

Corporate Profile

Osaka Gas Co., Ltd.

August 2004

Osaka Gas: A Century of Experience

1. Osaka Gas in Brief
2. Gas Business
3. Power Business

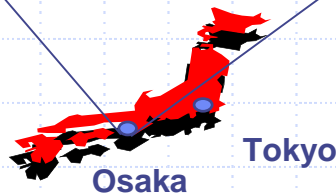
Key Facts

- Nearly a century of experience
- Started business operations in 1905, with majority of capital from USA
- Currently serving 6.6 million natural gas customers
- 6.4 million tons of LNG purchased, or over 5% of traded volume in the world
- 120 affiliated companies
- 16,000 employees (Osaka Gas + consolidated subsidiaries)
- Developing power business as 2nd core business

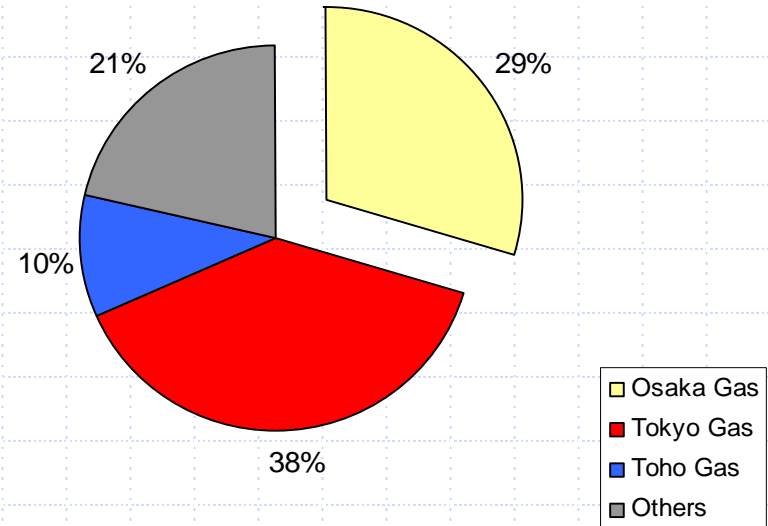
2nd Largest Natural Gas Supplier in Japan

- 29% domestic market share in gas sales volume
- Supply natural gas to 2nd largest economic area in Japan

Natural gas service area



Domestic market share



DATA: Japan Gas Association (FY2003)

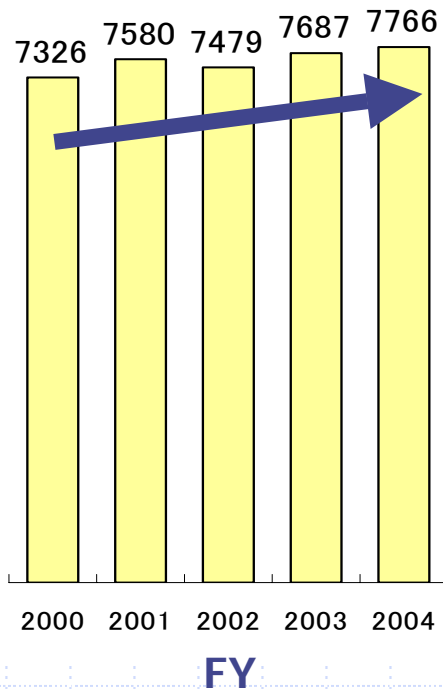
Key Financial Data

- Revenue \$ 8.6 billion (FY March 2004)
- Net Income \$ 427 million (FY March 2004)
- Market Capitalization \$ 6.7 billion (November 2004)
- Credit Ratings S&P: AA-
Moody's: Aa2

(\$1 ≙ ¥110)

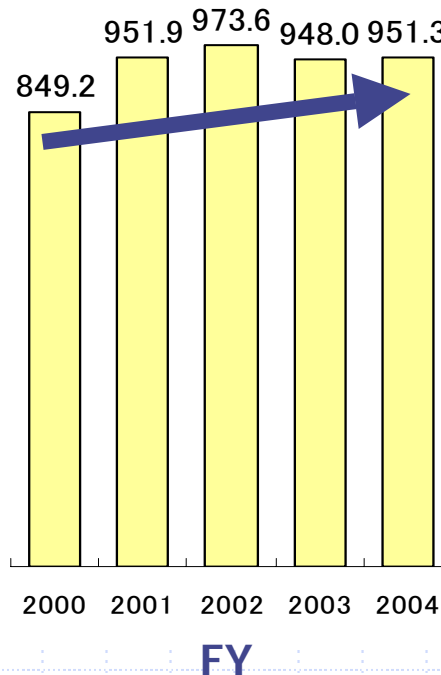
Operating Results

Gas Sales by Volume
(Millions of m³)



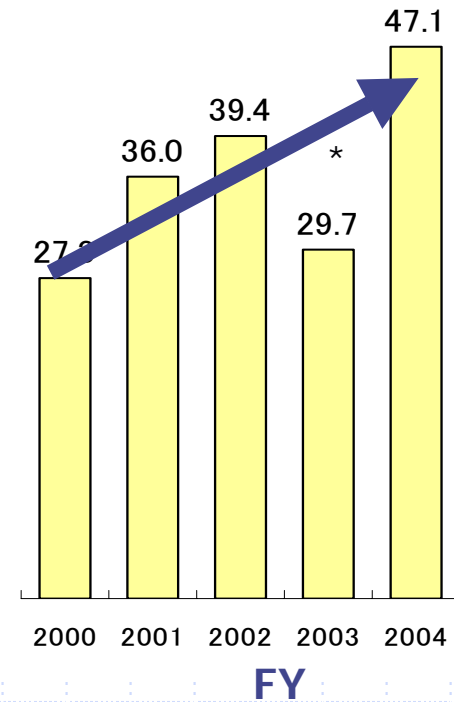
(1m³ ≒ 35.3 cf)

