Review of Operations

Defining the fiscal year ended March 31, 2012, as a "Boost-Up Year," Osaka Gas positioned the year as one for accelerating initiatives geared toward the realization of its long-term management vision and medium-term business plan, "Field of Dreams 2020," and expanded its business accordingly. In this section, we will explain the initiatives implemented in each business segment and the successes of these initiatives.

Domestic Energy Businesses

Gas Business

In the gas business, we provide a wide range of services to encourage customers in the Kansai region to use gas. These include producing, supplying, and selling city gas; installing house pipes; and selling gas appliances. Through technological development, marketing, and the formation of new services, the Group has penetrated a wide-ranging cross-section of residential; commercial, public, and medical; and industrial customers to meet their diverse energy needs.

Overview of Gas Sales in the Fiscal Year under Review

In the fiscal year under review, ended March 31, 2012, gas sales volumes increased 1.8% year on year, to 8,681 million m^3.

Sales volumes of gas to industrial customers, which account for approximately half of total gas sales volumes, rose 5.2%, to 4,355 million m^3, as a result of the success of our efforts to capture new demand and the increased utilization of customers' facilities following the Great East Japan Earthquake. Meanwhile, sales volumes of gas to residential customers, which account for approximately one-fourth of total gas sales volumes, declined by 0.2%, to 2,271 million m^3, due to the fact that summer temperatures, including those for water, were lower than in the previous fiscal year and that temperatures during the second half of the year were up, which resulted in a drop in heating demand. Likewise, sales volumes of gas for commercial use decreased by 4.3%, to 927 million m^3, and sales volumes for public and medical use were down 1.1%, to 648 million m^3. These declines can be attributed to the energy-saving initiatives implemented by customers.

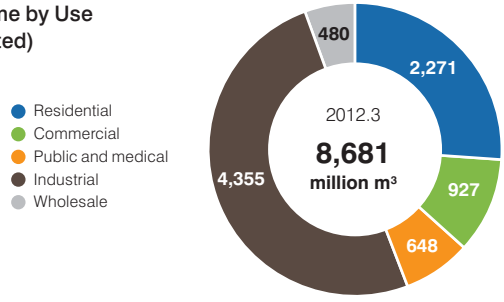
On a wholesale basis, the volume of gas sold to other gas providers was 480 million m^3, down 1.5%.

Introduction of the "Ga Smart!" Catchphrase

In January 2012, we introduced the new "Ga Smart!" as our catchphrase for communicating the environmentally friendly and advanced nature of natural gas and our gas business. This catchphrase is based on the Japanese used in our slogan for this project, which explains our belief that natural gas can contribute to smarter lifestyles, cities, and futures.

Furthermore, the "Ga Smart!" catchphrase embodies our desire to contribute to the realization of a low-carbon society while making customer lifestyles more comfortable and achieving energy savings. To these ends, we will promote the advanced usage of natural gas, which has a low impact on the environment, boasts an able supply, and is highly secure.

Gas Sales Volume by Use (Non-consolidated)



Residential Gas Sales

In the residential sector, we provide homes with a stable and safe supply of gas and also sell various gas appliances with the aim of encouraging increased gas usage. To offer customers new gas appliances that better meet their needs and contribute to energy savings and CO_2 emission reductions, we engage in joint-development ventures with appliance manufacturers. In addition, we propose more comfortable lifestyles utilizing gas appliances and are quick to respond should these appliances need maintenance or repairs. Recently, in the Kansai region, populations have been declining and natural gas has been facing increased competition from rival energy sources. In this harsh environment, we are taking other steps to contribute to the realization of a low-carbon society through the efficient use of energy and are also targeting higher levels of energy security through the increased usage of distributed power generation systems. In these ways, we are working to expand gas demand in the residential sector.

Residential Cogeneration System Initiatives

At Osaka Gas, we feel that the next generation of residential gas cogeneration systems, a type of distributed power generation system, will be supported by our residential gas engine cogeneration system "ECOWILL" and our residential fuel cell cogeneration system "ENE-FARM."

Launched in June 2009, ENE-FARM (PEFC*1 type) is an efficient gas-fired power generation system for households. The system generates electricity using hydrogen reformed from natural gas, and efficiently uses recovered heat for hot water supply and space heating. As there is little electricity lost during transmission and the system recovers exhaust heat, it operates on notably less energy and emits much less CO_2 than conventional power generation. While gas usage may increase, the system reduces electricity bills by the amount of electricity it generates. In this manner, this system's environmental benefits come coupled with lower utility costs when gas and electric bills are totaled. These environmental and economic benefits have earned the system a great deal of support from customers. Furthermore, as the Great East Japan Earthquake, sparked a rise in interest for distributed power generation, this system has recently seen a jump in sales. As a result, sales of this system in the fiscal year under review exceeded initial expectations, and we have managed to sell more than 6,000 units on a cumulative basis since the system was launched in 2009.

We have subsequently continued to develop new products and improve existing ones. In June 2011, we launched a new addition to our ECOWILL line. This cogeneration system is not only superior in terms of environ-

mental and economic benefits but also easier to install due to its smaller size. Later, in April 2012 we began sales of a new PEFC type ENE FARM system that realized the world's highest level for total efficiency*2 of 94%. In June 2012, we introduced a new addition to our cogeneration system lineup that can continue to generate power on a self-sustained basis independent from the power grid should a power outage occur so long as the ENE-FARM system is generating power at the time of the outage. Furthermore, the solid oxide fuel cell (SOFC*3) cogeneration system created through a joint-development venture with KYOCERA Corporation, Toyota Motor Corporation, and AISIN SEIKI CO., LTD., achieved a power generation efficiency of 46.5%,*2 the highest level in the world. We began selling this system under the name ENE-FARM Type S in April 2012. In the fiscal year ending March 31, 2013, we will target total residential gas cogeneration system sales of 10,000 units and continue to push forward with the development of new technologies.

