OSAKA GAS GROUP

2009
OSAKA GAS GROUP
CSR REPORT

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Major activities in FY2009

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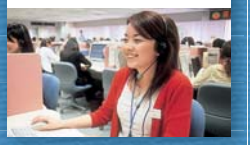
The Corporate Social Responsibility of the Osaka Gas Group

CSR Charter I Creating value for customers



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CSR Charter V Management policy of human growth

Editorial Policy

Editorial Policy

This report presents the Group's CSR activities within the organizational framework of the "Osaka Gas Group CSR Charter."

Feature pages focus on particularly significant efforts. Based on the opinions expressed in dialogues with stakeholders and a reader questionnaire, we identified three topics that also represent major themes for the Group's long-term vision: Measures to Prevent Global Warming, Safety and Security, and Stable Resource Procurement.

To ensure reliability, third parties have verified the environmental performance data of this report. In fact, the report incorporates a third party review of its entire content focusing on evaluation and recommendation, including a simplified examination of environmental performance as well as third party comments on our corporate activities in each category.

We have edited this report in compliance with the "Environmental Reporting Guidelines 2007" of the Ministry of the Environment and reference to the "Sustainability Reporting Guidelines 2006" of the Global Reporting Initiative.

Scope of This Report

Coverage This report covers the Osaka Gas Group consisting of Osaka Gas Co., Ltd. and its affiliated companies. Some information as noted in this report refers exclusively to Osaka Gas Co., Ltd.
Environmental performance data represents Osaka Gas Co., Ltd. and 87 affiliated companies. Overseas and tenant locations where it is difficult to collect data are not included.

Reporting period While annual data covered in this report represents FY2009 (from April 1, 2008 to March 31, 2009), some sections refer to efforts in FY2010.

Publication August 2009 (Next issue is scheduled for August 2010.)

WEB The content of this report can also be viewed on the Internet at:
http://www.osakagas.co.jp/csr_e/index.html

CSR Report
Report of CSR activities undertaken by the Osaka Gas Group

Corporate Profile
Company prospectus prepared for the general public

Annual Report
Report for shareholders and investors

Website
Comprehensive report on CSR efforts by the Osaka Gas Group

CSR Report: digest version
(Japanese version only)
Simplified CSR Report

Performance in CSR rankings in FY2009

Medium	Ranking of Osaka Gas
Weekly Diamond's Ranking of Contributors to the Prevention of Global Warming (July 2008)	24th
Carbon Disclosure Project	Selected as an advanced company in climate change-related information disclosure
Nippon Foundation CANPAN (November 2008)	CSR Grand Prize (information disclosure section)
IntegreX Inc.'s Survey on Corporate Action and Management Systems for Climate Change (November 2008)	Top (Electricity/Gas sector)
Nikkei Environmental Management Survey (December 2008)	2nd (Electricity/Gas sector)
Toyo Keizai Inc's CSR Ranking (May 2009)	20th (among 1,084 companies)

Inclusion in SRI Indices

As of the end of September 2009, Osaka Gas is included in the following socially responsible investment (SRI) indices.

- Dow Jones Sustainability Index
- FTSE4Good
- Ethical Index Global (E. Capital Partners)
- Morningstar Socially Responsible Investment Index (MS-SRI)
- KLD Global Climate 100 Index (KLD Research & Analytics, Inc.)
- Ethibel Sustainability Index

Response to Suggestions and Feedback Received from the 2008 Edition

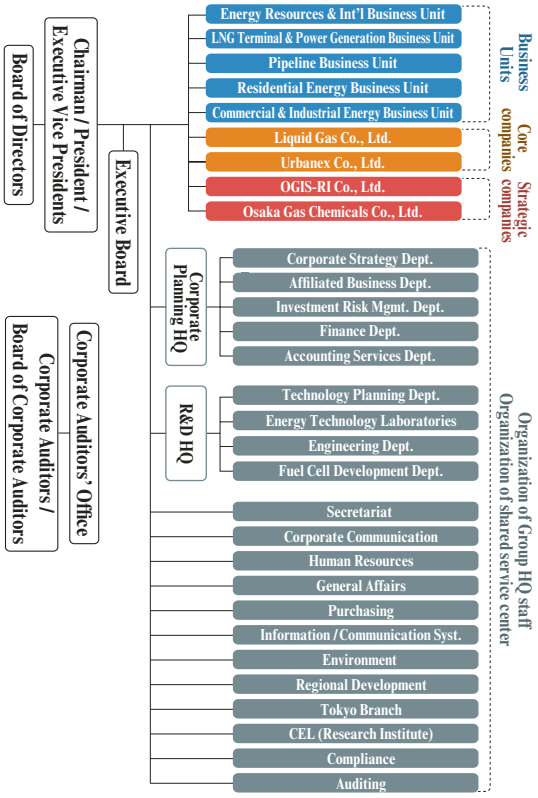
The structure, based on the CSR Charter, facilitates understanding but seemed to be trying to please everyone without having a clear focus.	We further clarified the relative importance of topics by providing more information to highlight efforts related to key issues in the opening feature while incorporating mini features on core efforts in each chapter.
There should be a PDCA list for CSR activities.	In the second half of FY2009, we established the new CSR Indicators to establish a stronger linkage with the performance targets of individual organizations. We will organize our efforts around these indicators starting in FY2010 and further clarify the process of validation and review.
Technical terms and foreign loaned phrases are confusing.	We tried to express information as simply and plainly as possible. Technical terms that cannot easily be replaced with other expressions are explained in the attached glossary. **For an explanation of words marked with this symbol, see the Terminology insert in this report.**

Outline of the Osaka Gas Group

Corporate Profile of Osaka Gas
(as of March 31, 2009)

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) 5,477 (including operating officers, directors and temporary employees, and excluding employees temporarily transferred to affiliated companies) (Consolidated) 19,009
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 electrical power (4) Sale of gas appliances (5) Installation of gas lines

Osaka Gas Group Management Structure
(as of July 1, 2009)



Note: Organizations other than those denoted by corporate names are part of Osaka Gas Co., Ltd.

Business fields of affiliated companies

Real estate business (Urbanex Group)


This group meets customer expectations by leveraging and increasing property value through development, operation and management of real estate including office buildings, comfortable rental and condominium apartments, commercial facilities with ample amenities, and large-scale urban development projects.

IT business (OGIS Research Institute Group)


Drawing upon technologies and expertise gained through providing comprehensive services to support the IT strategy of Osaka Gas as well as survey and development capabilities for advanced technologies including Object/UML, this group offers proven service capabilities, from consulting and computerization strategy planning to the design, development, operation and management of information systems and seamlessly delivers the optimal solutions to customers as a total solutions provider.

Industrial gas/LPG/LNG business (Liquid Gas Group)


Involved in the production and sale of various types of high-pressure gas and high-purity methane, the on-site hydrogen business, the transport and sale of liquefied natural gas (LNG), and the sale and maintenance of liquefied petroleum gas (LPG). The group is also steadily expanding into new business fields, such as low-temperature grinding using ultra-cold liquefied nitrogen and the development of industrial gas application technologies.

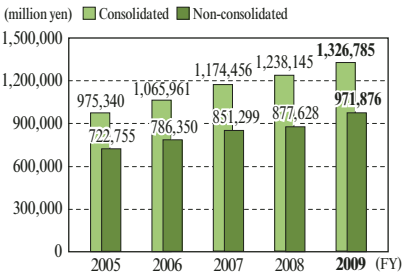
New material business (Osaka Gas Chemicals Group)


Exploring the infinite possibilities in developing new materials and discovering new applications in the field of carbon and chemical materials. This group supplies a broad range of customers with fine materials used for liquid crystal displays and camera lenses for cell phones and other devices, carbon fiber, activated carbon, and preservatives as well as products that use these materials.

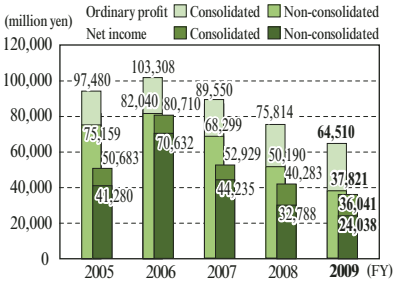
Life service and outsourcing service business


We pursue comfort and security by taking on diverse roles in consumer and industrial settings, including security services, temporary staffing, commissioned research and consulting, market research, leasing and credit, and operation of wedding halls, fitness clubs, private nursing homes and group homes.

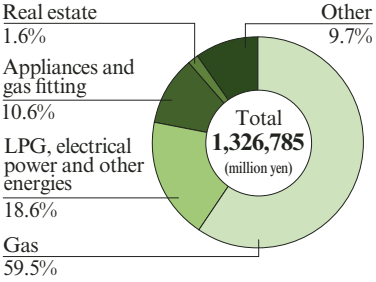
Operating revenues



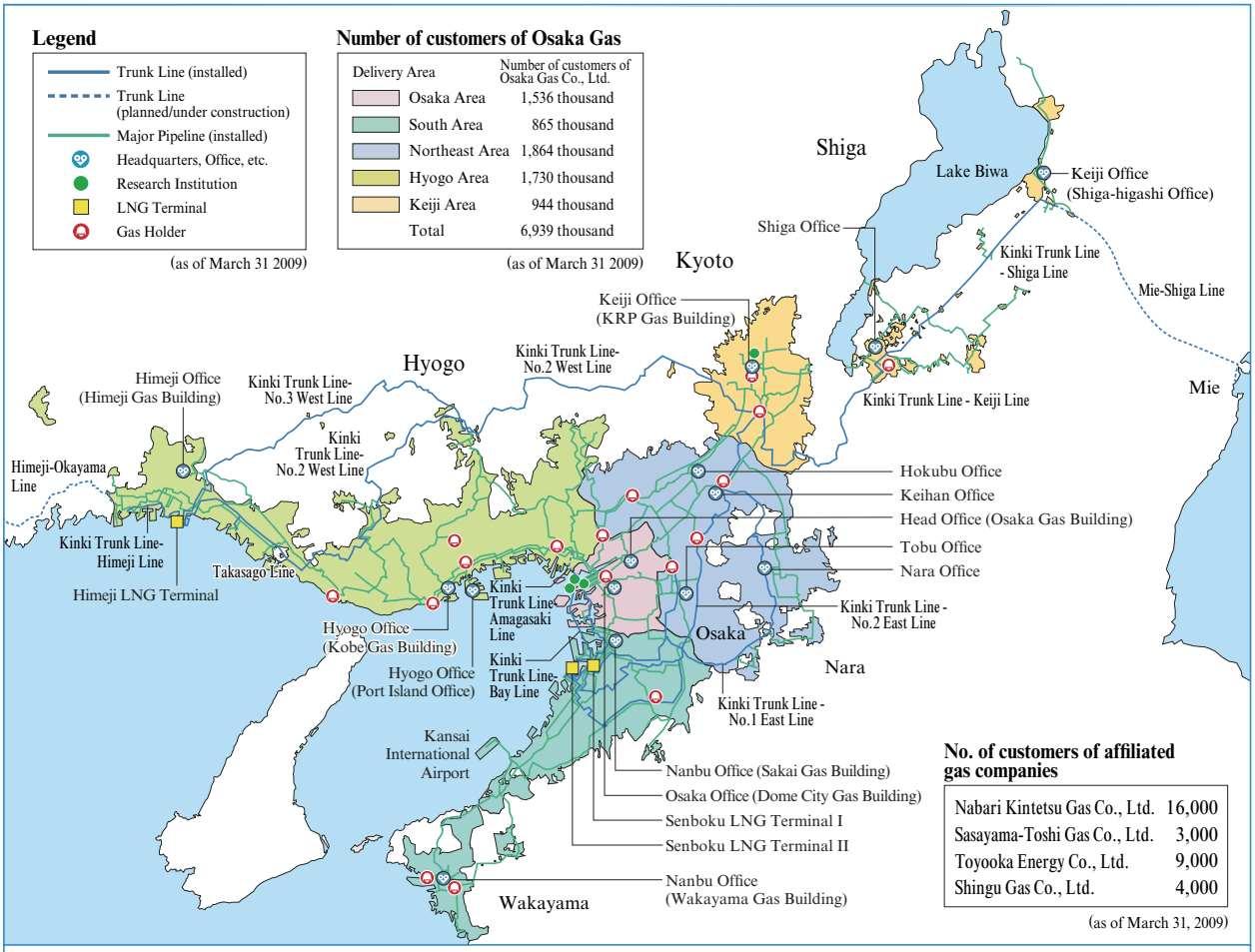
Ordinary profit and net income



Sales by segment

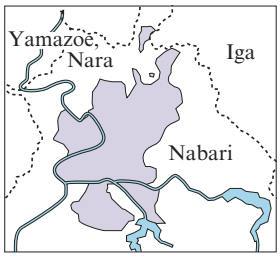


Service Area of Osaka Gas Group



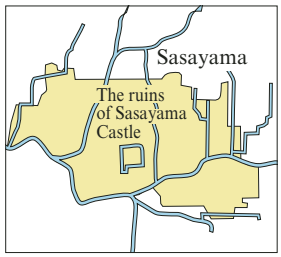
Gas companies of Osaka Gas Group (as of March 31, 2009)

Service area of Nabari Kintetsu Gas



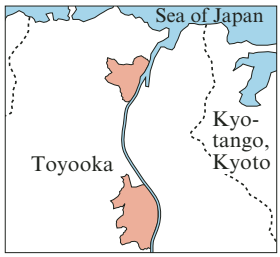
Service area: Nabari, Mie
Gas sales by volume (1,000 m³/year): 25,256

Service area of Sasayama-Toshi Gas



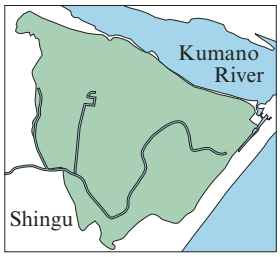
Service area: Sasayama, Hyogo
Gas sales by volume (1,000 m³/year): 1,417

Service area of Toyooka Energy



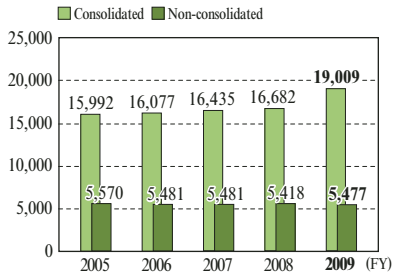
Service area: Toyooka, Hyogo
Gas sales by volume (1,000 m³/year): 6,997

Service area of Shingu Gas

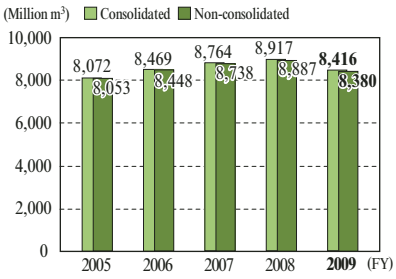


Service area: Shingu, Wakayama
Gas sales by volume (1,000 m³/year): 1,362

Number of employees

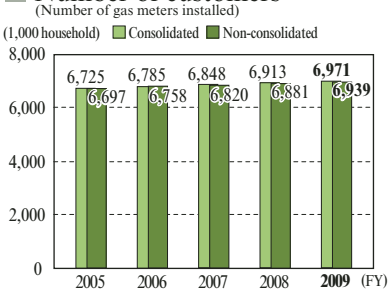


Gas sales by volume



Number of customers

(Number of gas meters installed)



The President's Commitment

To continue to be recognized and chosen by customers and society as an indispensable company

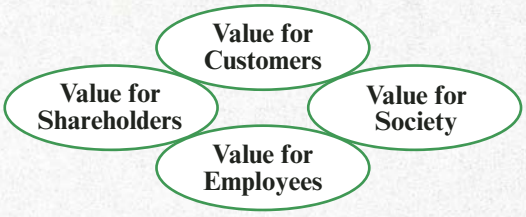
Hiroshi Ozaki
President, Osaka Gas Co., Ltd.

The foundational principle of the Osaka Gas Group is Value Creation Management to enhance value for all our stakeholders, including customers, shareholders, employees and society at large. The Group established The Osaka Gas Group CSR Charter based on this principle to provide guidelines for executive officers and employees of the Group.

Group Management Principles

Value Creation Management —Enhancing the four values

Giving top priority to maximizing the value for customers, the Osaka Gas Group, will pursue Value Creation Management to enhance value for all our stakeholders through fair and transparent business activities.



Osaka Gas Group CSR Charter (Established April 2006)

In order for the Osaka Gas Group to fulfill its full corporate social responsibilities and to achieve its sustainable development, we hereby set forth the Charter as the guiding principle for the management and the employees of the Group to observe in their conduct of business.

The management of the Osaka Gas Group, its subsidiaries and affiliates, and managers of respective divisions, are determined to implement the spirit of the charter in their business initiatives.

Should any infringement of the charter occur, the management acts immediately to identify and resolve problems, and to take strict corrective actions.

- **I Creating value for customers**
- **II Contributing to harmonizing with environment and to realizing a sustainable society**
- **III Being a good corporate citizen contributing to society**
- **IV Complying with laws and regulations and respect for human rights**
- **V Management policy of human growth**

Code of Conduct of the Osaka Gas Group

- **I Code of conduct as a good corporate citizen**
- **II Code of conduct in production and supply activities**
- **III Code of conduct in business transactions**
- **IV Code of conduct in information management**
- **V Code of conduct in workplace**
- **VI Code of conduct in working with society**

Introduction

Fiscal 2009 was a severe year beset with record high raw material prices and the deepest worldwide recession of the century. Economic uncertainty will persist in fiscal 2010 as well, including concerns over crude oil prices and ongoing economic stagnation due to the worldwide financial instability. The business environment surrounding the Osaka Gas Group will likewise continue to be severe.

Long-term Management Vision and Med-Term Business Plans: Field of Dreams 2020

Against this background, we developed Field of Dreams 2020: Long-term Management Vision and Med-term Business Plans of the Osaka Gas Group.

To continue delivering the advanced and environmentally sound new value demanded by customers and the times while maintaining its own development and growth into the future, the Osaka Gas Group intends to evolve into a global energy and environment enterprise. To this end, the Group will implement high-quality management practices to always be the company of choice for stakeholders through efforts such as pursuing an exemplary level of CSR. The Group will therefore actively strive to broaden its business fields and fortify its solid business foundations.

Osaka Gas Group Decision

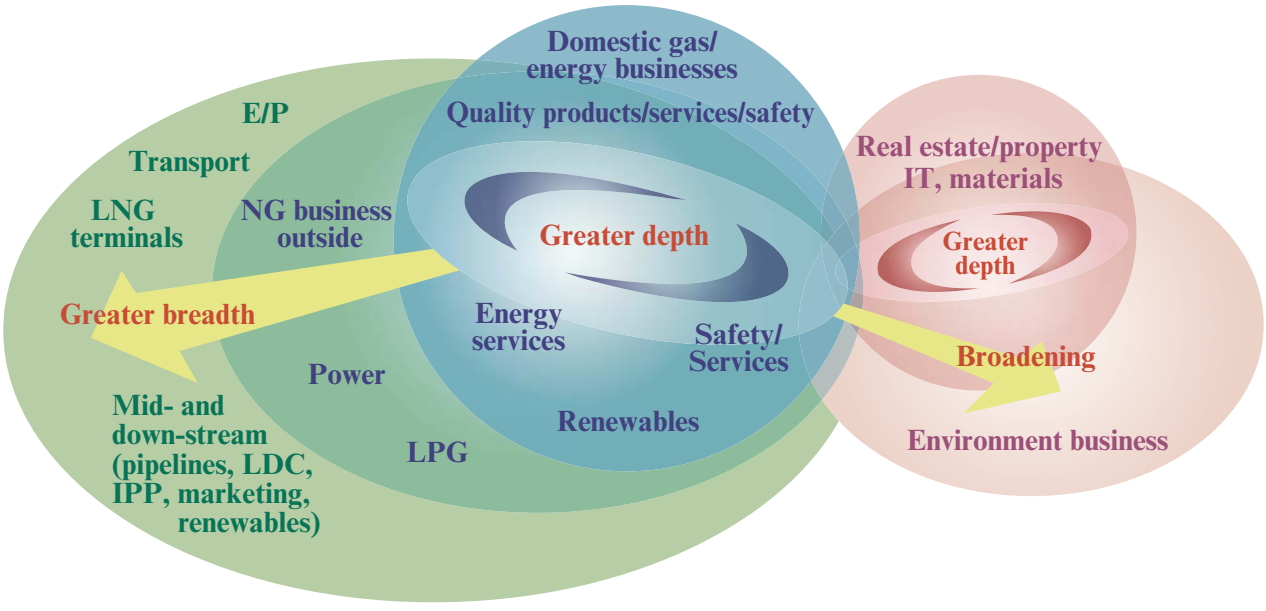
The Group will steadfastly create the advanced value demanded by customers and the times in which we live, taking advantage of its many versatile operating sites, human resources, technologies and expertise developed for more than 100 years through an energy business centered on natural gas. The Group will also provide environmentally sound business and quality-of-life solutions to drive its own development and growth in Japan and overseas.

Broadening Business Fields

We plan to grow each of our three business domains-domestic energy businesses, the international energy businesses along the energy value chain, and the environment and non-energy businesses-into major enterprises toward 2020. This will entail expanding in both depth and breadth by deepening existing businesses and broadening our reach into new business fields and locations.

■ Broadening business fields

International Energy Businesses	Domestic Energy Businesses	Environment and non-energy businesses
Expansion by using know-how and skills	Gas/energy business in Kansai Region with greater scale and scope	Greater scale and scope of strong environment/non-energy businesses



Fortifying Solid Business Foundations

We will generate synergies among our three areas of business while dispersing risks through the growth of individual businesses to maximize the collective strengths of the Group and establish a solid business foundation.

* Natural hedging: A means for ensuring stable profit through the natural complementary relationship between upstream and downstream sectors against fluctuations of crude oil prices and exchange rates.

The CSR Goal of the Osaka Gas Group

As an energy supplier, the Osaka Gas Group strives to reduce stress on the global environment, particularly by expanding the use of natural gas, the fossil fuel with the least environmental impact; offering high-efficiency equipment and systems, including fuel cells and cogeneration; and supporting energy conservation and related efforts in environmental businesses, such as renewable energy, toward realizing a low-carbon society.

At the same time, we remain acutely aware of our responsibility to preserve biodiversity as a common heritage of humankind to be handed down for the enjoyment of each successive generation. To this end, we will work hard to reduce the impact of our business activities on biodiversity to ensure its sustainability.

We also intend to further strengthen compliance through three priority action areas: knowledge of applicable laws and regulations, the establishment of a culture of compliance and mechanisms for preventing violations, and stronger, more sophisticated monitoring. These efforts are rooted in our basic principle, Value Creation Management, to enhance value for all our stakeholders, including customers, shareholders, employees and society at large through fair and transparent business activities. At the same time, we are striving to improve our long-term profit margin in terms of return on assets (ROA) and return on equity capital (ROE) while continuing to pay stable dividend payments to shareholders and maintaining our financial strength to further increase corporate value.

In addition, we will focus on creating a culture in which every one of our employees who supports Field of Dreams 2020 can mature personally by tackling challenging tasks. And our employment practices will carry forward our management tradition of respect for human dignity.

Conclusion

We have firmly adhered to the Osaka Gas Group CSR Charter, which provides structural accountability for our essential commitment to CSR. In addition, our recently developed CSR Indicators will bring coherence and visual clarity to our diverse activities in fiscal 2010 as we strive to embody the PDCA cycles based on these indicators as our second nature. We will consistently maintain our efforts to be a quality company that outperforms public expectations and contributes to daily life, businesses and society in the spirit of the UN Global Compact.

As a result of multiple dialogues with stakeholders concerning future challenges and expectations for the Group, all of our employees share a sincere desire for the company to be recognized and chosen by customers and society as an indispensable enterprise.

This report describes as concretely as possible the efforts of each part of the Osaka Gas Group in fiscal 2009 within the framework of our Charter. I hope you find it useful, and I look forward to your honest feedback.

Hiroshi Ozaki
President, Osaka Gas Co., Ltd.

Management and CSR of Osaka Gas Group

CSR Indicators Aligned with the CSR Charter

Identified Indicators for Raising CSR Awareness in Daily Operations

We held in the second half of FY2009 multiple discussions in the context of linkages with the medium-term plans of individual organizations, taking into consideration dialogues with stakeholders. Following deliberations by the CSR Promotion Council and the CSR Committee, CSR indicators were identified for each principle of the Charter. While the indicators do not encompass the full range of the Group's diverse CSR activities they are intended to fulfill our corporate social responsibilities in the course of daily business operations. These indicators will be applied beginning in FY2010 to further enhance corporate value.

CSR Charter	CSR Indicators (Targets for FY2012. These indicators and target levels will be reviewed at the end of each year.)	Indicator Framework
I Creating value for customers	**Customer satisfaction level survey:** Level of satisfaction at 82%+	Ratio of positive feedback to all responses for the surveys conducted after completing direct client services, including opening of gas, gas appliances repair, regular gas facilities inspections, telephone inquiries response, and appliances sales. Since the introduction of surveys in FY1989, we have been expanding a range of survey items year by year. We work on maintaining a high level of quality in our operations.
II Contributing to harmonizing with environment and to realizing a sustainable society	**Environmental management efficiency:** 91 yen/1,000 m^3 or less For more detail on this indicator, see "New Medium-term Environmental Objectives" in the table below.	Until FY2009, calculated using the formula: (CO_2 emission + NOx emission + COD + final disposal of waste + final disposal of excavated soil (converted to cash value) ÷ amount of gas sold. During and after FY2010, however, we will include chemical substance emissions (xylene and toluene) and other factors in the criteria and adopted LIME 2 cash value conversion, an environmental impact assessment method developed by the National Institute of Advanced Industrial Science and Technology (AIST).
III Being a good corporate citizen contributing to society	**Number of contacts and communication events** **Total contacts:** At least 1% of total customers; at least 365 communication events	Total number of visitors to the Gas Science Museum and the Himeji Gas Energy Hall, participants in energy environmental and dietary education classes and events (excluding sales-related events).
IV Complying with laws and regulations and respect for human rights	**Employee scores on compliance awareness:** Higher than the previous year (for example, Code of Conduct awareness level of at least 85%; understanding of at least 58%)	Calculation based on the results of the annual Group employee compliance awareness survey.
V Management policy of human growth	**Employee opinion survey (job satisfaction and dedication):** Maintain sufficient level	Calculation based on the results of the Group employee opinion survey (last survey conducted in FY2008).