Operating Revenues
(Billions of yen)



(\$1 ≒ ¥110)

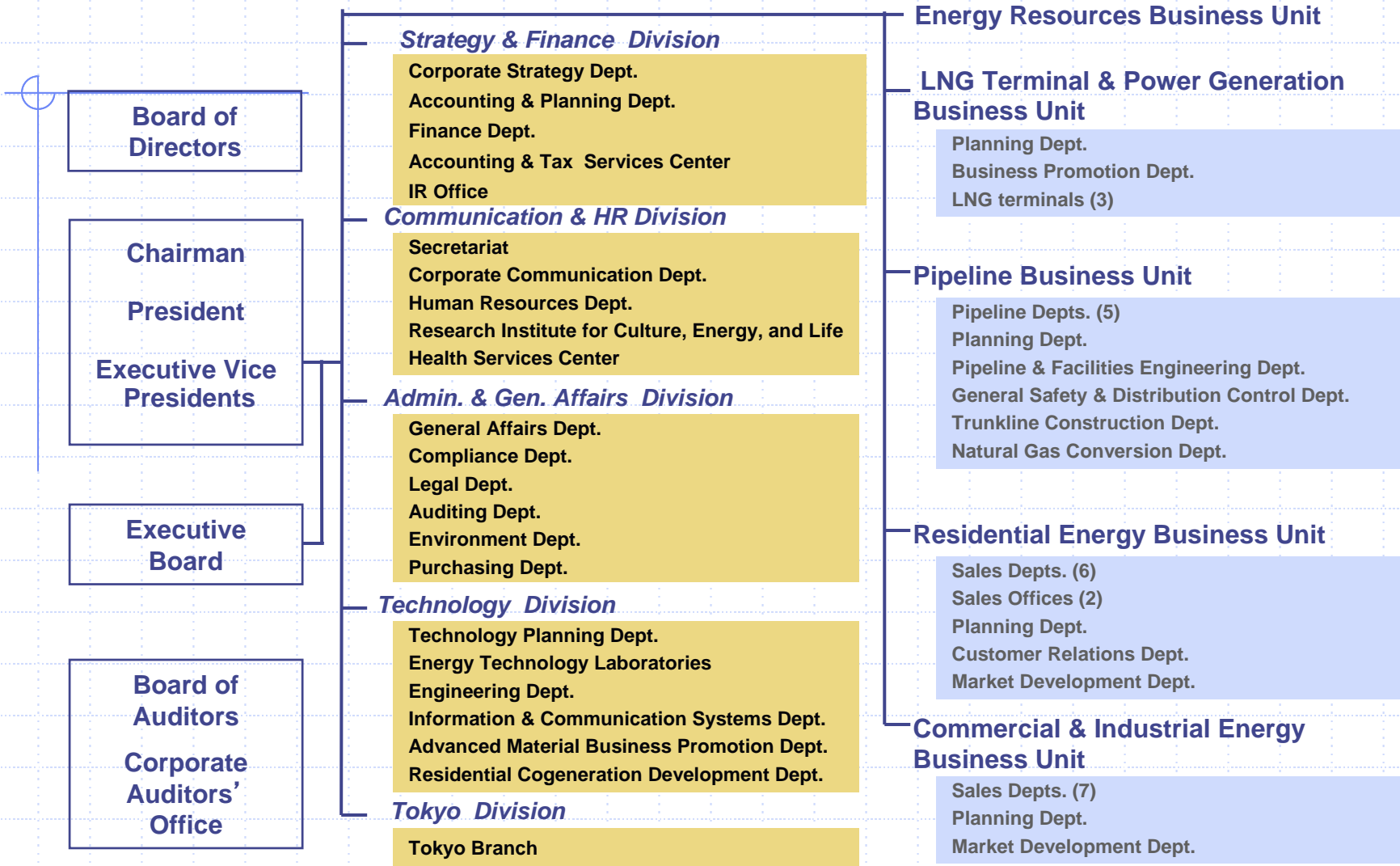
Net Income
(Billions of yen)



