industry, the LNG ships have risen as a blue ocean market for natural gas consumption with an estimated total value of the ship fuel market amounting to approximately 50 trillion KRW 2030¹⁾. Standing as one of the leading figures in the ship building industry, KOGAS' LNG ship fuel supply will contribute significantly to not only LNG ship fuel supply industry (LNG bunkering) but also strengthening Korean shipbuilding industry's competitiveness.

Securing Stable Procurement

Applying Strong Purchasing Power and Market Knowledge KOGAS' negotiating power comes from its reputation of holding the world's strongest purchasing power and market knowledge, enabling the demands to improve import conditions. The company also ensures economic purchase in a timely manner by maintaining reciprocal relationship with other international players like Japan, the biggest buyer in East Asia.

Securing Stability via Long-term Contracts

Drawing contacts on the basis of 'Long-term Natural Gas Supply Plan', KOGAS secures the necessary volume through long-term contracts (usually 10 years or more) primarily for city gas, power generation and industrial purposes. The company also uses more flexible short-term methods such as Cargo Swap, a result of cooperation with a foreign LNG buyer, and spot purchases to preemptively prepare for unexpected abnormal climate, economic conditions and natural disasters.

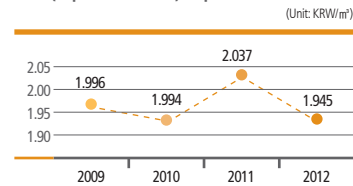
Drawing Shale Gas Contract Preemptively

Shale gas, a cheap gas produced in the U.S. has brought a phenomenon of 'Shale Gas Revolution', shifting the world energy market significantly. KOGAS was able to preemptively prepare and sign contracts in 2012 which will bring various benefits to our citizens from 2017.

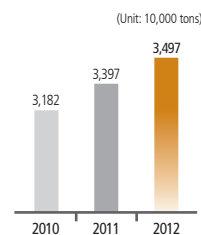
Improving the Winter and Summer Consumption Gap

1.945

TDR (Top-Down Ratio) Improvement



LNG Quantities Imported



Note 1) Gazprom, Russia

Proportion of Natural Gas in Primary Energy Consumption

17.2%

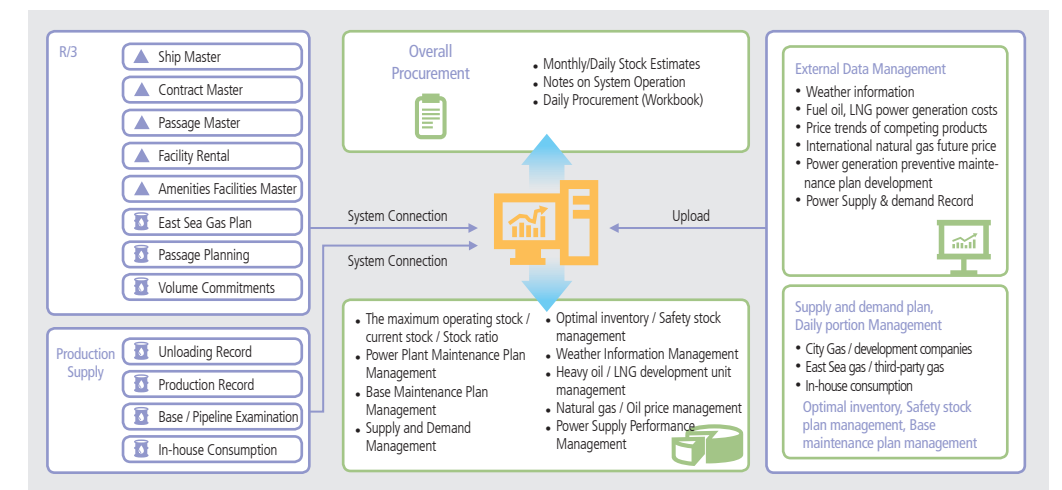
Proportion of Households with City Gas Supply

75%

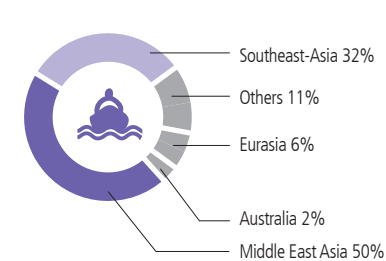
Efforts on Stable Supply

There are various means which KOGAS employs to ensure stable natural gas supply to households. Natural Gas, amounting to 17.2% of Korea's primary energy consumption, is one of the main energy resources along with oil, coal and nuclear power with its supply verging to 75% of households (14,990,000 households). With a target to reach 78% of supply by 2020, we will provide a stable supply nationwide.

Establishing an Integrated Supply and Demand Management System KOGAS introduced an integrated supply and demand management system, merging demand forecast, import, production, supply and etc. Its successful adoption, from October, 2012, has enabled realtime interactive data exchange between different departments, ultimately enhancing organizational capacity to provide stable natural gas supply and procurement.



LNG Supply Sources



Timely Expanding Facilities

Since the 2000s, the unreached areas of small cities where natural gas supply is hard or impossible to access have come to our attention. Correspondingly, KOGAS has constructed and expanded necessary facilities for effective production and supply in the areas with social needs and environmental changes for more scientific and systematic operation.

Expanding LNG Storage Capacity

Despite having enlarged storage capacity by approximately 250,000 tons through the completion of 3 LNG storage tanks in Pyeongtaek and Tongyeong Terminal Divisions, a drastic increase of approximately 3,000,000 tons in power generation and industrial procurement, due to conditions like power plant shutdown and etc., has created the need for continuous production and further supply facility constructions. In response, KOGAS, made plans to build a total of 12 tanks including 3 world's largest storage tanks (#10~12) of 270,000kℓ capacity in Samcheok by 2017 to sustain stable gas supply to Gyeongnam Province. Also, we are pursuing construction of three extra storage tanks in Incheon Terminal Division as well as in Aewol, Jeju by 2017 as a strategic location to enable natural gas procurement to the 5th terminal division and Jeju area.

Expanding Pipeline Networks to Unreached Regions

We, at KOGAS, are extending our distribution pipeline network to unreached regions to close the regional energy gaps and diversify energy source options for consumers. We have added 536km of pipeline by 2012, aggregating national pipeline network to 3,558km.

Building a Vertically Integrated LNG Value Chain

Stable Supply of Natural Gas	24	Improvement of City Gas Trading Unit	31
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Amount of Secured Resources

130 million tons

A Vertically Integrated LNG Value Chain

The natural gas industry always bears the risk of unstable supply and demand because it is dominated by a few hands. To counter such vulnerability, KOGAS produces natural gas directly in the overseas (Upstream operation), liquefies and transports the gas by ships made in Korea (Midstream operation) and supply the gas nationwide (Downstream operation) to build a vertically integrated LNG value chain. Currently, KOGAS conducts exploration, development and production all over the world and aims to claim 60% of profit from the foreign market.

KOGAS in Overseas



Promoting Upstream Resource Development

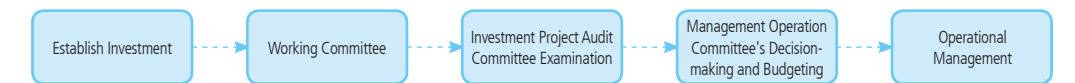
Increased Secured Reserves through Direct Participation The role shift from an investor to a direct participant in the resource development business is rooted in KOGAS' aim to preemptively increase the volume of secured reserves. As a result, the continued success in gas field exploration and potential resource-rich mines excavation in places like Mozambique has increased the volume of secured reserves substantially. In 2012, the reserve volume mounted up to approximately 130 million tons on an accumulative basis. The success of the Mozambique project, which secured further about 100 million tons of reserves, is likely to lead to the total reserved resources of 240 million tons or more. Mozambique Field, commenced from 2011, is the biggest gas field taken part by Korean company, and we expect to see more benefits with further mine excavations. The company also successfully signed 3 shared marine mine contracts in 2012. We consider Cyprus as 'the 2nd Mozambique' with its promising potentials. As it can be seen, KOGAS is devoted to creating stability by securing natural gas reserves by venturing in the development of overseas resources.

Oil Prospecting Ship in Mozambique Area 4



Packaged LNG Resource Development In order to secure resources in a competitive global market, KOGAS has introduced Packaged LNG Resource Development to capture a competitive edge. The business refers to operating chemical plant project and infrastructure construction at gas field in an integrated manner. Support or provision of social infrastructure can better assist resource development and thus have become a crucial advantage for KOGAS. Despite the initial involvement through equity ownership at the beginning of upstream operation, the extended value chain involvement has become a means to build a vertically integrated LNG value chain as our role shifted by shared and leading operations. The Surgil project in Uzbekistan entails the comprehensive package that encompasses the whole value chain. We plan to extend this to Mozambique where we aim to not only explore gas fields, but also supply city gas, build infrastructure and pipeline networks in line with the local government's request. Beneficiary of the resource development package operation extends not only to KOGAS but also to other Korean firms, offering opportunities and a competitive edge in international market as effective means of inclusive growth and industrial strength.

Enhancing E&P Project Processes Acknowledging the fierce competition in the E&P (Exploration & Production) business, KOGAS has established a systemized investment process as a stepping stone to become a specialist company in the arena. Although we focused on production and reserve augmentation in the beginning, the changing paradigm of resource development towards profit-center orientation has emphasized on the significance of profitability which has highlighted the importance of raising the success rate of exploration and expanding operational projects.

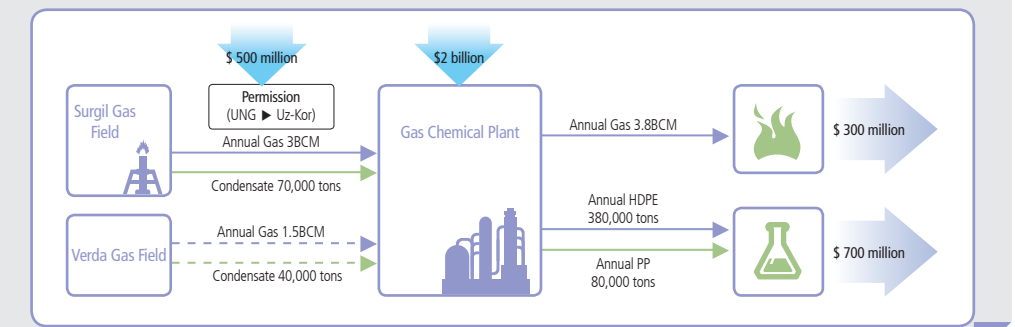


Best Practice

A Success Story of Packaged LNG Resource Development

Surgil Gas Field Project in Uzbekistan

Surgil Gas Field Project in Uzbekistan is one of the representatives of the successful cases of packaged resource development. It is Uzbekistan's first and largest project financing and KOGAS will be in charge of developing the gas field located in Aral Sea area, where the reserve of 130 billion m³ (liquefied natural gas of 96 million tons and crude oil of 810 million barrels) rests at. We will also build and run a chemical plant (460,000 tons) with the gas produced. The cost of operation will be 500 million dollars for gas field development, 2 billion dollars for gas chemical facility construction and etc, totaling up to 3.9 billion dollars. KOGAS believes that this is a highly promising project as it accompanies a chemical plant project (downstream operation). The project is a cooperative work of KOGAS and 8 other Korean companies like Honam Petrochemical Corporation, STX energy, GS Construction, Samsung Engineering, Hyundai Engineering and etc. We believe that this project is the forefront of future projects in under developed regions, such as Central Asia and Africa, in the field of resource development.



FID Signing Event for the Surgil Project in Uzbekistan



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Expanding Midstream and Downstream Businesses

Midstream and downstream operations are relatively stable with guaranteed cash profit in comparison to upstream resource development operation that bears high-risks on return. Also, midstream and downstream businesses are seen as inroads to business expansions in various other areas where upstream projects are already taking place - such as Mozambique natural gas exploration, Australia natural gas production, Canada shale gas production, Iraq oil and natural gas development and etc. - by exporting KOGAS' plant technology.

KOGAS plans to expand further with a newly arising blue ocean, Floating Storage Regasification Unit (FSRU) design and operation. The company will also export new technology of large storage tank (200,000 kℓ) construction and expand trading business by LNG, OIL, unconventional gas, petrochemical products (PE, PP), PNG, DME, etc. We are also seeking trading business in OMAN LNG gas, and petrochemical products produced in Surgil, Uzbekistan and crude oil productions in Iraq, as well as an opportunity to enter natural gas charging and cylinder projects with other Korean firm cooperatively. In particular, in case of Mozambique, when the operation comes in full production (expected 2018), we will be able to work in the primary derivatives Industry worth more than approximately 25 billion dollars such as construction of Floating LNG plant and inland liquefaction plant, LNG shipbuilding and transportation, land and sea pipeline and gas processing facility (CPF)

Exporting Downstream Technology

Starting from technology import from France and Japan for terminal design, construction and operation, KOGAS is now able to design LNG storage tanks, build and operate LNG terminals with our own technology. In 2012, KOGAS saw profit of 18.1 billion KRW from downstream part such as Manzanillo, Mexico LNG terminal operation project, Thailand PTT LNG terminal project, Singapore LNG terminal test operation and training project, China LNG terminal and storage tank design and technical advisory project, UAE LNG terminal technical advisory project orders. Also, our work in Zehjiang, China design and test operation project, UAE technical advisory project as well as Jaingsu, China tank design project and etc. have also received orders worth of approximately 10 million dollars. The company's operation is not confirmed to terminal projects, expanding to overseas natural gas pipeline network building and operation. Such skills owe to the experiences and technology in the domestic industry, enabling to obtain orders like Iraq overseas pipeline EPC turnkey projects and Mozambique gas pipeline network project.

▼ The Construction Site of LNG Terminal in Manzanillo, Mexico
 ▼▼ The Dedication Ceremony of LNG Terminal in Manzanillo, Mexico with the President of Mexico



Best Practice

A Successful Korean Business Model with 20 Years of Guaranteed Dividend Income.

Manzanillo, Mexico LNG Terminal Project

The LNG terminal project in Mexico is a successful case of cooperative operation between public and private enterprises increasing a substantial added value. The hard work and collaboration of KOGAS and other Korean companies brought about such success through a Korean LNG business model. Samsung C&T Corporation was able to create dividend income, Korea Exim Bank led financial return while Samsung Engineering designed, purchased and constructed LNG terminal, strengthening competitiveness in the EPC sector of LNG terminal business. The terminal, completed in 2011, is under KOGAS' effective management for the next 20 years from June, 2012 which we hope to demonstrate an unparalleled competitiveness in LNG terminal and relevant plant sector. Deriving from successful record of terminal operation in the past, KOGAS plans to dive further into overseas LNG terminal operation projects in the future.

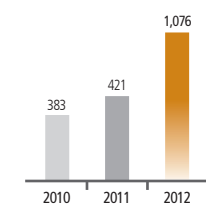


▲ OJT Overseas Field Result Briefing

Development of the World's Biggest LNG Storage Tank

270 thousand kℓ

R&D Investments (Unit: 100 million KRW)



- ① Design of the LNG Storage Tank 270 thousand kℓ
- ②③ Self-Propelled Gas Pipe Inspection Robot Technology
- ④ Catalyst for Hydrogen Manufacturing Technology
- ⑤ Desulfurization Facility
- ⑥ A Hydrogen Station & A Fuel cell car(Incheon)

Nurturing Global Talent

KOGAS is developing a system that nurtures a professional global talent pool, complementing the building of a vertically integrated LNG value chain. In order to nurture a talent pool for varied sectors, we incorporate overseas field OJT, short commissioned training, on-site practices and etc. With an external specialist institution's help, we are currently running a comprehensive training program of global E&P company's standard. In 2012, 489 pupils of 5 sectors were trained in total with 18 pupils trained separately by long-commissioned training in key areas of expertise (Global MBA, public policy, gas engineering, resource development, financing, legal and other overseas OJT).

Developing Core Natural Gas Technology

The World's Largest LNG Storage Tank KOGAS has developed construction technology for the world's largest LNG storage tank, applying to #10-12 tanks construction at Samcheok Terminal Division. The world's largest storage tank, in comparison to the former tanks of 200,000 kℓ capacity, bears 35%-increased storage capacity. From such development, the company can save costs on operational and maintenance cost and 7.27 billion KRW construction cost per tank.

LNG Ship Cargo and Marine Terminal Gas Plant Technology KOGAS developed Korean type of membrane and LNG ship cargo KC-1 to apply to inland LNG storage tank (200,000 m³) and LNG ship respectively. We are cooperating with shipbuilding companies to apply this technology to LNG ship in various ways and also developing offshore terminal (LNG-FSRU) gas plant technology for gas field business.

Self-propelled Gas Pipe Inspection Robot Technology In order to scientifically assess and evaluate the safety of underground pipelines, we have developed an ILI (In-Line Inspection) method pigging self-propelled robot technology, where relevant testing equipments are deployed inside the pipes. KOGAS believes that this is a great cornerstone to enter international market.

Hydrogen Fuel Cell & HCNG Charging Station KOGAS is investing in new and renewable energy and eco-friendly technology in many directions, pioneering the future energy market. In particular, in order to build up a solid foundation in hydrogen energy area, the company is developing catalyst for hydrogen manufacturing technology, a desulfurizing agent, residential fuel cell systems, hydrogen station control system and etc. Through this, we are also leading low carbon green growth with infrastructure building such as 30N^m/h level hydrogen station construction and inspection and HCNG charging station building.



Stable Facility Operation



▲ Gas Forecasting System

Supply Capacity of Cheongna Supply Station

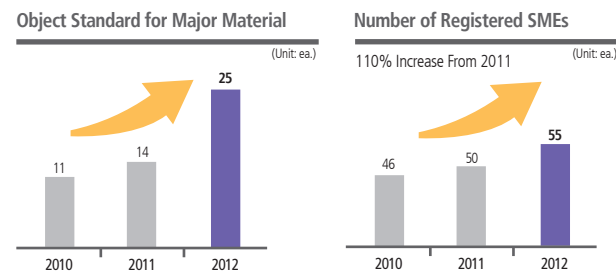
1,100 ton/hour

KOGAS considers stable and cost-effective supply as the upmost priority and ensures to carry out its responsibility despite various interfering conditions such as natural disasters and abnormal climate change through effective and safe facility operation. For such, KOGAS has established a crisis response system, advancement of facility operation process, securing high-quality equipments, improving quality and etc. to proactively respond.