New Medium-term Environmental Objectives

Item				Indicator	Targets for FY2012	Notes
Osaka Gas	Reduce environmental impact of the company In the gas business	Improve Environmental Management Efficiency		Cash equivalent of total environmental impact • GHG (CO_2 and methane) emissions • Final disposal volume of excavated soil • Final disposal volume of general and industrial waste • NOx emission • COD • Chemical substance emissions /Amount of gas sold (yen/1,000 m^3)	91	Total individual environmental impacts in cash value per 1,000 m^3 of gas sold is calculated.
		Reduce CO_2 emission		CO_2 emission factor*1 CO_2 emission per 1m^3 gas sold (g-CO_2/m^3)	17.9	
		Waste reduction and recycling promotion	LNG terminals	Percentage of final disposal (general and industrial waste)	0.5%	
			Offices and laboratories	Percentage of final disposal (general waste)	9%	
				Percentage of final disposal (industrial waste)	3%	
		Reduce final disposal of excavated soil		Percentage of final disposal (improved percentage of recycling and efficient utilization)	4%	
		Efficient utilization of water		Water usage (general and industrial water) (10 thousand m^3)	160	
	Reduce environmental impact of product and services				Qualitative targets	
	Contribute to environmental improvement of local communities, and society in Japan and overseas					
Osaka Gas Group	Reduce CO_2 emission	Electricity business		Strive to reduce CO_2 emission factor at transmission point by about 15% of FY2009 level in FY2021.		Covers grid-connected power source owned by Osaka Gas and affiliated companies in Japan.
		District cooling/heating business		Energy efficiency*2 (reduce energy intensity from base year, FY2009)	Reduced by about 1%	Covers district cooling/heating businesses of Osaka Gas and affiliated companies in Japan.
		Other businesses		CO_2 emission factor*3 (CO_2 emission/sales) (tons-CO_2/million yen)	0.75	In principle, includes all affiliated companies excluding thermal energy supply and power generation businesses.
	Waste recycling promotion			Percentage of final disposal (general and industrial waste)	10%	Covers Liquid Gas, Urbanex, OGIS Research Institute and Osaka Gas Chemicals.

Notes: Targets for FY2013 *1 17.8g-CO_2/m^3 *2 Down approx.4% *3 0.75tons-CO_2/million yen

CSR Organization

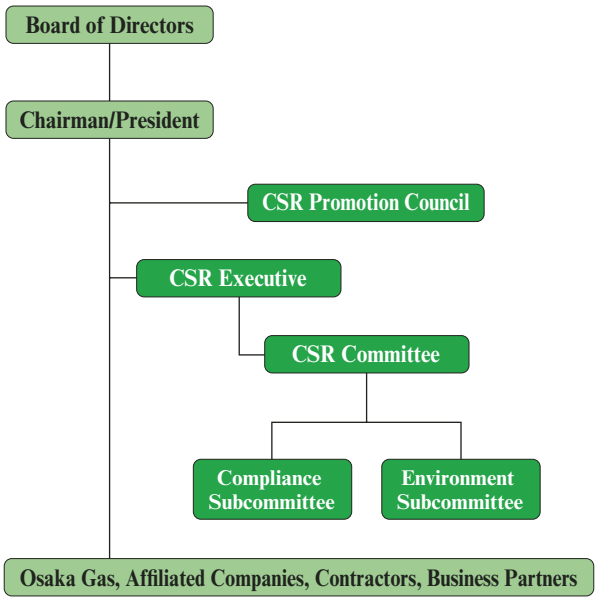
To Embody the CSR Charter and the Code of Conduct

Promoting Group CSR under the Leadership of the CSR Promotion Council

The CSR Promotion Council, consisting of executives, deliberates CSR plans and reports on results of activities under the supervision of the President of Osaka Gas. From the viewpoint of integrating the promotion of 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 and external experts. The penetration and deep understanding of the CSR Charter and Code of Conduct across the Group strengthens each employee's compliance and appropriate behavior as a member of society.

Two CSR Promotion Council meetings and three CSR Committee sessions were held in fiscal 2009.

CSR organization



Participation in the Global Compact

We Revised the Code of Conduct of the Osaka Gas Group

Prohibited the Offer of Bribes to Foreign Officials and Child Labor

In June 2007, Osaka Gas joined the United Nations Global Compact to ramp up CSR efforts.

The UN Global Compact encompasses ten principles for enterprises to observe in four fields: human rights, labor standards, the environment and anti-corruption. As of March 2009, the compact has been adopted by 6,693 organizations including 81 from Japan. Osaka Gas is the first and only Japanese utility corporation to join it.

In May 2008, the company revised the Code of Conduct of the Osaka Gas Group to incorporate all ten principles of the Global Compact, clearly prohibiting the offer of bribes to foreign officials and child labor.

Since these principles impact the relationship between the company and its business partners, the CSR-based Purchasing Guidelines were revised in June 2009 (see page 46) to describe our observance of the Global Compact.

The Ten Principles of the Global Compact

THE GLOBAL COMPACT
WE SUPPORT

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.

Labor Standards

Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining;
Principle 4: the elimination of all forms of forced and compulsory labor;
Principle 5: the effective abolition of child labor; and
Principle 6: the elimination of discrimination in respect of employment and occupation.

Environment

Principle 7: 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 environmentally friendly technologies.

Anti-Corruption

Principle10: Businesses should work against corruption in all its forms, including extortion and bribery.

Business Operation and Auditing System

We Have Established a System to Ensure Accurate and Timely Decision-Making, Execution and Audit

Osaka Gas follows a clearly defined set of company regulations in its decision-making. Important decisions are only made after careful, technical scrutiny by the Executive Board, which is comprised of executive directors and executive officers, and after full discussion by the Board of Directors. The Board of Directors comprises thirteen directors, including two outside directors (the number of outside director will be increased to three in FY2010). The Board of Directors makes accurate and speedy business decisions and works to improve operational oversight across the entire Group. Osaka Gas has also introduced an operating officer system in which each executive officer is engaged in business execution as determined by the Board of Directors.

At the Board of Directors' meeting held after the annual shareholders' meeting in June 2009, Osaka Gas decided that the President and several directors shall double as executive officers to further strengthen the oversight and the executive responsibilities of the Board of Directors. The company has adopted a Board of Corporate Auditors. Four corporate auditors, including two outside auditors, monitor the actions of the directors of the Osaka Gas Group. In addition, the Corporate Auditors' Office, composed of three staff members not under the direct control of the directors, has been established to support the auditors and thereby improve the audit system.

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

Internal Governance System

Ensuring Fair Business Operations and Reliable Financial Reporting

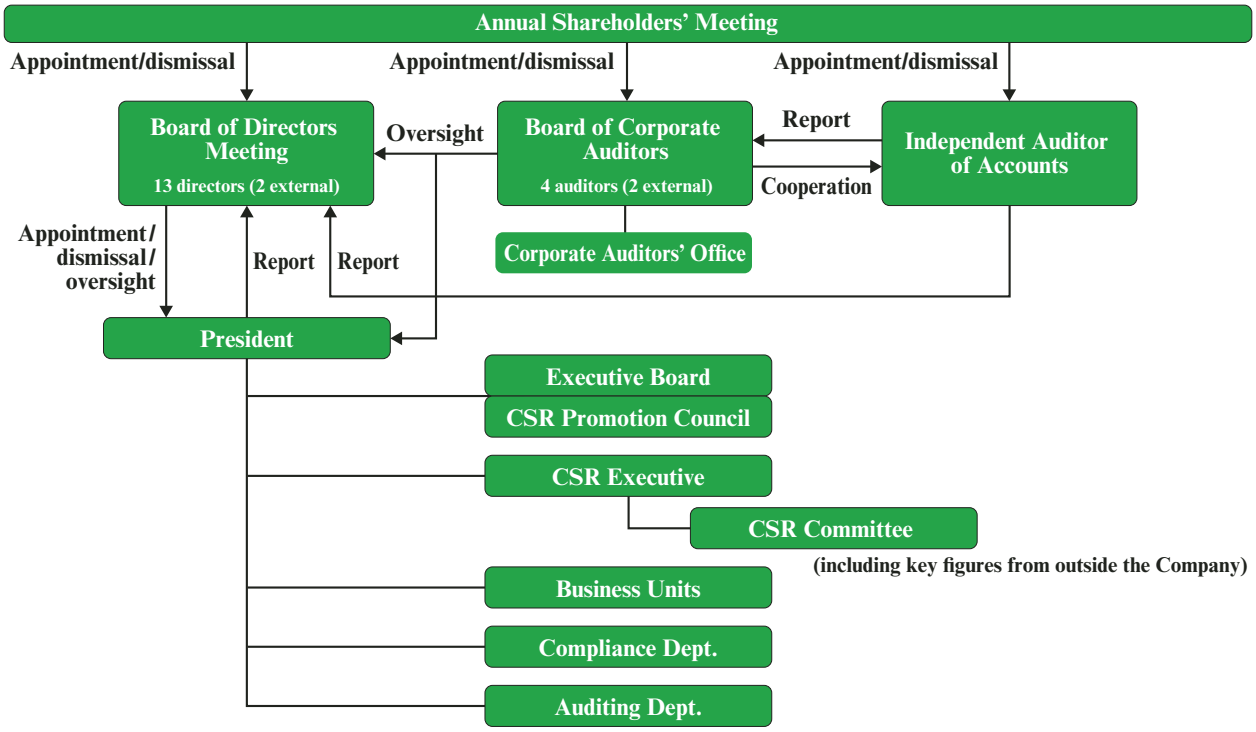
As an internal auditing body, we maintain the Auditing Department (21 staff members) to oversee the fairness and efficiency of corporate business operations based on the annual audit plan and other guidelines. The department advises and makes recommendations to respective divisions within the company as necessary. Additionally, each Business Unit within the company maintains its own auditor who operates under the authority of the management to enhance internal control functions. Each auditor's role and responsibilities are clearly defined by internal regulations, thus strengthening internal controls at the operational level.

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

To further strengthen compliance, the company's Compliance Department serves as the focal point for various activities related to ensuring the legal compliance of business operations through such actions as the establishment of the Compliance Boosting Period, enhanced training, and monitoring.

The Osaka Gas Group has taken positive steps to establish and strengthen its internal control system to conform with Corporate Law, and has fully complied with the newly stipulated Internal Control Reporting System. The company also put together an internal control evaluation team in June 2008 within the auditing section to establish an evaluation system on internal control regarding financial reporting, and the company submitted its internal control report to the Prime Minister in June 2009.

■ Corporate governance organization



Risk Management

Risk Management Principles of the Osaka Gas Group

Clarifying Organizational Responsibility for Risk Management in Internal Rules

The internal regulations of Osaka Gas Group clarify the organizational structure for promoting and confirming the effectiveness of risk management.

The group headquarters supports the implementation of risk management tasks common to divisions and business units.

Organizational Risk Management Structure

Each Business Division and Subsidiary or Affiliate Serves as the Basic Organizational Unit for Risk Management

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

G-RIMS (Gas Group Risk Management System) Check list

1. Financial risks
2. Credit management risk
3. Purchase, accounting, tax risks
4. Risks on electronic banking
5. Information management risks
6. Personal information management risk
7. Information disclosure management risk
8. Personnel management risks
9. Disaster damage prevention risks
10. Product safety risks
11. Report-related risks
12. Lawsuit risks
13. Environmental problem risks
14. Risks concerning unfair trading and subsidy
15. Risks of inappropriate contact
16. Risks of insider trading
17. Risks of compliance violation in business execution
18. Business risks
19. Other risks on business practices
20. Intellectual properties management risks
21. Risks due to deficient internal control
22. Others

Regular Reviews and Monitoring

Operating G-RIMS, Our Own Self-Assessment System

Risks must first be properly recognized. Then, after assessing the current status of risk management and remaining risks, actions must be planned.

G-RIMS (Gas Group Risk Management System) was established in FY2007 as a common platform for identifying and managing risks. 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. In the course of this process, the results of reviews are analyzed to identify issues requiring response while important risks unique to the individual divisions are distinguished from those common to the Group. The results of G-RIMS and issue identification are reported to the management.

Supervising and Review Functions

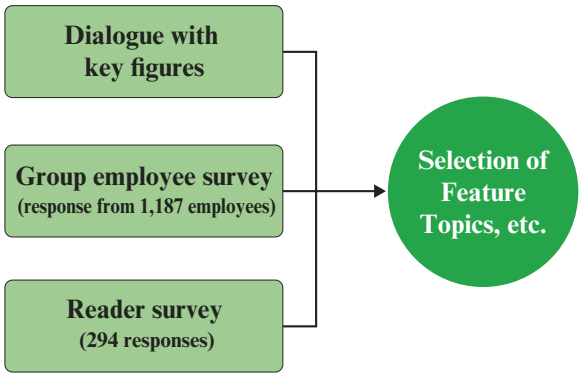
Reinforcing Internal Management Initiatives

Each division head and manager is responsible to take action for problems identified in the course of risk management reviews and to provide periodic follow up on 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 promote managers' self assessment to reinforce internal risk management initiatives. We ensure an effective PDCA cycle (plan, do, check, action) through these activities for risk management across the entire group.

Selection of Feature Topics Major activities in FY2009

We selected feature topics for this report based on the results of the dialogue with key figures, internal surveys, the 2008 CSR Report reader survey and other sources.

In the course of compiling the 2009 CSR Report, Osaka Gas examined the results of the dialogue with key figures, the Web survey for employees of the Osaka Gas Group, and the reader survey attached to the 2008 CSR Report for identifying material issues of the group's CSR for our stakeholders and selected them as the topics for feature articles. They include efforts for establishing a low-carbon society, a system for safely using gas, and ensuring the stable procurement of natural gas, which is essential for addressing the other two issues. We also included the activities on the title pages for each CSR Charter section, which are related to the CSR Indicators described on page 8 as additional key topics.



From the dialogue with key figures

On December 11, 2008, we held a stakeholder dialogue to obtain feedback on the group's CSR activities from key figures outside the company (along with the participation of 110 Osaka Gas Group employees). Following an introduction to our CSR activities by the Manager of the Environmental Department, a panel discussion featuring four panelists was held.

Comments that helped identify major activities included the following:

To be widely accepted with environment-friendly products and services

Hisashi Ishitani
Professor of the Graduate School of Keio University and Professor Emeritus of Tokyo University

To make Japan "a nation founded on the principles of environmental protection," it is important not only to provide excellent products and services with the best environmental technologies but also to make environmental protection a viable business. Therefore, Japanese companies must win understanding from both investors and consumers to secure capital and market.

The most urgent issue for environmental management is to control and reduce CO_2 emissions

Eriko Nashioka
Certified Public Accountant and Certified Tax Accountant, and Director, Institute for Environmental Management Accounting (IEMA)

Environmental management indicators of Osaka Gas introduced in fiscal 2004 are wonderful in that they incorporate environmental accounting. I understand the company is now reviewing these indicators in connection with its new medium-term management plan. The company is also taking this opportunity to formulate indicators for social actions in addition to environmental activities as advised by IEMA in the Third Party Review of the report. I look forward to seeing the results.

Create an environment where everyone can use gas safely

Hideo Iida
Secretary General, Osaka Liaison Committee of Consumer Organizations

Recent consumer-oriented policies call for the disclosure of information concerning consumer accidents and related incidents. Osaka Gas may next be expected to help guard against accidents in which clothing may catch fire as well as with other preventive measures by applying information from accidents associated with improper use.

Development and delivery of "buycott" products and services

Noboru Hayase
Executive Director, Osaka Voluntary Action Center

The new word "buycott" has been coined to mean, "buying good things." Developing and providing environmentally sound goods and services is important. And I also recommend the company continue encouraging employees to find meaningful activities outside of the company as well as inside, as exemplified by The Small Light Campaign.

Feature

A Low-Carbon Society with Natural Gas

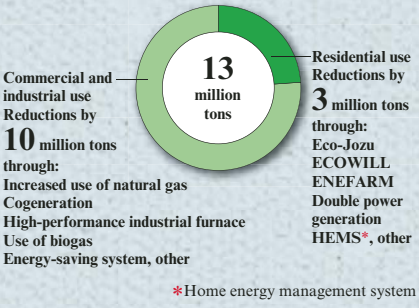
As an energy company, our greatest responsibility to society is to curb global warming. The world must dramatically reduce CO_2 emissions to realize a low-carbon society. Osaka Gas Group intends to be a driving force behind this effort.

We want as many people as possible to use natural gas, a clean energy source, and we want to help spread the use of high-efficiency energy systems such as cogeneration and fuel cells. Prerequisites to this are the securing of natural gas resources (see page 21) and creating ways to ensure the safety of gas (see page 19).

These efforts are helping us contribute to the realization of a low-carbon society. By stepping up these efforts, we aim to reduce by 13 million tons the amount of CO_2 emission from our customers between FY2010 and FY2021.

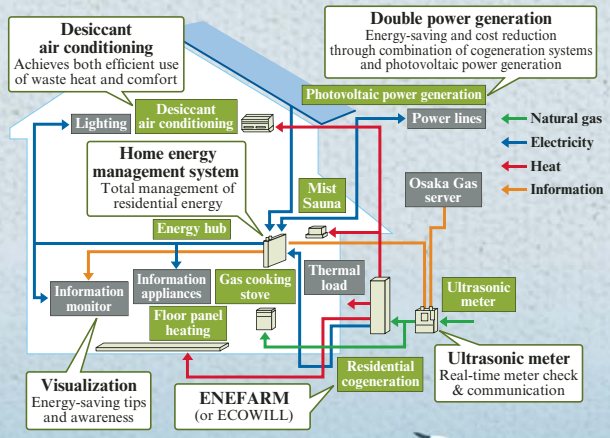
We are also conducting development towards the realization of smart energy networks, and systems for the provision and utilization of hydrogen fuel.

Estimated reduction in CO_2 emissions between FY2010 and FY2021

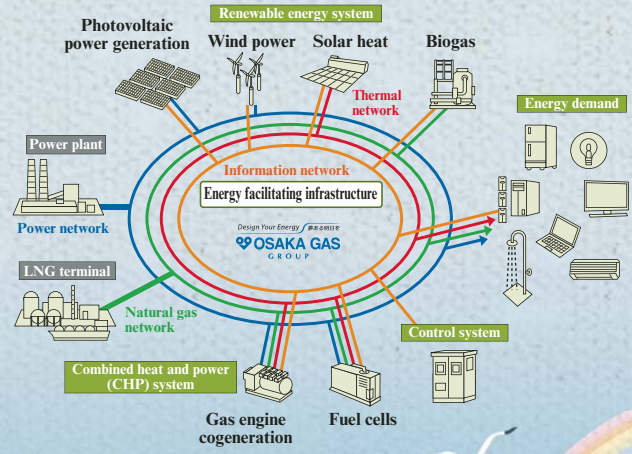


*Home energy management system

Residential energy supply systems of the future



Future city energy supply system (Smart energy network)



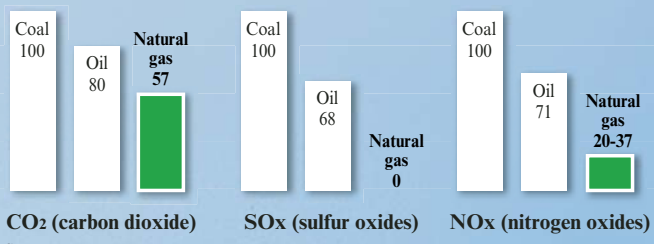
Main Osaka Gas Efforts towards a Low-Carbon Society

1. Create networks of heat and electricity, on the level of cities and towns, and realize high efficiency by making use of all forms of energy. ▶page 13
2. Help customers reduce their CO_2 emissions by promoting widespread and more advanced use of natural gas, a clean energy source. ▶page 14
3. Promote higher energy efficiency through the development and spread of cogeneration systems and fuel cells as well as the combination of these systems with photovoltaic power generation. ▶page 15
4. Produce hydrogen fuel, as well as introduce new technologies such as next-generation fuel cells (solid oxide fuel cells: SOFCs), which have higher power generation efficiency. ▶page 37
5. Offer customers a wider range of choices for renewable energy, such as wind power and biogas. ▶page 38

Advanced Use of Natural Gas Curbs Global Warming

Natural gas is clean energy that gives off the fewest CO_2 emissions during combustion than any other fossil fuels. Osaka Gas is working to spread advanced energy systems, such as cogeneration systems and fuel cells, running on environmentally friendly natural gas, with the goal of helping customers save energy while reducing CO_2 emissions.

■ Comparison of emissions levels of combustion products of fossil fuels (Coal = 100)



Sources:
•International Energy Agency (IEA): Natural Gas Prospects to 2010 (1996)
•Institute of Applied Energy (IAE): Report on Thermal Power Plant Atmospheric Impact Assessment Technology Demonstration Surveys (March 1990)

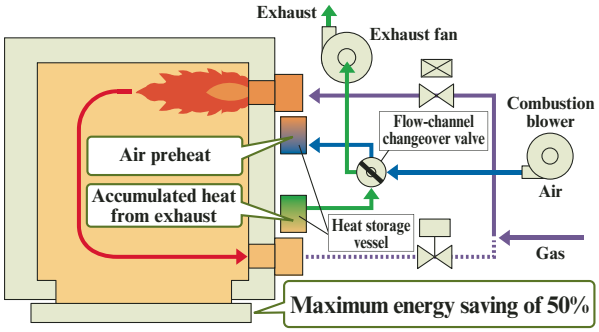
Natural Gas as Clean Energy

Promote the Spread and Advanced Use of Natural Gas, Contributing to CO_2 Emissions Reduction

CO_2 (carbon dioxide) is one substance that is causing global warming. Compared to oil and coal, natural gas emits fewer CO_2 emissions from combustion. As well, there are widespread reserves of natural gas around the world, which ensures stable procurement and supply.

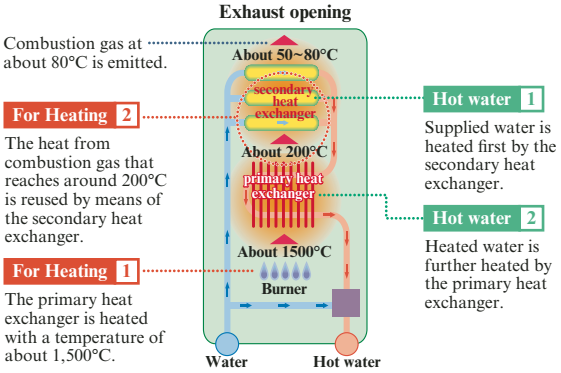
Osaka Gas uses natural gas and strives to spread its use. Osaka Gas also pursues the advanced use of natural gas in applications such as high-efficiency industrial furnaces, burners, high-efficiency water heaters, and natural gas cogeneration systems, thus helping customers save energy and reduce CO_2 emissions.

■ Regenerative burner system for high-efficiency industrial furnaces



By alternately sending combustion exhaust gas and combustion air through the heat storage vessel in the system, waste heat is recovered and energy is saved.

■ High-efficiency water heater Eco-Jozu mechanism



Eco-Jozu is a registered trademark of Tokyo Gas Co., Ltd.

Creating Heat and Electricity Where Needed

Distributed Energy Systems More Efficient than Centralized Power Systems

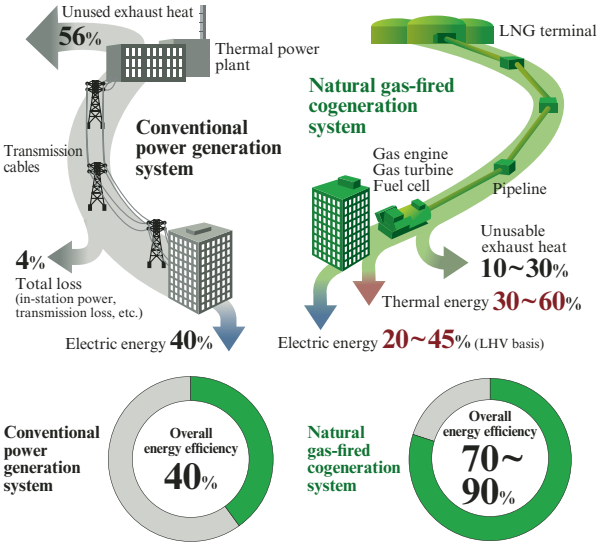
In conventional power generation systems, 40% of the primary energy put into the system is used as electricity; however 56% ends up as unused waste heat and 4% is transmissions losses. This means the overall energy efficiency is just 40%*1.

The natural gas cogeneration system being developed and spread by Osaka Gas is a distributed energy system that creates electricity and heat only where they are in demand. Of the primary energy put into the system, 20-45% is used as electricity and 30-60% is used as heat energy, and there are no transmission losses. The overall energy efficiency is 70-90% (LHV*2). Promising dramatic energy savings and CO_2 emission reductions, distributed energy systems like this are being recommended under the Japanese government's Kyoto Protocol Target Achievement Plan as one measure against global warming.

*1 Calculated by the Energy Efficiency Standards Subcommittee in September 2005.
*2 LHV = Lower heating value. The amount of heat generated by complete combustion of the combustion gas, minus the latent heat of vaporization of the water vapor generated in the process.

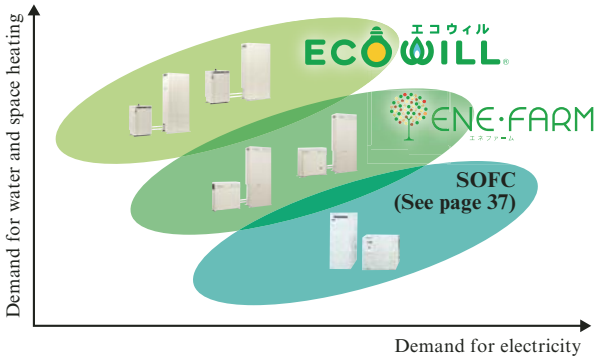
Advanced Use of Natural Gas Curbs Global Warming

Comparison of overall energy efficiency



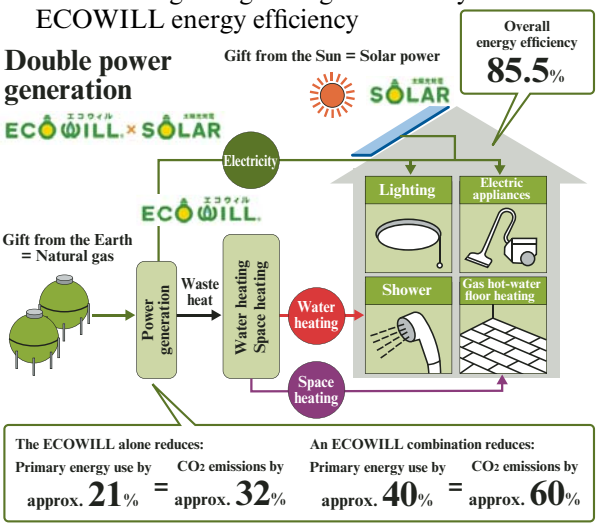
(Power generation efficiency calculated from FY2003 actual values)
Source: Japan Gas Association

Residential cogeneration systems applicable to a variety of customer lifestyles



customer's home and uses the waste heat for water and space heating. ECOWILL runs automatically to offer the optimum energy efficiency for the customer's particular pattern of use. Compared to conventional systems, it reduces primary energy use by approximately 21% and CO_2 emissions by approximately 32%, and can achieve an overall energy efficiency of 85.5%. Thanks to its reputation for superb environmental performance, the ECOWILL sold a total of 50,000 units in Osaka Gas's service area in FY2009.