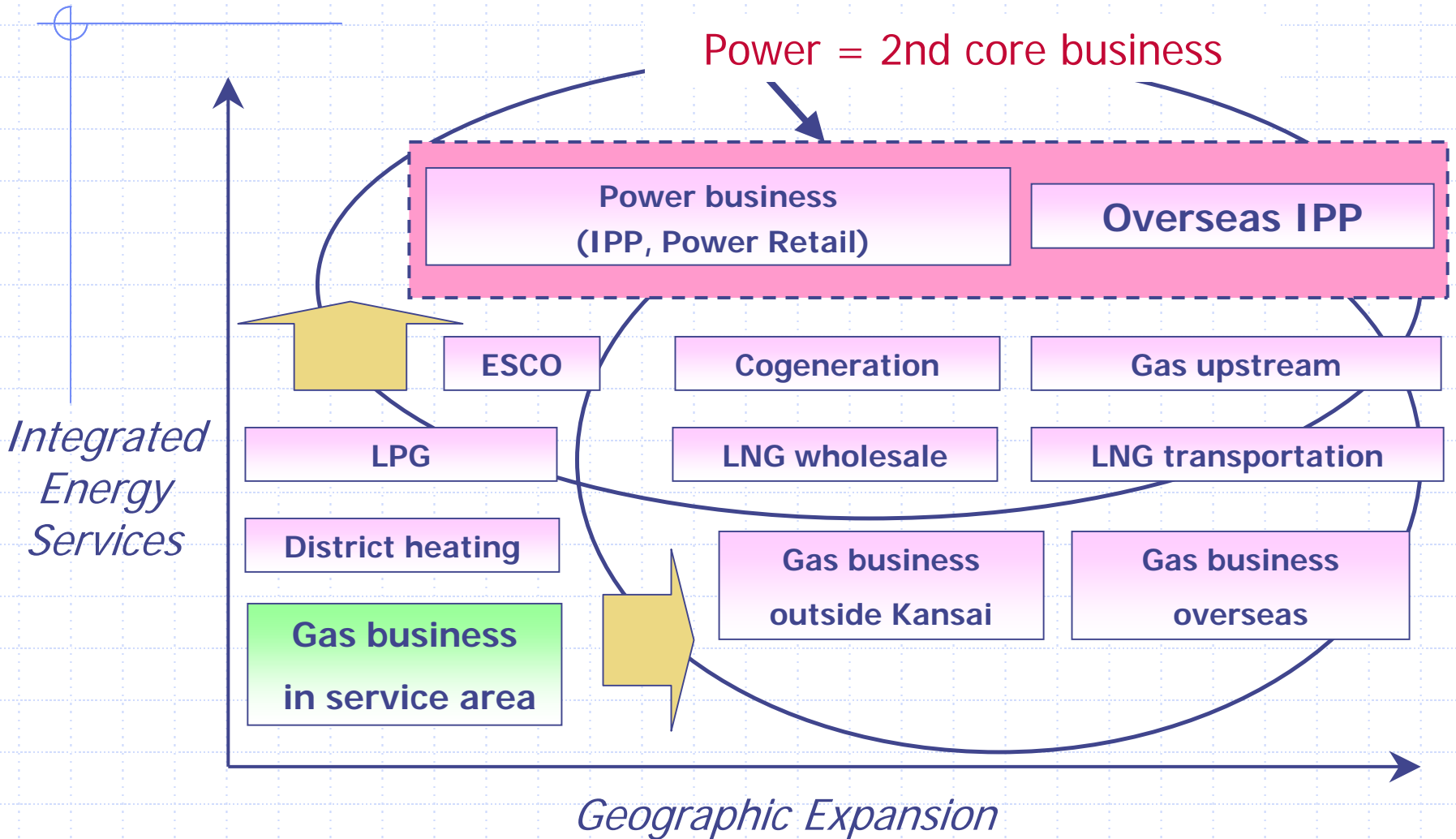
*Note: voluntary early retirement charge ¥13.3 bil.
(FY 2003.3)

Organization Chart

June 29, 2004



Directions of Energy Business



Group Organization (G8)

July 2004

Energy business fields and core companies

G1 : Osaka Gas

*Energy Resources Business Unit
LNG Terminal & Power Generation Business Unit
Pipeline Business Unit
Residential Energy Business Unit
Commercial & Industrial Energy Business Unit*

G2: Liquid Gas Group

LPG & industrial gas businesses

G3: NPG Group

LPG wholesaling and retailing

**One-stop
energy
solution
services**

Non-energy business fields and core companies

G4: Urbanex Group

Property and real estate businesses

G5: Kinrei Group

Food and restaurant businesses

G6: OGIS Group

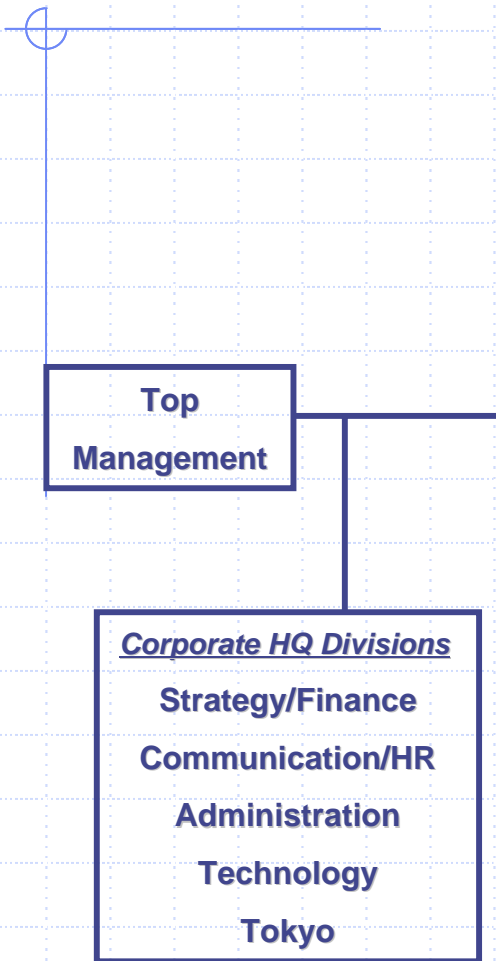
IT-related businesses

G7: Osaka Gas Chemicals Group

Chemicals, carbon fiber, new materials

G8: OG Capital Group

Engineering, consumer services, etc.



