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

DATA: Japan Gas Association (FY2003)
Key Financial Data

- Revenue: $8.6 billion (FY March 2004)
- Market Capitalization: $6.7 billion (November 2004)
- Credit Ratings:
  - S&P: AA-
  - Moody’s: Aa2

($1 \div ¥110)
Operating Results

Gas Sales by Volume
(Millions of m³)

Operating Revenues
(Billions of yen)

Net Income
(Billions of yen)

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

(1m³ ≈ 35.3 cf)  ($1 ≈ ¥110)
Directions of Energy Business

- **Power business** (IPP, Power Retail)
- **Overseas IPP**
- **ESCO**
- **Cogeneration**
- **Gas upstream**
- **LNG wholesale**
- **LNG transportation**
- **Gas business outside Kansai**
- **Gas business overseas**
- **District heating**
- **LPG**
- **Gas business in service area**

**Power = 2nd core business**

**Integrated Energy Services**

**Geographic Expansion**
Group Organization (G8)

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

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.

Non-energy business fields and core companies

One-stop energy solution services
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Natural Gas Business

Natural Gas Value Chain

LNG Procurement/Transportation
Receiving Terminals
Transmission/Distribution
Marketing/Services

Customers
Residential
Commercial
Industrial
IPP, DHC
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
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

- Manufacturer
- Osaka Gas
- Distributors (about 280)
- Customers
Commercial and Industrial 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
Osaka Gas: First DHC operator in Japan

- 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

<table>
<thead>
<tr>
<th>Start of Operation</th>
<th>Place</th>
<th>Capacity</th>
</tr>
</thead>
<tbody>
<tr>
<td>FY2002</td>
<td>Senboku 1</td>
<td>18MW</td>
</tr>
<tr>
<td>FY2004</td>
<td>Himeji</td>
<td>50MW</td>
</tr>
<tr>
<td>Phase 1 FY2008</td>
<td>Senboku 1 + 2</td>
<td>300-400MW</td>
</tr>
<tr>
<td>Phase 2 FY2010</td>
<td>Senboku 1 + 2</td>
<td>300-400MW x 4</td>
</tr>
</tbody>
</table>

- **Phase 1 (FY2008)**: Senboku 300-400MW
- **Phase 2 (FY2010)**: Senboku 300-400MW

#### Additional Units
- **Himeji (50MW)**
- **Ennet (35MW, Maizuru Hitachi Shipbldg.)**
- **Senboku 1 (18MW)**
Planned Business Scale

- Plans to enlarge generation capacity
- Targets total supply capacity of 2GW in 2010
# Power Generation Business

<table>
<thead>
<tr>
<th>PG Project</th>
<th>Capacity</th>
<th>Phase</th>
<th>COD</th>
<th>Ownership</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torishima</td>
<td>150MW</td>
<td>in operation</td>
<td>2002</td>
<td>100%</td>
</tr>
<tr>
<td>Nakayama</td>
<td>150MW</td>
<td>in operation</td>
<td>1999</td>
<td>95%</td>
</tr>
<tr>
<td>Nakayama Nagoya</td>
<td>150MW</td>
<td>in operation</td>
<td>2000</td>
<td>95%</td>
</tr>
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<td>Senboku</td>
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<td>100%</td>
</tr>
<tr>
<td>Unitika Uji</td>
<td>62MW</td>
<td>under const.</td>
<td>2004</td>
<td>100%</td>
</tr>
<tr>
<td>Senboku</td>
<td>1600MW</td>
<td>planned</td>
<td>2008</td>
<td>100%</td>
</tr>
</tbody>
</table>
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
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
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

Osaka Gas Co., Ltd.

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