



These are painted by children who are learning designing at an NPO "Children Design Education."

http://c0d0e.com/english/index.html



# Osaka Gas Co., Ltd.

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As of the end of June 2013, Osaka Gas is included in the following socially responsible investment (SRI) indices.

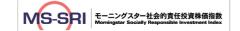






















# 2013 OSAKA GAS GROUP CSR REPORT

The Osaka Gas Group believes that to fulfill its corporate social responsibilities, it must manage its business by incorporating the opinions of society.

This Report features two important CSR themes, which we have selected taking into consideration the current social situation as well as stakeholders' expectations toward our group, clarified through dialogues with experts and stakeholders.

The Osaka Gas Group carries out its CSR activities in accordance with the Osaka Gas Group CSR Charter. The Group's main CSR activities undertaken in fiscal 2013 are presented in this report. together with targets and results.

# [ Scope of This Report ]

### ■ Organization

- •This report covers the Osaka Gas Group consisting of Osaka Gas Co., Ltd. and its affiliated companies. Some information, as noted in this report by phrases such as "Osaka Gas" or "the company," refers exclusively to Osaka Gas Co., Ltd.
- •Environmental performance data represents Osaka Gas and 77 affiliated companies. Overseas and tenant locations where it is difficult to collect data are not included.

### ■ Reporting Period

While the most recent data covered in this report represents fiscal 2013 (from April 1, 2012 to March 31, 2013), some articles refer to efforts for fiscal 2014.

### ■ Coverage and Materiality

The Osaka Gas Group continuously discloses information on its CSR activities to the public.

Adding to our principle of materiality, feedback from readers and the opinions of various external organizations were also took into consideration for selecting topics to cover in this report and define their priorities.

### ■ Readability and Ease of Understanding

To ensure that a wide range of readers can understand the information provided in this report, careful consideration is given to visual design, including the text size, use of colors, pictures and diagrams, and explanatory notes are provided for technical terms.

? ! The meanings of terms with this mark are provided in the glossary.

We use third party verification to ensure the reliability of the content and data presented in our CSR report. The environmental performance data in this report underwent third party verification by Bureau Veritas Japan Co., Ltd. The overall report underwent a third party review process that included assessment and recommendations as well as simple audits, by the Institute for Environmental Management Accounting



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What Natural Gas-Fuelled Distributed Energy Systems Can Do to Enhance Energy Security for Customers

Gas Cogeneration Systems with a Grid-Independent Operation Function Enable Continued, Highly Energy Efficient Operation Even in the Event of Power Outages.

The Effort to Build More Disaster-Resistant Stores Is Actively Being Made, by Combining an Emergency Power Generator-Cum-Gas Cogeneration System and Renewable Energy .

# Example for detached housing

The ENE-FARM and the ECOWILL with a Grid-Independent Operation Function Provide Uninterrupted Amenity at Home During Power Outages.

# Example for collective housing

Gas Cogeneration Systems with Power Outage Response Capability and LPG Backup Contribute to Increased Energy Security for Customers in Collective Residences.









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# Guidelines Referred to

- · ISO 26000 21
- Sustainability Reporting Guidelines (G 3.1) of the Global Reporting Initiative (GRI)
- Environmental Reporting Guidelines 2012 of the Ministry of the Environment
- The United Nations Global Compact [21] Communication on Progress (COP) Policy

## Inclusion in SRI Indices

As of the end of March 2013, Osaka Gas is included in the following socially responsible investment (SRI) indices.

- Dow Jones Sustainability Asia Pacific Index ECPI Ethical Index Global (E. Capital Partners Indices)
- FTSE4Good Index Series · MSCI ESG Index

# Fiscal 2013 Activity Highlights

# Creating Value for Customers

### **Customer Satisfaction Survey**

Seven Customer Service Duties

① Overall satisfaction rate 90.6% ② Achieve over 82% in all satisfaction rates



Harmonizing with the **Environment and Contributing** to Realizing a Sustainable Society

**Environmental Management Efficiency:** 

 $59 \text{ ven/}1.000 \text{m}^3$ 



# Being a Good Corporate Citizen Contributing to Society

# **Number of Communication Events and Contacts**

Number of events (for environmental/dietary communication)

held 2.004 events

Total contacts (number of visitors) 70,865 people

Number of events (for social contribution) held 632 events



# Complying with Laws and Regulations and Respect for Human Rights

**Scores on Compliance Awareness** 

Understanding level of Code of Conduct: decreased

Penetration level of compliance: improved

Percentage of employees receiving compliance training: 100 %



# Management Policy for Human Growth

CSR Indicator

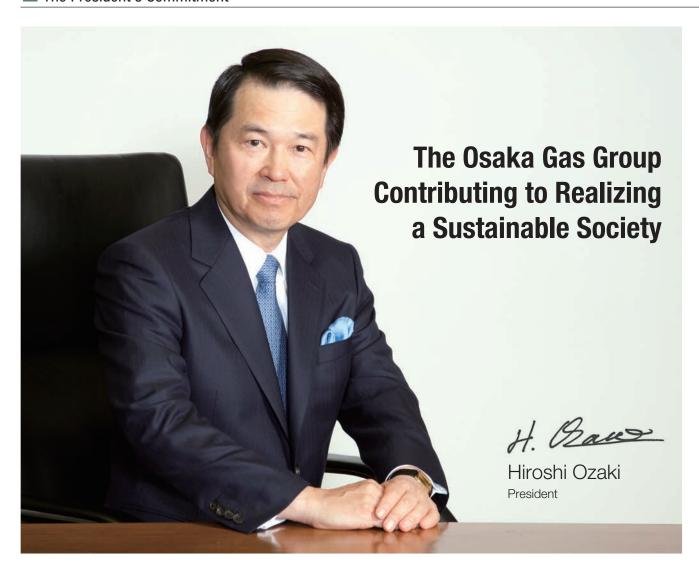
**Employee Opinion Survey** (Job Satisfaction and Attachment to the Company)

Job satisfaction: 3.89 Out of 5

Attachment: 4.38 Out of 5

Major Activities in FY 2013 -----25

Ethibel EXCELLENCE / PIONEER index



# 'Field of Dreams 2020': Our Long-Term Management Vision and Medium-Term Business Plan

Osaka Gas Group has been pursuing 'Value Creation Management' that offers as much value as possible to customers, society and all its stakeholders. Under our long-term vision 'Field of Dreams 2020', we have been operating each of our businesses to achieve sustainable growth.

Following the devastating earthquake and tsunami in 2011, there has been a mounting public concern over the security of energy supply in addition to its environmental impact. Natural gas attracts increased attention as the most suitable energy in addressing the current and future energy problems. Osaka Gas has long been promoting the use of natural gas and the dissemination of its advanced, more efficient utilisation such as gas-fired distributed power generation system and cogeneration. At the same time, we have constantly upgraded our gas pipeline and LNG terminals against earthquakes and tsunamis to ensure the security of gas supply. With those undertakings, we will be able to make a positive contribution to a disaster-resilient society and the preservation of global environment and, hence, we will fulfil our fundamental corporate social responsibility.

In the year 2012, the Japanese economy saw a gradual growth thanks to the solid recovery of the US economy as well as demand growth arising from reconstruction work in

the disaster-stricken areas. Furthermore, the new administration's economic stimulus package launched during the second half of the year inspired many companies with confidence and hope for the future.

Taking advantage of this positive development in the Japanese economy, Osaka Gas will step up its business activities promptly and flexibly to meet the changes in the market we play. During the year 2013, the final year of the first five year plan in 'Field of Dreams 2020', we will make every effort to achieve the targets set in the plan. At the same time, we continue to operate our businesses to meet our customers' needs for greater comfort at home or further growth in business as the first priority. We seek to improve our products and services to higher standard in terms of safety, customer satisfaction and environment friendliness. In this way, we hope to share the fruits of our achievements and growth with our customers.

### Tasks for the Year 2013

In the current fiscal year, we will focus on the following three tasks;

1. Advancing our energy business to respond to customer and social needs

As an energy supplier, our primary mission is to deliver economically competitive natural gas to customers in a safe and stable manner. To this end, we will continue our efforts for diversifying our LNG supply portfolio including shale gas 11 import from North America.

We will continue our efforts to disseminate distributed power generation systems. In the household sector, we will promote hybrid gas cogeneration system combined with solar panels, and for commercial and industrial customers we will provide them with energy solutions based on cogeneration systems. In the area of R&D, we will further develop 'smart energy house' and 'smart energy network' for realizing higher energy security, energy conservation, and for reducing CO<sub>2</sub> emission.

To ensure stability and security of energy supply, we will maintain our LNG terminals and pipeline network rejuvenated and upgraded. New pipelines will be commissioned to supply natural gas outside our service territory as well as to augment our supply capacity within the territory. Similarly, we will keep our power plants at high availability and examine possible expansion of their generating capacity to capture additional market opportunities.

# 2. Expansion of our international energy business

Osaka Gas will maintain, improve and develop overseas assets already operating or acquired. In addition, we will seek to acquire suitable assets both in the upstream such as oil and gas fields as well as in the downstream such as gas distribution assets or power plants.

## 3. Enhancing revenues through diverse affiliated businesses

Thirdly, we will remain committed to providing high quality products and services through our affiliated businesses in the areas of property/real estate, IT services, materials solutions and other businesses.

# Towards Achieving a Higher Level of CSR

We have formulated the Osaka Gas Group CSR Charter as the guiding principle both for the management and for the employees of the group.

We value most the confidence of our customers and society in general, because it is the source which has enabled us to continue our business for over a century. It constitutes one of our invaluable assets together with human resources and technical know-how, which cannot be listed in the balance sheet. We are determined incessantly to promote our group-wide CSR to a higher level, which, in turn, will garner greater confidence from our customers and society.

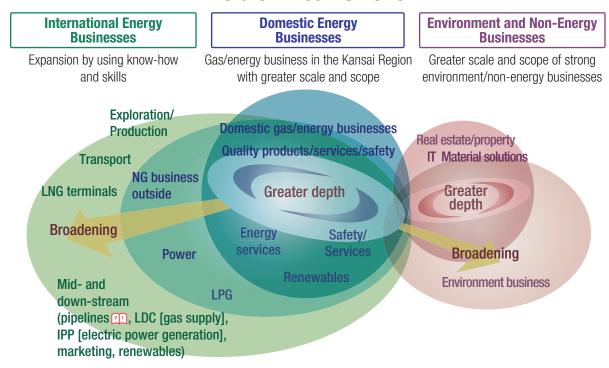
Consequently, we will reinforce our activities in compliance with the ISO26000 CSR standard, the United Nations Global Compact, and other international norms. In April 2013, we set up a Diversity Promotion Team, with the aim of advancing diversity management. By offering a workplace environment where diverse employees can maximize their individual capabilities, we will pursue the creation of new value, making use of our employees' innovative ideas and abilities to embody these ideas. In April 2012, we established a new division called the "Regional Co-Creation Division," which liaises between the Osaka Gas Group and various stakeholders in the community. Placing emphasis on communication with these stakeholders, and incorporating their opinions, we will strengthen our CSR initiatives.

# Conclusion

The Osaka Gas Group contemplates to become a "global energy and environmental business group that lives up to the expectations of society and contributes to the realization of a sustainable society, while achieving its own sustainable growth."

This report describes the current and past CSR activities of the Osaka Gas Group. I hope you will find it informative, and I look forward to hearing from readers their comments and opinions.

# Long-Term Management Vision and Medium-Term Management Plans Field of Dreams 2020



# **What Natural Gas-fuelled Distributed Energy Systems Can Do to Enhance Energy Security for Customers**

It is an urgent task for today's Japan to establish a disaster-resistant society. Energy systems that ensure a stable supply of energy even in disaster situations will serve as a foundation for a disaster-resilient society.

To provide such systems, we must promote the "widespread use of distributed energy systems" and pursue "a new best mix of energy sources, including renewable energy ..."

Osaka Gas will help Japan resolve the above-mentioned task,

by promoting the proliferation of energy systems—mainly natural gas cogeneration systems —that feature environmental friendliness and economic efficiency, as well as supply stability.

