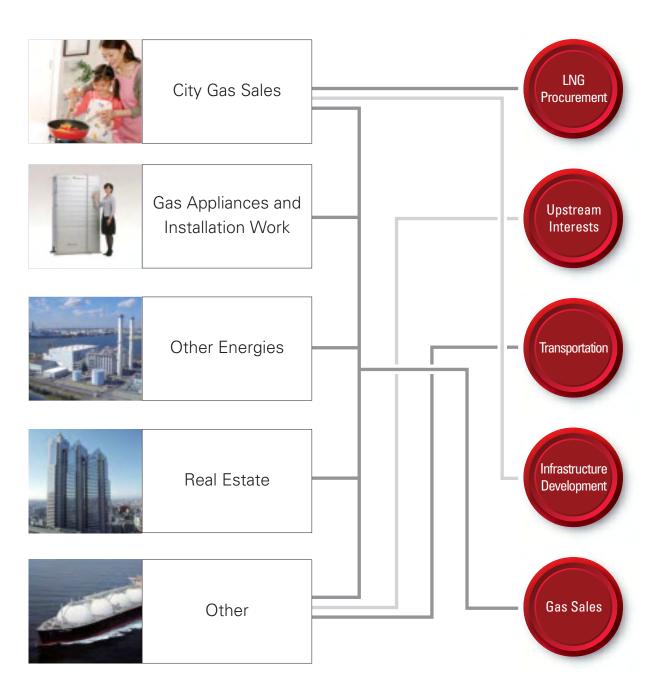
# LNG Value Chain of Tokyo Gas

Tokyo Gas directly serves its 10.74 million customers through its integrated "LNG value chain," which covers everything from gas field development and raw materials procurement to transportation via LNG tankers, city gas production, and gas delivery via pipelines. By pursuing new levels of value for each link in the value chain, we strive to maximize both social value and economic value.

# Segment and LNG Value Chain





### Position in the LNG value chain

Flexible, competitive resource procurement in line with demand

Principal operating company Tokyo Gas Co., Ltd.

City Gas Sales

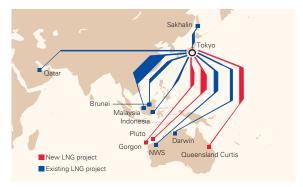
### **Targeting Diversified Procurement**

Centered on supply sources located in regions that are politically stable, Tokyo Gas has concluded long-term LNG contracts for 10 projects in six countries and imports more than 10.0 million tons of LNG a year.

Amid stiff worldwide competition for procurement, LNG, the main resource for city gas, is subject to major price fluctuations because it is linked to crude oil prices. Following the Great East Japan Earthquake, moreover, LNG-fired thermal power generation is receiving growing attention. Under these circumstances, we place top priority on stable, long-term supply source procurement, flexible responses to changing demand, and the ability to procure resources at low prices.

In addition to geographic diversification of procurement sources, we are broadening the scope of procurement options by complementing conventional natural gas with the procurement of unconventional forms of natural gas. In these ways, we are targeting reliable, flexible responses to demand, which is expected to grow in the future. In March 2011, we

Tokyo Gas Long-Term LNG Contracts



Tokyo Gas LNG Imports by Country of Origin

Thousand tons Years ended March 31							
Country	2009	2010	2011				
Malaysia	4,482	4,274	4,479	(41.9%)			
Australia	2,847	2,416	2,297	(21.5%)			
Brunei	1,257	1,166	1,155	(10.8%)			
Indonesia	742	730	843	(7.9%)			
Russia	_	505	983	(9.2%)			
Qatar	631	297	358	(3.3%)			
Alaska	176	141	139	(1.3%)			
Others	1,027	523	440	(4.1%)			
Total	11,162	10,052	10,692	(100.0%)			

signed an agreement covering coal-bed methane (CBM), an unconventional form of natural gas located in coal seams in the Surat Basin of Queensland, Australia. Under the agreement, CBM will be liquefied on Curtis Island and purchased by Tokyo Gas as LNG.



