



# Toward Further Growth *and* Development

The Osaka Gas Group is actively investing in areas aimed at expanding new businesses as part of efforts to realize its long-term management vision and medium-term business plan, “Field of Dreams 2020.” In this context, we are committed to ensuring further business growth and development. From the next page of this report, we provide details of our current focuses, which provide the platform and wellspring for our ability to move steadfastly forward.

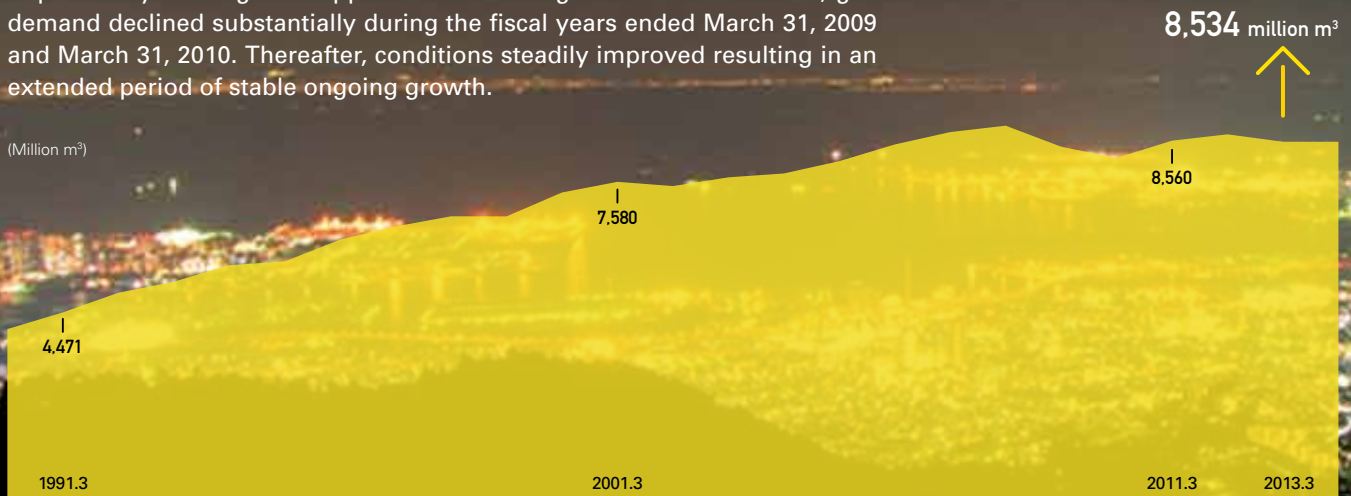
# 1. A Robust Earnings Platform

The Osaka Gas Group engages in unflagging efforts to meet the diverse needs of its customers. To this end, we continue to develop innovative technologies and services while honing our marketing skills. By adapting to changes in an appropriate and timely manner, we continue to supply gas to over seven million customers. Drawing on these collective efforts, we are putting in place a stable and robust operating platform in the Kansai region by consistently engaging in sound management practices and securing an appropriate level of earnings.

## Trends in Consolidated Gas Sales Volume

Impacted by the negative ripple effects of the global economic crisis, gas demand declined substantially during the fiscal years ended March 31, 2009 and March 31, 2010. Thereafter, conditions steadily improved resulting in an extended period of stable ongoing growth.

(Million m<sup>3</sup>)



## Developing Business Activities in Japan's Second Largest Economic Zone

The Kansai region, the Osaka Gas Group's core area of operation, is an economic zone that accounts for approximately 16% of Japan's nominal GDP.

Share of Japan's Nominal GDP

**15.6%\***

\* Source: Prefectural Economic Calculations issued by the Cabinet Office of Japan



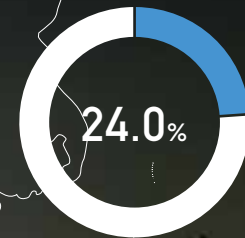
# Initiatives Aimed at Further Growth and Development

## Expansion of Pipeline Network

In its supply of gas, Osaka Gas maintains a pipeline network that today reaches approximately 60,800 km in length.