On a community basis, we will strive to seek the best mix of energy sources and to build "smart energy networks," which optimize energy use within a community by combining electricity and heat produced by cogeneration systems and renewable energy and by using information and communications technology (ICT).

As for factories, stores, offices and detached and collective housing,

we will also provide solutions tailored to their respective characteristics and requirements,

in order to ensure more efficient use of energy, environmental friendliness and enhanced energy security.

Through such efforts. Osaka Gas intends to contribute to the realization of a disaster-resilient and eco-friendly society.



**Plants** 

P.07

Gas cogeneration systems with a grid-independent operation function



**Stores** 

P.08

Gas cogeneration systems that can be also used as emergency power generation systems

Renewable energy



Detached P.09

Fuel cell / gas cogeneration systems with a grid-independent operation function

Photovoltaic power generation



Collective P.10 housing

Gas cogeneration systems with a grid-independent operation function

LPG backup

GAS GROUP CSR REPORT 2013 0

# **Natural Gas, Which is Expected as a Clean Energy Source with Less Environmental Impact**

The figure on the right compares total greenhouse gas (GHG 11) emissions at respective stages from drilling to the combustion of fossil fuels. LNG 11 is a clean energy that emits less GHG than any other fossil fuels.

.CA (Life Cycle Assessment): A comprehensive quantification method of survey, analysis, and evaluation of the amount of environmental impacts of products and services. The assessment covers all the related processes from resource extraction to waste disposal including production, transportation, consumption and recycling for the products and services

# ■ LCA\* comparison of GHG emissions among fossil fuels

				(g-CO <sub>2</sub> /MJ, HHV)
	Coal	Oil	LPG	LNG (Natural gas)
Production	4.58	4.06	4.94	9.17
Transportation	1.71	0.79	1.80	1.97
Infrastructure	0.11	0.08	0.11	0.04
Combustion	88.53	68.33	59.85	49.40
Total	94.93	73.26	66.70	60.58
Ratio	157	121	110	100

Sources: Future Forecast for Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A

# Gas Cogeneration Systems with a Grid-Independent Operation Function Enable Continued, Highly Energy Efficient Operation Even in the Event of Power Outages.

More and more plants are adopting gas cogeneration systems with a grid-independent operation function so that they can continue to operate even when a power saving request is issued because of power shortage or in the event of power outage. Waste heat recovery systems are also used increasingly in plants, where the energy generated by natural gas can be completely used.



# **Challenges in Plants** < JTEKT Corporation>

JTEKT Corporation manufactures and markets around the world a wide range of bearings used in various machines including trains, aircrafts, building machines, and wind power generators. JTEKT was considering the installation of an energy system that can address the following issues.

- Avoid the loss of sales opportunities associated with power-saving upon request and realise enhanced risk management following the Great East Japan Earthquake
- Prevent production process from secondary disaster in the event of a power failure.

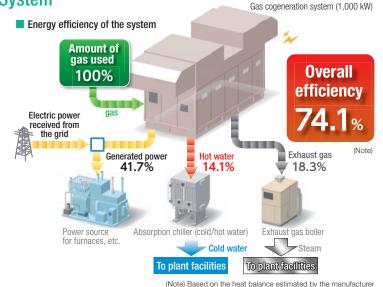


# **Proposal from Osaka Gas**

We suggested introducing an energy-efficient gas cogeneration system with a grid-independent operation function and a system that utilizes exhaust heat, which not only realise a stable supply of energy during power outages but also provide high energy efficiency.

# **Features of the Gas Cogeneration System**

- outages, providing increased energy security for the plant
- 2 Makes effective use of exhaust heat generated from the gas cogeneration system
  - By installing an exhaust gas boiler in conjunction with the gas engine, steam produced by the heat of gas engine exhaust gas is fed into the production
  - By using the hot water generated by cooling the gas engine jacket as a heat source for absorption chiller, cold water is created and fed into the production process.



Establishing a Risk Management System and Pursuing Energy Conservation and Eco-Friendliness to Realize a Smart Factory

JTEKT manufactures and provides a variety of bearings to customers worldwide for use in aircrafts, automobiles and other transportation vehicles, and in environmental industrial equipment such as wind power generators.

One of the lessons learned from the Great East Japan Earthquake is that we must urgently establish a risk management system capable of responding to an energy demand/supply crisis. In this regard, we have adopted a gas cogeneration system which can provide risk management while meeting the energy conservation and eco-friendliness requirements. An innovative and revolutionary energy-saving system has been realized by adopting new equipment running on low-temperature exhaust heat that has never been utilized in production activities.

The new system has been realized with the full cooperation of the Osaka Gas Group. We are very grateful for their helpful advice and support given to us.

Kitahara Engineering Section No. 3, Production Engineering Department Kokubu Plant. JTEKT Corporatio

Shinsuke



# The Effort to Build More Disaster-Resistant Stores Is Actively Being Made, by Combining an Emergency Power Generator-Cum-Gas Cogeneration System and Renewable Energy.

Osaka Gas contributes to the creation of next-generation stores that achieve greater energy security and energy saving, by promoting distributed and diversified energy sources realised by gas cogeneration systems.

AFON Mall Osaka Dome City

# Challenges in Stores < AEON Retail Co., Ltd.

Based on lessons learned from the Great East Japan Earthquake, AEON Retail Co., Ltd. has been promoting the development of Smart Aeon stores with disaster preparedness capabilities, which are both energy efficient and disaster resistant. The first Smart Aeon store, AEON Mall Osaka Dome City, opened in May 2013, as a core facility of the redevelopment project of Iwasaki District (Osaka City), the birthplace of Osaka Gas. AEON Retail Co., Ltd. and Osaka Gas collaborated to design a store which facilitates disaster resistance function.

# **Proposal from Osaka Gas**

AEON Retail Co., Ltd. has been seeking to create eco-friendly, disaster resistant stores. We recommended that they install a gas cogeneration system that can function as an emergency power generator in the case of a power outage and that uses the exhaust heat generated during power generation to provide air conditioning in the shopping mall and district heating/cooling under normal conditions. We also suggested introducing "Solar Link Excel," a double power generation system that combines photovoltaic power generation and a gas-powered heat pump air-conditioner with a power generation function, thereby contributing to reducing the peak demand 👊 Osaka Gas established a smart energy network (see P.25) in Iwasaki District, in cooperation with the local community.

# Overview of the Energy System Installed in Aeon Mall Osaka Dome City

In the case of a blackout caused by a natural disaster, gas is supplied to the emergency power generator-cum-gas cogeneration system through mid-pressure quake-resistant pipes, to secure emergency power.

# ■Where to supply power from the gas cogeneration system

- · Emergency power outlets (about 200 locations) Lighting (supermarket area and disaster
- recovery center) Freezing/cooling showcases (some) Pumps (water receiving tanks etc.)



Electric powe

Emergency power generator Solar Link Excel Where to supply power from the GHP with an independent power source Lighting in the food court District cooling / Electricity Gas Cold water Warm water heated by exhaust heat Medium-pressure gas pipe (earthquake-resistant) Individual air-conditioning

Aeon Group Contributes to the Community by its First "Disaster Resistant Smart Aeon" Store

The above shopping mall is Aeon Group's first Disaster Resistant Smart Aeon store which meets both disaster-preparedness and energy-saving requirements, thereby contributing to the community. For "disaster preparedness," various earthquake-resistant features have been incorporated in the building, and advanced energy systems have been adopted to secure emergency power. With these features, the Smart Aeon will be able to serve as a temporary evacuation shelter for the community in the case of a disaster. For "energy-saving," the Smart Aeon plays an important role in the smart energy network, supplying exhaust heat from the gas cogeneration system to a district cooling/heating plant. This project has been realized through close collaboration with the Osaka Gas Group. We are very grateful for their advice and support given to us, and are expecting deeper relationship between the two groups in the future.

Koichi Takahashi General Manager Construction Departmen Construction and Planning Administration Division Development Office Aeon Mall Co., Ltd



# The ENE-FARM and the ECOWILL with a Grid-Independent Operation Function Provide Uninterrupted Amenity at Home During Power Outages.

Distributed energy systems, including the ENE-FARM residential fuel cell cogeneration system and the ECOWILL residential gas cogeneration system, have been upgraded with a new function that allows grid-independent operation in the case of a power outage. The new models have aroused great expectations and interest from customers living in detached homes.

# **Challenges in Detached Housing**

From the electricity supply system centering on large-scale centralized power generation, to the distribution of power sources and the best mix of various energies--the Great East Japan Earthquake has triggered significant changes in public orientation and attitude toward energy. In the wake of the Earthquake, we have received many requests from our customers using residential gas cogeneration systems saying that they want to use their cogeneration system during power outages.



# **Proposal from Osaka Gas**

Osaka Gas has been promoting the widespread use of distributed energy systems that generate power at the site where it is consumed, and use the heat generated during power generation for hot water supply and heating, including the ENE-FARM residential fuel cell cogeneration system and the ECOWILL residential gas-engine cogeneration system. Osaka Gas released new models\* of ENE-FARM and ECOWILL, equipped with a new function that allows grid-independent operation in the case of a power outage.

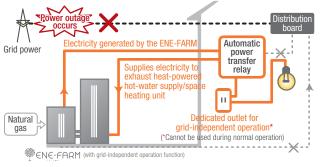
\*ENE-FARM with a grid-independent operation function: released in July 2012. ECOWILL with a grid-independent operation function: released in November 2012

# Features of a New ENE-FARM Model Capable of Grid-Independent Operation

- 1 Continues to generate electricity by operating in grid-independent mode even if a power outage occurs during operation.
- 2 Supplies up to about 350W of power to the dedicated outlet during grid-independent operation.
- 3 Automatically reconnects to the utility grid and returns to a normal operation when the utility grid returns to normal.
- Maintains hot water supply and floor heating, enabling users to stay comfortable during power outages.
- Conceptual diagram of grid-independent operation from power outage to restoration of power

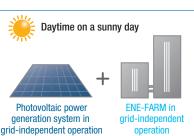


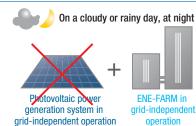
Mechanism of grid-independent operation (power generation) of the ENE-FARM during power outage



# Double Power Generation Ensures Greater Peace of Mind Even During Power Outages.

During the daytime on a sunny day, a photovoltaic power generation system and the ENE-FARM in grid-independent operation, produce enough electricity to meet your home's needs. On a cloudy or rainy day and at night, you can use electricity generated by the ENE-FARM operating in grid-independent mode. Double power generation provides a more stable supply of electricity during power outages.





The photovoltaic power generation system (independent power generation) and the ENE-FARM (independent power generation) need an independent dedicated circuit respectively.

# Gas Cogeneration Systems with Power Outage Response Capability and LPG Backup Contribute to Increased Energy Security for Customers in Collective Residences.

More and more office and apartment buildings are adopting gas cogeneration systems with power outage response capability that can supply electricity to pre-selected electric appliances even during power outages.

# Y<sub>1</sub>

# Challenges in Collective Housing < Hankyu Realty Co., Ltd.>

Hankyu Realty Co., Ltd. has adopted gas cogeneration systems for apartment buildings, which generate electricity by using gas to meet part of the electricity needs in the apartment building and utilize the exhaust heat for space heating of common spaces like the entrance hall. Following the Great East Japan Earthquake, Hankyu Realty established its own disaster mitigation standards and explored how to make collective housing more resistant to disasters.



Geo Niehinomiya Kitaguchi Gardene

# **Proposal from Osaka Gas**

We made a proposal to adopt a gas cogeneration system that is capable of continuing to generate electricity and supply electricity for the lighting of common spaces, information equipment and water-supply pumps, not only during grid power failures, but also when gas supply is interrupted due to an earthquake or other cause. Moreover, the gas cogeneration system is also economically efficient. Geo Nishinomiya Kitaguchi Gardens has installed gas cogeneration systems capable of independent operation during power outages, coupled with LPG backup systems.

