Gas business

# INVISIBLE ASSETS

P51

# Safe and stable energy supply infrastructure

Contributing to the achievement of Sustainable Development Goals (SDGs)











We are working to secure diversity in our LNG procurement and stable transport, serving as the safe and stable energy supply infrastructure for more than 11 million customers in the greater Tokyo area. We boast city gas production and supply facilities with sufficient quake resistance to withstand tremors comparable with those in the 2011 Great East Japan Earthquake. We also engage in a wide variety of actions that include segmentation of the pipeline network for minimizing the impact of supply stoppages in the event of disasters, monitoring at normal times for ensuring safety in gas utilization, and the establishment of a system for staff deployment in case of an emergency.

## Diversifying LNG procurement and achieving efficient and stable transportation of LNG

- Diversifying procurement sources We procure LNG from 14 projects in 6 countries, including the United States as well as Southeast Asia and Australia
- Ensuring stable transportation of LNG
   We utilize our own fleet of 13 ships, owned and managed by Tokyo Gas

Natural gas reserves are abundant in various parts of the world. The Tokyo Gas Group was among the first to notice the potential of natural gas, and in 1969 we became the first in Japan to import LNG from Alaska.

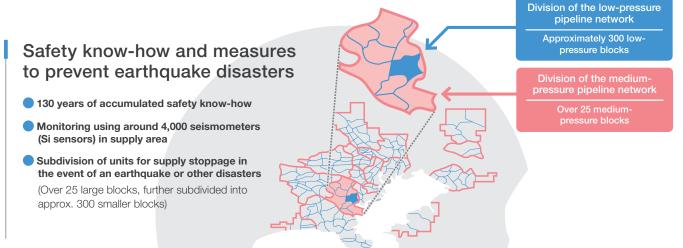
To achieve stable procurement of LNG, by seeking to diversify our procurement sources (resource suppliers), we are working to ensure that interferences to LNG procurement do not arise, even in cases where there are evident geopolitical risks such as disasters or human conflicts. We also operate stable transportation of LNG through the efficient deployment of ships (including ships owned and managed by Tokyo Gas).

#### Safe and secure production and supply facilities

- Four LNG terminals
  (Three in Tokyo Bay, one in Northern Kanto)
- Pipeline network with total length of over 60,000 km
- High level of resistance to seismic activity, even in the case of major earthquakes such as the Great Hanshin-Awaji (Kobe) Earthquake, or the Great East Japan Earthquake

(High- and medium-pressure gas pipelines)

We import LNG by tankers and store it in tanks at LNG terminals. It is then reconverted into gas and adjusted in calorific value to produce city gas, and supplied to 11 million customers via our pipeline network. Based on almost 50 years of experience and knowledge since our introduction of LNG to Japan in 1969, we adopted structural designs with superior anti-seismic properties for LNG terminals, and introduced materials that are resilient to ground deformation to our pipeline network. This ensures a high level of quake resistance for the infrastructure. Since city gas is made by conversion from LNG to natural gas at an LNG terminal and then distributed via pipeline, there is no energy conversion loss or transport loss to the point of consumption.



In order to constantly deliver natural gas safely and steadily to over 11 million customers, we are continually developing human resources involved in safety. It is indispensable to have human resources that are equipped with advanced specialized skills in facility design, construction, and maintenance, as well as decision-making capabilities that enable the reliable execution of gas supply and safety responsibilities even in times of emergency. The trust of customers that has been earned as a result of safety-related expertise developed over the course of our long history, and its continuation, is one of our greatest strengths.

We have also developed a disaster-readiness system, which protects entire local areas by automatically cutting off the supply of gas when it detects an earthquake that poses the possibility of affecting our pipeline network and/or other structures. In order to minimize the impact of supply stoppages, we subdivide our supply areas, enabling us to stop the supply of gas remotely, in block units, depending on the extent of the damage.

#### Facilitating safe use of gas

- Safety inspections of gas facilities
- Monitoring and control of the status of operation of city gas production and supply facilities
- Readiness for swift emergency dispatch in response to gas leak reports



#### **Periodic Safety inspections**

We conduct periodic safety inspections of gas-related equipment and facilities for all customers, as frequently as required by law. We visit customers to conduct inspections for gas leaks on customer premises (as a general gas pipeline operator), and to examine gas appliances and supply and exhaust equipment (as a gas retailer).

### **Supply Command Center** (Monitoring and control at normal times)

The Supply Command Center performs 24/7 monitoring and control on the status of operation of city gas production and supply facilities. It facilitates the analysis of damage, remote operation to stop gas supply and other initial actions for preventing secondary damage following an earthquake. It conducts around 100 initial action drills per year.

## Gaslight 24 (Emergency response actions)

The Safety Command Center receives gas leak reports from customers. It receives information about their situations without omission to give safety advice and to ask Gaslight 24 to send personnel. Gaslight 24 operates emergency dispatch bases for prevention of accidents such as arising from gas leaks. Upon receipt of a report, its personnel will immediately visit the reporting customer to take swift action even on holidays or at night.