

FY2003
Business Plan

April 2003

Tokyo Gas Co., Ltd.

Introduction

Revisions to the Gas Utility Industry Law, which continue substantial system deregulation/reforms for gas utilities, have now cleared the government council deliberation stage. Legislation is likely to come into force in spring 2004, finally bringing full-scale mega-competition to the energy markets. Our job is to meet the challenges of this changing situation and win out over the competition. Frontier 2007, Tokyo Gas' mid-term management plan formulated for this purpose, was announced in October 2002 and covers FY 2003 to FY 2007. We start FY 2003 with a keen awareness that our performance in this first year of the Frontier 2007 plan will be the foundation that the whole five years will be built upon. With that awareness, Tokyo Gas will do its very best to achieve the targets that we have set for ourselves.

I. Outline of the Business Plan

1. Diffusion plan

The number of new gas service connections in FY 2003 is expected to remain at 270,000, the level achieved in FY 2002 (excluding the newly acquired Konosu City service area). This is due to the continuing completion of large residential projects in the Tokyo metropolitan area. From FY 2004 onwards, there is likely to be a drop off, after the rush of housing starts produced by the extension of the preferential tax treatment for housing loans and the fall in land prices starts to abate. This, plus the effects of prolonged economic problems, is likely to lead to a drop in the base level of housing starts in the metropolitan area, resulting in a reduction in the number of new connections. In Frontier 2007, the number of customers is projected to grow at a five-year average of 1.5%

							(Thousands)
	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Number of new connections	289.8 <small>Note)</small>	272.3	263.3	254.1	253.7	251.2	-2.8%
Number of customers	9,230.6	9,396.6	9,550.5	9,692.4	9,831.1	9,964.5	1.5%

* Number of customers = number of gas meters fitted

Note: 11,700 gas service connections transferred from the gas business in Konosu City are included in the 289,800 new gas service connections for FY2002, so the number of genuine new gas service connections is 278,100.

2. Gas sales volume plans

A 4.0% five-year average growth rate (from FY2002 outlook to FY2007) is projected for gas sales volume, with sales of 12.5 billion m³ expected in FY2007.

<Overall sales volume>

							(Unit: 1 million m ³ , 46.04655MJ/m ³)
	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Total sales volume	10,258	10,713	11,271	11,644	12,190	12,486	4.0%

* FY2002 outlook is after standardization (values adjusted for temperature etc., based on the average year), the same applies throughout this document.

(1) Residential

The number of residential accounts is increasing with the growth in new gas service connections. However, the decrease in the sales volume per account is expected to continue despite efforts to promote floor heating systems. This is due to the decline in the number of people per household, the impact of the growth in convenience foods, improvements in the efficiency of appliances, and better draught exclusion and insulation in housing.

<Residential demand and sales volume per account>

(Unit: 1 million m³/account/year, 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Residential sales volume	3,196	3,250	3,299	3,341	3,379	3,417	1.3%
Sales volume per account	407	404	402	401	400	399	-0.4%

<Cumulative number of floor heating systems installed>

(Thousand households)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Cumulative number	470	557	653	749	843	936	14.8%
Rate of diffusion	5.0%	6.0%	7.0%	8.0%	9.0%	10.0%	-

* The rate of diffusion was calculated by dividing the cumulative number of floor heating systems installed by the number of residential customers as of the end of the year in the company's service area.

(2) Industrial

Large-scale demand, primarily for power generation, is growing. It is set to outstrip residential demand from FY2002, becoming the biggest volume by category of use.

(Unit: 1 million m³, 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Industrial sales volume	3,469	3,657	4,041	4,247	4,569	4,720	6.4%
(Of which are of large-scale sales volume)	3,104	3,331	3,632	3,815	4,117	4,248	6.5%

(3) Commercial, Others

Air conditioning demand is increasing due to the growth in popularity of gas air conditioners. In addition, large-scale sales volume will rise in FY2002 due to the commencement of sales to a new spin-off energy service company.

(Unit: 1 million m³, 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Commercial sales volume	2,503	2,704	2,769	2,838	2,960	3,030	3.9%
(Of which are of large-scale sales volume)	774	838	867	883	940	958	4.4%

(4) Wholesales supply

Wholesale supply to other gas companies is rising due to increased demand from wholesale purchasers, increase of new wholesale company.

(Unit: 1 million m³ , 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Wholesale supply sales volume	1,090	1,102	1,162	1,218	1,282	1,319	3.9%

(5) Power generation

[Power generation (cogeneration/power generation only) sales volume] (Included in figures for (2), (3) above)

Sales volume is increasing due to the diffusion of cogeneration and supply to new power generation companies, with the proportion of overall sales volume also rising.