# Features of the Gas Cogeneration System with LPG Backup to Enhance Energy Security

- 1 Installation of a power generator is not necessary because the cogeneration system can operate independently and generate electricity during power outages.
- 2 Even if natural gas supply is interrupted, the cogeneration system can continue to operate using LPG as backup fuel.
- 3 During normal operation, electricity generated by the gas cogeneration system is used to provide power to common areas including the entrance hall, and the exhaust heat generated during power generation is used for space heating and cooling of common areas.

Gas generator

Cogeneration system 35kW

(capable of grid-independent operation)

during power outage

(7 × 50 kg LPG cylinder)

24-hour operation possible

In an emergency

Changeover valve (2-way manual valve)
Switches to LPG air

During normal operation

orakenolaer collille

# We Will Offer Condominiums That Can Provide Residents with a Stable Supply of Electricity Even During a Disaster.

To further promote environmental protection, since 2008 Hankyu Realty Co., Ltd. has sold environmentally conscious Geo Series condominiums, equipped with energy creation systems such as gas cogeneration systems.

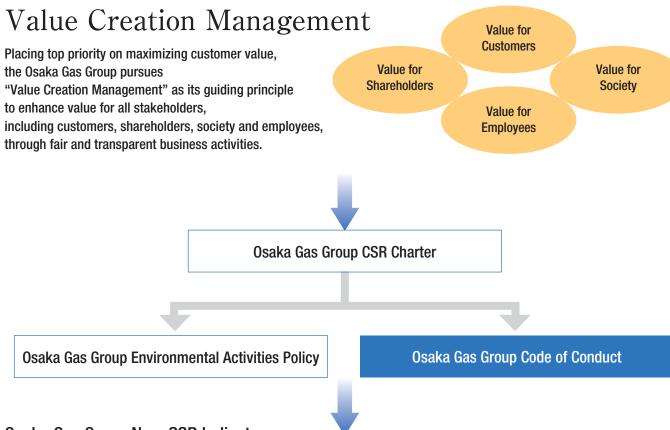
Following the Great East Japan Earthquake, we have developed our own disaster mitigation standards "Geo Fit + sonae" from the two aspects—"preparedness to prevent disaster damage" and "preparedness to protect post-disaster lifestyles," to develop and provide condominiums that are both environmentally friendly and resistant to disasters.

Kazunori
Tanimura
Assistant Manager,
Project Promotion Section
Apartment Development
Promotion Department
Hankyu Realty Co., Ltd.



# CSR of the Osaka Gas Group

Management Principles of the Osaka Gas Group



# Osaka Gas Group New CSR Indicators

CSR Charter	New CSR Indicators <2013 – 2014>	FY2013 Result
Creating value for customers	Customer satisfaction level for seven customer service duties Overall satisfaction rate 85% or more 82% or more in all satisfaction rates	Customer satisfaction level for seven customer service duties Overall satisfaction rate 90.6% Achieve over 82% in all satisfaction rates
Harmonizing with the environment and contributing to realizing a sustainable society	Environmental Management Indicator Environmental Management Efficiency 68 yen / 1,000 m³ or less	Environmental Management Indicator Environmental Management Efficiency 59 yen / 1,000 m <sup>3</sup>
Being a good corporate citizen contributing to society	Number of contacts and communication events Number of events held (on-site dietary and energy/environment seminars, etc.): 1,000 times Number of contacts (visitors to permanent facilities including Gas Science Museum): 70,000 people or more Social contribution activities: Number of activities implemented: 600 times or more	Number of contacts and communication events Number of communication events held: 2,004 times Visitors to permanent facilities: 70,865 people Number of social contribution activities implemented: 632 times
Complying with laws and regulations and respect for human rights	Compliance awareness survey scores (Individual) Level of understanding of the Code of Conduct: Higher than the previous year (Organization) Degree of penetration of compliance: Higher than the previous year Percentage of employees receiving compliance training: 100%	Compliance awareness survey scores Level of understanding of the Code of Conduct: 1.8p decreased Degree of penetration of compliance: 1.3p improved Percentage of employees receiving compliance training: 100%
Management policy for human growth	Employee opinion survey Maintaining sufficient levels in job satisfaction and sense of attachment to the company	Employee opinion survey Job satisfaction: 3.89 out of 5 Sense of attachment to the company: 4.38 out of 5

# CSR Management of Osaka Gas Group

Placing top priority on maximizing customer value, the Osaka Gas Group pursues "Value Creation Management" as its guiding principle to enhance value for all stakeholders, including customers, shareholders, society and employees, through fair and transparent business activities. We believe that pursuing value creation management means fulfilling our corporate social responsibilities.

In 2006, the Osaka Gas Group formulated the five principles of the Osaka Gas Group CSR Charter to ensure sustainable development through fulfilling our CSR. In addition, in 2007, we became the first utility in Japan to join the United Nations Global Compact 21. In 2008, we revised the Osaka

Gas Group Code of Conduct (formulated in 2000) to be in line with the UN Global Compact.

In 2009, we defined and announced CSR indicators for each of the five principles of the CSR Charter. These indicators have been used to promote our CSR activities and stakeholder dialogues.

Our CSR indicators are meant to visualize our CSR performance and thus promote our CSR initiatives. Since the present indicators were set for the period until fiscal 2014, we will consider a new target for each indicator. for fiscal 2015 and onward, based on our past performance.

# How the UN Global Compact and ISO 26000 are Related to the Osaka Gas Group Code of Conduct (revised in July 2011)

			aroup oddo or conduct (rovioca in odry 2011)	
United Nations Global Compact		ISO 26000: Core subjects Organizational governing	Osaka Gas Group Code of Conduct	
Human Rights	Principle 1 Businesses should support and respect the protection of internationally proclaimed human rights; and Principle 2 make sure that they are not complicit in human rights abuses.	Human rights Osaka Gas Group Code of Conduct 1 3 4 5 13	1 Respect for human rights	
			2 Creating a pleasant work environment	
			3 Compliance with laws and regulations ★	
			4 Personal and professional lives ★	
Labor	Principle 3 Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;	Labor practices Osaka Gas Group Code of Conduct	5 Respect for international rules and regulations as well as international norms including human rights norms	
	Principle 4 the elimination of all forms of forced and	2 3 4 5 13	6 Consideration to the environment	
	compulsory labor; Principle 5 the effective abolition of child labor; and Principle 6 the elimination of discrimination in respect of employment and occupation.		7 Compliance with anti-monopoly laws and practice fair transaction	
			8 Provision of products and services ★	
Environment	Businesses should support a precautionary approach to environmental challenges; Principle 8 undertake initiatives to promote greater environmental responsibility; and Principle 9 encourage the development and diffusion of	The environment Osaka Gas Group Code of Conduct 3 4 5 6 13	Ensuring safety of products and services	
			10 Interacting with customers	
			11 Contributing to society ★	
			12 Associating with business partners	
Anti- Corruption	environmentally friendly technologies.  Principle 10 Businesses should work against corruption in all its forms, including extortion and bribery.	Fair operating practices Osaka Gas Group Code of	Developing our partners' understanding of our Code of Conduct ★	
		Conduct 3 4 5 7 12 ~ 18	14 Use of information and information systems	
		Consumer issues	15 Disclosure of information ★	
CLOBAL COLLEGE		Osaka Gas Group Code of	16 Management of intellectual property	
		Conduct 3 4 5 8 9 10 13	17 Prohibiting association with anti-social forces	
	ME SUBDOT	Community involvement and development	18 Appropriate payment of taxes and accounting practices ★	
WE SUPPORT		Osaka Gas Group Code of Conduct 3 4 5 11 13	★ Revised item  Numbers in the center column show the items of the Osaka  Gas Group Code of Conduct relating to each core subject of  ISO 26000.	

# The Osaka Gas Group Supports the Women's Empowerment Principles (WEPs).

In fiscal 2011, Osaka Gas endorsed the objective of the Women's Empowerment Principles (WEPs), a partnership initiative of UN Women and UN Global Compact, and expressed its support for the Principles. WEPs are a set of seven principles offering practical guidance to companies, private organizations in advancing women's empowerment in the workplace, in the market, and in the community. The seven Women's Empowerment Principles are as follows: Establish high-level corporate leadership for gender equality; Treat all women and men fairly at work – respect and support human rights and nondiscrimination; Ensure the health, safety and well-being of all women and men workers; Promote education, training and professional development for women; Implement enterprise development, supply chain 11 and marketing practices that empower women; Promote equality through community initiatives and advocacy; and Measure and publicly report on progress to achieve gender equality.

# Osaka Gas Group CSR Activities in the Value Chain

As its mid- and down-stream businesses in the natural gas value chain, Osaka Gas has conventionally been engaged in the importation and receipt of natural gas, regasification at LNG terminals, and gas supply to customers via pipelines . In recent years, we have also focused our attention on and accelerated the upstream business, including participation and investment in projects for overseas gas fields and liquefaction plants.

As a company dealing with energy, Osaka Gas has a responsibility to be attentive to the social impact of its wide-ranging business activities. We are therefore aware that

we should act to avoid or minimize the negative impact that may arise in our value chain from procurement to sales, giving greater consideration than in the past.

At the same time, we will promote our business partners who comprise the value chain to behave ethically and conduct activities in consideration of society and the environment, by sharing Osaka Gas's CSR concept and policy in an integrated manner

# We Will Work to Improve the CSR Standards of the Entire Value Chain

As the Osaka Gas Group's business field expands, its value chain is also enlarged. To enhance CSR activities throughout the value chain, I believe that it is important to hold dialogues with a variety of stakeholders, including our business partners, customers, and experts, to properly identify the social issues.

We also intend to strengthen CSR-related communication with partners comprising our value chain and thereby resolve those social issues. While continuing to grow together with our partners, we will work to improve the CSR standards of the entire value chain.

Hiroshi Hara
Manager, CSR Office,
CSR & Environment Department
Osaka Gas Co., Ltd.



# Dialogues and Collaboration with Stakeholders

The Osaka Gas Group attaches importance to dialogues with various stakeholders, as a means of discerning in advance the negative impact that may arise in our value chain, so as to avoid or minimize such an impact.

For example, we held dialogues with members from the Council of the Kansai Consumers' Association (pages 15 and 16), the Osaka Voluntary Action Center (pages 19 and 20), and the Osaka Gas Workers Union (pages 23 and 24). We also exchange information with various stakeholders via the UN Global Compact Japan Network, actively participate in policy-making opportunities, advocacies by World Business Council for Sustainable Development\* as a member company. Through these dialogues and opinion exchanges, we promote our CSR activities. Moreover, Osaka Gas is active in

implementing collaborative projects with other companies, universities and NPOs. Examples of our collaboration with various stakeholders include the open innovation projects to bring together and make effective use of various technologies of universities and small and medium enterprises (SMEs), the "Learning About Fire" program promoted in cooperation with the NPO Plus Arts and the Kobe City Local Human Resources Development Support Center, and the easy cooking classes for visually impaired people, held jointly with Nippon Meat Packers, Inc.

\* World Business Council for Sustainable Development: a CEO-led organization of approx. 180 of forward-thinking companies that galvanizes the global business community to create a sustainable future for business, society and the environment. Established in 1995.

# Drilling in Natural Gas Fields Plants Liquefaction Plants LNG Tanker Transportation LNG Terminals Business offices Gas Pipes PL Customers (Gas consumers)

# **Procurement**

- ◆Notification of suppliers of CSR purchasing guidelines based on the UN Global Compact
- ◆Reducing CO₂ emissions by introducing fuel-efficient LNG carriers (currently under construction, planned to enter service in 2014 or later)
- ⊙Giving consideration to biodiversity conservation during transportation by LNG carriers



# **Processing**

- **⊙**Safety and security measures 24 hours a day, 365 days a year
- ODisaster preparedness and prevention efforts
- Ensuring work safety
- ⊙Energy-saving activities in the processing process
- Biodiversity conservation activities at LNG terminals
- Establishing sections for receiving reports and consultations from partner companies
- Securing gas quality and safety
- OVolunteer activities in areas around LNG terminals

# Supply

- ⊙Safety and security measures 24 hours a day, 365 days a year
- ODisaster preparedness and prevention
- ⊙Ensuring work safety
- Reducing CO<sub>2</sub> emissions through modal shift in transporting LNG
- OEstablishing sections for receiving reports and consultations from partner companies



# Sales

- ◆Ensuring customer safety through the All-Employee Gas Safety Initiative
- Protecting the personal information of customers
- Reducing CO<sub>2</sub> emissions at customer sites by promoting the use of highly efficient equipment and systems
- Providing information on the safe use of equipment
- ◆Responding to consultations, complaints, and opinions from customers
- Promoting environmental education, dietary education and a "Learning About Fire" program

# Creating Value for Customers

The Osaka Gas Group is committed to making a positive contribution to realizing a higher level of comfort and development in the business activities of its customers. The group intends to achieve this objective through the provision of a reliable and safe supply of natural gas and other energy services with an improved level of services for its customers. We also pursue the development of new products and services furthering value for customers, and that create opportunities for growth for our business and customers and society at large.