Residential gas engine cogeneration system ECOWILL energy efficiency



Natural Gas Cogeneration System

Energy Savings and CO_2 Reductions Everywhere from Commercial and Industrial Applications to Residential Use

Osaka Gas is developing equipment that offers improved overall energy efficiency and power generation efficiency to meet the needs of a wide range of customers for heat and electricity, such as commercial facilities and factories that require vast quantities of hot water and heating.

Compared to a combination of grid-connected electricity generated by thermal power and a conventional boiler, the "Gene-Light," a commercial system reduces primary energy use by approximately 31% and CO_2 emissions by approximately 40%, while offering an overall energy efficiency of 85%. This system is already in widespread use in relatively small-scale commercial facilities such as restaurants and senior citizens' homes. For customers who don't use a lot of hot water, in 2006 we released the High Power Excel GHP, a commercial system mainly for air conditioning. It uses the excess power from gas engines for power generation, giving it an astonishing 45% (LHV) power generation efficiency. The CO_2 generated by the High Power Excel GHP's air conditioning and electricity generation is 23% less than what would be generated when using electric air conditioning powered and grid-connected electricity.

As a result of our efforts to improve the energy efficiency and power generation efficiency of natural gas cogeneration systems, as well as to spread their use, and as a combined result of other measures, our customers were able to reduce their CO_2 emissions by 2.33 million tons in FY2009 compared to FY1999.

We are also developing gas systems for residential use that offer both comfort and energy savings. (See diagram above.)

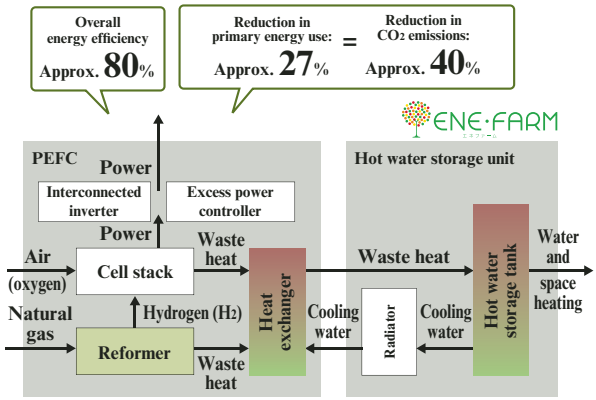
The ECOWILL residential gas cogeneration system, which we released in 2003, generates power at the

Key to a Low-Carbon Society ENEFARM Fuel Cell for Residential Use

In June 2009, Osaka Gas released the ENEFARM, a polymer electrolyte fuel cell (PEFC) cogeneration system for residential use.

A fuel cell generates electricity through the reaction of hydrogen and oxygen. The ENEFARM modifies natural gas to give hydrogen, which reacts with the oxygen in the air to generate electrical energy. The heat from this reaction is used to make hot water. In conventional power generation methods, combustion moves a turbine or engine and this motion gives electricity. In fuel cells, it is the chemical reaction that directly generates electricity. Fuel cells make possible minimal energy loss and maximum generation efficiency.

Mechanism of ENEFARM and its energy efficiency



To develop ENEFARM, we conducted countless experiments in real homes to prove the system's reliability.

These experiments allowed us to achieve a high generation efficiency of 35% for ENEFARM, far more than the 22.5% of the ECOWILL. Compared to conventional systems, primary energy use is about 27% less and CO_2 emissions are about 40% less.

Both ECOWILL and ENEFARM can be combined with photovoltaic power generation to dramatically raise environmental performance, giving an economical system that generates energy from the "Double generation" and makes it possible to sell excess daytime power generated to the power grid.

Stakeholder Comment

Enjoying Economy and Comfort While Contributing to the Environment

After learning about ENEFARM through newspapers and television, I wanted to try it for myself.

After having it installed, I was able to see immediately how much less CO_2 my home was producing. And because I can set my own energy targets, ENEFARM makes saving energy fun. I also had a Mist Sauna installed.

I was astonished at how much money I saved: my gas and electricity bills for a year were about 60,000 yen less than before.

Shoichi Okuno
Sakai City, Japan
Participant in the in-home experiments for the ENEFARM

Helping Customers Save Energy with Products and After-Sales Support

The Osaka Gas Group strives to reduce CO_2 emissions by offering customers energy efficient products and services. An example is the Energy Bank, which started in 2008 as Japan's first investment fund for promoting CO_2 reductions.

Efforts at Affiliates

"Motto Save" — Save More Energy

Gas and Power Investment Co., Ltd. (GPI) (now integrated into Creative Techno Solution Co., Ltd.) offers a service which provides energy measurement and control services for mid-size buildings, hospitals, and universities. For example, GPI analyzes the amount of electricity and gas used and then offers the customer energy-saving solutions. Customers can also monitor their energy use in real time with their computers.

Because this service is built from open source software and products, data can be exchanged with other companies' systems, measuring equipment can be easily upgraded, and a range of system expansion options are available.

Comment from a user

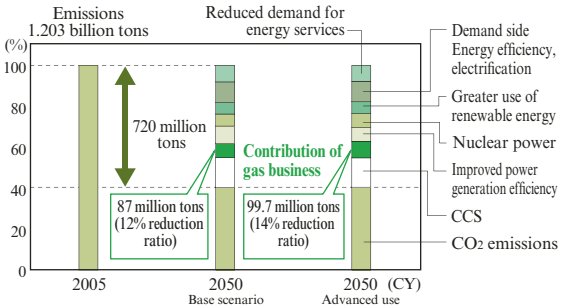
Before we joined this service, GPI conducted meticulous surveys and joined us in numerous meetings. The Save More service has automated activities that used to require time and manpower on our part, such as daily power and gas meter readings, and patrols to check on temperature settings and to ensure unneeded power switches are turned off. The "Motto Save" system has made it easier to see how we use energy, and based on this we create energy measures and control our air conditioners. We are looking forward to seeing future energy savings and to reporting the energy savings we have achieved.

Head of materials and equipment
Hokusetsu General Hospital

T O P I C

Natural Gas Contributes to a Low-Carbon Society

The Mitsubishi Research Institute, Inc. drew up a scenario in which Japan's CO_2 emissions in 2050 had been reduced by 60% against 2005. In the base scenario, of the 720 million tons of CO_2 reductions achieved by 2050, the gas business, through conversion of fuels and the introduction of cogeneration systems, contributed to 87 million tons (99.7 million tons when considering advanced used of natural gas) of reductions in 2050. This shows the crucial role that our industry plays in achieving a low-carbon society.



Source: Presentations by Mitsubishi Research Institute, Inc. at the 5th Gas Business Conference

What are the Power Sources (Marginal Power Sources) that are Affected by CO_2 Reduction Measure?

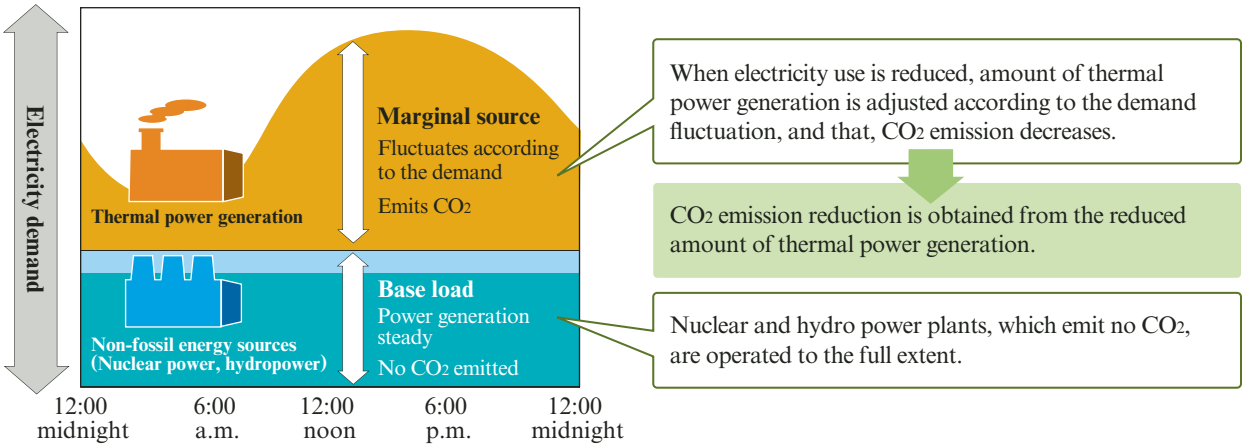
The average emission factor of thermal power generation should be used to calculate the CO_2 reduction effect of energy-efficient equipment.

CO_2 emission of thermal power generation sector amounts to approximately 30% of total emission of Japan. In order to accelerate the efforts for energy saving, the key factor is to properly evaluate CO_2 reduction by power saving.

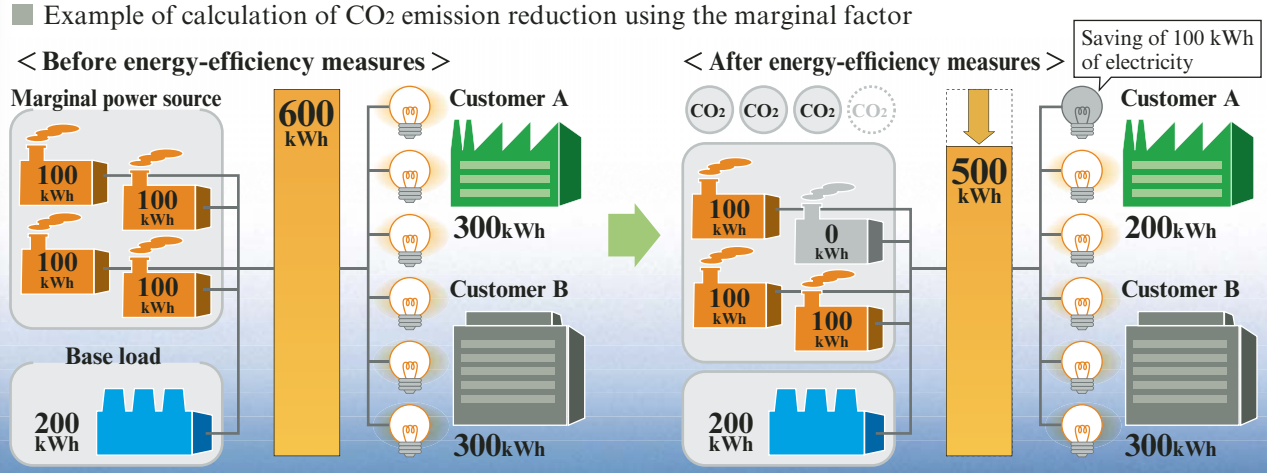
Proper evaluation for CO_2 reduction

The fluctuation of electricity demand by energy-saving efforts influences the operation of specific power source (marginal power source.) For proper estimation of reduced emission, the marginal power source should be identified and taken into account.

■ Change in energy demand by time of day



■ Example of calculation of CO_2 emission reduction using the marginal factor



The marginal source in Japan is the Thermal power generation

The power sources of Japan include thermal, nuclear and hydro power generation. The nuclear power plant maintains its generation except for occasions such as periodical inspections. Amount of generation of hydro power plant, operated to the fullest due to the low cost for operation, fluctuate affected by changes in precipitation and amount of snowfall. The power source of which generation fluctuate affected by changes in demand is the thermal power plant. Consequently, current marginal source in Japan is considered to be the thermal power source.

References Estimation of CO_2 emission and CO_2 emission reduction

Generally, CO_2 emission is estimated by using the Average Emission Factor (AEF) for all types of power source including nuclear and hydro generation. The ministerial ordinance under the Law concerning the Promotion of the Measures to Cope with Global Warming employs the AEF for estimating and reporting of CO_2 emission by electricity use. However, estimation using AEF also considers the nuclear and hydro generation as the reduced sources, even though they have no impact of power-saving. As a result, CO_2 emission reduction is underestimated. Appropriate factors should be used for estimation of emission and emission reduction.

＜Calculation of CO_2 emission reduction＞

Reduced electricity use (kWh) × Marginal factor 0.69 (kg-CO_2/kWh) = Reduced CO_2 emission (kg-CO_2)

(Amount of CO_2 emission associated with power generation of 1 kWh at thermal power plant)

When savings are 100 kWh

Amount of electricity reduced 100 (kWh) × CO_2 emissions per kWh 0.69 (kg-CO_2/kWh) = Amount of CO_2 emissions reduced 69 (kg-CO_2)

Marginal factor

International / internal standards for CO_2 reduction assessment

International standards provide the calculation practice using the marginal factor (in Japan, the average factor of thermal power source) for assessment of CO_2 reduction as a result of reduction of purchased electricity. This practice is employed in the process of CDM, one of the mechanisms of the UNFCCCs Kyoto Protocol, as well as the international standards such as the Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects. Also, the guidelines for energy saving established by the Japanese government include the description of the practice.

The estimation method of CO_2 reduction provided the Guidelines for Quantifying GHG Reductions from Grid-Connected Electricity Projects by the GHG Protocols

The marginal factor is used for the calculation of CO_2 reduction due to the effect of energy-saving efforts. The marginal factor is obtained by identifying the power source of which generation is reduced. In the light of this guideline, the average factor of thermal power source is considered to be the marginal factor in Japan.

The government guidelines employed the marginal factor (the average factor of thermal power source)

- **Targets Achieved Scenario Subcommittee Interim Summary, Global Environmental Committee,** Central Environmental Council (July 2001)
- **The Environmental Report Guidelines 2007,** the Ministry of the Environment (June 2007)
- **The standard for green government building and its practical manual,** edited by the Ministry of Land, Infrastructure, Transport, published by Public Buildings Association (2005)
- **The standard for environmental performance examination/retrofit design and its practical manual,** edited by the Ministry of Land, Infrastructure, Transport, published by the Building Maintenance & Management Center (2006)

There is a video with an explanation of the proper evaluation of CO_2 emission reductions. (Japanese only)
http://www.osakagas.co.jp/company/csr/co2movie/index.html

A Round-the-Clock System Protects Every Customer in the Service Area

Osaka Gas brings natural gas to its approximately 6.94 million residential and commercial customers in the Kansai region. We have a system of safety that is in operation 24 hours a day, 365 days a year, ensuring that natural gas is handled and used safely in every stage, from processing and distribution to consumption at customers' sites.

■ The Pursuit of Safety—From Gas Fields to Customers' Sites

Processing Stage

Ensuring Safety of the Surrounding Areas at LNG Terminals, Where LNG is Converted to Natural Gas

At Osaka Gas's two terminals, Senboku and Himeji, natural gas is processed with the utmost concern for the safety of the surrounding areas.

Natural gas mined from gas fields in foreign countries is liquefied into liquid natural gas (LNG) and delivered in double-hulled tankers to the two terminals in Japan, where it is stored in a total of 30 LNG tanks. These tanks are extremely earthquake-resistant, thanks to a structure that includes foundation piles driven deep into the solid ground. And gas and flame detectors are located in key areas of the LNG terminals.

The stored LNG is converted to natural gas through vaporization and heating value adjustment processes before being sent to customers throughout the service area. Because natural gas is odorless, it is odorized so that it can be detected in case of a gas leak.

The entire process from the receipt of LNG to the processing and distribution of gas is centrally computer-controlled, and all the facilities in the terminals are monitored and operated 24 hours a day, 365 days a year, from the central control rooms. This ensures irregularities and accidents are prevented or detected early on before they spread. There are also about 150 emergency drills, including unannounced drills, held annually to ensure that we are always prepared for any situation.


Fire drill with fire engine

Distribution Stage

Monitoring and Controlling to Ensure the Safety of Our Extensive Network of Pipelines: Long Enough to Circle the Earth 1.5 Times

The high-pressure natural gas is sent through a network of pipelines, where it gradually has its pressure lowered by gas pressure regulators situated along the pipelines before being delivered to customers' sites. This network in the Kansai region stretches a total of 58,500 kilometers—enough to circle the Earth 1.5 times. To make the areas around these pipelines safe, Osaka Gas has 47 emergency stations throughout the service area. These stations dispatch staff to regularly inspect and maintain the pipelines, while the central control room of the head office monitors and controls facilities in the entire service area.

This system of monitoring and control is carried out 24 hours a day, 365 days a year. Reports of leakages are taken by dedicated phone lines and are responded to promptly, whatever time of day they occur, with the dispatch of emergency staff from the nearest station.

To limit the damage from an earthquake, tremors are detected and gas supplies are automatically shut off by intelligent meters at customers' locations and by gas

pressure regulators situated along the pipelines. The central control room can also remotely shut off gas supplies.

Many of the low-pressure pipelines near customers' homes are made of polyethylene. Polyethylene pipes are flexible and corrosion-resistant; it is also earthquake-resistant, a fact proved during the Great Hanshin-Awaji Earthquake of 1995.

Regular inspection of gas pipes on bridges

Consumption Stage

Equipment and Services Ensure Customers Can Use Gas Safely

So that customers' can use their gas equipment with peace of mind, Osaka Gas conducts regular safety rounds as required by law, and moreover, has also been quick to introduce equipment and services that make using natural gas safe. Since the 1990s, we have provided safety measures such as intelligent meters that shut off gas in case of an earthquake, and the "Piko Piko" gas alarm system, which provides vocal alerts if it detects gas leaks or incomplete combustion.

From 2007, we stepped up our legal compliance and level of product safety with the establishment of our voluntary product safety plan. We further raised the level of equipment and services that ensure safe use of natural gas; for example, we began new services including the "Kemu Piko" smoke detector, and the "Kuru Piko" system, under which emergency staff are dispatched to the site in case of fire or other calamity.

In March 2008, we introduced "Si sensor equipped cooking stove", which comes standard with functions for preventing cooking oil from overheating, ensuring burner safety, and automatically turning off the flame when the user forgets to do so. We are also in the process of replacing small gas water heaters and gas stoves that do not have devices to prevent incomplete combustion.

Employee Comment

TV Commercial Stresses Importance of Ventilation

Osaka Gas runs TV commercials to reinforce the importance of using gas equipment safely.

I was the spokesperson in the FY2009 commercials. The message was that ensuring the daily safety of your gas ventilation is just as important as my daily training as a track and field athlete.

Nobuharu Asahara
Human Resources Department, Osaka Gas
Beijing Olympic bronze medalist, men's 4×100-meter relay, track and field

In the area of commercial gas kitchen equipment, after surveying approximately 100,000 users, in January 2009 we began a free service of lending commercial ventilation alarm systems. In 2008 in Japan, there were 11 cases of CO poisoning as a result of unused or faulty air supply and exhaust equipment in restaurants and other commercial facilities. To prevent such accidents, by March 2010 we will have visited all of our customers to inspect equipment and if necessary will install gas alarms.

Through these and other efforts, Osaka Gas will ensure that customers throughout the Kansai region will have safety and comfort in their use of natural gas 24 hours a day, 365 days a year.

Si sensor equipped cooking stove

Commercial ventilation alarm system

TOPIC

Measures Against New Strains of Influenza

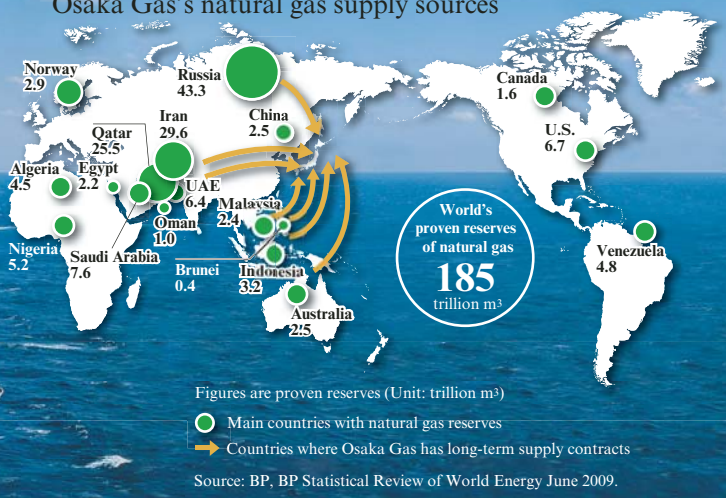
To ensure we can continue the safe, steady supply of gas in the case of an outbreak of a new strain of influenza, in June 2007 Osaka Gas formulated its "Action Plan for New Strains of Influenza." The plan includes measures to prepare for an outbreak, as well as measures to confirm how much an outbreak has spread and to contain it from spreading further for all employees.

With the worldwide spread of a new strain of influenza starting in April 2009, we set up an emergency system based on WHO alert levels, and implemented action including thorough preventative measures for all employees, the wearing of protective masks for employees interacting with customers, and the limiting of business trips to only those absolutely necessary.

Meeting Our Responsibility to Supply Natural Gas by Diversifying Our Procurement Sources

Through long-term contracts with LNG producers in seven countries, Osaka Gas ensures a stable supply of natural gas for its customers.

Countries with natural gas reserves, Osaka Gas's natural gas supply sources



Figures are proven reserves (Unit: trillion m³)
Main countries with natural gas reserves
Countries where Osaka Gas has long-term supply contracts
Source: BP, BP Statistical Review of World Energy June 2009.

Increasing Worldwide Concern About Energy

Natural Gas Increasingly in the Spotlight—Stable Supply and Minimal CO_2 Emissions

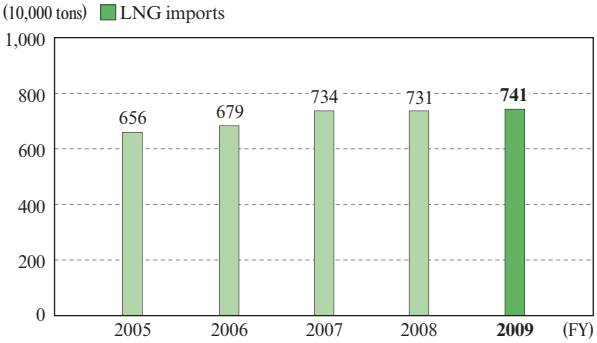
Energy issues were at the forefront of concern in 2008. The wildly fluctuating price of crude oil has had a dramatic effect on the world economy. The price of crude oil began climbing in 2007 and, pushed by a flood of investment, hit a record high of $147/barrel in July 2008. It then plummeted to $34/barrel in December because of the global economic crisis originating in the U.S. There has also been growing momentum towards the energy sources with low environmental impact, as witnessed by the focus on the environment and climate change at the G8 Hokkaido Toyako Summit.

As a country with few energy resources, Japan imports most of its energy from other countries. This makes the stable procurement of energy resources one of the most important policies for Japan.

Unlike oil, which is found mainly in the Middle East, natural gas is distributed at reserves around the world and can therefore be more easily secured and supplied. It is also a relatively environmentally friendly energy resource, emitting less CO_2 than other fossil fuels when combusted. As well, natural gas contributes to the spread of energy systems that achieve high efficiency and fuel savings; these include cogeneration systems and fuel cells.

All these factors are increasingly putting natural gas in the spotlight in countries around the world.

Osaka Gas LNG imports



FY2009 Procurement: 7.41 Million Tons

Diversifying Supply Sources to Reduce Risk and Ensure Stable Supply

In 1972, Osaka Gas began importing liquefied natural gas (LNG) from Brunei. Today, we have long-term contracts with suppliers in seven LNG producing countries—Brunei, Indonesia, Australia, Malaysia, Oman, Qatar, and Russia—. As well, we have supplemental suppliers in the five countries of Abu Dhabi, Egypt, Trinidad and Tobago, Nigeria, and Equatorial Guinea. All of these sources allowed us to import 7.41 million tons of LNG in FY2009.

By diversifying our suppliers, we can reduce our risk by always having resources available in case of a sudden problem with a certain supplier. This is an effective way to ensure we secure a stable gas supply.

Resource Development, LNG Tankers, LNG

Developing the Upstream Stage of Procurement to Cope with an Increasingly Unsure Energy Resources Market

Before the LNG that is the primary source of natural gas makes it to Japan, it goes through a long value

chain: from the exploration and development of gas fields, through mining and production, and the liquefaction and storing of the natural gas for its journey across the ocean.

The Osaka Gas Group is aggressively entering this upstream stage of the natural gas value chain. We are aiming for the stable and economic procurement and supply of gas by taking part in overseas natural gas projects, acquiring equity of the LNG receiving terminal, and building up our own fleet of LNG tankers.

We got our start in the upstream development of natural gas in 1990 when we invested in Universal Gas and Oil, which took part in a natural gas project in Indonesia. We went on to join in natural gas projects and crude oil projects in Australia, Norway, and Oman. In 2008, we invested in the Freeport LNG receiving terminal in Texas, U.S.A., putting to work 30 years of technology and know-how built up in Japan and marking our entry into the LNG plant business overseas.

We also gradually built up our fleet of LNG tankers: put into service were the LNG Flora in 1993, the LNG Vesta in 1994, the LNG Jamal in 2000, the LNG Dream in 2006, and the LNG Barka in 2008. In July 2009, we built our sixth tanker, the LNG Jupiter.

Osaka Gas will continue to make the most of this LNG fleet to expand into the upstream stage of the natural gas value chain. We are striving to cope with an increasingly uncertain energy market by procuring a flexible, stable supply of competitive LNG and by raising the worth of the value chain, while at the same time helping decrease environmental impact through the use of the "clean energy", natural gas.

T O P I C

Fuel Cost Adjustment System

Because the price of natural gas is subject to fluctuations of currency rates and crude oil prices, in 1996 a system was introduced to reflect these fluctuations in the gas rates.