Furthermore, we are stepping up our sales efforts proposing "hybrid generation" systems that realize even higher levels of CO_2 emission reduction by combining residential gas cogeneration systems with solar power generation systems, a source of renewable energy. Currently, more than 5,300 households are using such systems.

*1 PEFC: Polymer electrolyte fuel cell
*2 Rate for lower heating value (LHV). Heat value excluding the calorific value of latent heat for condensation of steam generated when fuel gas is completely combusted.
*3 SOFCs are fuel cells that use ceramics as an electrolyte. Compared to PEFCs, their power generation efficiency is higher and they can be made smaller. Electric current is generated when oxygen is ionized and reacts chemically with hydrogen and carbon monoxide as it passes through the electrolyte. The ability to use carbon monoxide is a significant feature.

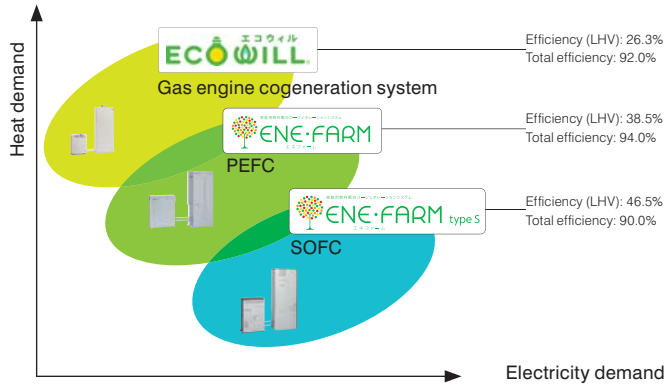
Development and Sales of Appliances that Provide Higher Levels of Efficiency and Comfort

Osaka Gas is constantly pursuing the development of gas appliances and equipment that contributes to energy savings and CO_2 emission reductions while also making users' lives more comfortable, and actively promotes sales of these after their development. One such product is the strong-selling ECO-JOZU, a water heater that recovers heat which would normally escape into the atmosphere during gas combustion to efficiently heat water. In the fiscal year under review, we sold 79,000 units of this revolutionary product, with cumulative sales reaching 389,000 units. Also, our gas fan heaters, which provide a comfortable, gas-originated source of heat for the winter, sold more than 205,000 units in the fiscal year under review, exceeding 200,000 for the first time in six years.

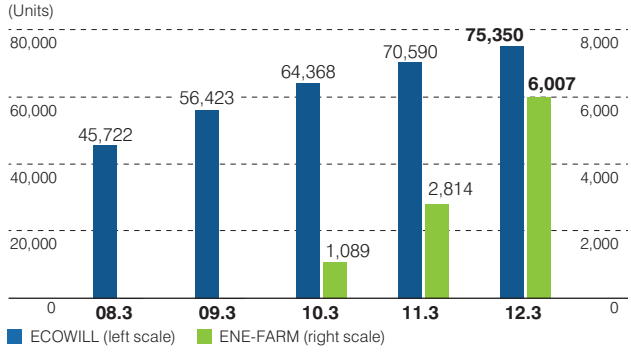
Providing Consistently High-Level Service

Striving to win greater customer support, we are practicing community-based marketing and developing new services. In September 2011, we launched the Water Heater Easy Discount Insurance service. This service offers customers repair services if their gas water heater experiences difficulties and periodic inspection free of charge for up to 10 years after purchase. Customers only have to pay a set monthly fee. This service is available even for customers using gas heaters made by other companies and can be subscribed to at the time of purchase or after. As of March 31, 2012, the number of contracts for this convenient service was up to 39,000. Moreover, we are further enhancing this service by establishing systems to shorten the time between when a repair request is received and when it is completed, with the aim of providing consistently high-quality service in all of our interactions with customers.

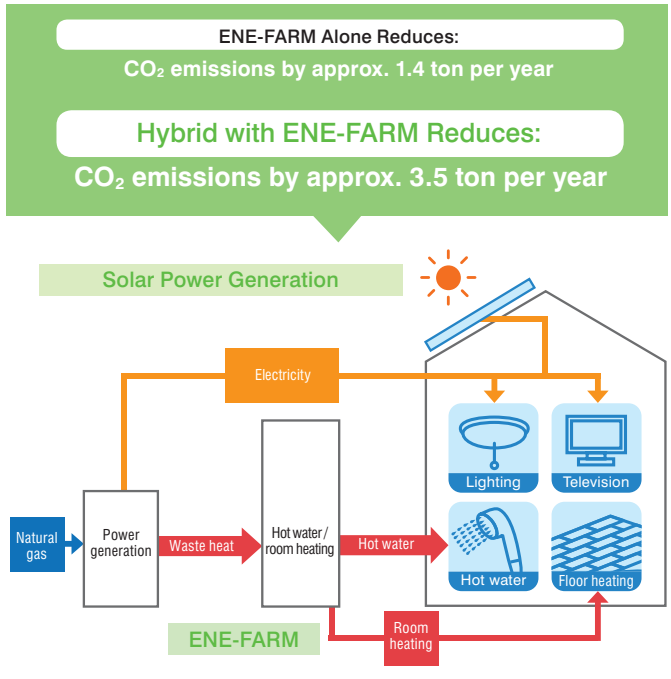
Residential Cogeneration System Lineup



Residential Cogeneration System Units Sold (Cumulative Total)



Energy Efficiency of Residential Fuel Cell Cogeneration System ENE-FARM and Hybrid Power Generation



* Estimates are for a four-person family living in detached housing and switching from a conventional system to a system using ENE-FARM (PEFC type) and ENE-FARM (PEFC type) with solar power generation.