Corporate HQ Divisions
Strategy/Finance
Communication/HR
Administration
Technology
Tokyo

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Natural Gas Business

Customers



Residential



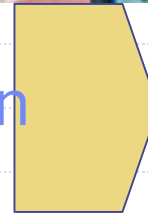
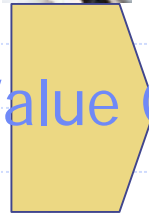
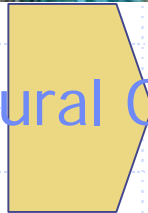
Commercial



Industrial



IPP, DHC



Natural Gas Value Chain

**LNG
Procurement/
Transportation**

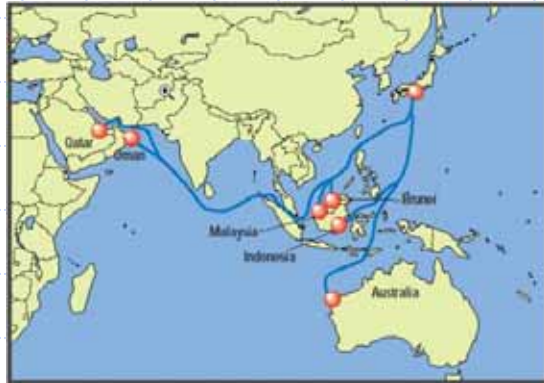
**Receiving
Terminals**

**Transmission/
Distribution**

**Marketing/
Services**

LNG Procurement & Transportation

30-year experience in LNG



- Imports 6.4 mil. tons/year of LNG from 6 countries (Brunei, Indonesia, Australia, Malaysia, Qatar and Oman)
- Has ownership in fleet of three LNG carriers
- Participates in gas field development in Indonesia and Australia



LNG Terminals

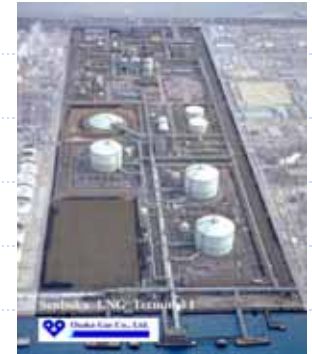
Owner and operator of state-of-the-art LNG terminals

- Construction and operation of three LNG receiving terminals
- Technological innovations
 - ✓ World's largest above-ground tanks
 - ✓ Cryogenic energy utilization
- Overseas consulting experience in LNG terminal design & construction and LNG cold energy utilization

Himeji Terminal



Senboku I



Senboku II



Pipeline Operation

Managing 55,000 km of pipelines



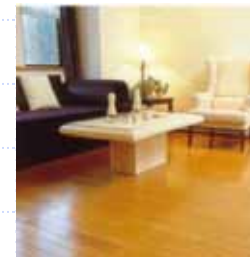
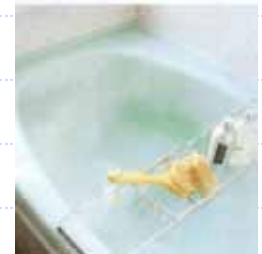
- Integrated central-control system
- Advanced safety & inspection system
- High preparedness for earthquakes and other disasters



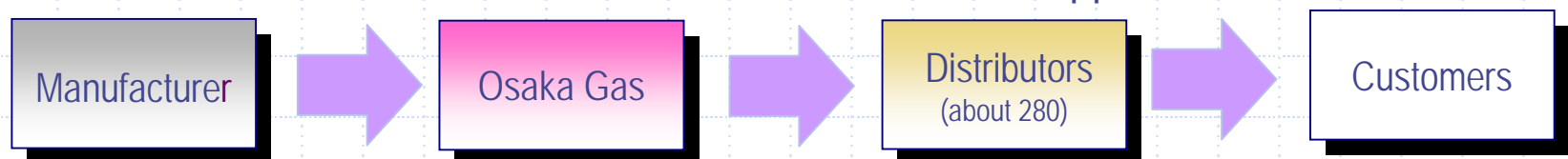
Residential Sales

- Sell range of gas appliances and related products
- Market own brand products
 - FY 2003 sales : ¥98 bil. (US\$890 mil.)
 - Market shares (in Kansai service area)

fan heaters: 70%	floor heating: 75%
bath: 44%	kitchen stoves: 37%
- Sell more gas!
- Compete effectively with electrical & electricity business



Residential market channels of OG brand appliances



Commercial and Industrial Marketing



Industrial Market



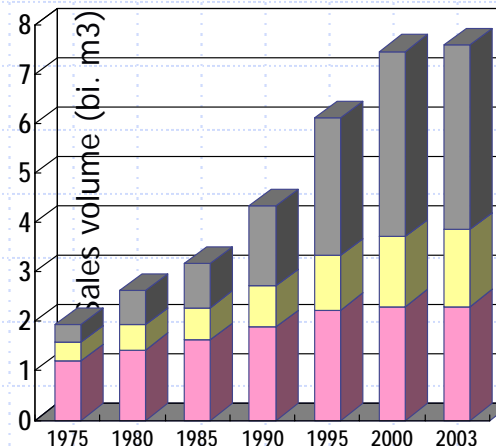
Commercial Market



Cogeneration Marketing

- Marketing activities backed by strong engineering capabilities
- Japan's pioneer in marketing gas-fired cogeneration
 - Top seller of co-gen systems
 - Domestic market share: 47%
 - Installed capacity: over 1200 MW