# Hiahliaht

- Development of a New ENE-FARM Model Capable of Generating Electricity Even During Power **Outages, Incorporating Customer Feedback.**
- Participating in a Shale Gas and Liquids Development Project in Texas, U.S.
- Participating in a Natural Gas Retail Business for Industrial Customers in Singapore

**Target & Results** 

# **CSR Indicator: Customer Satisfaction Survey:** Seven Customer Service Duties

1) Overall satisfaction rate 90.6% 2) Achieve over 82% in all satisfaction rates

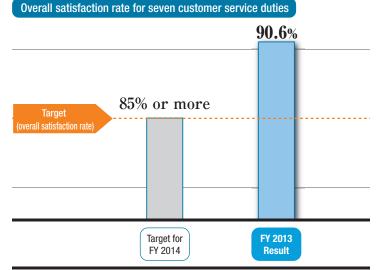
The customer satisfaction survey covers the following 7 items in which Osaka Gas deals directly with end users: "opening of gas lines," "repair of gas appliances," "regular security inspections (gas facilities inspections)," "response to telephone inquiries," "sales of appliances," "security emergency response," and "replacement of gas meters upon expiration of the validity period." A written survey, which contains questions on levels of satisfaction and quality of service, will be mailed to customers after completion of the service concerned.

Overall satisfaction is a rate of response for "very good" and "good" among six options.



# **FY2013 Results Overview**

With the aim of improving service quality, Osaka Gas has conducted customer satisfaction surveys since 1988. The overall satisfaction rate was 90.6% in fiscal 2013. We continue striving to improve our services based on customer feedback, so as to provide services that best meet the needs of our customers



We Will Promote the Development of Systems That Facilitate **Energy Conservation, Pursue Further Cost Reduction,** and Proactively Disseminate Information.

We sincerely appreciate your expectations for Osaka Gas. We have long striven to spread the use of energy-saving equipment that will help mitigate global warming. After the Earthquake disaster, we have received many opinions that prompt us to reconsider what Osaka Gas can do in terms of stable energy supply. In the future, we will continue to encourage the widespread use of independent power generation and energy-saving equipment, including double power generation systems, which combine fuel cells and solar power generation. In addition, we will pursue the development of products that meet consumer needs, and further cost reduction and proactive information dissemination, so as to offer optimal solutions to the various needs of our customers.

I Expect Osaka Gas to Fulfill Customers' Wishes for **Environmental and Energy-Saving Solutions.** 

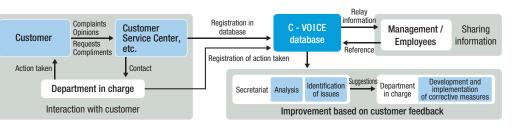
Since the Great East Japan Earthquake, which struck on March 11, 2011, consumers have come to study more about energy and to act with greater consideration to energy than ever before. Osaka Gas has promoted the use of distributed energy systems and energy-saving equipment, as well as the development of smart energy houses using these systems and equipment. Such initiatives generally satisfy consumer needs. It is true that as a business enterprize, Osaka Gas must conduct business on a basis of profitability. However, all consumers do not always seek profitability. Taking photovoltaic power generation as an example, some consumers install solar cells at their own expense, just for the sake of the environment. I expect that Osaka Gas will propose new solutions that will live up to the wishes of these environmentally conscious consumers.

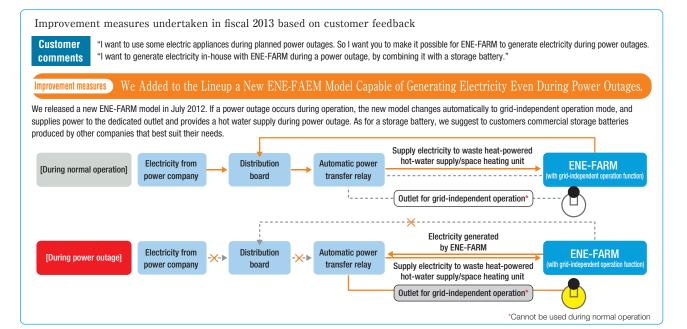
Hideo lida Council of the Kansai Co

**Incorporating Customer Opinions** 

# C-VOICE, a System That Enables Customer Feedback to Be Used for Our Business Improvement

Osaka Gas has established a database system that enables company-wide sharing of customer opinions and requests that we receive at various opportunities. With C-VOICE, we make effective use of customer feedback for our business improvement and quality enhancement of our products and services.





Yuko Kusui Manager, Service Planning Team, Customer Service Departm Osaka Gas Co., Ltd.

# Harmonizing with the Environment and

Addressing the issues of the environment both at regional and global levels is of paramount importance for the Osaka Gas Group which is engaged in wide-ranging energy services. Being seriously aware of the impacts of its business activities on the environment, the Group seeks to harmonize its businesses with the environment and to realize efficient utilization of energy resources, thereby contributing to realizing a sustainable society.

# Contributing to Realizing a Sustainable Society

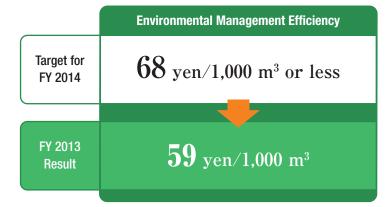
# Hiahliaht

- Development of Smart Energy Network
- A "Smart Energy Building" Featuring an Energy Conservation Mechanism by Focusing on People's Behavior
- Activities to Preserve Biodiversity at LNG Terminals

# **Target & Results**

# **CSR Indicator: Environmental Management Indicators:** Environmental Management Efficiency

Osaka Gas uses Environmental Management Efficiency as an indicator to assess progress in environmental management in a continuous, integrated manner. This indicator is the total monetary value of six environmental impacts per gas sold: greenhouse gas emissions, NOx emissions, COD\*1, final disposal of general and industrial waste, final disposal of excavated soil\*2 11, and chemical substance emissions. This allows us to quantitatively measure how much we are reducing our environmental impact arising from our business activities. From the fiscal 2013 results, we have added water consumption (general and industrial water) as an environmental impact to be counted in this indicator. The smaller the figure for environmental management efficiency, the greater the reduction in environmental impact per amount of gas sold.



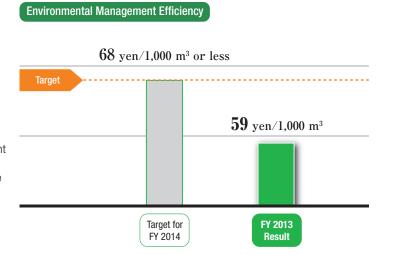
\*1 COD: Chemical oxygen demand. An indicator of water quality. Increase in COD indicates an increase in the amount of pollutants in the water

<sup>2</sup> Excavated soil: Soil and asphalt waste generated during excavation works for burying or relocating of gas pipes 🗓 under the road.

# FY 2013 Results Overview

We strove to reduce the amount of electricity we purchase from the electric utility through the efficient use of LNG (11) cold heat at the LNG terminals and the green gas building promotion activities aimed at saving energy in office buildings, and to reduce the amount of excavated soil for final disposal. Thanks to these efforts, the monetary equivalent value of environmental impact, which is the numerator in the formula for calculating the environmental management efficiency, was 501 million yen.

Meanwhile, the amount of gas sold, which is the denominator in the formula, decreased by about 2%. Therefore, the environmental management efficiency stood at 59 yen/1,000 m<sup>3</sup>, already achieved the fiscal 2014 target of 68 yen/1,000 m<sup>3</sup>.



# **Hope for Further Expansion of Environmental Activities** Based on the Group-wide EMS

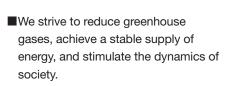
Osaka Gas acquired the certification for company-wide integrated ISO 14001, and has continued environmental activities across the Group. In addition, all the Group companies in Japan have established and actively implemented environmental management systems (EMSs 1121). I understand that, on the basis of EMSs, Osaka Gas has steadily continued its environmental activities and achieved positive results. I can also appreciate the company's proactive efforts to address environmental problems, by taking energy security measures and developing energy-related technologies, in response to the needs of the time. In the future, I expect that Osaka Gas will encourage its business partners in the value chain and overseas affiliates to work to minimize environmental impacts.

Ms. Yoshika Yamamoto Associate Professor, Setsunan University

# **Contributing to a Sustainable Society**

Reduction of CO<sub>2</sub> emissions

13 million tons



**Efforts at Customer Sites** 

■Centered on natural gas, we pursue the best mix of energy (combination with renewable energy n sources, etc.), promote the widespread use of distributed systems, and boost energy saving.

Promoting Widespread Use and Advanced Use of Natural Gas

Spread the use of natural gas and develop highly efficient equipment and systems

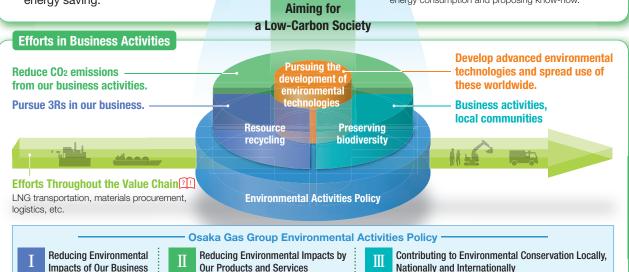
**Spread of Distributed Energy Systems** Promote widespread use of cogeneration systems.

Using Renewable Energy

Expand the use of renewable energy by combining it with high-efficiency gas equipment

Improving Customers' Energy Efficiency Through Energy Services

Improve customers' energy efficiency by visualizing energy consumption and proposing know-how.



We Will Strive to Reduce Environmental Impact Throughout the Value Chain by Pursuing Energy Conservation, CO<sub>2</sub> Emissions Reduction and the 3Rs.

Thank you very much for your understanding of Osaka Gas's EMSs and other environmental efforts. We will stay committed to reducing greenhouse gas emissions at customer sites, by promoting widespread use of high-efficiency fuel cells and cogeneration systems. Moreover, for instance, by proposing the cogeneration system that also serves for emergency power generation, we will meet the demands of the present time, including enhanced energy security. To help realize a sustainable society, we will continue our efforts throughout the value chain, by taking measures to save energy and reduce CO2 emissions during the importation of LNG from overseas, and by promoting the 3Rs in collaboration with our

Chika Kuwahara General Manager, CSR & Environment Departmen Osaka Gas Co., Ltd.

# **CSR Charter**

# Being a Good Corporate Citizen Contributing to Society

As a good corporate citizen, the Osaka Gas Group strives to maintain communication with society and the communities it serves. Through proactive disclosure of information and improved managerial transparency, we intend to establish favorable relationships with citizens and to make our positive contribution to the development of a healthy society.