Uninterrupted Gas Supply In spite of national energy crisis, such as a 20% increase in gas consumption in winter 2012 due to power station failures and abnormally cold weather, KOGAS demonstrated uninterrupted and stable gas supply with effective operation through increasing the send-out pressure of Tongyoung Terminal Division, operating Oe-dong pressure-boost facility and establishment of gas forest system. The reliable supply of natural gas was also sustained, achieving no accident and no crisis condition through various measures of safety check - by the ILI (IN-Line Inspection) in long-ran operation facilities, pipeline safety assessment system as well as LNG storage tank inspect with KOGAS-origin cryogenic camera.

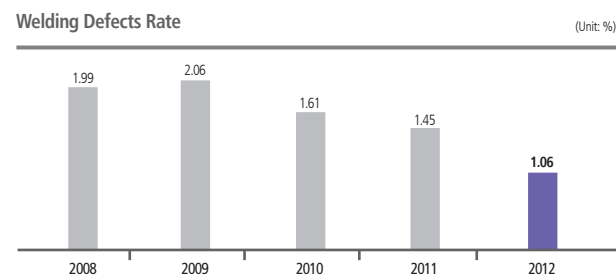
Advanced Equipment Operation Processes KOGAS has introduced the technology of Natural Gas Pressure Power Plant that produces power by using gas pressure energy for the first time. The world's largest integrated station(Cheongna Supply Station : 1,100 ton/hour) is being operated efficiently. Through development of intelligent map for terminal drawing management, efficiency of terminal operation system is being improved and optimized.

Efforts to Secure High-quality Equipments KOGAS holds a specific management system for 8 major equipments (Valve and others) that is directly related with the safety of natural gas supply. For the 8 major equipments, we ensure to do our best in securing only high-quality equipments by comprehensively assessing the suppliers' ability to comply with the proposed standards indicated in the contract prior to signing. Also, the company actively encourages the SMEs' involvement by extending 2012 registered assessment to occasional ratings and separately assesses the companies in different sizes.



▲ Generating Equipment Using Gas Pressure

Reinforcing Onsite Quality Control Having achieved the target of less than 3% welding defects, KOGAS has also been able to identify the underlying reasons and communicated with poorly performing companies to improve the quality. Furthermore, KOGAS' commitment in high quality management, demonstrated by activities like quality assessment at construction sites with a specialist, has translated to receiving Grand prize of 2012 Quality Management Award <Management Quality> sector.



▲ Receiving Grand prize of 2012 Quality Management Award

Welding Defects Rate

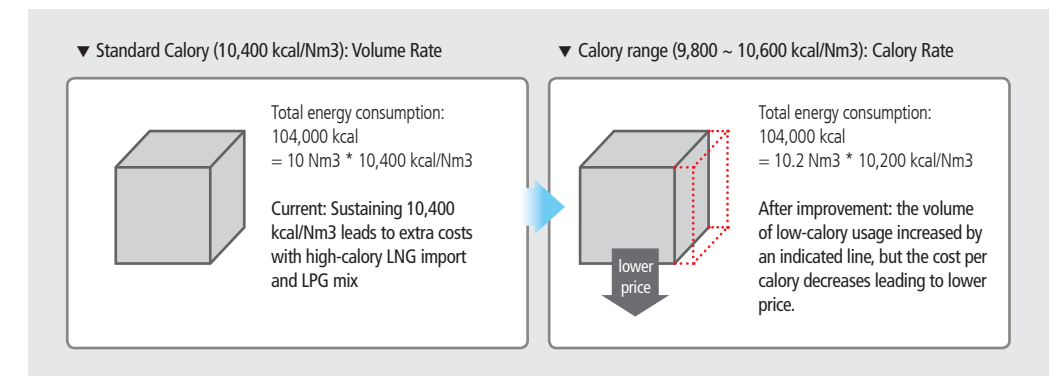
1.06 %

Improvement of City Gas Trading Unit

Stable Supply of Natural Gas	24	Improvement of City Gas Trading Unit	31
Building a Vertically Integrated LNG Value Chain	26	Major Economic Performance	32
Stable Facilities Operation	30		

Implementation of the Calorific Value Range System

KOGAS' city gas trading unit has been changed to the calorific value range system from the standard calorific value system in an attempt to unburden the citizens with lower cost and to improve energy source competitiveness. Rooted in the decreasing number of large quantity of calory gas field, the world has opted to consuming low-calory city gas with peaking of high-calory city gas price. Therefore, KOGAS has changed from the standard calorific value system, where a certain level of high calorific gas supply is necessitated, to the calorific value range system, where the gas can range from the lowest to the highest. Also, with such implementation, we have changed out measurement unit from volume (m³) to calory (MJ) to offer fair and accurate price.



Reduced Costs by Improvement of City Gas Trading Unit in 2012

About **130** billion KRW

Estimate of Cost Savings in the Next 12 Years

About **5.7** trillion KRW

In order to minimize the potential inconvenience due to the system change, we have lowered city gas calory step by step from 1st of July, 2012. Also, we supply with 'Notification of calorific value in advance', to maintain the calory range within ±2%.

Expected Benefits of the Calorific Value Range System

Compared to the pre-existing system, KOGAS can offer natural gas with large quantity of calory at cheaper price. The system change also provides an environment where city gas can be produced from various other gas sources in overseas (coal gas, bio-gas and etc.). As the addition of pricey LPG is no longer necessary in natural gas production, we can see the benefits of production cost savings. From the change, we expect to see an estimate of 130 billion KRW, leading to approximately 5.7 trillion KRW in the next 12 years.

Enhancing Strengths <ul style="list-style-type: none"> Establishing consumer response measures towards the globalization of low calory consuming city gas trend Competitive price advantage 	S	Improving Weaknesses <ul style="list-style-type: none"> Responding effectively to global calory flow changes Natural gas revenue diversification and quality standards establishment 	W
Leveraging Opportunities <ul style="list-style-type: none"> Improve city gas trading system Following the low calory consuming trend of the world LNG market 	O	Eliminating Risk Threats <ul style="list-style-type: none"> Eliminating cost-raising factors due to calorific management (added LPG) Improving LNG competitiveness for low-calory adoption 	T

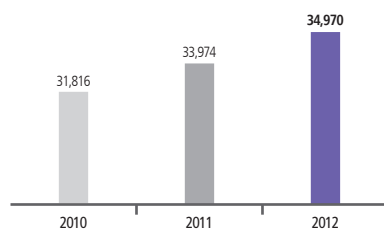
Stable Supply of Natural Gas	24	Improvement of City Gas Trading Unit	31
Building a Vertically Integrated LNG Value Chain	26	Major Economic Performance	32
Stable Facilities Operation	30		

Major Economic Performance

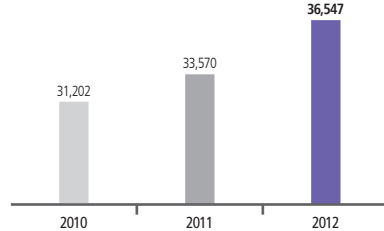
Domestic Operation Performance

Natural Gas Trade

LNG Procurements (Unit: 1,000 tons)

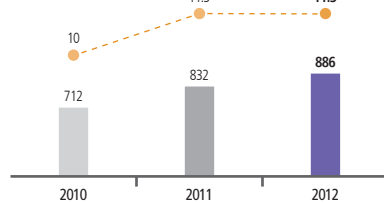


Natural Gas Sales (Unit: 1,000 tons)



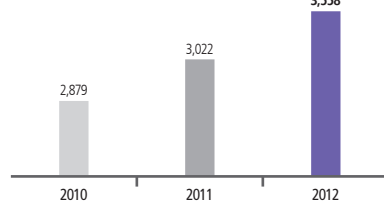
LNG Storage

Unit: Proportion of storage (%)
Stored Volume (10,000 kJ)



Gas Supply Pipeline

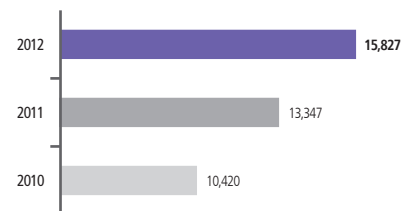
(Unit: km)



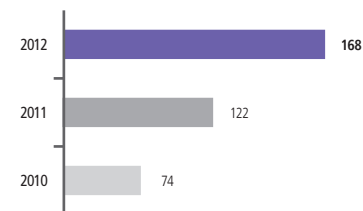
Overseas Operation Performance

Overseas Resources Development

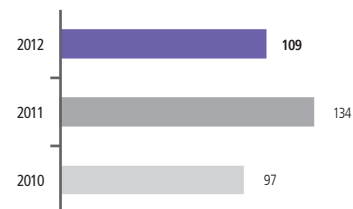
Secured Reserves (Unit: 10,000 tons)



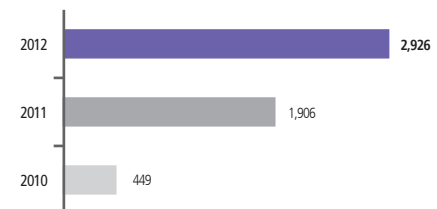
Direct Development (Unit: 10,000 tons)



Overseas Business Dividend Profit (Unit: million dollars)



Investment (Unit: million dollars)



Financial Performance

Major Financial Performance

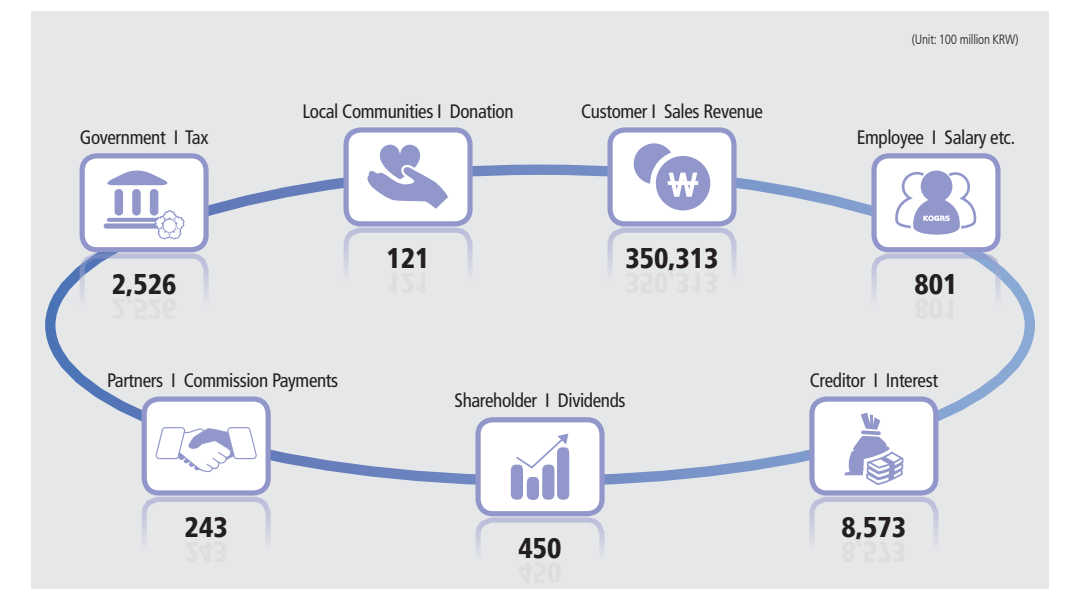
Category	Unit	2010	2011	2012
Sales	100 million KRW	227,405	284,298	350,313
Profit	100 million KRW	9,701	10,232	12,666
Borrowings	%	52.0	55.7	59.9
Credit Level		AAA (Domestic)	AAA (Domestic)	AAA (Domestic)
		A1 (Moody's)	A1 (Moody's)	A1 (Moody's)

* The K-IFRS Consolidated Reporting Standards

Key Financial Indicators

Category	Content	2010	2011	2012
Safety	Current Ratio (%)	138	147	116
	Debt Ratio (%)	288	348	116
	Interest Coverage (Ratio)	1.65	1.41	116
Profitability	Return on Assets (%)	0.9	0.5	116
	Return on Equity (%)	3.6	2.2	116
	Operating Margin (%)	4.3	3.6	3.6
Growth	Revenue Growth (%)	-	25.3	23.2
	Tangible Asset Growth (%)	6.6	7.7	11.9
	Operating Profit Growth (%)	-	5.0	23.8
	Total Asset Growth (%)	4.9	19.9	12.8

Economic Value Creation and Division



Green Value

02

Environmental Investment



27.6 billion KRW

First in the Energy Industry to Obtain ISO 50001 Certification

ISO 50001 certified

New and Renewable Energy Facilities Installment



867 million KRW



A Bird's Eye View of the New Eco-Friendly Headquarter

In fulfilling the promise to preserve the mother earth, KOGAS is committed to environment activities as a global energy company with eco-consciousness.

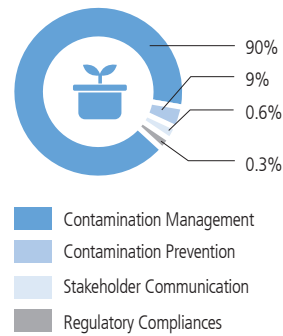
Under the vision of 'Sustainable Future Energy Company', we operate the low carbon management strategies, which consist of 'Addressing climate change', 'Saving energy' and 'Securing future growth engines', to effectively uphold social responsibility and prevent global warming with company-wide energy management system in an effective and integrated manner.

Environmental Management System

Environmental Activities Expenditure

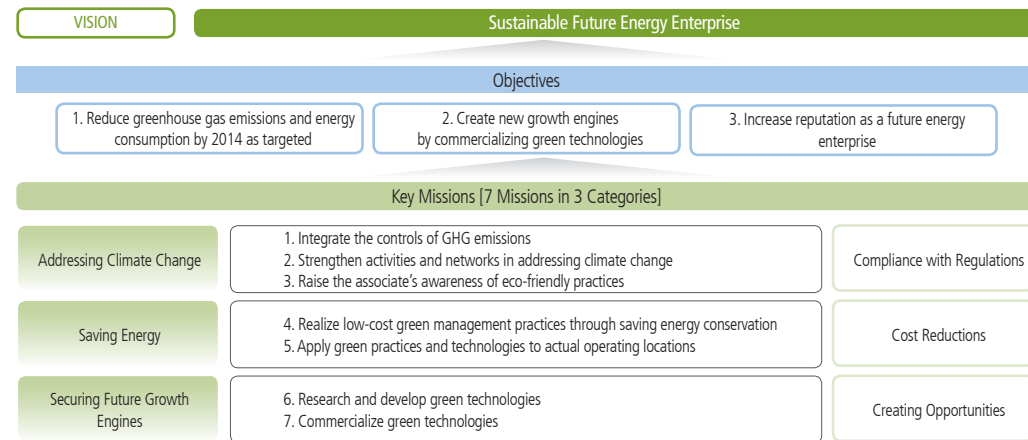
27.6 billion KRW

Proportional Environmental Activities Expenditure by Category



Eco-Friendly Infrastructure

KOGAS Environmental Management Strategy Acknowledging the intrinsic necessity of green growth in pursuing companies' survival and sustainable growth, KOGAS, as Korea's eco-friendly energy corporation, has established the Environmental Management Strategy. Under the vision of 'Sustainable Future Energy Company', we have established 52 action plans and 7 missions in 3 categories of 'Addressing climate change', 'Saving energy' and 'Securing future growth engines' which are bestowed as a company-wide practice.



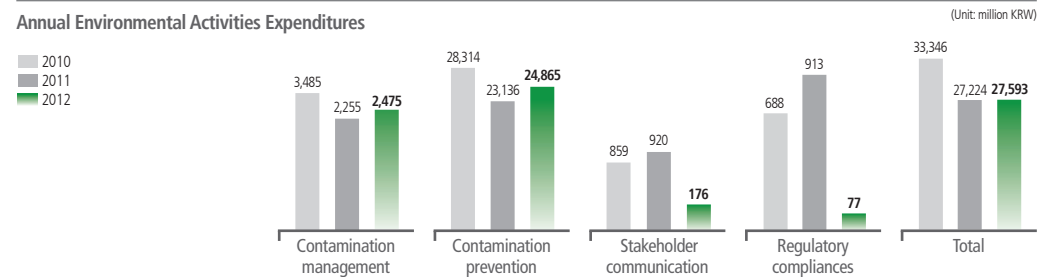
Computerized Environmental Control System The intranet-based ERP (Enterprise Resource Planning) system has been established as a part of a company-wide environmental management system, assisting to improve data accessibility.

Environmental Performance Evaluation (EPE) In order to enhance the effectiveness of environmental management, KOGAS has established the EPE (Environmental Performance Evaluation) system in December 2007 for systematic indices management. We also monitor environmental performance indices through annual evaluations to enable quantitative controls of environmental management performance.

Environmental Crisis Control System KOGAS has compiled the 'Ocean Pollution Management Manual' in December 2007 to cope with maritime disasters in a fast and efficient manner. We also continuously train our staff and prepare more anti-disaster supplies than legally required as the contingencies to minimize the environmental damages in the aftermath of such crisis.

Environmental Cost Control

KOGAS has developed its own environmental cost standards to manage expenditures on environmental programs under 4 different activity categories - contamination prevention, contamination management, stakeholder communication, and regulatory compliances. In 2012, the preventative environmental activities cost scaled up to around 27.6 billion KRW in the order of contamination prevention, contamination management, stakeholder communication, and regulatory compliances respectively for the cost.