Gas sales volume by market segment



← Growing C&I Market

District Heating & Cooling

Osaka Gas: First DHC operator in Japan

DHC sites



- Japan's first plant in operation (1970)
- Now operate at 29 locations*
*including plants owned by JV with other firms
- Most plants have installed cogeneration systems, supplying power to adjacent buildings



Osaka Dome City



Kobe Harbor Land

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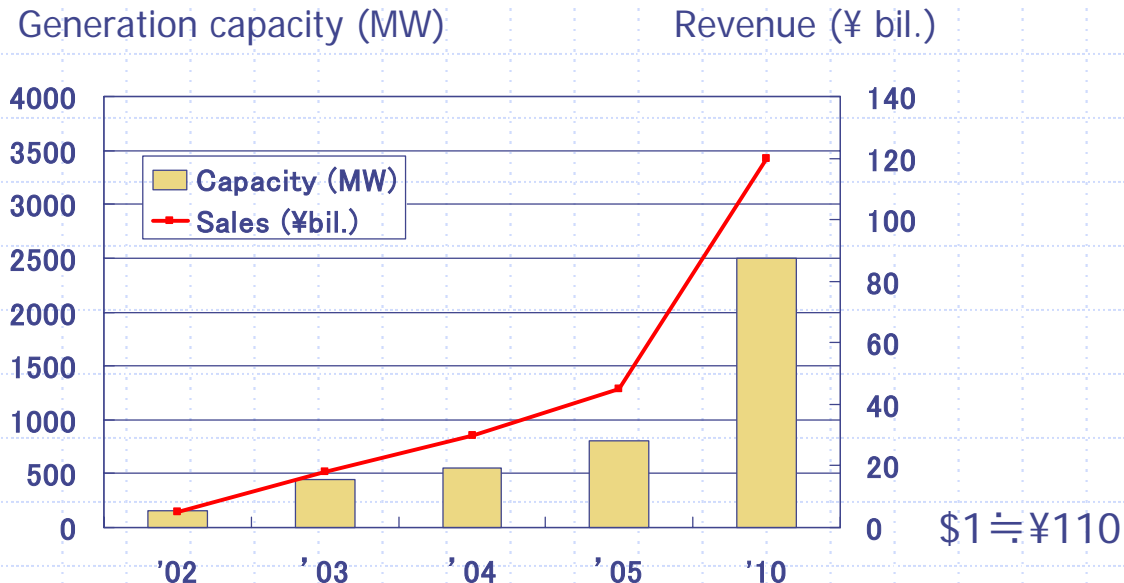
Power Business Development

2nd Core Business of OG

○ Entered generation and retail market

○ Business targets by 2010 (domestic market only)

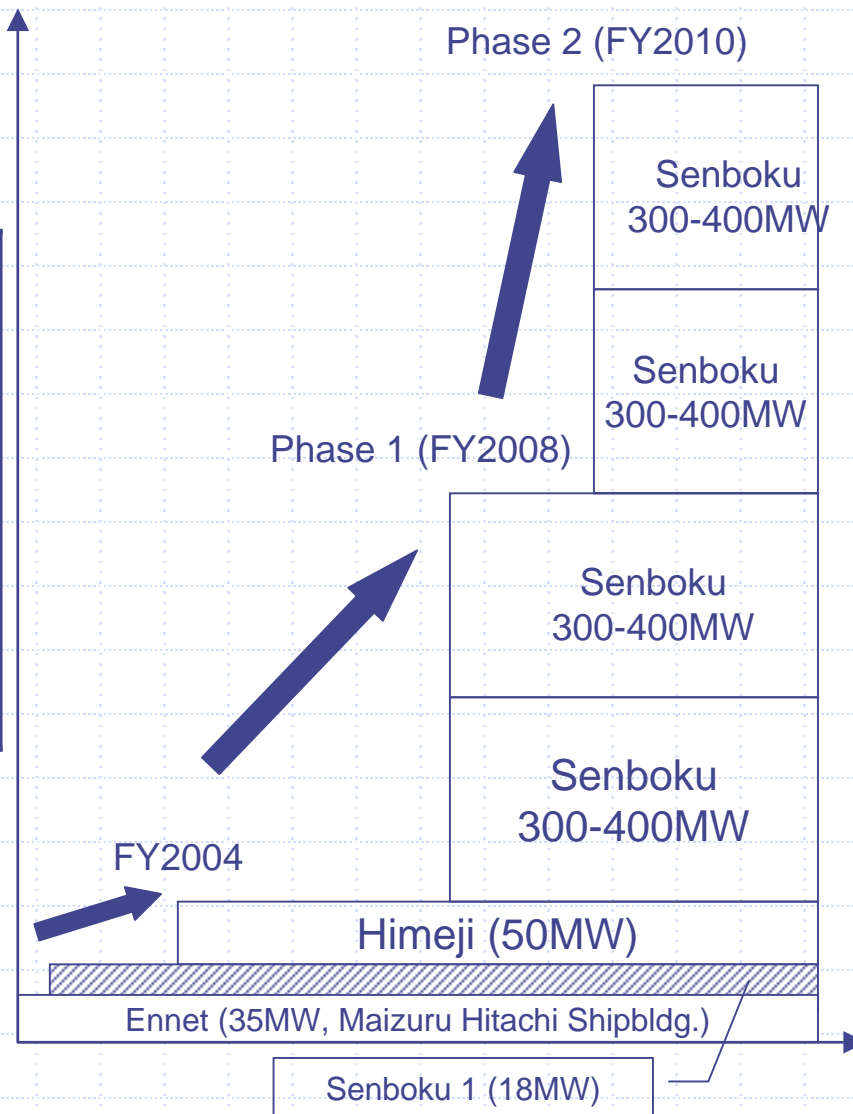
- Net generation capacity: 2,500 MW
- Revenue: ¥120 billion (\$1.1 bil.)
- Pre-tax income: ¥10 billion (\$ 910 mil.)