# Highlight

ncreased desire

for

contribution among

- Holding Bazaars to Support Victims and Areas Affected by the Great East Japan Earthquake
- Receiving the 10th Corporate Philanthropy Special Award in Recognition of Hajimaru-kun(R), an Osaka Gas Group-Wide Social Action Program
- Establishing the High School OMS Drama Award with the Aim of Fostering Dramatists in the Kansai Region
- Delivering a Total of 1,235 On-Site Energy and Environmental Lessons for Elementary, Junior-High and High School Students
- Launching the Educational Grant Program in East Timor (Osaka Gas Foundation of International Cultural Exchange)

# **Target & Results**

# **CSR Indicator:** Number of Communication Events and Contacts

The number of events (for environmental/dietary communication) represents the number of energy/environmental and dietary education seminars actually conducted. The number of contacts represents the total number of visitors to the Gas Science Museum and the Himeji Gas Energy Hall. The number of events (for social contribution activities) represents the number of social contribution activities implemented by our sports clubs, the NOBY Track & Field CLUB, and the Osaka Gas Group Welfare Foundation, and conducted as part of the Small Light Campaign and other initiatives.

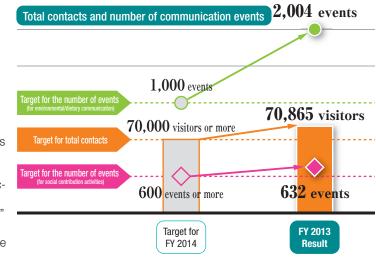


# **FY2013 Results Overview**

We have revised the indicator calculation method for fiscal 2013, so that the indicators will more clearly reflect the results of our social contribution activities, and will be more suited to the actual conditions.

Regarding programs to foster the next generation, the number of dietary education and energy/environment education seminars held was about double our target number, and our sports clubs and the actively held baseball and athletic sports classes.

On the cultural side, we supported the reproduction and radio play adaptation of OMS Drama Award-winning works, and held "Naniwa-no Kataribe" cultural promotion programs at the Head Office, and implemented other social contribution activities unique to the Osaka Gas Group.



**Expecting Further Expansion of Various Social Contribution** 

I feel that Osaka Gas's local community contribution activities in recent years have

and NPOs are involved in supporting the areas affected by the Great East Japan

Earthquake. This is a great encouragement for people in the disaster-hit areas. The

Osaka Gas Group also operates "Hajimaru-kun (R)," which is a program that helps

increase employment opportunities for physically challenged preople. by combining

various resources. I expect that Osaka Gas will pursue the further development of its

unique social contribution activities, while continuing its diligent efforts and dialogues

**Activities Through the Synergy of "Resources and Collaboration"** 

been taking advantage of the synergy of "resources and collaboration." Osaka Gas has continued to use the Midosuji Boulevard as a venue for bazaars, in which many groups

In Collaboration and Coordination with Various Stakeholders, We Will Promote Social Contribution Activities Characteristic of the Osaka Gas Group.

In today's complex society, there is a limit to what a single company alone can do for local communities. To implement high-quality activities that help resolve social issues, it is indispensable to collaborate and coordinate with not only other companies, but also with various stakeholders, including local governments, schools, social entrepreneurs, NPOs, intermediary support organizations, and citizens.

We will make more proactive use of the resources that we have developed through our business operations, such as technologies, expertise, human resources and facilities. By promoting activities making use of Osaka Gas's unique strengths, we will strive to live up to the expectations of our stakeholders.



Ms. Ava Mizutani Director, Osaka Voluntary Action Cente

# **Activities of Communication with Customers in FY2013**



We Have been Pursuing Various Activities to Promote the Health, Safety and Security of Society at Large.

Ever since completing the Gas Building, the head office of Osaka Gas, in 1933, Osaka Gas has carried on its tradition of using cooking lessons to provide knowledge, awareness, and information related to food and food culture. We have also worked vith local governments to promote the health, safety and security of society.





We Have been Striving to Protect the Environment. While at the Same Time Working to Disseminate Advanced Knowledge on the Environment.

Besides sending employees to teach lessons on energy and the environment at elementary, junior high and senior high schools, Osaka Gas contributes to improving citizens' awareness through workshops and exhibitions. Since 2005, the Osaka Gas Forest has been contributing to the protection of the forests along the historic Kumano Kodo pilgrimage route.





We Make Full Use of Our Resources Including Human Resources, Facilities and Technologies, to Contribute to the Revitalization and Development of Local Clommunities.

As a token of our gratitude to local communities, we conduct numerous events and activities: fun events at Osaka Gas business sites inviting local residents, community cleanup activities, and work experience program for local junior high school students.

Masaaki Emoto Manager, Social Contributions Promotion Team, Regional Development Department Osaka Gas Co., Ltd.



# Complying with Laws and Regulations and Respect for Human Rights

The management's and the employees' compliance with laws and regulations forms the basis for gaining society's trust. Our perspectives on compliance go beyond legal and regulatory boundaries to include decent conduct expected of all citizens. Based on our respect for human rights, we intend to maintain equitable relationships with our customers, business partners, and other parties.

# **Highlight**

- Activities to Prevent the Recurrence of Problems
- Actively Holding Case-Method Training Programs to Enhance Corporate Ethics
- Implementing Compliance Measures Based on an Analysis of the Trends and Content of Consultations
- Receiving a Testimonial from the Mayor of Osaka as a Company That Has Made Distinguished Contribution to the Promotion of Human Rights Awareness

**Target & Results** 

**CSR Charter** 

### **CSR Indicator:**

# Scores on Compliance Awareness

Understanding level of Code of Conduct, Penetration level of compliance\*1 in organization Percentage of Employees Receiving Compliance Training

Since fiscal 2013, we have been using the following three perspectives as key indicators to promote compliance.

### (1) Understanding level of Code of Conduct

Does each and every employee understand the Osaka Gas Group Code of Conduct, which serves as the foundation for our compliance

### (2) Penetration level of compliance in the organization

Do employees recognize that compliance awareness permeates throughout their organization?

(3) Percentage of employees receiving compliance training

Are trainings effectively implemented?

\*1 For the Osaka Gas Group, the penetration of compliance means not merely having employees understand the importance of compliance at a mental level, but firmly instilling compliance awareness in employees so that they can always implement compliance activities as a matter of course and as part of their daily operations

As for indicators (1) and (2) above, the Osaka Gas Group has been conducting compliance awareness surveys that was introduced in fiscal 2004 and aims to obtain higher scores in the survey than in the previous year. Concerning indicator (3), we work to ensure that all employees receive compliance training.

	Compliance		
Target for FY 2014	Scores on compliance awareness	Percentage of employees receiving compliance training	
112014	Continued improvements in all items over the previous year	100% of employees received compliance training	

FY 2013

- (1) Understanding level of the Code of Conduct decreased
- (2) Penetration level compliance in the organization improved
- (3) 100% of employees received compliance training

12 In fiscal 2013, the compliance awareness survey was conducted not only on regular employees but also on temporary employees, part-time employees and other employees who have been directly hired for more than one year, with 16,622 respondents answering the survey. When compared with the previous year's results on the basis of regular employees, while



Osaka Gas is actively working to promote respect for human rights among employees, through such measures as human rights training for all job levels, the compliance desk that is also open to temporary workers, and its business partners. These measures are beyond the standards required by laws and regulations.

On the other hand, however, the promotion of diversity 111 is not sufficient. While Osaka Gas annually hires disabled persons, whose rate is more than 2.0% of its workforce, the number of female employees in the managerial position does not yet reflect the proportion of male and female workers in the company. In addition, as the scope of its business operations expands, Osaka Gas should strengthen efforts in the overseas energy value chain . To make these efforts in Japan and overseas more visible to stakeholders, I expect that Osaka Gas will work toward the establishment of a system and process to set specific targets and achieve these targets.

Ms. Emi Sugawara 👸

# **FY2013 Results Overview**

# **Scores on Compliance Awareness**

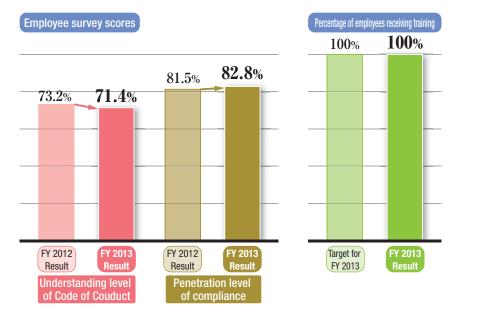
The degree of penetration of compliance in the organization was rather high, exceeding 80%, whereas the level of understanding of the Code of Conduct was in the low 70s.

In fiscal 2014, we will continue activities to improve the level of understanding of the Code of Conduct, by ensuring that all employees understand the Code of Conduct through compliance training programs and by other means.

# **Percentage of Employees Receiving Compliance Training**

Each organization and affiliate held training programs tailored to its workplace and workflow, and strengthened measures to ensure that employees failing to take the training could receive it. As a result, we achieved our

In fiscal 2014, we will continue to work diligently to further improve compliance.



We are Committed to Enhancing Human Rights Awareness Through Training. In the Future, We Will Strive to Establish a Workplace Culture That Respects Human Rights.

At the beginning of the Osaka Gas Group Code of Conduct, we have stipulated respect for human rights. In line with the Code of Conduct, we have been working on human rights education, organizing training programs designed for all job levels, as well as seminars and training for all Group employees, to ensure that all employees can obtain correct knowledge about human rights and act on that knowledge. At the same time we have been active in participating in human rights-related activities outside the company.

However, I admit that our efforts are not yet sufficient, as Ms. Sugawara points out. In April 2013 we set up a Diversity Promotion Team to undertake the issue of diversity. We will continue to sincerely respond to opinions from stakeholders inside and outside the company, and strive to firmly establish a workplace culture that respects human rights from a global perspective, and to further visualize our efforts.

Tadashi Awaji Director, Human Rigonaka Gas Co., Ltd.

# Management Policy for Human Growth

The Osaka Gas Group strives to become a group of enterprises to realize the growth of its employees through work by ensuring employment opportunities and respecting employees' individuality and initiative. With discipline and self motivation, we will charge ourselves with the task of creating new value for customers, shareholders and society. Through mutual trust and decency, the group and its employees strive to achieve sound growth of the corporate group.

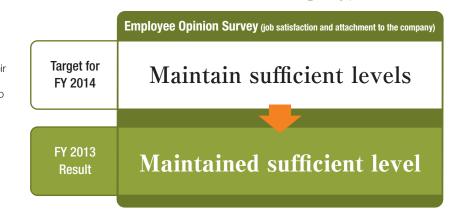
# Highlight

- Establishing a Diversity Promotion Team
- Systematic Training Programs to Support the Human Resource Development of the Osaka Gas Group
- Conducting an Employee Opinion Survey to Gather Employee Opinions in 21 Categories, Including "Job Satisfaction."

**Target & Results** 

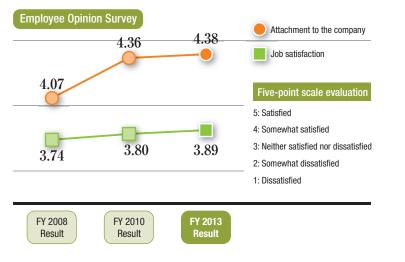
# Employee Opinion Survey (Job Satisfaction and Attachment to the Company)

Osaka Gas periodically conduct employee opinion surveys to understand how employees satisfy with their job, workplace environment, superiors, company systems, and so on. Employees are asked to rate their satisfaction level on a five-point scale for 21 categories ("job satisfaction," "attachment to the company," etc.) and to leave an open comment. The most recent opinion survey was given to all employees in fiscal 2013.



# **FY 2013 Results Overview**

We conducted an employee opinion survey to understand year-by-year change in awareness of employee and how far the personnel system that was introduced in fiscal 2012 had taken root and how it was operated. The survey results showed that employees gave higher ratings than the results of the previous survey (in fiscal 2010), in the categories of "job satisfaction" and "attachment to the company," which are among our CSR indicators, and created a booklet titled "Support for Balancing in the category of "satisfaction with the personnel system."