### Position in the LNG value chain

Competitive resource procurement through the acquisition of upstream interests

### Principal operating companies

TOKYO GAS AUSTRALIA PTY LTD, Tokyo Gas Darwin LNG Pty Ltd Segment Other

# Outline of Project Participation

Project	Annual contracted quantity (Thousand tons)	Inception of contract	Duration	Contract type	Project participation (%)
Darwin	1,000	2006	17 years (-2022)	FOB	3.07
Pluto	1,500– 1,750	2011	15 years	Ex-Ship, FOB	5.0
Gorgon	1,100	(2014)	25 years	FOB	1.0
Queensland Curtis LNG	1,200	(2015)	20 years	Ex-Ship	1.25 (Upstream) 2.5 (Midstream)

# **Acquiring Interests over Broad Geographic Areas**

With respect to upstream interests, the Company participates in projects where exploration has ended and there is a high potential for going forward, to the extent that it can limit the candidate projects for the Company's LNG procurement operations and otherwise minimize risk. We have also adopted internal rate of return (IRR) as a minimum investment benchmark, and we receive dividends from the Darwin Project.

As of March 31, 2011, Tokyo Gas held interests of 1–5% in the Darwin Project, Pluto, and Gorgon in Australia, and had concluded long-term LNG procurement contracts with all of these projects. In unconventional LNG, in May 2011, we decided to participate in the Cordova Embayment Project in Canada, thus complementing our involvement in the Surat Basin project in Queensland, Australia. In acquiring upstream interests, we emphasize promising projects across broad geographic areas while paying attention to transportation costs.



Position in the LNG value chain
Decreasing cost
by increasing FOB
Principal operating company
Tokyo LNG Tanker Co., Ltd.
Segment
Other

# **Expanding Our Business to Include Transport of LNG to Other Companies**

The Tokyo Gas Group operates one of the largest fleets among domestic electric power and gas companies. Our own fleet now has eight LNG tankers, including one scheduled for commissioning in August 2011.

Tokyo Gas possesses the largest-class shipping fleet in Japan. In addition to transporting LNG under long-term contracts, we will leverage this fleet to target procurement based on short- and medium-term agreements, as well as achieve further reductions in LNG import costs and flexible resource procurement. Moreover, we will seek to expand our business to include transport of LNG to third parties and the leasing of vessels to other companies.



LNG Carrier with Onboard Regasification Equipment

# **Equity Stake in LNG Carrier with Onboard Regasification Equipment**

Consolidated subsidiary Tokyo LNG Tanker Co., Ltd. has acquired a 1.5% equity stake in a joint venture related to an LNG carrier owned by Mitsui O.S.K. Lines, Ltd. with onboard gasification equipment. Here, our aim is to build a flexible LNG transportation system. LNG is vaporized on board, and the natural gas is then sent via pipeline laid on the seabed. This represents a new LNG procurement technology that does not require conventional, land-based LNG terminals.



Position in the LNG value chain Ensuring both stable supply and safety

Principal operating company Tokyo Gas Co., Ltd. Segment City Gas Sales

# Hitachi Project Fast-Tracked due to Growing Demand

The Company's LNG terminals are among the largest in the world. We continue to invest in our facilities in order to enhance our ability to address growth in demand for natural gas and further stabilize supply. In fiscal 2011, we plan to start supplying gas via a pipeline linking Chiba and Kashima. In light of increasing demand for city gas since 2010, meanwhile, we will fast-track the construction of our fourth LNG terminal, the Hitachi LNG Terminal, and a high-pressure gas pipeline, the Ibaraki-Tochigi Line, linking the terminal and Moka City, Tochigi Prefecture. Both are planned to start operation in fiscal 2015—two years ahead of schedule.