Planned Generation Capacity at LNG Terminals

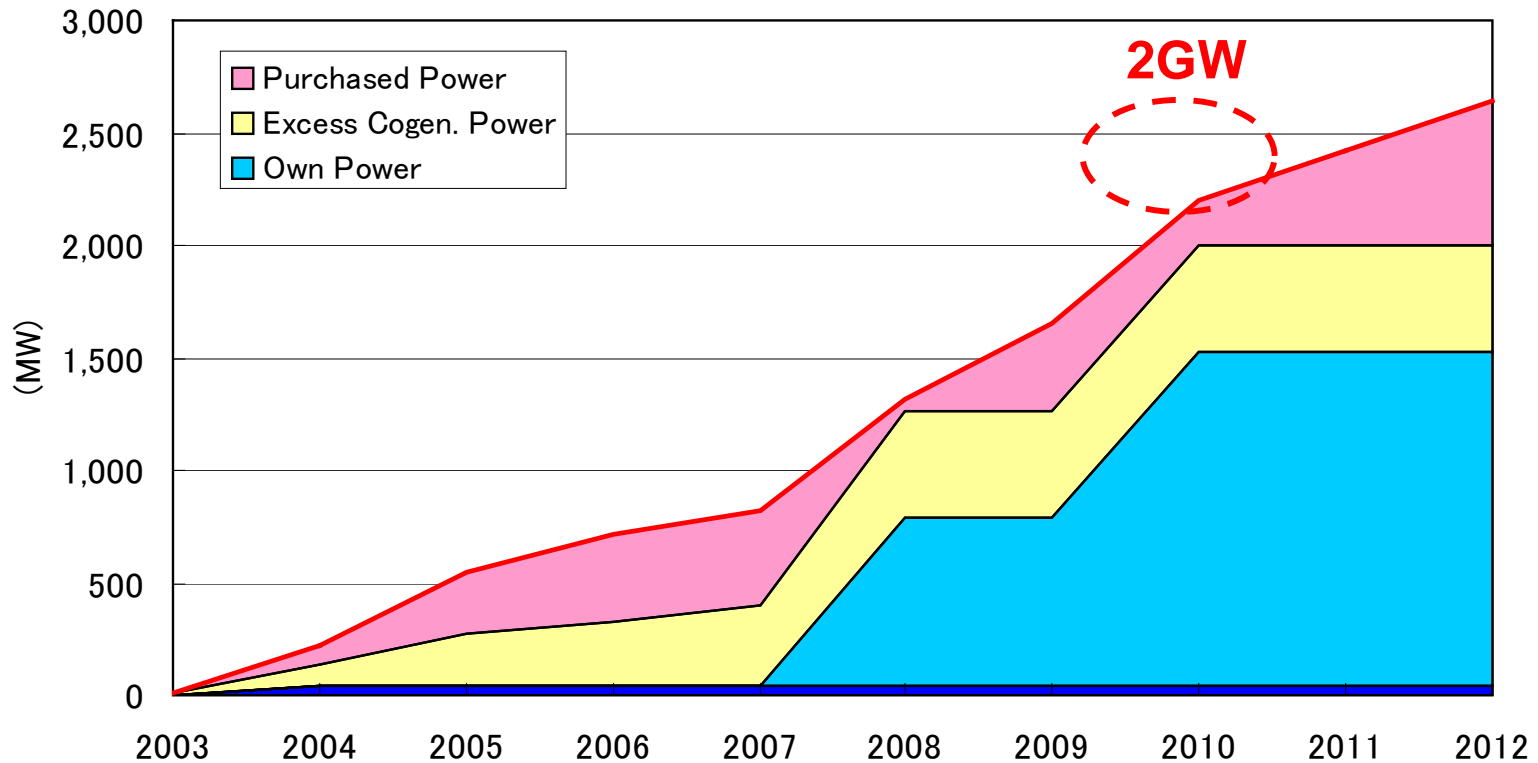
Planned capacity

Start of Operation	Place	Capacity
FY2002	Senboku 1	18MW
FY2004	Himeji	50MW
Phase 1 FY2008	Senboku 1 + 2	300-400MW
Phase 2 FY2010	Senboku 1 + 2	× 4



Planned Business Scale

- Plans to enlarge generation capacity
- Targets total supply capacity of 2GW in 2010



Power Generation Business

PG Project	Capacity	Phase	COD	Ownership
Torishima	150MW	in operation	2002	100%
Nakayama	150MW	in operation	1999	95%
Nakayama Nagoya	150MW	in operation	2000	95%
Senboku	18MW	in operation	2002	100%
Himeji	50MW	in operation	2004	100%
Unitika Uji	62MW	under const.	2004	100%
Senboku	1600MW	planned	2008	100%

Torishima Plant

Owner: GPI (OG 100% subsidiary)