(Unit: 1 million m³ , 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Commercial use cogeneration	246	256	244	261	274	287	3.1%
Industrial use cogeneration	998	1,033	1,167	1,312	1,383	1,426	7.4%
Power Generation only (business use)	1,053	1,153	1,285	1,295	1,377	1,395	5.8%
Power Generation only (private use)	178	155	165	155	165	155	-2.7%
Total	2,475	2,597	2,861	3,023	3,199	3,263	5.7%

* Sales to the Roppongi area in the energy supply sector are included in power generation only (business use).

<Power generation as proportion of overall sales volume>

	FY02 outlook	FY03	FY04	FY05	FY06	FY07
Proportion represented by power generation (%)	24.1%	24.2%	25.4%	26.0%	26.2%	26.1%

3. Production/purchasing volume and feedstock utilization plans

Tokyo Gas is working to secure stable feedstock over the long term. In addition, we are also further reducing procurement costs by increasing short term transactions, thereby boosting our flexibility.

<Gas production/purchasing volume>

(Unit: 1 million m³, 46.04655MJ/m³)

		FY02 outlook	FY03	FY04	FY05	FY06	FY07
Natural gas	LNG	9,647	9,790	10,321	10,488	11,006	11,365
	Domestic natural gas	182	218	254	266	280	291
Petroleum	LPG	447	504	526	747	762	689
	Off gas	206	210	210	210	210	210
Total		10,482	10,722	11,311	11,711	12,258	12,555

* Production/purchasing volume does not include receipts from other gas companies

<Feedstock utilization volume>

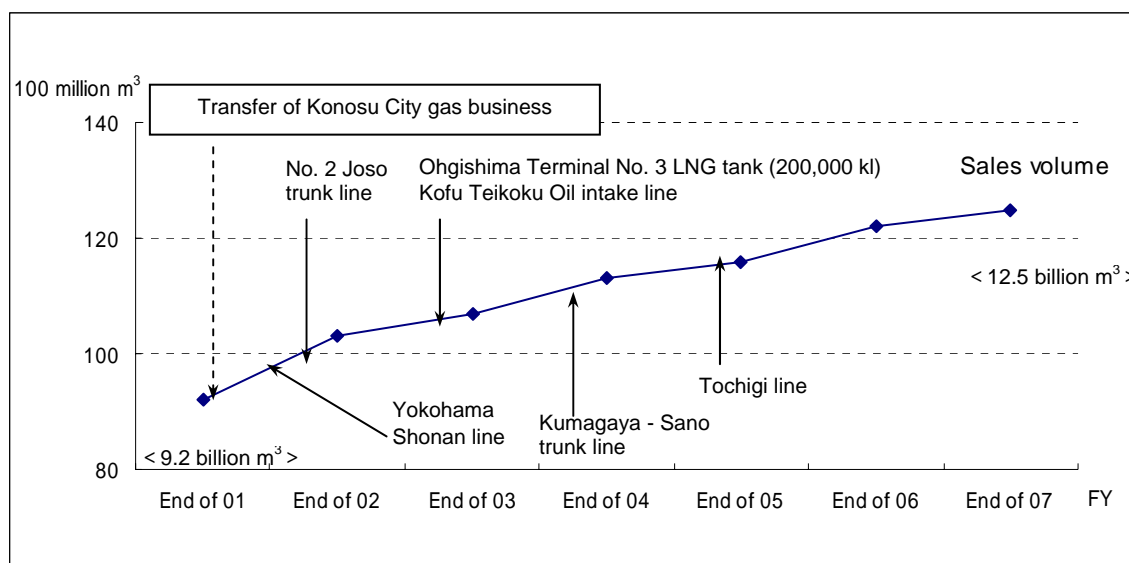
(Unit: thousand tons)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07
LNG	7,738	7,919	8,344	8,526	8,999	9,321
LPG	390	443	471	684	710	653

4. Major facility plans

We are boosting gas production at facilities to respond appropriately to the demand outlook, while at the same time developing related production and supply infrastructure. As well as striving for stable supply, we are making efforts to improve efficiency. During FY 2002, specific strategies were the completion of the Yokohama-Shonan line and the Second Joso trunk line. In FY 2003, Tokyo Gas will start to receive domestic natural gas from Teikoku Oil in the Kofu area. After that, the supply of city gas from the company's plants to the Utsunomiya area will commence in FY 2004 upon the completion of the Kumagaya-Sano trunk line. In FY 2005, this will be followed by the completion of the Tochigi line, enabling us to handle growing demand in the northern Kanto region. In the longer term, FY 2009 will see the completion of a central trunk line (from Edogawa Ward to Soka City), planned for the dual purposes of achieving supply security and meeting increasing demand in the whole Tokyo Gas service area.