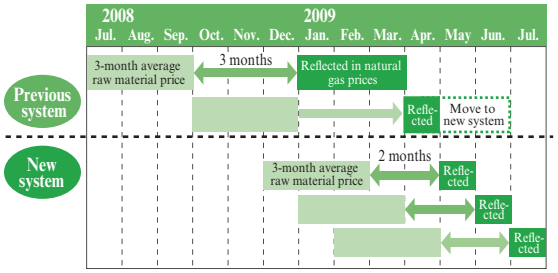
Last year's sudden and dramatic LNG price fluctuations also prompted a shortening of the time it takes for these fluctuations to be reflected in the gas rates, and the fuel cost adjustment system was changed so that cost adjustments are now made once a month instead of once every three months. At Osaka Gas, we switched to this new system starting with the May 2009 gas meter reading: this reflects fuel cost changes in the gas rates timely, and also it levels off the fluctuations in the gas rates.

Calculation method

$$\text{Unit rate adjustment amount (yen/m}^3\text{)} = \frac{\text{Average raw material price (yen/ton)} - \text{Standard average raw material price (yen/ton)}}{100 \times 0.81 \times (1 + \text{consumption tax rate})}$$

The "Average raw material price (yen/ton) — standard average raw material price (yen/ton)" is the amount, in units of 100 yen, rounded off to the nearest 100 yen.
The adjustment of specific unit rate is as follows:
In the case of a positive adjustment, it is the value to the second decimal place after rounding the third decimal place down; in the case of a negative adjustment, it is the value to the second decimal place after rounding the third decimal place up.

■ How to reflect raw material prices in natural gas prices



Stakeholder Comment

Aggressive Gas Resource Development Ensures Stable Supply

Akira Ishii
Chief Economist, Survey Division
Japan Oil, Gas and Metals National Corporation

Natural gas is becoming an increasingly important factor in reducing the environmental impact of energy use and thus curbing global warming. Although the mass media is giving the impression that renewable energy is the solution to our problems, the reality is that there remain problems with costs, available supply, and stability. The fact is that renewable energy will be insufficient unless it is used effectively in unison with the vast resources of natural gas. Osaka Gas was the first company in Japan's gas industry to develop gas resources in the Asia-Pacific region to secure a stable supply of inexpensive energy. It is also aggressively shoring up its supply base in Japan. I would like to see Osaka Gas make a rapid push into its main business and continue taking advantage of this opportunity to decrease its environmental impact.

Freeport LNG plant, Texas U.S.

CSR Charter I

Creating value for customers

Charter I The Osaka Gas Group is committed to making its positive contribution to realizing higher level of comfort and development of business activities of its customers. The group intends to achieve this objective through its provision of reliable and safe supply of natural gas and other energy services with improved level of services for its customers. We also seek to grow together with customers and society at large by creating new products and services to enhance our value for customers and pursuing opportunities for further growth of our businesses.

CSR Indicators

Targets by FY2012

Customer Satisfaction Level Survey:

Level of satisfaction at 82%+

Customer scores in FY2009

Continuing high marks for interaction with customers

Osaka Gas has been conducting customer satisfaction surveys since 1988 in order to raise the quality of our work. Customers are surveyed on "opening of gas lines," "repair of gas appliances," "regular security inspections (gas facilities inspections)," "response to telephone inquiries," "replacement of gas meters upon expiration of validity period," "sales of appliances," "sales of gas alarms," and "sales of ST24*." The survey takes the form of a written questionnaire mailed to customers one or two weeks after completion of the service concerned, and is divided into overall satisfaction and quality of service for the specific service that was provided. About 50,000 questionnaires are returned each year, with a more-than 30% return rate.

We set targets of at least an 80% rate of overall satisfaction and at least 84 points in quality of service, and in recent years we have easily achieved both of these: with 88.1% and 89.8 points respectively in FY2009. The results of the survey are shared as vital information and to improve motivation; for example, to constantly improve our customer service, as benchmarks for future efforts, in the creation of documents and leaflets we give when visiting customers and in work procedure manuals, and at workshops to improve response to telephone inquiries.

From FY2010 on, we will expand the survey to cover more work processes and will make it an indicator of our CSR. Our goal for overall customer satisfaction is at least 82%.

Overall satisfaction	Proportion of customers who answered "very good" or "good" on a six-point scale of customer satisfaction
Quality of service	Customers' assessment of the main elements of service and their contribution to customer satisfaction converted to a score out of 100

Recent efforts

- In FY2007, we began conducting the surveys by mail, instead of by phone as previously, to make it easier for customers to respond to the questions.
- In FY2009, we added the survey items "sales of appliances," "sales of gas alarms", and "sales of ST24" in order to raise the quality of our work.

* Station 24 business: A 24-hour IT monitoring system to ensure customer safety and peace of mind.

Replacement of gas meter

Regular security inspection

WEB Safety and Security (Stable procurement and supply of natural gas / Gas processing / Gas supply / consumption stage)

Safety and Security at the Customer's End

Safety and Security for Customers

Osaka Gas Safety inspections for regular buildings are carried out at least once every 40 months and every 14 months in the case of designated underground shopping areas and other facilities. We also check into the background of gas appliances owned by customers and ensure they are registered, as well as check that certain gas appliances are igniting properly.

For customers using our products in factories and retail facilities such as restaurants, in addition to inspections required by law, we conduct special custom-made surveys in response to the customer requests. These include drawing layouts of the customer's facilities, doing anti-corrosion work on gas pipes, and organizing joint safety training.

Tailored safety inspections

Removing Old Gas Appliances Without Safety Mechanisms

Osaka Gas would like to take out of use all old gas appliances with no safety mechanisms from the market. In particular, we are visiting customers using old appliances with incomplete combustion prevention devices, such as small tankless gas water heaters and wire-mesh gas stoves, and recommending they upgrade to safer gas appliance. We also offer to bear a part of the cost to ease the financial burden on the customer.

We also keep customers informed of safer use in a number of other ways, such as through TV commercials and the distribution of leaflets to the approximately 6 million customers.

All Group Employees Shoot for Safety

Osaka Gas believes that the foundation of the gas business is the assurance of safety by each and every employee. That's the reason behind our All Employee Gas Safety Initiative.

The initiative is aimed at giving all employees the knowledge to handle customer inquiries about gas, to eliminate the risk of gas accidents caused by leaks and products with no safety features, and to provide customers with all the safety-related information they need.

The company intranet details safety measures to take, and gives basic information about gas and gas appliance safety.

Employee Comment

Awarded by Osaka Governor

Kazuyuki Matsuo received a fiscal 2010 award for merit in the field of labor from the governor of Osaka Prefecture. The awards are presented every year to honor outstanding achievements by individuals and groups in industry, education, and culture. Since joining Osaka Gas, Mr. Matsuo has worked in gas processing, gas pipe installation, sales expansion, and design and installation of indoor gas pipes, and is currently using this experience in indoor pipe safety.

"This award is thanks to the support I have received from my superiors, colleagues, and subordinates, and of course from our customers. This award has inspired me to work even harder to ensure safety and peace of mind for our customers."

Kazuyuki Matsuo

Nanbu Residential Energy Business Unit

Creating New Services for Customer Safety and Peace of Mind

The "Piko Piko" gas alarm system, which detects and warns of gas leaks and carbon monoxide. We also provide appliances with fire alarm functions, the "Kemu Piko", which detects smoke and fire. So as not to be confused with the sound of other alarm equipment, the "Kemu Piko" emits voice warnings such as "Fire!" and "Accident!".

With our "Kuru Piko" service, 24 × 365 monitoring is carried out to detect fires, gas leaks, and carbon monoxide, and if a problem is detected, gas supplies are shut off and emergency staffs are dispatched to the site.

We also offer the "Airusu" home security system, in which homes are connected by Internet to our monitoring center, which dispatches staff when problems are detected.

Piko Piko

Problems with Gas Clothes Dryers in FY2010

Handling problems with Gas Clothes Dryers

In September 2008, it was discovered that some of the gas clothes dryers sold by Osaka Gas would occasionally have a problem with their circuitry, causing some of the clothes to get burn marks before the product turned off. We proceeded to carry out free inspections and parts replacements when necessary, on the 1,688 units that we could confirm were installed. We also set up a toll-free phone line to take inquiries from customers on this matter.

For details, see the press release (Japanese version only):
http://www.osakagas.co.jp/company/press/pr_2008/1174607_793.html

Incorporating Customer Opinions

WEB Improving customer service with IT / Dialog with consumer groups

Osaka Gas Supporter Activities

Reflecting the Customers' voices in Osaka Gas Business

Osaka Gas Supporter is a group of citizens who give Osaka Gas their valuable opinions and requests on our activities, and who provide our customers with a range of helpful information related to using gas. Osaka Gas Supporter started in the spring of 2009 and anyone is welcome to become a member.

Members take part in hands-on events sponsored by Osaka Gas, where, as average users of gas products, they give their feelings, opinions, advice, and original product and service suggestions. Osaka Gas does its best to reflect these into future products and services.

There is also the Osaka Gas Supporter Blog on our website, where supporters present convenient ways to use gas appliances, their feelings on using gas, gas cooking recipes, and energy-saving ideas.

The Osaka Gas Supporter blog

Efforts at Affiliates

Planet Work Co., Ltd.

Staff Communication for Improving Service

Following weddings at its Mia Via wedding venue, Planet Work surveys participants to boost its level of service.

All sections of the company, including those of partner companies, have a manager in charge of "greetings with a smile," and portraits of all employees are put on a bulletin board to make them continuously aware of the importance of service with a smile. Planet Work and its partner companies also share information on complaints and discuss about improvement of service.

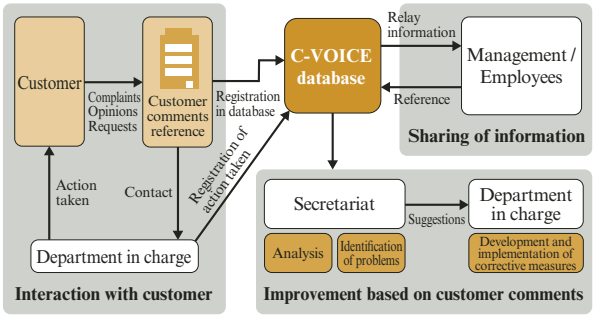
A bulletin board keeping employees' better awareness

Customer Opinions Shared Company-Wide

Work Processes Improved upon Customer Opinions and Requests

C-VOICE is a database for gathering customer opinions and requests in various ways and sharing them across the company to improve our work processes.

Overview of C-VOICE



In FY2009, we simplified the credit card payment process accompanying customer's move. In the new system, without submitting a change of address notification, customers can continue paying by credit card as before.

We will continue to listen closely to customers so that we can make them even more satisfied with our products and services.

Efforts at Affiliates

OG Sports Co., Ltd.

A Fitness Club People Want to Come Back to

OG Sports runs the COSPA chain of fitness clubs. Based on our corporate creed of "Wellness for smiles," we stick to the basics in all our activities in our aim of keeping customers satisfied, healthy, and smiling.

All efforts to improve the operational quality of our fitness clubs are carried out from the customer's point of view. Initiatives in FY2009 included consultation with trainers' days, customer suggestion boxes, and a treasure hunt to create a lively, fun atmosphere. We will continue to take pride in our company and be conscious of our mission of giving customers satisfaction through better health.

A member of our COSPA club in Suita, Osaka Prefecture, had to suddenly quit after 11 years with us. This person had taken part in my exercise lessons. Knowing that COSPA was a special place for this person, I felt I had to do something. So on the last day we met, I gave this person a letter, and in response received many heartfelt thanks and smiles. I want to continue always serving customers heart-to-heart.

Yukiko Tokuda

COSPA Suita branch
OG Sports Co., Ltd.

WEB Variety of rate plans / Products with advanced functions and convenience / Overview of Senboku Natural Gas Power Plant

Osaka Gas Becoming a Multi-Energy Supplier

The Best Energy Mix

Osaka Gas Group wants to be a multi-energy supplier creating value for a wide range of customers by offering the best mix of energy sources, including natural gas, electric power, liquefied petroleum gas(LPG), and thermal energy.

In particular, we are focusing on electric power as the second pillar of our business after the gas business. A key to this will be the IPP business that we are developing both in Japan and overseas, such as the U.S. and Spain. In April 2009, the Senboku Natural Gas Power Plant went into operation, and before the end of FY2010 our power generating capacity will be approximately 3 million kW.

We plan to expand both our natural gas and LPG businesses beyond the Kansai region to include other parts of Japan.

Senboku Natural Gas Power Plant

"Keep Blue with Gas"

Offering the Value, "Environmental Consciousness"

In April 2009, Osaka Gas adopted a new slogan, "Keep Blue with Gas." This represents our desire to ensure that the Earth continues to be blue and beautiful, and that our customers continue to enjoy a comfortable life.

Osaka Gas will contribute to environmental protection by not only providing the clean energy of natural gas, but also by spreading the way of use to achieve a low-carbon society, such as distributed energy systems including the ENEFARM residential fuel cell, and double generation systems that incorporated solar power generation systems.

TOPIC

Using Service Science of Behavior Observation to Improve Business

行動観察

Osaka Gas developed a scientific method to observe and analyze unconscious behavior in order to improve business. In July 2009, we established the Osaka Gas Research Institute of Behavior Observation to develop more advanced methods of observation, foster observation staff, and facilitate exchange with industry and academia.

L-Net Co., Ltd. helps companies reform and improve their level of service by discovering needs and issues to be dealt with.

Scientifically analyzing service

Osaka Gas Service Shops Kurashi (Living) Plus

Ideas for Living Comfort

The Kurashi (living) Plus Osaka Gas service shops partner with us to act as the contact point between Osaka Gas and its end users. As of April 2009, there are 105 of these shops in our service area.

These shops carry out a wide range of services including starting gas service for customers, selling and repairing gas appliances, renovating kitchens and bathrooms, selling "Kemu Piko" home fire alarm systems and "Airusu" home security systems, and even cleaning homes.

Osaka Gas service shops Kurashi (Living) Plus

Osaka Gas's Food Education

Teaching About Food with Various Programs

Osaka Gas and affiliate Apriti Sesamo Co., Ltd. are involved in a wide range of educational activities related to cooking. We strive to strengthen relationships with customers at cooking classes and events to introduce gas cooking appliances, run the Little Chef Academy to teach children how to cook, and conduct joint research with professor Ryuta Kawashima of Tohoku University on the positive effects cooking has on the brain.

In 2008, we came up with a new slogan: "Thank you for the food." We published a textbook for schools called introducing the culture, nutrition, and environment relating food. We intend to further develop our plans for cooking education by holding cooking seminars and similar events for educators.

CSR Charter

II Contributing to harmonizing with environment and to realizing a sustainable society

Charter II 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. The Group, being seriously aware of the impacts of its business activities on the environment, seeks to harmonize its businesses with the environment and to realize efficient utilization of energy resources, thereby contributing to achieving a sustainable society.

CSR Indicators

Targets by FY2012

Environmental Management Efficiency:

91 yen/1,000 m³ or less

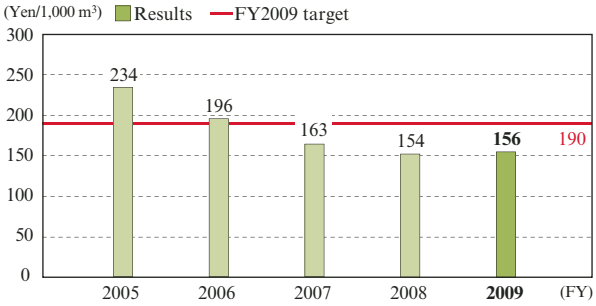
Activities in FY2009

Achieved Targets for Final Year of Medium-Term Management Plan

In FY2004, Osaka Gas established environmental management indicators in order to assess progress in environmental management in a continuous, integrated manner. These environmental management indicators help us assess the reduction in environmental impact by measuring five types of environmental impact (from CO_2 emissions, NOx emissions, COD*, final disposal of industrial/general waste, and excavated soil), in the form of amounts generated or amount reduced against the base year (FY1999), and converting these into a monetary value. For example, environmental management efficiency is the total of the monetary value of each of the five above-mentioned impacts divided by the amount of gas sold. The smaller the resulting number, the greater the reduction of environmental impact per amount of gas sold.

In FY2009, we achieved the targets for the final year of the Medium-Term Management Plan. Starting in FY2010, we will include emissions of chemical substance (xylene, toluene) for a total of six environmental impacts. As well, the monetary value of environmental impact will use data of LIME 2 (Life Cycle Impact Assessment Method based on Endpoint Modeling; a damage-calculated impact assessment method), developed by Japan's National Institute of Advanced Industrial Science and Technology (AIST).

Environmental management efficiency targets and achievements (up to FY2009)



Environmental management efficiency (Yen/1,000 m³) = (6 types of environmental impact (on the right) (1), (2), (3), (4), (5), and (6) converted into monetary value) / Amount of gas sold

Six types of environmental impact

(1) GHG (CO_2 + methane) emissions
(2) NOx emissions
(3) COD*
(4) Final disposals of industrial and general waste
(5) Final disposal of excavated soil
(6) Chemical substances (xylene, toluene) emissions

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

Under the new medium-term environmental targets, besides environmental management efficiency, we carry out the following activities based on the Osaka Gas Group Environmental Activities Policy. (For details, see page 8.)

I. Reducing Environmental Impacts of Our Business

In addition to its natural gas business, the Osaka Gas Group sets and pursues targets for the reduction of CO_2 emissions in the power generation business and the local heating and air conditioning business. In the power generation business, we need to readjust the make-up of our power source portfolio in the long term and we have set targets to do this by 2020.

II. Reducing Environmental Impacts of Our Products and Services

We are working towards the realization of a low-carbon society through the proliferation of products that save energy, such as the ECOWILL and ENAFARM residential cogeneration systems and the high-efficiency Eco-Jozu water heater, and the proliferation of natural gas use by commercial and industrial facilities.

III. Contributing to Environmental Conservation Locally, Nationally and Internationally

We hold seminars and other educational activities, the main ones being energy and environment lessons in schools, and we take part in fairs and exhibitions. Our goal is to communicate the importance of the environmental efforts. We also carry out activities to further biodiversity, and we work to spread the use of renewable energy.

WEB Environmental Policy / EMS certification status of affiliates

Building an Environmental Management System

Company-Wide Integrated ISO 14001 Certification

In 1997, all business units were involved as Osaka Gas launched efforts to acquire certification for ISO14001, an international environmental management systems (EMS). As a result, the entire company was covered by seven EMSs by FY2006. From FY2007, we started integration of all the EMSs across the company to promote CSR and enhance management efficiency. Osaka Gas was accredited integrated certification in December 2007.

In FY2009, based on the integrated company-wide system, we boosted legal compliance, strengthened our system of internal audits, and raised the level of our EMS. We also have the Osaka Gas Environmental Policy.

96 Affiliates in Japan Complete EMS Building and Certification

As of the end of FY2009, 96 affiliates in Japan had introduced an EMS. This includes the Osaka Gas EMS (OGEMS®), a voluntary EMS that functions similar to Eco Action 21, as well as third-party EMSs such as ISO 14001 and Eco Action 21.

The Osaka Gas Group will continue to aggressively implement EMSs so that it can ensure it is abiding by relevant environmental laws. These efforts will contribute to proper, effective environmental protection activities such as the reduction of CO_2 emissions and other environmental burdens.

On-site inspection for OGEMS® certification

Review for OGEMS® certification

Osaka Gas ISO 14001 certification dates

Business unit	Date
LNG Terminal & Power Generation Business Unit	October 1997
Engineering Department (Construction sector)	March 2001
Head Office Building	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
Company-wide integrated certification	December 2007

EMS Standards Osaka Gas Group certified for

Standard	Certification acquired		Total
	Until FY2008	FY2009	
ISO 14001	19	1	20
Eco Action 21	7	0	7
Osaka Gas Environmental Management System (OGEMS®)	19	51	70
Total	45	52	97

(as of March 2009)

Support for EMS Introduction

General Training and E-Learning

In FY2007, the Osaka Gas Group started e-learning to give all employees the necessary knowledge on environmental basics and Group environmental measures and targets. There is also group training, divided by job description, for raising employees' environmental awareness.

Approximately 7,000 employees joined in e-learning and about 370 participated in the group trainings in FY2009.

E-learning screen

Environmental Information System

To ensure that the EMS is working to properly and efficiently carry out environmental protection activities, a range of environmental data must be periodically collected from the various companies and departments. In FY2007, Osaka Gas created the Environmental Information Management System for gathering and managing group-wide data in an integrated manner. The system went into operation in FY2008.

Environmental Accounting

WEB Environmental accounting calculation method
Environmental accounting: Classification and content

Overview of FY2009

Investment increased approximately 30 million yen against the previous year, due to investment in the development of environmentally products, and investment in a method to reduce the amount of excavated soil by replacing pipes with excavating only two points. We had an increase in costs of 2.6 billion yen because we purchased far more polyethylene pipe material as part of our green procurement efforts. Environmental conservation results were about the same as the previous year.

We will continue to work on the monetary assessment of environment-related efforts so that we can invest more effectively.

Environmental conservation cost

Item		Contents	Investment (million yen)		Expense (million yen)	
			FY2008	FY2009	FY2008	FY2009
In-company activities	Global environment	Energy saving equipment	31	19	325	409
	Pollution prevention	Air and water pollution preventing equipment	17	11	175	44
	Resources recycling	Excavated soil recycling, waste management	118	135	160	155
	Environment management	Green purchasing, environmental education, EMS development, environmental organizations	0	0	2,305	5,444
	Conserving resources, other	Greening at plants, compensation for environmental preservation	0	2	422	269
Environmental impact reduction at customers	R&D	R&D of environmental impact reduction technologies, environment-conscious products	161	255	1,172	947
	Recycling of used gas appliances	Collection and recycling of gas appliances	0	0	102	73
Philanthropic activities		Voluntary greening, environmental advertising, environmental information disclosure	69	1	200	169
Total			396	423	4,861	7,510

Internal economic benefits

(million yen)

	FY2008	FY2009
Saving through reduction and recycling of excavated soil	4,799	4,667
Sales of valuable resource (LNG cryogenic energy)	246	238
Cost reduction through energy / resources saving	–308*	–224*
Total	4,738	4,681

* Including the increased cost for purchasing electricity due to lowering the production ratio of the cryogenic power generation

Environmental conservation results

(million yen)

	Per output*2			Total amount			Reduction*3			Social benefits	
	Unit	FY2008	FY2009	Unit	FY2008	FY2009	Unit	FY2008	FY2009	FY2008	FY2009
NOx (LNG Terminals) : NOx emissions in the gas business	mg/m^3	0.68	0.70	tons	6.07	5.90	tons	24.04	23.39	9	8
COD (LNG Terminals) : COD for all LNG terminals	mg/m^3	0.31	0.40	tons	2.76	3.39	tons	9.63	14.04	14	21
CO_2 (LNG Terminals)*1	g-CO_2/m^3	12.95	13.61	thousand tons-CO_2	115	114	thousand tons-CO_2	21	14	73	49
CO_2 (Other sites)*1	g-CO_2/m^3	5.02	5.26	thousand tons-CO_2	45	44	thousand tons-CO_2	37	33	130	115
Final disposal of excavated soil	t/km	38	37	thousand tons	35	33	thousand tons	83	78	1,830	1,729
Final disposal of general waste	g/m^3	0.01	0.01	tons	122	58	tons	1,211	1,203	4	4
Final disposal of industrial waste (including used gas appliances)	g/m^3	0.11	0.08	tons	943	686	tons	5,100	5,012	156	154
										Total 2,215	2,080

(Note) FY2009: The amount of gas sales was 8,380 million m^3 and the total length of newly installed gas pipelines was 886 km.

*1 CO_2 emissions associated with purchased electricity are calculated using the average factor of thermal power plants (0.69 kg-CO_2/kWh).

*2 NOx, COD, CO_2, industrial waste, and general waste per 1 m^3 gas sold was calculated. Final disposal of excavated soil per 1km of new gas pipeline was calculated.

*3 For NOx and COD, the difference from the regulated value was calculated for each facility. For CO_2, industrial waste and general waste, the difference in the factor (amount per 1 m^3 gas sold) from the FY1999 level was multiplied by the amount of gas sold during the year under review. For final disposal of excavated soil, the reduction in offshore landfill disposal was calculated based on the amount of reduction in excavated soil and the amount of soil recycled.

(Social benefits of environmental conservation in monetary value)

We converted the social benefits of environmental conservation accruing from the reductions in total environmental impacts into monetary value. We calculated the monetary value of the reduction in final disposal of excavated soil using a factor determined by the Contingent Valuation Method (CVM). (In the CVM, we calculate the value of environmental conservation activities by surveying residents about how much they would be willing to pay for certain environmental conservation benefits). We define the monetary benefit of environmental conservation as this factor multiplied by the amount of reductions.

For other environmental impacts, we have suitable factors for the monetary value of environmental values on the basis of some research into the costs of environmental damage etc.

We have calculated monetary values for the environmental conservation benefits by multiplying these factors by the reductions in the individual environmental loads of Osaka Gas.

Report on Final Year of Environmental Targets

Based on the Design 2008 Medium-term Management Plan set in FY2006 to cover the fiscal 2007-2009 period, Osaka Gas has set environmental targets for the entire Group. Progress in achieving these targets is evaluated and summarized each year.

Under Design 2008, the environmental management efficiency target that is systematically evaluated to check progress in environmental management has been achieved. However, targets were not met for CO_2 emissions from the natural gas business, so we will work harder towards this in future.

From FY2010 on, we will continue efforts to achieve new medium-term environmental targets and newly established CSR Indicators.