To the east of its supply area, the Group plans to open the Mie-Shiga gas pipeline in January 2014 to further boost stable supply. To the west, the Himeji-Okayama gas pipeline is scheduled to open in April 2014 with the aim of stimulating demand along areas peripheral to the pipeline.

The Osaka Gas Group's Share of Gas Sales in Japan  
(2013.3)



Total Pipeline Length (Consolidated)

Approx. **60,800** km

Number of Meters Installed (Consolidated)

Approx. **7,110,000**

**2<sup>nd</sup>** in Japan

Scheduled to open in January 2014  
The Mie-Shiga gas pipeline

## City Gas Supply Network of Osaka Gas

Scheduled to open in April 2014  
The Himeji-Okayama gas pipeline

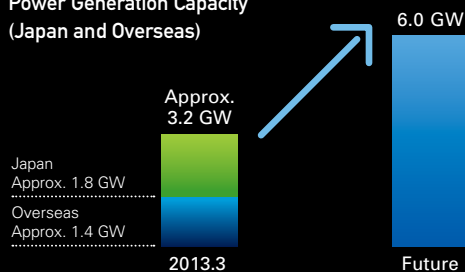
- Trunk lines (installed)
- - - Trunk lines (under construction)
- Major pipelines (installed)
- Service area of Osaka Gas

(As of March 31, 2013)

## Expanding the Electric Power Business

The Osaka Gas Group currently maintains a power generation capacity of approximately 3.2 GW in Japan and overseas. With an eye toward expanding this capacity to around 6.0 GW, we are looking at promoting a cogeneration-based power export business\* and constructing large-scale generation facilities.

Power Generation Capacity  
(Japan and Overseas)



Senboku Natural Gas Power Plant  
Total output: 1,109 MW (operations commenced in 2009)



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Please refer to page 31 of this report for details on the cogeneration-based power export business.

# 2. Advanced Use of Natural Gas

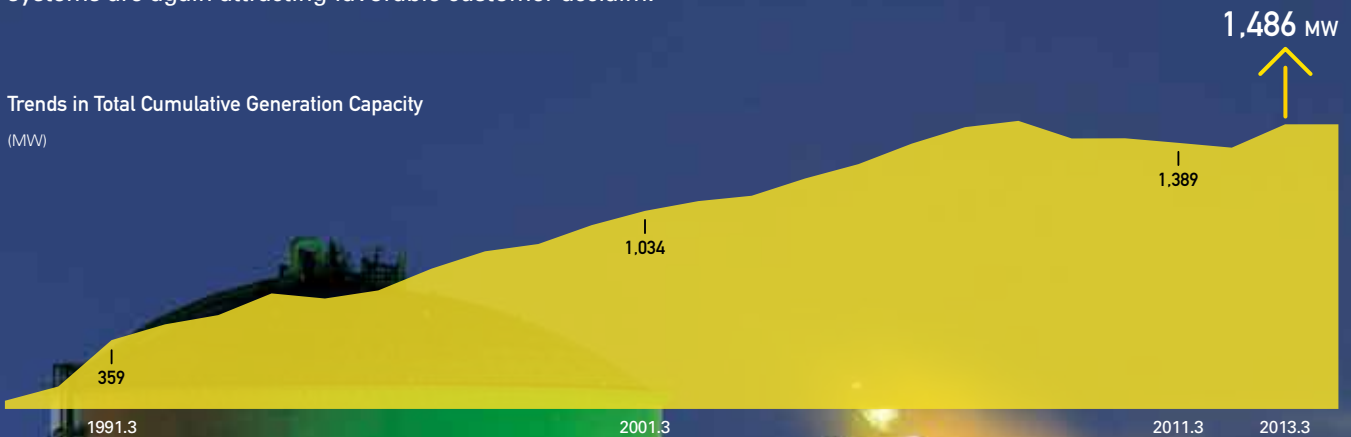
The government and public agencies also recognize the importance of energy sources that can help facilitate the early realization of a low-carbon society. As a result, policy trends lean heavily toward efforts aimed at promoting the switch of fuels to natural gas. In specific terms, policy objectives are focusing increasingly on expanding the ratio of gas fuel consumption as well as the increased use of cogeneration systems in the industrial sector and wider acceptance of high-efficiency water heaters in the residential sector. Looking ahead, we anticipate the shift from other fuels to natural gas as well as the advanced use of natural gas becoming more prominent, reflecting the positive effects of policy objectives.