GREEN VALUE

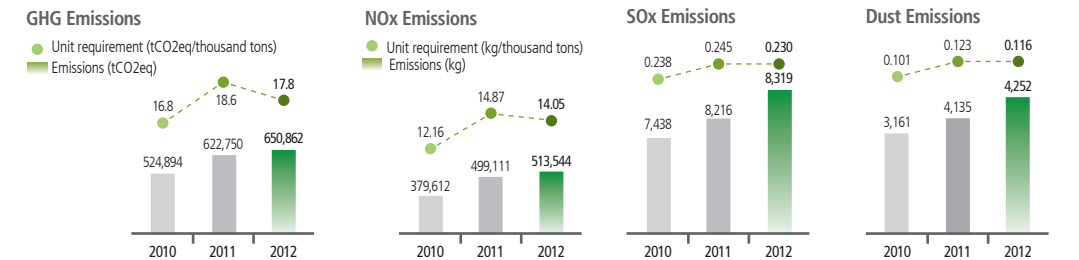
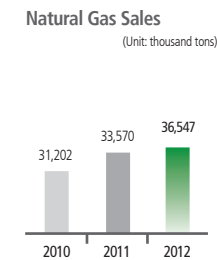
Environmental Management System	36	Green Partnership	40
Environmental Management Performance	37	Efficient Use of Energy	41
Addressing Climate Change	39		

Environmental Management Performance

Through a computerized environmental management system, KOGAS manages air, water quality and usage, hazardous chemicals and waste in an effective and integrated manner.

Air Pollutant Control

Primary air-polluting production and distribution facilities include submerged combustion vaporizers (SMV), gas heaters, cogeneration facilities, boilers, and air conditioners at KOGAS. In order to minimize emission of contaminants, the facilities are managed with specific instructions. The SMVs are managed to not exceed 75ppm in pollutant density, which is half of the domestic emission standard of 150ppm. We also monitor and control NOx density and emissions by using the TMS (Tele-Monitoring System) installed at stacks on a real-time basis. The green gas emission mounted to 650,862 tCO2eq in total with 308,957 tCO2eq and 341,911 tCO2eq for direct Greenhouse Gas (GHG) and indirect Greenhouse Gas emission respectively in 2012.



※ Estimated on the autonomously recognizable level, applied IPCC_GL 1996 emission factor
 ※ Unit requirement : Value of the necessary investment (material, fuel or consumed time) for natural gas production

Water Pollutant Control

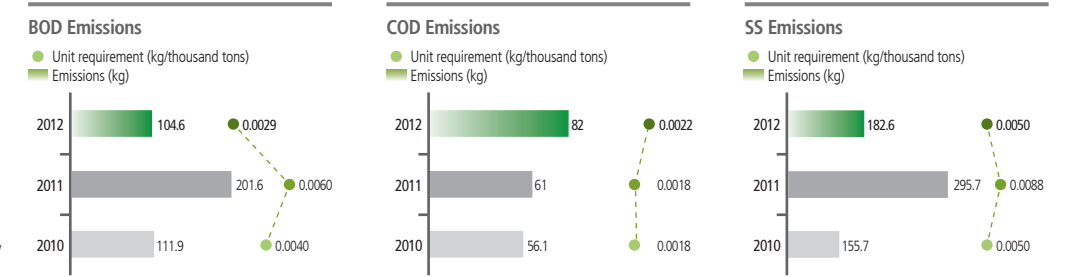
KOGAS' commitment in minimizing water pollution is demonstrated by various activities and facility improvements. Also, effective management of water consumption is facilitated by the integrated management of tap water and underground water since 2009. The total amount of water usage mounted up to 431,973kℓ with 411,953kℓ of tap water and 20,020kℓ of underground water 2012.

Sewage Control Pyeongtaek and Incheon LNG Terminal Divisions, located near shores, hold sewage treatment facilities which discharge water into seawater after purification. The sewage from Tongyoung Terminal Division and distribution stations are sent to local sewage treatment plants for processing. The pollutant concentration of wastewater effluent is strictly controlled so that it does not exceed the legal limit of 20ppm.

Wastewater Control In spite of the fact that the KOGAS' natural gas production bears limited damaging potentials owing to minimal water use, we still operate a strict system of water management for comprehensive system. Incheon LNG Terminal operates its own water and waste oil treatment facilities, while other plants recycle the water supply for all the processes within their facilities to prevent the discharge of contaminants. The seawater used for LNG vaporizers is discharged into the ocean without any harmful effects after being used for heat exchanges.



▲▲ Incheon Terminal Division Sewage Management Facility
 ▲ Incheon Terminal Division Waste Oil Management Facility



※ Natural gas sales which is considered as the standard is 31,202 thousand tons in 2010, 33,570 thousand tons in 2011 and 36,547 thousand tons in 2012.
 ※ Unit requirement : Value of the necessary investment (material, fuel or consumed time) for natural gas production

Environmental Management System	36	Green Partnership	40
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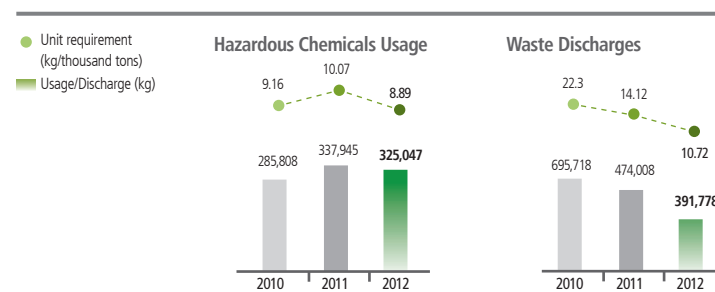
Addressing Climate Change

Hazardous Chemicals Control

Caustic soda (NaOH) and hydrochloric acid (HCl) are the major hazardous chemicals used in KOGAS' production processes. These substances are applied to control the acidity of the contents in the tanks of submerged combustion vaporizers (SMV), which are LNG gasification facilities. KOGAS is carrying out research on the measures which we can use to reduce the use of such chemical counteragent for submerged combustion vaporizers.

Waste Control

KOGAS applies stricter standards to the management of our waste production than legally required standards and we perform routinized periodical inspections on waste management service providers for effective containments handling.

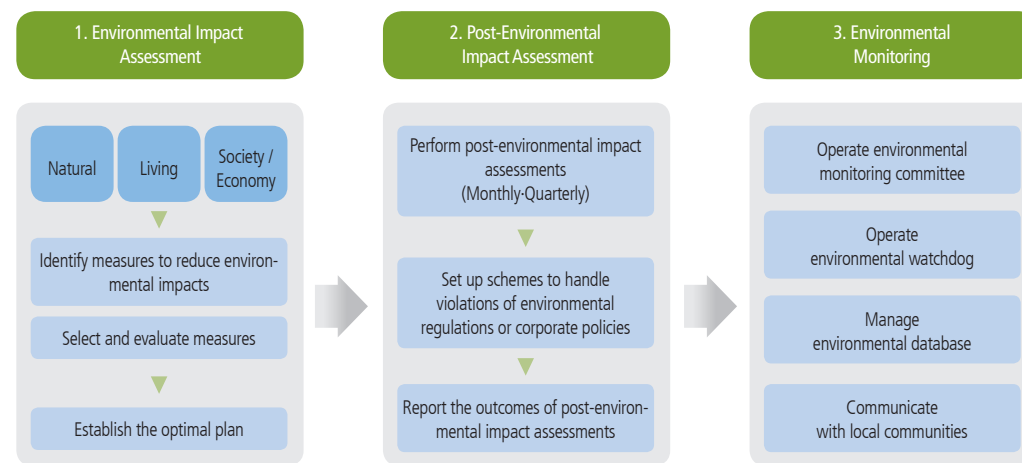


※ Natural gas sales which is considered as the standard is 31,202 thousand tons in 2010, 33,570 thousand tons in 2011 and 36,547 thousand tons in 2012.
 ※ Unit requirement: Value of necessary investment (material, fuel or consumed time) for natural gas production

Biodiversity Control

We, at KOGAS, apply strict standards to preserve and maintain biodiversity as a part of our dedicated environmental management. In order to minimize topographic and ecological damages, it is compulsory to conduct environmental impact assessments prior to construction of production plants and distribution stations with regular post-environmental impacts assessments. In cooperation with local communities and environmental organization, we have organized and operated environmental monitoring committee and environmental watchdog. The findings are shared through various measures of communication, like conferences, with the residents.

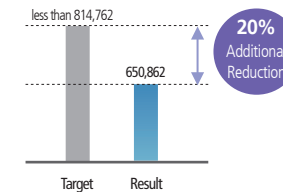
KOGAS Biodiversity Control System



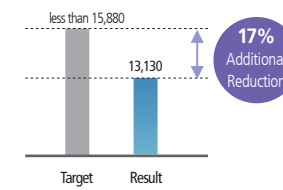
- ▼ Phytoplankton Collection
- ▼ Sediments Traction
- ▼ Marine Sediment Measurement



Greenhouse Gas Emissions (tCO2)



Energy Consumption (TJ)



Establishing the GHG Inventory Control System

KOGAS has been successful in constituting effective GHG controls through the foundation of GHG Inventory Control System. The system, by identifying the sources of direct and indirect Greenhouse Gas sources within our operating sites, eases the assessment of the respective emissions to clearly track GHG data. In addition, we plan to build an IT system for effective emission and energy consumption controls.

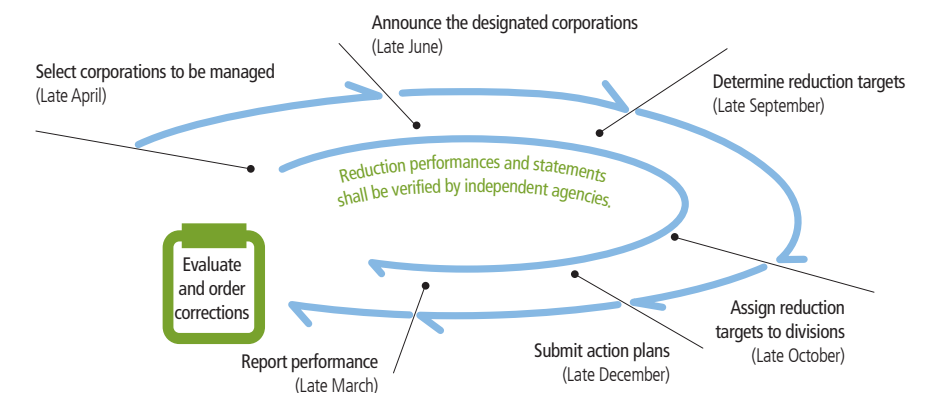
Carbon Disclosure Project

In conjunction with the global response to climate change, KOGAS has been disclosing its carbon footprint since 2008. We provide accurate KOGAS data to financial institutions and investors across the world to help them clearly assess the investment risks and opportunities related to climate change through the data disclosure project. The project's ultimate goal is to help minimize the relevant investment risks.

GHG & Energy Target Management System

GHG & Energy Target Management System is a management support system in which the government imposes the target for Greenhouse Gas Emission as well as Fossil Energy Use to designated companies with GHG emission and energy consumption in large volumes respectively and by which the government checks on and manages the achievements of those companies. Performance assessments are then used, along with incentives and penalties (instructions, fine and etc.), to manage and support the corporations' effective improvement. KOGAS has submitted GHG & Energy statement relevant statement and received the reduction target for 2013 from the government. The pursuit of such targets was actualized by the submission of detailed execution plans drawn per division in December 2012 and all reduction-related activities are executed diligently.

Guidelines for GHG & Energy Management



Best Practice

Low Carbon Green Production/Consumption Support System

First in the Gas Industry to Achieve a Carbon Emission Certificate

KOGAS' Pyeongtaek Terminal Division has obtained the gas industry's first Carbon Emission Certificate. The certificate program calculates the carbon emissions generated from the entire production and service processes, and then affixes labels with this carbon data to products. The certificate program aims to promote low carbon production and consumption practices as part of the efforts to address climate change. The system operates at carbon emission certification (1st grade) and low carbon product certification (2nd grade).



Green Partnership

Green Credit Program

At KOGAS, we fulfill our social responsibilities as a public enterprise by carrying out the Green Credit Program. The program encourages large corporations to provide financing and technical support to help SMEs reduce Greenhouse Gas emissions and on the other hand, receive a portion of credits for emission cuts in return for such support. From such, both parties can benefit as large corporations can reduce carbon emissions cost-effectively while SMEs can cut their Greenhouse Gas emissions and raise energy efficiencies through support received.

Environmental Control Training

KOGAS commissions a professional education service institution to provide environmental management education to all our employees, leading to improved environmental management performance by raising awareness of the values of environmental protection.

Environmental Control Education Curriculums

Course	Trainee	Agency	Contents	Note
GHG Action Plan Writing Session	GHG Managers	KOGAS	GHG Data System Submission	In-house Training
Env-Info System Registration Expert Session	Env-Info System Managers	KEITI	Registering Environmental Information	Commissioned
GHG & Energy Target Management Expert session	GHG Managers	KOGAS	GHG & Energy Target Management Expert Session	In-house Training
EnMS Expert Session	Energy Managers	KEMCO	Energy Management System Introduction Calculating GHG Emission	KEMCO
Regular CDP Official Training	Managers	CDP KOREA	CDP Introduction	Commissioned

Involvement in Local Environmental Activities

Aware of the importance of autonomous practices and contributions in preventing global warming, KOGAS actively engages in local environmental activities with corporations, social partners and local communities.



Gas Science Museum KOGAS runs the Gas Science Museum at its LNG terminal base to promote the environmental benefits and values of LNG for environmental protection. The museum is one of the major cultural attractions in the region, receiving a cumulative total of 1.3 million visitors. About 100,000 visitors come to visit this museum annually, serving as a local cultural space.

ECO School with KOGAS KOGAS operates an educational program, catered to elementary and middle school students, called Eco school. The program is consigned by 3 environmental organizations, including Seongnam Green Consumer Network.



Cultural Heritage Preservation KOGAS inspects the safety of gas facilities, repairs any malfunctioning facilities, and cleans the environments of cultural heritage sites to contribute to the preservation of local heritage and enhance its reputation as a community-friendly corporation.

Beach Cleaning Day We collect garbage and trash on beaches and roadways along the seas near Terminal Divisions to help protect the clean and beautiful environments on Beach Cleaning Day.

▲▲ Joint Event with Seongnam Green Consumer Network
▲ Joint Event with E-Green Network

Efficient Use of Energy

Environmental Management System	36	Green Partnership	40
Environmental Management Performance	37	Efficient Use of Energy	41
Addressing Climate Change	39		



▲ Energy Management System (ISO 50001) Certificate

New and Renewable Energy
Facilities Investment

867 million KRW

Establishing Energy Management System (ISO 50001)

In pursuit of effective use of energy, KOGAS operates a company-wide Climate Change & Energy Saving Committee. Our environmental management entails annual company-wide energy saving targets for each 14 operating sites which is complemented by regular assessment and analysis of Energy Technology Team, the responsible department. The sites with excellent energy saving performance are encouraged further with incentives. 3 terminal divisions (Pyeongtaek, Incheon and Tongyoung) have obtained the energy management system certificate, ISO 50001. We will continue to fulfill our social responsibility and contribute towards global warming prevention by perfecting the integrated energy management system by 2014.

New and Renewable Energy Facilities Installment

KOGAS is adopting low carbon energy facilities as a measure to enhance its energy efficiency. We invested 867 million KRW in installing renewable energy facilities at our 6 district divisions and 1 terminal division in 2012 alone to produce 138.63kW of electricity. We also pursue not only solar power but also wind power for diversified measures to ensure effective environment preservation.

2012 New and Renewable Energy Facilities Installments

Location	Type	Capacity (kW)	Investment (1,000 KRW)	Power Generation (kWh)
Tongyoung Terminal Division	Solar	18	62,945	2,037
Seoul District Division	Solar	0.1	48,000	46
Gyeongin District Division	Solar	48	258,818	23,083
	Wind	3	18,000	2,628
Chungcheong District Division	Solar	3	21,000	339
Jeongnam District Division	Solar	6	38,272	1,358
	Solar + Wind	0.52	11,020	233
Gyeongbuk District	Fuel cell	1	56,000	1,460
	Solar	53.1	317,338	20,034
Gyeongnam District	Solar	6	36,000	8,147

Energy Consumption 2012

In 2012, KOGAS has consumed 13,130TJ of energy, 6,081TJ, directly and 7,049TJ indirectly. This is an 8.25% of increase from that of 2011 which was 12,129TJ and we also consumed 0.359 (TJ/1,000 tons) of energy for each unit of natural gas sales.

Energy Consumption

Category	2010	2011	2012
Natural Gas Sales (Thousand tons)	31,202	33,570	36,547
Energy Emissions (TJ)	Direct Energy	4,562	6,000
	Indirect Energy	5,636	6,129
	Total	10,198	12,129
Energy Emissions per Unit (TJ/Thousand tons)	0.327	0.361	0.359

※ TJ : Terajoule, energy consumption unit (10¹²)

Saving Energy in Commuting

KOGAS procures residual heat from heat producers neighboring its distribution stations to reduce fuel consumption for gas heaters. KOGAS also operates commuter shuttle buses and an alternating driving day program to encourage our associates to reduce energy consumption and carbon emissions caused by commuting and business travel.

Shared Value

03

Topped the Public Enterprise Customer Satisfaction Survey



6 consecutive years

SMEs Products Purchase



439.2 billion KRW

Gas Discounts for Socially Vulnerable Groups



34.9 billion KRW

Contribution Expenditure

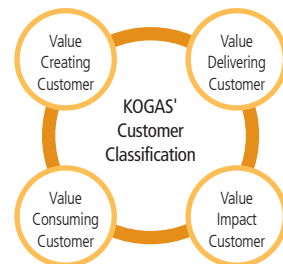


48 billion KRW



With a keen interest in social development, KOGAS has been at the forefront of social contribution, fulfilling our social responsibility as a global energy corporation. We are committed to ensuring both customers' and associates' happiness as our top priority. In particular, we are listening to the voices of shareholders, customers, employees, partners and local communities for balanced growth, bringing forward a better future for all through sharing mindset and heart-felt caring attitude.