Domestic Energy Businesses

Gas Business

Commercial and Industrial Gas Sales

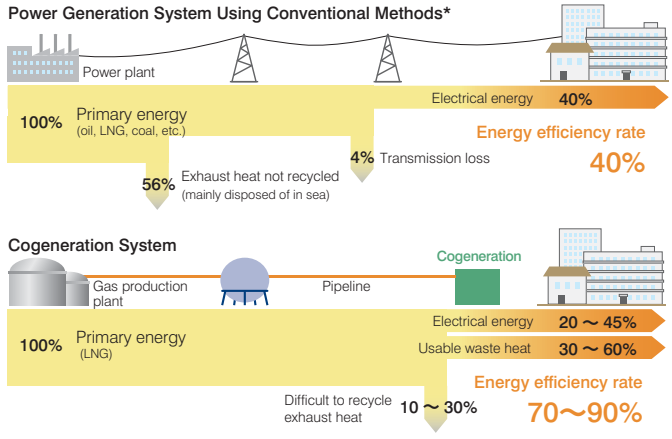
In the business-use sectors, we encourage customers to continue using gas by supplying them with appliances and services that meet their needs. We also work to attract new customers mainly through demonstrating the environmental friendliness of natural gas and its compatibility with energy-efficient engineering based on which we offer proposals for shifting to natural gas to those using other fuel sources. We focus on promoting natural gas and its advanced utilization through marketing various gas appliances such as gas cogeneration systems, gas air conditioning systems, and gas kitchens, that are environmentally friendly, energy-efficient, and improve energy security for customers. Furthermore, Osaka Gas strives to expand its business of providing a broad range of services that go beyond energy supply as an energy service provider. These services include energy services such as managing utilities such as water treatment systems and lighting facilities, and financing for installing gas equipment as well as IT monitoring systems.

Spreading Usage of Gas Cogeneration Systems

When gas cogeneration systems were initially introduced in the 1980s, they primarily consisted of large-scale facilities. However, technologies have continued to advance since then, leading to the creation of smaller and more efficient facilities. Today, Osaka Gas possesses a diverse lineup of gas cogeneration systems, and has supplied them to a wide variety of customers, ranging from factories and large-scale commercial facilities, to hospitals, hotels, and small stores.

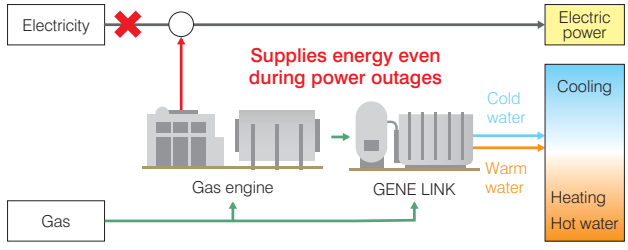
Following the Great East Japan Earthquake, the need for secure power sources began to rise rapidly. A result of this shift would be the growing importance of cogeneration systems, which serve as a backup source for electricity and other forms of energy and can provide customers with a stable supply of energy even during power outages.

Differences between Conventional Generation Systems and Cogeneration Systems



* Average for 10 power companies (2005.3)
Source: Japan Gas Association "Cogeneration System"

Power Outage Response System



Cogeneration System Lineup

Note: Representative examples are listed.

	Residential		Commercial			Industrial	
	Detached homes	Apartments	Restaurants and stores	Public baths	Hospitals and hotels	Electric appliances and foods	Chemical and steel
Primarily electric energy use	ENE-FARM Type S (SOFC) Efficiency (LHV): 47% Waste heat recovery ratio: 43% Total efficiency: 90%				Miller-Cycle Gas Engine (400kW) Efficiency (LHV): 40% Waste heat recovery ratio: 32% Total efficiency: 72%	Miller-Cycle Gas Engine (1MW) Efficiency (LHV): 42% Waste heat recovery ratio: 32% Total efficiency: 74%	
Primarily thermal energy use	ECOWILL Efficiency (LHV): 26% Waste heat recovery ratio: 66% Total efficiency: 92%	ENE-FARM (PEFC) Efficiency (LHV): 39% Waste heat recovery ratio: 55% Total efficiency: 94%	Genelight (5kW) Efficiency (LHV): 29% Waste heat recovery ratio: 51% Total efficiency: 85%	Genelight (35kW) Efficiency (LHV): 34% Waste heat recovery ratio: 51% Total efficiency: 85%			Gas Turbine (7.24MW) Efficiency (LHV): 33% Waste heat recovery ratio: 47% Total efficiency: 80%

Self-Sufficient Gas Engine Heat Pump GHP Excel Plus that Can Operate During Power Outages

After the Great East Japan Earthquake, there was a rapid rise in the number of customer requests for means of using air conditioning and lighting at minimal levels during power outages. In response to this demand, in April 2012, the Company began sales of the self-sufficient gas engine heat pump "GHP Excel Plus" that can be used even during power outages.