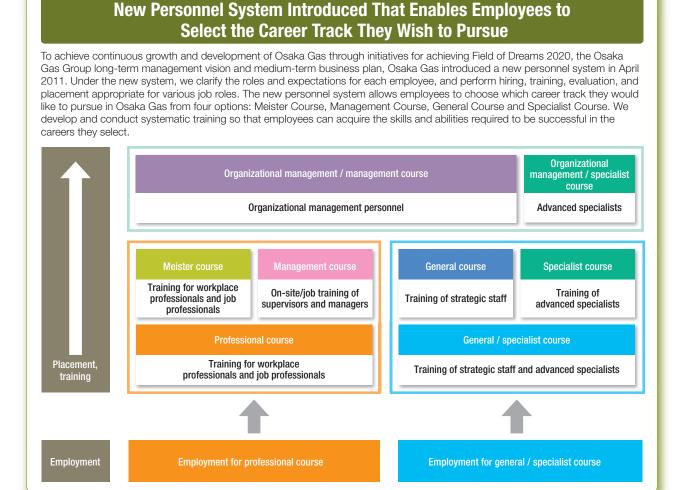


# Stakeholder comment

# We Will Work to Achieve an Optimal Life-Work Balance Through Close Cooperation Between Labor and Management.

To achieve a better life-work balance, it is important to create a workplace environment that not only ensures employees' physical and mental well-being by preventing health problems due to overwork, but also enables employees to make a distinction between work and private time. I hope that each workplace will continue their constant efforts to develop and establish more effective and practical measures to realize such a working environment. Toward this end, we need to promote awareness and understanding about a reduction in total working hours among employees and supervisors/managers. We will remain committed to realizing an optimal life-work balance, through close cooperation between labor and management.

Yoshiko Kabumoto Secretary-General Osaka Gas Workers Union



Reply from the person responsible

To Reduce the Annual Total Working Hours per Employee, We Will Seek to Change the Mindset of Individual Employees and to Improve Work Efficiency.

We believe that it is essential to realize a workplace where there is no overwork and where employees can achieve a Life-Work balance, in order to improve value for employees as stipulated in the Management Principles of the Osaka Gas Group, and to promote workforce diversity aimed at business development through the effective use of diverse human resources and their diverse values. From fiscal 2013, we will seek to 1) change the employee mindset by shortening and limiting the durations of meetings and the time during which employees stay in their workplaces; 2) strengthen time management education for managers; and 3) make an inventory of jobs; thereby improving work efficiency and leveling the workload. Through these measures, we will strive to improve awareness of time management and productivity in order to reduce the total annual working hours per employee.

Nobuya Ogawa Manager, Personnel Planning Team Human Resources Department, Osaka Gas Co., Ltr

# Major Activities in FY 2013



# **CSR Activities in Figures**

# 7 countries Number of countries from which

Osaka Gas imports LNG 21

2,983 locations

Usage rate for gas stoves with

an automatic shutdown function

and automatic gas shut-off devices are installed

Multi-Energy Business

# Participating in a Shale Gas<sup>11</sup> and Liquids Development Project in Texas, U.S.

Osaka Gas has participated in the Pearsall shale gas and liquids project in the state of Texas in the United States, by concluding an agreement with Cabot Oil & Gas Corporation, a U.S. company, to acquire a 35% stake in the project. It was the first time for Osaka Gas to acquire interests in an unconventional shale gas and liquids project in the United States. Starting in July 2012, Cabot and Osaka Gas embarked on a venture estimated to operate approximately 30 years. Over this period, we will drill several hundred wells and produce natural gas, condensate and NGLs\* to be marketed in the United States.



A ria drillina a wel

\* NGLs: Short for natural gas liquids, which are hydrocarbons produced as natural gases that remain in a liquid state even at normal temperatures and pressures.

**CSR Activities in Figures** 

10.9

CO<sub>2</sub> emission per unit of gas sale

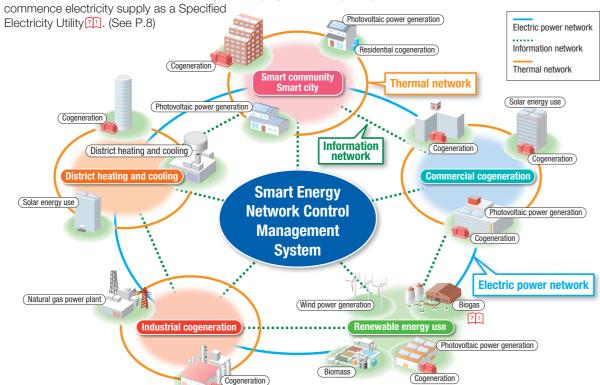
at LNG terminals (t-CO<sub>2</sub>/million m<sup>3</sup>)

Industrial waste from LNG terminals (final disposal rate) Excavated soil 21 from gas pipe

**Technological Development** 

# Development of Smart Energy Networks

A smart energy network is a next generation energy system that optimizes energy use by combining gas cogeneration systems, renewable energies 11 and information and communications technology (ICT). The smart energy network provides the following three benefits, by arranging the interchange of energy among multiple uses within a specific area ("energy community") and by performing integrated control of dispersed energy sources: (1) increased energy conservation and CO2 emission reductions; (2) improved energy security; and (3) wider diffusion of renewable energies. Between fiscal 2011 and 2013, Osaka Gas and Tokyo Gas jointly participated in the Dispersed Energy Compound Optimization Demonstration Project of the Ministry of Economy, Trade and Industry (METI). Osaka Gas implemented demonstration experiments with the cooperation of nine customers. Making use of these experiment results, we commenced business demonstration experiments for the Smart Service Provider (SSP) business in June 2012. Starting in June 2013, we will establish a smart energy network in the redevelopment project of Iwasaki District (Nishi Ward, Osaka City). In the project, whose participants include AEON Co., Ltd, Osaka Gas will





# **CSR Activities in Figures**

# 8,601,000 yen

Donations made by customers : Employees' volunteer activities for nd employees for disaster relief

4 times, a total of 24 people

the recovery of disaster-hit areas

1,235 lessons, 46,046 people

Numbers of on-site energy and environmental lessons held and participants

140,000 (in total) Number of free copies

of dietary education booklets ("Dietary Education Book-Why and What?

provided to elementary school

Activities at Osaka Gas's Foundations

# Launching the Educational Grant Program in East Timor with Cooperation from IICA

The Osaka Gas Foundation of International Cultural Exchange (OGFICE) launched an educational grant program in the Democratic Republic of Timor-Leste (East Timor), with cooperation from the Japan International Cooperation Agency (JICA). It was Japan's first collaborative program between JICA and a Japanese company to support human resource development in East Timor, Under this program, scholarships are awarded annually to 20 selected students of the Faculty of Engineering, Science and Technology of the National University of Timor-Lorosa'e (UNTL), and two teaching staff members of the same faculty are invited each year to Japan to receive short-term training. Through this project, we will contribute to the development of East Timor, and work to help strengthen amicable relations and international goodwill between Japan and East Timor.



Ceremony to sign the memorandum of understanding on offering scholarships and training grant to UNTL



**CSR Activities in Figures** 

Number of consultation and reports received

Number of works submitted to

**Compliance Promotion Efforts** 

# Actively Holding Case-Method Training Programs to Enhance Corporate Ethics

awareness-raising slogan contests

Since fiscal 2013, Osaka Gas has been actively holding "case-method training" programs to enhance corporate ethics. Approximately 5,500 employees participated in these training programs in fiscal 2013.

This case-method training is a teaching approach that develops the ability of ethical thinking. Trainees are presented with cases that involve difficult judgments, and hold group discussions, so as to discover and analyze problems and to make decisions. We believe that the promotion of training using the case method will help improve ethical standards of employees and create a workplace climate characterized by open communication in which employees can freely exchange





# **CSR Activities in Figures**

employees in Osaka Gas

Ensuring a Diversified Workforce

# Establishing a Diversity Promotion Team

To develop a workplace environment that enables employees to maximize their abilities regardless of sex, age, nationality or other attributes, we established a Diversity Promotion Team in the Human Resources Department in April 2013. To begin with, the Team is working mainly on the following:

# Career development support

- · Planning and conducting interviews and trainings for female employees
- Creating an employee-friendly workplace
- Supporting the formation of networks inside and outside the company
- · Planning and implementing awareness-raising programs designed for managers and supervisors to encourage the cultivation of female leaders

# Environmental Management Systems and Measures Against Environmental Risks

# Continued Certification for Company-Wide Integrated ISO 14001

Osaka Gas began efforts to acquire ISO 14001 certification in fiscal 1998, and all its business units were certified by the end of fiscal 2006. From fiscal 2007, we started integration of all the EMSs across the company to enhance company-wide environmental management. Osaka Gas was accredited integrated certification in December 2007. We are striving to reduce the impact of our operations on the environment and to comply with environmental laws and regulations through effective implementation of EMS.

### Osaka Gas ISO 14001 Certification Dates

Business unit	Date
LNG 🕮 Terminal & Power Generation Business Unit	October 1997
Head Office	September 2001
Energy Technology Laboratories	July 2002
Pipeline Business Unit	May 2005
Commercial & Industrial Energy Business Unit	February 2006
Residential Energy Business Unit	March 2006
Integrated certification accredited	December 2007

# 80 Affiliates in Japan Have EMSs in Place

In accordance with the Osaka Gas Group Environmental Management Regulations, all Group companies in Japan have established and implemented environmental management systems.

# EMS Establishment / Implementation Status in Affiliates (as of April 1, 2013)

Standard	Outline	Number of companies with an EMS in place
ISO 14001	An international EMS standard set by the International Organization for Standardization (ISO)	12
Eco Action 21 (EA21)	An EMS standard based on the Eco Action 21 Guidelines of Japan's Ministry of the Environment	3
KES	An EMS standard established by the Kyoto Local Agenda 21 Forum, which is made up of the municipal government, businesses, and citizens	2
OGEMS®*	A standard established by Osaka Gas for its affiliates, based on Eco Action 21	66

<sup>\*</sup> The number of affiliates that have established EMSs is 83 in total, since three affiliates have established EMSs of both ISO 14001 and OGEMS(R) standards.

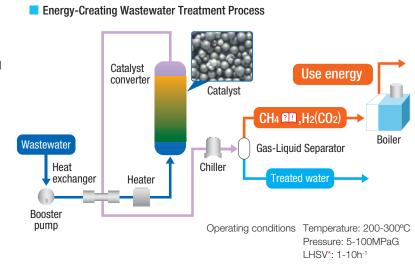
# **Environmental Risk Management**

As part of our efforts to minimize environmental risks, we ensure proper management of chemical substances in compliance with the relevant laws and regulations, and continue soil and groundwater conservation efforts at former coal gas production sites. No legal violations occurred in fiscal 2013.

# Winning the Special Engineering Promotion Award for the Energy-Creating Wastewater Treatment Process

Osaka Gas developed a process to decompose organic matter contained in wastewater produced from chemical plants, at high speed by using a catalyst. This process has enabled effective use of gas generated during wastewater treatment as a fuel for boilers within the factory. As compared with the conventional treatment through incineration, this wastewater treatment process can reduce CO2 emissions by approximately 110% and wastewater treatment cost by approximately 40%.

In fiscal 2011, we commenced demonstrative operations at customer' plants, achieving a series of positive results. For such achievements, energy-creating wastewater treatment process won the Advance of Technology Award (Technical Department) from the Japan Institute of Energy, and the Special Engineering Promotion Award from the Engineering Advancement Association of Japan.



 $^*$ LHSV: Liquid Hourly Space Velocity which devided liquid flow using catalyst capacity

# Environmental Action Targets and FY2013 Results

Third-party verification completed.