Creating Customer Value



Customer Satisfaction Management Strategy

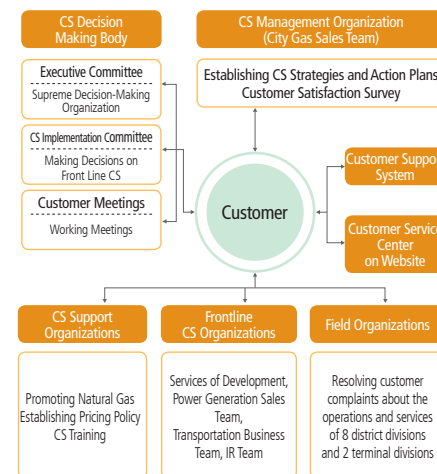
Determined by service value, KOGAS identifies 4 categories for customers - Value Creating (employees, procurement companies), Value Delivering (contractors and partners), Value Consuming (30 city gas companies, natural gas power stations, direct procurement contractors, production/pipeline facility customers, small and institutional investors) and Value Impact (government, local communities, citizens and customers) customers. Also, a means to pursue such goal is the customer satisfaction strategic network, which, based on the analyses of category-based core demands and the VOC (Voice Of Customer), uses customer support system, online support system, BIZ portal and etc. to effectively monitor customer support on a real-time basis.

CS Vision	KOGAS Pursuing Customer Values for More Happiness			
Strategic Orientations	Upgrade CS organization and system	Customer-oriented system and service improvements	Strengthen pre-civil complaint	Improving Expertise in CS
Strategic Missions	<ul style="list-style-type: none"> Strengthen CS field organization Improve online CS support system 	<ul style="list-style-type: none"> Changing natural gas supply contract Improve incentive payment instructions Improve billing and payment options 	<ul style="list-style-type: none"> Increase On-site sessions Run Consumer complaints call center 	<ul style="list-style-type: none"> Customer service best practices contest Increase KOGAS CS School

CS Service Organization KOGAS is establishing CS service networks throughout our organization with the City Gas Sales Team. There are dedicated team for each category of city gas · power generation · direct customers as the center of the overall network. The onsite service team of 8 district divisions and 2 terminal divisions is responsible for customer satisfaction network operation and in the field, customer commissioners are directly involved through CS Service Committee.

Customer Support System KOGAS is strengthening customer management and service systems through various means. The efforts range from monitoring the voices of customers on a real-time basis and improving the statistical and analytic functions over VOCs through promoting customer support system to revamping our web-based customer service center.

Online CS Support System KOGAS is strengthening our bilateral communication through advanced IT-based customer management and service systems which entails VOC real-time monitoring, statistics and analysis. In 2012, we enhanced accessibility by improving the login process of the BIZ portal system while extending the scope of online information provision such as offering necessary information regarding city gas bill calculation. Furthermore, the online website's function varies largely from grant/subsidy application for gas heating/air-conditioning, heat combined power generating system and etc. and the information regarding its process is also available online. We plan to extend this further in 2013, where we will provide a web-zine service to relevant personnel in customer management with a variety of information such as natural gas market trends. We also plan to facilitate real-time service of natural gas information (sales volume, daily/monthly customer category-orientated analysis of supply and revenue) enabled by BIZ portal advancement with online contact network with customers can be established.



▼ BIZ Portal System

Important BIZ Portal Changes

Real-time Natural Gas Sales Information Disclosure	<ul style="list-style-type: none"> City gas companies, power generation companies' volume commitments, sharing daily / monthly supply and sales data
Internet-based Operational Contact Network	<ul style="list-style-type: none"> Customer (City gas companies, power generation companies, relevant organizations) contacts shared, extended online communication with SMS and e-mail functions Sharing necessary documents and templates
Facilitating VOC Management	<ul style="list-style-type: none"> Alarm function when an issue is raised, leading swift responses Operational standard establishment with FAQ

SHARED VALUE

Creating Customer Value	44	Win-win Management	54
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Customer Satisfaction for Public Corporation

Topped for **6** consecutive years

Strengthening Customer Communication

Interactive Communication with Partners KOGAS pursues field explanatory meetings to ensure that customers' needs are heard and solutions are found. In particular, running a call center in 2012 meant that the company was able to actively communicate with the customers regarding city gas heat trading system adoption. We also listen to the voices from our major clients, including city gas suppliers, electric power companies, and direct suppliers, through a wide variety of direct communication channels such as joint workshop with customers, Wednesday Development Conference, Pricing Policy Public Hearing, Customer Meetings, Technical Information Seminar and Day of Field Operations events.

Through such, we were able to build a solid foundation for extension our natural gas supply by effectively communicating and allocating dividend responsibility to both local municipalities of unreached areas of natural gas supply and city gas companies. Also, areas like Jeju Island, where energy is not readily available, a natural gas supply contract has been signed to expand our operation and effectively serve the nation.

KOGAS CS School KOGAS CS School has been popularly received by partners. In particular, targeted at city gas volume control managers, Demand Prediction Training (5.29-31) which handled exchanges of demand estimation data with partners and enhancing accuracy on a shared platform, and CS Manager Training (6.23~26) was a great platform to facilitate CS capacity for the growth of city gas industry. This was complemented by another crucial training course of natural gas measurement training. KOGAS will not cease to extend the scope of CS School education to further strengthen its CS capability.

Advancing Customer-orientated Energy Marketing In order to resolve the problem on regional energy consumers imbalances, we have built new procurement locations to accelerate the natural gas supply on the basis of early-supply needs of municipalities' and residents', deriving from the development of industrial complex and cities. Improving subsidies to enable gas heating and air-conditioning meant that we were able to see 25-60% rise in the available finance and the subsidies for combined heat and industrial purposes comply to with National Energy Efficiency Policy. Gas discounts are also on offer as an extensive welfare system to cater for the socially vulnerable groups.

- ▼ Natural Gas Street Campaign
- ▼ Pricing Policy Public Hearing



Best Practice

Tailored Customer Service

Highest Rating in Customer Satisfaction for Public Corporation Service for Six Consecutive Years



Public-CSI, organized by the Ministry of Planning and Finance, is a typical survey that evaluates customer satisfaction regarding publicity, social happiness, and social contribution with public institutions. This survey is held once a year targeting approximately 170 public institutions. The result of the survey is reflected in assessment of management performance for customer-oriented management and improvement of service quality and is communicated to public through a public announcement. KOGAS, since the research started in 1999, has been selected 9 times as the best institution until 2012 and have been selected as an excellent institution for 6 years in a row. We believe that this is the result of our extended effort to improve customer service in many ways for natural gas quality improvement (e.g. Gas trading and etc.) and energy welfare (e.g. Extending supplies of natural gas at unreached regions, gas discount for the underprivileged and etc.) that is tailored to KOGAS' unique characteristics.

Human Resources Management

Socially Fair Recruitment Increase

137%

Executives and Employees

A total of 3,143 associates were in service as of the end of 2012. The wage for newly employed college graduates amounts to about 244% of the legal minimum wage with no gender gap. The numbers and proportions of female, disabled, and veteran associates are increasing due to the successful operation of socially fair recruitment.

Open Employment Opportunities

KOGAS, actively encouraging the transition of temporary employees to full-time employment, contributes to job creation largely. Also, socially fair recruitment and open employment procedures have facilitated the increasing number of disabled, veterans and high school graduates, as a great source of diversification and competitive advantage. Socially fair recruitment has increased by 137% in a year and such efforts have translated to being selected as 'the most desired employer in Korea' by the KMAC.

Women's Empowerment We currently have 302 female employees, amounting to 9.6% of all employees. With affirmation action system to encourage female recruitment in place, we have seen a substantial increase of the number of female employees for the past 3 years. However, considering the nature of work that with a large number of employees involved in maintenance and repairing and construction, the number of female applicants is not impressive. In the future, we plan to counter this problem by improving working conditions and systems and promote such to attract more application from women.

	Unit	2010	2011	2012
Total Employees	Persons	2,862	2,947	3,143
Employment Type	Full-time	2,830	2,915	3,112
	Temporary	32	32	31
Gender Equality	Female Associates to Full-time Employees	8.1	8.2	9.6
	Female Managers to Full-time Employees	0.03	0.03	0.03
Socially Underprivileged	Disabled Associates to Full-time Employees	2.3	2.4	2.5
	Former Veterans to Full-time Employees	8.84	8.72	8.62
Turnover	Number of turnover	44	35	38

Socially Fair Recruitment Diversification of workforce and socially fair recruitment have been thoroughly carried out at KOGAS as it can be seen from the rising numbers of veterans, disabled and former interns. A wide range of efforts to such commitment has been demonstrated by the rise in employment by 2.4~2.5%. For instance, veterans receive 5~10% additional points at socially fair recruitments and have been selected with Veteran Eligibility Screening Test and blinds are provided with a special location for recruitment. For disabled people, 5% of additional points will be added for them by each area. Also we have designated examination hall only for visually handicapped people. The socially fair recruitment is also present in the internship recruitment which saw the combination of 43% of women, 53% of local talents, 6% of high school graduates, and 6% of veterans.

Competency-orientated Recruitment In order to actively pursue competency-orientated recruitment that upholds the principle of affirmative action and equal opportunity, the unnecessary barriers to employment, such as age, education level and major, have been withdrawn from application requirement and personal background (name, place of origin and universities) is kept private. As a result, KOGAS was able to see that the proportion of local talent joiners soared at 47%.

High School Graduates KOGAS hires high school graduates to expand job opportunities to the socially underprivileged class and promote competence-based corporate cultures. We have gone through system changes to eliminate biases, tailored for high school graduates. For instance, we have waived the language certificate submission during application, which was a problem for high school graduates, and prevented the university graduates' to apply for high school graduate-specific recruitment sessions. Also, we started to accept the applications from those who have not attended or finished military service.

Proportion of Local Talent Joiners in All Employees

47%

SHARED VALUE

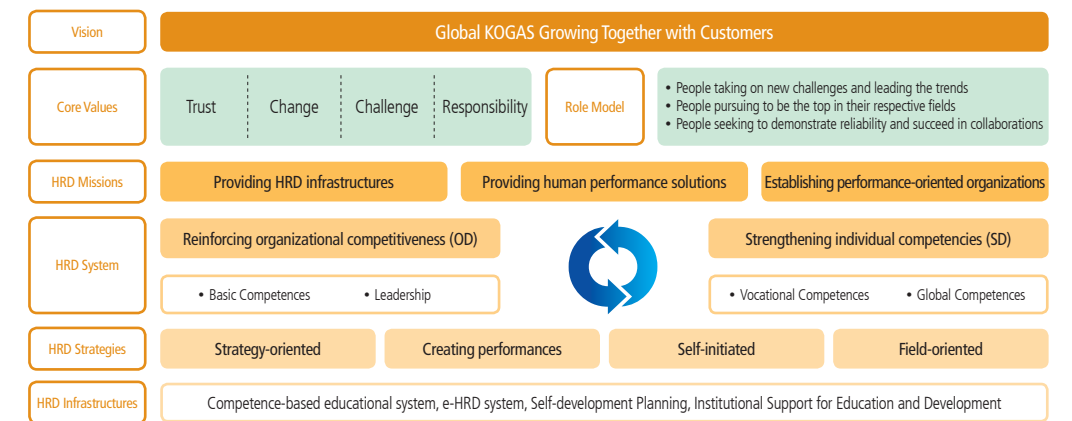
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Duration of Training Per Employee

136 hours

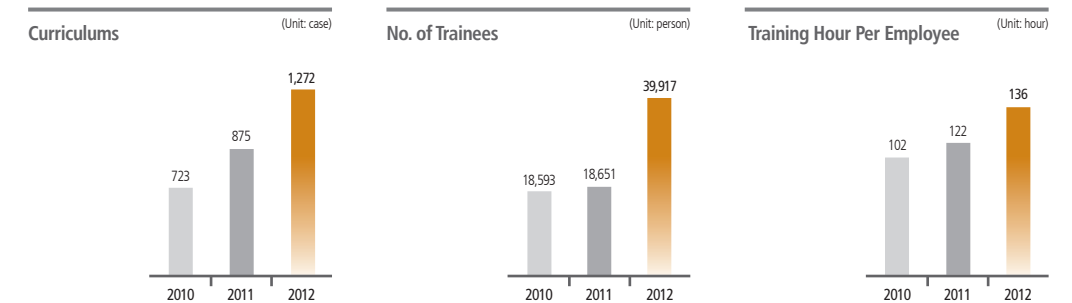
Human Resource Development Infrastructure

Upholding our core value, KOGAS has built ideal employees, who possess a harmonious balance of organizational and personal competences, to build the human resource development infrastructure. In accordance, we are also implementing customized human resource development roadmaps and providing educational programs.



Customized Competence Development on Career Development Planning KOGAS is focusing on nurturing the professional workforce for overseas business core areas (finance, HR, G&G and resource economy), enabled by long and short term overseas commissioned training and overseas field OJT training. By establishing a system where different levels of certification are available, we have built a career development planning guide that provides the necessary experience, education level, requirements and necessary training in demand determined by the pursued areas of expertise. This is complemented by overseas talent pool standard which enables prompt selection of professional talents when required.

Providing Curriculums on Employees' Needs In order to encourage better understanding of training and explain further about the changing training system and curriculum, KOGAS organizes management training workshop for training managers of teams and divisions. Also, various training courses and sessions are built on the basis of employee training demand survey. In 2012, we operated 1,272 courses with 39,917 graduates.



Particularly, the establishment of e-HRD system, an educational portal, opened in March, 2013 to effectively manage training in an effective manner. The portal manages educational history, competency measurement, career development planning, training registration, assessment and educational support in an integrated manner.

SHARED VALUE

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Strengthening Fair Human Resource Management System

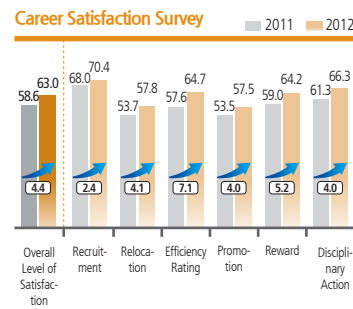
KOGAS' human resource management system entails competency and performance-based foundation with incentives to motivate the employees further. We are leading workforce motivation and competency strengthening through field-centered HR management.



▲ Employee Discussion on HR Management Improvement

Enhancing Fairness in the Promotion System KOGAS heightens fairness in promotion to allow our associates to better accept personnel management decisions. Candidates are examined by multiple evaluators to test their qualifications while organizational and personal performances are assessed at the same time to more clearly identify the better candidates. We have also raised the transparency in evaluation processes by disciplining the candidates involved in unfair behaviors related to promotion, applying strict standards to the nomination and management of evaluators and reinforcing the qualification reviews of auditors.

Providing Curriculums Based on Employees' Needs KOGAS has built a Self-directed Career Development System where employees can identify their weaknesses and compensate such through the support provided for careers development planning and execution. Also, a logical relocation standard has been established and shared, facilitating predictability and the self-directed career development management. This is also complimented by operation of core businesses talent pool for strengthened professionalism where important posts of domestic and overseas businesses are filled through internal vote.



Personnel Management Satisfaction on the Rise for 5 Consecutive Years KOGAS conducts annual personnel management satisfaction surveys of our associates to evaluate our personnel management and operations and identify measures to continuously improve the personnel management system. Acquiring feedback about human resource management and operation and proactive reflection of the raised issues in the system have contributed to the continuous increase in the satisfaction rate.

Harmonious Balance with Work and Family Life

KOGAS supports personal welfare through various family-friendly programs and welfare schemes to lead happier and more productive operation.

Flexible Shifts The flexible shifts scheme is a system where an employee can determine her/his working time determined by personal needs. Therefore, since its establishment, children's commuting, personal development and long-distance commuting have been popular reasons to use the scheme to adjust the schedule accordingly and work flexibly.

Proportion of Parental Leave Used

100%

Return to work and retention rates after parental leave

		2010	2011	2012
Parental leave rates(%)	Male	100	100	100
	Female	100	100	100
Return to work after parental leave(%)	Male	100	100	100
	Female	100	100	83
12 Month retention rate after parental leave(%)	Male	100	100	-
	Female	100	100	-

Family Satisfaction Management KOGAS runs a varied range of activities for family involvement, believing a happy personal and family life can lead to a more productive and excellent performance. The company has been at the forefront of building an organizational culture with high quality of life and excellent performance through various means such as communication between the CEO and expatriate families, employee children's summer camp, voluntary with families, support for various cultural activities, professional speeches and etc.

Labor-Management Relations Satisfaction Survey (Unit : Score)



▼ Joint Labor-Management TFT Meeting
▼ Labor-Management Conference



Reasonable Welfare System

KOGAS has employed a variety of welfare measures to ensure that employees' voices are heard and the problems regarding health management, child bearing, hobby and self-development are supported. We are doing our best to maintain a fine balance between improving quality of life and managerial efficiency with limited resources available.

Post-retirement life security with life planning support	Personal and family quality of life improvement	Facilitating active and compassionate organizational culture
<ul style="list-style-type: none"> Personal New Life Start course (online education, reading, entrepreneurship school, Continuing Education & professional consulting support) Retirement pension plan Employee's association to facilitate communication with junior employees 	<ul style="list-style-type: none"> Childbirth subsidies and selective point system (more than 3 children) Workplace welfare facilities (4 divisions) and maternity vacation (examination, giving birth, partner's labor) Relaxing facilities allocation(selective/rational) (health, culture, relaxing and etc.) welfare system Family sick leave and expatriate spouses leave to prevent family segregation Support for further education for self-development. (e.g. academy fee, language exam application fee and etc.) 	<ul style="list-style-type: none"> Gym, anti-obesity and no smoking programs are in place to ensure healthy workforce Health checkups for the employees with shifts and construction-based work. (obligatory) Support for healthy hobby through social clubs(134 in place at the moment) Joint sports activities for departments Legal and accounting counseling

Coexistent Labor Relations

Labor Relations Promotion Strategy Labor-Management Relations Committee has been built to encourage interactive communication in labor relations. As a joint committee of both parties - employees and the company representative - the committee is at the core of building labor relations management and strategy and identifies detailed execution missions for each 13 sites.

