



Osaka Gas acquired IPP facilities in Texas, U.S.A.

“Our energy consulting capabilities, backed by technological know-how, are one of the greatest strengths of Osaka Gas to stimulate customer demand and provide an optimal combination of products and systems developed to solve a specific problem.”

### Growing Gas Sales

In the gas business, the non-regulated sector has expanded to encompass sales volume of more than 500,000 cubic meters per year from April 2004. In this sector, the Osaka Gas Group is promoting cogeneration systems as a key product for expanding operations.

#### What is a Cogeneration System?

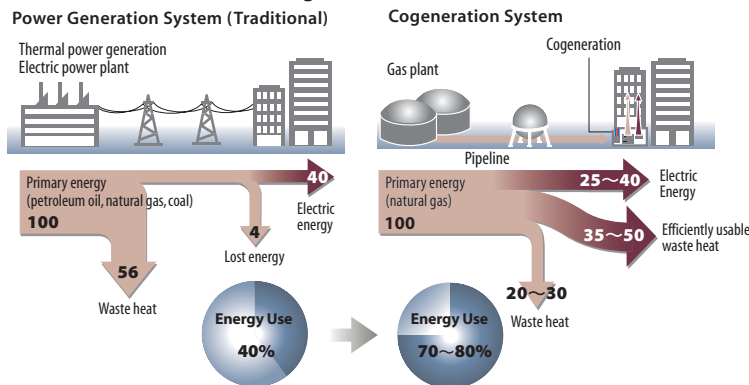
Installed on location at the customer, cogeneration systems recover heat emitted from power generation and use it for air conditioning and thermal applications. Energy usage efficiency improves approximately 70-80% with the use of cogeneration systems, as exhaust heat can be effectively utilized and there is minimal transmission loss because electricity is generated at the customer's location.

#### Strengths of Osaka Gas Cogeneration Systems

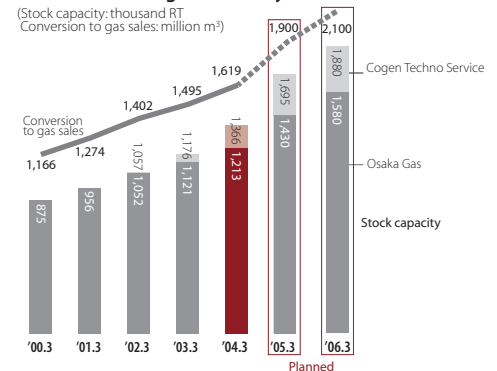
- 1) Osaka Gas develops highly efficient cogeneration systems. Compared with the average efficiency of approximately 40% at existing thermal power plants, our advanced cogeneration systems achieve a power generation efficiency of around 43%. As a result, there are an increasing number of customers that enjoy the cost benefits of introducing Osaka Gas cogeneration systems.
- 2) Our maintenance system, which includes the remote observation system Echo Line, leads the industry in service and maintenance quality.
- 3) Osaka Gas offers various financing schemes that answer customer needs such as for not wanting to own capital assets, and wanting to preset rate fluctuations to changes in fuel costs.
- 4) For franchise chain owners with stores located outside our service area, we meet customer needs through our subsidiary Cogen Techno Service Co., Ltd., which is in charge of cogeneration operations outside our service area.
- 5) In addition to natural gas as a fuel, Osaka Gas also provides a wide variety of cogeneration systems, including engines that use biogas as fuel as well as agricultural systems that supply CO<sub>2</sub> to plants.

Through these strengths, Osaka Gas has delivered cogeneration systems with a total generation capacity of approximately 1,200MW.

#### General View of Natural Gas Cogeneration



#### Total Installed Cogeneration Systems



Note: 1. Stock volume conversion is 1kW = about 1.32 thousand cubic meters  
2. Includes steam turbines and in-house facilities, and excludes IPP and other independent power sources  
3. Gas development volume conversion excludes Cogen Techno Service Co., Ltd.



Featuring cutting-edge technology, this 1,000kW-class high-efficiency engine boasts power generation efficiency of approximately 41%.

### Making Inroads into the Electricity Sector

The electric power sector is an area where the Osaka Gas Group can leverage its strengths in the natural gas business, namely its LNG terminal infrastructure, solution marketing capabilities and customer networks. Grasping deregulation in the electric power sector as a business opportunity, the Osaka Gas Group is making inroads into the electricity business based on the following strengths.

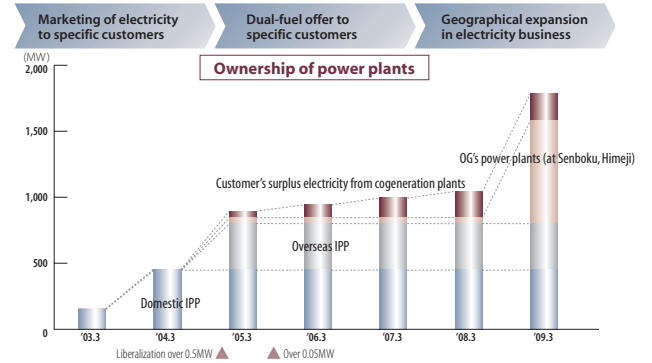
- 1) The Osaka Gas Group has three 150MW IPP generation capacity for wholesaling of electricity to power utilities. Based on long-term contracts, we expect these three power plants to provide a stable source of revenues of approximately ¥18 billion annually. In April 2004, Osaka Gas decided to acquire a 338MW portion of an IPP plant (total capacity: 845MW) in Texas, U.S.A.
- 2) In Senboku, we plan to construct a large-scale power plant within one of our LNG receiving terminals, making efficient use of existing land and natural gas line facilities. Osaka Gas will minimize power generation costs by using cutting-edge combined cycle gas turbines.
- 3) Targeting customers that already use gas cogeneration systems, Osaka Gas is able to provide one-stop energy solutions for both electricity and gas.

### Combining Gas and Electricity Businesses

Osaka Gas aims to combine the gas and electricity businesses through “customer’s surplus electricity from cogeneration plants” schemes, which are cogeneration systems designed to sell excess electricity in addition to providing electricity for on-site use.

Excess electricity is generated by using thermal load as a basis for determining cogeneration scale, and balancing it with a customer’s electricity requirements. The Osaka Gas Group purchases this excess electricity and uses it in the retail electricity business as a power source. Customers, whose primary energy source is heat, generate excessive electricity from exhaust heat, creating a relatively inexpensive supply of electricity.

### Development of Electricity Business



### Example of a Business Scheme