## Expanding Sales of Gas Cogeneration Systems for Commercial and Industrial Use

A cogeneration system is a system which, in addition to generating power using equipment that is installed at the customer's site, recovers the exhaust heat emitted during generation and uses it for air conditioning and heat treatment. As the power is generated at the customer's site, little is lost in energy transmission. Energy utilization efficiency is also enhanced to 70–90% through the efficient use of waste heat. As these features have become more widely appreciated, we have seen rapid growth in installations at manufacturing plants, commercial facilities, and stores. As interest in energy security increases in the aftermath of the Great East Japan Earthquake, cogeneration systems are again attracting favorable customer acclaim.

### Trends in Total Cumulative Generation Capacity

(MW)

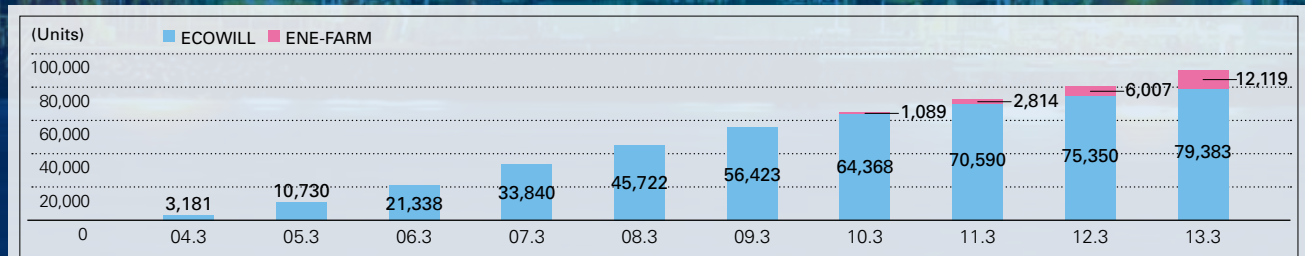


Note: The generation capacity of systems where removal has been confirmed is excluded from the fiscal year ended March 31, 2009.

## Expanding Sales of Gas Cogeneration Systems for Residential Use

Thanks largely to technological development and advances in reducing size while enhancing power generation efficiency, cogeneration systems are attracting considerable interest in the residential sector. Since the release of our residential gas engine cogeneration system "ECOWILL" and residential fuel cell cogeneration system "ENE-FARM" in 2003 and 2009, respectively, we have witnessed a steady increase in sales reflecting high reputation for environmental friendliness and economic efficiency.

### Trends in Cumulative Number of Units Sold



# Initiatives Aimed at Further Growth and Development

## Developing Smart Energy Networks

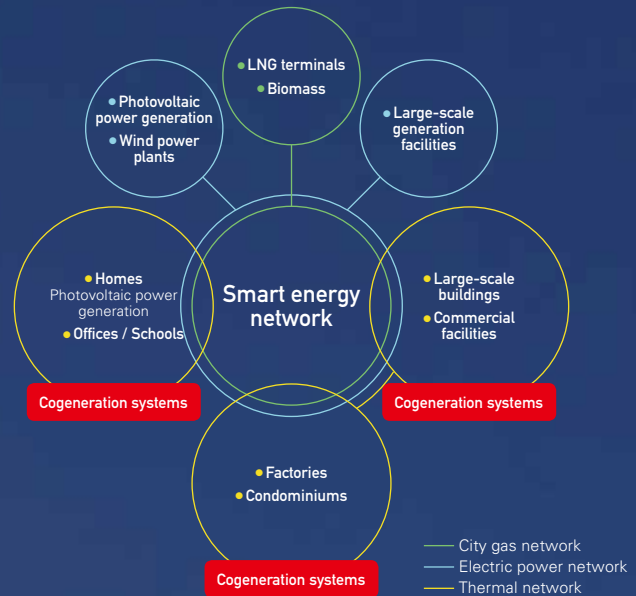
Smart energy networks are systems where several power sources, including renewable energy and cogeneration systems, are combined over a wide area to mutually accommodate electricity and heat. Information and communications technology (ICT) is used to optimally control the energy supply and demand.