<Demand outlook and facility formation plans>



<Major production facility plans>

Date of scheduled commencement	Production facility	Location
Oct. 2003	LNG vaporization facilities (for emergencies)	Kofu Intake Terminal
Oct. 2003	No. 3 LNG underground tank (200,000 kl), LPG vaporization facilities	Ohgishima Terminal

<Major pipeline plans>

(Unit: km)

Date of scheduled commencement	Name of route	Section	Inner diameter (mm)	Pressure (MPa)	Total length (km)
Oct. 2004	1. Kumagaya-Sano trunk line	Kumagaya ~ Sano	400	7.00	39.1
				1.77	2.9
Mar. 2006	2. Tochigi line	Sano ~ Maoka	400	7.00	54.0
Oct.2009	3. Central trunk line	Edogawa-ward ~ Souka-city	600	7.00	23.0
Oct. 2003	1) Teikoku intake pipeline	No.1 line	300	0.99	2.8
		No.2 line	300	0.99	0.7
Mar. 2006	2) Tochigi line (medium pressure)	Moka ~ Utsunomiya	500	0.99	16.0

* 1 MPa (megapascal) = 10.1972 kg/cm³

<Total length of pipeline infrastructure at end of fiscal year>

(Unit: km)

FY02 outlook	FY03	FY04	FY05	FY06	FY07
49,411	50,079	50,670	51,281	51,834	52,392

5. Outline of capital expenditure plans

We have made plans for investments totaling ¥415.1 billion (after compression for income from construction beneficiary burdens) in the five year period from FY2003 to FY2007. The following were the major considerations in this supply planning period:

- (1) In the area of production facilities, we intend to fully ensure a stable production system in step with the increase in demand by continuing to expand LNG-related facilities, such as the construction of various facilities at the Ohgishima Terminal, which went into operation in October 1998.
- (2) In the area of supply facilities, we will make efforts to establish a stable supply system and assure safety through investments in construction of additional pipelines to meet new demand, the formation of a major pipeline network, the systematic replacement of existing pipelines, and facilities for disaster prevention.
- (3) In the area of business facilities, we are planning to further reinforce the sales system through additional investment in augmentation of customer services, promotion of technology development and information technology as well as implementing land improvement strategies.
- (4) In the area of incidental services, we plan significant reduction through the establishment and transfer of operations to a new energy service company.

<Table of facility investment plans>

(Unit: ¥ billion)

		FY02 outlook	FY03	FY04	FY05	FY06	FY07	FY03~07 Total
Gas business facilities	LNG-related facilities	6.0	3.7	1.6	1.1	0	0.7	7.1
	Others	1.9	1.8	2.9	3.9	5.1	4.2	17.9
	Production facilities	7.9	5.5	4.5	5.0	5.1	4.9	25.0
	Trunk line investment	9.4	8.3	7.7	5.3	4.1	2.2	27.6
	Others	63.7	61.9	57.5	58.4	54.2	54.0	286.0
	Supply facilities	73.1	70.2	65.2	63.7	58.3	56.2	313.6
	Business facilities	14.8	19.1	18.1	12.9	12.8	12.0	74.9
Subtotal		95.8	94.8	87.8	81.6	76.2	73.1	413.5
Associated business facilities		1.1	0.7	0.3	0.3	0.2	0.1	1.6
Total after compression for income from construction beneficiary burdens		96.9	95.5	88.1	81.9	76.4	73.2	415.1

LNG-related facilities	Ohgishima terminal (Phase II cost of ¥ 66.9 billion in total, of which ¥ 3.8 billion is over five-year period in question) Third underground 200,000 kl LNG tank (Completion in FY2003: total cost ¥ 24.2 billion, of which ¥ 1.9 billion is over five-year period in question)
Trunk line investment	Kumagaya-Sano trunk line (Completion in FY2004: total cost ¥ 15.4 billion, of which ¥ 2.9 billion is over five-year period in question) Tochigi line (Completion in FY2005: total cost ¥ 16.9 billion, of which ¥ 12.8 billion is over five-year period in question): including medium pressure lines Central line(Completion in FY2009: total cost ¥ 16.0 billion, of which ¥ 13.5 billion is over five-year period in question)
Business facilities	Technology development, information technology, sales office improvements, etc.