Off-taker: Kansai Electric Power

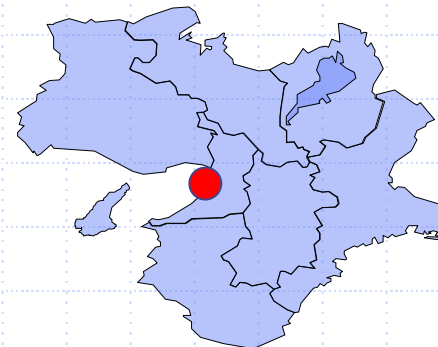
Capacity: 150 MW (CCGT)

Location: Osaka

PPA Term: 2002 - 2016 (15 years)

Fuel: Natural gas

Operation: Peak



Nakayama Plant

(acquired by OG in 2003)

Owner: GPI (OG's 100% subsidiary) 95%,
Nakayama Steel 5%

Off-taker: Kansai Electric Power

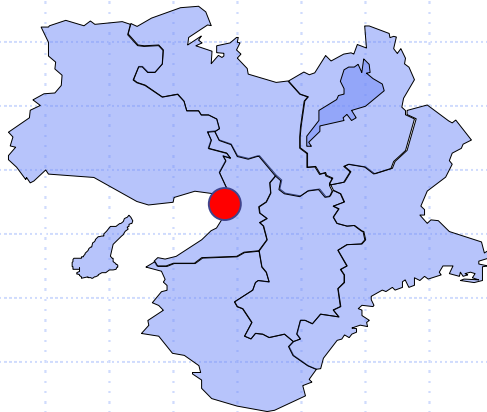
Capacity: 150 MW (CCGT)

Location: Osaka

PPA Term: 1999—2013 (15 years)

Fuel: Natural gas

Operation: Peak



Nakayama Nagoya Plant (acquired by OG in 2003)

Owner: GPI 95%, Nakayama Steel 5%

Off-taker: Chubu Electric Power

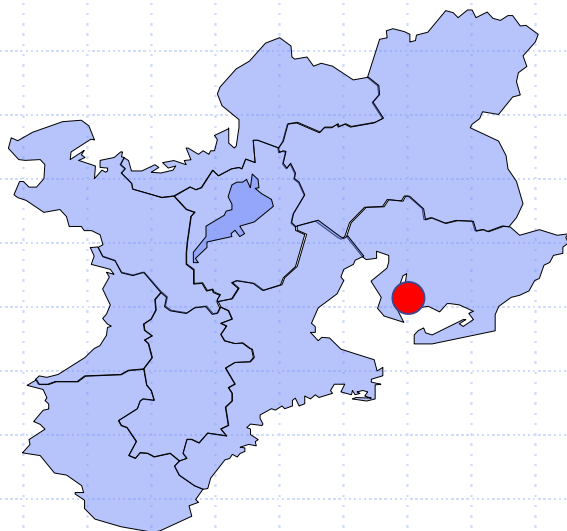
Capacity: 150 MW

Location: Aichi

PPA Term: 2000—2014 (15 years)

Fuel: Coal

Operation: Baseload



Senboku Plant

Owner: Osaka Gas

Off-taker: In-plant use + Ennet (JV of OG, Tokyo Gas,
and NTT Facilities)

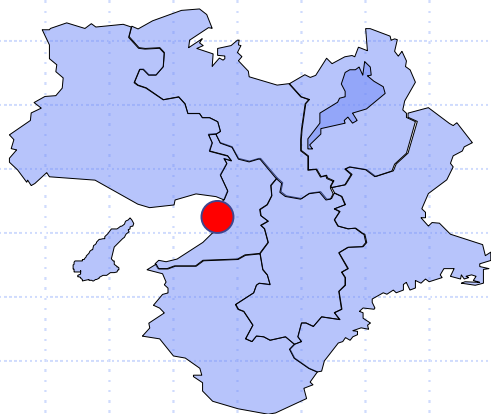
Capacity: 18 MW (CCGT, cogeneration)

Location: OG's Senboku LNG Terminal I, Osaka

COD: July 2002

Fuel: Natural gas

Operation: Baseload



Himeji Plant

Owner: Osaka Gas

Off-taker: Ennet + in-plant use

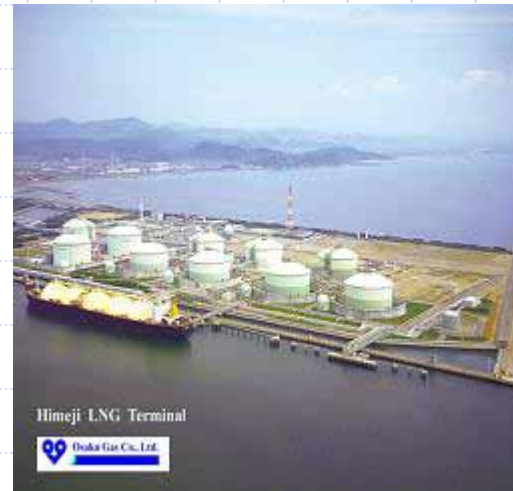
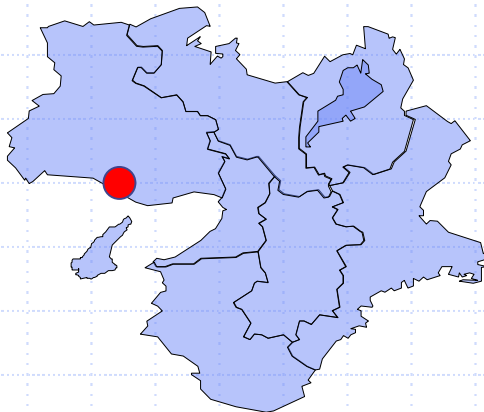
Capacity: 50 MW (CCGT)