We commenced business experimental operations of smart service provider from June 2012.



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Please refer to page 41 of this report for details on smart energy networks.



## The Public and Private Sectors Working in Unison to Promote Increased Use of Natural Gas

The Japan Gas Association announced details of measures aimed at promoting the increased use of natural gas through to 2030 in October 2011. These measures took into consideration the direction of energy policies following the Great East Japan Earthquake and accordingly identified such ambitious quantitative objectives as lifting gas cogeneration capacity from its level of 4,600 MW in 2010 to 30,000 MW and increasing the number of residential fuel cells from 20,000 to 5,000,000 (including LPG). The nation as a whole is expected to promote the increased use of natural gas going forward.

<b>Gas cogeneration</b> 2010 <b>4,600 MW</b> ▶▶ <b>30,000 MW</b> 2030	<b>Gas air conditioning systems</b> 2010 <b>13 million RT*</b> ▶▶ <b>26 million RT</b> 2030	<b>Ratio of natural gas to total industrial-use heat demand</b> 2010 <b>10.7%</b> ▶▶ <b>25.0%</b> 2030
<b>Residential fuel cells</b> 2010 <b>20,000 units</b> ▶▶ <b>5 million units</b> (including LPG) 2030	<b>Natural gas vehicles (NGV)</b> 2010 <b>40,000 units</b> ▶▶ <b>500,000 units</b> 2030	

\* The cooling capacity required to turn one ton of 0°C water into ice over a period of 24 hours.

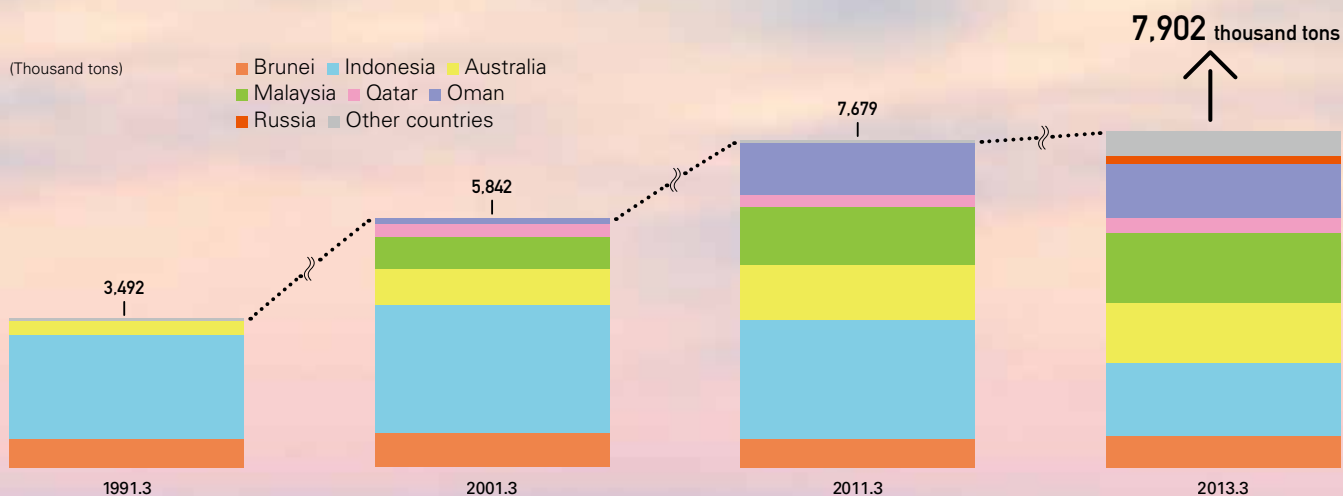
Source: The "Approaches by the City Gas Industry Based on the Direction of Future Energy Policy" issued by the Japan Gas Association in October 2011

# 3. Stable LNG Procurement

The Osaka Gas Group procures all of its natural gas from overseas sources. Natural gas reserves are spread across the length and breadth of the world and are abundant. Thanks to these features, natural gas is recognized as a superior energy source.