		Objectives	Measures/Metrics	FY2009 Targets	FY2009 Results	Evaluation	Reference
Osaka Gas	I. Introducing Environmental Impacts of Our Business	Improvement of Environmental Management Efficiency*1	Environmental management efficiency (Monetary value of environmental impact per gas sales) (/1,000 m³)*2	190 yen/1,000 m³ (62% reduction from the FY2001 level)	156 yen/1,000 m³ (70% reduction from the level in FY2001)	💧💧	P27
		Reduction in CO_2 emissions from our gas business*1	Reduction of CO_2 emission per cubic meter of gas sales (g-CO_2/m³)	15.4g-CO_2/m³ (28% reduction from the FY2001 level)	18.9 g-CO_2/m³ (16% reduction from the level in FY2001)	💧	P33
		Recycling of excavated soil	Recycling rate of excavated soil*3	75% or more	85%	💧💧	P34
		Reducing & recycling of general/industrial wastes generated from gas business	Zero emission in LNG terminals*4	Maintain the final disposal amount to nearly zero	0.6 t (Final disposal ratio of 0.3%) (General waste of 0.6 t, industrial waste of 0 t)	💧💧	P53 P54
			Reduction of amount of general wastes and improvement of recycling rate at offices and laboratories	Recycling rate: 90% or more, amount of final disposal: 100 tons or less (90% reduction from the level in FY2001)	Recycling rate of 91.3% Final disposal amount of 58.4 tons (95% reduction from the level in FY2001)	💧💧	P53
			Reduction of amount of industrial wastes and improvement of recycling rate at offices and laboratories*5	Recycling rate: 95% or more, amount of final disposal: 180 tons or less (85% reduction from the level in FY2001)	Recycling rate of 98.1% Final disposal amount of 55.3 tons (82% reduction from the level in FY2001)	💧💧	P54
	II. Reducing Environmental Impacts of Our Products and Services	Dissemination of natural gas and energy-saving systems	Reducing CO_2 emission at customers*6	Reduced by 2,150,000 tons-CO_2 (from the FY1999 level)	Reduced by 2,330,000 tons-CO_2 (from the FY1999 level)	💧💧	P33
		Promotion of technology development	Efficiency of household and other cogeneration systems	Further improvement	Market introduction of ENEFARM residential fuel cell cogeneration system	💧💧	P37
		Recycling of used gas appliances	Improvement of recycling rate	Recycling rate of 90% or more	Recycling rate of 90%	💧💧	P34
	III. Contributing to Environmental Conservation Locally, Nationally and Internationally	Promoting environmental communications	Ecological actions of employees	Community-wide environmental activities to be implemented at each business location	Work with communities in cleanup activities and the creation of green spaces of biodiversity	💧💧	P36 P40
			Environmental education activities	Hold environmental seminars and events using company facilities, and support the environmental education in schools (dispatching employees as speakers, etc)	Hold energy and environment lessons (at schools; 673 times)	💧💧	P36
		Developing and spreading new environmental technologies (apart from gas appliances and systems)	Disseminating environmental technologies nationally and internationally	Dissemination of compact hydrogen production equipment, new catalyst technology for flue gas treatment and adsorptive storage of digester gas	Continue to hold trials at the hydrogen filling station in front of Osaka Prefectural Government building NOx removal device using ACF (activated carbon filter) media registered with NETIS (New Technology Information System) Technology transfer to affiliates	💧💧	P37
			Promoting the introduction of renewable energy	Develop techniques for generating methane from biomass and wastes	Development of highly efficient methane fermentation system using ultra-high temperature solubilization technology	💧💧	P38
				Develop involvement in the wind power generation business	Startup of Hirogawa Myojinyama wind farm (Wakayama Prefecture)	💧💧	P38
Affiliated companies		Reducing CO_2 emission from business activities	Reducing CO_2 emissions per sales*7	3.5% reduction from the FY2005 level	42.4% reduction from the FY2005 level achieved	💧💧	P52
		Introduction of Environmental Management Systems (EMSs)	Acquiring ISO14001 and external certifications etc, or introducing Osaka Gass own version of EMS*8	Acquired or introduced at all affiliates*9	Acquired or introduced at all affiliates*10	💧💧	P28

💧💧 : Achieved
💧 : Not achieved

*1 CO_2 emissions associated with purchased electricity are calculated using the average factor of thermal power plants (0.69 kg-CO_2/kWh) so that the benefits of reducing the purchased electricity is properly indicated.
*2 Environmental impacts of CO_2, NOx, COD (Chemical Oxygen Demand), waste, and excavated soil were converted into monetary values, which were added up and then divided by the amount of gas sold.
*3 Recycling rate of excavated soil was calculated by dividing the amount of recycled soil used for gas pipeline construction by the amount of excavated soil generating from gas pipeline construction.
*4 To reduce the final disposal amount to less than 3% of the amount generated.
*5 Used gas appliances and housing equipment are not included.
*6 Reduction in CO_2 emissions from the FY1999 level, resulting from the increased introduction of high efficiency equipment and systems, such as cogeneration systems, gas air-conditioning systems, and high performance industrial furnaces, was calculated.
*7 Thermal energy supply and power generation businesses are not included.
*8 Eco Action 21: Based on the Environmental Management Guidelines of the Ministry of the Environment, this standard is mainly for medium and small enterprises.
OGEMS: Environmental management system developed originally by Osaka Gas.
*9 Domestic affiliated companies with 11 or more employees.
*10 Domestic affiliated companies with employees working full-time.

Environmental Impacts of Our Value Chain in FY2009

Overseas (LNG imported by Osaka Gas)

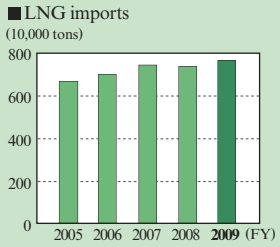
Osaka Gas supplies natural gas that emits less CO_2 than any other fossil fuels to customers. Osaka Gas also takes the following measures to reduce environmental impact.

At the extraction sites of natural gas fields and liquefaction facilities

- Natural gas, which is of minor environmental impact, is used as fuel for electric power at the extraction sites.
- Reducing environmental impact by improving generating efficiency through implementing waste heat recovery.

In the shipping

- Natural gas is used as the fuel for shipping.



LNG Imports
7.41
million tons

Calorific value of LNG: 54.5 GJ/ton
(Value specified by ministerial ordinance under the Law concerning the Promotion of the Measures to Cope with Global Warming)

Drilling in Natural Gas Fields 327 (thousand tons-CO_2) ➡ **Liquefaction Plants** 3,376 (thousand tons-CO_2) ➡ **LNG Tanker Transportation** 796 (thousand tons-CO_2)

L N G

LCA comparison of GHG emissions among fossil fuels

The table below compares total greenhouse gas emissions (specifically CO_2 and methane, expressed in CO_2 equivalent), from drilling to combustion, for various fossil fuels according to the LCA method*. LNG is clean energy that emits less GHG than any other fossil fuels.

■ Comparison of greenhouse gas emissions

(g-CO_2/MJ, HHV)

	Coal	Oil	LPG	LNG
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

*LCA (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 process from resource extraction to waste disposal including production, transportation, consumption and recycle for the products and services.

Sources:
Future Forecast for Life Cycle Greenhouse Gas Emissions of LNG and City Gas 13A (Energy and Resources, Vol. 28, No. 2, March, 2007)

Japan (Osaka Gas)

Energy consumption at LNG terminals

Purchased electricity ……125.43 million kWh
Gas …… 12.23 million m^3
General and industrial water …… 1.57 million m^3

①In-house cryogenic power generation: 47.26 million kWh

＋

②In-house power generation utilizing gas pressure: 25.29 million kWh

①＋②= Reduction in amount of purchased electricity due to use of LNG cryogenic energy and gas pressure 72.55 million kWh = CO_2 reduction effect of 50,060 tons-CO_2

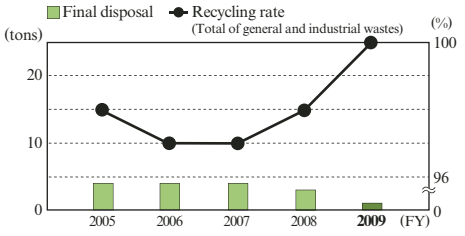
INPUT

LNG Terminals (Processing) ➡

OUTPUT

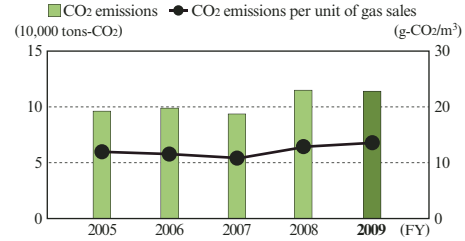
Waste

General waste: Generated……75tons, Final disposal…0.6tons, Recycling rate …99%
Industrial waste: Generated……135tons, Final disposal……0tons, Recycling rate ……100%



Emissions

CO_2 emissions* ……114,000tons-CO_2 (73,000tons-CO_2)
CO_2 emissions per unit of gas sales*……13.6g-CO_2/m^3 (8.8g-CO_2/m^3)
NOx emissions…… 6t

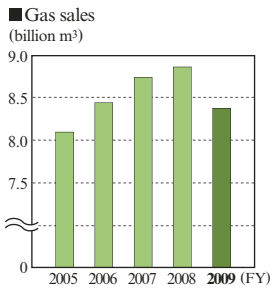


Energy consumption at business locations

Purchased electricity ····· 34.55 million kWh
Natural gas ····· 740,000 m³
Vehicle fuel
Gasoline ····· 1,010 kl
Natural gas ····· 440,000 m³
Diesel ····· 2 kl
General water ····· 320,000 m³

Gas sales

Gas sales **8,380** million m³

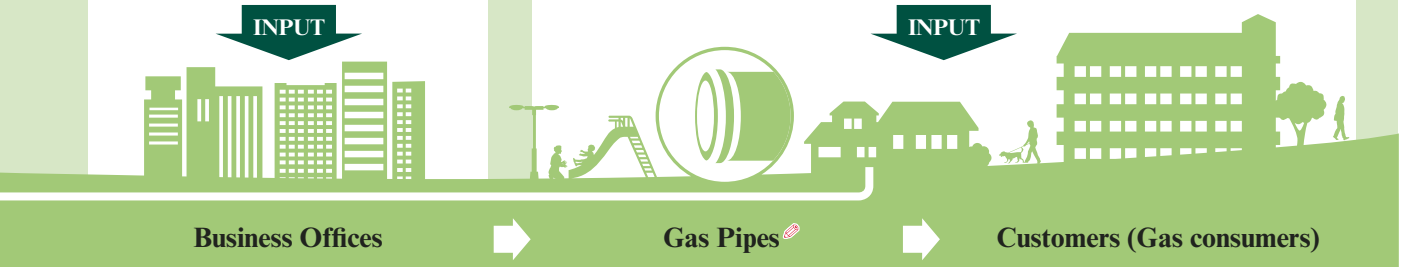


Quality of the gas supplied by Osaka Gas

Heat value (HHV) **45.0** MJ/Nm³ (about 10,750kcal/Nm³)

CO_2 emission factor in combustion **50.9** g-CO_2/MJ (2.29kg-CO_2/Nm³)

Note: Figures applied since March 2003



Business Offices → **Gas Pipes** → **Customers (Gas consumers)**

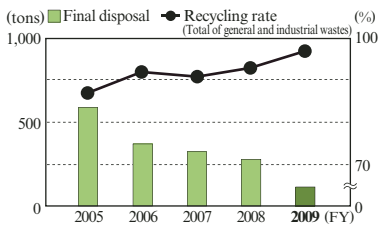
Natural gas

OUTPUT

Waste

General waste
Generated ····· 675tons
Final disposal···· 58tons
Recycling rate ··· 91%

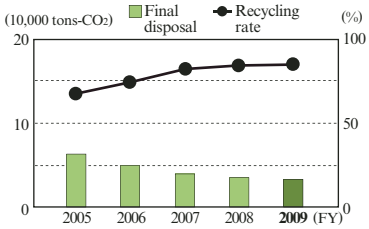
Industrial waste
Generated····· 2,931tons
Final disposal····· 55tons
Recycling rate ···· 98%



OUTPUT

Excavated Soil

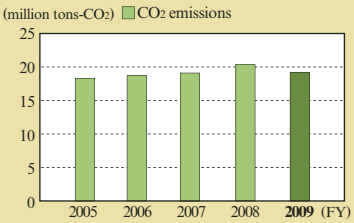
Generated·····1,020,000tons
Final disposal····· 33,000tons
Recycling rate ···· 85%



OUTPUT

CO_2 emissions at customers sites

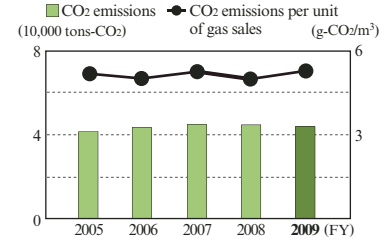
CO_2 emissions
·····19.19 million tons-CO_2



CO_2 Emissions

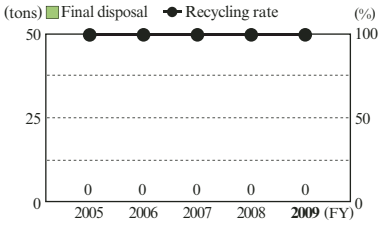
CO_2 emissions* ·····44,000tons-CO_2 (33,000tons-CO_2)

CO_2 emissions per unit of gas sales* ····· 5.3g-CO_2/m³ (3.9g-CO_2/m³)



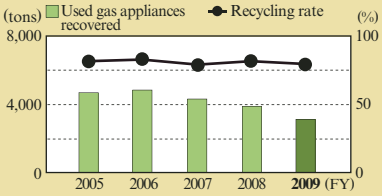
Polyethylene pipes

Generated ·····145tons
Recycled ·····145tons
Final disposal·····0tons
Recycling rate ·····100%



Used gas appliances and residential equipment*

Recovered····3,470tons
(Out of this amount, used gas appliances account for ····2,780tons)
Recycling rate ····· 80%
Final disposal·····686tons
*Those recovered by service chain shops, etc.



*At Osaka Gas, CO_2 emission subject to control is calculated using the average factor of thermal power plants (0.69 kg-CO_2/kWh) so that we can precisely assess how reduction of purchased electricity has contributed to a reduction in CO_2 emission. The figures in ( ) show CO_2 emission calculated using the emission factor of Kansai Electric Power Co., Inc. in FY2008 (0.338 kg-CO_2/kWh) for the purpose of comparison.

Reducing Greenhouse Gas Emissions

WEB Osaka Gas Group greenhouse gas emissions / CO_2 emission reductions at LNG terminals / CO_2 emission reductions at offices / CO_2 reductions by the use of railway transport for LNG / Helping customers reduce CO_2 emissions

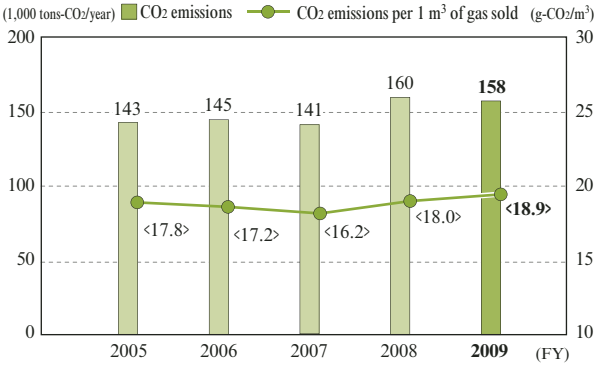
GHG emissions of Osaka Gas Group

CO_2 Emissions from Energy Consumption in Osaka Gas's Gas Business Were 158,000 tons (down 1% from the previous year)

In FY2009, CO_2 emissions from energy consumption in Osaka Gas's gas business were 158,000 tons, a decrease of about 2,000 tons (1%) compared to the previous year, due partly to a decrease in gas sold. Efforts to reduce CO_2 include an increased production ratio of the cryogenic power operation (which meant that purchased electricity decreased), and aggressive efforts to conserve energy in office buildings under an EMS.

We will work towards further emission reductions by aggressively using electricity produced by cold energy of LNG and unused energy such as gasification, as well as by reducing energy use in offices.

CO_2 emissions from the gas business of Osaka Gas



Osaka Gas Methane Emissions Were 110 tons (about the same as the previous year)

In the gas business of Osaka Gas, methane gas (CH_4) is emitted during measurement of gas quality and gas fitting work. We therefore strive to reduce emissions by switching to measurement instruments that emit less CH_4 and performing gas fitting work in a more environmentally friendly manner.

Methane gas emissions were 110 tons in FY2009, about the same as the previous year.

CO_2 Emissions from Energy Consumption by Affiliates Amounted to 2.048 Million tons (up 2% from the previous year)

Osaka Gas affiliates emitted a total of 2.048 million tons, of CO_2, up 2% from the previous year. This was due to overall Group business expansion and a greater production amount at power plants.

TOPIC

Osaka Gas's Dome City Gas Building Honored by Society of Heating, Air-Conditioning and Sanitary Engineers of Japan

In 1996, the Dome City Building was built as a model office building that utilizes effective local air conditioning to go with the development of the former plant site of Osaka Gas in Osaka City. Since 2006, a reduction of 11% of energy consumption per annum compared to 1996 have been achieved as a result of thorough analysis of operational data and improvement by Osaka Gas, Osaka Gas Total Facilities Co., Ltd, Yasui Construction Architect Office, and Takenaka Corp.

In recognition of its sustainable operation, it received the "10 Year Award" from the Society in May 2008.

Efforts at Affiliates

Kyoto Research Park Corp

Received Two Awards for Its Unique Design

KRP Building 8, built in September 2006, was selected for the Kinki New Office Award and the Japan Institute of Architects' Outstanding Buildings Awards 200 in FY2009.

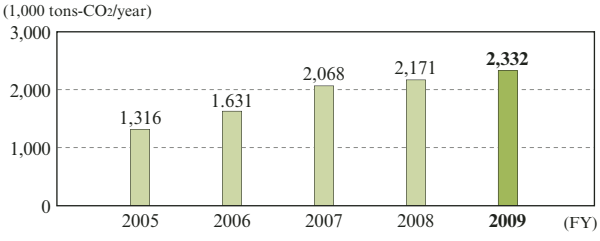
With its original mesonet-type units, and use of roof tiles disposed of during the renovation of Higashi Hongan Temple, the building was praised for its "Kyoto-like" design and materials, and for energy efficiency achieved through natural light and ventilation from two sides of the building.

Customers' Greenhouse Gas Emissions

Customer CO_2 Emissions Were Reduced by 2.33 Million tons (down 7% from the previous year)

Through the use of high-efficiency equipment and systems, such as cogeneration systems, gas air conditioners, and high-performance industrial furnaces, CO_2 emissions of corporate customers was reduced by about 2.33 million tons in FY2009 (against the FY1999 base year).

Customer CO_2 reductions (against FY1999) (excluding residential use)



WEB Osaka Gas's reduction and recycling of waste (Breakdown by type of waste) / Reduction of waste at affiliates / Recycling of used gas pipes / Soil and Asphalt Recycling System / Amount of home appliances recycled

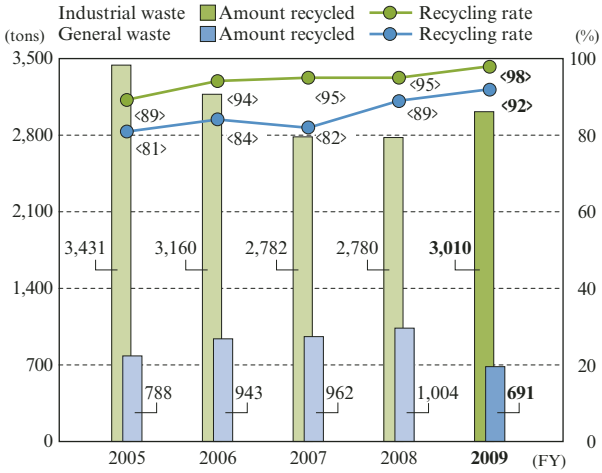
Osaka Gas Efforts

Recycling Rate of Over 90% for both Industrial Waste and General Waste

In FY2009, Osaka Gas recycled about the same amount of industrial waste as the previous year. Final disposal amount, however, decreased dramatically, from 157 tons to 55 tons. This was accompanied by an increase of 3 points in the recycling rate, to 98%. We were able to reduce a large amount of waste by carefully selecting the waste disposal contractors based on the surveys of waste disposal systems of these contractors.

In general waste, the amount generated decreased by about 30% from the previous year and final disposal amount was about half. The resulting recycling rate was up 3 points to 92%. This success was helped by our company-wide integrated ISO 14001 and by the efforts of employees in each part of the company, based on their improved awareness, to reduce waste generated and separate waste for recycling.

Waste (industrial/general) generated, recycling rate



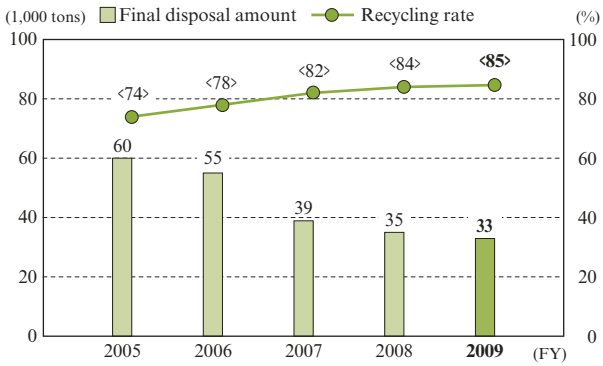
Efforts during Gas Pipe Installation

Reusing 85% of Excavated Soil

The Osaka Gas Group works to reduce the amount of excavated soil generated as a result of gas pipe installation. Ways to achieve this include the Bor-Mor method, which require soil excavation of only two points, and the shallow pipe installation method. The excavated soil was reduced by 78t compared to the conventional installation.

We established our Soil and Asphalt Recycling System, under which we separate road waste into waste asphalt and excavated soil, reusing the former as asphalt and the latter as either regenerated roadbed material or improved soil. In FY2009 we achieved an 85% recycling rate for excavated soil and had 33,000 tons of soil for final disposal, a decrease of 2,000 tons from the previous year.

Final disposal amount of excavated soil and recycling rate



Efforts at Affiliates

OG Road Co., Ltd.

All Road Waste Either Reused or Recycled

Pipe installation generates road waste such as excavated soil and waste asphalt. All of this is not soil that can simply be put back into the ground. Soil that cannot be used to support the road's intensity or protect gas pipes can only be used after it is recycled.

OG Road developed its comprehensive Soil and Asphalt Recycling system for reusing road waste. With this system, rocks and clumps of asphalt contained in the road waste are crushed into small-enough sizes and the soil is adjusted for water content. This makes the excavated soil suitable to surround gas pipes, and allows waste asphalt to be used once again as asphalt paving material.

Crushing process during the recycling of excavated soil

Collecting and Recycling Customers' Waste

Recycled 90% of Products Collected (on a weight basis)

Osaka Gas has its own "e-cycle" electronic manifest system, which connects us to JWNET (Japan Industrial Waste Technology Center) through EDI*. Under this system, dealers, used appliance collection contractors, and disposal contractors are connected via an online system for the collection of industrial waste and used gas appliances that are thrown away when residential customers purchase and have new appliances installed.

Dealers collect used gas appliances from customers, as well as items like old bathtubs and rubble after installation work. They then input the amounts of these items on the system, where they are seen by designated collection contractors in each region, who deliver them to intermediate disposal contractors. The used gas appliances are recycled as metal and RPF (refuse paper and plastic fuel). In FY2009, 2,780 tons were collected and 90% were recycled.

* EDI = Electronic Data Interchange. Electronic data is exchanged between JWNET and Osaka Gas's own e-cycle system.

Environmental Risk and Chemical Substance Management

WEB List of soil surveys at former plant sites / Asbestos management / Chemical substance management (PRTR Law) / Legal violations / PCB waste management / Gas appliance eco-design

Chemical Substance Management

Legal Compliance and Proper Management

Osaka Gas carries out the proper handling of chemical substances under the following policies.

Osaka Gas Group Chemical Substance Management Guidelines

1. To comply with laws and regulations concerning the use of chemical substances.
2. To conduct risk assessment of chemical substances and reduce releases of such substances in the course of ISO14001 and other environmental management activities.
3. To disclose information on chemical substance management in the CSR Report and on our website.

There are very few hazardous chemicals handled by Osaka Gas during the processing and supply of natural gas. The only two substance we handle that must be reported under the PRTR Law are xylene and toluene.

Addressing Environmental Risks

Soil and Groundwater Conservation

Between 2001 and 2004, Osaka Gas conducted a series of voluntary investigations of 21 former plant sites for coal gas production in order to determine the environmental risks to soil and groundwater. When substances (cyanide, benzene, etc.) were discovered that exceeded the standards of the Soil Contamination Countermeasures Law, we checked that there were no effects on the surrounding environment and released our findings. In remediating the soil of former plant sites, we follow the guidance of the local government, conduct the necessary surveys, dispose of contaminated soil, and carry out on-site encapsulation* of contaminated soil.

* Soil with contaminants exceeding environmental standards is encapsulated on-site in an impermeable barrier.

Green Purchasing and Green Distribution

WEB Green Purchasing Guidelines / Green Distribution Policy

Green Purchasing

Purchasing Carbon Offset Products to Balance Out CO_2 Emissions

Based on its Green Purchasing Guidelines (formulated in 2000, revised in 2005), Osaka Gas strives to work with its business partners in purchasing products and installation contracts that have minimal impact on the environment.

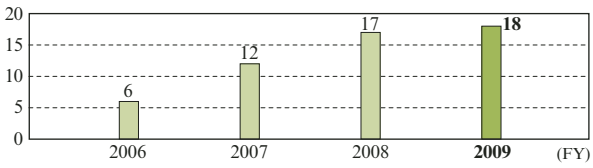
In FY2009, we began purchasing carpets and other items for our offices that are designated as carbon offset products; which means they balance out CO_2 emissions.

In FY2006, we launched the Green Partner Initiative to evaluate the environmental efforts (such as creation and certification of an EMS and development of environmentally friendly products) of suppliers of our piping material. Companies that meet our evaluation standards are registered as Green Partners.

In December 2008, we introduced these and other efforts at a training session for environmental and green purchasing managers from Thai companies who were in Japan to study under the auspice of the Association for Overseas Technical Scholarship (AOTS).

Number of Green Partners

Note: Covers 19 companies in total



Stakeholder Comment

Association for Overseas Technical Scholarship (AOTS)

Hiroshi Furuya
Training Group
Tokyo Kenshu Center

In December 2008, the AOTS held a Green Purchasing class under its Thai Environmental Management Training Course. As part of the class, Mr. Morino of Osaka Gas's Purchasing Department to come and give a lecture on outstanding examples of green purchasing. The examples are practical, effective green procurement that participants could use when they return to Thailand.

Lecture

Green Distribution

Low-Pollution Vehicles Reduce Air Pollution and CO_2 Emissions

Osaka Gas established its Green Distribution Policy in 2001 and began implementing green distribution activities in January 2002. Through the use of natural gas vehicles, hybrid cars, and other low-pollution vehicles in distribution, servicing, and sales activities, we are reducing the amount of air pollutants we emit.