Labor Relations Key Performance The operation of labor-relations committee has resulted in positive outcomes. The committee enabled reasonable control of welfare fund, unattended supply management office, company-wide application of flexible shifts and extension of essential core services requirements. Also, with the expanded performance-based pay scheme, we have established an incentive system with the scheme in mind and we have cooperated to carry out voluntary works for the underprivileged and local communities.

Percentage of Employees Covered By Collective Bargaining Agreements

Category	Unit	2010	2011	2012
Number of Workers Subject to Unionization	Person	2,862	2,947	3,143
Number of Unionized Workers	Person	2,525	2,610	2,701
Proportion of Unionized Workers	%	88.2	88.5	85.9

Minimum Period of Notice for Important Operational Changes KOGAS is obliged to abide by the following rules when notifying discharge. In case of restructuring where layoffs for management purposes occur, the notice should be given 50 days in advance. In case of modifications of incorporation articles, organization and capital, transfers of operating of key assets, restructuring and privatization, this should be notified promptly upon the occurrence of such events. Also, in case of adopting new machineries and technologies and renovation of work process, discussion is required prior to notifying on the occurrence of such events.

Grievances Management Process Labor-Management Conference, with CEO and the head of trade union serving as members, works to resolve inconveniences to employees and protect their rights. The conference also receives suggestions regarding work environment and human rights issues that are handled by the Ombudsman Committee. Associates can file complaints over their rights through KOGAS' website and intranet without any restrictions. We also have counselors to handle sexual harassment for employees at our operating locations. No lawsuit related to human rights issues have been filed in 2012.

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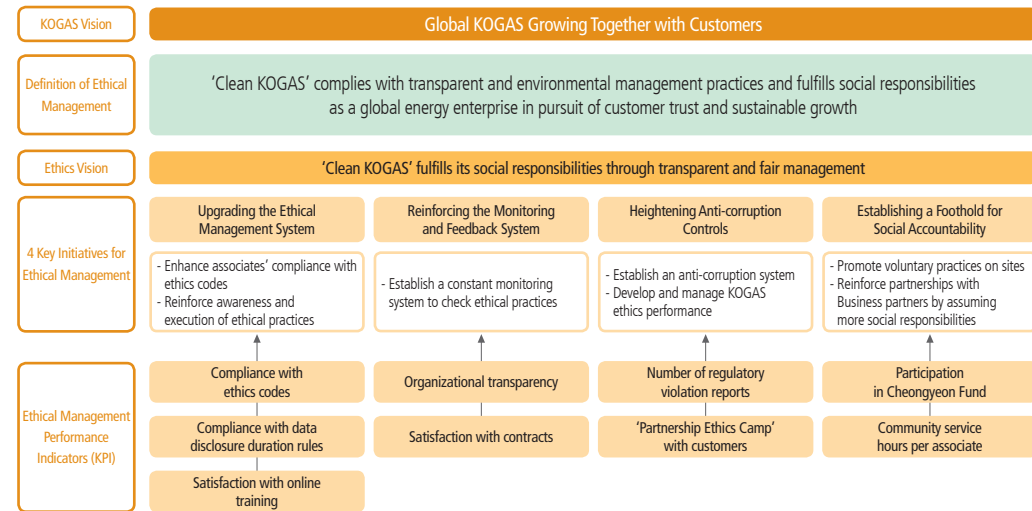
Fair and Transparent Management

Number of Ethical Management Training Graduates

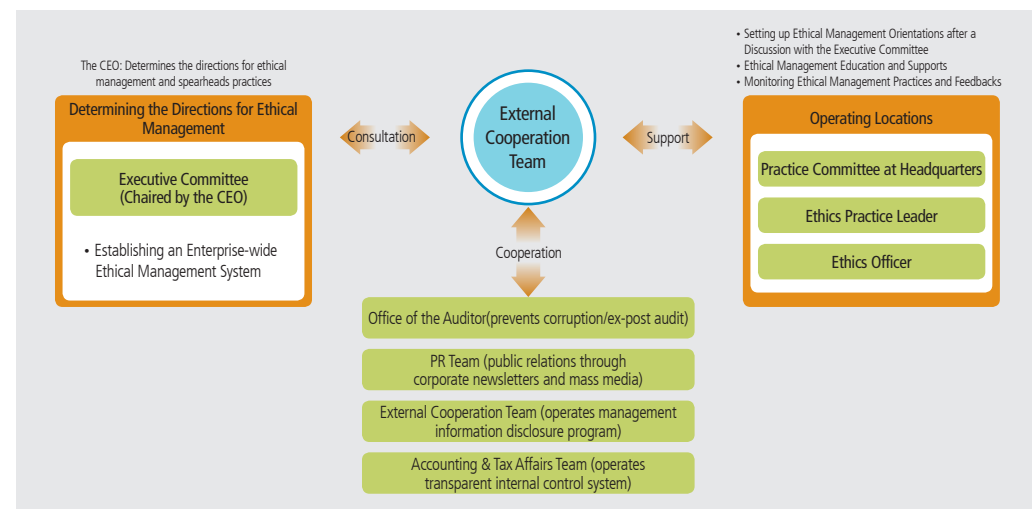
2,777

Transparent Management System

Transparent Management Strategy We, at KOGAS, establish and execute 4 ethical management strategies under our ethical vision of becoming a 'Clean KOGAS', a socially accountable enterprise based on transparent management. We also periodically examine the strategic progress and update our strategic initiatives and reflect feedbacks through KPI(Key Performance Indicator).



Implementing Organization The External Cooperation Team is in charge of the company's ethical management, supervising the establishment and revision of ethics codes and the establishment and operation of our ethical management practice programs. This team also periodically monitors the progress to enhance its executions and ethical standards as well. Based on the close collaborations with the Executive Committee, Office of the Auditor, and field organizations, the team acts as KOGAS' ethical management hub to improve the company's ethical management practices and standards



Progress and Impact Assessment KOGAS upholds the value of human rights and fairness by conducting Integrity survey for all sites under its operation regarding anti-corruption practices and partner relationships, and carry out regular assessments of ethical management. From such, we have been recognized as an exemplified case for our operation by ACRC in 2012.

Strengthening Anti-corruption Practices

Reinforcing Anti-corruption and Governance Innovation Task force KOGAS sets up and operates the Anti-corruption Transparency Committee (Chairman : Standing Auditor) as part of our efforts to prevent corruption and build transparent organizational cultures. Under this committee, the Transparency Action Committee (Chairman : Chief Auditor) and domestic/overseas field subcommittees (Chairman : Field Operating Director) are established to promote ethical management practices.

Category	Contents
International Guideline	<ul style="list-style-type: none"> Overseas anti-corruption law compliance system (October, 2012) Ethical standard and partner risk management to reduce breaching
Budget Transparency Promoting System Change	<ul style="list-style-type: none"> Travel expenses rule change Domestic business trip improvement (2nd grade → all employees) Corporate card rule change Real-time SNS notice (manager)
Fulfilling Social Responsibility	<ul style="list-style-type: none"> Subcontract fee confirmation system established (preventing outstanding or unpaid fee) Integrity ombudsman system strengthened Systematic unpaid fee resolution Complaints of subcontractor's unpaid fee
Anti-corruption Prevention	<ul style="list-style-type: none"> Retiree database establishment (November, 2012) Contact record monitoring for righteousness and transparency (November, 2012) Solicitation registration system (May, 2012) Facilitating institutionalization of anti-solicitation culture
Integrity Pledge	<ul style="list-style-type: none"> Expanding the scope of integrity pledge e.g. interns 112 integrity pledge (March, 2012)
Autonomous system improvement and execution	<ul style="list-style-type: none"> Voluntary system improvement areas identified (56 cases) and executed ACRC selected 7 issues (0 out of 112, in 2011)
Others	<ul style="list-style-type: none"> Obligatory training Public Private Partnership expansion

Ethical Education for Associates KOGAS provides ethical education sessions for all associates every year. Our company aims to educate them about the negative impact of corruption and train them to appropriately address such corruption to better cope with ethical dilemmas and enhance overall ethical standards.

(Unit: person)

Category	2009	2010	2011	2012
KOGAS Ethical Management Education	2,622	2,600	2,711	2,777
Online Ethics (Code of Conduct) Education	2,672	2,680	2,733	2,787
E-Clean Ethical Education	-	2,700	2,777	

Upholding Integrity as Culture KOGAS appreciates and institutionalizes the culture of integrity through external independent irregularity report center, coexisting ethics camp, and integrity pledge of all employees.

Aftermath Management In 2012, there was no case of irregularity report through online irregularity reporting center and bribery. There was one case which was handled with suspension.

(Unit: person)

Category	2009	2010	2011	2012
Corruption Reports	6	15	15	0
Bribery Reports	0	0	1	0
Follow-ups	Dismissal	0	1	0
	Pay Cut	0	0	1
	Others	0	1	0

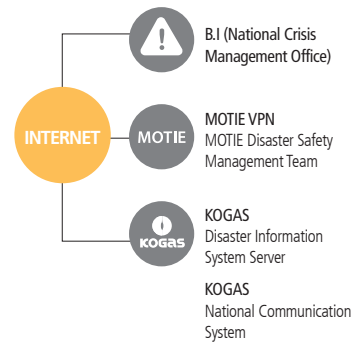
▼ Online Anti-Corruption Reporting Center
▼▼ Integrity Pledge



Safe and Healthy Workplace

KOGAS & MOTIE (Ministry of Trade, Industry & Energy) B,H Network

※ MOTIE : Previously MKE



EHSQ Operation System

KOGAS manages safety, health and the environment on an integrated basis through our EHSQ (Environment, Healthy, Safety & Quality) System to minimize accidents and enhance productivity since 1997. The system has been certified by ISO 9001, ISO 14001 and OHSAS 18001, manifesting its global standard. KOGAS has established a training roadmap to nurture the adequate professionals for the EHSQ Management System with specialized courses. Our company's efforts do not cease here but extends to the development of safety guidelines, building an organizational culture that is centered on safety.



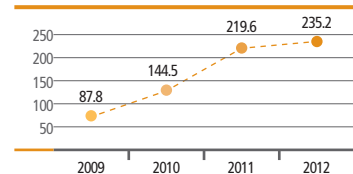
Occupational Health Management System KOGAS started operating a newly established occupational health management system in September 2011. This system covers the safety control area - including personal protection gear, material safety data sheets (MSDS), and health exposure assessments - and the health management area - including the management and reservation of medical examinations, surveys, and management of patients. We aim to maintain comfortable work environments and ensure compliance with regulations and restrictions such as the Occupational Safety and Health Act by identifying safety and health risks and then controlling and removing these risks by using this system.

Safety and Health Expenditures The EHSQ expenditure is raised every year as the preventative means to counter natural disaster, fire and explosion-induced human and material damages as well as minimization and restoration. We expect to see the continued trend of increasing expenditure in the coming years.

2012 EHSQ Management Expenditure

235.2 billion KRW

Annual EHSQ Management Expenditure (Unit: billion KRW)



EHSQ Operation System Expenditure (Unit: 100 million KRW)

Category	2009	2010	2011	2012	Changes
Sales	193,918	226,113	282,548	345,167	-
Investment Expense (Health and Safety)	878	1,445	2,196	2,352	156
Expense to Revenue (%) (Health and Safety)	0.45	0.64	0.77	0.68	△ 0.09

Product and Health Safety Promotional Activities

Phase	Major Activities
Manufacturing and Production	Conduct safety, health and environmental safety assessments for the installation and modification of gas facilities, subsidiary equipment, construction, and new instruments to systematically identify potential risks and establish countermeasures. Perform a job safety analysis (JSA) and hold a tool box meeting (TBM) before commencing works on site to identify potential risks in advance.
Storage, Transport, and Supply	Perform safety checks on pipelines older than 15 years at least every five years. Conduct safety assessments on the storage tanks at terminals every five years.
Usage and Service	Attach the material safety datasheets (MSDS) for materials in use at operating locations to prepare for problems like leakages.
Disposal, Reuse, or Recycling	Review the EHSQ management plans submitted by waste management companies, and inspect the service providers to check whether they legally and properly manage wastes semiannually or more frequently.

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2012 Safety Culture Level

5.75 Level

Accident-free Work Environments

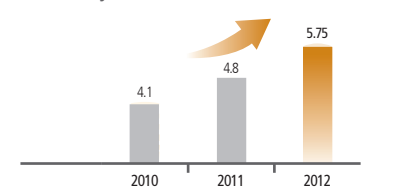
Safety Culture Institutionalization Given the commitment of our CEO to promote safety practices throughout our company, KOGAS proactively brings attention to safety practices through the joint efforts between labor and management. In 2012, we held Joint labor-management safety practice event where our efforts to prevent accidents in the field had been communicated and the establishment of the company-wide safety level strengthening mid-/long-term roadmap contributed towards heightening our employees' safety awareness.

According to DNV, a commissioned third party, assessment on safety culture at KOGAS, it indicated that the KOGAS' institutionalization of safety culture has improved compared to the year before. (Level 5.75 in 2012).

* DNV Level of Safety Culture Result :

2010(Level 4.1) → 2011(Level 4.8) → 2012(Level 5.75)

DNV Safety Culture Level (Unit: Level)



Integrated Crisis Management System KOGAS has a company-wide crisis management system, entailing disaster and safety system, cooperation network with related institutions, case-by-case contingency manuals, regular emergency drills, to promptly handle disasters, and maintain a fast and systematic crisis control program. In order to handle the national electricity crisis, we operated Practical Response Manual for power cut and 'Safe Korea Exercise' and run. In the same line with the measures, we have institutionalized Gas Fire Training Center at Pyongtaek Terminal Division as a preemptive and effective management of potential gas fire, which trains around 500-700 trainees with a total of around 5,000 graduates so far.

Preemptive Risk Control KOGAS' effort to preemptively handle the potential risks in the field operation varies widely. In particular, we thoroughly assess risk factors prior to any facility changes such as construction and further installation via safety assessment which then is followed up with mitigating measures. We have institutionalized the risk factor inventory system, built upon the foundation of the 10 years of occupational safety assessment data, enabling company-wide sharing and prioritization of the core issues.

Onsite Safety Management Accident and disaster free work environment bears a crucial value to KOGAS which has led its efforts for safety management practices for field operations. Our company holds the enterprise-wide 'Safety Inspection Day' program, thorough management of field operations pursuant to approved procedures, near-miss case identification and reward, safety assessment of crucial facilities every 5 years and etc. to eliminate potential risks in advance and proactively carry out safety practices. Also, we publish safety education casebook for both domestic and overseas as well as ordinary accident cases to build an effective crisis management system such as embodying safety management standard for overseas business sites.

Safety Awareness Events Reflecting upon the enterprise's commitment towards safety, KOGAS has held company-wide Joint labor-management safety practices rally on 16th of November, 2012 to form pragmatic safety culture. The field offices (Seoul, Gyeongbuk District Division and Incheon Terminal Divisions) maintained the no accident & no disaster record for 15 years, since 1995, and which has been celebrated by 3 events for continued maintenance.

Industrial Safety & Health Committee KOGAS has set up the Industrial Safety & Health Committee co-chaired by the representatives of labor and management to discuss and determine the major safety and health agenda as part of our efforts to ensure disaster-free work environments. Each committee has the same number of members, representing employees and employers equally. They hold meetings at least once a quarter at the company's 12 district/terminal divisions.

- ▼ Joint Labor-Management Safety Practices Rally
- ▼▼ Gas Fire Training Center
- ▼▼▼ Management's On-site Safety Inspections



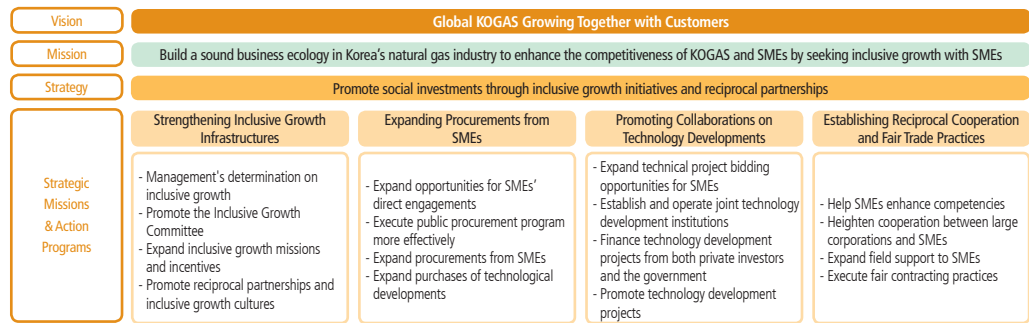
Win-win Management

Number of Inclusive Growth and Reciprocal Partnership Committee

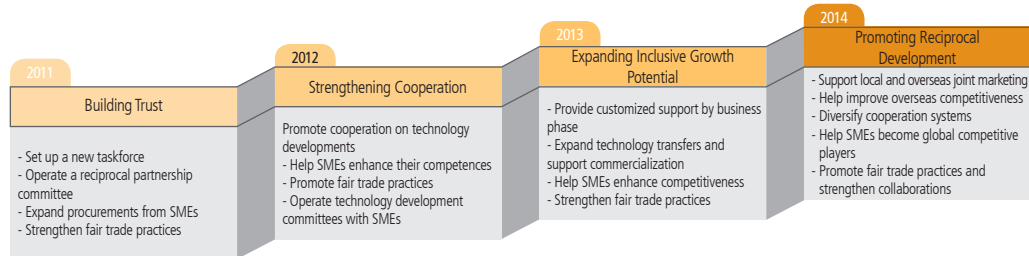
43 companies

Inclusive Growth Infrastructure

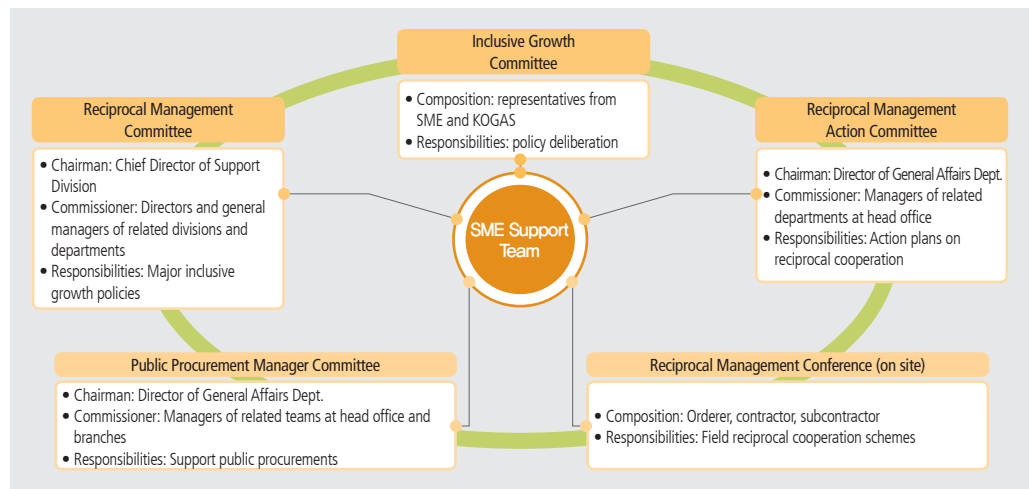
Inclusive Growth Strategy KOGAS established 4 strategic missions of strengthening inclusive growth infrastructures, expanding procurements from SMEs, promoting collaboration over technology developments, and building fair trade practices, as well as 16 action programs to ensure inclusive growth and reciprocal partnerships with SMEs. In particular, the action programs constitute the 'KOGAS Inclusive Growth Execution Plan' which reflects opinions offered from internal and external associates and partners on our pursuant path.