## Diversifying Sources of Supply

Osaka Gas Group began importing LNG from Brunei in 1972. Thereafter, the Company worked diligently to diversify its sources of supply. Currently, long-term LNG procurement agreements have been concluded with producers from seven countries comprising Brunei, Indonesia, Malaysia, Australia, Qatar, Oman, and Russia. Plans are in place to procure LNG from Papua New Guinea during the fiscal year ending March 31, 2015.



## Abundant Reserves of Natural Gas Worldwide

Abundant reserves of natural gas totaling 187 trillion m<sup>3</sup> have been confirmed worldwide. This volume is sufficient to meet global annual demand for a period of 55.7 years, which enables a stable supply.

### Major Nations with Natural Gas Reserves and Proven Reserves

Natural Gas Reserves		Proven Reserves	
(Trillion m <sup>3</sup> )			
Iran	33.6	Iraq	3.6
Russia	32.9	China	3.1
Qatar	25.1	Indonesia	2.9
Turkmenistan	17.5	Norway	2.1
U.S.A.	8.5	Canada	2.0
Saudi Arabia	8.2	Egypt	2.0
UAE	6.1	Malaysia	1.3
Venezuela	5.6	Oman	0.9
Nigeria	5.2	Papua New Guinea	0.4
Algeria	4.5	Brunei	0.3
Australia	3.8		

Source: BP "Statistical Review of World Energy June 2013" (2013)

# Initiatives Aimed at Further Growth and Development

## Liquefaction Tolling Agreement Concluded with a Subsidiary of U.S.-Based Freeport LNG Expansion, L.P.

Osaka Gas and Chubu Electric Power Co., Inc. executed a gas liquefaction tolling agreement with a subsidiary of U.S.-based Freeport LNG Expansion, L.P. in July 2012. With the support of the Japanese government, this became the first project involving Japanese companies to acquire authorization from the U.S. Department of Energy to export LNG to non-FTA countries in May 2013. Currently, activities are being undertaken with a view to the launch of a natural gas liquefaction business in 2017.

Through this project, the Osaka Gas Group will be able to obtain LNG sourced from U.S. natural gas fields including shale gas. Accordingly, Osaka Gas recognizes this initiative as an opportunity to diversify its sources of procurement and help achieve stable and economical LNG procurement.



Freeport LNG terminal (Houston, Texas, U.S.A.)  
Photograph courtesy of Freeport LNG Development, L.P.