II. Major numerical projections

(1) Diffusion plan

(Thousands)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Comments
Number of new gas service connections	Note) 289.8	272.3	263.3	254.1	253.7	251.2	(Five-year total 1,294.6)
Number of customers	(2.1%) 9,230.6	(1.8%) 9,396.6	(1.6%) 9,550.5	(1.5%) 9,692.4	(1.4%) 9,831.1	(1.4%) 9,964.5	(Year-on-year rate of growth)
Net increase	186.4	166.0	153.9	141.9	138.7	133.4	Five-year net increase 733.9
Diffusion rate (%)	89.5	90.0	90.5	91.1	91.7	92.3	

Note: 11,700 gas service connections transferred from the gas business in Konosu City are included in the 289,800 new gas service connections for FY2002, so the number of genuine new gas service connections is 278,100.

(2) Gas demand outlook

(Unit: 1 million m³, 46.04655MJ/m³)

		FY02 Outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Sales volume	Residential	(407) 3,196	(404) 3,250	(402) 3,299	(401) 3,341	(400) 3,379	(399) 3,417	(-0.4%) 1.3%
	Industrial	3,469	3,657	4,041	4,247	4,569	4,720	6.4 %
	Commercial	2,503	2,704	2,769	2,838	2,690	3,030	3.9%
	Subtotal	5,972	6,361	6,810	7,085	7,529	7,750	5.4%
	Total	9,168	9,611	10,109	10,426	10,908	11,167	4.0%
Wholesale supply		1,090	1,102	1,162	1,218	1,282	1,319	3.9%
Grand total		10,258	10,713	11,271	11,644	12,190	12,486	4.0%
(Of which are for power generation)		2,475	2,597	2,861	3,023	3,199	3,263	5.7%
Excluding power generation		7,783	8,116	8,410	8,621	8,991	9,223	3.5%

* FY2002 outlook is after standardization (values adjusted for temperature etc., based on the average year).
Figures in parentheses indicate sales volume per household (m³/household/year).

<Reference>

(Unit: 1 million m³, 46.04655MJ/m³)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Large-volume supply	3,878	4,169	4,499	4,698	5,057	5,206	6.1%

* FY2002 outlook is after standardization (values adjusted for temperature, etc., based on the average year), the same applies in the tables below.

(3) Installed stock for each system type in the air conditioning sector

(Unit: thousand kW)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Absorption type	2,681	2,797	2,905	3,007	3,017	3,193	3.6%
GHP	708	786	857	925	992	1,049	8.2%
Total	3,389	3,583	3,762	3,932	4,099	4,242	4.6%

* Installed stock is a conversion of the base cooling facility capacity managed at the company to COP 3.5 electric air conditioners

(4) Installed stock of power generation facilities

(Unit: thousand kW)

	FY02 outlook	FY03	FY04	FY05	FY06	FY07	Average annual growth rate
Consumer cogeneration	246	271	291	308	321	334	6.3%
Industrial cogeneration	650	687	792	904	969	1,016	9.3%
Generation of power only (business use)	1,434	2,065	2,065	2,305	2,305	2,305	10.0%
Generation of power only (private use)	187	187	187	287	287	287	8.9%
Total	2,517	3,210	3,335	3,804	3,882	3,942	9.4%

(5) FY2003 facility investment plans

(Unit: ¥ 1 million)

Item		Amount of investment	Percentage of total	Comments	
Production facilities	New LNG-related facilities	3,741	3.9%	• Ohgishima terminal, Phase II construction Includes construction of the third 200,000 kl underground tank	
	Others	1,769	1.9%	• Improvement and replacement of existing facilities	
	Total	5,510	5.8%		
Supply facilities	Mains and laterals	Demand development	27,869	29.2%	• Mains and laterals to meet demand
		Stable supply	13,836	14.5%	• 76.2 km high pressure transmission trunk lines, 18.2 km Includes : Kumagaya - Sano trunk line Tochigi line (including medium pressure lines) Chuo trunk line Improvement of supply pressure, etc.
		Pipe maintenance	7,818	8.2%	• 119.3 km systematic replacement of superannuated pipes
		Other construction, etc.	4,201	4.4%	• 123.5 km concomitant construction such as road construction
		Subtotal	53,724	56.2%	• 936.7 km
	Service pipes and gas meters	15,004	15.7%		
	Others	1,447	1.5%	• Disaster prevention facilities and other safety equipment	
Total	70,175	73.5%			
Business facilities		19,136	20.0%	• Technology development, introduction of information technology and repair of sales offices	
Gas utility facility total (after compression for income from construction beneficiary burdens)		94,821	99.3%		
Associated business facilities		703	0.7%	• on-site heat supply etc.	
Total (after compression for income from construction beneficiary burdens)		95,524	100.0%	• Income from construction beneficiary burdens	

* Figures for length in Comments indicate total length to be constructed in FY2003.