GAS BUSINESS

Outline

Applications of gas from the Tokyo Gas Group spans a wide range, from household cooking, heating, and hot water, commercial air conditioning, industrial use, power generation, and other usage. The Tokyo Gas Group has also extended coverage from Tokyo and its adjacent three prefectures (Kanagawa, Chiba, and Saitama) to North Kanto (Ibaraki and Tochigi) by lengthening its pipeline network so as to serve more customers.

Number of customers	Gas sales volume	Net sales
11,536 thousand	**15.7** billion m³	**¥1,040** billion
FY2016	Equivalent to approximately 45% of gas sales volume in Japan in FY2016	FY2016

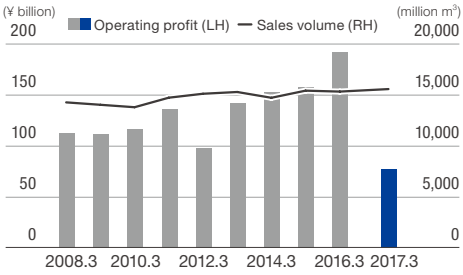
Strengths

- Over 11 million customers as a base and the relationship of trust with them
- Delivery of safety and reliability to customers for many years
- The Kanto Region with its robust production/consumption activities (representing about 40% of Japan's GDP) is now in the service area
- Safety-related know-how and energy solution technology

Risks

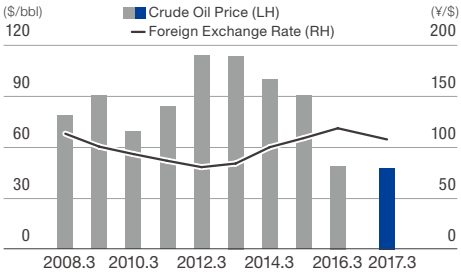
- Potential difficulty in material procurement caused by the impact of country risks at import sources
- Supply issues due to damage to production facilities stemming from a large-scale disaster
- Intensified competition driven by market deregulation; decline in demand caused by changing lifestyle

Sales Volume and Operating Profit



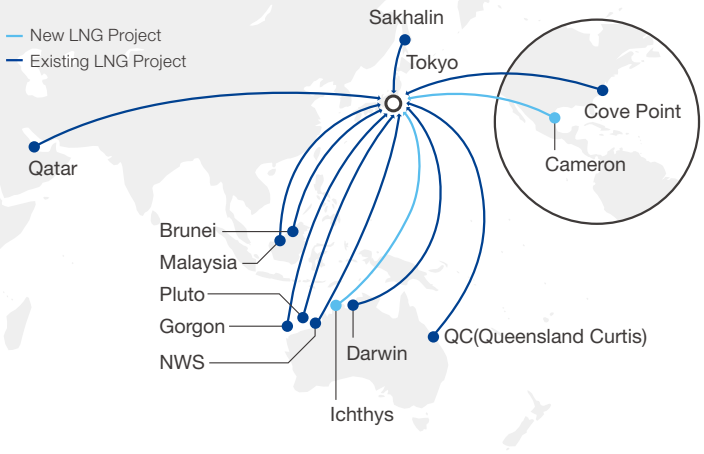
Factors affecting revenues and expenses P.55

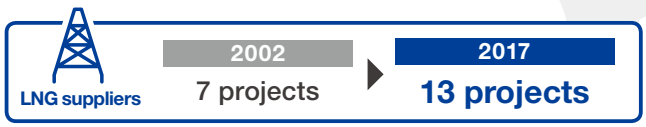
Crude Oil Price and Foreign Exchange Rate



1 Diversify resource suppliers

Tokyo Gas is beginning to receive LNG from the Cove Point LNG Project, our first from the gas-rich shale source in North America. This resulted in increasing the number of LNG suppliers to 13 projects in 6 countries, and making Tokyo Gas one of the foremost purchasers with diversified contracts in Japan. To enhance procurement stability we are considering widening LNG procurement areas from Southeast Asia, Australia, and North America to include Africa.