This product was developed by attaching a start-up battery to our gas-engine heat pump air conditioner High Power EXCEL. As High Power EXCEL features an electricity generator, the battery allows the gas engine to start up during power outages, enabling customers to use air conditioning and lighting to a certain degree.

Going forward, we will work to expand usage of the GHP series and other gas air conditioning systems that help reduce energy usage during peak hours and lower energy consumption and CO_2 emissions.


GHP Excel Plus

Electric Power Business

Following the partial deregulation of the electric power sector, Osaka Gas expanded its business domain to include the electric power business. In the fiscal year under review, the total power generation capacity of its domestic power resources amounted to approximately 1.8 GW, with its flagship power plant being the Semboku Natural Gas Power Plant which commenced operation in 2009. The Company positions this key business as its second core business alongside its city gas operations.

The electric power business is a business that can fully leverage the Group's infrastructure, solution-based marketing techniques, and customer network nurtured through the Company's core gas operations. The business consists of three domains: IPP operations, power generation, and power marketing. Power generation is primarily conducted using natural gas thermal power plants. However, in an effort to contribute to environmental preservation, the Company is also actively engaged in supplying renewable energies such as CO_2-emission-free wind power generation and solar power generation. In power marketing, we sell our electricity through the Group company ENNET Corporation, and also sell wholesale power to Japan Electric Power Exchange (JEPX), and we have thus managed to establish a well-balanced marketing portfolio.

In response to the incidents at a nuclear power station that was damaged during the Great East Japan Earthquake, and the subsequent electricity shortages, there has been much debate in Japan about the need to revise electricity systems and consider the optimal energy mix for the country in the medium to long term. The Group is closely monitoring the direction of these discussions, and is considering the possibility of constructing cogeneration systems with capacities ranging from 10 to 100 MW or large-scale natural gas thermal power plants with the goal of contributing to the crealion of stable power supplies and furthering the growth of its electric power business.

Semboku Natural Gas Power Plant

The Semboku Natural Gas Power Plant, operational since 2009, is a cutting-edge, highly efficient gas turbine combined-cycle power plant generating electricity from environmentally friendly natural gas. All four gas turbines at the plant were constructed within Osaka Gas' Semboku LNG Terminal, allowing the plant to utilize the terminal's land and infrastructure. By fully leveraging the benefits this situation creates, along with the Group's accumulated natural gas knowledge base, we are pursuing higher levels of competitiveness for this plant. Throughout the fiscal year under review, the plant served as an important power source that contributed to relieving the stress on electricity supply and demand balances amid the electricity shortages that followed the Great East Japan Earthquake.

Power Sources Owned by the Osaka Gas Group (As of June 2012)

	Power plant	Capacity
Domestic power source	Torishima Energy Center	150 MW
	Nakayama Joint Power Generation	149 MW
	Nakayama Nagoya Joint Power Generation	149 MW
	Himeji Power Plant	55 MW
	Semboku Natural Gas Power Plant	1,109 MW
	Hayama Wind Farm Power Plant	20 MW
	Hirogawa Myojin-yama Wind Power Plant	16 MW
	Yura Wind Power Plant	10 MW
	Others	115 MW
	Total	1,773 MW

In addition to the above, 1.4 GW (Group stake) is sourced abroad.
For more details, please refer to page 35.

Procurement of Energy Resources

The LNG currently used by the Osaka Gas Group businesses is entirely imported from abroad. Due to the expansion of global energy demand driven by emerging nations and the changes in energy market conditions accompanying economic fluctuations, securing a long-term stable LNG supply became a key issue for the Group's management. In the fiscal year under review, we added Russia to the list of countries from which we procure LNG under long-term contracts, which includes six other countries: Indonesia, Brunei, Malaysia, Australia, Qatar, and Oman. In the fiscal year ending March 31, 2013, we will begin receiving LNG from a wide range of sources based on a long-term portfolio supply contract.

In the future, we plan to procure LNG from new projects in Papua New Guinea and Australia. We will also procure LNG on a medium-term, short-term, or spot basis in response to fluctuations in demand, thus allowing us to secure stable supplies of resources in an economically sound manner.

Procurement from the Ichthys Project in Australia

Osaka Gas has concluded an agreement with Ichthys LNG Pty Ltd. to purchase LNG produced at the Ichthys Project in Australia. In this project, operated by a company in the corporate group headed by INPEX Corporation, natural gas is produced at the Ichthys gas and condensate field offshore Western Australia. The produced natural gas is transported through pipelines to Darwin in the Northern Territory for processing and liquefaction, after which it will be sold. Operation of the project is scheduled to commence in the fourth quarter of 2016. Under the agreement the Company concluded with this project, 800,000 tons of LNG will be purchased each year over a 15-year period starting in 2017. Also, the Company acquired a 1.2% equity interest in this project through a Group company located in Australia.

LNG Transportation

Having our own LNG transportation capabilities not only reduces LNG shipping costs but also expands business opportunities in vessel leasing, LNG trading, and other activities.

Addition of Two New LNG Carriers

In October 2011, Osaka Gas approved plans to commence joint ownership of two new, fuel-efficient LNG carriers together with Mitsui O.S.K. Lines, Ltd. One carrier will go into commission in the fiscal year ending March 31, 2015, with the second coming into service in the following year. We intend to use these carriers to deliver LNG to the Company from new projects such as the one scheduled to begin in Papua New Guinea and the Gorgon Project in Australia.