### **Chuo Trunk Line Completed**

In May 2010, Tokyo Gas completed the Chuo Trunk Line, which runs north-south through the center of the circular trunk line looping the Tokyo metropolitan area. The new line, running 32.9 kilometers from Edogawa-ku in Tokyo to Kawaguchi City in Saitama Prefecture, links the Company's city gas production facilities in Tokyo Bay with customers in the northern Kanto area. We now have 818 kilometers of high-pressure gas pipelines, centering on the Tokyo metropolitan area. Seeking further growth and proliferation of natural gas in the future, we will actively expand, upgrade, and maintain our pipeline network with top priority on safety.

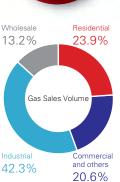


Industrial

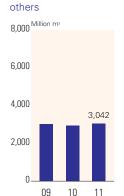


Gas Sales Volume by Sector (Years ended March 31)

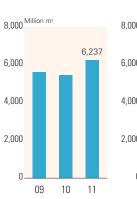
Residential







Commercial and





Wholesale

### **Residential Sector**

#### Position in the LNG value chain

Maintaining and expanding the number of customers through community-based marketing

Principal operating companies

LIFEVAL companies

#### Segments

City Gas Sales, Gas Appliances and Installation Work

In the residential sector, the average sales volume per customer has shown a continuous decline. This is due to structural factors, such as a decreasing population, an aging population and the low number of childbirths, as well as the proliferation of energy-saving appliances and increases in multiple dwelling units with exceptional air-tightness. Spearheaded by Tokyo Gas LIFEVAL community-based marketing systems, we are strengthening relationships with customers by proposing lifestyle values based on gas. At the same time, we will seek to generate new demand related to both new houses and renovations while establishing a market for our "ENE-FARM" residential fuel cells.

## New "ENE-FARM" Model Unveiled

In April 2011, we introduced a new model in the "ENE-FARM" series of residential fuel cells. "ENE-FARM" is a fuel cell cogeneration system that generates electricity from a chemical reaction between hydrogen, which is separated from city gas, and atmospheric oxygen. The waste heat from this process is used for hot water and indoor heating. Since electricity is generated in the home, there is no transmission loss, and heat thus generated can be used without being wasted. Accordingly, it is a very environmentally friendly system.

In addition to improvements in electricity generation efficiency, the new model features lower prices thanks to a simplified power generation system and a more compact design of the core components. In fiscal 2011, we hope to sell 5,000 "ENE-FARM" units (having sold 2,400 in fiscal 2010).

# Commercial and Others, Industrial, and Wholesale Sectors

Position in the LNG value chair

Proposing tailor-made solutions that match diversified customer needs

Principal operating companies

Tokyo Gas Co., Ltd., ENERGY ADVANCE Co., Ltd.

Segment

City Gas Sales, Other Energies

In response to the increasingly diversified and sophisticated needs of clients in the commercial and others, and industrial sectors, Tokyo Gas is focusing on establishing an integrated energy business. Here, we coordinate a comprehensive range of services covering various energy sources, including gas, electric power, and heat. We also propose tailor-made, optimal combinations of products and services on a one-stop basis.

Amid growing demand for reduced electricity consumption, we are accelerating the introduction of natural gas cogeneration, a dispersed energy system that uses waste heat, as well as cooling systems. In addition, we will continue encouraging clients to switch from other fuels to natural gas, which has lower environmental impact. Furthermore, we are aggressively working to capture demand, including through wholesale operations targeting peripheral gas suppliers. Here, our focus is on the region extending for a 200-kilometer radius around Tokyo, where latent demand is expanding.

### **Solar Air Conditioning System Launched**

The Tokyo Gas Group has commenced sales of its Solar Cooling System, which uses heat from the sun. The system uses solar heat as the first priority, and also deploys gas as a highly efficient backup during rainy days and other times when heat supply is inadequate. Therefore, it is environmentally friendly while offering comfort and convenience. We will promote the system's use in office buildings, schools, hospitals, factories, and other facilities.