

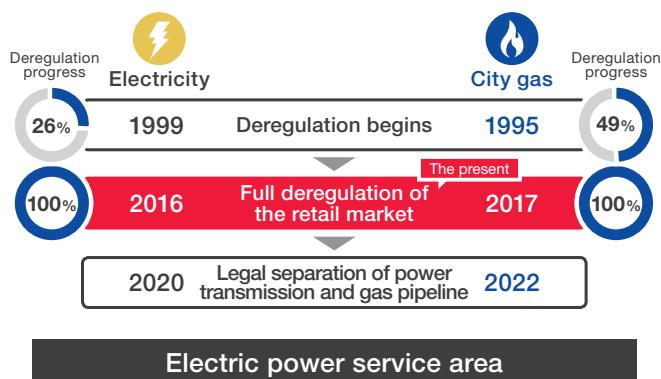
## Overall image after full deregulation

# City Gas and Electric Power Businesses After Full Deregulation

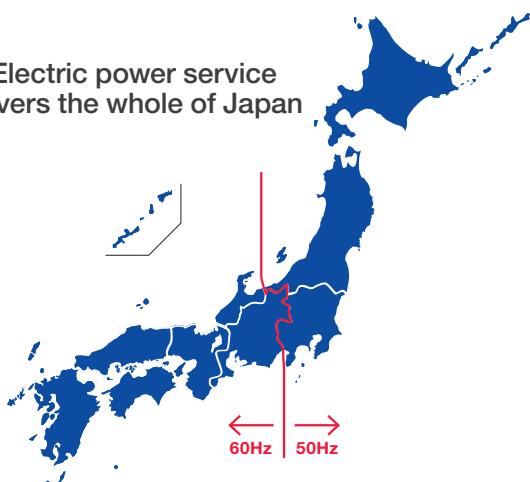
After the phased and subsequent full deregulation of the electric power retail market in April 2016 and of the retail gas market in April 2017, Japan's energy market has become fully deregulated.

### ■ Progress of deregulation

Deregulation has progressed in phases, shifting from large-lot to small-lot sales.



Electric power service covers the whole of Japan



All electric power grids across the whole of Japan, from Hokkaido in the northeast to Kyushu in the southwest, are connected by power distribution lines. This infrastructure enables power exchange (lending) across the conventional barriers between individual power companies, and supports the stable supply of electricity and efficient operation of power generation facilities.

Although in Japan electricity is distributed at frequencies of either 50Hz (East Japan) or 60Hz (West Japan) depending on the region, the installation of specialized transformer equipment in Nagano and Shizuoka prefectures has enabled the transformation and mutual exchange (lending) of certain volumes of electric power even between east and west.

## Electricity

### Meaning and Objectives of Electricity System Reforms

- Securing a stable supply of electricity
- Lowering electricity rates
- Expanding choices for customers

Deregulated



Power generation

### Our strengths and achievements

- Tokyo Gas owns four high-efficiency LNG-fueled power plants (1.6 million kW equivalent power generation capacity).
- Kobelco Power Moka Inc. is currently constructing power station at Moka, in Tochigi prefecture. Tokyo Gas plans to begin phased acceptance of supply of electric power from the plant as of 2019, and expand the generation capacity of its own power sources to around 3.0 million kW by 2020.

Regulated business



Transmission and distribution

### Responsibility for supply (power transmission and distribution operator) (Providing final guarantee service, maintaining balance of supply and demand, etc.)

### Our operation

- Tokyo Gas transmits and distributes electric power using transmission and distribution grids owned and operated by power transmission and distribution operator.

Deregulated



Retail

### Our strengths and achievements

- Utilizing our sales network, which is closely linked to local communities, we supply electric power as a retail service to 1.13 million customers (as of March, 2018).
- We also maintain alliances with other companies.

## City gas



### Meaning and Objectives of Gas System Reforms

Securing a stable supply of city gas and **increasing its use**

Lowering city gas rates and **increasing customer satisfaction**

Expanding choices for customers and **enhancing safety at customer sites**



Production

Deregulated

### Our strengths and achievements

- Tokyo Gas owns four LNG terminals in the Kanto region. Utilizing these four terminals (the Negishi, Ohgishima and Sodegaura LNG terminals in Tokyo Bay, and Hitachi LNG terminal in Ibaraki Prefecture), we are driving stable and efficient terminal operations.



Supply

Regulated business

Obligations of fair operation and guarantee of final (last resort) supply to all retail operators

### Our achievements

- Tokyo Gas's pipeline network covers a total distance of over 60,000 km in the Kanto region. We are also expanding and enhancing our network with new infrastructure to improve our supply capabilities.
- We operate a safe and stable pipeline network.



Retail

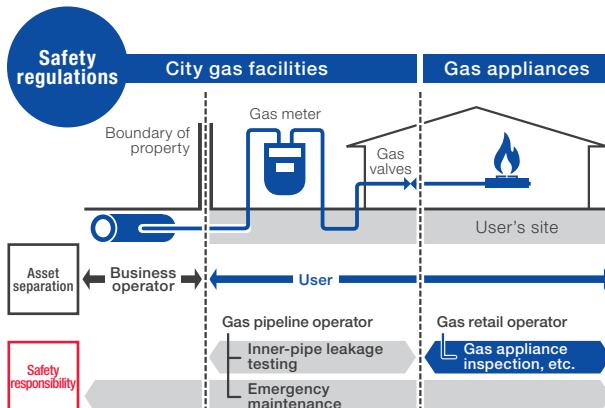
Deregulated

### Our strengths and achievements

- Our sales organization is closely linked to local communities.
- We also have the capability to propose a variety of energy solutions.

### Division of safety responsibility

Gas retail operators, including new market entrants, are obligated to perform gas appliance inspections and engage in risk prevention publicity. However, as the existing gas operators have know-how regarding these obligations, the market environment has been prepared to make it easy for new entrants to outsource these duties to existing operators.



### Full Deregulated Market of the Electricity and Gas

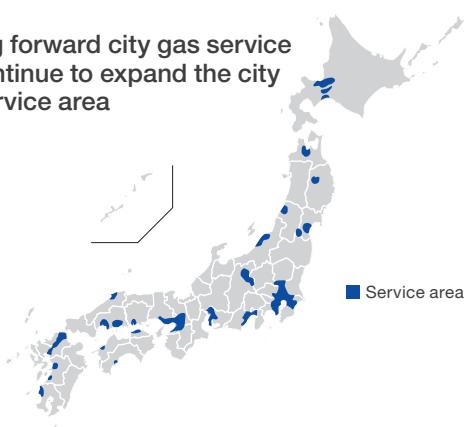
	Number of companies*	Approximate potential customers (Million)	Approximate market size (¥ trillion)
Electricity	10	85	8.0
Within TEPCO's domain	29	2.8	
City gas	203	26	2.4

\*Former general electric power operators, former general gas operators

\*From materials officially announced by the Ministry of Economy, Trade and Industry

### Expansion of city gas service area

Moving forward city gas service will continue to expand the city gas service area



Because city gas business developed through efficient pipeline network construction, utilizing economies of scale, the supply areas are centered primarily around urban areas, and city gas business do not currently operate in regions with low population densities or low industrial concentrations. In Japan, city gas business rely on LNG imports from overseas for the majority of our raw materials, and have established a supply infrastructure, within the scope of reason, by constructing LNG terminals in proximity to major consumer areas. Because of this history, the development of a nationwide gas pipeline network has not progressed in the same way as the electric power business. In the Japanese government's gas system reforms, too, experts have pointed out the necessity for developing an overall optimal pipeline network, and considerations are currently underway with regard to this.