Inclusive Growth Mid-/Long-term Road Map We have established a visionary roadmap, necessary to systematic planning of SME's competitiveness strengthening and growth beyond mere support by facilitating technology development.



Implementing Organization In cooperation with 43 companies, KOGAS has set up the Inclusive Growth and Reciprocal Partnership which ensures that their voices are heard and visionary discussions regarding inclusive growth are held. Such is also dealt by Reciprocal Management Conference, Reciprocal Management Action Committee and Public Procurement Management Committee which assist the embodiment of inclusive growth culture in an integrated manner, enabling horizontal communication among partners.



▼ SMEs Advisory and Training Support Agreement Ceremony
 ▼▼ Inclusive Growth and Reciprocal Partnership Committee



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SMEs Product Purchase

439.2 billion KRW

Heightening the SMEs' Competitiveness

R&D Cooperation with SMEs KOGAS has been a dedicated supporter of inclusive growth and such commitment is demonstrated by various support schemes for technology development for those who develop natural gas equipments and core parts and encourage localization of core technology. We have set 10 tasks in technology development project and once completed successfully, we expect to see a substantial change for the SMEs' operation with increased sales revenue and competencies like self-sustainability, entering new domestic and overseas market.

Core Technology Development Action Programs

Support Area	Technology Development Support (Within 75% per project, max. 0.5 billion KRW), Priority Purchasing If Completed Successfully			
Major Performance	SMEs	Development Task (Total Cost)		Period
	DNGV	GHP Gas Engine (2.6L)	0.6 Billion KRW	12.4 ~13.12
	Samgong	Pier berthing / Mooring equipment management system	0.59 Billion KRW	12.4 ~13.1
	Kangwon NTS	Development of high-performance seawater heater	0.93 Billion KRW	12.5 ~13.3
	Shinwoo FA	Natural gas heat measurement device	0.67 Billion KRW	12.4 ~14.3
	Sungrim Industrial Co.	Development of combined method and equipment for pipeline construction	1 Billion KRW	12.4 ~14.3

Government-funded Public-private Co-invested Technology Development Action Programs

Support Area	Raising Cooperation Fund with Small and Medium business Administration (5 Billion KRW) and Technology Development Support (Within 75% per project, max. 1 billion KRW)			
Major Performance	SMEs	Development Task (Total Cost)		Period
	Youngook Electronics	LNG Storage tank low heat observation camera	1 Billion KRW	11.12 ~13.11
	Correl Technology	Electric remote monitoring and control system	0.39 Billion KRW	12.6 ~14.5
	WK Electech	Development of the Arc detector for the power distribution system	0.27 Billion KRW	12.6 ~13.11
	Ground	Direct current blocking device	0.14 Billion KRW	12.9 ~13.8
	Beeryong Electronics	Remote supervisory system for the outer security equipment	0.2 Billion KRW	12.12 ~ 13.11

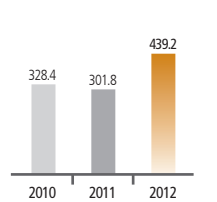
▼ Management Doctor Scheme
 ▼▼ SMEs Occupational Training
 ▼▼▼ Public Procurement System Workshop



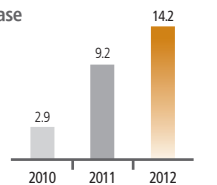
Expanding Procurement from SMEs and Market Support

In pursuit to expanding procurement volume from SMEs, KOGAS launched 'Main Contractor Joint Subcontracting Program' and 'Order Splitting Order for SMEs' Competition Promotion' which led to the purchase worth of approximately 439.2 billion KRW, a 130 billion KRW increase from 2011 (301.8 billion KRW). We also managed to sign 29 private contracts at purchase fairs. Revitalization of local economy has also been a matter of consideration for KOGAS and this has translated into hiring local SMEs for 24% (approximately 16.5 billion KRW) of the construction in Gyeonggi-do's extra-high voltage gas piping construction. Also, Samcheok Terminal Division actively encourages SMEs' participation by splitting and allocating the project orders within SMEs' capacity, which amounted to 72% of the project, for the grassroots local economy revitalization.

SMEs Product Purchase (Unit: billion KRW)



SMEs' Technological Product Purchase (Unit: billion KRW)



Support for SMEs Self-Sustainability and Vitalizing Inclusive Growth Culture

KOGAS believes that heightening SMEs competitiveness necessarily involves strengthening of capacity, finance and HR and has provided various channels of communication to vitalize international and external inclusive growth culture. Particularly, there are some educational supports, such as natural gas facility field technological training and KOGAS occupational training program, an offer to SMEs' employees to enhance their competencies. The liquidity problem, one of the major issues for the SMEs, has been handled by advance payment and collective purchase.

Creating Customer Value	44	Win-win Management	54
Human Resources Management	46	Social Contribution	57
Fair and Transparent Management	50		
Safe and Healthy Workplace	52		

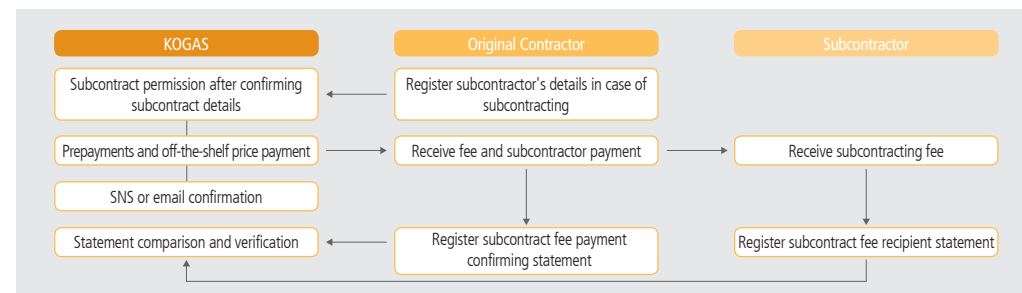
Social Contribution

Transparent and Fair Trade

Fair Trading Relationships KOGAS has formed the 'Inclusive growth and Fair Trade Pacts' and we ensure full compliance with anti-trust and fair trade regulations. We will make further efforts to promote fair trade practices and raise the awareness of inclusive growth as a public enterprise.

Fair Profit Allocation In promoting the improvement of working environment and leading fair profit allocation with the SMEs, we have constituted a computerized system for pragmatic execution, paving the way towards actualizing a fair society with fair division of profit with the employees in construction and physically demanding fields.

Establishing Subcontracting Payment Verification System KOGAS has set up Subcontracting Payment Verification System to fight against illegal subcontracting and to assist the embodiment of fair trade culture and fair subcontracting market. We have simplified the administrative work to minimal level to ensure that the practices are easily conducted.



Received President Prize from the National Sharing Award



Social Contribution Strategy

In order to institutionalize customer-orientated management through global-standard CSR activities, KOGAS is in pursuit of developing a representative brand of KOGAS, promoting sharing culture and establishing the foundation for social trust as our strategies.



Social Contribution Brand, Onnuri

We at KOGAS have developed our own social contribution initiative brand, 'Onnuri', to establish a social contribution model customized for public energy enterprises. 'Onnuri' is a combination of 'On', which means warmth, and 'Nuri', which means the world. This term carries the meaning of 'Making the entire world warm and peaceful'. We are currently running three key initiatives - the Onnuri Love Project, Onnuri Hope Project, and Onnuri Harmony Project.

Onnuri Love Project KOGAS carries out thermal efficiency enhancement projects and offers gas utility discounts to help the low income class improve their quality of life and gain more energy sufficiency

- Renovate the heating systems of low income households and welfare facilities (floor heating, insulation, wall, window replacement)
- Improve the environments of local childcare centers around operating locations (facility improvement)
- Install and support city gas pipelines to low income households and welfare facilities (New in 2012)

Onnuri Hope Project KOGAS contributes to a better future and better public welfare through its 'Onnuri Hope Project' in a variety of ways.

- Medical: Execute 'Onnuri R-Bank Pact', providing rehabilitative assistive devices to disabled children and teenagers suffering from brain lesions (36 patients, 200 million KRW)
- Scholarship: Provide scholarships to 100 low income high school students and 43 university students around operating locations (total of 270 million KRW)
- Cultural Heritage Preservation: Inspect safety and clean the environment (semiannually / 29 heritages nationwide)
- Blue sky: Has been conducting environmentally responsible programs as a movement to give clean environment to our next generations (approximately 100 million KRW)
- Traditional Market Sponsorship: Each operating location forms a partnership with nearby traditional markets and holds a Traditional Market Day Event (monthly), Onnuri Coupon Purchases: 826 million KRW
- Government Support: Running Saturday Schools due to 5-days school schedule (Taekwondo and craft classes)

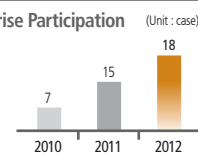
Onnuri Harmony Project KOGAS runs the 'Local Community Relations' projects to build reliable relations with local communities and expand customized support. We also push for 'International Community Relations' projects to help successfully carry out overseas projects and fulfill our responsibilities as a global corporate citizen.

- Local Community Relations
 - Rural Town Sponsorship (1 location, 1 village) : Each 13 operating location provides customized support to a village under the program
 - Hope Town Sponsorship (1 location, 1 hope village) : Provides heaters to low income households to Dongdaemun jjobbangchon
 - Love Embracement: Supports 13 local childcare centers across the country in partnership with the subsidiaries of the Ministry of Trade, Industry & Energy (facility renovation, cultural programs, educational tools and materials, etc.)
- International Community Relations
 - Global Fellowship (Scholarships to students from countries in which KOGAS runs resource development projects)

- ▼ Onnuri Thermal Efficiency Enhancement Project
- ▼ Onnuri Enhancement Project Voluntary Activity



Social Enterprise Participation



Support for Social and Women's Enterprises

Leading energy industry with excellent social contribution projects like Onnuri heat efficiency improvement project, we have invested 1.33 billion KRW for 18 enterprises in 2012 to support and facilitate their standing in the markets. In pursuit to lead inclusive growth and fair competition market with women's enterprises, KOGAS has changed the qualification standard to give additional points when the enterprises participate to offer equal opportunity.

Purchase from Women's Enterprises

12.6 billion KRW

Social and Women's Enterprises Product Purchase

Category	2011	2012	Note
Social Enterprise	495	548	10.7% ↑
Women's Enterprise	1,871	12,576	572% ↑

Traditional Market Sponsorship

KOGAS is also pursuing government's efforts to revitalize traditional and domestic markets. To transform Korea with income equality, traditional and domestic markets have formed partnerships with KOGAS and led continued interactive communication to create fair competition and inclusive growth with a wealth of activities.

KOGAS' Partnership with Traditional Markets





Promoting KOGAS' Sharing Culture

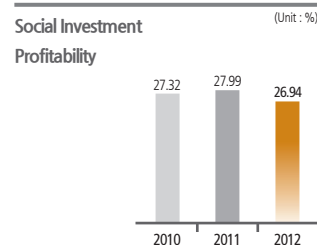
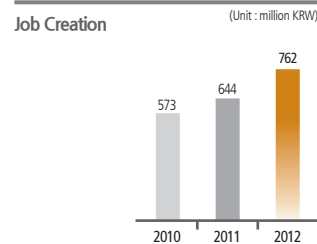
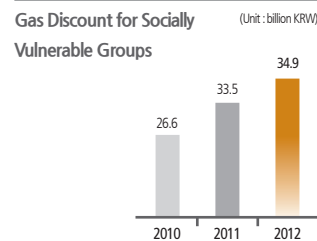
KOGAS has set up a customized social contribution system to facilitate internal spread of sharing culture movement. Through Volunteer 5up Campaign, our social contribution mileage is increasing by 5% per employee every year. In order to actively carry out the movement, our company has prepared matching grants, Onnuri volunteer team, employee involvement programs, 'Social Contribution Day' as main activities which have resulted to receiving the President's Award from Korea Sharing Awards.

48 Billion KRW Investment in Social Contribution Expenditure KOGAS' social contribution expenditure of 48 billion KRW, ratio to pre-tax profit, 9.3%, is substantially higher than FKI (Federation of Korean Industries) average of 3.2% or Japanese average of 2.73% (2011).

2012 Pre-Tax Profit	518,526,989,540 KRW
2012 KOGAS Social Contribution Expenditure	48,070,000,000 KRW

Social Contribution Expenditure

48 billion KRW



2.6 Billion KRW from the SROI Through heat efficiency improvement project, we saw SROI of approximately 2.6 billion KRW leading to positive outcomes of recruitment of the underprivileged, retrenchment of energy.

34.9 Billion KRW Gas Discount for the Underprivileged KOGAS carries out thermal efficiency enhancement projects and offers gas utility discounts to help the underprivileged. 500,000 basic livelihood security benefit households receive 15% discount on their gas bills and 300,000 next higher level households receive 5% discount, amounting to 31.7 billion KRW in total. In 2012, we supported 18,000 social welfare institutions by granting 3.2 billion KRW worth of gas bill discount.

Best Practice

Mozambique Educational Environment Improvement Project

Cooperating with Korean Food for the Hungry International, KOGAS signed the 'Mozambique Educational Environment Improvement Project'. We have also built, with 210 million KRW of investment, a new school near the capital city to offer good education. Meaning abundant life, Vida Abundante is the name of the school with 5 classrooms, 2 teachers' room and a toilet. KOGAS has gone further to improve the quality of life for the children by offering 60 million KRW for school food.

Medical Support Business in Developing Countries

At KOGAS, the scope of welfare system encompasses local communities in our foreign locations. Considering the unfortunate conditions of poor medical infrastructure and economic reasons, KOGAS provided medical support for children from the overseas with free operation. We invited 10 Mongolian and Cambodian children to be treated and supported 2 heart surgeries for 2 Iraqi children in cooperation with Inje University Seoul Paik Hospital and Bundang Seoul National University Hospital respectively. KOGAS will be leading such international welfare system to ensure that not only the children can live a healthy life but also a life where their hopes can flourish.



Onnuri

A combination of 'On', which means warmth, and 'Nuri', which means the world. This term carries the meaning of 'Making the entire world warm and peaceful.'