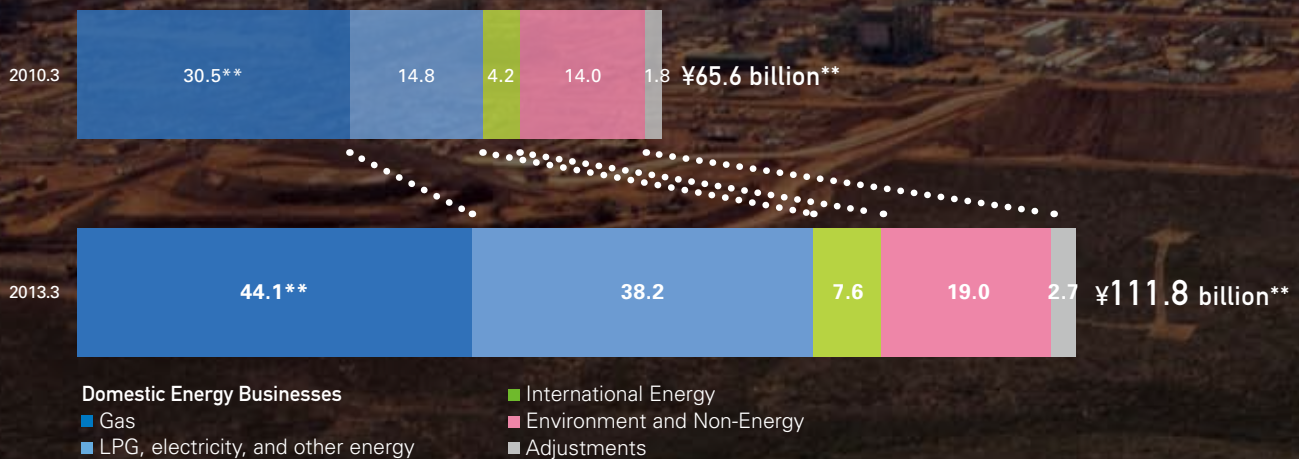
# 4. Expanding New Businesses

The Osaka Gas Group has continued to develop opportunities outside its domestic energy businesses from early on, drawing on its robust management platform, know-how, and technological capabilities. Currently, over 50% of the Group's overall earnings are derived from outside the gas business. Thanks largely to these developments, the Group has successfully put in place a balanced portfolio.

## Changes in Composition of Segment Income\*

The Osaka Gas Group is endeavoring to expand its three core domestic energy business, international energy businesses along the energy value chain, and environment and non-energy businesses. In this manner, the Group is working to build a stable earnings portfolio.

(Billions of yen)



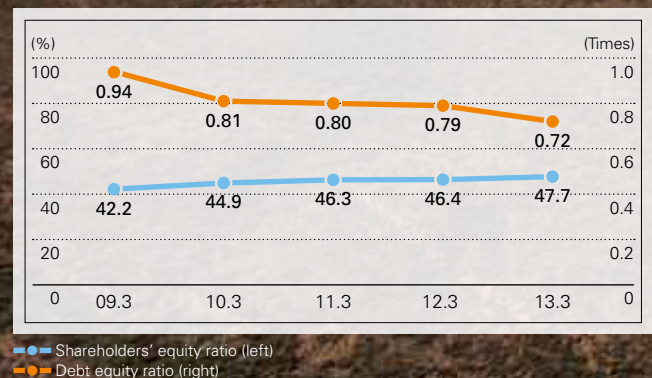
\* Segment income = Operating income + Equity in net earnings of affiliates

\*\* After adjustment for the impact of profit and loss on fuel cost adjustment system

## Maintaining Sound Financial Position while Actively Engaging in New Investments

The Osaka Gas Group is endeavoring to maintain a sound financial position. In specific terms, the Group has targeted a shareholders' equity ratio of 40% or more and a debt equity ratio of approximately one over the medium-to-long term while actively engaging in new investments.

Shareholders' Equity Ratio / Debt Equity Ratio





# Initiatives Aimed at Further Growth and Development

## Participation in Condensate and Gas Development Project in Papua New Guinea

In May 2013, Osaka Gas reached an agreement with a subsidiary of Horizon Oil Limited to acquire a portion of the subsidiary's interests in resource development and exploration licenses. In specific terms, this acquisition allows the Company to participate in a condensate\* and gas development project in Papua New Guinea. Steps are now being taken to progress activities through to condensate development.

In addition, the western region of Papua New Guinea has gained increasing attention for its prospect natural gas reserves. With the acquisition of the aforementioned licenses, Osaka Gas plans to participate in exploration activities with Horizon Oil and its joint venture partners and to also consider opportunities for developing an LNG project.

\* Condensate: A type of ultra-light crude oil that exhibits similar characteristics to naphtha and gasoline



## Participation in Natural Gas Retail Business in Singapore

In March 2013, Osaka Gas reached an agreement with City Gas Pte Ltd to participate in a natural gas retail business for industrial customers in Singapore. The jointly formed natural gas business will utilize the technological expertise in energy solutions of the Osaka Gas Group combined with the customer knowledge and network of City Gas to engage in a wide range of activities, from the development of natural gas demand to sales in the industrial energy market in Singapore.