Artisti's rendition of LNG carrier under construction

Domestic Energy Businesses

LPG and Industrial Gas Businesses

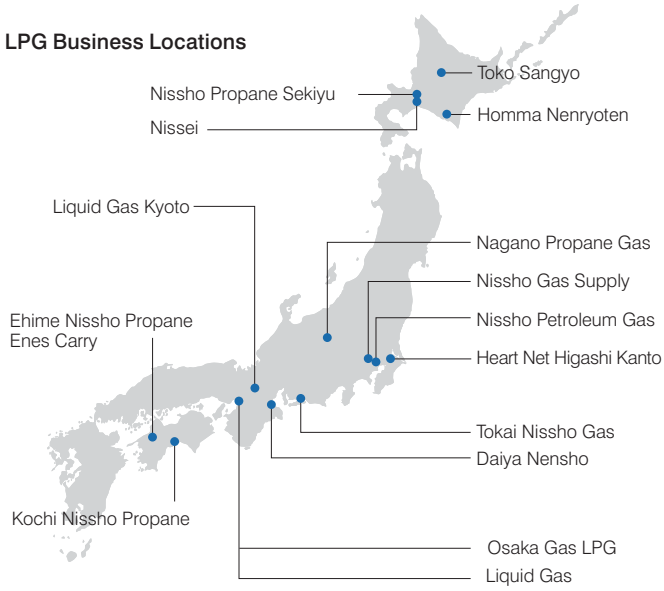
LPG Business Leveraging the Group's Network

The Osaka Gas Group's LPG business mainly serves customers outside the natural gas service area by providing retail and wholesale supplies of LPG. The Group takes full advantage of its nationwide network, as well as its knowledge and experience regarding the city gas business, to enhance its competitiveness in LPG. The LPG business constitutes multi-energy services of the Company in combination with natural gas and electricity supplies for a range of users from residential to industrial.

Industrial Gas Business Utilizing LNG Cryogenics

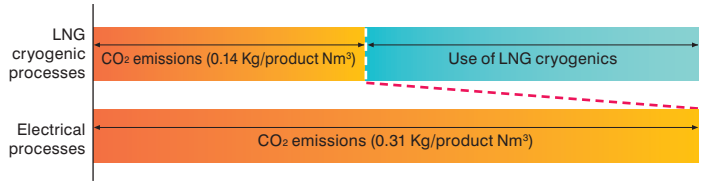
Utilizing the cryogenic technologies for LNG, Osaka Gas is involved in businesses such as air separation, manufacturing and marketing of liquefied carbon dioxide and dry ice, high-purity methane related businesses, and on-site supply of hydrogen from hydrogen producer "HYSERVE." Additionally, we are expanding businesses using our proprietary low-temperature crushing technologies.

LPG Business Locations



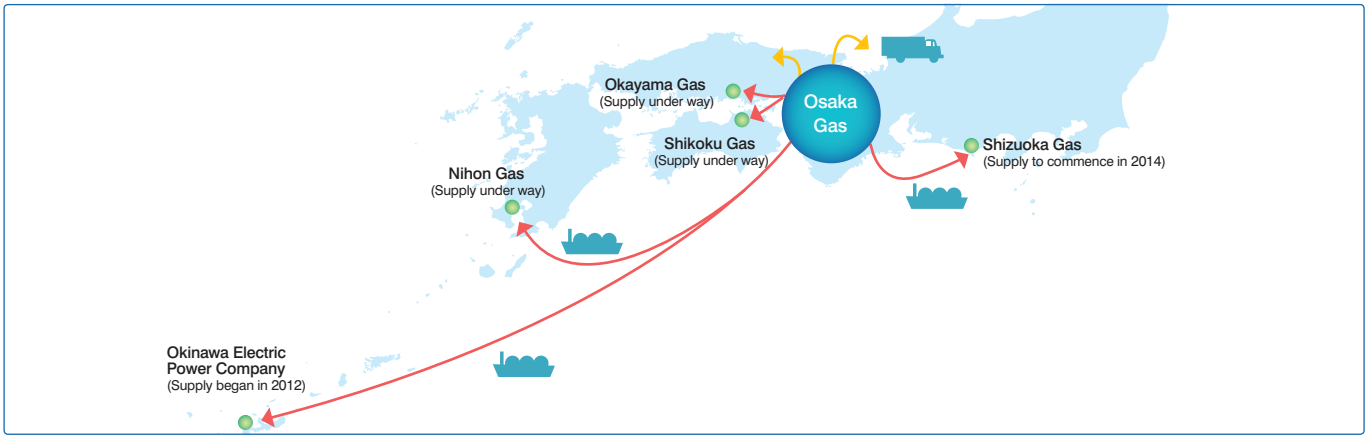
Significantly Lower CO_2 Emissions from Industrial Gas Production with LNG Cryogenics

When producing industrial gases such as liquid oxygen, LNG cryogenics can be used to improve the efficiency of air separation processes. The production processes at highly efficient, energy-saving plants that employ these technologies emit 55% less CO_2 than conventional plants using electrical processes.