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History & Organization Chart

- 2010~**
 - 2012. 11 Ranked excellent among public corporations in the customer satisfaction survey for sixth consecutive years (Ministry of Strategy and Finance)
 - 2012. 9 Ranked No.1 in Dow Jones Sustainability Indexes Korea (DJSI KOREA) in the gas sector for fourth consecutive years
 - 2012. 3 Nominated as Korea's Most Admired Energy Company for 5 consecutive years
 - 2011. 3 Ranked 4th in the World's Most Admired Energy Company category by Fortune
 - 2010. 10 Selected as an operator of the Akkas, Mansuriya Gas Project in Iraq
 - 2010. 3 Ranked 6th in the World's Most Admired Energy Company category by Fortune
 - 2010. 1 Landed development and production rights in the oil and gas fields in Zubair and Badra, Iraq
- 2000~**
 - 2009. 12 Selected as a target organization for public enterprise self-management
 - 2009. 7 Extending supply to unreached areas and pipeline network construction
 - 2008. 9 KOGAS-Gazprom Natural Supply MOU signed
 - 2008. 7 Confirmation of natural gas pipeline enlargement
 - 2007. 7 Declared Vision 2017 : "Global KOGAS, Growing Together with Customers"
 - 2007. 6 Daegu~Tongyoung major pipeline construction completed
 - 2004. 1 Natural gas demand 10 million households reached
 - 2002. 11 Gangwon area natural gas supply commenced (Nationwide natural gas supply infrastructure established)
 - 2002. 10 Tongyoung Terminal Division construction completed
 - 2000. 6 Natural gas bus operation commenced
- 1990~**
 - 1999. 12 Listed on the Korea Stock Exchange, KORAS founded
 - 1999. 10 Natural gas supply commenced in West Sea area
 - 1997. 10 Incheon Terminal Division completed
 - 1997. 1 KOLNG founded
 - 1996. 12 Natural gas supply commenced in Busan area
 - 1996. 3 Announced a second foundation of KOGAS
 - 1995. 11-12 Natural gas supply commenced in Youngnam and Honam Area
 - 1994. 6 Placed a national flag carrier for LNG transport in service
 - 1993. 7 Commencement of city gas supply to the mid region (Daejeon, Cheonan and Chungju)
 - 1993. 5 Established Korea Gas Maintenance & Engineering Co., LTD.
- 1980~**
 - 1987. 4 Pyeongtaek Terminal Division and procurement facilities construction completed
 - 1987. 2 Commenced city gas supply to Seoul metropolitan area
 - 1986. 11 Commenced terminal and distribution facilities at Pyeongtaek
 - 1986. 10 First national supply of LNG
 - 1983. 8 Korea Gas Technology Corporation founded

Organization Chart



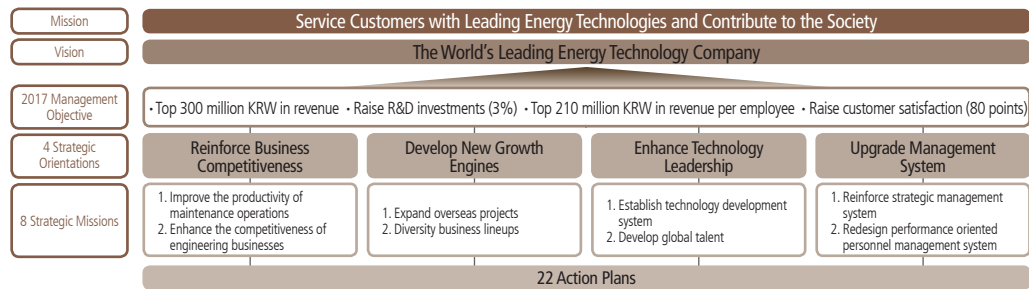
Affiliates & Subsidiaries

Affiliates & Subsidiaries

Country	Company	Business	Establishment	Ownership (%)
Korea	Korea Gas Technology Corporation	Maintenance & Engineering	1993	100
	KOGAS Iraq B.V.	Development & Production of Oil and Gas	2009	100
Iraq	KOGAS Badra B.V.		2010	100
	KOGAS Akkas B.V.		2010	100
	KOGAS Mansuriya B.V.		2010	100
Overseas	Australia KOGAS Australia Pty Ltd.	Exploration & Development - Liquefaction	2008	100
	Canada KOGAS Canada Ltd.	Development & Production of Oil and Gas	2010	100
	Mexico KOGAMEX Investment Manzanillo B.V.	Construction & Operation of LNG Terminal	2009	100
	Oman KOMAN ENERGY LNG	Trading	2008	50
	Russia KOGAS Vostok LLC	Gas Exploration & Inspection	2009	100

KOGAS-Tech Profile and Performance

Category	Description
Company	Korea Gas Technology Corporation
Establishment	May 27, 1993
Head Office	1227 Daedeokdaero, Yuseong-gu, Daejeon, Korea
Businesses	Inspection and maintenance of gas facilities
	Renovation and repairs of gas facilities and related businesses
	Safety inspections and maintenance of gas pipe networks
	Plant engineering services and plant facility maintenance
Employees	1,090 (As of Dec. 31, 2012)
Investment	Capital: KRW 10.6 billion
	KOGAS Ownership: 100%



Category	Unit	2010	2011	2012
Finance	Sales	100 million KRW	1,467	1,605
	Net Profit	100 million KRW	80	66
	Current Ratio	%	180.4	170.6
Management	Debt Ratio	%	55.2	58.7
	Revenue per Employee	1 million KRW	147.1	153.8
	Value Added per Employee	1 million KRW	83.1	92.8
Quality of Maintenance	Labor Cost per Employee	1 million KRW	62.7	76.3
	Suspension of Gas Supply	Case	0	0
	Piping Damages	Case	0	0
Education & Training	Facility Repairs	Case	3,104	2,519
	Investment in Education & Training	1 million KRW	1,713	2,068
	Investment/Revenue	%	1.17	1.29
Growth Potential	Overseas Sales	1 million KRW	10,448	12,262
	R&D Investment	1 million KRW	436	444
	R&D/Revenue	%	0.3	0.3
Credit Rating	Korea Investors Service		P-AA-	P-AA-
	Korea Ratings		P-AA-	P-AA-
	Korea Enterprise Data		AA-	AA-

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Assurance Statement

Related to Korea Gas Corporation (KOGAS)'s Sustainability Report 2012, for the calendar year ending 31st December 2012

Terms of Engagement

This Assurance Statement has been prepared for Korea Gas Corporation (KOGAS). Lloyd's Register Quality Assurance Ltd. (LRQA) was commissioned by KOGAS to assure its Sustainability Report 2012 for the calendar year ending 31st December 2012 ("the Report"). The Report relates to the sustainability performance data and information for KOGAS's activities in Korea. KOGAS's overseas branches and subsidiaries were not covered by this Report. KOGAS's activities in Korea are their headquarters, twelve domestic business locations and KOGAS's R&D Centre. An excerpt from KOGAS-Tech's audited annual financial report has also been included; it is a summary of the business performance of KOGAS's only domestic subsidiary, Korea Gas Technology Corporation (KOGAS-Tech).

Management Responsibility

KOGAS's management was responsible for preparing the Report and for maintaining effective internal controls over the data and information disclosed. LRQA's responsibility was to carry out an assurance engagement on the Report in accordance with our contract with KOGAS. Ultimately, the Report has been approved by, and remains the responsibility of KOGAS.

LRQA's Approach

- Our verification has been conducted against:**
- AA1000 Assurance Standard 2008 (AA1000 AS), where the scope was a Type II engagement.
 - Global Reporting Initiative Sustainability Reporting Guidelines (GRI G3.1, 2011) and GRI's oil and gas sector supplement.

- The objectives of the assurance engagement were to:**
- Review adherence to the AA1000 AS Accountability Principles of Inclusivity, Materiality and Responsiveness and evaluate the reliability of specified sustainability performance data and information.
 - Confirm that the Report meets the requirements of GRI G3.1's application level A and GRI's oil and gas sector supplement.
 - Validate KOGAS's self-declaration for GRI's application level A+.

- To form our conclusions the assurance was undertaken as a sampling exercise and covered the following activities:**
- Reviewing the stakeholder engagement process and related information.
 - Benchmarking KOGAS's material issues against our own independent analysis of stakeholder issues by reviewing other sustainability reports written by KOGAS's peers in comparable industries.
 - Understanding how KOGAS determine, respond and report on their material issues.
 - Interviewing management of KOGAS to understand KOGAS's reporting processes and use of sustainability performance data within their business decision-making processes.
 - Interviewing key personnel to understand processes of KOGAS for setting performance indicators and for monitoring progress made during the reporting period.
 - Verifying KOGAS's data and information management processes and reviewing supporting evidence made available by KOGAS at their head office Korea in 171, Dolmaro, Bundang-gu, Seongnam-si, Gyeonggi-do, 463-754, Korea in accordance with our contract for the verification of data and information disclosed in the Report.
 - Note 1: No source data was sampled for its accuracy and completeness.
 - Note 2: Economic performance data was taken direct from the audited financial accounts.
 - Checking that the GRI index allows stakeholders to access sustainability performance indicators.

Level of Assurance and Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a moderate level of assurance and at the materiality of the 'professional judgement of the Verifier'.

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LRQA's Opinion

Based on LRQA's approach nothing has come to our attention that would cause us to believe that the Report has not been produced based on AA1000 AS's Principles. It should be noted that for the Principle of:

- **Inclusivity** - KOGAS has processes in place for identifying and engaging with its stakeholders across all of its activities and we are not aware of any key stakeholder groups that have been excluded. KOGAS also demonstrated that they have incorporated stakeholder concerns into their management approach and decision-making processes in order to develop a structured approach and response to sustainability issues. KOGAS emphasized the importance of the stakeholder engagement in the Report through addressing the stakeholder interviews.
- **Materiality** - KOGAS has a process in place for identifying and evaluating material issues. The Report provides a balanced reflection of KOGAS's material issues and we are not aware of any material issues that have been excluded.
- **Responsiveness** - KOGAS has processes in place to respond to employees, subcontractors, suppliers, customers, shareholders and investors, government authorities, local communities. KOGAS has demonstrated how they responded to these stakeholders' needs and concerns.

It is also our opinion that nothing has come to our attention that would cause us to believe that the specified performance data and information is not reliable.

Based on LRQA's approach nothing has come to our attention that would cause us to believe that the Report does not meet GRI's application level A+ or GRI's oil and gas sector supplement as we found nothing that would cause us to contradict this conclusion.

LRQA's Recommendations

KOGAS should consider:

- Establishing sustainability targets and monitor progress against them.
- Including overseas branches and subsidiaries in future Reports.

Dated: 24th July 2013

Hee-Jeong Yim LRQA Lead Verifier

On behalf of Lloyd's Register Quality Assurance
17th Floor, Sinsong Building, 67 Yeouinaru-ro, Yeongdeungpo-gu, Seoul, Korea

LRQA Reference: SEO6018049



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The English version of this statement is the only valid version. Lloyd's Register Group Limited assumes no responsibility for versions translated into other languages.

GRI G3.1 / ISO 26000 Index

General

• Complete ▶ Partial ○ Non-disclosure

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
The principle of stakeholder inclusion					
		6.8.3	Community involvement	●	
Boundary Protocol					
		6.6.6	Promoting social responsibility in the value chain	●	
Vision and Strategy					
1.1	CEO statement		Organizational governance	●	2-3
1.2	Risks and opportunities			●	8-11, 16-17
Organizational Profile					
2.1	Name of organization		Organizational governance	●	8
2.2	Primary brands and products			●	10-11
2.3	Operational structure	6.2		●	8, 61-62
2.4	Location of head office			●	8
2.5	Country where the organization operates			●	24
2.6	Nature of ownership and legal form			●	12-13
2.7	Markets served			●	8-9, 24-27
2.8	Size of organization			●	8-9, 32-33
2.9	Significant changes during the reporting period regarding size, structure, or ownership			●	Unchanged
2.10	Awards received			●	72
Report Scope					
3.1	Reporting period			●	About this report
3.2	Date of most recent previous report			●	About this report
3.3	Reporting cycle			●	About this report
3.4	Contact point for questions regarding the report or its contents			●	About this report
3.5	Process for defining report content			●	18-20
3.6	Boundary of the report			●	About this report
3.7	Limitations on the scope or boundary of the report			●	About this report
3.8	Basis for reporting that can significantly affect comparability			●	About this report
3.9	Data measurement techniques and the bases of calculations			○	Omitted techniques and bases on some data
3.10	Re-statements of information provided in earlier reports			●	About this report
3.11	Significant changes in the scope, boundary, or measurement methods			●	Unchanged
3.12	GRI Content Index			●	65-70
3.13	Policy and current practice with regard to seeking external assurance	7.5.3	Investigation	●	63-64
Governance					
4.1	Governance structure of the organization	6.2		●	12-13
4.2	Indication of whether the Chair of the Board of Directors is also the CEO	6.2		●	12-13
4.3	Structure of Board of Directors	6.2		●	12-13
4.4	Mechanisms for shareholders and employees to provide recommendations to the Board of Directors	6.2		●	12-13
4.5	Linkage between compensation for members of the Board of Directors and senior managers, and the organization's performance	6.2		●	12-13
4.6	Processes in place for the Board of Directors to ensure conflicts of interest are avoided	6.2		●	12-13
4.7	Process for determining the qualifications and expertise of the members of the Board of Directors for guiding the organization's strategy on economic, environmental, and social topics	6.2	Organizational governance	●	12-13
4.8	Principles of management	6.2		●	9
4.9	Procedures for the Board of Directors for overseeing the organization's identification and management of economic, environmental, and social performance	6.2		●	9, 12-13
4.10	Processes for evaluating the Board of Director's own performance, particularly with respect to economic, environmental, and social performance	6.2		●	12-13

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General

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
4.11	Explanation of how the precautionary approach or principle is addressed by the organization	6.2		●	16-17
4.12	Externally developed economic, environmental, and social charters, principles, or other initiatives to which the organization subscribes	6.2		●	70-72
4.13	Memberships in associations and national/international organizations	6.2		●	72
4.14	List of stakeholder groups	6.2		●	18-21
4.15	Basis for identification and selection of stakeholders	6.2		●	18-21
4.16	Approaches to stakeholder engagement	6.2		●	18-21
4.17	Key topics and concerns that have been raised through stakeholder engagement, and how the organization has responded	6.2		●	18-21

Economic Performance Indicators

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
DMA (Disclosure of Management Approach)					3, 10-11, 22-25, 32-33
Economic Performance					
EC1	Direct economic value generated and distributed	6.8/6.8.3/6.8.7/6.8.9	Community involvement and development/Community involvement/Wealth and income creation/Social investment	●	32-33
EC2	Financial implications and other risks and opportunities for the organization's activities due to climate change	6.5.5	Climate change mitigation and adaptation	●	36-41
EC3	Coverage of the organization's defined benefit plan obligations	6.4,4/6.8		●	49
EC4	Financial assistance received from government			●	None
Market Presence					
EC5	Range of ratios of standard entry level wage compared to local minimum wage at significant locations of operation	6.4,4/6.8	Conditions of work and social protection/Community involvement and development	●	46
EC6	Policy, practices, and proportion of spending on locally-based suppliers at significant locations of operation	6.6.6/6.8/6.8.5/6.8.7	Promoting social responsibility in the value chain/Community involvement and development/Employment creation and skills development/Wealth and income creation	●	55
EC7	Procedures for local hiring and proportion of senior management hired from the local community at locations of significant operation	6.8/6.8.5/6.8.7	Community involvement and development/Employment creation and skills development/Wealth and income creation	●	46
Indirect Economic Impacts					
EC8	Development and impact of infrastructure investments and services provided primarily for public benefit	6.3.9/6.8/6.8.3/6.8.4/6.8.5/6.8.6/6.8.7/6.8.9	Economic, social and cultural rights/Community involvement and development/Community involvement/Education and culture/Technology development and access/Wealth and income creation/Social investment	●	31, 55-56, 57-59
EC9	Understanding and describing significant indirect economic impacts, including the extent of impacts	6.3.9/6.6.6/6.6.7/6.7.8/6.8/6.8.5/6.8.6/6.8.7/6.8.9	Economic, social and cultural rights/Promoting social responsibility in the value chain/Respect for property rights/Access to essential services/Community involvement and development/Employment creation and skills development/Technology development and access/Wealth and income creation/Social investment	●	24, 31, 54-56, 57-59
Reserves					
OG1	Volume and type of estimated proved reserves and production			●	24-25, 26-27

Environment Performance Indicators

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
DMA (Disclosure of Management Approach)					3, 34-38
Materials					
EN1	Materials used by weight or volume			●	37
EN2	Percentage of use of recycled materials			●	N/A
Energy					
EN3	Direct energy consumption by primary energy source			●	41
EN4	Indirect energy consumption by primary source			●	41
OG2	Total amount invested in renewable energy			●	41
OG3	Total amount of renewable energy generated by source			●	41

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
EN5	Energy saved due to conservation and efficiency improvements			●	41
EN6	Initiatives to provide energy-efficient or renewable energy based products and services, and reductions in energy requirements as a result of these initiatives	6.5/6.5.4	The environment/Sustainable resource use	●	41
EN7	Initiatives to reduce indirect energy consumption and reductions achieved			●	39-41
Water					
EN8	Total water withdrawal by source			●	37
EN9	Water sources significantly affected by withdrawal of water			●	N/A
EN10	Percentage and total volume of water recycled and reused			●	N/A
Biodiversity					
EN11	Location and size of land owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas			●	N/A
EN12	Impacts of activities, products, and services on biodiversity in protected areas and areas of high biodiversity value outside protected areas			●	38
EN13	Habitats protected or restored	6.5/6.5.6	The environment/Protection of the environment, biodiversity and restoration of natural habitats	●	None
EN14	Strategies, current actions, and future plans for managing impacts on biodiversity			●	38
OG4	Number and percentage of significant operating sites in which biodiversity risk has been assessed and monitored			●	N/A
EN15	Number of IUCN Red List species and national conservation list species with habitats in areas affected by operations, by level of extinction risk			●	N/A
Emissions, Effluents, and Waste					
EN16	Total direct and indirect greenhouse gas emissions by weight			●	37
EN17	Other relevant indirect greenhouse gas emissions	6.5/6.5.5	The environment/Climate change mitigation and adaptation	●	37
EN18	Initiatives to reduce greenhouse gas emissions and reductions achieved			●	39-40
EN19	Emissions of ozone-depleting substances			●	Not our key issue, planning to investigate
EN20	NOx, SOx, and other significant air emissions			●	37
EN21	Total water discharge by quality and destination			●	37
OG5	Volume of formation or produced water			●	N/A
EN22	Total weight of waste by type and disposal method	6.5/6.5.3	The environment/Prevention of pollution	●	38
EN23	Total number and volume of significant spills			●	38
EN24	Weight of transported, imported, exported, or treated waste deemed hazardous under the terms of the Basel Convention Annex I, II, III, and VIII, and percentage of transported waste shipped internationally			●	N/A
EN25	Identity, size, protected status, and biodiversity value of water bodies and related habitats significantly affected by the reporting organization's discharges of water and runoff	6.5/6.5.4/6.5.6	The environment/Sustainable resource use/Protection of the environment, biodiversity and restoration of natural habitats	●	N/A
OG6	Volume of flared and vented hydrocarbon			●	N/A
OG7	Amount of drilling waste (drill mud and cuttings) and strategies for treatment and disposal			●	N/A
Products and Services					
EN26	Initiatives to mitigate environmental impacts of products and services, and extent of impact mitigation	6.5/6.5.4/6.6.6/6.7.5	The environment/Sustainable resource use/Promoting social responsibility in the value chain/Sustainable consumption	●	36, 39-41
EN27	Percentage of products sold and their packaging materials that are reclaimed by category	6.5/6.5.4/6.7.5	The environment/Sustainable resource use/Sustainable consumption	●	N/A
OG8	Benzene, lead and sulfur content in fuels			●	N/A
Compliance					
EN28	Monetary value of fines and total number of non-monetary sanctions for noncompliance with environmental laws and regulations	6.5	The environment	●	No occurrence
Transport					
EN29	Significant environmental impacts of transporting products and other goods and materials used for the organization's operations, and transporting members of the workforce	6.5/6.5.4/6.6.6	The environment/Sustainable resource use/Promoting social responsibility in the value chain	●	41
Overall					
EN30	Total environmental protection expenditures and investments	6.5	The environment	●	36