Osaka Gas underwent third party verification
by Bureau Verification Co. Ltd.

by Bureau Veritas Japan Co., Ltd.										
Area	Indicator Target for FY 2014		FY 2013 Results							
Integrated indicator	Environmental management efficiency	gement (Monetary value (yen) of GHG (1), excavated soil (1), waste, NOx, COD, chemical substances, (26% decrease compared to F72009)			59					
		City Gas	LNG terminals (CO <sub>2</sub> emissions per 1 million m³ of gas sold) (t-CO <sub>2</sub> /1 million m³)	12.3 (5% decrease compared to FY2009)	10.9					
	Reducing CO <sub>2</sub> emissions from our business activities	business	Office buildings (CO2 emissions per 1,000 m² floor space) (t-CO2/1,000 m²)	75.9 (6% decrease compared to FY2009)	68.7					
		Group	Electricity business (including from renewable energy [1] sources) (CO2 emissions per electricity generated)	FY 2021 15% decrease compared to FY2009	-31%					
		companies' businesses	Other businesses (CO2 emissions per sales) (t-CO2/10 million yen)	10.3 (3% decrease compared to FY2010)	9.5					
Low-carbon society	Reducing CO <sub>2</sub> emissions on customer sites and throughout the value chain		-Centered on natural gas, we seek to reduce greenhouse gas emissions and contribute to the energy security of society—  Promote the widespread use of high-efficiency residential fuel cells.  Spread the use of equipment for Smart Houses promoting energy creation/conservation* and energy visualization.  *Fuel cells, photovoltaic power generation, high-efficiency water heaters  Spread the use of sophisticated energy management systems.  Introduce and expand the use of equipment and systems with outage response functions.  (Residential) cogeneration systems (including fuel cells)  (Commercial/industrial) emergency-generator and cogeneration systems and GHP with stand-alone power supply function, etc.  Promote the use of cogeneration / gas air-conditioning systems, which can contribute to reducing peak electricity demand.  Promote the spread of renewable energy such as solar power and biogas 1.		Released the ENE-FARM type S Released the ENE-FARM and ECOWILL Plus with an grid-independent operation function Total sales of the ENE-FARM, PV and double power generation reached approx. 10,000 units, 7,000 units and 10,000 units, respectively.  Developed the "Solar Link Excel," which combines a GHP with a power generation function and photovoltaic power generation.  "Motto Save" selected as a BEMS aggregator.  Promoted the photovoltaic power generation business using SOLAR-ECOWAVE.					
		Transportation/ logistics  Transportation/ logistics  Transportation/ logistics  Transportation/ logistics  Promote the use of natural gas powered vehicles (including lar distributing products/services at Group companies and busine		tankers;	Began encouraging distributing companies and business partners to use natural gas powered vehicles.					
	Promoting 3Rs in our business			Industrial waste from LNG terminals (final disposal rate)	0%	0.5%				
			Industrial waste from offices (final disposal rate)	2%	2.0%					
			General waste from LNG terminals and offices (final disposal rate)	5%	3.1%					
			Excavated soil (final disposal rate)	Approx. 2%	0.8%					
Resource recycling					* *			Polyethylene (PE) pipes (III) (recycling rate)	100%	100%
. coyog		Group companies	Gas meters (reuse rates)	97% or more	99.2%					
		(core affiliates*2)	Industrial waste/general waste (final disposal rate)	9%	9.8%					
	Efforts throughout the value chain		s for used equipment at our customers, in cooperation with our business partners pent, gas alarms, packing materials, renovation waste, commercial/industrial equipment, etc.)		<ul> <li>New effort including recycling of all recovered alarm devices and foam for packing.</li> </ul>					
Biodiversity	In accordance with the Osaka Gas Group Biodiversity Policy, we take biodiversity into consideration in all of our business activities.			<ul> <li>According to the survey in 2012, more than 70% of rare plants preserved at our LNG Terminal were healthy.</li> </ul>						
Technology development	Promote the development of technologies that contribute to a low-carbon society and energy security.  Aim to improve distributed energy technologies (smart energy houses, smart energy networks, etc.).  Aim to develop high-efficiency equipment and systems including next-generation fuel cells.  Aim to develop renewable energy-related technologies.				<ul> <li>Launched a demonstration of demand response through cogeneration systems.</li> <li>Conducted a long-term living experiment of the Smart Energy House, which runs on three types of batteries.</li> <li>Completed a demonstration project for the optimal combination of distributed energy systems.</li> </ul>					
Green procurement/ purchasing	Promote green purchasing in cooperation with business partners, and the Green Partner Initiative.				<ul> <li>Expanded green purchasing items and performed green partner renewal audits</li> </ul>					

<sup>\*1</sup> Fiscal 2010 is used as the base year, because by that year EMS had been introduced into all Group companies

OSAKA GAS GROUP CSR REPORT 2013

\*2 Core affiliates: Osaka Gas Urban Development, Osaka Gas Chemicals (excluding CF Materials Division), OGIS-RI, and Liquid Gas

OSAKA GAS GROUP CSR REPORT 2013

\*2 Core affiliates: Osaka Gas Chemicals (excluding CF Materials Division), OGIS-RI, and Liquid Gas

OSAKA GAS GROUP CSR REPORT 2013

# CSR Management

# **CSR Organization**

# To Embody the CSR Charter and the Code of Conduct

Promotion and Reform in Alignment with the Osaka Gas Group CSR Charter

In April 2006, the Osaka Gas Group established the Osaka Gas Group CSR Charter\* to serve as a set of guidelines for executive officers and employees of the Group, to enable it to fulfill its corporate social responsibilities. In fiscal 2011, the Osaka Gas Group initiated a new system and established a forum for dialogue with internal and external stakeholders as the occasion warrants, depending on the topic, to enable flexible and appropriate responses to the demands of society. The CSR Promotion Council, consisting of executives, deliberates on CSR plans and reports on the results of activities under the supervision of the President of Osaka Gas. From the viewpoint of integrating the promotion of our overall CSR activities, we established the CSR Committee to coordinate and advance Group-wide CSR activities. The committee, led by the CSR Executive, is composed of the heads of business units. Along with restructuring of the CSR

organization to cover all five areas of the CSR Charter, the CSR & Environment Department was established to perform administrative functions and to act as a hub for CSR activities. With these actions, we will strengthen our initiatives under the CSR Charter and aim for the achievement of CSR that fulfills the demands of society.

Starting from fiscal 2011, we are expanding the themes of the stakeholders' meetings and holding communication opportunities including lectures for the general public and sending Osaka Gas experts to give guest lectures at universities.

\*Charter I: Creating value for customers; Charter II: Harmonizing with the environment and contributing to realizing a sustainable society; Charter III: Being a good corporate citizen contributing to society; Charter IV: Complying with laws and regulations and respect for human rights; Charter V: Management policy for human growth

# **Corporate Governance**

# **System of Corporate Governance**

Following the internal regulations stipulated by the Board of Directors, the Executive Board and Board of Directors are comprised of the executive directors and directors that implement Group business. They make decisions after thoroughly deliberating upon relevant issues. The Board of Directors consists of 13 directors (including two outside directors). Its mission is to make swift and appropriate decisions about important matters that affect the whole Group and to fulfill supervisory functions efficiently. The Company has adopted an executive officer system under which executive officers perform duties determined by the Board of Directors. while some representative directors and directors concurrently serve as executive officers. This serves to further strengthen the supervisory functions of the Board of Directors and enhance their performance in the execution of their duties. Osaka Gas has chosen to adopt the Board of Corporate Auditors. Four corporate auditors, of whom two are outside auditors, monitor and audit the duties and performance of the

Osaka Gas has retained KPMG Azsa & Co. as its independent auditor.

# Audits by Internal and Outside Auditors

The Company has established the Auditing Department (with a staff of 20), that functions as an internal auditing division and, based on a yearly auditing plan, monitors the appropriateness and efficiency of business activities, and provides each section of the organization and affiliates with advice and recommendations. For business units, core group companies, and other sections, the Group is working to enhance and strengthen auditing and internal control functions. For example, basic rules for affiliated companies and self-auditing regulations commonly shared by Group companies more

clearly define the roles and duties of internal auditors. Moreover, auditors evaluate internal controls over financial report based on the Japanese Financial Instruments and Exchange Law.

The Corporate Auditor's Office, composed of four staff members not under the direct control of the directors, has been established to assists in investigations of auditors to further ensure that their duties are fully and properly executed.

The Auditing Department, auditors and accounting auditors meet on a regular basis to discuss annual audit plans and audit reports, and also convene as required to exchange audit information to ensure the effectiveness of the auditing activities.

# **Outside Directors and Outside Auditors**

Osaka Gas has two outside directors and two outside auditors. The Company makes decisions concerning the independence of outside directors and outside auditors based on the policy to the effect that outside directors and auditors do not have any conflicts of interest with the general shareholders. The outside directors take part in decision-making as members of the Board of Directors. They are also expected to conduct monitoring and operational oversight. The outside auditors are expected to audit the directors' performance of their duties from an independent standpoint. The concrete roles of outside directors and outside auditors include verifying the state of the internal governance system based on the Companies Act, evaluating internal governance related to financial reporting in compliance with the Japanese Financial Instruments and Exchange Law, and holding hearings on the status of internal audits and CSR at the Board of Directors meetings or other occasions. They also confirm the content of audit reports compiled by the independent auditor of accounts.

# Risk Management

# **Organizational Risk Management Structure**

The basic unit for risk management in the Osaka Gas Group is each business division, subsidiary or affiliate. The head of each unit is responsible for managing the risks of loss and conducts relevant checks on a regular basis.

In addition, the management organization for risk management common to the Group supports the implementation of risk management tasks within each division and business unit across the entire group.

# Regular Reviews and Monitoring

Operating G-RIMS, Our Own Self-Assessment System

In fiscal 2007, the Osaka Gas Group introduced G-RIMS (Gas Group Risk Management System), which systematizes the self assessment of risk management practices. Each division conducts a self assessment annually using a check list comprising about 170 items. Based on the self-assessment result, the division manager, on recognition of risks his/her division is exposed, properly operates PDCA (plan-do-check-act) cycle for improvement. Following the

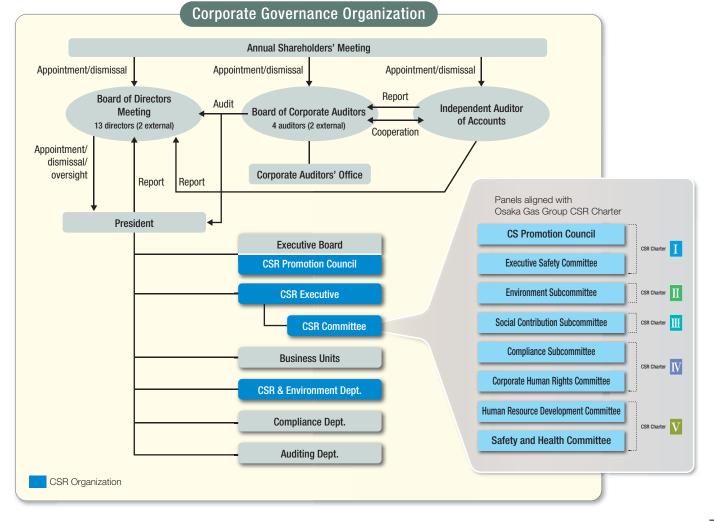
annual self-assessment by each division, the secretariat (Auditing Department, Compliance Department, Corporate Strategy Department and Affiliated Business Dept.) holds discussions with each division to monitor implementation. The results of G-RIMS and issue identification are reported to management.

# **Ongoing Improvement and Regular Reviews**

## Reinforcing Internal Management Initiatives

Each division head and manager is responsible for taking action on issues identified in the course of risk management reviews and to provide periodic follow ups on the improvement processes. In addition, the auditor in each business unit and major affiliated company serves as a focal point for discerning issues for internal audit and promotes managers' self assessment to reinforce internal risk management initiatives.

We ensure an effective PDCA cycle (plan, do, check, act) through these risk management activities across the entire group.



# Third Party Review

The Osaka Gas Group contracted with the Institute for Environmental Management Accounting (IEMA) for a third party review, including recommendations as well as simple audits.

IEMA interviewed Masato Kitamae, Executive Vice President and CSR Executive, regarding the planning and implementation of CSR activities at the Osaka Gas Group.

Based on these interviews and documents submitted, IEMA prepared and presented a report which summarized the IEMA's overall evaluation and advice regarding the Osaka Gas Group's CSR activities.



Interview with IEMA (Professor Kokubu, second from left, and Ms. Nashioka, third from left)



# Evaluation and Opinion of CSR Management at Osaka Gas Co., Ltd.

# **Purpose of the Review and Overview of Procedures**

From our position as a third-party that maintains no business relationships with Osaka Gas, we are expressing our opinion to help enhance the reliability of the Osaka Gas Group CSR Report 2013 by evaluating all the CSR initiatives that are not related to environmental management. We interviewed Masato Kitamae, Executive Vice President/CSR Executive, to clarify the planning and implementation of CSR management (excluding environmental management) at Osaka Gas and the evaluation and utilization of the performance data that indicates the results of these activities and serves as the basis for disclosed information.