We are also asking our affiliates to use low-pollution vehicles when delivering or making sales calls to Osaka Gas bases.

Conserving Biodiversity

WEB Preserving nature: The Osaka Gas Forest / Afforestation project in Australia

Making LNG Terminals Greener

Afforestation Using Indigenous Species Builds Base of Biodiversity

At Osaka Gas LNG terminals, we are conducting afforestation activities that recreate the area's original ecosystems and are capable of supporting a high level of biodiversity. At the Senboku LNG Terminal, we are trying to create a network of greenery that brings us closer to the community. On the premises, we are creating forests where a diverse range of life can exist; for example, the Senboku Forest of Japanese oak, and beautiful meadows of Japanese blood grass. We have another 19,000 m^2 of space that we will use to plant indigenous trees.

At the Himeji LNG Terminal, we took part in an experiment by the Museum of Nature and Human Activities, Hyogo in which we introduced into our afforestation projects 36 species of plants native to Nishi Harima (Hyogo Prefecture), including ones on the Ministry of the Environment's endangered species list, such as Honshu wood mint (level 2 endangered) and calanthe (semi-endangered). In April 2009, the plants were surveyed and found to have an 80% rate of survival, which is very high. This showed that the forest of an urban factory is an effective place to grow and protect rare plants. Not only did this project help build a habitat for a diverse range of life and protect valuable genetic resources; because indigenous species grow readily in their original area since the climate is ideal for them, it will be more cost-effective to grow such species in afforestation of factories.

Stakeholder Comment

A Refuge for Plants

In the Senboku Forest at the Senboku LNG Terminal, one can observe how thinning the forest has allowed a variety of trees to grow from seeds. I recommend that small sections of the forest be thinned and trees planted so that the forest can have a range of different species. And since the thinning tree is accredited as CO_2 sequestration effort, the project should be carried out as aggressively.

Adjacent Shinodayama has a wealth of nature, with many endangered and rare species growing there. I sincerely hope that the forest in the Senboku LNG Terminal can be a refuge for these valuable genetic resources.

Yukihiro Morimoto

Professor, Graduate School of Global Environmental Studies Kyoto University

Stakeholder Comment

Will be a Rich Nature in 100 Years from Now

The afforestation of the Himeji LNG Terminal, which used plant species native to Nishi Harima, was a progressive effort that the Hyogo Prefectural government took note of. The survey taken showed that the forest of a factory can be a place for preserving endangered species. Its artificial forest, with its single wide open space and no danger of human interference or plant-eating animals, is a valuable space where a variety of species can take root and prosper. In 100 years, this space will be a rich natural environment.

Tamotsu Hattori

Professor, Institute of Natural and Environmental Sciences, University of Hyogo
Head of Division of Ecological Restoration, Museum of Nature and Human Activities, Hyogo

Communicating Our Environmental Efforts

WEB Participating in events of various organizations / Osaka Gas in New Earth 2008

Communicating to Employees

Raising Environmental Awareness

Every year, the awarding of annual prizes by the President is held to honor employees who have made outstanding contributions to the environment, and to raise awareness among all employees. In FY2009, the following activities were honored.

- A proposal to use a CO_2 reduction effect calculation method to help global warming prevention efforts.
- Raised social value through accelerated green purchasing.
- Proof of CO_2 reduction effect from a cogeneration system for a housing complex.
- Awareness of environmentally friendly living for local communities through an experiment in home life improvement.

June is environmental month at Osaka Gas, a time when employees take part in a variety of initiatives. In FY2009, we worked with the Japan Gas Association in the Energy-Saving Behavior Check program, with participation by approximately 5,320 employees. All employees from four gas companies of affiliates also took part.

Communicating to the Public

Energy and Environment Education Honored with Special Prize in Osaka Environment Awards

Osaka Gas conducts energy and environment education in elementary and junior high schools, with current and former employees visiting schools to raise environmental awareness.

In FY2009, we held 673 sessions for approximately 27,300 students. In FY2010, we started additional program, "Be Friendly to the Earth! Team to Review Our Daily Life," that focuses on how students can reduce CO_2 emissions in their daily lives. This education initiative by Osaka Gas was recognized with a special prize in 2009 Osaka Environment Awards.

Environmental lesson at a school

Developing Environmental Technologies

WEB Eco Micelles: Additive for reducing pressure loss in hot/cold water streams

Residential Fuel Cells

Experimental Studies in Solid Oxide Fuel Cells (SOFCs)

Osaka Gas is developing a fuel cell cogeneration system powered by a solid oxide fuel cell (SOFC), which is compact and has high power generation efficiency. This system has a power generation efficiency of 45% (LHV basis), even higher than that of the ENEFARM, and is compact, making it ideal for homes with low energy demand and people living in housing complexes. Osaka Gas is taking part in experimental studies on SOFCs conducted by the New Energy Foundation that started in FY2008. By FY2009, the experiment had gathered data on 45 systems installed and operating in average homes. We have also been conducting joint development of SOFCs with Kyocera since 2004, with Toyota Motors and Aisin Seiki Co., Ltd. joining the project in March 2009. By pooling the technology and know-how of these companies, the goal is to have products on the market within a few years after 2010.

Developed for Hydrogen Suppliers

Hydrogen Production Equipment Developed

Osaka Gas, Liquid Gas Co., Ltd., and Osaka Gas Engineering Co., Ltd. developed the HYSERVE, a compact hydrogen generator. By FY2009, the two models released are for industrial use, producing and providing hydrogen to companies in industries such as metalworking and semiconductors.

Experimental Hydrogen Filling Stations

For Fuel Cell Vehicles to enjoy widespread use, we first need hydrogen filling stations to provide them with their fuel.

Osaka Gas is taking part in the Japan Hydrogen & Fuel Cell (JHFC) Demonstration Project being run by the Ministry of Economy, Trade and Industry, and in August 2007 we built a hydrogen filling station, the first ever in a commercial area in Japan, in front of the Osaka Prefectural Government building. As of the end of FY2009, more than 240 hydrogen fillings had been performed at the station.

Synthesis Gas Production Process for GTL

Successful Test of Large Machinery

GTL (gas to liquids) is a synthesized liquid fuel produced from natural gas and associated petroleum gas (gas emitted when petroleum is excavated). Compared to petroleum, during combustion it releases no SOx and far less NOx and CO_2. GTL is produced when chemical synthesis causes natural gas to be converted into synthetic gas (whose main components are hydrogen and carbon monoxide) and then into a liquid through chemical synthesis.

Osaka Gas and JGC Corporation have jointly developed the A-ATG (Advanced Auto Thermal Gasification) process, which reduces the amount of CO_2 emitted during production of the synthesis gas for GTL. The process has undergone successful pilot testing. Starting in FY2009, we have obtained favorable results in testing the A-ATG process on GTL plants using associated gas from offshore oil drilling, which used to be a waste product of combustion.

A-ATG field test

Note: This research is sponsored by the Japan Oil, Gas and Metals National Corporation (JOGMEC).

Stakeholder Comment

Seeking Early Adoption of the A-ATG Process

The synergy created by the collaboration between Osaka Gas, with its proven track record of technological development, and JGC Corporation, a company with advanced engineering capabilities, has brought us close to the practical application of the A-ATG process.

The A-ATG process is applicable to not only the production of synthesis gas for GTL, but also to methanol, DME (dimethyl ether), ammonia, and hydrogen plants. It offers lower construction costs and unit cost, and contributes to the environment through reduced carbon gas emissions.

We hope to pick up the pace of collaboration and development so that this process can be adopted at the earliest possible time.

Tsutomu Kawasaki (right)
Yoshiyuki Watanabe (left)
Assistant researchers, Technology Promotion Department
JGC Corporation

Coal Mine Methane Gas Concentration Technology

Curbing Global Warming through Effective Use of Unused Energy

To ensure the safety of people working in mines, the coal mine methane gas (CMM*) from the coal layer must be moved out of the mine. Until now, low-concentration CMM has less than 30% methane, has normally been pumped into the atmosphere without being used for anything.

Osaka Gas developed a technology, called low-concentration CMM concentration technology, for using this low-concentration CMM as fuel for gas engines and boilers. In April 2009, we successfully concentrated this gas in a pilot plant. Using one standard commercial-use machine (CMM flow of 2,000 m^3/h), it is possible to reduce the equivalent of approximately 40,000 tons-CO_2 a year (CO_2 conversion). To get this technology on the market as soon as possible, we will continue developing technologies to improve reliability, cut costs, and scale up the equipment.

Note: The research in the pilot plant was carried out as a cooperative research project with the New Energy and Technology Development Organization (NEDO).
* CMM = Coal mine methane. Methane gas recovered from gas drainage boring and sealed sections after excavation in mine shafts.

Air Pollution Prevention Technology

Activated Carbon Fiber Technology Developed for Using Natural Wind to Remove Airborne NOx

To remove the air pollutant NOx from exhaust gas, an NOx reduction catalyst is used. Osaka Gas Group adopt an activated carbon filter (ACF) for removing NOx at normal air temperatures (approximately 0-40°C) using only the flow of the wind and without the need for electricity. In April 2008, the second experimental installation of this system was conducted along Route 43 in Osaka City. The experiment showed that the pollution density of the air near the filter system improved along with the improvements made to the nearby major intersection.

In March 2009, this technology was registered with the Ministry of Land, Infrastructure, Transport and Tourism's NETIS (New Technology Information System); this makes it a promising technology for installation in regions currently showing no improvement in air quality. In future, Osaka Gas will conduct R&D on the ACF material while Osaka Gas Engineering will work on the actual installation of the system along roads.


Activated carbon filter (ACF) installed beside major thoroughfare

Renewable Energy

WEB Development of high-efficiency methane fermentation system using ultra-high temperature solubilization technology / Biogas absorption storage technology / Solar power generation

Wind Power

Operation Starts at Wind Farms in Wakayama

The Osaka Gas Group is developing its wind power generation business.

Wind Farm (20,000 kW) in Kochi Prefecture, which began operation in March 2006, and the Hirogawa Myojinyama Wind Farm (16,000 kW) in Wakayama Prefecture, which began operation in November 2008.

Both of these wind farms combined have enough capacity to contribute to the reduction of approximately 60,000 t-CO_2 a year.

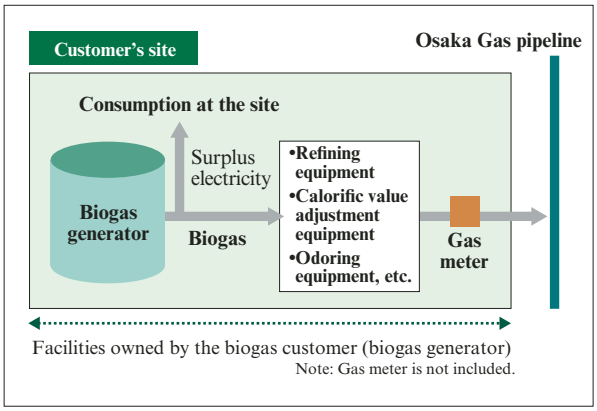

The Hirogawa Myojinyama Wind Farm in Wakayama

Efficient Use of Biogas

Promoting the Use of Biogas

Biogas, one of renewable energies, is a combustible gas made by fermenting organic waste such as sewage sludge, food waste, and bodily waste from livestock. Like natural gas, its major component is methane.

Osaka Gas created the Biogas Purchasing Guidelines, which set the conditions for the purchase of biogas that we use as fuel for our natural gas operations. In April 2008, we launched a biogas trading scheme.



We have also developed high-efficiency methane fermenting system that halves the amount of sediment and wastewater generated during the biogas production process, as well as biogas absorptive storage technology that reduces the volume of biogas in a storage tank to just one-twentieth. These technologies allow us to improve both environmental protection and economic operation and will contribute to our ability to spread the use of biogas.

CSR Charter

Ⅲ Being a good corporate citizen contributing to society

Charter Ⅲ The Osaka Gas Group, as a good corporate citizen, 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 relationship with citizens and to make our positive contribution to healthy development of society.

CSR Indicators

Targets by FY2012

Number of contacts and communication events

Total contacts: at least 1% of total customers; at least 365 communication events

Activities in FY2009

Formulated Two New CSR Indicators

Osaka Gas offers various forums and opportunities to encourage communication with the public, including the Gas Science Museum, the Himeji Gas Energy Hall, energy and environmental education for children (school visit program) and seminars by the Research Institute for Culture, Energy, and Life.

In FY2010, the company formulated two additional CSR indicators related to communication opportunities to further enhance communication.

The first indicator, the number of contacts, represents the total number of customers contacted. This indicator is calculated by summing up the number of visitors to the Gas Science Museum and the Himeji Gas Energy Hall, energy and environmental education participants and attendees of other events and seminars (excluding sales-related events).

The second indicator, actualized opportunities, stands for the number of communication activities and related efforts actually conducted.

We set the following medium-term goals starting from FY2010:

Total contacts should be at least 1% of customers, that is, we intend to come into contact with just under 70 thousand out of 6.94 million customers at which company meters are installed.

Our target for actualized communication opportunities is at least 365. This means we plan to implement more than one communication activity, such as an event or seminar, per day.

Looking ahead, we will strive to achieve these targets in order to be recognized as a business group that is deemed important for society by as many people as possible.

Nature Class for Parents and Kids

Cooking for Children

A Good Corporate Citizen

WEB A look at our activities (Small Light Campaign, and support activities for the disabled, senior citizens, and children)

The Small Light Campaign

Cultivating the Spirit and Practice of Volunteering

In 1981, the Small Light Campaign was launched as a corporate volunteer project run by the Osaka Gas Group. The aim of this campaign is that every employee will take a lead role in resolving community problems.

With this spirit, we conduct a variety of creative projects such as events for assisting area orphanages as well as people with disabilities as part of our philanthropic activities.

The Small Light Fund, which was created at the same time the campaign was launched, provides donations and aids in times of disaster and through open recruitment, and other types of assistance for addressing social issues.

Symbol of the campaign

Osaka Gas Tomoshibi Club

Employees Donating Benefit Points

We started the Osaka Gas Tomoshibi Club in 2009 to provide employees with opportunities to donate through the company's benefits program.

Under this program, individual employees can at their own discretion donate benefits points to organizations working to address social issues.

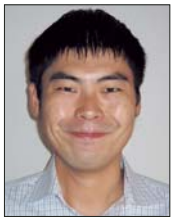
Tomoshibi Club donation ceremony

In 2009, we collected donations totaling 2,506,000 yen and distributed them to the respective organizations.

Efforts at Affiliates

Cooperating with a TV Charity Program

OUD Co., Ltd., a Group company operating hot spring facilities, cooperated with a nation-wide campaign "Love Saves the Earth" in 2008. In addition to placing donation boxes, OUD invited children living in orphanages to enjoy hot springs.



Mitsuo Hatakeyama
OUD Co., Ltd.

Support for the Handicapped

Providing Opportunities to Participate in Social Activities

The Midosuji Neighborly Bazaar, which exhibits and sells items made by hand at facilities for persons with disabilities, has been held in front of the Osaka Gas Building since 1986. The event, in which persons with disabilities sell goods, offers an opportunity for the disabled to participate actively in society. We also invite visually-challenged persons to cooking classes at our company's cooking school twice a year. Invited guests enjoy cooking using the latest glass-top stoves and ovens.

Osaka Gas' sign language club, "Tablecloth," and Braille club, "Tomoshibi," also help persons with disabilities through their daily volunteer activities.

Stakeholder Comment

Support for Our Activities that Make Life Worth Living

Society is making a number of efforts to create opportunities for persons with high-level disabilities to work and enjoy the benefits while experiencing a life that is worth living. Osaka Gas provides a major boost to our activities by supporting the exhibition in the Midosuji Neighborly Bazaar and donating goods.

Kazumasa Yamanaka
President
Society for the Independence of Persons with Disabilities

Support for the Elderly

Helping Them Live a Healthy and Vigorous Life

With the goal of helping the elderly live a healthy and vigorous life, we have been working since 1996 with NPOs to provide elderly citizens who do not get out very much with opportunities to enjoy the sights of the seasons and visit famous places.

Since 2002, we have also been jointly sponsoring charity concerts with NPOs and the Asahi Shimbun Social Welfare Organization to give them a chance to enjoy the children's songs that were once dear to them.

Stakeholder Comment

Cheered Up by Children's Songs

Children's songs and school songs remind me of my childhood and fill me with inspiration. The time just flies by as I enjoy the singing lesson, the huge chorus of all participants, live marimba music, and more. This event is organized jointly by Osaka Gas, an NPO that helps the elderly get out more, and our own organization. After I retire this year, I will participate in the event as a member of the public.

Tsutomu Matsunaga
Asahi Shimbun Social Welfare Organization, Osaka Office

Support for Children

Planning and Operating the Nature Class and Other Activities for Kids

The Osaka Gas Group, in collaboration with NPOs and volunteers, runs events designed to expose children to various experiences, including the nature class and cooking class for kids with their parents.

Musical Event for Children

Stakeholder Comment

Working on Nature Class

We have held the Spring Vacation Nature Class for Kids with Their Parents in collaboration with Osaka Gas for five years. In the class, they learn about the importance of nature through experiencing and enjoying it. The popular program attracts the participation of about 100 kids and their parents every session. Looking ahead, we will continue our efforts to help children become rich with humanity.

Hideo Matsuda
Deputy Representative Director, Senior Natural University

Contribution to Local Communities

WEB Community events / Job experience for junior high students / Cleanups around LNG terminals / Private enterprise training course for school teachers

Cleanup Projects

Taking Part in a Project to Create a Litter-free, Beautiful Town

Osaka Gas Group participates in local cleanup projects to create a litter-free, beautiful town.

Since 2003, Osaka Gas has sponsored the Clean Osaka City Project, and the Group provided 260 participants in FY 2009. Individual business locations, including Senboku and Himeji LNG Terminal, also take part in local beautification campaigns.

Cleanup Activities around the Osaka Gas Building

Cultural Activities

Supporting Cultural Activities in Kansai

As a way of contributing to the community, Osaka Gas organizes a project entitled, "The Story teller of Naniwa," to communicate history and culture as well as the status of urban development and possibilities for the future.

In 1994, we established the OMS Drama Award to help identify the new playwrights of the next generation. The Award has attracted attention for its association with Kansai, and any past winners are active in the front lines of the theater.

OMS Drama Award Ceremony

Interaction with the Community

WEB Energy and environment lessons for children / Private enterprise training for school teachers

Community Communication Design Experiment

Working with Local Residents and Research Institutes

Since FY2008, the Osaka Gas Research Institute for Culture, Energy and Life has been working on a community communication design experiment in the Osaka Gas Experimental Residential Complex NEXT 21 in Osaka City. This experimental project encourages us to share information among local residents and research institutes and universities. Research is also shared with the public through endowed courses at Doshisha University and the publication of books.

At the publication celebration, 150 authors and participants afforded a valuable opportunity for sharing wisdom and gathering ideas for community development.

Stakeholder Comment

Collaboration in Seeking the Knowledge

How can we enhance economic, social and cultural appeal through the ingenuity of local residents in this century? Many people from industry, governments, academia and the community participated in this project to answer this question. I think we were able to discover a clue for sharing the knowledge woven through the activities beyond the boundaries of communities and positions. I also strongly believe there is increased interest in what will happen after publication of the book.

Hironori Yamaguchi
Representative of Outenin and Associate Professor, Doshisha University Graduate School

Accepting Trainees

Diverse People from Japan and Abroad

Every year since 1998, the Energy Technology Laboratories have hosted interns from abroad for extended periods of time. Many interns have acquired practical technical experience and knowledge, and our company has been exposed to new perspectives, leading to more creative research.

Stakeholder Comment

I Fully Apply My Skills as an Intern

I am truly grateful to the company for providing me this opportunity to test my abilities at the Osaka Gas Advanced Technology Fair. This was a really challenging experience, and I was able to meet a wide variety of people from across Japan. I'll continue to fully apply my skills and abilities during the time remaining for me to work at Osaka Gas.

Colin Tougas
Student of The University of British Columbia and intern of Osaka Gas Energy Technology Laboratories

Nurturing the Next Generation

Making a Presentation at KidZania Koshien

Osaka Gas is one of the official sponsors of KidZania Koshien (Nishinomiya), an interactive facility for children to learn about work and the structure of society through enjoyable role playing.

WEB Aid activities and health promotion activities for the past five years (senior citizens support) / Range of activities, amount of subsidies (international contributions)

Assisting the Elderly

Contributing to a Dynamic Society with Excellent Longevity

Set up in 1985 through the contribution of Osaka Gas Group companies, The Osaka Gas Group Welfare Foundation operates in six prefectures of the Kansai region, mainly engaging in 1) funding welfare projects, research, and 2) supporting health-promotion projects to help maintain and improve health for the elderly.

In FY2009, the Foundation provided 16 million yen to 81 welfare projects, 12 million yen to 12 research and survey efforts, and carried out 277 health-promotion projects involving 15,900 participants.

Walking Rally

Stakeholder Comment

We Greatly Appreciate the Support

Members of our association seeking longevity and health greatly appreciate the Osaka Gas Group Welfare Foundation for promoting and supporting activities such as a walking rally, cooking classes, and health classes for many years. We hope these activities of the Osaka Gas Group Welfare Foundation will continue into the future.

Toru Uemura
Executive Director and Secretary General, Kyoto Federation of Senior Citizens' Clubs

Doing our Part on the International Scene

Working to Deepen Mutual Understanding with Natural Gas-producing Countries

The Osaka Gas Foundation of International Cultural Exchange, established in 1992, has been assisting about 430 schools, from elementary schools to universities in natural gas-producing Asian and Oceanic countries.

Assistance through FY2009 totals about 303 million yen and scholarships have been awarded to 5,140 students. Since FY2009, we have expanded our funding to cover new areas, such as short-term Japanese language training and disaster prevention education.

Stakeholder Comment

Thanks for Supporting Distance Learning in Indonesia

Universitas Terbuka is the only open university* established to expand opportunities for higher learning across Indonesia and to promote education in underdeveloped areas. With the help of the Osaka Gas Foundation of International Cultural Exchange, we were able to raise the level of our media instructional materials.

Dr. Tian Belawati
President, Universitas Terbuka

*Open universities provide distance learning to everyone; similar to The Open University of Japan.

Philanthropic activities of the Osaka Gas Group

Small Light (Tomoshibi) Campaign	
As a Good Corporate Citizen	Small Light Foundation
	Osaka Gas Tomoshibi Club
	Donations of Used Stamps and Prepaid Cards
	Handmade Dustcloth Volunteer Project
	Donation of Unused and Scrap Postcards
	Blood Drive
Working for the Wellbeing of Children	The Spring Vacation Nature Class for Parents and Kids
	Tomoshibi Cooking for Children
	Tomoshibi Musical for Children (Christmas Event)
	Volunteer Sweet-making
	Visits to Children's Homes
	Tomoshibi Children's Theater
Working for the Wellbeing of the Elderly	The Osaka Gas Suzuran Club Cultural Exhibition Charity Fundraiser
	Let's Sing Children's Songs and School Songs
	Assisting with outings for the elderly
Working with Persons with Disabilities	The Midosuji Neighborly Bazaar and Used Book Fair
	Cross-Cultural Exchange at Welfare Workshops
	Enjoy Music Together with Your Guide Dog
	A Cooking Class for Persons with Disabilities
Osaka Gas Volunteer Club	Osaka Gas Sign Language Club "Tablecloth"
	Osaka Gas Braille Club "Tomoshibi"

Contribution to Local Communities	
Interaction with Local Communities	Events for Local Communities
	Himeji Work Experience Project
	Volunteer Activities in Disaster Areas
	Cleanup around the Osaka Gas Building
	Cleanup Activities around LNG Terminals
Contributing to Kansai Culture	OMS Drama Award
	The Story Teller of Naniwa
	Charity Concert by In-house Musical Clubs
	Healing Music Concert
Efforts for Biodiversity	Afforestation Projects at LNG Terminals
	Forest Conservation Activities: Osaka Gas Forest
	An Afforestation Project in Australia
	NEXT21/U-CoRo "The Uemachi Plateau: A Corridor of Greenery and Birds" Exhibition
Communication with Society	
Dialogue with Consumer Groups	
Osaka Gas Supporters	
Energy Environmental Education	
Osaka Gas's Education through Cooking	
Visitors to Our Corporate Museum	
Information on Eco Housing and Eco Lifestyle Projects	
Sending Information to Society by Development of U-CoRo Window Exhibition (an experiment in local communication design)	
Accepting School Teachers for Private Sector Training	
Accepting Interns From Abroad	
Activities at Osaka Gas's Foundation	
Assisting the Elderly	
Doing our Part on the International Scene	

CSR Charter

Ⅳ Complying with laws and regulations and respect for human rights

Charter Ⅳ The management's and the employees' compliance with laws and regulations forms a basis of 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 relationship with our customers, business partners, and other parties.

CSR Indicators

Targets by FY2012

Employee scores on compliance awareness:

Higher than the previous year*

*Some target items and target standards are being revised.

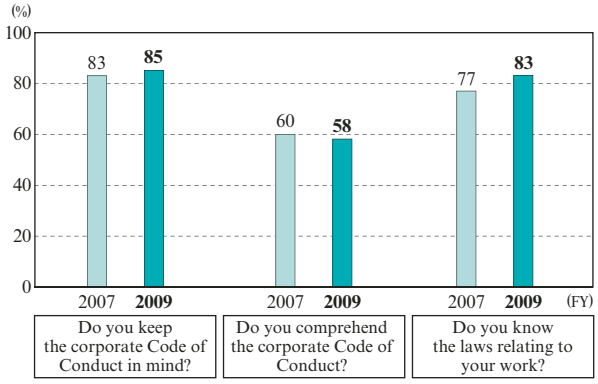
FY2009 scores on compliance awareness

Awareness of Code of Conduct: 85%, Level of understanding of Code of Conduct: 58%, Knowledge of work-related laws: 83%

The Osaka Gas Group conducts anonymous surveys once a year to determine how widespread and entrenched compliance awareness is throughout the Group. The results are used to improve future compliance measures. A questionnaire is given to 4,000 randomly chosen employees.

Awareness and understanding of compliance is improving year by year, 99.6% in FY2009, and that we are taking a higher level of action aimed at improving compliance in the workplace. (See page 44.) But because we are still not satisfied with employees' level of awareness and understanding of the Code of Conduct and work-related laws, we will step up efforts through education and training.