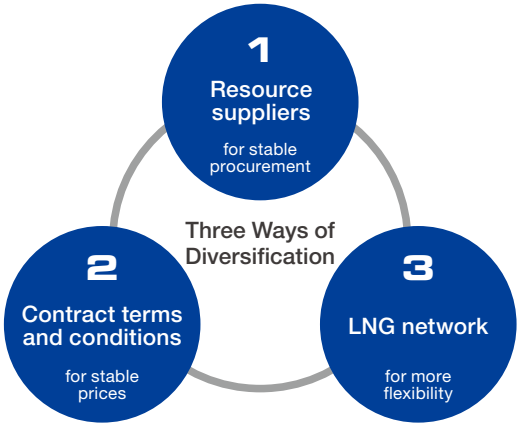
Specific examples

Procurement from the Cove Point shale gas project, achieving three ways of diversification

In fiscal 2017, Tokyo Gas is beginning to receive LNG from the Cove Point LNG Project, our first from the gas-rich shale source in North America. In addition to diversification of our suppliers and total contract terms and conditions through the procurement from Cove Point, we signed a memorandum of understanding on a strategic alliance with Centrica, the UK's leading energy and services company in November 2016, which contributes to diversification of the LNG network.

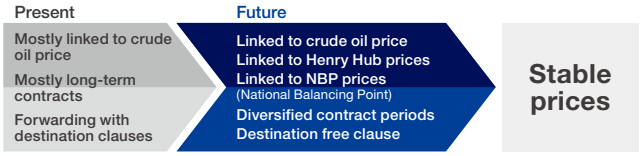
Anticipatory diversification to achieve stable and affordable LNG procurement

Japan heavily relies on imports for natural gas procurements. Prices for imported LNG generally set under a mechanism linked to the price of crude oil. Aiming for stable and affordable LNG procurement with these given conditions in the background, the Tokyo Gas Group has been using an LNG procurement strategy that calls for diversified procurement sources, flexibility in setting contract terms and conditions, and developing its LNG supply network.



Diversify contract terms and conditions

By adding contracts linked to the U.S. natural gas prices and other benchmarks, in addition to conventional crude oil price-linked contracts, we aim to have a better balanced portfolio of contracts and thereby to stabilize procurement costs. We also intend to increase the number of contracts which allow us freedom to determine shipment destinations and other matters to enhance our flexibility.



Diversify our LNG network

By establishing an LNG network that connects the markets in Europe, Asia, and North America, we aim to reduce cost differentials among regions and to position ourselves to flexibly adjust demand and supply.

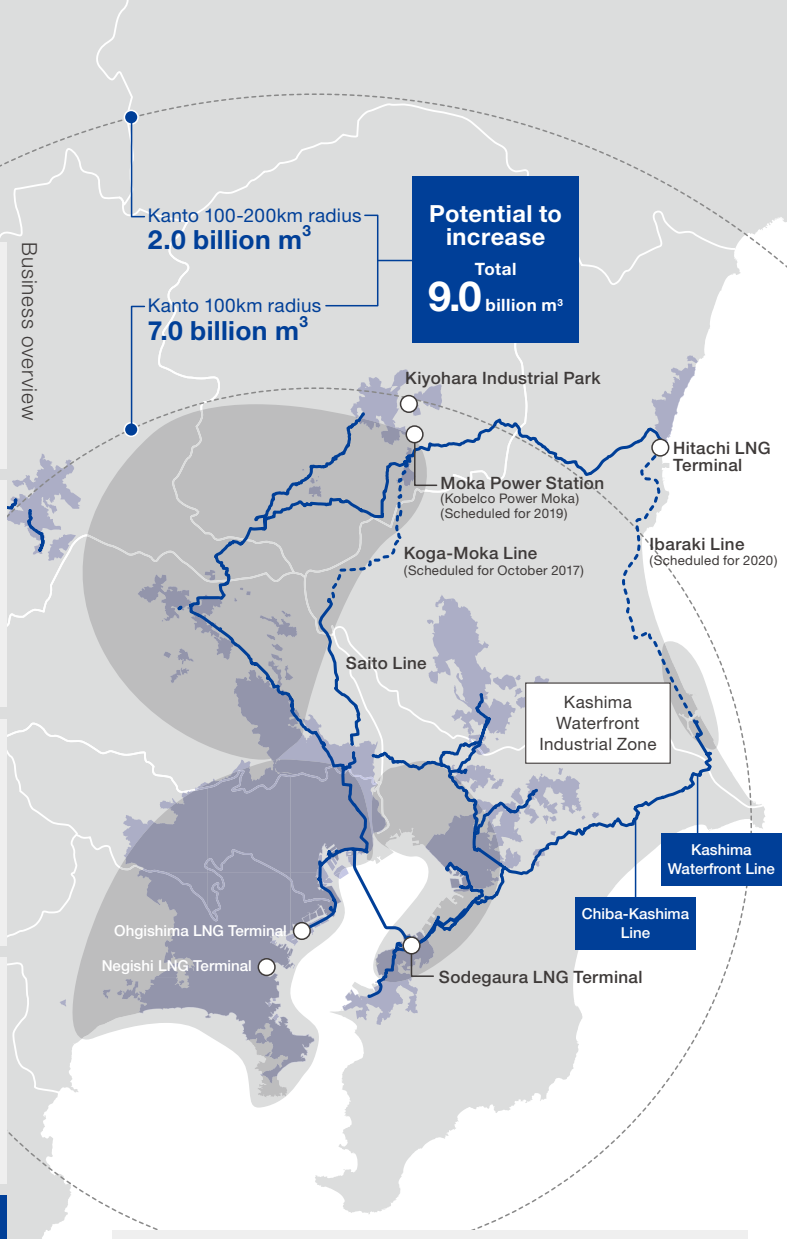
Present Mainly trade between Japan and its export-market countries