Broad-Area Energy Business

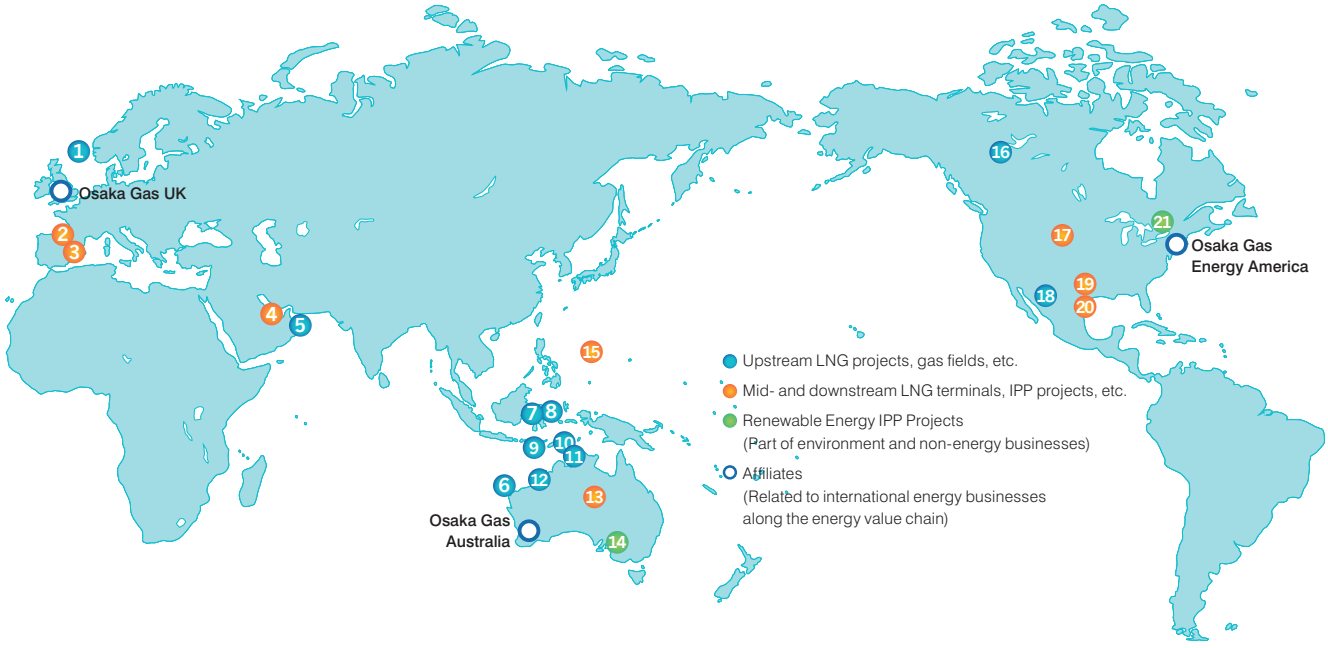
The Osaka Gas Group does not merely supply natural gas to customers inside the service area. The Group also sells part of the LNG that it procures to large-scale customers outside its service area, and to other utilities, by transporting the gas by truck, train, or ship. In addition to the LNG already being supplied to Nippon Gas Co., Ltd., by LNG tanker, the Group began providing LNG to Okinawa Electric Power Company, Inc., in May 2012. The Company is also scheduled to begin LNG supply to Shizuoka Gas Co., Ltd., in the fiscal year ending March 31, 2015. Going forward, we will expand the volumes of LNG we deal in with the aim of enhancing competitiveness from a resource procurement standpoint, and will continue to pursue alliances with regional utilities to provide various energy solutions.



International Energy Businesses along the Energy Value Chain

The Osaka Gas Group strives for stable and flexible procurement of highly competitive supplies of LNG. In the field of international energy businesses along the energy value chain, we are constructing a natural gas value chain that extends from upstream to mid- and downstream businesses by utilizing the knowledge, expertise, and networks cultivated through our operations. In this endeavor, we intend to secure the profitability of individual projects and maximize synergies across the entire value chain.

In addition to pushing ahead with the development of natural gas fields, oil fields, and other energy resources in the upstream area, we also promote the development of mid- and downstream operations in LNG terminals, pipelines, gas distribution, and IPP projects. In the future, we plan to leverage our LNG terminals and LNG carriers to develop global operations, including the possible engagement in global energy trading businesses.



1. Idemitsu Snorre Oil Development Co., Ltd. (North Sea Oil Field)

Stake since 2005: 49.49%
Estimated reserves: 0.9 million boe* (crude, etc.)
* boe: Barrels of oil equivalent

2. Amorebieta IPP

Stake since 2005: 50%
Power generation capacity: 378 MW (Group stake)

3. Sagunto LNG Terminal

Stake since 2010: 20%
Vaporization capacity: 6.4 million tons/year

4. Shuweihat S2 IWPP

Stake since 2011: 10%
(25% equity interest in the operation and maintenance company)
Power generation capacity: 150 MW
Freshwater processing capacity: 10 million gallons/day

5. Qalhat LNG Terminal

Stake since 2006: 3%
Liquefaction capacity: 3.3 million tons/year

6. Gorgon Project Gas Field

Stake since 2009: 1.25%
Projected output: 15 million tons/year (Start of production scheduled for 2014)
Estimated reserves: 800 million tons (LNG equivalent)

7. Universe Gas & Oil Company, Inc. (Sanga Sanga Gas Field)

Stake since 1990
4.375% stake in mining concession

8. Japan CBM Limited

Stake since 2011: 40.12%
Interest held by Japan CBM Limited: 4.375%

9. Crux Condensate Field

Stake since 2007: 15%
Estimated reserves:
Approx. 60 million bbl condensate

10. Sunrise Gas Field

Stake since 2000: 10%
Estimated reserves: 110 million tons natural gas (LNG equivalent)
Approx. 230 million bbl condensate