### **Evaluation and Opinion**

Osaka Gas has made steady progress toward achieving its long-term management vision and medium-term management plans "Field of Dreams 2020" announced in 2009, mostly as planned, despite the drastic changes that have occurred in social conditions since then. However, such social upheavals have had a great impact, requiring Osaka Gas to substantially augment its activities to improve Japan's hard-pressed energy situation. In view of the steady growth of the gas-fueled power generation business, gas suppliers are expected to play greater social roles in addressing the issue of unstable electricity supply. It will therefore continue to be important to secure stable gas supply. Osaka Gas has also been quick to respond to significant changes in the global energy situation, as represented by the shale gas revolution.

In the feature of this report, Osaka Gas reports on some commercial facilities and large-scale collective housing that use the cogeneration systems, as examples of activities it is conducting to fulfill its social role as a gas supplier. Osaka Gas has striven to reflect the concepts of the Smart City and the Smart House into the community development of existing cities to bring about benefits in the forms of energy-saving and disaster-preparedness. We believe that this proposal will provide solutions to major social issues. Given the difficulties in undertaking large-scale reforms in existing cities, we can highly appreciate Osaka Gas's efforts to conduct businesses that meet social needs, capitalizing on the technologies and experience that the company has accumulated thus far. It is meaningful that Osaka Gas considers these initiatives as part of its CSR. In the future, we hope that Osaka Gas will continue to conduct reliable business operations by further promoting cooperation among different businesses.

Having established CSR indicators for respective CSR Charters, Osaka Gas has worked to achieve the numerical targets set for key CSR items, and reports on the results. The disclosed information is important in that it will provide a basis for judging the corporate value, along with financial information. Recently, the introduction of integrated reporting has attracted much attention in the international community. We believe that Osaka Gas has established the foundation for this kind of reporting, in terms of integration of business and CSR activities. We expect that Osaka Gas will take the lead in pursing the ideal state of stakeholder communication and corporate information disclosure, including integrated reporting.

June 17, 2013

Katsuhiko Kokubu, Professor, Kobe University; Director of IEMA

Eriko Nashioka, Certified Public Accountant and Certified Tax Accountant; CEO of IEMA

# **Third Party Verification**

The environmental performance data of the Osaka Gas Group included in this Report underwent third-party verification by Bureau Veritas Japan Co., Ltd. The verification was conducted to confirm that the data was sufficiently reliable and consistent for the purpose of the Report.

### Scope of work

Osaka Gas Head Office: Functions for data aggregation
Osaka Gas Product Development Division: Technical development
Senboku Natural Gas Electric Power Co., Ltd.: Electric supply
Nabari Kintetsu Gas Co., Ltd.: Production and supply of gas

OGIS-RI Co., Ltd.: Software development and information processing services

BUREAU

### **Verification work**

Bureau Veritas conducted the following evaluation based on agreement with Osaka Gas at:

Head Office:

- 1. The reliability and adequacy of the overall data collection and aggregation processes
- and systems, and the effectiveness of internal verification checks
- 2. The accuracy of the aggregated data for FY2013 (from April 2012 to March 2013)

Operational sites: 1. The appropriateness of the scope of data selected for inclusion in the Report

- 2. The effectiveness of data measurement, collection and aggregation methods, and the effectiveness of
- internal verification checks
- 3. The accuracy and reliability of measured, compiled and aggregated final data

This verification was conducted using Bureau Veritas' standard procedures and guidelines for external verification of non-financial reporting based on current best practice, informed by the International Standard on Assurance Engagements 3000(2005) in providing a limited assurance for the scope of work stated herein.

### Opinio

As a result of the above scope of work Bureau Veritas is of the opinion that:

- The environmental data reported at sites' level is measured, collected and aggregated based on established and effective internal systems and processes.
- All errors in reported data identified during the verification process have been duly corrected.
- Therefore, nothing comes to our attention to suggest that there are any data that are not free from significant error.

Masato Kitamae Executive Vice President and CSR Executive, Osaka Gas Co., Ltd.

# Toward the Realization of "S + 3Es"

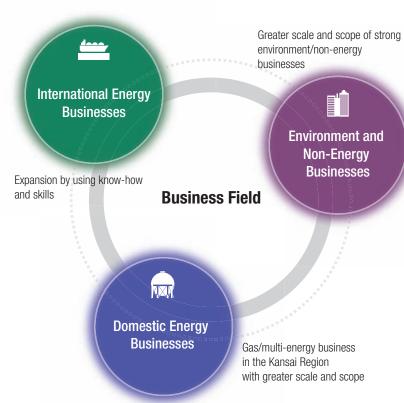
Japan's energy policy is currently under discussion on the initiative of the national government. What serves as the foundation for the development of the energy policy is the concept of "S + 3Es", i.e., energy security, economic efficiency and environment, plus safety, which has been recognized anew since the Great East Japan Earthquake.

We have worked to promote the widespread use of distributed power generation systems that can help realize the "S + 3Es." As stated in this report's feature, large-scale cogeneration systems have been introduced by an increasing number of companies, including JTEKT Corporation, AEON Retail Co., Ltd. and Hankyu Realty Co., Ltd. In the residential sector, we are pleased that the accumulated number of ENE-FARM residential fuel cell cogeneration systems sold has exceeded 10,000. Also, the accumulated number of houses with double power generation, which combines the photovoltaic power generation systems with the ENE-FARM or with the ECOWILL residential gas cogeneration system, has topped 10,000.

Regarding the provision of a reliable and safe supply, in fiscal 2013 we completed discussions on measures to be taken by our gas production and supply facilities against earthquakes, tsunamis and other disasters. In fiscal 2014, we will actually implement these measures. We will also steadily push forward with pipeline construction work toward the opening of the Mie-Shiga Line and the Himeji-Okayama Line, as well as measures to update aging production and supply facilities, thereby establishing a more robust gas production and supply network.

Furthermore, we will intensify our efforts to reduce LNG 1 procurement costs, by such means as promoting the shale gas 1 project in North America, and expand our electricity and LPG businesses to contribute to stable energy supply.

We will proactively meet customer and social needs that are changing with the times, including the realization of "S + 3Es," taking advantage of the strength that we have developed as a multi-energy provider. We will remain committed to social contribution by conducting fair and transparent business operations, while considering what we should do through dialogues with various stakeholders, and keeping in mind the entire value chain [2].



## **Corporate Profile of Osaka Gas**

(As of March 31, 2013)

Head Office: 4-1-2 Hiranomachi, Chuo-ku, Osaka 541-0046, Japan

Establishment: April 10, 1897

Commencement of operations: October 19, 1905

Number of employees: [ Non-consolidated ] 5,867

(including operating officers, directors and temporary employees,

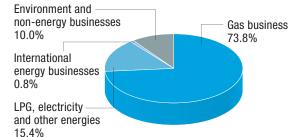
and excluding employees temporarily transferred to affiliated companies [ Consolidated 1 19.870

Capital: 132,166 million yen Major business fields :

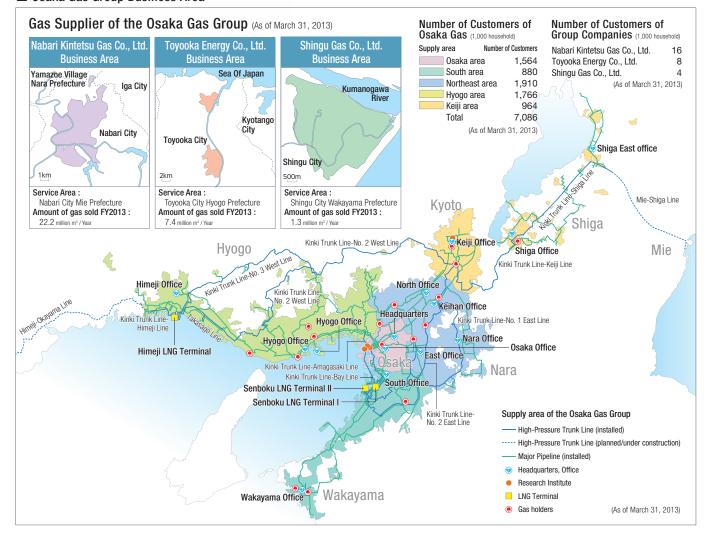
1. Manufacture, delivery and sale of gas

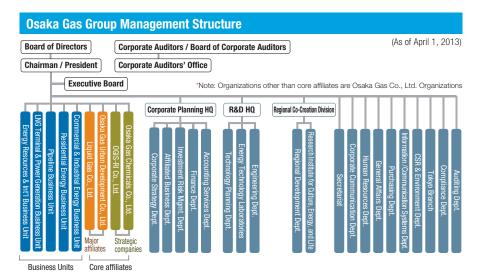
- 2. Delivery and sale of LPG
- 3. Generation, delivery and sale of electric power
- 4. Sale of gas appliances
- 5. Installation of gas pipes

# Sales by Segment



## ■ Osaka Gas Group Business Area

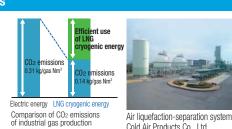




# **Business Fields of Affiliated Companies**

### Industrial Gas/LPG/LNG Business (Liquid Gas Group)

Ilnvolved in a wide range of businesses, including industrial gas businesses using LNG cryogenic energy, the production and sale of dry ice, and cryogenic grinding using liquefied nitrogen. Also involved in the wholesale and retail sale of liquefied petroleum gas (LPG) mainly to customers outside the natural gas supply area, and the transportation of dry ice, and cryogenic grinding usingLNG.



### **Real Estate Business** (Osaka Gas Urban Development Group)

IT Service Business

(OGIS Research Institute Group)

services, such as design/consulting, and

services in China, Singapore and the Philippines.

**Materials Solutions Business** 

(Osaka Gas Chemicals Group)

customers.

Involved in the development/leasing/sale of real estate owned or newly purchased by the Osaka Gas Group, including office buildings and houses, and management/maintenance/ commissioned construction of building facilities (including energy conservation/services related to CO<sub>2</sub> emissions reduction). Also involved in the Kyoto Research Park Project, which aims to establish a base for government-industryacademia collaboration to foster new industries.

Established mainly for developing systems for Osaka Gas's gas businesses. In recent years, this group has provided

customers in various industries, including manufacturing,

development/operation/maintenance of information systems

The group has also been working to expand and improve IT

Specializing in the materials solution business. This group supplies customers in a broad range of industries, from

electronics to environmental business, with high-function

offers valuable proposals that meet various needs of

materials that use coal chemistry technologies, which have

been accumulated through our gas business. The group also

distribution and financial services, with a wide array of







Cold Air Products Co., Ltd.

Server room





lenses for smartphones

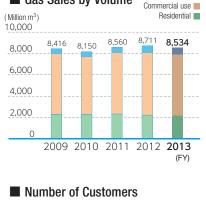
Activated carbon products of the "Shirasani" brand used for wide ranging applications, including water treatment and pharmaceuticals

# Life Support and Outsourcing Service Business

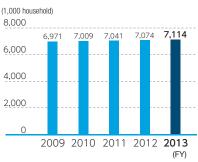
Provides a wide range of high quality services to meet all needs of customers, including behavior observation business leasing of cars, etc., facility management, temporary staffing, and operation of sport facilities, wedding halls, and private nursing homes. We seek to enhance the brand value of the Osaka Gas Group by conducting a diverse range of businesses that support people's comfortable lifestyles and the prosperity of businesses



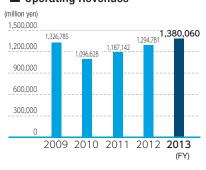
retirement home operated hy Active Life Inc. Fitness club COSPA



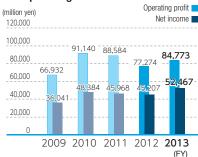
■ Gas Sales by Volume



# Operating Revenues



# Operating Profit and Net Income



# ■ Number of Employees