Social Performance Indicators

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
Labor conditions and its current status					
DMA (Disclosure of Management Approach)					46-49, 52-53
Employment					
LA1	Total workforce by employment type, employment contract, and region	6.4/6.4.3	Labour practices/Employment and employment relationships	●	46
LA2	Total number and rate of employee turnover by age group, gender, and region	6.4/6.4.3	Labour practices/Employment and employment relationships	●	46
LA3	Benefits provided to full-time employees that are not provided to temporary or part-time employees	6.4/6.4.3/6.4.4	Labour practices/Employment and employment relationships/Conditions of work and social protection	●	48-49
LA15	Return to work and retention rates after parental leave			●	48
Labor/Management Relations					
LA4	Percentage of employees covered by collective bargaining agreements	6.4/6.4.3/6.4.4/6.4.5/6.3.10	Labour practices/Employment and employment relationships/Conditions of work and social protection/Social dialogue/Fundamental principles and rights at work	●	49
LA5	Minimum notice period regarding operation changes	6.4/6.4.3/6.4.4/6.4.5	Labour practices/Employment and employment relationships/Conditions of work and social protection/Social dialogue	●	49
Occupational Health and Safety					
LA6	Percentage of total workforce represented by joint management-labor health and safety committees	6.4/6.4.6	Labour practices/Health and safety at work	●	53
LA7	Rates of injury, occupational diseases, lost days, and absenteeism, and number of work related fatalities			●	4, 53
LA8	Programs in place to assist workforce members and community members regarding serious diseases	6.4/6.4.6/6.8/6.8.3/6.8.4/6.8.8	Labour practices/Health and safety at work/Community involvement and development/Community involvement/Education and culture/Health	●	49, 57-59
LA9	Health and safety topics covered in agreements with trade unions	6.4/6.4.6	Labour practices/Health and safety at work	●	49, 52-53
Training and Education					
LA10	Average hours of training per year per employee by employee category	6.4/6.4.7	Labour practices/Human development and training in the workplace	●	47
LA11	Programs for lifelong learning that support the continued employability of employees and assist them in managing career endings	6.4/6.4.7/6.8.5	Labour practices/Human development and training in the workplace/Employment creation and skills development	●	47, 49
LA12	Percentage of employees receiving regular performance and career development reviews	6.4/6.4.7	Labour practices/Human development and training in the workplace	●	48
Diversity and Equal Opportunity					
LA13	Composition of governance bodies and breakdown of employees	6.3.7/6.3.10/6.4/6.4.3	Discrimination and vulnerable groups/Fundamental principles and rights at work/Labour practices/Employment and employment relationships	●	13, 46
LA14	Ratio of basic salary of men to women by employee category	6.3.7/6.3.10/6.4/6.4.3/6.4.4	Discrimination and vulnerable groups/Fundamental principles and rights at work/Labour practices/Employment and employment relationships/Conditions of work and social protection	●	46
Human Rights					
DMA (Disclosure of Management Approach)					46-51
Investment and Procurement Practices					
HR1	Percentage of significant investment agreements that include human rights clauses or that have undergone human rights screening	6.3/6.3.3/6.3.5/6.6.6	Human rights/Due diligence/Avoidance of complicity/Promoting social responsibility in the value chain	●	0%
HR2	Percentage of suppliers and contractors that have undergone screening and human rights	6.3/6.3.3/6.3.5/6.4.3/6.6.6	Human rights/Due diligence/Avoidance of complicity/Employment and employment relationships/Promoting social responsibility in the value chain	●	0%
HR3	Total hours of employee training on policies and procedures concerning human rights	6.3/6.3.5	Human rights/Avoidance of complicity	●	51
Non-Discrimination					
HR4	Total number of incidents of discrimination and actions taken	6.3/6.3.6/6.3.7/6.3.10/6.4.3	Human rights/Resolving grievances/Discrimination and vulnerable groups/Fundamental principles and rights at work/Employment and employment relationships	●	No occurrence
Freedom of Association and Collective Bargaining					
HR5	The right to exercise freedom of association and collective bargaining	6.3/6.3.3/6.3.4/6.3.5/6.3.8/6.3.10/6.4.3/6.4.5	Human rights/Due diligence/Human rights risk situations/Avoidance of complicity/Civil and political rights/Fundamental principles and rights at work/Employment and employment relationships/Social dialogue	●	49

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Social Performance Indicators

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
Child Labor/Forced and Compulsory Labor					
HR6	Operations identified as having significant risk for incidents of child labor, and measures taken to contribute to the elimination of child labor	6.3/6.3.3/6.3.4/6.3.5/6.3.7/6.3.10	Human rights/Due diligence/Human rights risk situations/Avoidance of complicity/Discrimination and vulnerable groups/Fundamental principles and rights at work	●	46
HR7	Operations identified as having significant risks for incidents of forced or compulsory labor, and measures to contribute to the elimination of forced or compulsory labor			●	46
Security Practices					
HR8	Percentage of security personnel trained regarding human rights	6.3/6.3.5/6.4.3/6.6.6	Human rights/Avoidance of complicity/Discrimination and vulnerable groups/Employment and employment relationships/Promoting social responsibility in the value chain	●	51
Indigenous Rights					
HR9	Total number of incidents of violations involving rights of indigenous people and actions taken	6.3/6.3.6/6.3.7/6.3.8/6.6.7	Human rights/Resolving grievances/Discrimination and vulnerable groups/Civil and political rights/Respect for property rights	●	No occurrence
OG9	Operations where indigenous communities are present or affected by activities and where specific engagement strategies are in place			●	57-59
Assessment					
HR10	Percentage and total number of operations that have been subject to human rights reviews and/or impact assessments			●	50
Assessment					
HR11	Number of grievances related to human rights filed, addressed, and resolved through formal grievance mechanisms			●	49, 51
Society					
DMA (Disclosure of Management Approach)					3, 42-43, 50-51, 54-58
Local Communities					
S01	Nature, scope, and effectiveness of any programs that assess and manage the impacts of operations on communities, including entering, operating and exiting	6.3.9/6.8/6.8.5/6.8.7/6.6.7	Economic, social and cultural rights/Community involvement and development/Employment creation and skills development/Health and income creation/Respect for property rights	●	38, 57-59
S09	Operations with significant potential or actual negative impacts on local communities			●	None
S10	Prevention and mitigation measures implemented in operations with negative impacts on local communities			●	38, 57-59
OG10	Number and description of significant disputes with local communities and indigenous peoples			●	None
OG11	Number of sites that have been decommissioned and sites that are in the process of being decommissioned			●	None
Corruption					
S02	Percentage and total number of business units analyzed for risks related to corruption	6.6/6.6.3	Fair operating practices/Anti-corruption	●	50
S03	Percentage of employees trained in organization's anti-corruption policies and procedures			●	51
S04	Actions taken in response to incidents of corruption			●	51
Public Policy					
S05	Public policy positions and participation in public policy development and lobbying	6.6/6.6.4/6.8.3		●	39, 46, 54-56
S06	Total value of financial contributions to political parties and politicians			●	No occurrence
Illegitimate Competitive Behavior					
S07	Total number of legal actions for anticompetitive behavior, anti-trust, and monopoly practices and their outcomes	6.6/6.6.5/6.6.7		●	No occurrence
Compliance					
S08	Monetary value of fines and total number of non-monetary sanctions for noncompliance with laws and regulations	6.6/6.6.7/6.8.7		●	No occurrence
OG12	Operations where involuntary resettlement took place, the number of households resettled in each and how their livelihoods were affected in the process			●	No occurrence
OG13	Number of process safety events, by business activity			●	53

Social Performance Indicators

GRI G3.1	Description	ISO 26000	ISO 26000 topic and key issues	Level of Disclosure	Page
Product Responsibility					
DMA (Disclosure of Management Approach)					42-45, 52
Customer Health and Safety					
PR1	Life cycle stages in which health and safety impacts of products and services are assessed for improvement	6.3.9/6.6.6/6.7/6.7.4/6.7.5	Economic, social and cultural rights/Promoting social responsibility in the value chain/ Consumer issues/Protecting consumers' health and safety/Sustainable consumption	●	52
PR2	Total number of incidents of non-compliance with regulations concerning health and safety impacts of products and services	6.3.9/6.6.6/6.7/6.7.4/6.7.5		●	No occurrence
Product and Service Labeling					
PR3	Type of product and service information required by procedures	6.7/6.7.3/6.7.4/6.7.5/6.7.6/6.7.9	Consumer issues/Fair marketing, factual and unbiased information and fair contractual practices/Protecting consumers' health and safety/Sustainable consumption/Consumer service, support, and complaint and dispute resolution/Education and awareness	●	See the material safety data sheets (MSDS) for natural gas on website
PR4	Total number of incidents of non-compliance with regulations concerning product and service information and labeling	6.7/6.7.3/6.7.4/6.7.5/6.7.6/6.7.9		●	No occurrence
PR5	Policies and practices related to customer satisfaction	6.7/6.7.4/6.7.5/6.7.6/6.7.8/6.7.9		●	44-45
Marketing Communications					
PR6	Policies and programs for marketing communications, including advertising, promotion, and sponsorships	6.7/6.7.3/6.7.6/6.7.9	Consumer issues/Fair marketing, factual and unbiased information and fair contractual practices/Consumer service, support, and complaint and dispute resolution/ Education and awareness	●	N/A
PR7	Total number of incidents of non-compliance with regulations concerning marketing communications, including advertising and sponsorship	6.7/6.7.3/6.7.6/6.7.9		●	No occurrence
Customer Privacy					
PR8	Total number of substantiated complaints regarding breaches of customer privacy and losses of customer data	6.7/6.7.7	Consumer issues/Consumer data protection and privacy	●	No occurrence
Compliance					
PR9	Monetary value of fines for noncompliance with laws and regulations concerning the provision and use of products and services	6.7/6.7.6	Consumer issues/Consumer service, support, and complaint and dispute resolution	●	No fine paid
OG14	Volume of biofuels produced and purchased meeting sustainability criteria			●	None

UN Global Compact

In 2007, KOGAS became a member of the United Nations Global Compact (UNGC), a platform for encouraging and promoting good corporate principles and learning experiences in the areas of human rights, labor, environment, and anti-corruption. The UNGC principles have been engrained in our approach to corporate responsibility and business practices for many years.



- The Declaration of Human Rights
- 'Declaration on Fundamental Principles and Rights at Work', International Labor Organization (ILO)
- The Rio Declaration on Environment and Development
- UNCAC (United Nations Convention against Corruption)

Global Compact requires enterprises to support, adopt, and enact core values in four areas - human rights, labor standards, environment, and anti-corruption.



- Principle 1 Business should support and respect the protection of internationally proclaimed human rights.
Principle 2 Business should ensure that they are not complicit in human rights abuses.



- Principle 3 Business should uphold the freedom of association and the effective recognition of the right to collective bargaining.
Principle 4 Business should support the elimination of all forms of forced and compulsory labour.
Principle 5 Business should support the effective abolition of child labour.
Principle 6 Business should support the elimination of discrimination in respect of employment and occupation.



- Principle 7 Business should support a precautionary approach to environmental challenges.
Principle 8 Business should undertake initiatives to promote greater environmental responsibility.
Principle 9 Business should encourage the development and diffusion of environmentally friendly technologies.



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

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Glossary

Terminologies

Term	Definition
BOD (Biochemical Oxygen Demand)	The amount of dissolved oxygen needed by aerobic biological organisms in a body of water to break down organic material present in a given water sample at certain temperature over a specific time period.
CDP (Carbon Disclosure Project)	A global project that collects and analyzes the greenhouse gas emission data of major public companies across the world on behalf of global investors and financial institutions.
CNG (Compressed Natural Gas)	Natural gas compressed under high pressures at normal temperature (14.5°C ~ 15.5°C) to be used as vehicle fuel.
COD (Chemical Oxygen Demand)	Commonly used to indirectly measure the amount of organic compounds in water. Most applications of COD determine the amount of organic pollutants found in surface water (e.g. lakes and rivers) or wastewater, making COD a useful measure of water quality.
DJSI Korea	A Dow Jones social responsibility index for domestic corporations only.
DME (Di-Methyl Ether)	Dimethyl ether (CH ₃ -O-CH ₃ , DME) is produced by extracting and synthesizing compound gas (CO, H ₂) from natural gas, coal, and biomass. It is available as an alternative to LPG (liquefied petroleum gas).
EPC (Engineering Procurement Construction)	An acronym that stands for engineering, procurement and construction. It is a common form of contracting arrangement within the construction industry.
ERP (Enterprise Resource Planning)	Enterprise resource planning (ERP) systems integrate internal and external management of information across an entire organization—embracing finance/accounting, manufacturing, sales and service, customer relationship management, etc.
GHP (Gas engine-driven Heat Pump)	A device that can alternate for heating or air-conditioning purposes according to the season. Gas(LNG/LPG) is transferred through indoor and outdoor refrigerant pipes where repeated procedure of liquidization and evaporation occur.
UN Global Compact	The world's largest global corporate citizen initiative under the United Nations that provides the framework of the ten principles for corporations to apply to their strategies supporting human rights, labor, environment and anti-corruption.
HCNG (Hydrogen blended CNG)	A fuel, mixture of natural gas and hydrogen, burns faster than natural gas and extends the flammable limit significantly.
Low Carbon Green Growth	A government-driven national development paradigm that develops new growth engines and jobs with green technologies and clean energy sources to ensure sustainable growth by cutting greenhouse gas emissions and environment pollution.
OJT (On the Job Training)	Instructions and education given by the field managers or direct superiors in the field.
PNG (Pipeline Natural Gas)	A pipeline system to provide natural gas supplies in gas form from a production plant to users without any liquefying processes.
Self Sufficiency	Percentage of resources developed by domestic corporations in the annual resource imports. Self-sufficiency is calculated by dividing the total imports by the combined stakes of domestic companies in overseas production.
SMV (Submerged Combustion Vaporizer)	Facility that heats water through the combustion of fuel in the water. Using tubes installed in the water tank, the LNG is pumped into the tubes to be gasified.
Spot Market	LNG trading market that ensures free trade between producers and buyers without any medium to long-term contract terms.
SS (Suspended Solid)	Small solid particles which remain in suspension in water as a colloid or due to the motion of the water. It is used as one indicator of water quality.
Tcf (Trillion Cubic Feet)	Volume unit equivalent to 1 trillion cubic feet.
Unconventional Gas	A method to estimate the maximum loss which can be caused by the variability in the portfolio value in normal market circumstances for a specific period in accordance with a specific confidence level.
Value Proposition	A promise of value to be delivered and a belief from the customer that value will be experienced. A value proposition can apply to an entire organization, or parts thereof, or customer accounts, or products or services.

Awards & Associations

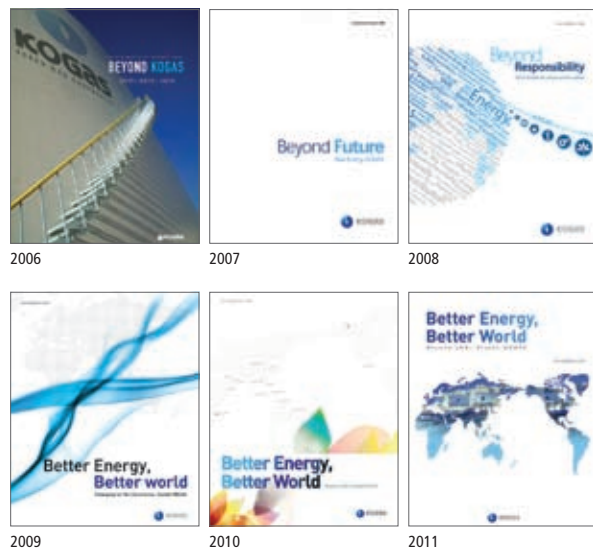
Awards

Awards	Organization
Ranked No. 1 for 4 consecutive years in the Dow Jones Sustainability Index (DJSI) Korea Gas sector.	Korea Productivity Center
Earned the top grade (Excellence) in the customer satisfaction survey for public enterprises for 6 consecutive years	Ministry of Strategy & Finance
Received President's Prize from the National Sharing Award	Ministry of Health and Welfare
Achieved top grade(excellence) in Self-management evaluation for 2 consecutive years	Ministry of Strategy and Finance
Won the Presidential Human Resource Development Award at the 2011 National Quality Competition	Korea Standards Association
Won the Ministerial Award for advanced labor-management relations	Ministry of Employment & Labor
Social Contribution Award (Ministerial, Chungcheong Regional Headquarters)	Ministry for Health and Welfare
Social Responsibility Award (Ministerial, North Gyeongsang Regional Headquarters)	Ministry of Public Administration & Security
Won the Disaster Control Award from the Prime Minister	Ministry of Public Administration & Security
Won the Ministerial Anti-Disaster Safety Management Award	Ministry of Knowledge Economy
Earned the Excellence grade in the Transparency Survey	Anti-corruption & Civil Rights Commission
Nominated as Korea's Most Admired Energy Company for 5 consecutive years	Korea Management Association

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 preservations	Member
	Ethical Management SM Forum	Activities of the CEO and working groups for ethical management practices	Member

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