Key Questionnaire Results



Compliance Promotion

WEB Examples of compliance efforts (OGIS Research Institute Group) / Preventing the reoccurrence of misconduct

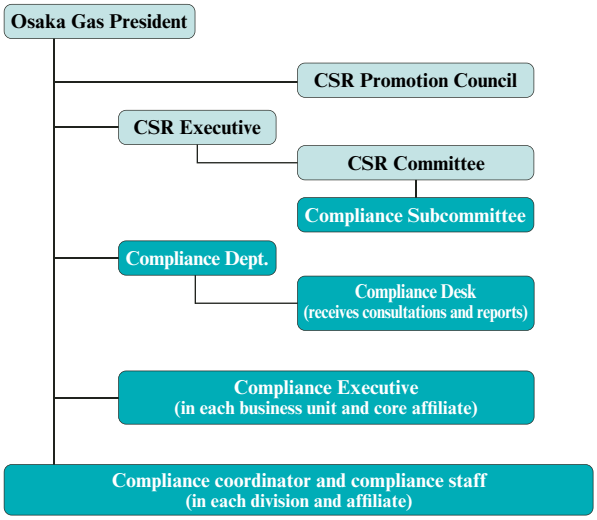
Organization for Strengthening Compliance

Covering the Entire Group

Measures to promote compliance are deliberated and status of compliance is monitored by the CSR Promotion Council, CSR Executive, and the CSR Committee, which fall under the supervision of the president of Osaka Gas. At each business unit and core affiliate, the Compliance Executives are selected who are responsible for monitoring, promoting, and providing advice and recommendations on compliance-related activities. In each division of Osaka Gas as well as affiliates, a compliance coordinator and staff are appointed to take responsibility for planning and promoting compliance activities, awareness raising, and training.

The Compliance Department functions as secretariat to the CSR Committee and Compliance Subcommittee and as a dedicated entity responsible for promotion of compliance activities. As an advisory body to the Board of Directors, Osaka Gas has also established a Corporate Ethics Committee in order to provide recommendations from an external perspective on compliance activities and improvement of corporate ethics. (See page 45.)

Compliance Structure



Compliance Desk (internal notification system)

For Workers of the Group as well as Our Business Partners

The Compliance Desk was established in fiscal 2004 to provide a channel for persons seeking advice and reporting on compliance with laws and internal rules. With the enactment of the Whistleblower Protection Act in April 2006, the system's scope of application has been expanded to include workers at our business partners. As well, referral desks have been established at core affiliates and at outside law offices to make it easier to report cases. Anonymous referrals are also accepted.

In FY2009, the Compliance Desk was contacted in 75 cases, mainly by Group employees and temporary workers. Upon receipt of notification, an initial examination is made, following which a fair investigation of the facts is conducted and any necessary corrective measures are implemented.

Education and Awareness Activities in FY2009

Focus on Three Key Actions

To make compliance an integral part of every workplace, in FY2009 we focused on three key actions: (1) be aware of legislation and regulations; (2) develop a culture of compliance and mechanisms to avoid violations; and (3) audit and monitor throughout the Group. In number (1), we conducted revision of the Code of Conduct in May 2008 and a test of the level of understanding, a test to follow-up on FY2008 legal training, and compliance training for supervisors and managers. For number (2), we established a compliance boosting period (July to September) during which we held training for all Group employees. We also held other training for all levels of the workforce, including advanced seminars for compliance staff led by outside instructors. For number (3), we conducted surveys to determine the state of compliance and what needs to be done.

As of FY2009, a cumulative total of over 86,000 employees took compliance training available to all employees of the Osaka Gas Group. In FY2009, we also published a new manual, the "Compliance Musts for Supervisors and Managers" and used it for training relevant employees. We will continue training with the aim of making compliance an integral part of each employee's thinking and actions.

We also spread awareness through the use of comics and posters, and we use our intranet to post regular information about compliance.

■ Participation in Compliance Training

Fiscal year	2005	2006	2007	2008	**2009**
Lectures for management by outside experts	150	170	180	170	**150**
Group training and e-learning for supervisors and managers (including new appointees)	224	811	1,906 (All managers)	802	**4,370**
Group training for compliance staff	—	110	98	93	**325**
Group training and e-learning for general employees (including new recruits)	6,389	8,084	16,514	29,487	**25,388**

Note: In addition to the above, compliance training is organized by each division. Figures indicate the cumulative number of participants in each category of program.

Examples of Compliance Efforts

Efforts in the Pipeline B.U.

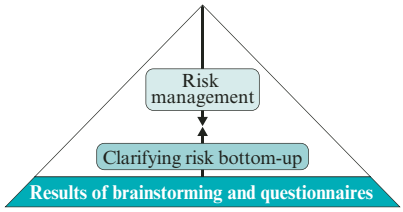
The Pipeline B.U. conducts the following bottom-up efforts that make up its multi-faceted approach to clarifying compliance issues.

(1)Efforts for clarifying compliance issues in work from the viewpoint of each employee (brainstorming on issues of concern)

(2)Analysis of workplace culture by employees (workplace culture questionnaires)

(3)Efforts in which business partners check to see how widespread compliance is among Osaka Gas employees (compliance questionnaires)

The issues that are brought to the surface through the above efforts are handled through top-down improvement plans, and the PDCA cycle (plan, do, check, action) is used to regularly inspect and follow-up on how well compliance is entrenched among employees.



Efforts at Affiliates

Raising Compliance Hazard Prediction Capabilities

Yoshikazu Abe

Administrative Department Manager and CSR Executive Osaka Gas LPG Co., Ltd.

Employees of Osaka Gas LPG Co., Ltd. constantly strive to improve their business ethics. Efforts include study by all employees of laws such as the Act on the Protection of Personal Information and laws related to contracts, the Law concerning the Securing of Safety and the Optimization of Transaction of Liquefied Petroleum Gas (LPG Act), and the High Pressure Gas Safety Law.

In FY2009, we created compliance hazard prediction check lists that included 28 examples of potential dangers, which all employees discussed in groups to improve their ability to spot potential hazards.

Protection of Personal Information

Stronger Measures against Mishaps

The Osaka Gas Group is in possession of personal information on a large number of customers, and we have a range of safety measures to protect this information.

In FY2009, we strengthened our personal information protection risk management through the G-RIMS self-inspection system and featured personal information protection as a key issue in the compliance training. We also held an e-learning course for all employees. Thanks to these efforts, it was revealed that the number of problems requiring attention decreased by half from FY2008, and that those problems found were not as serious. There were no cases of losses of personal information, and data that was lost prior to FY2008 was not found to have been divulged to or used by any outside parties.

Preventing the Reoccurrence of Misconduct

In FY2007, an Osaka Gas affiliate was found to have acted in violation of the Anti-Monopoly Law in gas filling station construction subject.

Despite efforts to prevent the reoccurrence, in July 2007 another example of misconduct occurred in a subsidized project for installation of natural gas cogeneration and other equipment. The Osaka Gas Group believes it crucial to prevent such a series of circumstances from happening again, and the entire Group is engaged in measures to this end. We will continue to work to strengthen our thorough implementation of compliance and strive to regain public trust.

■Measures to Prevent Reoccurrence

Osaka Gas punishes offenders in-house and implements measures to prevent the reoccurrence of misconduct.

1. Improvement of mechanisms operating mutual checks

- Responsibility for the management of subsidy projects has been shifted to the planning department of the commercial & industrial energy business unit, which is the body responsible for managing the business unit
- Purchasing functions for subsidy projects across the entire Group have been moved to the Purchasing Department

2. Strengthening internal auditing system

- The Auditing Department has been strengthened by increasing its staff

3. Tightening penalties for compliance violations

- All employees have been instructed again to be rigorous in compliance, and a compliance awareness level survey has been carried out

4. Revise items of performance evaluation for organizations and individuals

- Compliance have been incorporated into organizational performance evaluation and the mechanisms for target management for individuals

5. Establishment of Corporate Ethics Committee

- A Corporate Ethics Committee has been established as a consultative group to the Board of Directors, to offer advice from an external perspective on how to improve compliance practices and corporate ethics at the Osaka Gas Group

Corporate Ethics Committee Meeting

More detailed information (Japanese version only) is available on our website.

• The second meeting of Corporate Ethics Committee, May 22, 2008

Main items reported and opinions voiced

1. Status of FY2008 compliance enhancing activities and FY2009 compliance activities plan
2. Measures to prevent reoccurrence
3. Revision of Osaka Gas Group Code of Conduct
4. Incorporating customers opinion in management, as well as ensuring customers safety

• The third meeting of Corporate Ethics Committee, November 21, 2008

Main items reported and opinions voiced

1. Status of first half FY2009 compliance enhancing activities and compliance activities plan for second half
2. Earthquake drills

• The fourth meeting of Corporate Ethics Committee, May 28, 2009

Main items reported and opinions voiced

1. Status of FY2009 compliance enhancing activities and FY2010 compliance activities plan
2. Follow-up on preventing reoccurrence of problems
3. Measures for fire prevention and environmental protection in the LNG Terminal and Power Generation Business Unit

Members of the Corporate Ethics Committee

(As of May 28, 2009)

Chair: Akira Negishi (Professor, Faculty of Law, Konan University)

Members: Katsuhiko Kokubu (Professor, Graduate School of Business Administration, Kobe University)
Kuniko Misawa (Executive Director, Nippon Association of Consumer Specialists)
Hiroshi Ozaki (President, Osaka Gas Co., Ltd.)
Zenzo Ideta (Executive Vice President and CSR Executive, Osaka Gas Co., Ltd.)

Systems for Human Rights Awareness

Group-Wide Awareness Activities

Osaka Gas participates in the UN Global Compact (see page 9), and the entire supply chain—all Group executives and employees as well as business partners and partner companies —strive to ensure the protection of human rights. In June 2009, we revised our Policy for Purchasing, which covers the 10 principles of the UN Global Compact and constitutes our declaration to conduct purchasing with respect for human rights and towards the abolition of offenses such as child labor.

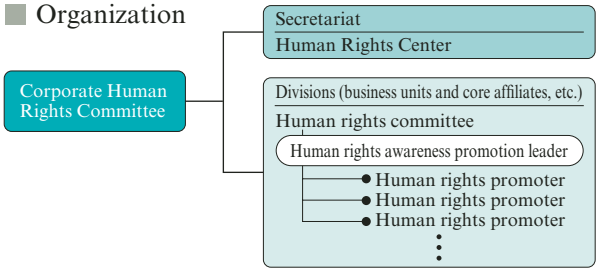
All policy on human rights action is organized by the Corporate Human Rights Committee, which is headed by the director responsible for the Human Resources Department. Communication with the committee goes through the Human Rights Center, part of the Human Resources Department and the point of execution for group-wide activities. As well, each business unit and affiliate of that business has its own human rights committee, which leads local activities and exchanges information and opinions with other businesses so that we are aware of all human rights issues across the group.

The main goal for awareness activities in FY2009 was "respect human rights and build a positive, energetic workplace." We strived to achieve this goal with the following five actions.

Requirement for Suppliers
(formulated June 1992, revised June 2009)

1. Strict Compliance
   Revision: Suppliers must follow the letter and spirit of all relevant laws (not only the relevant laws of countries and regions where we do business, but also laws and regulations related to fulfilling corporate social responsibility in labor and human rights), as well as follow accepted social norms and corporate ethics.
2. Assurance of Quality
3. Fair Price
4. Observance of Delivery Date
5. Environmental Considerations
6. Assurance of Safety
7. Maintenance and After-Sales Service

Organization



Human Rights Awareness Plans FY2009

1. Enhancement and strengthening of human rights awareness structure
2. Enhancement of human rights education and awareness raising activities
3. Training of human rights awareness promotion leaders within each division
4. Gathering of information on human rights and dissemination within the company
5. Participation in human rights associations for businesses and information gathering

Human Rights Training

Training for All Levels

The table below shows Osaka Gas's human rights training: group training for all levels and training for each division's human rights awareness leaders. Group training consists of graded education for managers and new recruits. Newly appointed managers go through a process of more detailed understanding, starting with the basics of human rights, a video course of lectures and discussions, then moving on to case study training on topics such as sexual harassment and power harassment. Managers at affiliates also undergo similar human rights training.

Human rights awareness leaders also receive a variety of training outside the company.

In FY2010, we will continue to hold group training for all levels, along with outside training to foster capable human rights awareness leaders.

Group Training

Participants	Period	No. of participants
Directors	February	21
Supervisors and managers	June, July, September, December	166(cumulative total)
General employees	March	500
New recruits	April, November	115
Managers at affiliates	June, September, December	129

Participation in External Courses

Course name	No. of participants
Anti-discrimination and Human Rights Issues Awareness Raising Course (managers)	42(cumulative total)
Human Rights and Anti-discrimination Issues Corporate Awareness Raising Course	
Buraku Liberation and Human Rights Summer University Course, etc.	

Note: Organized mainly by the Buraku Liberation and Human Rights Research Institute and other organizations.

Management policy of human growth

Charter V The Osaka Gas Group strives to become a group of enterprises to realize 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. The group and its employees, through mutual trust and decency, strive to achieve sound growth of enterprises within the group.

CSR Indicators

Targets by FY2012

Employee opinion survey (job satisfaction and dedication):

Maintain sufficient level

Employee scores on awareness survey:

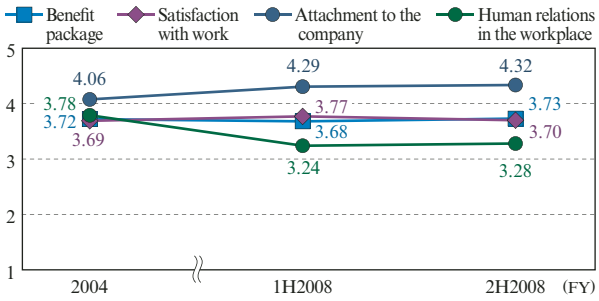
Marked High Standard for "Attachment to the Company" and "Satisfaction with Work"

Osaka Gas conducts periodic surveys of employee opinion to investigate how employees feel and think on a day-to-day basis about their own work, the working environment, their superiors, programs, and the company in general.

The most recent survey was conducted in FY2008 on about half the employees. Results have been analyzed according to the 16 categories. As in previous surveys, "attachment to the company" showed an extremely high level of satisfaction, and the categories of "satisfaction with work" and "human relations in the workplace" were also high compared to other companies. Answers given in the general comments section of the questionnaire revealed that employees want more action to be taken to improve mutual understanding and collaboration concerning inter-division communication and teamwork, and we are working to this end. We will do all we can to ensure that employees continue to rank Osaka Gas highly in the categories of "attachment to the company" and "satisfaction with work."

Surveys are held every two years and the next one is scheduled for FY2010 for all employees.

Trends in satisfaction (excerpt)



5: Satisfied
4: Somewhat satisfied
3: No opinion
2: Somewhat dissatisfied
1: Dissatisfied

OGIS Research Institute Group's Website for the disabled

WEB OGIS Research Institute Group hires the disabled

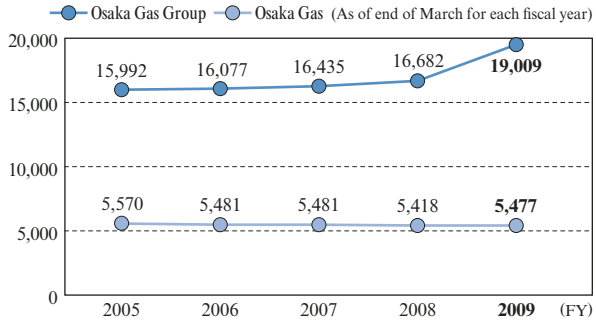
Hiring Efforts

Fair and Equal Employment Practices

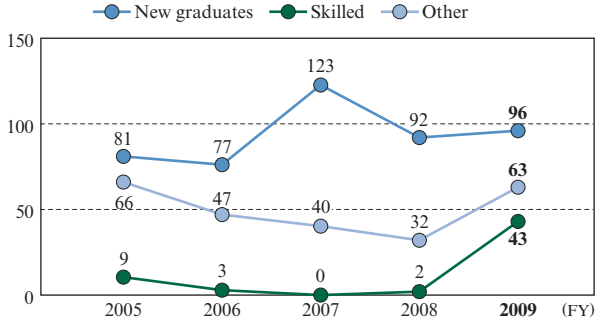
In its goal of maintaining and increasing employment levels to accompany business growth, the Osaka Gas Group has a policy of hiring and compensating employees with absolutely no discrimination based on race, religion, sex, social status, or lineage.

In hiring personnel, we emphasize placing people in the job they want and that they are qualified for, and matching them to the skills and job requirements of Osaka Gas. And to provide numerous chances for young people to gain work experience, we started an internship program and in FY2009 accepted approximately 100 applicants.

■ Number of employees in Osaka Gas and the Osaka Gas Group



■ Employment situation of Osaka Gas (New graduates, Skilled, Other)



Providing Opportunities for the Disabled, Seniors, and Women

Meeting a Diverse Range of Work Needs

Every company in the Osaka Gas Group strives to create an employee-friendly workplace with its own unique personnel systems that match the values and lifestyles of a range of employees.

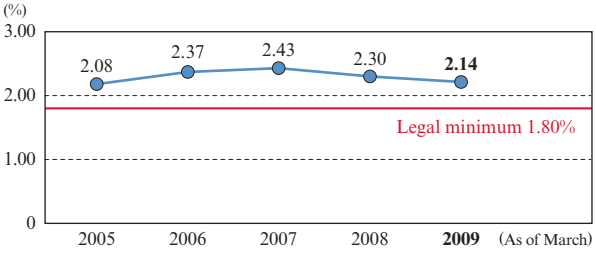
Osaka Gas does all it can to hire the disabled and creates a work environment conducive to the talents of each individual. As a result of these efforts, the disabled make up 2.14% of our workforce as of April 2009, well above the legal minimum of 1.8%.

Osaka Gas established a Career Development Center to help its diverse workforce plan for post-retirement. The career development program includes a consulting at age 53 based on the questionnaire filled out by each employee. There are also seminars held to explain the various systems available to help their life after retirement. In accordance with the revised Law concerning Stabilization of Employment of Older Persons, Osaka Gas has a system, called the Short-Term Contract Reemployment Scheme, to rehire employees 60 and older after retirement, under which applicants are placed in jobs that match their skills and desires. In FY2009, we introduced a full-time reemployment system to meet varied working needs. Osaka Gas Group companies also have similar systems for the reemployment of retirees.

Our female employees handle a range of duties that match their qualifications. There are currently 92 women at Osaka Gas in supervisory or management positions (as of January 2009).

Osaka Gas also has the Challenge System under which employees design their own career path by applying for in-house positions that match their interests or their spirit of challenge.

■ Percentage of disabled employees (Osaka Gas)



■ Reemployment after Mandatory Retirement (Osaka Gas)

Time of mandatory retirement	FY2008	FY2009
No. of retirees	90	126
No. of persons seeking reemployment	45	65
No. of persons reemployed	45	65
No. of reemployed persons working full-time	—	8
Rate of reemployment of persons seeking reemployment (%)	100	100

Employee Comment

Passing On Years of On-the-Job Knowhow

Yoshio Kato

Human Resources Development Center, Planning Division, Residential Energy Business Unit

I worked at Osaka Gas in gas equipment maintenance and servicing. After retirement, I wanted to use my years of experience to help train employees in dealing with customers and improving their skills and knowledge, so I applied for the reemployment system. Every day is satisfying as I help foster the next generation of workers.

Balancing Work and Family

WEB Helping the disabled contribute / Support for the next generation

Supporting Employees' at Work and Home

Widespread Support in Raising Children

Osaka Gas strives to create a corporate climate where employees can balance a rewarding job with fulfilling personal life and involvement in society to maximize their talents. To this end, we have systems to support employees during the various stages of their life and a workplace environment that makes it easy to take advantage of these systems.

To allow employees to take part in social activities, such as community activities, volunteering and jury duty, Osaka Gas introduced the leave systems. The Community Leave System allows employees to take leave for up to 10 days a year, and the volunteer leave system allows for from one month to a year off. The juror leave system allows employees to take off the necessary number of days.

We have also introduced a scheme allowing parents to take childcare leave up to the end of the month in which children reach their third birthday, and a system that allows parents to work shorter hours until children finish their third year at elementary school. There are employee guidebooks and various programs for helping employees' return-to-work. In recognitions of these efforts, in April 2007 Japan's Ministry of Health, Labour and Welfare certified Osaka Gas as a company that actively supports childcare for its employees in accordance with the Law to Promote Measures to Support the Next Generation.

In FY2010, we are introducing a system, "Nurturing Leave", for employees to take a day of paid leave until their child is three months old. In addition, we eased the condition of the leave aiming for more male employees getting involved in childcare.

Logo of certification from the Ministry of Health, Labour and Welfare

Employee Comment

Children are Precious, Women are Strong!

When my second child was born in May 2008, I was able to take an approximate seven-week childcare leave, thanks to my colleagues who covered for me while I was gone.

Each day seemed to be over so quickly, and it was also truly fulfilling. It was extremely valuable for me to realize the preciousness of raising children. I urge other men to take advantage of this system.

Hideyuki Seki

Hokutobu Pipeline B.U.

■ Number of employees taking childcare and nursing leave

	Men		Women	
	FY2008	FY2009	FY2008	FY2009
Childcare leave	1	2	33	29
Nursing care leave	0	0	2	1
Nursing/childcare time	0	1	58	48

Company-Employee Communication

Building Amicable Labor-Management Relations

Working as One to Tackle Problems

Osaka Gas has a union shop system in which all employees except those in management level are union members. The goal is wholesome and amicable labor-management relations.

The labor union and company management hold meetings at which they discuss changes in working conditions and management issues. In FY2009, we formed the "Labor-Management Committee to Support the Work-Life Balance".

Workers Union Comment

Stressing Labor-Management Communication

One particular focus of the Osaka Gas Workers Union, made up of approximately 6,000 members, is to strengthen our capacity to monitor and act in partnership with management.

The goal is to bring labor and management together as a team by exchanging opinions in freewheeling discussions, and to eventually boost company performance.

Toshikazu Honda

Chairman, Osaka Gas Workers Union

President Tours Workplaces

Face-to-Face Dialog with Employees

The President of Osaka Gas tours workplaces for face-to-face talks with employees to create a feeling of togetherness across the company. In FY2009, nine such events were held in which the president delivered a message to all employees. Comments from employees were favorable.

On the company intranet, employees can see summaries of his various announcements.

Developing High-Value Human Resources

WEB Training for all job levels / Take the initiative, take on the challenge / Self-development support

Training Policy and System

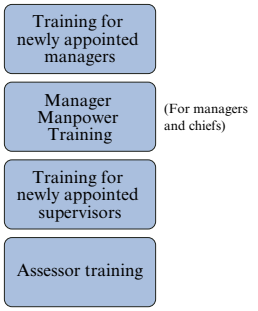
Wide-Ranging Training for Employees of All Levels

Osaka Gas has a training program for all levels—new employees, mid-level managers, executives—designed to spur motivation and personal growth. Other programs include leader training, tailor-made courses, and overseas training.

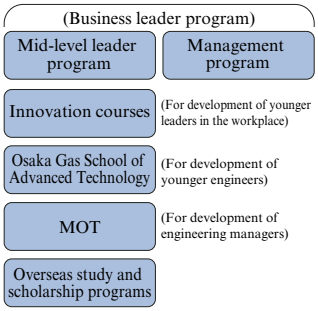
A focus in recent years has been our two-year Personal Tutor and Advisor (PTA) system, under which the PTAs (experienced colleagues) help new employees rapidly move up to a high-level of work skills. We are continuously improving this system, including adding follow-up training in the second and third years.

■ Stage-specific training

■ Management training



■ Leader training



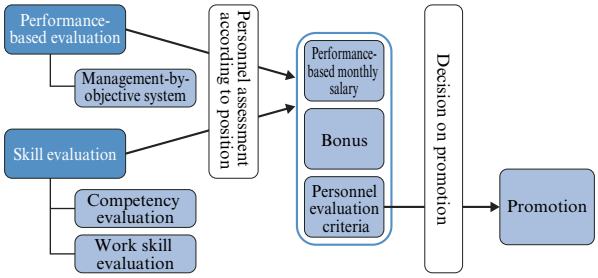
Employee Performance Evaluation and Interview, Management-Objective System

Evaluation Leads to Growth

We strive for fair assessment through meetings between employees and their superiors. The goal is a virtuous cycle of assessing performance according to clear expectations, giving employees the results of assessment as feedback to foster their growth, and reflecting employee performance in job compensation and benefits.

For example, through our management-objective system, in which employees set and shoot for their own targets, the evaluation components include not just results and performance, but also the originality and spillover effect of the compliance efforts. This system was introduced in FY2010 and is spurring employees on to greater challenges.

■ Judging promotions based on performance review



Improving Occupational Health and Safety

WEB Safety activities (United safety activities with partner companies) / Health promotion (Fighting obesity, lifestyle diseases, smoking)

Eliminating Industrial Accidents

Voluntary Standards Stricter than Legal Requirements

Following Code of Conduct of the Osaka Gas Group— "we are obligated to go beyond legal requirements in ensuring a work environment where employees can work with peace of mind" —we abide by not just relevant laws but also our voluntary Health and Safety Management Regulations in cooperating with business partners to prevent industrial accidents and improve the workplace environment.

We also use an accident index which uses a unique formula to calculate the degree of the accident in terms of seriousness and impact.

At the Osaka Gas Group Safety Activities Presentations, we honor group sections who exhibit a low accident index, and we introduce outstanding examples of safety activities.

■ Frequency of accidents and Accident severity rate (Osaka Gas)

	2007	2008	**2009**
Frequency of accidents causing absence from work	0.27	0.19	0.00
Frequency of accidents causing no absence from work	1.37	0.56	0.28
Overall absence rate	1.65	0.74	0.28
Accident severity rate	0.003	0.002	0.000

Absence rate = (No. of accidents/total work time) × 1,000,000
Accident severity rate = (Lost work days/total work time) × 1,000

Maintaining and Improving Health

Focus on Managing Mental and Physical Health

Osaka Gas has established the Health Services Center in the Human Resources Department to lead measures to prevent lifestyle-related diseases and promote mental health in accordance with the Ministry of Health, Labour and Welfare's "Health Maintenance and Promotion Initiative." Regular health checkups are held for all employees once a year to promote early detection and prevention of illnesses.

Osaka Gas has mental health measures that include education for all supervisors and managers. Starting in FY2008, this education has been open to employees of affiliates as well. In training for newly appointed supervisors and managers, mental health care for subordinates is now a required subject.

