

Implementation of FY2022.3 Company-wide Comprehensive Disaster Drill

September 10, 2021

Osaka Gas Co., Ltd.

Osaka Gas Co., Ltd. (President: Masataka Fujiwara, hereinafter referred to as "Osaka Gas") today conducted a company-wide comprehensive disaster prevention drill assuming a magnitude 6.1 inland earthquake with an epicenter in the southern part of Osaka Prefecture. By conducting an earthquake drill and a BCP^{*1} drill at the same time, the company verified issues regarding business continuity in parallel with disaster response operations in order to strengthen its comprehensive disaster response capabilities.

In the earthquake drill, based on the assumption that an earthquake with a maximum seismic intensity of 6-plus had occurred in the service area of Osaka Gas, the company set up a countermeasures headquarters with the president as the director and conducted a practical training exercise with the aim of improving initial disaster response capabilities as well as sharing the disaster response flow until complete restoration of gas supply. In addition, all training was conducted online on the assumption that a disaster had occurred during the current COVID-19 pandemic.

In order to further improve disaster response capabilities, each organization of the company will continue to address the issues found in this drill.

Osaka Gas will continue to enhance its countermeasures against and preparation for earthquakes and other disasters to ensure a safe and stable supply of city gas.

[Outline of company-wide comprehensive disaster drill]

Assumed earthquake	Epicenter: Southern Osaka
	Scale: Magnitude 6.1
	Seismic intensity: Maximum seismic intensity 6-plus (in the service area of Osaka Gas)
	Time of occurrence: 12:50 on a weekday
Number of participants	Approximately 2,000 people (Osaka Gas Headquarters, district offices, factories, affiliated companies, etc.)
Content	<p><Earthquake drill></p> <ul style="list-style-type: none"> - Sharing of disaster response flow and major decision-making process from initial response to complete restoration of gas supply during COVID-19 pandemic - Confirmation of the expected effects of early recovery measures and collaboration among Daigas group companies in the event of a disaster <p><BCP drill></p> <ul style="list-style-type: none"> - Confirmation of procedure for activating the BCP - Confirmation of procedure to report the status of damage from affiliated companies to Osaka Gas in the event of a disaster

*1 Business continuity plan: An action plan formulated in advance so that in the event of a problem, a minimum number of business activities can be continued or resumed within a target recovery time with limited management resources



(Reference) Concept and progress of Osaka Gas's earthquake disaster prevention measures

In response to the Great East Japan Earthquake, Osaka Gas has reformed its conventional earthquake disaster prevention measures in line with reviews conducted by the national government and other administrative organizations.

(1) Preventive measures (promotion of the use of earthquake-resistant equipment)

To minimize damage in the event of an earthquake, the quake resistance of gas facilities and safety measures at customer sites are being enhanced.

- Introduction of highly earthquake-resistant gas pipes, such as polyethylene pipes

(2) Emergency measures (measures to prevent secondary disasters)

Gas shut-off systems are being introduced to prevent secondary disasters due to gas leaks in the event of an earthquake or other disaster.

- Establishment of information gathering systems (governor monitoring, seismographs, etc.)
- Establishment of gas shut-off systems (division of conduit networks, seismic shut-off/remote shut-off systems)
- Establishment and enhancement of wireless communication networks
- Development of an earthquake disaster prevention system (damage prediction, recovery simulation)

(3) Recovery measures (measures to ensure early restoration of gas supply)

To enable quick restoration of gas supply to blocks where it has been suspended, various measures are taken, both tangible and intangible.

- Preparation of materials and equipment for restoration work
- Development of organizational systems and earthquake response manuals
- Emergency supply to facilities with high public importance or social urgency that could affect human life
- Introduction of systems that contribute to disaster recovery
- Introduction of systems that visualize the progress of recovery

(4) Tsunami countermeasures (measures to prevent secondary disasters that could be caused by a tsunami)

To achieve early recovery while preventing secondary disasters that could be caused by a tsunami, various measures are taken, both tangible and intangible.

- Introduction of a tsunami disaster prevention system
- Development of a system to stop gas supply to areas inundated by a tsunami
- Installation of cameras for monitoring tsunami

<Progress of major earthquake countermeasures since the Great Hanshin Earthquake>

Item	Major earthquake countermeasures	At the time of the Great Hanshin Earthquake (January 1995)	Current status (April 2021)
Enhancement of information-gathering capabilities	Expansion of seismographs	Installed at 34 locations	Installed at about 3,300 locations
	Introduction of an earthquake damage prediction system	—————	Introduced in the Central Control Room (Head office and Sub-center) and five districts
Development of gas shut-off systems	Subdivision of supply block	55 middle blocks	86 middle blocks About 660 small blocks
	Introduction of gas shut-off devices	Remote shut-off only available for super block units (The whole service area is divided into eight super blocks.)	About 3,600 remote shut-off devices About 3,000 automatic seismic shutoff devices
Enhancement of emergency communication	Enhancement of wireless communication systems	—————	Completion of Sub-center (establishment of two Central Control Rooms: Head office and Sub-center) Six portable satellite communication devices
Other countermeasures	Seismic resistance rate	Seismic resistant pipes as a percentage of all pipes in use: 68%	Seismic resistant pipes as a percentage of all pipes in use: About 88%
	Promotion of the use of PE pipes	Total length of PE pipes in use: About 1,200 km	In principle, all newly installed low-pressure pipes are PE pipes. Total length of PE pipes in use: About 17,200 km
	Backup system for important online systems	—————	Establishment of a backup center