Future Network that connects places such as gas fields and power plants across the globe

Procurement from Cove Point

1	Diversify resource suppliers	Being supplied from the LNG project originated from the shale gas source in the U.S.A.
2	Diversify contract terms and conditions	Linked to the U.S. natural gas prices, no restrictions on destinations
3	Diversify our LNG network	LNG that Tokyo Gas procures from the U.S. project will be exchanged with LNG Centrica procures in the Asia Pacific region on a cargo unit basis, toward realizing cost reduction by increasing the efficiency of LNG transport → The tie-up between between Centrica, which is a major LNG buyer on the Atlantic market, and Tokyo Gas, a major LNG business operator in the Pacific market, also has objective of conducting flexible LNG trading bridging both markets

Signed a memorandum of understanding on a strategic alliance with Centrica (UK)



Advantages of natural gas

Benefits of fuel conversion

Eco-friendly; no need for storage; improved operability (no clean-up); labor saving; stable supply

CO_2 emission reduction by fuel conversion

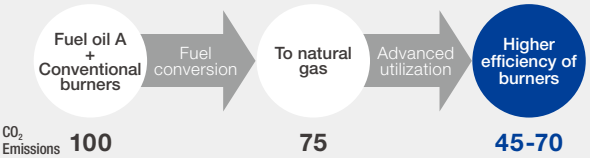
Comparison of CO_2 Emissions (Coal=100)

Natural gas	Oil	Coal
60	80	100

CO_2 emission reduction by use of advanced (high efficiency) facilities

Gas processing facilities designed for high efficiency require less energy for industrial heat sources and emit less CO_2

CO_2 emission reduction by conversion from fuel oil A to natural gas



Examples of advanced utilization measures	Adoption of high efficiency burners; collection of exhaust heat; improved heat insulation and reduced heat loss at openings; improved combustible air ratio

Expansion of Natural Gas Usage through Infrastructure Development

Investment of ¥730 billion in nine years in domestic infrastructure

Under the Challenge 2020 Vision, Tokyo Gas plans to invest around ¥730 billion, equivalent to 35% of its total investment budget, in domestic infrastructure upgrades over the nine-year period from fiscal 2012 to fiscal 2020.
We are expanding and improving the pipeline network to secure stable and reliable supply of our gas to users and to increase use of natural gas. In keeping with our plan to make a high-pressure line network in the form of a loop for enhancement of supply stability and increase in transport capacity, we are preparing to start constructing of the Ibaraki Line, connecting the Ibaraki-Tochigi Line and the Hitachi LNG Terminal with the Chiba-Kashima Line.

Northern Kanto, a region of significant potential demand

Tokyo Gas puts particular strategic emphasis on Northern Kanto which has strong potential demand growth for natural gas owing to the region's large-scale industrial zones. We aim to expand gas sales volume from 15.0 billion m^3 in fiscal 2011 to 22.0 billion m^3 by advancing on two fronts: 1) further enhancing the stability of supply through expanded supply capacity for the development of potential demand and the completion of the pipeline loop; and 2) promoting fuel conversion from heavy oil and kerosene as fuel to natural gas and advanced utilization of natural gas.