Health checkup at the Health Services Center

Environmental Performance Data

Item	Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Affiliated companies: No. of consolidated companies*1		81	81	81	77	87	

Environmental impact

Energy consumption*2

				Unit	FY2005	FY2006	FY2007	FY2008	FY2009
Consumption in crude oil equivalent				kℓ	768,491	877,169	960,074	912,889	929,581
	Osaka Gas			kℓ	114,368	118,581	118,361	118,963	120,235
		LNG terminal		kℓ	41,452	42,249	39,879	46,075	45,439
		Power plant		kℓ	48,031	51,376	52,223	47,083	48,789
		District heating and cooling		kℓ	6,768	6,444	6,557	6,982	7,113
		Offices		kℓ	18,116	18,511	19,702	18,823	18,894
	Affiliates			kℓ	654,124	758,588	841,714	793,926	809,346
		Power generation		kℓ	438,787	440,358	497,368	444,600	479,556
		District heating and cooling		kℓ	97,847	235,026	260,200	255,780	247,688
		Other		kℓ	117,491	83,205	84,146	93,547	82,102
Electricity and fuel consumption	Electricity consumption			1,000 kWh	476,588	466,523	450,874	512,982	477,519
	Osaka Gas			1,000 kWh	144,247	141,673	132,596	167,763	165,397
		LNG terminal		1,000 kWh	106,426	104,441	95,801	124,970	125,429
		Power plant		1,000 kWh	994	830	787	664	1,124
		District heating and cooling		1,000 kWh	4,536	4,301	4,343	4,463	4,299
		Offices		1,000 kWh	32,291	32,101	31,665	37,667	34,545
	Affiliates			1,000 kWh	332,341	324,851	318,278	345,219	312,122
		Power generation		1,000 kWh	3,017	5,947	6,033	6,754	5,896
		District heating and cooling		1,000 kWh	100,238	97,197	97,809	95,620	93,716
		Other		1,000 kWh	229,086	221,706	214,436	242,845	212,511
	Gas consumption (including natural gas)			1,000 m^3	288,207	409,644	474,545	445,455	457,702
	Osaka Gas			1,000 m^3	65,394	69,548	71,362	*3 64,886	*3 66,577
		LNG terminal		1,000 m^3	12,101	13,219	13,104	12,792	12,229
		Power plant		1,000 m^3	41,150	44,068	44,807	40,407	41,774
		District heating and cooling		1,000 m^3	4,825	4,598	4,686	5,025	5,174
		Offices*4		1,000 m^3	7,318	7,663	8,766	6,662	7,400
	Affiliates			1,000 m^3	222,813	340,096	403,184	380,570	391,125
		Power generation		1,000 m^3	132,611	148,211	189,730	168,338	187,531
		District heating and cooling		1,000 m^3	62,069	180,887	202,444	199,119	192,576
		Other		1,000 m^3	28,133	10,998	11,010	13,112	11,018
	Other fuel consumption (coal, heavy oil, etc., in crude oil conversion)			kℓ	307,335	276,964	288,162	259,305	271,426
	Osaka Gas			kℓ	7	19	3	17	5
		LNG terminal		kℓ	7	19	3	17	5
		Power plant		kℓ	0	0	0	0	0
		District heating and cooling		kℓ	0	0	0	0	0
		Offices		kℓ	0	0	0	0	0
	Affiliates			kℓ	307,328	276,946	288,158	259,288	271,421
		Power generation		kℓ	284,030	266,737	275,526	247,410	260,300
		District heating and cooling		kℓ	0	14	3	6	1
		Other		kℓ	23,297	10,194	12,630	11,872	11,121
Vehicle fuel consumption	Gasoline			kℓ	3,445	3,809	3,663	3,676	3,369
	Osaka Gas			kℓ	998	1,046	1,058	1,016	1,011
		LNG terminal		kℓ	1	1	1	1	1
		Other		kℓ	997	1,044	1,057	1,015	1,010
	Affiliates			kℓ	2,447	2,764	2,605	2,660	2,358
		Power generation		kℓ	1	1	0	1	1
		District heating and cooling		kℓ	0	0	1	1	0
		Other		kℓ	2,446	2,762	2,604	2,659	2,357
	Natural gas*4			1,000 m^3	458	474	424	509	520
	Osaka Gas			1,000 m^3	370	367	380	430	453
		LNG terminal		1,000 m^3	12	11	12	12	11
		Other		1,000 m^3	358	356	368	419	442
	Affiliates			1,000 m^3	87	107	44	79	68
		Power generation		1,000 m^3	0	0	0	0	0
		District heating and cooling		1,000 m^3	0	0	0	0	0
		Other		1,000 m^3	87	107	44	79	68

*3 Including the gas before adding LPG as a process of calorific value adjustment.

*4 In the gas consumption calculations, some of the figures for offices and vehicle fuel are figures announced by Osaka Gas.

Figures in the table do not appear to add up to the totals due to rounding.

Item				Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
	Diesel oil			kℓ	355	369	664	1,064	823	
		Osaka Gas		kℓ	13	15	14	11	6	
			LNG terminal	kℓ	5	4	4	3	3	
			Other	kℓ	8	11	10	8	2	
		Affiliates		kℓ	342	354	651	1,054	817	
			Power generation	kℓ	18	17	13	11	15	
			District heating and cooling	kℓ	0	0	0	0	0	
			Other	kℓ	324	337	637	1,042	802	
	LPG			1,000 m^3	0	144	186	167	164	
		Osaka Gas		1,000 m^3	0	0	0	0	0	
			LNG terminal	1,000 m^3	0	0	0	0	0	
			Other	1,000 m^3	0	0	0	0	0	
		Affiliates		1,000 m^3	0	144	186	167	164	
			Power generation	1,000 m^3	0	0	0	0	0	
			District heating and cooling	1,000 m^3	0	0	0	0	0	
			Other	1,000 m^3	0	144	186	167	164	
	Heavy oil, etc.(in crude oil conversion)			kℓ	0	0	91	63	130	
		Osaka Gas		kℓ	0	0	0	0	0	
			LNG terminal	kℓ	0	0	0	0	0	
			Other	kℓ	0	0	0	0	0	
		Affiliates		kℓ	0	0	91	63	130	
			Power generation	kℓ	0	0	0	0	0	
			District heating and cooling	kℓ	0	0	0	0	0	
			Other	kℓ	0	0	91	63	130	
Atmospheric emissions										
CO_2 emissions[*2]				1,000 tons-CO_2	2,010	2,226	2,398	2,270	2,316	
	Osaka Gas			1,000 tons-CO_2	252	260	258	267	268	
		LNG terminal		1,000 tons-CO_2	101	102	96	115	114	
		Power plant		1,000 tons-CO_2	95	101	103	93	95	
		District heating and cooling		1,000 tons-CO_2	14	13	14	15	15	
		Offices		1,000 tons-CO_2	42	43	45	45	44	
	Affiliates			1,000 tons-CO_2	1,757	1,966	2,140	2,003	2,048	
		Power generation		1,000 tons-CO_2	1,303	1,280	1,406	1,258	1,347	
		District heating and cooling		1,000 tons-CO_2	211	481	531	522	506	
		Other		1,000 tons-CO_2	243	205	203	222	195	
CO_2 emissions (Reference: Data for comparison)[*5]				1,000 tons-CO_2	1,805	2,070	2,248	2,089	2,161	
	Osaka Gas			1,000 tons-CO_2	191	213	214	208	214	
		LNG terminal		1,000 tons-CO_2	56	67	64	71	73	
		Power plant		1,000 tons-CO_2	94	101	103	93	95	
		District heating and cooling		1,000 tons-CO_2	12	12	12	13	13	
		Offices		1,000 tons-CO_2	28	32	35	31	33	
	Affiliates			1,000 tons-CO_2	1,615	1,857	2,034	1,881	1,947	
		Power generation		1,000 tons-CO_2	1,301	1,278	1,404	1,256	1,345	
		District heating and cooling		1,000 tons-CO_2	168	449	499	488	475	
		Other		1,000 tons-CO_2	145	131	132	137	126	

Figures in the table do not appear to add up to the totals due to rounding.

*1 Affiliates' data indicates the total for the companies, excluding overseas and tenant locations where data is difficult to collect. The number of the companies surveyed differs by year and by item.

*2 The following per-unit calorific values and emission factors are used for the calculation of energy consumption and CO_2 emissions.

	Purchased electricity	Gas	Before adding LPG as a process of calorific value adjustment	Gasoline	Diesel oil	LPG	LNG	Heavy fuel oil A	Kerosene	Coal
Per-unit calorific value	9.97	45.0	40.9	34.6	38.2	100	54.5	39.1	36.7	26.6
	GJ/1,000 kWh	GJ/1,000 Nm^3	GJ/1,000 Nm^3	GJ/kℓ	GJ/kℓ	GJ/1,000 m^3	GJ/ton	GJ/kℓ	GJ/kℓ	GJ/ton
Emission factor	* 0.69	2.29	2.23	2.32	2.62	5.98	2.69	2.71	2.49	2.41
	tons-CO_2/1,000 kWh	tons-CO_2/1,000 Nm^3	tons-CO_2/1,000 Nm^3	tons-CO_2/kℓ	tons-CO_2/kℓ	tons-CO_2/1,000 m^3	tons-CO_2/ton	tons-CO_2/kℓ	tons-CO_2/kℓ	tons-CO_2/ton

* CO_2 emission of purchased electricity subject to control is calculated using the average factor of thermal power plants so that the Osaka Gas Group can precisely assess how the reduction of purchased electricity has contributed to a reduction in CO_2 emission.

Sources:
Emission factor of purchased electricity (average factor of thermal power source): Please refer to July 2001 Target Achieved Scenario Subcommittee Interim Summary, Global Environmental Committee, Central Environmental Council.
Per-unit calorific value and emission factor of gas are as per the announcement of Osaka Gas.
Other values are as per the ministerial ordinance under the Law concerning the Promotion of Measures to Cope with Global Warming.

*5 Following factors are used for calculation of the CO_2 emission factor of purchased electricity.

FY		2005	2006	2007	2008	2009
Emission factor	kg-CO_2/kWh	0.261	0.356	0.358	0.338	0.366

The yearly CO_2 emission of purchased electricity is calculated by multiplying the year's electricity consumption by the year's emission factor, which means the emission factor used for the calculation varies from year to year. Therefore, the year-to-year difference in CO_2 emission does not necessarily reflect the effect of emission control measures.

Item			Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Environmental impact									
Methane emission[*6]			tons-CH_4	92	129	115	109	110	[*6] To be consistent with industry calculation methods, we revised some of our methods and conducted a detailed check.
	Osaka Gas		tons-CH_4	92	129	115	109	110	
Nitrogen oxide emission			tons-NOx	166	469	521	343	186	
	Osaka Gas		tons-NOx	29	17	24	24	20	
	Affiliates		tons-NOx	137	452	497	319	166	
Sulfur oxide emission			tons-SOx	140	172	190	151	146	
	Osaka Gas		tons-SOx	0	0	0	0	0	
	Affiliates		tons-SOx	140	172	190	151	146	
Water usage									
General and industrial water consumption			10,000 m^3	735	675	842	771	736	
	Osaka Gas		10,000 m^3	153	151	145	150	190	
		LNG terminal	10,000 m^3	110	110	107	117	157	
		Other	10,000 m^3	42	41	37	34	32	
	Affiliates		10,000 m^3	582	525	698	621	546	
		Power generation	10,000 m^3	143	147	177	162	170	
		District heating and cooling	10,000 m^3	125	171	200	208	203	
		Other	10,000 m^3	314	206	321	251	173	
Sea water consumption			10,000 m^3	64,030	62,259	59,916	59,951	57,265	
	Osaka Gas		10,000 m^3	42,257	41,782	38,208	38,827	38,504	
	Affiliates		10,000 m^3	21,773	20,477	21,708	21,125	18,760	
Chemical substances (Osaka Gas)									
Xylene	Handled		tons	1.70	8.40	4.50	3.45	1.44	
	Released		tons	1.70	8.40	4.50	3.45	1.44	
	Transferred		tons	0.00	0.00	0.00	0.00	0.00	
Toluene	Handled		tons	0.00	5.00	2.58	1.49	0.05	
	Released		tons	0.00	5.00	2.58	1.49	0.05	
	Transferred		tons	0.00	0.00	0.00	0.00	0.00	
Waste									
General waste	Generated		tons	2,012	2,207	2,240	1,962	1,459	
		Osaka Gas	tons	973	1,120	1,177	1,126	750	
		LNG terminal	tons	39	34	33	65	75	
		Other	tons	933	1,086	1,145	1,061	675	
		Affiliates	tons	1,039	1,086	1,062	836	709	
		Power generation	tons	0	7	29	11	17	
		District heating and cooling	tons	4	12	8	2	7	
		Other	tons	1,035	1,068	1,025	823	685	
	Recycled		tons	1,149	1,180	1,251	1,300	944	
		Osaka Gas	tons	788	943	962	1,004	691	
		LNG terminal	tons	38	32	30	64	74	
		Other	tons	750	911	932	940	617	
		Affiliates	tons	362	237	289	296	253	
		Power generation	tons	0	0	0	0	0	
		District heating and cooling	tons	2	1	2	1	2	
		Other	tons	360	235	288	295	251	
	Final disposal		tons	863	1,027	988	662	515	
		Osaka Gas	tons	185	177	215	122	59	
		LNG terminal	tons	1	2	3	1	1	
		Other	tons	184	175	212	121	58	
		Affiliates	tons	678	850	773	540	456	
		Power generation	tons	0	7	29	11	17	
		District heating and cooling	tons	2	10	6	1	5	
		Other	tons	676	833	738	528	434	
	Recycling rate		%	57	53	56	66	65	
		Osaka Gas	%	81	84	82	89	92	
		LNG terminal	%	97	95	91	98	99	
		Other	%	80	84	81	89	91	
		Affiliates	%	35	22	27	35	36	
		Power generation	%	0	0	0	0	0	
		District heating and cooling	%	54	12	20	50	29	
		Other	%	35	22	28	35	37	

Figures in the table do not appear to add up to the totals due to rounding.

Item				Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Industrial waste	Generated			tons	71,164	78,805	81,198	95,616	84,242	
		Osaka Gas		tons	3,836	3,358	2,913	2,938	3,065	
			LNG terminal	tons	202	115	175	124	135	
			Other	tons	3,635	3,243	2,738	2,814	2,931	
		Affiliates		tons	67,328	75,447	78,286	92,679	81,177	
			Power generation	tons	39,417	36,223	34,956	32,080	36,838	
			District heating and cooling	tons	14	60	22	25	17	
			Other	tons	27,897	39,163	43,307	60,574	44,322	
	Recycled			tons	63,043	70,738	71,981	85,412	75,534	
		Osaka Gas		tons	3,431	3,160	2,782	2,780	3,010	
			LNG terminal	tons	198	112	171	121	135	
			Other	tons	3,233	3,048	2,610	2,659	2,876	
		Affiliates		tons	59,612	67,578	69,199	82,631	72,524	
			Power generation	tons	38,956	35,913	34,685	31,766	36,271	
			District heating and cooling	tons	0	0	13	11	11	
			Other	tons	20,656	31,665	34,502	50,854	36,242	
	Final disposal			tons	8,121	8,067	9,218	10,204	8,708	
		Osaka Gas		tons	405	198	131	157	55	
			LNG terminal	tons	3	3	4	2	0	
			Other	tons	402	195	128	155	55	
		Affiliates		tons	7,716	7,869	9,086	10,047	8,652	
			Power generation	tons	461	310	272	314	566	
			District heating and cooling	tons	14	60	10	14	6	
			Other	tons	7,242	7,498	8,805	9,719	8,080	
	Recycling rate			%	89	90	89	89	90	
		Osaka Gas		%	89	94	95	95	98	
			LNG terminal	%	99	98	98	98	100	
			Other	%	89	94	95	94	98	
		Affiliates		%	89	90	88	89	89	
			Power generation	%	99	99	99	99	98	
			District heating and cooling	%	0	0	57	45	64	
			Other	%	74	81	80	84	82	
Used gas appliances, etc. (Osaka Gas)*7										
	① Generated			tons	5,491	5,523	4,786	4,327	3,470	
	② Collected			tons	4,715	4,811	4,060	3,894	3,123	
	③ Recycled			tons	4,482	4,570	3,900	3,541	2,784	
	④ Final disposal (① – ③)			tons	1,009	953	887	786	686	
	⑤ Recycling rate (③ ÷ ①)			%	82	83	81	82	80	
Polyethylene pipes (Osaka Gas)	Collected			tons	157	152	155	152	145	
	Recycled			tons	157	152	155	152	145	
	Recycling rate			%	100	100	100	100	100	
Excavated soil (Osaka Gas)	① Amount during installation			km	1,011	961	902	909	886	
	② Estimated amount of soil generated using conventional method*8			10,000 tons	189	183	184	183	180	
	③ Reduced (② – ④)			10,000 tons	82	85	83	83	78	
	④ Generated			10,000 tons	107	98	101	100	102	
	⑤ Recycled			10,000 tons	79	76	83	84	87	
	⑥ Recycling rate (⑤ ÷ ④)			%	74	78	82	84	85	
	⑦ Utilized*9			10,000 tons	21	18	14	13	12	
	⑧ Final disposal (④ – ⑤ – ⑦)			10,000 tons	6.0	5.5	3.9	3.5	3.3	
Copy paper (Osaka Gas)				10,000 sheets	4,033	3,608	3,851	4,004	4,044	

*7 In addition to gas appliances collected through Osaka Gas dealers, also included are used bathtubs and other household equipment.

*8 Estimated amount of soil generated: The amount that is believed will be generated when doing pipe installation without using current methods for reducing the amount of excavated soil, such as the bore-more method and the shallow pipe method. The difference between this figure and the actual amount generated is the reduced amount.

*9 Amount utilized: The amount used outside of Osaka Gas, such as for improving farmland soil. Final disposal is the amount generated minus the amount recycled and the amount utilized.

*10 When reliquefying BOG (boil-off gas), which has been gasified in the LNG tank, LNG cryogenics is used instead of electricity.

*11 With FY1999 as the base year, a calculation of the amount of CO_2 reduced as a result of the use of high-efficiency equipment and systems, such as cogeneration systems, gas air conditioners, and high-performance industrial furnaces.

Environmental impact reduction (Osaka Gas)

		Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Use of LNG cryogenics		1,000 tons	4,031	4,194	4,085	3,391	3,678	
	Cryogenic power generation	1,000 tons	2,354	2,445	2,453	1,546	2,006	
	Expansion turbine	1,000 tons	969	1,000	1,036	1,143	1,039	
	BOG re-liquefaction*10	1,000 tons	708	749	596	702	633	
CO_2 emission reduction at customer sites*11		1,000 tons-CO_2	1,316	1,631	2,068	2,171	2,332	

Environmental management indicators (Osaka Gas)

	Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Environmental management efficiency	yen/1,000 m^3	234	196	163	154	156	
Monetary value of environmental impact reduction	100 million yen	3.5	3.8	4.3	3.9	3.5	
Environmental impact reduction efficiency	yen/1,000 m^3	43	46	49	43	42	
Monetary value of environmental impact reduction at customer sites	100 million yen	46	57	73	76	82	
Environmental impact reduction efficiency at customer sites	yen/1,000 m^3	575	680	833	860	980	

Gas sales by volume (Osaka Gas)

	Unit	FY2005	FY2006	FY2007	FY2008	FY2009	Remarks
Gas sales by volume	million m^3	8,053	8,448	8,737	8,887	8,380	

Figures in the table do not appear to add up to the totals due to rounding.

Third Party Review

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

IEMA interviewed the managers of our front-line departments on the planning and implementation of social and environmental management activities at the Osaka Gas Group. An overall evaluation and feedback based on these interviews and other reviews were then presented during a subsequent conversation with CSR Executive Zenzo Ideta.

Mr. Abe (left), CS Executive of Osaka Gas LPG Co., Ltd., talking about its unique compliance hazard prediction check list.

Mr. Matsuzawa (right), Community Relations Representative, Osaka Gas Osaka Residential Sales Dept., discussing the response to education through cooking.

IEMA

Evaluation and Comments on CSR Management of Osaka Gas Co., Ltd.

July 29, 2009

Eriko Nashioka,
Certified Public Accountant and
Certified Tax Accountant, and Director,
Institute for Environmental
Management Accounting (IEMA)

1. Purpose of the Review

We express our opinion to help enhance the reliability of the Osaka Gas Group CSR Report 2009 by assessing its CSR initiatives, with the exception of those related to environmental management, from our position as a third-party that maintains no business relationships with Osaka Gas.

2. Procedures

We interviewed Zenzo Ideta, CSR Executive and Executive Vice President, as well as other responsible personnel at the Headquarters and affiliated companies to clarify the planning and implementation of CSR management (excluding environmental management) at Osaka Gas as well as the evaluation and utilization of environmental performance data, which indicates the results of these activities and serves as the basis of disclosed information.

3. Assessment and Opinion

We appreciate the company's announcement of its "Field of Dreams 2020" Long-term Management Vision and Medium-Term Management Plans in March 2009, which together represent a concrete vision of the future and awareness of the company's roles. We can sense the company's strong determination, evidenced by its Long-term Management objectives, which include both business domain and environmental/corporate quality items, to integrate these CSR elements into the company's main business activities. The vision of the future is described in an easy-to-understand manner with a clear awareness of Osaka Gas's corporate social responsibility.
Since a plan to formulate indicators for CSR action was also publicly announced, we expect the company to efficiently realize its vision of the future. Osaka Gas has been emphasizing CSR management that takes into account the stakeholders' perspective and is willing to receive many outside opinions; the company also conducts a stakeholder dialogue. Looking ahead, we expect the dialogue to provide an ongoing opportunity to not only listen to stakeholders but to actively involve them in identifying and prioritizing issues to promote increased transparency in CSR management.

About key performance factors

1. Communication with communities

Communities maintain high expectations for Osaka Gas as a community-based company. "The Small Light Campaign," with its long history and position as a basic activity of the company, indicates that each employee takes action with an awareness of CSR. There is also a virtuous cycle in which the company provides a mechanism for maintaining and guiding this awareness with outcomes that improve the communities. Due to the nature of the business of Osaka Gas, one person can be an employee and shareholder, customer or local resident at the same time in many situations. Consequently, contributions to communities often end up enhancing the satisfaction of both customers and employees. Projects such as the travelling classroom for elementary schools and education through cooking are very important social functions of the company. We hope these activities will continue to be promoted.

2. Communication with employees

Employee education appears to be successful, as seen in the establishment of compliance standards, risk management and the CSR Charter. Here, the key is to raise the awareness of the employees of group and partner companies, because they work in the front lines of Osaka Gas business at some distance from the Head Office and their turnover tends to be high. Osaka Gas LPG Co., Ltd., the company in which we conducted interviews for this assessment, frequently carries out education and training using direct role playing. We highly value these efforts and expect them to spread to the entire group.

About CSR Report 2009

The report is a highly readable, as it is prepared in line with the CSR Charter and features a well-designed use of color. While a significant volume of the content emphasizes the relevance of the articles, we have found the report to be an outstanding means for providing information. You can easily review highlights of the report in a slide show format on the Web. This is a very ingenious way to assign different roles to the printed report and the Web version.

Third Party Verification

Bureau Veritas Japan provided a third party verification of the environmental performance data of the Osaka Gas Group to be included in its CSR Report 2009. The verification was conducted to confirm the data were sufficiently reliable and consistent for the purpose of the Report.

Locations

Head Office: All CSR management functions
Senboku LNG Terminal II of Osaka Gas Co., Ltd.: LNG terminals
Nakayama Nagoya Joint Power Generation Corporation
Nagoya Power Plant : coal-fired power generation
Minabe Chemical Industries Co., Ltd.: production of activated charcoal


On-site interview by Bureau Veritas Japan at Senboku LNG Terminal II

Content of the Verification

Head Office:
1. Reliability of data collection and compilation system, adequate operation of system and effectiveness of internal verification
2. Accuracy of the compiled data for FY2009 (April 2008 to March 2009)
3. Validity of conclusions derived from compiled data

Individual business locations:
1. Adequateness of the scope of data collection
2. Effectiveness of data measurement, collection and compilation methods and effectiveness of internal verification
3. Reliability of measurement data and collected data and accuracy of compiled results

This verification was conducted according to Bureau Veritas Japan's CSR Report Third Party Inspection Procedures and Guidelines, which is based on outstanding case studies. In addition, Bureau Veritas Japan provided limited warranty for this verification with reference to ISAE (International Standards on Assurance Engagements) 3000 (revised in December 2003 by the IFA (International Federation of Accountants).

Opinion

The environmental performance data in CSR Report 2009 are free of serious errors and sufficiently reliable for use in the report. Although minor errors were found in some data in the process of examination, all errors were corrected prior to publication of the report.

Message from Zenzo Ideta, CSR Executive

In FY2009, we formulated our "Field of Dreams 2020" Long-term Management Vision and Medium-Term Management Plans after multiple discussions across the boundaries of organizations and tiers. As mentioned in "Field of Dreams 2020," we will not stand still; we intend to pursue CSR at the level of a quality enterprise that outperforms rising public expectations for effort and information disclosure, while at the same time contributing to daily life, business and society at large. Experts sometimes advise us to be sure we effectively report on the many good things we are doing. So, I think our CSR tasks include visually communicating our CSR efforts and ensuring the penetration of CSR throughout the day-to-day operations of all employees.

We will effectively use the Osaka Gas Group CSR Report 2009 and website to more dynamically and concretely communicate our CSR activities and thereby gain the understanding and support of society. Each initiative has its own long history and therefore tends to be regarded by those taking part as mere common practice in the midst of everyday activities. I believe we must review these initiatives again and ask which CSR components of the Group require the support of each operation. To help with this effort, we intend to establish management practices based on the CSR indicators developed in fiscal 2009, starting first with Osaka Gas and then expanding to include all affiliated companies, one at a time.




The team responsible for publishing this report; we welcome your opinions and comments.

Design Your Energy 夢ある明日を

OSAKA GAS GROUP

"Design" encompasses creativity and originality, while "Energy" refers not only to energy in the literal sense, but also to the vitality and dynamism of our customers. The Osaka Gas Group is committed to contributing to the realization of more comfortable lifestyles and development of business activities for our customers by creating new value to meet their needs and respond to the changing times. Based on the "Design Your Energy—A Better Tomorrow" brand slogan, we will continue to provide even better services in order to fulfill this commitment.

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Published in September 2009