11. Evans Shoal Gas Field

Stake since 2000: 10%

12. Ichthys Gas Field

Stake since 2012: 1.2%
Projected output: 8.4 million tons/year (Start of production scheduled for 2016)
Estimated reserves: 260 million tons natural gas (LNG equivalent)
Approx. 530 million bbl condensate

13. EII

Stake since 2008: 30.2%
Four pipelines, two gas-refining facilities, two power plants, two interconnected power lines

14. Hallett 4 Wind Farm Project

Stake since 2009: 39.9%
Power generation capacity: 52 MW (Group stake)

15. Marianas Energy IPP

Stake since 2005: 100%
Power generation capacity: 87 MW (Group stake)

16. Canada Shale Gas Development Project

Stake since 2011: 7.5%
Estimated reserves: Approx. 100 to 160 million tons natural gas (LNG equivalent)

17. Osaka Gas Power America

Stake since 2005: 8 projects
Power generation capacity: 447 MW*
(Group stake)
* Includes 87 MW generation capacity of Marianas Energy IPP

18. Shale Gas and Liquids Development Project in Texas, USA

Stake since 2012: 35%

19. Tenaska Gateway IPP

Stake since 2004: 40%
Power generation capacity: 338 MW (Group stake)

20. Freeport LNG Terminal

Stake since 2008: 10%
Vaporization capacity: 13 million tons/year

21. Solar Power Generation Project in Ontario, Canada

Stake since 2012: 44.95%
Power generation capacity: 45 MW (Group stake)

Artist's rendition of completed facility provided by Recurrent Energy, LLC

International Businesses along the Energy Value Chain

Upstream Businesses

The resource development business conducted as part of upstream business activities not only enables us to gain valuable experience in the field of LNG procurement but also helps raise profits while serving as a natural hedging mechanism against fluctuations in crude oil prices and exchange rates. Accordingly, we will continue to capture interests in promising upstream projects in the future.

Ichthys LNG Project

Osaka Gas Ichthys Development Pty Ltd., a subsidiary of Osaka Gas, has concluded an agreement with a company in the corporate group headed by INPEX Corporation to acquire interests in the Ichthys Project in Australia, and we will participate in this project with an equity holding of 1.2%.
(For more details on this project, please refer to page 33.)

Project Finance Arrangement for the Gorgon Project

Osaka Gas Gorgon Pty. Ltd., a subsidiary of Osaka Gas, has entered into an agreement with Japan Bank for International Cooperation and the Bank of Tokyo-Mitsubishi UFJ, Ltd., for the arrangement of project finance for the sum of US$302 million. The agreement will cover the development costs related to the project that are to be paid by Osaka Gas Gorgon. This is the first time the Company has entered into a project finance agreement on its own for a project in which it holds a minority interest. We believe that receiving this loan in the form of a project finance agreement will help reduce the risks associated with the project. In the future, Osaka Gas will continue to participate in overseas resource development projects and conduct investments geared toward securing a stable supply of LNG while taking steps to mitigate risks.

Shale Gas and Liquids Development Project in Texas, USA

In June 2012, Osaka Gas decided to participate in a shale gas and liquids development project in Texas, USA. and has thus concluded an agreement with Cabot Oil & Gas Corporation of the United States to acquire a 35% stake in the project. This is our second time to participate in an unconventional shale gas development project, with the first being the project in Canada in which the Company commenced participation in June 2011. Starting in July 2012, Cabot and the Company embarked on a venture estimated to take approximately 30 years. Over this period, we will drill several hundred wells and produce natural gas, condensate, and natural gas liquids* to be sold in the United States.

* Natural gas liquids are hydrocarbons produced as natural gas that remain in a liquid state even at normal temperatures and pressures.

Mid- and Downstream Businesses

The Osaka Gas Group is expanding its involvement in various overseas energy projects including LNG terminals, pipelines, and IPP businesses. Our primary goals in this business field are to establish overseas energy businesses in which the Company can leverage the expertise it has accumulated through its domestic operations and to further increase profit stability for the entire Group. Projects currently invested in include the Shuweihat S2 IWPP that started up in October 2011. Going forward, we will utilize the Group's accumulated human resources and expertise in considering the possibility of participation in projects that are judged to have the potential for generating stable profits. In particular, the Company will focus on projects in low-risk countries such as Australia and those in North America and Europe.

Environment and Non-Energy Businesses

The Osaka Gas Group develops its environment and non-energy businesses by strategically selecting and concentrating businesses based on the policy of investing in growth businesses and withdrawing from unprofitable businesses. Our operations in this area are focused on the real estate business, IT business, and material solutions business. These businesses are being expanded by leveraging the Group's technologies and expertise, and have already began to produce results as new growth business pillars.

Solar Power Generation Project in Ontario, Canada

In June 2012, Osaka Gas Co., Ltd., Mitsubishi Corporation, and Sharp Corporation agreed to purchase a large-scale solar power generation project (total of nine sites; total generating capacity: approximately 100 MW) in Ontario, Canada, being developed by Recurrent Energy, LLC, a wholly owned subsidiary of Sharp Corporation. The three companies also agreed to jointly operate this project in the future. This project will begin partial operation at the end of 2012, after which the range of operating facilities will be progressively expanded with full operation scheduled for the end of 2013. This project will sell the electricity produced to the Ontario Power Authority over a 20-year period.