Promoting the widespread use and expansion of distributed energy systems

Cogeneration systems supply electricity and heat by using city gas as fuel. In addition to the installation of facilities at the point of demand, cogeneration systems help enhance energy efficiency, reduce the amount of CO_2 emissions, and improve economic efficiency through the conservation of energy by effectively utilizing both electricity and waste heat. Having identified cogeneration system as a strategic product, Tokyo Gas is promoting adoption of **the residential fuel cell system ENE-FARM** and, for commercial and industrial customers, optimal cogeneration systems matching their demand. Since the first unit was launched in 2009, we have added smaller, lower-priced models of this system. As of March 2017, our ENE-FARM installed base had risen to approximately 80,000 units.
In the commercial and industrial area, against the backdrop of increased demand for energy security and business continuity

Gas sales volume in the Kashima area surged to equal 10% of total

As a first step toward capturing potential demand through the development of infrastructure, we completed the Chiba-Kashima Line in March 2012. Gas sales volume increased dramatically in the Kashima Waterfront Industrial Zone to about 10% of our consolidated gas sales volume.

Tap Northern Kanto's potential market for gas by another fuel conversion initiative

The Saito Line (Soka City, Saitama Prefecture–Koga City, Ibaraki Prefecture) started service in October 2015, followed by the start of service of the Hitachi LNG Terminal and the Ibaraki–Tochigi Line (Hitachi City, Ibaraki Prefecture–Moka City, Tochigi Prefecture) in March 2016. By linking with our existing three terminals in Tokyo Bay and our high-pressure trunk line network, our supply infrastructure has been made more stable. Capitalizing on our infrastructure building in Northern Kanto, Kobelco Power Moka (an affiliate of Kobe Steel) has decided to construct a gas-fueled thermal power plant in Moka City, Tochigi Prefecture near our facility. In addition to the projection of an increased gas sales volume by supplying gas to this power plant, we anticipate that it will enable us to increase our business. In order to complete our infrastructure base in Northern Kanto, we have decided to construct an Ibaraki Line between Hitachi City and Kamisu City. This will enable us to develop further demand in the Kashima area and increase use of natural gas in the Kanto Region.

Wider Energy Supply Business in Northern Kanto

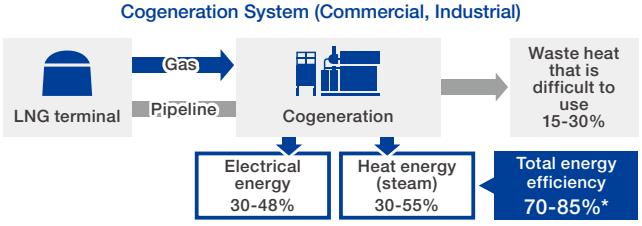
Area-wide Energy supply to Kiyohara Industrial Park

We began construction of an energy center, mainly consisting of a 30MW-class cogeneration system, to supply electricity and heat to multiple offices (three companies and seven offices) in the Kiyohara Industrial Park in Utsunomiya City, Tochigi Prefecture in October 2016. The Tokyo Gas Group, to achieve maximum efficiency in serving these customers, will monitor the fluctuating load of each office and engage in optimally balanced operation to supply energy. This will be one of the largest area-wide energy supply undertakings in an inland industrial park in Japan. We are thus promoting widespread use and expansion of distributed energy systems and tapping industrial demand in Northern Kanto.

Provide energy solutions centered on natural gas to promote diversified use of natural gas and to advance the LNG value chain.

plans, we have been promoting sales of commercial and industrial cogeneration systems, and the scale of our cumulative installed base of these systems has reached 2,020 MW. Aiming at widespread adoption, we are increasing the product line-up by offering an easy-to-install package type and a model with reduced low maintenance costs.

Cogeneration System (Commercial, Industrial)



*Energy efficiency stated above is calculated based on certain assumptions made by Tokyo Gas.

Installation Plans for ENE-FARM (Residential) and Cogeneration System (Commercial, Industrial)