Location: OG's Himeji LNG Terminal, Hyogo

COD: July 2004

Fuel: Natural gas

Operation: Mid-merit



Unitika Uji Plant

Owner: GPI

Off-taker: Power retailers + in-plant use

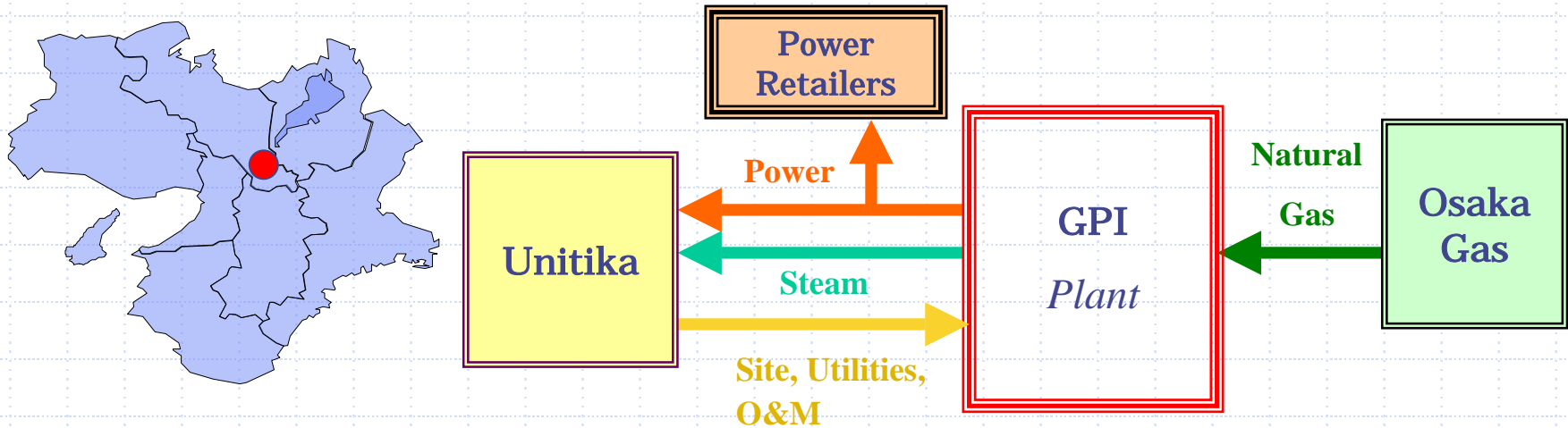
Capacity: 62 MW (CCGT, cogeneration)

Location: Unitika* Uji Plant, Kyoto *textile manufacturer

COD: October, 2004 (under construction)

Fuel: Natural Gas

Operation: Baseload



Senboku Plant (Planned)

Owner: Osaka Gas

Off-taker: (merchant)

Capacity: 1600 MW (400MW CCGT × 4)

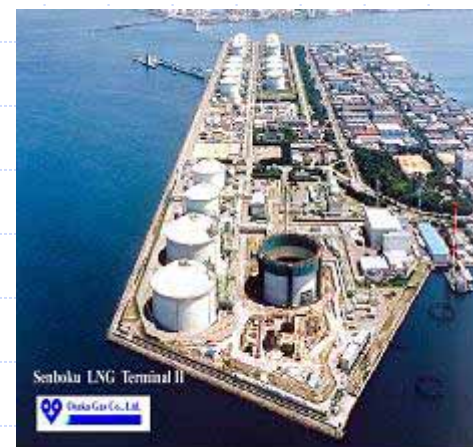
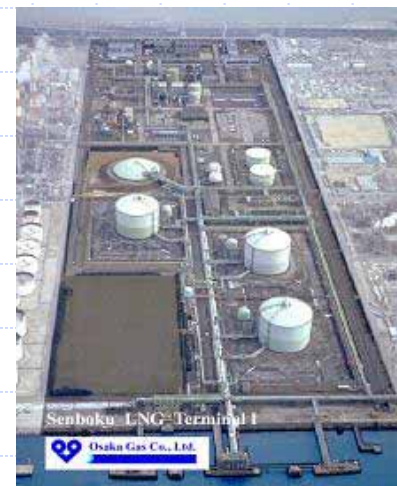
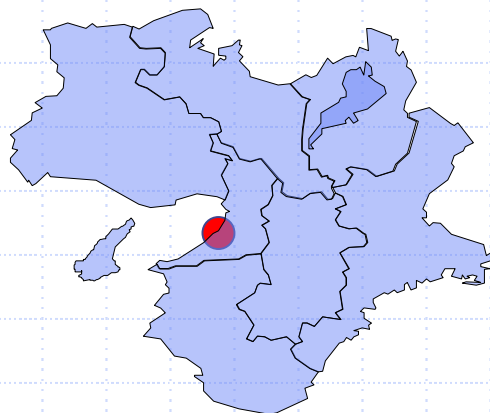
Location: OG's Senboku LNG Terminals (I , II)

COD: 2008 (800MW), 2010(800MW)

Fuel: Natural gas

Operation: Mid-merit

Status: Under environmental impact
assessment review



Power retail business : ENNET



Established: July 2000

Shareholders:	NTT Facilities (NTT subsidiary)	40%
	Osaka Gas	30%
	Tokyo Gas	30%

* Ennet has acquired 110 customers (400MW), including Osaka and Hyogo regional government offices.

A Century of Experience



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