Construction of Three Solar Power Plants in Japan

In June 2012, wholly owned subsidiary Gas and Power Co., Ltd., finalized the decision to construct three large-scale solar power plants in Japan. The plants will be located in Torishima, Konohana Ward, Osaka City; Shoo Town, Katsuta-gun, Okayama Prefecture; and Hirogawa Town, Arida-gun, Wakayama Prefecture, and will have a combined generation capacity of approximately 3.5 MW. All three plants are scheduled for completion by the end of March 2013, and operations will sequentially begin after completion.

Real Estate Business (Urbanex Group)

Business Characteristics and Strengths

In the real estate business field, Urbanex Group develops, leases, and sells office buildings, housing, and other properties by utilizing Osaka Gas Group's existing real estate assets and newly acquired prime assets. We are also engaged in efficient management and maintenance of office buildings, hospitals, commercial facilities, hotels, schools, and other facilities, which includes energy conservation and CO_2 emission reduction inilialives, and conduct related construction on a contracted basis. Use of these services is not limited to Group properties. At the same time, the Urbanex Group operates a research park in Kyoto, as a collaboration base for the private, academic, and public sectors in creating new industries.

Overview of the Fiscal Year under Review and Future Initiatives

In the real estate leasing business, we came into ownership of a total of six new properties including environmentally friendly condominiums developed by the Urbanex Group. For existing properties, we focused on improving occupancy rates, which rose to high levels. In condominium sales, sales of new properties progressed favorably, boosting profits. Going forward, we will continue to expand the real estate business by developing and acquiring quality real estate assets. At the same time, we will pursue synergies with our energy businesses by providing properties that enable customers to experience the benefits of gas. One way in which we will accomplish this is by installing gas appliances such as mist saunas, glass-top gas stoves, and floor heating systems.

IT Business (OGIS-RI Group)

Business Characteristics and Strengths

Having started with system development for its own gas operations, the Group's IT businesses offer a wide range of services to customers in the manufacturing, finance, and distribution fields including design, consulting, development, operation, and maintenance of IT systems.

Overview of the Fiscal Year under Review and Future Initiatives

Recently, we have been stepping up our direct sales efforts. As part of these efforts, we have been developing individual account plans for large-scale customers and forming strategic alliances. At the same time, we are utilizing the technologies developed for use in Osaka Gas' businesses to develop technological solutions for our customers. As one facet of these efforts, in July 2011 an agreement was reached with the Amagasaki City Waterworks Bureau to jointly develop a mapping system for water utilities. The mapping system compiles map databases of gas and water pipe networks [and related facilities]. This system serves as a valuable tool in creating and managing facility plans; designing facilities, creating and managing construction plans, and conducting maintenance. This system will be based on mapping systems for gas suppliers and will be reworked for use by water utilities leveraging Amagasaki City's water system expertise, Osaka Gas' facility management system knowledge, and OGIS-RI's system development capabilities.

In addition, a business alliance was formed between OGIS-RI Co., Ltd. and AWS, Inc., in October 2011. Through this alliance, the management resources of both companies will be mutually leveraged to expand IT service businesses in China, Singapore, and the Philippines.

Material Solutions Business (Osaka Gas Chemicals Group)

Business Characteristics and Strengths

This business domain draws on the coal chemical technology of Osaka Gas accumulated through the production of coal gas, to operate a variety of businesses ranging in application from electronics to the environment. In the fine materials field, the group manufactures and sells fluorine derivatives with excellent optical properties and outstanding heat resistance. These derivatives are used as materials in fabricating LCD films materials and optical lenses for use in mobile phones and other devices. Products manufactured and marketed in the carbon materials field include molded carbon-fiber insulation for use in fusion furnaces that process polysilicon to be used in photovoltaic cells, activated charcoal for various applications, and household environmental products using activated carbon such as water purifier cartridges and air purifying filters. Also produced are preservatives, including a widely recognized brand of wood protective paints.

Overview of the Fiscal Year under Review and Future Initiatives

In the second half of the fiscal year under review, the operating environment in the fine materials and carbon material fields grew increasingly harsh due to intensified competition and sluggish economic conditions. Seeking to achieve sustainable growth in this difficult environment, we are expanding our sales channels in a wide range of fields and developing new applications for our products. Furthermore, we are developing new technologies through the efforts of Frontier Materials Laboratories, established in April 2012. In these ways, we are accelerating initiatives geared toward creating new businesses that will form new profit pillars. Moreover, the Osaka Gas Group will aim to grow as a "Sustainable Value Creator" by developing a material solutions business that utilizes a diverse range of products to respond to customers' various needs.

Service-Related Businesses

Business Characteristics and Strengths

Osaka Gas is involved in a wide array of service-related business fields, including a research and consulting business using scientific methods of human behavior observation to contribute to productivity improvements in the service industry workplace, facilities operation of the COSPA and other sports centers, leasing of cars and various equipment, facilities management, temporary staffing, retirement home operation, and wedding services. These businesses help raise the brand value of the Group and contribute to efficient Group operations.

Overview of the Fiscal Year under Review and Future Initiatives

The Osaka Gas Human Behavior Observation Research Center and L-NET CO., LTD., are leading PR activities aimed at raising the social awareness of businesses in human behavior observation. By improving responsiveness to customers' needs, the Osaka Gas Group companies in the service-related area will continue to develop businesses to hedge the risks of the gas operations while searching for growth opportunities.